



ORANGE COUNTY FIRE AUTHORITY

BOARD OF DIRECTORS

Regular Meeting Agenda

**Thursday, February 22, 2024
6:00 P.M.**

**Orange County Fire Authority
Regional Fire Operations and Training Center
Board Room
1 Fire Authority Road
Irvine, CA 92602**

Link to:

[Board of Directors Member Roster](#)

NOTICE REGARDING PUBLIC ACCESS AND PARTICIPATION

This meeting is open to the public. Board members will participate in person. There are several alternative ways to make comments including:

In Person Comments at Meeting: Resolution No. 97-024 established rules of decorum for public meetings held by the Orange County Fire Authority. Resolution No. 97-024 is available from the Clerk of the Authority.

Any member of the public may address the Board on items within their subject matter jurisdiction, but which are not listed on this agenda during PUBLIC COMMENTS. However, no action may be taken on matters that are not part of the posted agenda. We request comments made on the agenda be made at the time the item is considered and that comments be limited to three minutes per person. Please address your comments to the Board and do not engage in dialogue with individual Board Members, Authority staff, or members of the audience.

If you wish to speak, please complete a Speaker Form identifying which item(s) you wish to address. Please return the completed form to the Clerk of the Authority prior to item being considered. Speaker Forms are available at the entryway of meeting location.

E-Comments: Alternatively, you may email your written comments to coa@ocfa.org. E-comments will be provided to the Board members upon receipt and will be part of the meeting record as long as they are received during or before the Board acts on an item. Emails related to an item that are received after the item has been acted upon by the Board will not be considered.

This Agenda contains a brief general description of each item to be considered. Except as otherwise provided by law, no action or discussion shall be taken on any item not appearing on the following Agenda. Unless legally privileged, all supporting documents, including staff reports, and any writings or documents provided to a majority of the board members after the posting of this agenda are available for review at the Orange County Fire Authority Regional Fire Operations & Training Center, 1 Fire Authority Road, Irvine, CA 92602 or you may contact the Clerk of the Authority at (714) 573-6040 Monday through Thursday, and every other Friday from 8 a.m. to 5 p.m. and available online at <http://www.ocfa.org>



In compliance with the Americans with Disabilities Act and [Board of Directors policy](#), if you need reasonable accommodations to participate in this meeting, please complete the [ADA Reasonable Accommodation Form](#) available on the Agency's website and email to COA@ocfa.org, or you may contact the Clerk of the Authority at (714) 573-6040 during regular business hours to submit your request orally. Please notify us at least 48 hours prior to the meeting to enable the Authority to make reasonable arrangements to assure accessibility to the meeting.

CALL TO ORDER by Chair O'Neill

INVOCATION by OCFA Chaplain Kent Kraning

PLEDGE OF ALLEGIANCE by Director Traut

ROLL CALL by Clerk of the Authority

REPORTS

A. Report from Budget and Finance Committee

B. Report from the Fire Chief

- EMS Excellence
- Winter Storm prepositions and swift water rescues
- OCFA Strategic Goals, FY 23-24 – Second Quarter Update

PUBLIC COMMENTS

Please refer to instructions on how to submit a public comment on Page 1 of this Agenda.

1. PRESENTATIONS

- A. Administer the Oath of Office to Beth Haney, representing the City of Yorba Linda**
- B. Recognition of Outgoing Director Gene Hernandez, representing the City of Yorba Linda**
- C. Recognition of Past Chair Vince Rossini**

2. CONSENT CALENDAR

All matters on the consent calendar are considered routine and are to be approved with one motion unless a director or a member of the public requests separate action on a specific item.

A. Minutes for the Board of Directors Meeting

Submitted by: Maria D. Huizar, Clerk of the Authority

The record will show that any Director not in attendance at the meeting of the Minutes will be registered as an abstention, unless otherwise indicated.

Recommended Action:

Approve the Minutes for the January 25, 2024, Regular Meeting as submitted.

B. Annual Grant Priorities for 2024

Submitted by: Robert Cortez, Assistant Chief/Business Services Department

On February 14, 2024, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 6-0 (Director Nguyen absent).

Recommended Action:

Approve OCFA's Annual Grant Priorities for 2024.

C. Award of Public Works Contract for RFOTC Training Grounds Modifications and Upgrades

Submitted by: Jim Ruane, Assistant Chief/Logistics Department and Rob Capobianco, Assistant Chief/EMS and Training Department

Recommended Actions:

1. Accept Neuroth Construction, Inc. bid dated December 7, 2023.
2. Approve and award the public works contract to Neuroth Construction, Inc. in the amount of \$2,347,227.
3. Approve the plans and specifications for the Training Grounds Modifications and Upgrades at the OCFA RFOTC, as included in the contract.

D. Award of Public Works Contract for Fire Station 41 Airfield Modifications

Submitted by: Jim Ruane, Assistant Chief/Logistics Department and Tim Perkins, Assistant Chief, Fire Operations South

Recommended Actions:

1. Accept J&L Constructors, Inc. bid dated January 11, 2024.
2. Approve and award the public works contract to J&L Constructors, Inc. in the amount of \$790,000.
3. Approve the plans and specifications for the airfield modifications OCFA Fire Station 41, as included in the contract.

3. DISCUSSION CALENDAR**A. Prefunding of CIP Projects Policy - B&FC Review Process and Recommendation for Board Consideration**

Submitted by: Lori Zeller, Deputy Chief/Administration & Support Bureau and Robert Cortez, Assistant Chief/Business Services Department

At the February 14, 2024, meeting of the B&FC, the Committee reviewed the proposed agenda item and recommended staff place the proposed draft policy language changes to the Fiscal Stability Budget Policy on the Board of Directors agenda for consideration at its February 22, 2024, meeting by a vote of 6-0 (Director Nguyen absent).

Recommended Action:

Review and approve the proposed draft policy language changes to the Financial Stability Budget Policy as recommended by the B&FC, to formalize the prefunding of CIP regional assets, specifically for the future replacement of helicopters.

RECESS TO CLOSED SESSION

The Brown Act permits legislative bodies to discuss certain matters without members of the public present. The Board of Directors find, based on advice from the General Counsel, that discussion in open session of the following matter will prejudice the position of the Authority on item listed below:

CS1. CONFERENCE WITH LEGAL COUNSEL - SIGNIFICANT EXPOSURE TO LITIGATION pursuant to paragraph (2) and (3) of subdivision (d) of Section 54956.9 of the Government Code: One (1) Case

CS2. CONFERENCE WITH LABOR NEGOTIATORS pursuant to Government Code Section 54957.6

Negotiators:

Peter Brown, Liebert Cassidy Whitmore; Stephanie Holloman, Assistant Chief/Human Resources Director and Lori Zeller, Deputy Chief/Administration & Support Bureau

Employee Organizations:

Orange County Professional Firefighters Association, IAFF - Local 3631

RECONVENE TO OPEN SESSION

CLOSED SESSION REPORT by General Counsel

BOARD MEMBER COMMENTS

ADJOURNMENT – The next meeting of the Orange County Fire Authority Board of Directors will be on Thursday, March 28, 2024, at 6:00 p.m.

AFFIDAVIT OF POSTING

I hereby certify under penalty of perjury and as required by the State of California, Government Code § 54954.2(a), that the foregoing Agenda was posted in the lobby and front gate public display case of the Orange County Fire Authority, Regional Fire Operations and Training Center, 1 Fire Authority Road, Irvine, CA, not less than 72 hours prior to the meeting.

Maria D. Huizar, CMC
Clerk of the Authority

FUTURE BOARD AGENDA ITEMS – THREE-MONTH OUTLOOK:

- OCFA JPA Study Session
- Long-Term Liability Study & Accelerated Pension Paydown Plan
- Mid-Year Budget Adjustments
- Wildfire Resource Center (Camp 18) Site Selection

UPCOMING MEETINGS:

Budget & Finance Committee
Legislative & Public Affairs Committee
Executive Committee
Board of Directors

Wednesday, March 13, 2024, 12 noon
Wednesday, March 20, 2024, 12 noon
Thursday, March 28, 2024, 5:30 p.m.
Thursday, March 28, 2024, 6:00 p.m.

APPROVED PERFORMANCE GOALS – FY 2023/24 - *Second Quarter Update*

OCFA STRATEGIC GOALS – FY 2023/24 GOALS, OBJECTIVES & PERFORMANCE MEASURES	Responsibility Designated department lead	Performance Measures Target start date (TSD), target completion date (TCD), and completion benchmark (CB)
<p>OCFA's Strategic Goals & Objectives function in a waterfall manner, with overarching goals at the top (Fire Chief) flowing down through the Departments, Sections, and ultimately to individual managers/employees. As our goals flow through the organization, they increase in volume, build momentum, become more detailed in definition, gain sequencing as incremental tasks, and become all the more measurable and quantifiable. And finally, our three goals are interlinked; as we progress towards one, elements of the other two come into play. This calculated process speaks to the organic, ever-evolving nature of the work that not only drives our success, but also empowers us to raise the bar even further.</p> <ul style="list-style-type: none"> ➤ At the highest level, OCFA's Strategic Goals are small in number, broad in scope, designed with a long-term outlook, and relatively static to keep the organization perpetually focused on fulfilling our overarching mission. Strategic Goals are guided by the Fire Chief. ➤ Strategic goals are further supported by Departmental Objectives which provide greater definition, are designed for annual measurement, and bolster forward progress towards the Strategic Goals. Departmental Objectives are guided by Executive Management/departments heads. <p>OCFA's annual goals, objectives, and performance measures guide our priorities and efforts throughout the year to ensure progress on intentional organizational goals.</p>		
OCFA's FY 2023/24 Strategic Goals, led by Fire Chief Brian Fennessy:		
1. Our Service Delivery <i>Goal #1: Our service delivery model is centered on continuous improvement. All services are sustainable through a range of economic environments and focused on our mission.</i>		
2. Our People <i>Goal #2: Recruit, retain, and promote a diverse and highly skilled workforce that is resilient, accountable, and united in our common mission.</i>		
3. Our Technology <i>Goal #3: Implement and utilize emerging technologies that support the needs of the organization by maximizing operational efficiency and improving quality of service.</i>		

Performance Measure: For quarterly updates, the measurement will be shaded to indicate status, as follows = Not Started, In Progress, Complete

APPROVED PERFORMANCE GOALS – FY 2023/24 - *Second Quarter Update*

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OCFA’s FY 2023/24 Departmental Objectives, led by Executive Management:			
1. <u>Our Service Delivery</u> <i>Goal #1: Our service delivery model is centered on continuous improvement. All services are sustainable through a range of economic environments and focused on our mission.</i>			
<p>a. Assist those OCFA member cities with 201 rights as they navigate the issuance of RFPs to award new 911 Ambulance Service contracts, helping them to achieve beneficial services and financial arrangements.</p> <p>At the July 27, 2023 Board of Directors meeting, staff received Board approval for an RFP scope of work to obtain a comprehensive analysis of Ambulance Transportation Options throughout OCFA’s service jurisdiction, including OCFA cities with 201 rights.</p> <p>At the September 28, 2023 meeting, the Board approved award of contract to Citygate Associates to provide the ambulance system analysis. As of this Second Quarter Update, Citygate Associates is in the process of completing the system-wide analysis.</p>	EMS/Ops Training	TSD: TCD: CB:	7/1/23 6/30/25 OCFA provides value-added subject-matter-expertise resulting in improved ambulance contract terms and services for our member cities.
<p>b. Partner with the County Health Care Agency as they begin to prepare a new RFP (starting January 2024) for the next 5-year 911 Ambulance Service contracts that would become effective in 2025.</p> <p>Staff is coordinating with the OCHCA to assist with its next RFP process. We anticipate that the Ambulance Transportation Options Analysis referenced above will provide valuable input in building the next RFP.</p>	EMS/Ops Training	TSD: TCD: CB:	1/1/24 6/30/25 OCFA provides value-added subject-matter-expertise resulting in improved ambulance contract terms and services for our member cities/county.
<p>c. Conduct a study session with the Board of Directors relative to the JPA governing terms, the differences between cash contract cities and structural fire fund members, OCFA’s history of equity deliberations, and the related Settlement Agreement with the City</p>	Deputy Chief Administration & Support and	TSD: TCD: CB:	7/1/23 6/30/24

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<p>of Irvine. Seek policy direction from the Board regarding its desire to establish an Ad Hoc Committee or Task Force, and for pre-planning actions for the OCFA JPA 2030 Renewal.</p> <p>Staff has prepared a comprehensive educational presentation to cover all of the JPA topics requested herein. Staff is currently targeting the March 28, 2024 Board of Directors meeting for presentation of this item.</p>	Business Services		The Board of Directors provides policy direction relative to pre-planning actions for the OCFA JPA 2030 Renewal.
<p>d. Research financial policy options for OCFA to begin prefunding its Capital Improvement Program (CIP), to be proactive in regard to CIP funding, while still allowing some financial flexibility.</p> <p>As directed by the Board of Directors, staff has been working through a multi-phase review process with the Budget & Finance Committee (B&FC) to evaluate policy options for prefunding CIP projects. The B&FC's final recommendations regarding CIP prefunding policy are anticipated to be presented to the Board of Directors at their meeting of February 22, 2024.</p>	Business Services	TSD: TCD: CB:	7/1/23 6/30/24 The Board of Directors adopts policy changes or confirms existing policy for funding the CIP.
<p>e. Fill the new Strategic Services position and leverage this new position/Section to begin identifying opportunities for organizational process and service improvements, including:</p> <ol style="list-style-type: none"> (1) Conducting operational deployment analysis (2) Developing measurement thresholds for determining service enhancement priorities (3) Responding to housing/commercial development occurring in OCFA member cities/county (4) Partnering with the Community Risk Reduction (CRR) & Business Services Departments to evaluate and update OCFA's Development Impact Fee (with support from an external Development Impact Fee consultant) 	Deputy Chiefs, Business Services & CRR	TSD: TCD: CB:	7/1/23 6/30/24 An analytical Chief Officer is selected to re-establish the OCFA Strategic Services Section and the Section begins building tools for process improvements and for responding to expanded service needs throughout OCFA's jurisdiction.

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<p>The Strategic Services position was filled with a Division Chief (Paul Whittaker) at the beginning of the fiscal year. Subsequently, at the October 26, 2023 meeting, the Executive Committee awarded a contract to Citygate Associates for completion of a Field Deployment Standards of Cover (SOC) Update, which will provide Chief Whittaker with the baseline tools needed for future analytics and facilitate identification of target areas in need of service enhancements in OCFA’s jurisdiction.</p> <p>In addition, staff is working on an RFP to engage a consultant who can assist with an update to OCFA’s Development Impact Fees.</p>			
<p>f. Complete required training (Flight Safety Simulator and Sikorski Training Academies) for Air Operations personnel to be ready for operational implementation of the new FIREHAWK helicopters, following delivery to OCFA.</p> <p>Required training for Air Operations personnel has begun, and will continue upon delivery of the new FIREHAWK helicopters. Buildout of the FIREHAWKS by United Rotorcraft is nearing completion. The current timeline for delivery of the FIREHAWKS is estimated around mid-March 2024.</p> <p>The FIREHAWK’s ease of navigation in aerial firefighting to a reconfigurable cabin that accommodates up to 12 firefighting crew members and their equipment during emergency operations — is being chronicled on all OCFA social media platforms. Thus far, this social media campaign has earned 381,508 impressions across all platforms. You can monitor the progress by following us on social media @OCFireAuthority and searching the hashtag #OCFAFIREHAWKS.</p>	South Operations	TSD: TCD: CB:	7/1/23 6/30/24 The FIREHAWK helicopters are implemented to enhance personnel safety and service delivery.

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<p>g. Prioritize and implement security improvements, as approved by the Board of Directors, which are designed to protect the provision of OCFA services and the employees who provide those services.</p> <p>Staff completed an RFP Process and, at the January 25, 2024 Executive Committee meeting, a contract was awarded to Allied Universal for Armed Physical Security services, for a three-year term with two optional one-year renewals.</p> <p>Staff also solicited proposals for security manager services and intends to return to the Executive Committee for award of a contract for those services.</p> <p>Additional elements of security measures are being prioritized for potential funding requests in the upcoming FY 2024/25 budget development process.</p>	Logistics	TSD: TCD: CB:	7/1/23 6/30/24 Prioritized measures for the fiscal year are funded in the budget and are in various stages of implementation by staff.
2. <u>Our People</u> <i>Goal #2: Recruit, retain, and promote a diverse and highly skilled workforce that is resilient, accountable, and united in our common mission.</i>			
<p>a. Pursue additional actions to reduce force hiring and to improve equitable distribution of force hiring for all ranks, including focus on ECC/Dispatch personnel.</p> <p>Aggressive actions which management took during Fiscal Year 2022/23 have continued into FY 2023/24, including hiring new firefighters, promoting existing personnel through the ranks, and providing opportunities for personnel to attend paramedic school. These actions continue to result in sustained reductions in force hiring.</p>	Deputy Chief of Emergency Ops, EMS/Ops Training and HR	TSD: TCD: CB:	7/1/23 6/30/24 The volume of force hiring is reduced as compared to FY 2022/23.

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<p>Data from May 2023 (when we last reported numbers to the Board) compared to data from December 2023 has revealed sustained improvements across all firefighter ranks, as shown below:</p> <table><tr><th colspan="3">Average # of Forced Overtime Shifts Per Employee/Per Month (>14 hrs.)</th></tr><tr><th>Rank</th><th>May '23</th><th>Dec '23</th></tr><tr><td>Firefighter (FF)</td><td>0.3</td><td>0.1</td></tr><tr><td>FF/Paramedic (PM)</td><td>0.5</td><td>0.2</td></tr><tr><td>Fire Apparatus Engineer</td><td>1.0</td><td>0.7</td></tr><tr><td>Fire Apparatus Engineer/PM</td><td>0.7</td><td>0.8</td></tr><tr><td>Fire Captain</td><td>1.7</td><td>1.0</td></tr><tr><td>Fire Captain/PM</td><td>1.5</td><td>0.8</td></tr></table> <p>Management is also working aggressively to reduce force hiring for Dispatchers, with significant improvement in these positions as well.</p> <table><tr><th colspan="3">Average # of Forced Overtime Shifts Per Employee/Per Month</th></tr><tr><th>Rank</th><th>May '23</th><th>Dec '23</th></tr><tr><td>Dispatchers</td><td>3.1</td><td>1.8</td></tr><tr><td>Dispatch Supervisors</td><td>0.3</td><td>0.0</td></tr></table>	Average # of Forced Overtime Shifts Per Employee/Per Month (>14 hrs.)			Rank	May '23	Dec '23	Firefighter (FF)	0.3	0.1	FF/Paramedic (PM)	0.5	0.2	Fire Apparatus Engineer	1.0	0.7	Fire Apparatus Engineer/PM	0.7	0.8	Fire Captain	1.7	1.0	Fire Captain/PM	1.5	0.8	Average # of Forced Overtime Shifts Per Employee/Per Month			Rank	May '23	Dec '23	Dispatchers	3.1	1.8	Dispatch Supervisors	0.3	0.0			
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<p>b. Fill the new Organizational Development & Training Manager position and leverage this new position to take actions towards fostering career progression, encouraging professional development, and developing future leaders within OCFA.</p> <p>A recruitment was completed and this position was filled on December 19, 2023 by Ms. Maria Hernandez. Ms. Hernandez is in the process of gaining input from throughout OCFA to begin building new training opportunities.</p>	Deputy Chiefs and HR	TSD: TCD: CB:	7/1/23 6/30/24 A skilled training manager is hired, and new training opportunities are offered for all levels of personnel.																																				

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<p>c. Plan and begin implementing actions to foster OCFA’s cultural growth for diversity, equity, and inclusion (DE&I) including focus and measurements for:</p> <ul style="list-style-type: none"> (1) Cultural diversity growth in staffing (2) Expanded trainings for cultural growth (3) Increased Outreach & Recruitment Team (ORT) engagement (4) Formation and effective use of DE&I Committee Task Force <p><i>(Note: This is an ongoing goal.)</i></p> <p>OCFA hosted its first O2X Women’s Wellness Workshop on December 15-16 focused on cognitive function and energy through nutrition, training protocols that reduce injury and overall readiness and resiliency. The program was customized for female tactical readiness.</p> <p>OCFA continues to identify and initiate partnerships with organizations that support our DE&I recruitment and retention initiatives like Anaheim Unified High School District Public Safety Academies, Empowering Leadership in Latina Athletes (ELLA), EXP – The Opportunity Engine.</p> <p>We continue to deploy classes that support cultural awareness, emotional intelligence, and inclusivity like Courageous Conversations and expanding content in the next quarter to include Supervising a Multi-Generational Workforce, Implicit Bias Training, and Leading with Cultural Humility.</p>	Deputy Chiefs, HR & Corporate Communications	TSD: TCD: CB:	7/1/23 6/30/24 Training, messaging, and actions emphasize the importance of a diverse and inclusive workforce.
<p>d. Develop policies to keep OCFA proactive with classification and compensation issues.</p> <p>Management is currently engaged in various classification and compensation studies in IT, Accounting, Dispatch, and Administrative Support Series, Air Operations, and Wildland Operations to ensure appropriate alignment of duties and responsibilities that support the current and future needs of the Authority. In addition, Management is</p>	Human Resources	TSD: TCD: CB:	7/1/23 6/30/24 Guiding policy initiatives are developed and shared in connection with pending decisions relative to classification and compensation.

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engaged in discussions with the OCPFA Local 3631 with regard to the Classification and Compensation Policy for the unit.			
3. <u>Our Technology</u> <i>Goal #3: Implement and utilize emerging technologies that support the needs of the organization by maximizing operational efficiency and improving quality of service.</i>			
<p>a. Complete the development of the Community Risk Reduction records management system, known as ORION to replace the obsolete Integrated Fire Prevention (IFP) system and thereby improve efficiencies while enhancing quality of service.</p> <p>The build of the ORION system is now 98% complete, with the project remaining under budget. Final adjustments to the system are being made to enable the initial roll-out. Training has begun for system users. The system is scheduled to go live on July 1, 2024.</p>	Logistics & Community Risk Reduction	TSD: TCD: CB:	7/1/23 (Beta Testing Begins) 6/30/24 The system goes live during the fiscal year, with refinement phases continuing, as needed, post-implementation.
<p>b. Building upon the EMS (Emergency Medical Services) System needs assessment completed in FY 2022/23, identify the best technology, develop the scope for making comprehensive EMS System upgrades, and engage in solicitation/implementation phases of the project.</p> <p>The final version of the EMS System needs assessment was completed in January 2023. IT/EMS is reviewing the project scope and prioritization of needs, which will result in recommendations for purchase of a system and/or development of a solution.</p> <p>Certain time sensitive technology projects have already kicked-off and are in implementation phases, including:</p> <ul style="list-style-type: none"> First Watch/Pass for the EMS Quality Management Division 	Logistics & EMS/Ops Training	TSD: TCD: CB:	7/1/23 6/30/24 EMS, with support from I/T, jointly prepares the project scope in preparation for system purchase or development, and phased implementation.

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<ul style="list-style-type: none"> RFP completed and new automated medication dispensing system, beginning implementation. RFI for non-controlled EMS Tracking and Storage System currently being evaluated. 			
<p>c. Complete the Staffing System needs assessment, prioritize and identify the best technology, and develop the scope for making comprehensive System upgrades.</p> <p>Gartner Consulting completed the Staffing System needs assessment report in November of 2023 and provided a number of recommendations for system replacement and enhancements. Staff presented the assessment report results to Executive Management in December of 2023. Staff is in the process of developing a Request for Information (RFI) solicitation to gain additional knowledge of alternative staffing system solutions available in the market.</p>	Deputy Chief of Emergency Ops, Business Services, HR & Logistics	TSD: TCD: CB:	7/1/23 6/30/24 Consultant completes the needs assessment and departments jointly prepare the project scope in preparation for system purchase or development during future fiscal years.
<p>d. Continue implementing the scope and plans developed during FY 2020/21 for targeted cyber-security upgrades, physical-security upgrades connected to technology, and continuity of operations supported by technology (data center colocation facility, backup dispatch center, and data center fire protection upgrade).</p> <ul style="list-style-type: none"> Cyber-security – Physical Access to IT systems 75% complete; Network access/privileges and software precautions 100% complete; 2-factor login authentication testing complete and being deployed; server and firewall software patching 95% complete. Wireless survey complete; going to bid to upgrade; recommended for 102 access points at RFOTC. A Purchase Order has been issued for third-party security penetration testing of the OCFA network and the penetration testing completed in Dec. 2023. 	Logistics	TSD: TCD: CB:	7/1/23 6/30/24 Implementation is substantially complete for the Cyber and Physical Security phases; Continuity of Operations implementation continues over the next three fiscal years.

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OCFA STRATEGIC GOALS – FY 2023/24 GOALS, OBJECTIVES & PERFORMANCE MEASURES	Responsibility Designated department lead	Performance Measures Target start date (TSD), target completion date (TCD), and completion benchmark (CB)	
<ul style="list-style-type: none"> • Physical Security Upgrades – Control Access System and surveillance camera upgrades design/engineering complete; bid/award, equipment ordered, all door access card readers upgraded, surveillance cameras installation in process, control access system servers installed in OCFA data center and operational. Project is 75% complete. Full implementation is estimated by June 2024 due to installation delays. Security Guard Services contract for enhanced services (armed guards and increased hours) was approved for contract award at the February 2024 Executive Committee. • Data Center Co-location Facility – 20% complete. Location identified (US&R Warehouse). Feasibility study complete; demonstration of Motorola radio communications for Dispatchers with OCSD February 2023. Developing engineering plans for US&R data center, dispatcher offices tenant improvements including power, HVAC, security, emergency generator. Next steps – Complete engineering plans and approval thru City of Lake Forest, solicit bids from vendors, and BOD approval to proceed with construction phase. Alternate dispatch location at FS43 with Dispatch trailer; VESTA modified to extend calls to trailer at FS43, Power and data connections added in Apparatus bay to support live CAD/9-1-1 dispatching. - 100% implemented. Live testing of 911 calls and dispatch complete; upgrading of PCs in existing communications trailer in process. • Data Center Fire Protection Upgrade –70% complete. Contract awarded and equipment ordered; installation completed. Supplemental facility update to Data Center determined necessary including improving door seals, installing additional venting duct work to outdoors. Upgrade to design is completed and with City of Irvine for approval. 			

Performance Measure: For quarterly updates, the measurement will be shaded to indicate status, as follows = Not Started, In Progress, Complete

MINUTES ORANGE COUNTY FIRE AUTHORITY

**Board of Directors Regular Meeting
Thursday, January 25, 2024
6:00 P.M.**

**Regional Fire Operations and Training Center
Board Room
1 Fire Authority Road
Irvine, CA 92602**

CALL TO ORDER

A regular meeting of the Orange County Fire Authority Board of Directors was called to order on January 25, 2024, at 6:03 p.m. by Chair Rossini.

INVOCATION

The Invocation was led by Chaplain Ken Krikac.

PLEDGE OF ALLEGIANCE

Director Gamble led the assembly in the Pledge of Allegiance.

ROLL CALL

Vince Rossini, Villa Park, Chair
Phil Bacerra, Santa Ana
Ross Chun, Aliso Viejo
Katrina Foley, County of Orange
Carol Gamble, Rancho Santa Margarita
Noel Hatch, Laguna Woods
Joe Kalmick, Seal Beach
Austin Lombard, Tustin
Chi Charlie Nguyen, Westminster
Joshua Sweeney, Laguna Hills
Connor Traut, Buena Park

John O'Neill, Garden Grove, Vice Chair
Troy Bourne, San Juan Capistrano
Chris Duncan, San Clemente
Mike Frost, Dana Point
Shelley Hasselbrink, Los Alamitos
Kelly Jennings, Laguna Niguel
Tammy Kim, Irvine
Anne Mallari, Cypress
Dave Shawver, Stanton
Mark Tettemer, Lake Forest
Donald P. Wagner, County of Orange

Absent: Bob Ruesch, Mission Viejo

Nitesh Patel, La Palma

Also present were:

Deputy Chief Lori Zeller
Assistant Chief Robert Cortez
Assistant Chief Rob Capobianco
Assistant Chief Tim Perkins
Assistant Chief Stephanie Holloman
Clerk of the Authority Maria D. Huizar

Deputy Chief TJ McGovern
Assistant Chief Lori Smith
Assistant Chief Jim Ruane
Assistant Chief Shane Sherwood
Director of Communications Matt Olson
General Counsel David Kendig

REPORTS

A. Report from Budget and Finance Committee Chair

Budget and Finance Committee Chair O'Neill reported at its January 10, 2024, meeting, the Committee recommended by a unanimous vote to forward the FY 22 State Homeland Security Grant Funding and the FY 2023/2024 Mid-Year Financial Report to the Board of Directors for consideration and approval of the recommended actions.

B. Report from the Fire Chief

Deputy Chief McGovern on behalf of Fire Chief Fennessy, presented the Chief's Report to the Board, wishing the Board of Director's a Happy New Year, he welcomed newly appointed Board Member Mike Frost of Dana Point, and presented the following monthly update; Firefighters Local 3631 partnered with OCFA to produce the annual Firefighter Cancer Awareness Month digital newsletter with an agency-wide call to action that aims to establish OCFA as a national model for best practices in cancer prevention. He reported a twenty percent increase in call volume in just 3 years for fires; all-hazard responses, and EMS responses. He presented a video highlighting the diverse 911 calls responded to by both air and ground attacks of OCFA firefighters.

Director of Communications Olson presented a video of the 2023 Year in Review with highlights of the Spark of Love Holiday Toy Drive in partnership with KABC 7, KWAVE, and OCFA Foundation, led by OCFA Community Educators. It was the most successful in the 31-years history with nearly 40,000 toys collected for under privileged youth throughout our region. He announced the annual OCFA Open House at RFOTC will occur this year on March 16.

PUBLIC COMMENTS

Chris Hamm, President of Firefighter Local 3631, thanked the Board of Directors for their support commenting on Cancer Awareness Month which sheds light on the numerous firefighters affected.

Chris Hamm, President of Firefighter Local 3631, noted Local 3631 is working in collaboration with OCFA to host Fire Ops 101; adding an invitation has been extended to all OCFA Board of Directors.

1. PRESENTATION

A. Administer the Oath of Office to Mike Frost, representing the City of Dana Point

Clerk of the Authority Huizar administered the Oath of Office to newly appointed Director Mike Frost of Dana Point.

B. Presentation of Badges to US&R Canines

Battalion Chief Sean Lowry provided background information of the FEMA Urban Search and Rescue Canine CA-TF5 Team. Fire Captain Doug Van Iwaarden introduced the canine handlers and canines and noted the training requirements. Clerk of the Authority Huizar administered the Oath of Office followed by the badge pinning by Vice Chair O'Neill, Deputy Chief McGovern, and Assistant Chief Perkins to the following: Handler Jill Haynes – K9 Rubble, Handler Sean Monville – K9 Nanci, Handler Chris Mackenzie – K9 Mia, Handler Eric Darling – K9 Mazie, and Handler Julie Kirk Purcell – K9 Keres.

2. CONSENT CALENDAR

On motion of Director Shawver and second by Director Hasselbrink, approved 22-0 Agenda Item Nos. 2A-2C (Directors Patel and Ruesch absent). Agenda Item No. 2D was pulled for separate consideration.

A. Minutes for the Board of Directors Meeting (FILE 11.06)

Action: Approve the Minutes for the November 16, 2023, Regular Meeting as submitted.

B. FY 22 State Homeland Security Grant Funding (FILE 16.02B)

On January 10, 2024, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 8-0 (Director Gabbard absent).

Action: Approve a budget adjustment in Fund 121 to increase revenue and expenditures by \$280,000 for the grant program award.

C. Proclamation for National Burn Awareness Week (FILE 11.09A)

Action: Approve proclamation designating February 4-10 2024, as Burn Awareness Week.

D. FY 2023/2024 Mid-Year Financial Report (FILE 15.04)

Chris Hamm, President of Firefighter Local 3631, addressed the collaborative efforts by Labor, OCFA, and Board of Directors for the fiscal management of the Health Care Trust. He noted Local 3631 Members had a significant role in substantial savings.

On motion of Director O'Neill and second by Director Kim, approved 22-0 (Directors Patel and Ruesch absent) to receive and file report and direct staff to return to the Board of Directors on March 28, 2024, for approval of the budget adjustments discussed herein for the FY 2023/24 budget.

3. DISCUSSION CALENDAR

A. Election of Board Chair and Vice Chair for 2024 (File 11.02B)

Chair Rossini introduced the election process for Chair and Vice Chair.

Clerk of the Authority Huizar performed a roll call vote of approval to move forward with the Election of the Board Chair and Vice Chair as presented. It was approved by 22-0 (Directors Patel and Ruesch absent).

Chair Rossini opened the nominations for Chair of the Board.

Director Shawver nominated Vice Chair O'Neill for the position of Chair of the Board. Chair Rossini seconded the nomination.

There were no other nominations. With no opposition stated, Chair Rossini declared Director O'Neill the newly elected Chair of the Board.

Chair O'Neill thanked all of the Board Members for the opportunity to serve as the Board Chair in the ensuing year.

Chair Rossini opened the nominations for Vice Chair of the Board.

Director Hasselbrink nominated Director Bourne. Chair Rossini seconded the nomination.

Director Kim nominated Director Kalmick. Director Mallari seconded the nomination.

Director Bourne and Director Kalmick accepted the nomination. There were no other nominations.

Clerk of the Authority Huizar performed a roll call vote for the two candidates for Vice Chair.

On a vote of 16-5 Director Bourne was declared Vice Chair of the Board for the ensuing year (Directors Mallari, Kalmick, Bacerra, Kim, and Traut voted in favor of Director Kalmick, with one abstention from Director O'Neill, and Directors Patel and Ruesch absent).

Chris Hamm, President of Firefighter Local 3631, thanked Chair Rossini for his service as Chair for the last year. He congratulated both newly elected Chair O'Neill and Vice Chair Bourne.

RECESS TO CLOSED SESSION (FILE 11.15)

Director Wagner left at 7:00 p.m.

General Counsel Kendig reported the Board would adjourn to Closed Session to consider items CS2 and CS3.

CS1. CONFERENCE WITH LEGAL COUNSEL - SIGNIFICANT EXPOSURE TO LITIGATION pursuant to paragraph (2) and (3) of subdivision (d) of Section 54956.9 of the Government Code: One (1) Case

CS2. CONFERENCE WITH LEGAL COUNSEL - POSSIBLE INITIATION OF LITIGATION pursuant to paragraph (4) of subdivision(d) of Section 54956.9 of the Government Code: One (1) Case

CS3. CONFERENCE WITH LABOR NEGOTIATORS pursuant to Government Code Section 54957.6

Negotiators:	Peter Brown, Liebert Cassidy Whitmore; Stephanie Holloman, Assistant Chief/Human Resources Director and Lori Zeller, Deputy Chief/ Administration & Support Bureau
Employee Organizations:	Orange County Professional Firefighters Association, IAFF - Local 3631

RECONVENED TO OPEN SESSION

CLOSED SESSION REPORT (FILE 11.15)

General Counsel Kendig reported that the Board continued its prior direction to initiate litigation. The action, the defendants, and other particulars will, once litigation is formally commenced, be disclosed to any person upon inquiry. General Counsel Kendig stated there was no other reportable action.

ADJOURNMENT – Chair O’Neill adjourned the meeting at 7:52 p.m. The next meeting of the Orange County Fire Authority Board of Directors will be on Thursday, February 22, 2024, at 6:00 p.m.

Maria D. Huizar, CMC
Clerk of the Authority



Orange County Fire Authority
AGENDA STAFF REPORT

Board of Directors Meeting
February 22, 2024

Agenda Item No. 2B
Consent Calendar

Annual Grant Priorities for 2024

Contact(s) for Further Information

Robert Cortez, Assistant Chief
Business Services Department

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714.573.6012

Summary

This annual agenda item is submitted to the Budget and Finance Committee for approval of OCFA's Annual Grant Priorities for 2024.

Prior Board/Committee Action

This is an annual and routine item presented to Budget and Finance Committee since 2012.

On February 14, 2024, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 6-0 (Director Nguyen absent).

RECOMMENDED ACTION(S)

Approve OCFA's Annual Grant Priorities for 2024.

Impact to Cities/County

Successful grant applications for staffing and equipment will provide significant benefit to member cities and the county.

Fiscal Impact

If grant funds are awarded for staffing or equipment, these funds will help offset expenses.

Background

The OCFA applies for grant funding throughout the year based on needs identified throughout the organization. This staff report and Attachment is provided to establish the 2024 Grant Priorities and to provide a progress update on grant awards previously received. Grant priorities are established in collaboration with Executive Management and staff to address staffing, training and equipment needs and to match them with funding opportunities. Upcoming grant opportunities of note include:

FY 2023 Assistance to Firefighters Grants (AFG) Program

The primary goal of the AFG is to meet the firefighting and emergency response needs of fire departments and non-affiliated emergency medical service organizations. Eligible item categories under the AFG grant include: training, equipment, PPE, wellness/fitness, modifications to facilities, and vehicles. Executive Management and staff are evaluating high priority needs and intend on submitting an application by the March 8, 2024 deadline.

FY 2023 Staffing for Adequate Fire & Emergency Response (SAFER) Program

The SAFER Program provides funding to assist in increasing the number of firefighters to help communities meet industry minimum standards and attain 24-hour staffing. Staff is evaluating the addition of a fourth firefighter on engines to enhance service delivery, improve efficiency and enhance firefighter safety. Stations that are currently being evaluated for potential staffing enhancements using proposed SAFER grant funding are Fire Stations 7 (San Juan Capistrano), 18 (Trabuco Canyon), and 57 (Aliso Viejo).

Attachment(s)

OCFA's Annual Grant Priorities for 2024



Orange County Fire Authority

Annual Grant Priorities

2024

Assistance to Firefighters Grant (AFG)

[AFG](#) funds the purchase of firefighting vehicles, programs, and safety equipment. Applications are accepted for training, equipment, PPE, wellness/fitness, modifications to facilities, and vehicles. Departments can submit one application and an additional “regional application,” in partnership with one or more other fire departments.

FY 2023 Grant Period Application

The Federal Emergency Management Agency (FEMA) AFG Notice of Funding Opportunity (NOFO) for the FY 2023 grant period opened on January 29, 2024 and applications are scheduled to close on March 8, 2024. Executive Management and staff are evaluating high priority needs and intend on submitting an application for grant eligible items. Additionally, and in conjunction with our budget development process, staff is identifying grant eligible items that cannot be funded by OCFA’s budget at this time.

Prior Grant Application Periods

For the FY 2022 grant period, OCFA submitted a regional grant application in partnership with the cities of Newport Beach, Orange, Costa Mesa, Fountain Valley, and Laguna Beach fire agencies for personal escape system (PES) devices for the prevention of firefighter entrapment and received a turndown notice from FEMA in November of 2023. For the FY 2021 grant period, OCFA submitted a grant application for the replacement of turnouts, wildland jackets/pants and other PPE and received a turndown notice. Fortunately, OCFA was able to use excess funds from the 2018 AFG grant award to purchase wildland jackets and pants. Structure turnouts are being funded through OCFA’s own budget to ensure all personnel have at least two sets.

For the FY 2020 grant period, OCFA was awarded \$1,362,522 in AFG funds on September of 2021 to replace outdated/aging Self-Contained Breathing Apparatus (SCBAs) to newer models with increased capacity and safety features. Upon further evaluation, Executive Management expanded the scope of the SCBA project to replace all SCBAs to newer models with increased capacity including the replacement of all related SCBA equipment and infrastructure. The change in scope necessitated a much greater timeframe to review OCFA’s needs, modify the 5-year CIP as part of the budget development process, and to conduct a much more extensive solicitation process than the grant timeframe allowed. As a result, grant funds were de-obligated in late 2023.

For the FY 2019 grant period, OCFA received \$1,522,584 for 35 OCFA members and 25 members from neighboring fire departments to be certified Fire Ground Survival (FGS) instructors under the International Association of Fire Fighters (IAFF). Due to COVID-19 this grant was extended multiple times, with OCFA completing the FGS program in early 2022.

Staffing for Adequate Fire and Emergency Response (SAFER)

The FEMA [SAFER](#) grant funds the hiring of “front-line” firefighters. This grant prioritizes awards to fire departments seeking funding for positions that will contribute to and improve compliance

with “NFPA staffing, response, and operational standards that enhance community and firefighter safety.”

FY 2023 Grant Period Application

As of the date of this report, the FY 2023 SAFER NOFO has not been released nor the details on the application start and end period. Typically the application period runs from mid-February to mid-March when the NOFO is made available. In anticipation of the NOFO being released, staff is considering future staffing needs and options to submit for engine companies that may benefit from the addition of a 4th firefighter position. Stations that are currently being evaluated for potential staffing enhancements using proposed SAFER grant funding are Fire Stations 7 (San Juan Capistrano), 18 (Trabuco Canyon), and 57 (Aliso Viejo). Upon release of the NOFO, staff will review for eligibility, match requirements, and seek further direction if required.

Prior Grant Application Periods

In 2017, OCFA requested and received funding for new firefighter positions, including the addition of a fourth firefighter on engines to enhance service delivery, improve efficiency, and enhance firefighter safety. The grant provided three years of funding with a federal and local cost share split of 75% federal and 25% local in the first two years, and 35% federal and 65% local in the third year. The 2017 grant funded a fourth firefighter on an engine in each of the member cities of Buena Park, San Clemente, Placentia, and Tustin. Adding a fourth firefighter on those units improved service delivery and enhanced firefighter safety. The cost of each position has been phased-in and will be fully paid for by Buena Park, San Clemente, and Tustin in FY 2024/25.

Fire Prevention and Safety (FP&S)

The FEMA [FP&S](#) grant supports projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to reduce injury and prevent death among high-risk populations such as seniors and children. Local agencies may apply for other at-risk groups they have identified through incident data, studies, or risk assessments.

FY 2023 Grant Period Application

As of the date of this report, the FY 2023 FP&S NOFO has not been released with details on the application start and end period. OCFA’s Corporate Communication and Community Educators have identified a need for additional smoke alarms designed for the hearing impaired, life jackets, and marketing of current education messages/programs. OCFA will apply for eligible items once the NOFO is made available.

Prior Grant Application Periods

OCFA submitted and received an award in September of 2021 for \$152,892 in federal funds to purchase a Fire Safety Education Trailer. OCFA staff completed the solicitation process, made an award and took delivery of the education trailer in early 2023. The trailer includes a kitchen and bedroom modules including special effects that allow for simulation to instruct the public on what to do in the event of an earthquake or kitchen fire.

Crews and Heavy Fire Equipment / Air Operations

[CAL FIRE’s Fire Prevention Grants Program](#) provides funding for fire prevention projects and activities in and near fire threatened communities that focus on increasing the protection of people, structures, and communities. Funded activities include hazardous fuels reduction, wildfire

prevention planning, and wildfire prevention education with an emphasis on improving public health and safety while reducing greenhouse gas emissions.

FY 2023 Grant Period Application

Staff's focus for 2024 is the integration of two new helicopters and the recent expansion of our hand crew. Staff anticipates seeking grant funds to purchase heavy equipment. However, staff will revisit OCFA needs once CAL FIRE announces its next application period.

Prior Grant Awards

The following are CAL FIRE grant awards that are in process of implementation. In 2023, OCFA's Wildland Operations Program continued to make purchases using the \$1.25M Cal Fire Direct Award Grant to support vegetation management projects. With another single purpose grant, OCFA purchased a water tender and recently took delivery. In 2022, OCFA's Crews and Heavy Fire Equipment Section received \$1.225 million for vegetation management activities to purchase equipment and supplies for the hand crew and \$250,000 for a new water tender. In 2021, OCFA received \$228,429 to purchase specialized heavy equipment and tools for use by the Crews and Heavy Fire Equipment Section ([Link to OCFA Board Item](#)).

These past awards are providing OCFA crews with improved means to complete projects quickly and efficiently thereby reducing the potential for wildfire within the State Responsibility Area (SRA). These projects will reduce the fuel load countywide and ensure proper maintenance of access roads. These projects include road repair for increasing emergency responses on wildland fires and remote medical aids, the installation of culverts, tree removal, stump grinding, chipping all in one, including the removal of disease-infested trees.

Homeland Security Grants

The Department of Homeland Security and FEMA oversee two grant programs that OCFA is a recipient of through our partnership with local law enforcement. Specifically, the Urban Area Security Initiative (UASI) and State Homeland Security Program (SHSP) provide funding to enhance regional approaches to preparedness and response to acts of terrorism and other threats (<https://www.fema.gov/grants/preparedness/homeland-security>).

UASI funds are allocated by the federal government to large urban areas including Santa Ana and Anaheim. The SHSP program is administered through the state and the Orange County Sheriff's Department. In both cases, those agencies work with all local law enforcement and fire agencies to identify regional needs.

OCFA receives annual funding to staff a position assigned to the Orange County Intelligence Assessment Center (OCIAC) and additional funding to provide training or purchase equipment on behalf of all Orange County fire agencies. In January of 2024, OCFA received \$180,000 to staff a position in OCIAC plus an additional \$100,000 for the purchase of equipment. Additional UASI funded projects include, \$455,000 for the purchase of a Hazardous Materials Support vehicle, \$55,563.64 for regional training in support of the Incident Management Team as well as Active Shooter training, and \$145,000 for the purchase of CBRNE training simulators.



Orange County Fire Authority
AGENDA STAFF REPORT

Board of Directors Meeting
February 22, 2024

Agenda Item No. 2C
Consent Calendar

**Award of Public Works Contract for
RFOTC Training Grounds Modifications and Upgrades**

Contact(s) for Further Information

Jim Ruane, Assistant Chief
Logistics Department

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714.573.6028

Rob Capobianco, Assistant Chief
EMS and Training Department

robcapobianco@ocfa.org

714.573.6008

Summary

This agenda item seeks approval of the plans and specifications for the Training Grounds Modifications and Upgrades at the OCFA RFOTC and award of a public works contract to Neuroth Construction Inc., the only responsive and responsible bidder, responding to bid RO2633B.

Prior Board/Committee Action

None

RECOMMENDED ACTION(S)

1. Accept Neuroth Construction, Inc. bid dated December 7, 2023.
2. Approve and award the public works contract to Neuroth Construction, Inc. in the amount of \$2,347,227.
3. Approve the plans and specifications for the Training Grounds Modifications and Upgrades at the OCFA RFOTC, as included in the contract.

Impact to Cities/County

Not Applicable.

Fiscal Impact

Funding for this contract is available in the existing FY2023/24 Logistics Department Capital Improvement Budget, project *RFOTC Training Grounds Upgrade and Expansion (P251)*.

Background

With adoption of the FY 2023/24 Budget and 5-Year CIP, the Board of Directors approved project RFOTC Training Grounds Upgrade and Expansion (P251) to provide upgrades to the existing Training Grounds, and expansion of the grounds to accommodate OCFA's growth since the facility was originally constructed in 2004. The upgrades portion of the project is being addressed by this set of recommended plans and specifications and award of construction contract (see Attachment 4). Plans/Specifications and Public Work contract award for the project expansion phase is anticipated to be brought to the Board at a future date.

The Training Grounds upgrades scope includes, most critically, replacement of the Live Fire Props within the training tower, and tower structure modifications necessary to accommodate the updated replacement props and other training scenarios, as well as extension and upgrade of electrical service.

Request for Statement of Qualifications (RFSQ) Process

On August 31, 2023, staff issued RFSQ RO2633A to solicit statements of qualifications from vendors interested in the Training Grounds Modifications at RFOTC project. A mandatory job-walk was held on September 14, 2023, with qualifications due on September 28, 2023. Five statements of qualifications were received and reviewed by staff for responsiveness and qualification. Five vendors were deemed responsive and qualified. Attachment 1 is the Executive Summary of the responsive bidders' qualifications (for vendors that completed both the qualifications and bidding stages).

Invitation for Bids (IFB) Process

On October 25, 2023, staff issued IFB RO2633B to solicit competitive bids from pre-qualified vendors for the Training Grounds Modifications at RFOTC project. A mandatory job-walk was held on November 8, 2023, with bids due on December 7, 2023. One construction bid was received and reviewed by staff for responsiveness.

Bidder	Lump Sum Pricing
Neuroth Construction, Inc.	\$2,347,227

Additionally, staff reviewed the pricing submitted and confirmed the reasonableness of the bidder's pricing based on the engineer's estimate, individual cost categories, and comparison to other bidders' pricing. Attachment 2 is the Bid Tabulation with cost category comparison.

Subsequent to this review, a discussion was conducted between Neuroth Construction, Inc. and the OCFA project team to confirm specifications, scope of work, and construction schedule of the project as provided in the bid submittal. As a result of the pre-qualification process, price analysis, and confirmation of the specifications, scope of work, and schedule, Neuroth Construction, Inc. is deemed the lowest responsive and responsible bidder.

Recommendation

Based on the bid results, staff recommends contract award to Neuroth Construction, Inc. as the only responsive, responsible bidder based on the base bid in the amount of \$2,347,227.

Attachment(s)

1. Executive Summary
2. Bid Tabulation
3. Proposed Public Works Contract (*Contract posted online and hard copy available in the Clerk's Office upon request*)
4. Upgrades Phase Site Map



Executive Summary: Formal Public Works Bid

Bid #RO2633B : Training Grounds Modifications at RFOTC

Attachment 1

Section 1. Project Information

IFB Issue Date	10/25/2023	IFB Due Date	12/7/2023
Vendors Notified	805 from original RFSQ, 5 from pre-qualified vendors	Bids Received	1
Job Walk	11/8/2023	Job Walk Attendees	7
Addenda Issued	4	Engineer's Estimate	\$2,609,343
Project Description:	Training Grounds Modifications at OCFA RFOTC		
Solicitation Method:	Due to the public works nature of this project, the estimated value exceeding \$200,000, this project was solicited through the Formal Invitation for Public Works process.		

Section 2. Pre-Qualification of Responsive Bidders

Contractor			Pre-Qualification Determination
Neuroth Construction, Inc.			<input checked="" type="checkbox"/> Qualified <input type="checkbox"/> Not Qualified
Contractor Reputation: <i>Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions</i>			<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Notes:	No notable findings.		
Contractor Capability to Perform Work: <i>CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination</i>			<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Prior & Current Contracts:	<u>Prior:</u> <ul style="list-style-type: none">- Alvarado Parkway Institute – Outpatient and hospital kitchen renovations- Laguna Campground – Picnic table renovations- City of Loma Linda – Fire Station 251 renovation- City of Norco – Gym renovation- OCFA Fire Stations 14, 16, 32, 53 renovations- Cal State San Marcos – Pantry renovation- USDA National Forest Service – San Jacinto restroom and structural upgrades <u>Current:</u> <ul style="list-style-type: none">- San Juan Capistrano Council Chambers- San Gorgonio Pass Perimeter Fence		
Disposition of References:			<input checked="" type="checkbox"/> Favorable <input type="checkbox"/> Unfavorable
References Provided:	Steve Watters – Cal State San Marcos Brian Bolger – City of Loma Linda Patrick Walsh – Alvarado Parkway Behavioral Institute Nathan Hay, Jushua Direen – USDA Robin Sheperd – City of Norco	References Contacted:	3

Notes:	Per contacted references, contractor performed and completed work as agreed, were easy to reach for communication, project was completed within time and budget. Contractor would be recommended for future projects.																				
Section 3. Bid Pricing <i>See attached Bid Tabulation for Detailed Cost Comparison</i>																					
Lowest Responsive, Responsible Bidder:	Neuroth Construction, Inc.																				
Comparison to Engineer's Estimate:	\$262,116 less																				
Pricing Determination:	<input checked="" type="checkbox"/> Reasonable <input type="checkbox"/> Not Reasonable																				
Section 4. Recommendation for Award																					
Award Documentation:																					
Payment Bond:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Performance Bond:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
Award Certifications:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Insurance Certificates:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																		
Discussion:																					
<p>Additional research was completed by OCFA staff and to confirm responsiveness and responsibility of the bid and qualifications of the apparent low-bidder, Neuroth Construction, Inc. A discussion was conducted with the apparent low bidder and OCFA staff for the project after bid opening to confirm specifications, scope of work, and construction schedule of the project as provided in the bid submittal.</p> <p>OCFA Staff also verified the current California State License Board (CSLB) license statuses and registration with the Department of Industrial Relations (DIR) for Neuroth Construction, Inc. as follows:</p> <table border="1"> <thead> <tr> <th>Contractor</th> <th>CSLB License Number, Classification, and Expiration</th> <th>DIR Registration Number</th> </tr> </thead> <tbody> <tr> <td>RB Concrete Solutions</td> <td>1071714, C6 12/31/24</td> <td>1000832867</td> </tr> <tr> <td>East West Building Solutions</td> <td>1014556, B, 5/31/24</td> <td>1000040753</td> </tr> <tr> <td>KFT Fire Trainer</td> <td>912139, A, 7/31/24</td> <td>1000044756</td> </tr> <tr> <td>Jahnke & Sons</td> <td>864784, C61/D64, 10/31/25</td> <td>1000031514</td> </tr> <tr> <td>Wakeland Electric, Inc.</td> <td>1063245, C10, 2/29/2024</td> <td>1000580743</td> </tr> </tbody> </table> <p>As a result of the additional research, meeting, and verified qualifications of the apparent low bidder, its bid was accepted.</p>				Contractor	CSLB License Number, Classification, and Expiration	DIR Registration Number	RB Concrete Solutions	1071714, C6 12/31/24	1000832867	East West Building Solutions	1014556, B, 5/31/24	1000040753	KFT Fire Trainer	912139, A, 7/31/24	1000044756	Jahnke & Sons	864784, C61/D64, 10/31/25	1000031514	Wakeland Electric, Inc.	1063245, C10, 2/29/2024	1000580743
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Wakeland Electric, Inc.	1063245, C10, 2/29/2024	1000580743																			

RO2633B - Training Grounds Modifications at OCFA RFOTC		Neuroth Construction, Inc.		
		Total Bid	Difference from Lowest Bid	Difference from Engineer's Estimate
		\$2,347,227.00	\$0.00	-\$262,116.00
Line Item Subtotal		Line Item Subtotal		
Category I: Labor Classifications (Prevailing Wage)		\$600,000.00		
Category II: Permanent & Non-Permanent Materials/Supplies		\$1,100,000.00		
Category III: Equipment		\$50,000.00		
Category IV: Overhead & Indirect Costs		\$417,227.00		
Category V: Profit (% As written)		8.00%		
Category VI: Permits/Fees		\$0.00		
Notes:		Price is 10% less than engineer's estimate. The submitted bid price is deemed reasonable.		

4F: CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter "Agreement" or "Contract" or "Contract Agreement") is made and entered into for the above identified Project this 18 day of January, 2024, BY AND BETWEEN THE **ORANGE COUNTY FIRE AUTHORITY** (hereinafter "OCFA"), and Neuroth Construction, Inc, as CONTRACTOR.

WITNESSETH that OCFA and CONTRACTOR have mutually agreed as follows:

[SECTIONS 1 – 40 are set forth in the Solicitation Information and Instructions to Bidders above.]

41 – PROJECT MANUAL

This Contract consists of the Project Manual. The Project Manual includes the following component parts thereof, each of which is a part of this Contract:

- (1) RO2633B - Notice Inviting Bids
- (2) RO2633B - Instructions to Bidders
- (3) RO2633B - Bid Documents
- (4) RO2633B - Contract Documents
- (5) RO2633B - Technical Specifications
- (6) Any and all addenda and other supplemental notices and agreements issued by OCFA clarifying, amending, or extending the work contemplated as may be required to ensure its completion in an acceptable manner

All of the above component documents of the Project Manual are complementary and Work required by one of the above documents shall be done as if required by all. In the event of conflict among the component documents of the Project Manual, the conflict shall be resolved as set forth in Section 52 of the General Conditions.

42 - CONTRACT PRICE

OCFA shall pay to Contractor as full consideration for the faithful performance of the Contract, the sum of TWO MILLION, THREE HUNDRED FORTY-SEVEN THOUSAND, TWO HUNDRED TWENTY-SEVEN DOLLARS (\$2,347,227). This sum is the total amount stipulated in the Bid. Payment shall be made as set forth in the General Conditions.

43 – CONTRACTOR'S COMMITMENT TO FURNISH MATERIALS AND WORK

For and in consideration of the payments and agreements to be made and performed by OCFA, CONTRACTOR agrees to furnish all materials and perform all work required for the above identified Project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

44 – CONTRACTOR'S COMMITMENT TO PRICES

CONTRACTOR agrees to receive and accept the prices set forth in the Proposal as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. Said compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

44.1 - NO INCREASE IN BID COST DUE TO SUBSTITUTION OF SUBCONTRACTOR. In the event that a subcontractor is substituted in any manner for any reason, any increased cost related to such substitution shall be the sole responsibility of the Contractor. Such substitution shall not cause or result, directly or indirectly, in any increase in the bid price. This subsection shall not be construed to be prior consent to substitution of subcontractors, nor to authorize any substitution that is prohibited by the Subletting and Subcontracting Fair Practices Act.

45 – PAYMENT TO CONTRACTOR

OCFA hereby promises and agrees to employ, and does hereby employ, CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in the Contract Documents.

46 - WORKER'S COMPENSATION

CONTRACTOR acknowledges the provisions of the Labor Code requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance in accordance with the provisions of that Code, and certifies compliance with such provisions.

47 – PRINCIPAL INTERESTS

CONTRACTOR affirms that the signatures, titles, and seals set forth hereinafter in execution of this Agreement represent all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest herein.

48 – COMPLIANCE WITH FEDERAL IMMIGRATION AND NATIONALITY ACT

CONTRACTOR hereby represents and warrants that it will comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C. Section 1101, *et seq.*, as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should CONTRACTOR so employ such unauthorized aliens for the performance of any work and/or services under this Agreement, and should any liability or sanctions be imposed against OCFA for such use of unauthorized aliens, CONTRACTOR hereby agrees to defend and indemnify OCFA against any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, or penalties which arise out of or are related to such employment, together with any and all costs, including attorneys' fees, incurred by OCFA.

49 – CERTIFICATION RE DEBARMENT

CONTRACTOR confirms that neither CONTRACTOR nor its principals are suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts from United States (U.S.) federal government procurement or nonprocurement programs, or are listed in the List of Parties Excluded from Federal Procurement or Nonprocurement Programs (<http://www.sam.gov/>) issued by the U.S. General Services Administration. "Principals" means officers, directors, owners, partners, and persons having primary management or supervisory responsibilities within a business entity (e.g. general manager, plant manager, head of a subsidiary, division or business segment, and similar positions). CONTRACTOR will provide immediate written notification to OCFA if, at any time prior to award, CONTRACTOR learns that this certification was erroneous when submitted or has become erroneous by reason of changed circumstances. This certification is a material representation of fact upon which reliance will be placed when OCFA executes this Agreement. If it is later determined that

CONTRACTOR knowingly rendered an erroneous certification, in addition to the other remedies available to OCFA, OCFA may terminate this Agreement for default by CONTRACTOR.

50 - INDEMNIFICATION

To the fullest extent permitted by law, CONTRACTOR (at CONTRACTOR's sole cost and expense) shall defend (with legal counsel acceptable to OCFA in OCFA's sole discretion), indemnify, protect, and hold harmless the INDEMNIFIED PARTIES and each of them against all CLAIMS which arise out of, pertain to, or are related to CONTRACTOR's performance under, or failure to perform under, the Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit CONTRACTOR's indemnification obligation or other liability hereunder. Notwithstanding the foregoing, such obligation to defend, indemnify, protect, and hold harmless the INDEMNIFIED PARTIES shall not apply to the extent such CLAIMS arise from the sole negligence or willful misconduct of the OCFA.

As used herein, "INDEMNIFIED PARTIES" refers to OCFA and its appointed officials, officers, employees, agents, representatives, attorneys and volunteers.

As used in this Section 50, "CLAIMS" refers to any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, penalties, and expenses including legal costs, expert fees and attorney fees, including but not limited to CLAIMS arising from injuries to or death of persons (CONTRACTOR's employees included), or for damage to property, including property owned by OCFA.

51 – COMPLIANCE WITH WORK RULES

CONTRACTOR shall be familiar with, observe, and comply at all times during the term of this Agreement with any work rules for contractors as may be established and promulgated by the OCFA Fire Chief, which work rules shall be additional terms and conditions for providing the work and services to the OCFA pursuant to this Agreement, as may be updated and/or amended from time to time at the sole discretion of the Fire Chief.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first written.

ORANGE COUNTY FIRE AUTHORITY:

[NAME], CHAIR
OCFA BOARD OF DIRECTORS

ATTEST:

MARIA D. HUIZAR,
CLERK OF THE AUTHORITY

APPROVED AS TO FORM:

DAVID E. KENDIG
GENERAL COUNSEL

CONTRACTOR:

Neuroth Construction, Inc
(CORPORATION (NAME - TYPE))

BY: Rob Neuroth

(PRINT)

(SIGNATURE)

President

(TITLE)

BY: Rob Neuroth

(PRINT)

(SIGNATURE)

President

(TITLE)

SEE ATTACHED
NOTARIZED DOCUMENT

NOTE:

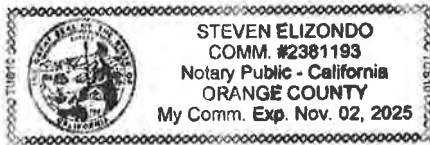
SIGNATURES OF CORPORATE OFFICIALS MUST BE NOTARIZED, ATTACH JURAT.

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of ORANGE

Subscribed and sworn to (or affirmed) before me on this 30TH
day of JANUARY, 2024, by ROBERT NEUROTH

proved to me on the basis of satisfactory evidence to be the
person(s) who appeared before me.



(Seal)

Signature



ORANGE COUNTY FIRE AUTHORITY FORMAL INVITATION FOR BIDS

RFOTC TRAINING GROUNDS MODIFICATIONS FOR PROJECTS EXCEEDING \$200,000

October 26, 2023

Solicitation No. RO2633B

The Orange County Fire Authority is requesting bids to establish a construction agreement for RFOTC Training Grounds Modifications project located at OCFA RFOTC, 1 Fire Authority Rd., Irvine CA 92602, as specified herein. Bids will only be accepted from the five pre-qualified firms resulting from RO2633A.

THIS PROJECT IS CONSIDERED A PUBLIC WORK.

Pursuant to SB 854, no contractor or subcontractor may be awarded a contract for a public works project unless registered with the CA Department of Industrial Relations per California Labor Code section 1725.5. This project is a public work and is subject to compliance monitoring and enforcement.

MANDATORY REQUIREMENTS:

- Meet Minimum Qualifications
- Attendance at Job Walk on **11/8/2023**
- Contractors' License: **A, B, or specialty as required based on scope of work as provided**
- Registration with the California Department of Industrial Relations
- Bid Bond - 10% of Bid Amount (*All Bidders*)
- Faithful Performance Bond – 100% of Agreement Price (*Awarded Contractor Only*)
- Payment Bond – 100% of Agreement Price (*Awarded Contractor Only*)

BID SUBMITTALS:

- Bids will be received no later than **11:00 A.M. on 11/27/2023**
- **Only paper bids will be accepted for this solicitation**
- Bids may be hand delivered or mailed to Orange County Fire Authority, Purchasing Department, 1 Fire Authority Road, Building C, Irvine, CA 92602 no later than the date and time specified.
- One (1) original hard copy and one (1) duplicate hard copy shall be sent to the attention of the Purchasing Section, within said time limit, in a sealed envelope.
- The envelope should include the Bidder's Business Name, Solicitation Number, and the Due Date.

LATE BIDS WILL NOT BE ACCEPTED.

Any questions concerning this Formal Invitation for Bids or the specifications should be submitted on-line via the Q&A Module available through PlanetBids before **5:00 P.M. on 11/8/2023**. OCFA will publish a response to all inquiries through the e-procurement system and/or may issue an addendum as a result.

Rothchild Ong, Assistant Purchasing Agent
rothchildong@ocfa.org | 714-573-6642

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SECTION 1: NOTICE INVITING BIDS

**1A: ORANGE COUNTY FIRE AUTHORITY NOTICE INVITING SEALED BIDS FOR
OCFA RFOTC TRAINING GROUNDS MODIFICATIONS**

=====

ORANGE COUNTY FIRE AUTHORITY BID OPPORTUNITY: SCOPE: OCFA RFOTC Training Grounds Modifications project located at OCFA RFOTC, 1 Fire Authority Rd., Irvine CA 92602. Bids will only be accepted from the five pre-qualified firms resulting from RO2633A. For official bid documents visit: <https://www.planetbids.com/portal/portal.cfm?CompanyID=14773>. A MANDATORY job walk will be held November 8, 2023 AT 10:00A.M. Bid submittals will be accepted until November 27, 2023 AT 11:00 A.M.

=====

Published: Orange County Register
FIRST PUBLICATION DATE: October 31, 2023
SECOND PUBLICATION DATE: November 7, 2023

1B: SOLICITATION INFORMATION

1. ABBREVIATIONS

IFB: Invitation for Bids

OCFA: Orange County Fire Authority

DIR: California Department of Industrial Relations

CSLB: California Contractors State License Board

PCC: California Public Contract Code

RFOTC: Regional Fire Operations and Training Center

2. OBJECTIVE

The Orange County Fire Authority is requesting bids to establish a construction agreement for OCFA RFOTC Training Grounds Modifications project located at OCFA RFOTC, 1 Fire Authority Rd., Irvine CA 92602 as specified herein. Project work will be coordinated by the OCFA Property Management section.

3. MANDATORY SITE INSPECTION

A mandatory job walk for prime contractors will be held on **WEDNESDAY, November 8, 2023 10:00A.M. at OCFA RFOTC, 1 FIRE AUTHORITY RD, IRVINE, CA 92602.**

Contractor's representative must attend the entirety of the job walk. **Late arrivals will not be granted access to the site, nor permitted to attend the job walk.** This informational meeting will be held to allow for site inspection and questions or clarifications concerning OCFA's IFB process and subsequent contract award. Prospective Bidders should be familiar with the IFB prior to attending the job walk.

4. CONTRACTOR MINIMUM QUALIFICATIONS

Bidder must meet the following minimum qualifications in order to have its response considered:

- **Current and valid A, B, or specialty Contractor's License issued by the California Contractor State License Board as required based on scope of work as provided**
- **Current and valid California Department of Industrial Relations registration**
- **Minimum 10 years' experience providing the same or similar services**

5. DUE DATE

Bids will be received no later than **11:00 AM on 11/27/2023**. Late submittals will not be accepted. There will be a public opening of the bids on the specified due date and time in the Purchasing Office at the OCFA's Regional Fire Operations and Training Center located at 1 Fire Authority Road, Irvine, CA 92602. If attending the bid opening, please allow time to check in at the Reception Desk.

6. SUBMITTAL INSTRUCTIONS

The Bid Response Forms are available for download on OCFA's online bidding platform, PlanetBids. Bids must be prepared using the response forms included in this IFB document. Bids shall be executed by an authorized signatory. Contractors are to fill in all blank spaces (insert "N/A" where the answer is not applicable). Contractors are to initial all interlineations, annotations, deletions, alterations, erasures and other modifications on the forms. Deviations in the form may result in the bid being deemed non-responsive. **Only paper bids will be accepted for this solicitation.**

Bids may be hand delivered or mailed to Orange County Fire Authority, Purchasing Department, 1 Fire Authority Road, Building C, Irvine, CA 92602 no later than the date and time specified in Section 5 above. One (1) original hard copy and one (1) duplicate hard copy shall be sent to the attention of the Purchasing Section, within said time limit, in a sealed envelope. The envelope should include the Bidder's Business Name, Solicitation Number, and the Due Date. (Failure to include a duplicate hard copy will not cause an otherwise responsive bid to be deemed non-responsive.)

Any vendor who wishes his or her bid to be considered for award is responsible for ensuring that it is complete and received by the Purchasing Office on or before the due date and time. **Facsimile, electronic or e-mail bids will not be considered.**

7. INQUIRIES

Any questions related to the IFB shall be directed to the Assistant Purchasing Agent, Rothchild Ong. Questions and comments must be submitted via this bid's Q&A module on the PlanetBids website no later than **5:00 P.M. on 11/8/2023**. The inquirer's name, company, address, phone number should be included. Verbal interpretations or clarifications on the part of OCFA will be without legal effect. Only responses submitted in writing via the Q&A module or addendum will be binding.

8. SCHEDULE OF IMPORTANT DATES

Invitation for Bid Issue Date	October 25, 2023
Mandatory Job Walk	November 8, 2023
Final Day to Submit Questions	November 8, 2023
Deadline to Submit Bid Response	November 27, 2023

9. CONTRACTOR RESPONSIBILITIES

9.1 MATERIAL AND LABOR

Contractor shall provide all permits, material, labor, tools and supplies to complete the project as described herein. See Section 5 for detailed information on these requirements and additional components that must be included in Contractor's bid and pricing.

9.2 CSLB LICENSE

Contractor and all subcontractors shall possess a valid California **A, B, or specialty** Contractor's license, as required by California law based on scope of work as provided, at the time of bid submission, pursuant to California Public Contract Code Section 3300 and Business and Professions Code Section 7028.15. The successful contractor and all subcontractors must maintain the license throughout the duration of the project.

9.3 PREVAILING WAGE AND COMPLIANCE MONITORING

Contractor and all subcontractors shall conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hour notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project, including, without limitation, the State labor compliance monitoring and enforcement by the Compliance Monitoring Unit of the Department of Industrial Relations. The successful contractor and all subcontractors must maintain DIR registration throughout the duration of the project.

9.4 STANDARD SPECIFICATIONS

OCFA relies on the standard specifications, CSI and Greenbook applicable in the jurisdiction where the project is located, as modified by the local jurisdiction.

9.5 BUSINESS LICENSE REQUIREMENTS

Contractor and all subcontractors shall conform to the requirements of the city in which the project is located (or the requirements of the County if the project is located within an unincorporated area) and shall maintain active business license(s) as required by the jurisdiction(s) in which the project is located. The successful contractor and all subcontractors must remain in compliance with these requirements throughout the duration of the project.

9.6 WARRANTY

In addition to any warranties specified in the drawings and any manufacturer's warranty, Contractor shall warrant the workmanship and manufacturing for a minimum of one year.

10. OCFA RESPONSIBILITIES

OCFA will coordinate with training operations to ensure Contractor has access to necessary areas to perform work. OCFA shall be responsible for the registration of the project with the CA DIR subsequent to contract award.

11. DELIVERABLES

11.1 PROJECT COMPONENTS

Site data and power upgrades, live fire prop replacement, and associated work as noted on the bid specifications and drawings.

11.2 SPECIFICATIONS

11.2.1 MINIMUM SPECIFICATIONS

The purpose of the information provided herein is to establish the minimum requirements for the supplies, materials, and equipment used for this project. It is not the intention of OCFA to exclude suppliers of similar or equal products of the types specified. Provided specifications, brands, and/or manufacturers describe OCFA expectations for the equipment, supplies and materials to be acquired.

11.2.2 EQUIVALENT ALTERNATE ITEMS

11.2.2.1 EQUIPMENT SUBMITTALS

As noted throughout Section 5, deviations from the specifications provided herein are not preferred but in some instances may be accepted. OCFA retains the sole right to determine whether proposed deviations to the specified items are acceptable. Any bidder offering items or equipment as equivalent alternatives to those items specified must submit documentation in accordance with the requirements outlined in Section 5 to substantiate that the item is equal no less than ten (10) business days prior to the bid deadline. Failure to do so may result in the bid that includes such alternative(s) being deemed non-responsive. As part of the evaluation of proposed alternate items, OCFA may request additional product information or product samples. Such information or samples must be submitted at no expense to OCFA by an agreed-upon due date for inspection and approval prior to contract award. Failure to comply with the request, or failure of the proposed alternate product to meet the required specifications, may be cause for OCFA to deem the bid that includes such alternative(s) to be non-responsive.

11.2.2.1 ADDITIONAL SUBMITTALS

Contractor shall submit for approval all items and documentation prior to beginning work in accordance with the requirements outlined in Section 5. In addition to the requirements specified in Section 5, any equivalent alternate items offered as a submittal during the course of construction must include documentation to substantiate that the item is equal. As part of the evaluation of proposed alternate items, OCFA may request additional product information or product samples. Such information or samples must be submitted at no expense to OCFA by an agreed-upon due date for inspection and approval prior to installation. Failure to comply with the request, or failure of the proposed alternate product to meet the required specifications, may be cause for OCFA to deem the Contractor to have caused a delay in the project, to be remedied by the assessment of liquidated damages, as described in the Contract Documents (see Section 4).

11.2.3 MATERIALS

Materials shall be pure, unadulterated, first quality and shall be delivered to the project in original unbroken packages bearing the maker's name and brand number. Materials shall comply with all

requirements described in Section 5. Materials shall be submitted for approval prior to use. Contractor must furnish additional stock of materials, as specified in Section 5.

OCFA intends to purchase and keep as inventory commonly replaced items for the purpose of expediting future repairs. Should Contractor or subcontractors utilize this inventory to perform repairs, use of these items will not void or otherwise negatively affect the warranty. Contractor or subcontractors must replace the stock at no cost to OCFA.

11.3 PROJECT EXECUTION

11.3.1 WORKMANSHIP

Contractor shall:

- a. Perform work under conditions best suited to produce the specified deliverables.
- b. Correct all work that does not comply with the intent of the specification and/or does not meet the approval of OCFA.
- c. Protect all adjacent areas and surfaces from damage from work performed (i.e. automobiles, sidewalks, asphalt, concrete, plants, etc.).
- d. Coordinate with the OCFA before using noisy, motorized equipment.
- e. Take all necessary steps to protect the public and all property concerned.

11.3.2 CLEAN-UP

Contractor shall, at completion of work each day, remove all debris and rubbish resulting from this project and leave workspaces in a clean condition subject to OCFA approval.

11.3.3 PROTECTION

Contractor shall protect work of other trades, correct damage by cleaning, repairing or replacing, and repainting, as approved by OCFA.

11.3.4 REPAIR

At completion of work, Contractor shall repair and/or restore damaged work of other trades.

11.3.5 ACCEPTANCE DOCUMENTATION

Upon completion of work, Contractor shall provide the documents specified herein for final review and acceptance by OCFA.

11.3.6 HEALTH AND SAFETY

Contractor shall ensure compliance at all times with the Health and Safety requirements in Section 86 of the Contract Agreement.

11.4 SCHEDULES, TIMELINES, AND MEETINGS

11.4.1 COORDINATION OF WORK

Prior to beginning work, Contractor shall prepare a schedule and submit to OCFA for approval. Contractor shall coordinate the commencement of all work with OCFA so as not to cause inconvenience to the facility. Contractor parking, along with the placement of all trailers, equipment and materials must be coordinated with OCFA in advance.

All work at the location must be coordinated with OCFA in a manner that shall accommodate the requirements of OCFA personnel. Contractor shall post notices in conspicuous places at least three to five days in advance warning occupants what date work will begin. Work, deliveries or efforts which may impede existing circulation roadways shall be scheduled at least seven (7) days in advance.

11.4.2 HOURS OF WORK

Work shall be performed Monday through Friday between the hours of 7:00 AM and 5:00 PM. Overtime and after-hours work is not permitted, unless otherwise coordinated with and approved by the city in which the project is located.

11.4.3 PROJECT TIMELINE

OCFA anticipates that:

- Project work will begin no later than **60** days after the agreement and all other required award documents are received and approved by OCFA
- Project will be complete within **120** days

12. MEETINGS

Meetings between OCFA and Contractor will include, at a minimum, the following:

12.1 PRE-AWARD MEETING

This meeting will aid OCFA in determining responsibility of Contractor and to finalize the specifications and services to be provided.

12.2 PRE-CONSTRUCTION JOB WALKS

These meetings with OCFA, the staff of the city in which the project is located, and others as necessary and/or required by law will be coordinated by the Contractor.

12.3 PROJECT STATUS MEETINGS

Weekly meetings held in person, unless otherwise determined by OCFA.

12.4 ACCEPTANCE

Meetings regarding project acceptance and warranty punch list items.

12.5 ADDITIONAL

Other meetings deemed necessary by OCFA for contract compliance.

SECTION 2: INSTRUCTIONS TO BIDDERS

13.1 AMENDMENT OF INVITATION FOR BID

Notification via email will be sent to vendors listed as "Prospective Bidders" on PlanetBids in the event that a Q&A set or amendment to the IFB is released. The bidder shall acknowledge receipt of an amendment to this Invitation for Bid on the bid submittal. The OCFA reserves the right to revise the bid documents prior to the bid opening date. Revisions, if any, shall be made by written Addenda.

13.1.1 Pursuant to Public Contract Code Section 4104.5, if OCFA issues an Addendum later than seventy-two (72) hours prior to the deadline for submission of bids, and the Addendum requires material changes, additions or deletions to the description of the work to be performed or the content, form or manner of submission of bids, OCFA will extend the deadline for submission of bids by at least seventy-two (72) hours. Otherwise, OCFA may determine, at its sole discretion, whether an Addendum requires that the date set for opening bids be postponed. Announcement of a new date, if any, will be made by Addenda. All bidders will be notified by e-mail when an addendum is posted to PlanetBids.

All Addenda issued before the time bids are due shall form part of the contract documents. It is the bidder's responsibility to be familiar with Addenda issued. OCFA will deem any bid that fails to acknowledge all Addenda to be non-responsive. Bidders must acknowledge the Addenda in writing on the form provided in the bid documents.

13.2 INTERPRETATION OF BID DOCUMENTS

Discrepancies in, and/or omissions from the Specifications or other bid documents or questions as to their meaning shall be immediately brought to the attention of the Purchasing Manager by submission of a written request for interpretation or correction thereof no later than the deadline specified for questions specified in Section 1 of the Notice Inviting Bids. The person submitting the request will be responsible for its prompt delivery.

Any interpretation of the bid documents will be made only by addendum duly issued electronically to each bidder registered on the prospective bidder's list. The OCFA will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the bid documents to any bidder, and no bidder should rely on any such oral interpretation.

14. DISPUTES RELATING TO THIS INVITATION FOR BID

In the event a dispute arises concerning any aspect of this bid, including specifications and/or process, the party bringing the dispute shall submit a written request for resolution to the Purchasing Department prior to the IFB's due date and time.

In the event a dispute arises regarding this IFB's Recommendation for Award or Denial of Award, the party bringing the dispute must do so in accordance with OCFA's **Purchasing Ordinance, Article IX. Legal and Contractual Remedies**, which can be found online under "Doing Business with OCFA" at <https://www.ocfa.org/Uploads/Purchasing/OCFA%20Purchasing%20Ordinance.pdf>.

15. WITHDRAWAL OF BID

15.1 PRIOR TO BID DUE DATE AND TIME

At any time prior to the specified due date specified in IFB Section 1, an Offeror may formally withdraw the bid by a written letter, facsimile or electronic mail from the Offeror or an authorized representative to the OCFA Purchasing Manager, provided such letter, facsimile or electronic mail is actually and timely received by the OCFA Purchasing Manager. **Telephonic or oral withdrawals shall not be considered.**

15.2 AFTER BID DUE DATE AND TIME

In accordance with California Public Contract Code sections 5100-5110, Bidder shall not be relieved of the obligations of its bid unless by consent of OCFA, nor shall any change be made in the bid because of mistake. Bids may be withdrawn for mistake upon mutual written agreement of Bidder and OCFA, or if all of the following conditions apply:

- A mistake is made in the bid; and
- Written notice is provided to OCFA within five (5) working days from the date of the public opening specifying in the notice in detail how the mistake occurred. Telephonic or oral withdrawals will not be considered; and
- The mistake makes the bid materially different than Bidder intended it to be; and
- The mistake was made in filling out the bid and was not due to error in judgment or to carelessness in inspecting the site of the work, or in reading the plans or specifications.

Any bidder who claims a mistake or who forfeits its bid security (Bidder's Bond) shall be prohibited from participating in further bidding on the project on which the mistake was claimed or bid security was forfeited.

16. INDEMNIFICATION

Bidder agrees to protect, defend, indemnify, save and hold harmless the OCFA and its officers, officials, employees and volunteers from any and all claims, liabilities, expenses, or damages of any nature, including attorney fees, for injury to or death of any person (Bidder's employees included), and for injury to any property, including consequential damages of any nature resulting there from, arising out of or in any way connected with the Bidder's submittal.

17. RESERVATIONS (RIGHTS RESERVED TO OCFA)

OCFA reserves the right to reject any or all bids or any part thereof; to rebid the solicitation; to reject non-responsive or non-responsible bids; to reject unbalanced bids; to reject bids where the terms, prices, and/or awards are conditioned upon another event; to reject individual bids for failure to meet any requirement; to award by item, part or portion of an item, group of items, or total; to make multiple awards; to investigate the qualifications of any bidder under consideration; to modify or amend this IFB in writing; to waive minor irregularities, defects, omissions, technicalities or form errors in any bid. Waiver of one irregularity does not constitute waiver of any other irregularity. OCFA may seek clarification of the bid from the bidder at any time, and failure to respond is cause for rejection. OCFA is required to make an award that is in the best interest of the OCFA. All decisions on compliance, evaluation, terms and conditions shall be made solely at the OCFA's discretion and made to favor the OCFA. OCFA may cancel this solicitation at any time.

The OCFA may reject any bid which, in its sole opinion, does not accurately reflect the cost to perform the work as compared to other bids received and/or to project estimates. In addition, because the OCFA may elect to include or exclude any of the bid items and alternate bid items (if applicable) at its sole and absolute discretion, each bidder must ensure that each bid items contain a proportionate share of profit, overhead and other costs or expenses which will be incurred by the bidder. The OCFA may deem any bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items as non-responsive. No contract will be executed unless the bidder is licensed in accordance with the provisions of the State law.

18. INSPECTION OF SITE/MANDATORY MEETING AND JOB WALK

Each prospective bidder is responsible for becoming familiar with the conditions of the project site as well as those relating to the construction and labor of the project, to fully understand the facilities, conditions, difficulties and restrictions which may impact the completion of the project. Attendance by a representative of each prospective contractor at the mandatory meeting as stated in the request for

informal bid is required. **Any bid received by a contractor not represented at the mandatory meeting will be rejected and deemed non-responsive.**

19. CONTRACTOR AND SUBCONTRACTOR LICENSING REQUIREMENTS

Bidder and all listed Subcontractors shall possess valid California Contractor's licenses, as required herein and as appropriate for each specialty subcontracted at the time of bid submission, pursuant to California Public Contract Code Section 3300 and Business and Professions Code Section 7028.15. Licenses must be maintained throughout the duration of the contract resulting from this IFB.

Pursuant to Section 7028.15 of the Business and Professions Code, the OCFA shall consider any bid submitted by a contractor not currently licensed in accordance with California law and pursuant to the requirements found in the bid documents to be nonresponsive, and the OCFA shall reject the bid. The OCFA shall have the right to request evidence of all valid license(s) currently held by the bidder and each of the subcontractors listed in the bid before awarding the contract. In such cases, Bidders shall provide evidence of valid licenses satisfactory to the OCFA within five (5) calendar days. Pursuant to Public Contract Code Section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code Section 2717(b) in order to supply mined material for this contract.

20. SB 854 DEPARTMENT OF INDUSTRIAL RELATIONS REGISTRATION

No contractor or subcontractor may be listed on an offer for a public works project unless registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5, with limited exceptions from this requirement for bid purposes only under California Labor Code Section 1771.1(a). No contractor or subcontractor may be awarded a contract for public work, or engage in the performance of any public works project unless registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5. Pursuant to SB 854, the DIR registration number of each subcontractor must be identified on the bid; **failure to do so may result in the bid being deemed non-responsive.**

The contract resulting from this solicitation is subject to compliance monitoring and enforcement by the California Department of Industrial Relations. OCFA reports all public works contracts to the DIR subsequent to contract execution.

The OCFA will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining bid pricing, and will not under any circumstances be considered as the basis of a claim against the OCFA on the contract resulting from this solicitation.

21. PREVAILING WAGE

This project is a public work in the State of California, funded in whole or in part with public funds. Therefore, the applicable prevailing wage rates will be enforced. The work is subject to the payment of not less than prevailing wages under California Labor Code Section 1770 et seq. Contractor must comply with all related provision of the California Labor Code if awarded the agreement, including but not limited to:

- The provisions of California Labor Code Section 1775 relating to payment of prevailing wages, and
- Section 1777.5 relating to employment of apprentices, and
- Section 1811-1813 relating to the payment of overtime.

Failure to comply with the applicable prevailing wage, overtime, and apprenticeship requirements may result in penalties.

Contractors are hereby notified that the Director of Industrial Relations has ascertained the general prevailing rate of per diem wages and the rates for overtime and holiday work in the locality in which the work is to be performed for each craft, classification or type of worker needed to perform the work under the contract which will be awarded to the successful contractor.

Additional information is available at the Department of Industrial Relations website at:

<http://www.dir.ca.gov/oprl/DPreWageDetermination.htm>.

Contractors are further notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Additional information on the Compliance Monitoring Unit requirements can be found at:

<https://www.dir.ca.gov/Public-Works/PublicWorksEnforcement.html>.

22. DEBARMENT OF CONTRACTORS

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.7 of the Labor Code and Federal "Excluded Parties List System". Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the OCFA. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project. In order to prohibit the procurement of any goods or services ultimately funded by Federal awards from debarred, suspended or otherwise excluded parties, each Contractor will be screened at the time of response to ensure the Contractor, its principal and their named subcontractors are not debarred, suspended or otherwise excluded by the United States Government in compliance with the requirements of 2 Code of Federal Regulations (CFR) 200.12 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.

23. CONTRACT

A response to this IFB is an offer to contract with OCFA based upon the terms, conditions, and specifications contained within this document, all Addenda, and the Construction Services Agreement, attached hereto as Section 4. Submission of a bid confers on the bidder no right to an award or to a subsequent contract. No binding contract will exist between the bidder and the OCFA unless and until the OCFA executes a written contract or purchase order.

24. BID DOCUMENTS & FORMS

Bid submittals are to be prepared using the bid forms which are included in this IFB Document. Bids shall be executed by an authorized signatory. As a condition of bidding and in accordance with the provisions of Section 20101 of the California Public Contract Code, prospective bidders are required to submit all the bid forms listed in the Bidder's Checklist. Failure to do so may result in the rejection of the bid.

25. PREPARATION OF BID

All bids shall incorporate the forms provided in this IFB document. It is permissible to copy these forms as required. Facsimiles or electronic mail bids shall not be considered.

The Bid form and any solicitation amendments must be signed and returned with the bid. The forms submitted shall be signed by a person authorized to submit an offer. Authorized signature on the Bid forms shall constitute an irrevocable offer to provide services specified herein. Offeror shall submit any additional requested documentation, signifying intent to be bound by the terms of the agreement.

- The authorized person signing the bid shall initial all interlineations, annotations, deletions, alterations, erasures and other modifications on the bid.
- Periods of time, stated as days, shall be in calendar days.
- It is the responsibility of all Offerors to examine the entire Request for Bid package and seek clarification of any requirement that may not be clear and to check all responses for accuracy before submitting a bid. Negligence in preparing a bid confers no right of withdrawal after the due date and time.
- OCFA shall not reimburse the cost of developing, presenting, submitting or providing any response to this solicitation.
- Offeror must list any subcontractors to be utilized in the performance of the services specified herein. For each subcontractor, details on respective qualifications must be included.
- Each bidder shall submit its bid in strict conformity with the requirements of the bid documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a bid may render it non-responsive and may cause its rejection. Bidders shall not delete, modify, supplement printed matter on the bid forms.
- **Verbal, telephonic, facsimile, email or other electronic bids or modifications will not be considered.**

26. BID CERTIFICATION

By signature on the Bid Response Forms, Bidder certifies:

- The Bidder has thoroughly examined and become familiar with the requirements of this IFB;
- Clear understanding of the rules as defined in this IFB and compliance with all terms and conditions specified herein;
- The Bidder is an authorized and/or certified retailer and/or installer of the specified items;
- The submission of the bid did not involve collusion or other anti-competitive practices;
- The bid is compliant with all state and federal laws;
- The Bidder will not discriminate against any employee or applicant for employment in violation of Federal or State law;
- The Bidder has not given, offered to give, and does not intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, meal or service to any Director, officer, or employee of OCFA in connection with the submitted offer;
- That the individual signing the submittal is an authorized agent for the Bidder and has the actual authority to legally bind the Bidder to the Contract;
- That its principal and named subcontractors are not debarred, suspended or otherwise excluded by the United States Government, in compliance with the requirements of 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.

27. ACCEPTANCE PERIOD

Unless otherwise specified herein, bids are firm and may be accepted by OCFA at any time within 180 days of bid opening.

28. BID OPENING

All the bids opened by the OCFA will be subject to further evaluation with respect to responsiveness of the bid and for purposes of determining that the bidder is responsible.

29. SUBLETTING AND SUBCONTRACTING.

Pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Public Contract Code), bidders are required to list in their proposal the name, business address, California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render services in or about the construction of the work or improvement, or a subcontractor who specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Plans and

Specifications in excess of 1/2 of 1% of the prime Contractor's total bid or \$10,000, whichever is greater. If a subcontractor's California contractor license number or public works contractor registration number are submitted incorrectly in the bid, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to OCFA within 24 hours after the bid opening.

If the Bidder fails to list a subcontractor for a portion of work or if the Bidder lists more than one subcontractor of the same portion of work in excess of 1/2 of 1% of the total bid or \$10,000, whichever is greater, the Bidder agrees that it is fully qualified to perform that portion of work itself, and that the Bidder shall perform that portion of work itself. If after award of the contract, the Bidder actually subcontracts that portion of work, except as provided in Public Contract Code Section 4107 or 4109, the Bidder shall be subject to the penalties listed in Section 4111 of the Public Contract Code. It is the OCFA's intent for the Subletting and Subcontracting Fair Practices Act to apply to all phases of the work.

29.1 NO INCREASE IN BID COST DUE TO SUBSTITUTION OF SUBCONTRACTOR.

In the event that a subcontractor is substituted in any manner for any reason, any increased cost related to such substitution shall be the sole responsibility of the Contractor. Such substitution shall not cause or result, directly or indirectly, in any increase in the bid price. This subsection shall not be construed to be prior consent to substitution of subcontractors, nor to authorize any substitution that is prohibited by the Subletting and Subcontracting Fair Practices Act.

30. PRICING

Contractors shall provide itemized pricing. No aggregate bids will be considered. The bid must state the amount for which the contractor offers to supply all labor, materials, equipment, tools, transportation, services and applicable taxes to perform all work specified. Bids shall not contain any conditions, limitations or provisions for the work to be done. Alternative bids will not be considered unless requested. The contractor shall set forth for each item of work, in clearly legible figures, a unit item price and a total for each item in the respective spaces provided. In case of a variation between the unit price and the totals shown by the contractor, the unit price will take precedence. In case of discrepancy between the numerical lump sum price and the written lump sum price, the written lump sum price shall prevail.

31. TAXES

No mention shall be made in the proposal of Sales Tax, Use Tax, or any other tax, as all amounts set forth in the bid will be deemed and held to include any such taxes that may be applicable. Bidder acknowledges and agrees that OCFA shall not be responsible for the payment of any increase in any Sales Tax, Use Tax, or any other tax that takes effect after award.

32. COMPLIANCE WITH LAWS

All bids shall comply with current and applicable federal, state, and local laws relative thereto.

33. CRITERIA FOR EVALUATION AND AWARD

The OCFA will award the contract to the lowest responsive, responsible bidder as required by law. The OCFA evaluates three categories of information: responsiveness, responsibility, and price. Bids must meet the following responsiveness and responsibility criteria in order to be considered for award:

- a) RESPONSIVENESS: OCFA will determine whether the bid complies with the instructions for submitting bids including completeness of bid which encompasses the inclusion of all required attachments and submissions. The OCFA will reject any bids that are submitted late. Failure to meet the specifications, project timeline, product availability, or other requirements may result in rejection.

- b) **RESPONSIBILITY:** OCFA will determine whether the bidder is one with whom it can or should do business. Factors that OCFA may evaluate to determine whether a contractor is a “responsible bidder” for purposes of the Public Contract Code include, but are not limited to: excessively high or low priced bids, past performance, references (including those found outside the bid), compliance with applicable laws - including tax laws, business standing, bidder's record of performance and integrity - e.g. has the bidder been delinquent or unfaithful to any contract with OCFA, whether the bidder is qualified legally to contract with the OCFA, financial stability and the perceived ability to perform completely as specified. A bidder must at all times have financial resources sufficient, in the opinion of the OCFA, to ensure performance of the contract and must provide proof upon request. OCFA staff may also use Dun & Bradstreet and/or any generally available industry information to assist in making such determinations. The OCFA reserves the right to inspect and review bidder's facilities, equipment and personnel and those of any identified subcontractors, and by submitting a bid, bidder consents thereto. The OCFA will determine whether any failure to supply information, or the quality of the information, will result in rejection.
- c) **PRICE:** OCFA will then evaluate bids that have met the requirements above for price, quality of product, life cycle cost, maintenance, warranty, etc.

34. GROUNDS FOR DISQUALIFICATION

OCFA may disqualify a submittal for any of the following reasons:

- Contact regarding this procurement is made with any OCFA Director, officer or employee other than those in the Purchasing Department from the time of issuance until the end of the dispute period;
- Evidence of collusion, directly or indirectly, among bidders regarding the amount, terms, or conditions of this solicitation is found;
- Evidence of submitting incorrect information in the response to this solicitation or misrepresenting or failing to disclose material facts during the award process is found;
- Submittal of added terms, conditions, or agreements with the bid document;
- Offering of gifts or souvenirs, even of minimal value, to OCFA Directors, officers or employees;
- The existence of any lawsuit, unresolved contractual claim or dispute between the Bidder and OCFA;
- Evidence of the Bidder's inability to successfully complete the responsibilities and obligations of the bid is found;
- Bidder's default under any OCFA agreement.
- No bidder shall be allowed to make, submit or be interested in more than one bid. No person, firm, corporation, or other entity may submit a sub-proposal to a bidder, or quote prices of materials to a bidder when also submitting as a prime on the same project.

35. PUBLIC RECORD

All bids submitted in response to this IFB shall become the property of OCFA and shall become a matter of public record available for review when required by law, including but not limited to the California Public Records Act.

36. CLAYTON ACT AND CARTWRIGHT ACT

In accordance with Section 7103.5 of the Public Contract Code, in entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the Contractor or subcontractor offers and agrees to assign to OCFA all rights, and interest in and all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

37. INSURANCE

The successful bidder shall procure the insurance in the form and in the amount specified in the Contract Documents, including but not limited to the General Conditions. Failure to do so may result in forfeiture of the bid guarantee. No time extensions or extra payments shall be made to contractor for delays it may encounter in obtaining such coverage.

Contractor shall not commence work under the agreement until he/she has obtained all required insurance, including any and all endorsements, and the insurance has been approved by the OCFA as to form, amount, and carrier, nor shall Contractor allow any subcontractor to commence any work until all insurance required of the subcontractor has been obtained and approved.

38. NOTICE OF INTENT TO AWARD/EXECUTION OF CONTRACT

A notification of OCFA's intent to award contract ("Notice of Intent to Award") will be sent to the successful Offeror(s). Following receipt of the Notice of Intent to Award, and within fourteen (14) calendar days of the notice, the successful Offeror(s) shall complete and/or submit the items listed in Exhibit 4A: Transmittal Page – Bid Award Documents to the Purchasing & Materials Manager or designee.

The successful contractor or any designated subcontractors shall not perform any work on the project prior to attending the pre-construction conference and executing the appropriate certification. In case of failure of the Offeror(s) to execute and return all required documents in a form satisfactory to OCFA and within the time allowed, the OCFA may, at its option, consider that the Offeror(s) has/have abandoned the contract.

39. SUBSTITUTION OF SECURITIES

In conformance with Public Contract Code Section 22300, which is incorporated herein by this reference, the Contractor may substitute securities for any monies retained by the OCFA to ensure performance under the Contract or, in the alternative, may request payment of retention earned directly to an escrow agent.

At the request and expense of the Contractor, the Contractor has the option to deposit securities, which have been approved by the OCFA, with a State or Federally chartered bank as the escrow agent or require the OCFA to deposit 5% of each progress payment with the escrow agent. Said securities will be used as a substitute for retention earnings required to be withheld by the OCFA pursuant to the construction contract. Said securities shall have no obligation to any other construction contract for substitution of securities in lieu of retention. When the Contractor deposits the OCFA approved securities with the escrow agent, the escrow agent shall notify the OCFA within 10 calendar days of the deposit. Said securities shall be evaluated quarterly by the escrow agent to verify the current market value. If the current market value of said securities falls below the required amount, the escrow agent shall notify the Contractor and require additional securities and/or cash to be submitted for OCFA approval, and to be held in the escrow account to meet the Contractor's obligations. The escrow agent shall hold said securities until such time as the escrow agent receives written notification from the OCFA that the Contractor has satisfactorily completed his Contract obligations.

The type of securities deposited and the method of release shall be approved by the OCFA's Office of General Counsel.

If the Contractor chooses not to exercise its rights under Public Contract Code Section 22300, the full five percent (5%) retention will be deducted from all payments. The final retention will be authorized for payment thirty-five (35) days after the date of recordation of the Notice of Completion, if no stop notices have been filed. The OCFA may withhold from release of the final retention amounts authorized under Public Contracts Code Section 7107 and/or 125% of the cumulative amounts identified in all stop notices.

40 AWARD AND EXECUTION OF CONTRACT. If a bid bond is submitted with a 10% of Bid designation for the amount as noted in the OCFA Approved Bid Bond form, a revised Bid Bond with numerical dollar values, both in words and with digits, shall be submitted to the OCFA within three (3) working days of bid opening.

Within seven (7) calendar days after the date of the Notice of Apparent Low Bidder, the Contractor shall execute and return the following documents to the OCFA:

- All required evidence of insurance
- Two (2) Original Signed Contract Agreements

Within fourteen (14) calendar days after the date of the Notice of Award, the Contractor shall execute and return the following documents to the OCFA, as applicable to the project:

- | | |
|-----------------------------|-------------------------------------|
| • Faithful Performance Bond | • Water Pollution Control Plan |
| • Material and Labor Bond | • Form W-9 |
| • Construction Schedule | • Encroachment Permit Application |
| • Traffic Control Plan | • Construction Materials Submittals |

FAILURE TO COMPLY WITH ALL OF THE ABOVE WILL RESULT IN ANNULMENT OF THE AWARD AND FORFEITURE OF THE PROPOSAL GUARANTEE AT THE SOLE DISCRETION OF OCFA.

The Contract Agreement shall not be considered binding upon the OCFA until executed by the authorized OCFA officials.

3A: TRANSMITTAL PAGE**TO:** Orange County Fire Authority**FROM:** Neuroth Construction Inc.

(Legal Name of Contractor)

PROJECT: RFOTC TRAINING GROUNDS MODIFICATIONS

The contractor will accept in full payment for the work specified herein the following total lump sum amount, inclusive of all applicable taxes and markup (transferred from Exhibit 3J: Bid Sheets):

BID LUMP SUM:**NUMERICAL:** \$ 2,347,227.00**WRITTEN:** Two million Three Hundred forty seven thousand two hundred twenty seven 00/100**ACKNOWLEDGMENT OF ADDENDA:**

No.: <u>1</u>	Dated: <u>10/26/27</u>	No.: <u>3</u>	Dated: <u>11/20</u>
No.: <u>2</u>	Dated: <u>11/16/27</u>	No.: <u>4</u>	Dated: <u>11/22</u>

BIDDER'S CHECKLIST:

Bidder certifies that the following documents are included in its Bid:

- | | | |
|--|--|--|
| <input type="checkbox"/> Transmittal Page (Exhibit 3A) | <input type="checkbox"/> List of Subcontractors (Exhibit 3F) | <input type="checkbox"/> Project Approach and Schedule (Exhibit 3K) |
| <input type="checkbox"/> Bidder's Bond (Exhibit 3B) | <input type="checkbox"/> Designation of Sureties (Exhibit 3G) | <input type="checkbox"/> List of Project References (Exhibit 3L) |
| <input type="checkbox"/> Certification of Bid (Exhibit 3C) | <input type="checkbox"/> Bidder's Certification of Compliance with Insurance Requirements (Exhibit 3H) | <input type="checkbox"/> Qualifications Questionnaire (Exhibit 3M) |
| <input type="checkbox"/> Contractor's Licensing Statement (Exhibit 3D) | <input type="checkbox"/> Certification of Site Examination (Exhibit 3I) | <input type="checkbox"/> Party and Participant Disclosure Forms (Exhibit 3N) |
| <input type="checkbox"/> Non-Collusion Affidavit (Exhibit 3E) | <input type="checkbox"/> Bid Sheets (Exhibit 3J) | |

MINIMUM QUALIFICATIONS:

Bidder Meets the Minimum Qualifications as follows:

CSLB License #: 1062300 **Expiration:** 06/30/2024

DIR Registration #: PW-LR-1000666197 **Expiration:** 06/30/2026

Number of Years of Experience: 3

SIGNATURE OF CONTRACTOR:

CALIFORNIA ALL-PURPOSE CERTIFICATE OF ACKNOWLEDGMENT

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Diego

On 12/07/2023 before me, Hamid Emadian Naeini, Notary Public
(Here insert name and title of the officer)

personally appeared ROBERT W. NEUROTH

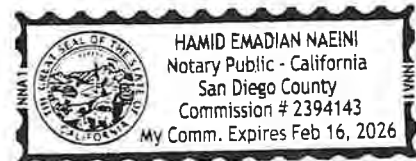
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal. /

Signature of Notary Public

(Notary Seal)



ADDITIONAL OPTIONAL INFORMATION

DESCRIPTION OF THE ATTACHED DOCUMENT

BIDDER'S BOND

(Title or description of attached document)

(Title or description of attached document continued)

Number of Pages 20/21 Document Date 12/7/23

(Additional information)

CAPACITY CLAIMED BY THE SIGNER

☒ Individual (s)

☒ Corporate Officer

CONTRACTOR
(Title)

☐ Partner(s)

☐ Attorney-in-Fact

☐ Trustee(s)

☐ Other _____

INSTRUCTIONS FOR COMPLETING THIS FORM

Any acknowledgment completed in California must contain verbiage exactly as appears above in the notary section or a separate acknowledgment form must be properly completed and attached to that document. The only exception is if a document is to be recorded outside of California. In such instances, any alternative acknowledgment verbiage as may be printed on such a document so long as the verbiage does not require the notary to do something that is illegal for a notary in California (i.e. certifying the authorized capacity of the signer). Please check the document carefully for proper notarial wording and attach this form if required.

- State and County information must be the State and County where the document signer(s) personally appeared before the notary public for acknowledgment.
- Date of notarization must be the date that the signer(s) personally appeared which must also be the same date the acknowledgment is completed.
- The notary public must print his or her name as it appears within his or her commission followed by a comma and then your title (notary public).
- Print the name(s) of document signer(s) who personally appear at the time of notarization.
- Indicate the correct singular or plural forms by crossing off incorrect forms (i.e. ~~he/she/they~~ is /are) or circling the correct forms. Failure to correctly indicate this information may lead to rejection of document recording.
- The notary seal impression must be clear and photographically reproducible. Impression must not cover text or lines. If seal impression smudges, re-seal if a sufficient area permits, otherwise complete a different acknowledgment form.
- Signature of the notary public must match the signature on file with the office of the county clerk.
 - ❖ Additional information is not required but could help to ensure this acknowledgment is not misused or attached to a different document.
 - ❖ Indicate title or type of attached document, number of pages and date.
 - ❖ Indicate the capacity claimed by the signer. If the claimed capacity is a corporate officer, indicate the title (i.e. CEO, CFO, Secretary).
- Securely attach this document to the signed document

PRINTED NAME: Neuroth Construction Inc. **TITLE:** RFOTC TRAINING GROUNDS MODIFICATIONS

3B: BIDDER'S BOND

(10% of Agreement Price)

Bidders must use this form, NOT a surety company form

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, Neuroth Construction Inc. as Principal ("Principal"), and The Gray Casualty & Surety Company as Surety ("Surety"), a corporation organized and existing under and by virtue of the laws of the State of Louisiana and authorized to do business as a surety in the State of California, are held and bound unto the Orange County Fire Authority ("OCFA") of Orange County, State of California as Obligee, in the sum of Ten Percent of Bid Amount Dollars (\$ 10%) lawful money of the United States of America, for the payment of which sum well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the OCFA for all work specifically described in the accompanying bid;

NOW, THEREFORE, if the Principal is awarded the Project and, within the time and manner required under the Bid Documents, after the prescribed forms are presented to Principal for signature, enters into a written contract ("Agreement"), in the prescribed form in accordance with the bid, and files two bonds, one guaranteeing faithful performance and the other guaranteeing payment for labor and materials as required by law, and meets all other conditions to the contract between the Principal and the Obligee becoming effective, or if the Principal shall fully reimburse and save harmless the Obligee from any damage sustained by the Obligee through failure of the Principal to enter into the Agreement and to file the required performance and labor and material bonds, and to meet all other conditions to the Agreement between the Principal and the Obligee becoming effective, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. The full payment of the sum stated above shall be due immediately if Principal fails to submit and execute the Agreement award documents as required in the Invitation for Bid Document within the timeline specified therein.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work, or to the specifications.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorneys' fee to be fixed by the Court.

If the OCFA awards the bid, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (180) days after the date of the bid opening.

[Signature Page Follows]

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 9th day of November, 2023, accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract:

CONTRACTOR:

(Affix Corporate Seal)

Neuroth Construction Inc.

Principal



By



Print Name and Title of Signatory

PLEASE SEE ATTACHED
CALIFORNIA CERTIFICATE

12/07/2023

SURETY:

(Affix Corporate Seal)

The Gray Casualty & Surety Company

Surety



By Lawrence F. McMahon, Attorney-in-Fact

Alliant Insurance Services, Inc.

Name of California Agent of Surety

701 B Street, 6th Floor, San Diego, CA 92101

Address of California Agent of Surety

(619)238-1828

Telephone Number of California Agent of Surety

Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Diego)
On NOV 09 2023 before me, N. Kirk-Smith, Notary Public,
Date Here Insert Name and Title of the Officer
personally appeared Lawrence F. McMahon
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature N. Kirk-Smith
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☒ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: Surety Company

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

**THE GRAY INSURANCE COMPANY
THE GRAY CASUALTY & SURETY COMPANY**

GENERAL POWER OF ATTORNEY

Bond Number: Bid Bond

Principal: Neuroth Construction Inc.

Project: Solicitation No. RO2633B, RFOTC TRAINING GROUNDS MODIFICATIONS

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Lawrence F. McMahon, Sarah Myers, Ryan E. Warnock, Maria Guise, Janice Martin, and Christopher J. Conte of San Diego, California jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of \$25,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 4th day of November, 2022.



By:

Michael T. Gray

Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske

Cullen S. Piske
President
The Gray Casualty & Surety Company



State of Louisiana

ss:

Parish of Jefferson

On this 4th day of November, 2022, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.



Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

I, Mark S. Manguno, Secretary of The Gray Insurance Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 9th day of November, 2023.

Mark S. Manguno

I, Leigh Anne Henican, Secretary of The Gray Casualty & Surety Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 9th day of November, 2023.

Leigh Anne Henican



3C: CERTIFICATION OF BID

In responding to IFB RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS the undersigned Bidder(s) certifies the following:

1. Bidder agrees to provide all necessary labor, materials, equipment, and services to OCFA per the specifications contained herein and that all furnished labor is able to work in harmony with all other elements of labor employed or to be employed on the work.
2. Bidder further agrees to the terms and conditions specified herein, the following terms and conditions that are a part of this IFB, and the resulting Construction Services Agreement. **If there are any exceptions to or deviations from the terms of the Contract Documents (Section 4), they must be stated in an attachment included with the bid.** Where Bidder wishes to propose alternatives to the OCFA's contractual requirements, these should be thoroughly explained. While exceptions will be considered, OCFA reserves the right to determine that an offer is non-responsive based upon any exceptions taken. OCFA's governing body reserves the right to deny any material exceptions to the contract. If no contractual exceptions are noted, Bidder will be deemed to have accepted the form of the contract requirements set forth in Section 4.
3. The Bidder hereby certifies that the individual signing the submittal is an authorized agent for the Bidder and has the OCFA to legally bind the Bidder to the Contract.
4. The undersigned has reviewed the work outlined in the documents and fully understands the scope of work required, understands the construction and project management function(s) as described, and that each contractor who is awarded a contract shall be in fact the prime contractor, not a subcontractor, to the OCFA, and agrees that its offer, if accepted by the OCFA, will be the basis for the contractor to enter into a contract with the OCFA.
5. The undersigned had notified the OCFA in writing any discrepancies or omission or of any doubt, questions, or ambiguities about the meaning of any of the IFB documents.
6. By submitting this Offer Form and signing below, the liquidated damages clause of the Agreement is hereby acknowledged.
7. It is understood that the OCFA reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of one hundred eighty (180) days.
8. Contractor expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the OCFA will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the contractor may be subject to criminal prosecution.
9. Labor Code Section 1735 requires that no discrimination be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status or sex of such persons, except as provided in Government Code Section 12940. Bidder certifies that it does not discriminate in its employment with regard to the factors set forth in Labor Code Section 1735; that it is in compliance with all federal, state and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal employment opportunity in employment.
10. The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager: (1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency; (2) has not been suspended, debarred, voluntarily excluded or determined ineligible by

any Federal agency within the past 3 years; (3) does not have a proposed debarment pending; and (4) has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

To the Orange County Fire Authority:

Contractor hereby certifies to the OCFA that all representations, certifications, and statements made by the contractor, as set forth in this offer form, are true and correct and are made under penalty of perjury. The Undersigned hereby offers and shall furnish the services in compliance with all terms, scope of work, conditions, specifications, and amendments in the Request for Proposal which is incorporated by reference as fully set forth herein. The representations herein are made under penalty of perjury.

LEGAL NAME OF CONTRACTOR:

Neuroth Construction Inc.

SIGNATURE OF CONTRACTOR:

[Handwritten Signature]

PRINTED NAME:

Rob Neuroth

TITLE:

President

CONTRACTOR ADDRESS:

1165 Linda Vista Drive, Suite 102

CITY:

San Marcos

STATE:

CA

ZIP CODE:

92078

IF CONTRACTOR IS A CORPORATION, AFFIX CORPORATE SEAL AND COMPLETE THE FOLLOWING:

NAME OF CORPORATION:

Neuroth Construction Inc.

DATE OF INCORPORATION:

05/13/2022

PRESIDENT:

Rob Neuroth

TREASURER:

Rob Neuroth

SECRETARY:

Rob Neuroth

MANAGER:

Rob Neuroth

SUBSCRIBED AND SWORN TO BEFORE ME

THIS 7th DAY OF DEC. 2023

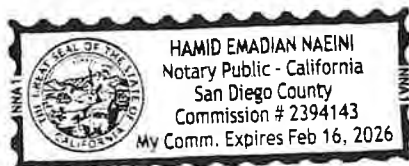
(Signature of Notary Public)

HAMID EMADIAN NAEINI
(Attach Jurat)

SAN DIEGO - CALIFORNIA

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

(SEAL)



BY

Rob Neuroth

(Print Name)

[Handwritten Signature]

(Signature)

TITLE

President

(SEAL)

3D: NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
) SS
 COUNTY OF)

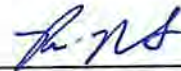
In conformance with Public Contract Code Section 7106, the party making the foregoing bid declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 12,7,2023 [date], at SAN DIEGO [city], CA [state]."

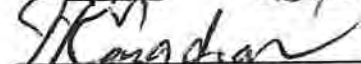
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

Signed _____



President
 Title

Subscribed and sworn to before me
 this 7th day of DECEMBER 2023.


 Signature of Notary Public

HAMID EMADIAN NAEINI
 (SEAL) SAN DIEGO - CALIFORNIA



3E: CONTRACTOR'S LICENSING CERTIFICATION

If the contractor is a sole proprietorship or another entity that does business under a fictitious name, the bid shall be in the real name of the respondent with a designation following showing "DBA (the fictitious name)," provided however, that no fictitious name shall be used unless there is a current registration with the Orange County Recorder. If the bid is submitted by a corporation, provide an additional attachment that states the names of the officers who can sign an agreement on behalf of the corporation and whether more than one officer must sign. If the bid is by a partnership or a joint venture, state the names and addresses of all general partners and joint venture parties.

The undersigned certifies that the contractor is licensed in accordance with the laws of the State of California to do the type of work required. Contractor further certifies that it is regularly engaged in the general class and type of work called for in this Request for Informal Bid. The successful contractor and subcontractors are required to hold the State of California Contractor's License(s) and DIR registration as required by SB854. Please complete and/or provide all requested information.

CONTRACTOR'S
LICENSE NO: 1062300 **CLASS:** B **EXPIRATION:** 06/30/2024

CA DIR REGISTRATION NUMBER: PW-LR-1000666197 **EXPIRATION:** 06/30/2026

CONTRACTOR TELEPHONE: 517-652-3156 **CONTRACTOR FAX:** _____

BUSINESS ADDRESS: 1165 Linda Vista Drive Suite 102, San Marcos CA 92078

LENGTH OF TIME IN BUSINESS: 3 years 8 months

LENGTH OF TIME AT CURRENT LOCATION: 1 year 11 months

NUMBER OF EMPLOYEES: 5 **NUMBER OF CURRENT CLIENTS:** 2

If the contractor operates as a sole proprietorship:

NAME OF INDIVIDUAL CONTRACTOR: _____

SIGNATURE OF OWNER: _____

BUSINESS ADDRESS: _____

If the contractor operates under a partnership:

NAME OF FIRM: _____

PARTNER NAME: _____ **PARTNER TITLE:** _____

PARTNER ADDRESS: _____

SIGNATURE OF PARTNER: _____

PARTNER NAME: _____ **PARTNER TITLE:** _____

PARTNER ADDRESS: _____

SIGNATURE OF PARTNER: _____

NAME OF CORPORATION: Neuroth Construction Inc

CORPORATION ORGANIZED UNDER THE LAWS OF THE STATE OF CALIFORNIA:

SIGNATURE OF THE CORPORATION SECRETARY

DATE 12/06/2023

NAME: Rob Neuroth **TITLE:** President

TELEPHONE: 517-652-3156 **E-MAIL:** rob.neuroth@neurothconstruction.com

NAME: Ed Hearn **TITLE:** Superintendent

TELEPHONE: 951-400-9775 **E-MAIL:** ed.hearn@neurothconstruction.com

SUBSCRIBED AND SWORN TO BEFORE ME
THIS 7th DAY OF DEC. 2023

BY Rob Neurotin
(Print Name)

(Signature of Notary Public)

hns
(Signature)

(Signature of Notary Public)
HAMID EMAD IANI NAEINI
(Attach Jurat)
SAN DIEGO - CALIFORNIA

TITLE President

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.



(SEAL)

(SEAL)

3F: PROPOSED SUBCONTRACTORS

Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., Bidder must clearly set forth the name and location of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work in an amount in excess of one-half of one percent (0.5%) of bidder's total bid and the kind of work that each will perform. This is to include any subcontractor that will specially fabricate and install a portion of work according to detailed drawings contained in the plans and specifications in the amount greater than one half of one percent (.05%) of the Contractor's total bid.

Furthermore, Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., if bidder fails to list as to any portion of work, or if bidder lists more than one subcontractor to perform the same portion of work (i.e. bidder must indicate what portion of the work each subcontractor will perform), bidder must perform that portion itself or be subjected to penalty under applicable law. If alternate bids are called for and Bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the base bid, Bidder must list subcontractors that will perform work in an amount in excess of one half of one percent (0.5%) of bidder's total bid, including alternates.

In case more than one subcontractor is named for the same kind of work, the Contractor is to state the portion of work that each subcontractor will perform. Bidders or suppliers of materials only do not need to be listed. If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document.

Subcontractor Name	<i>RB Concrete Solutions</i>				
Address	<i>1159 W. 8th St. San Bernardino, CA 92411</i>				
DIR Registration No.	<i>PWLR-1000832867</i>	CSLB No.	<i>1071714</i>	Class	<i>C-8</i>
Phone	<i>909 601 7031</i>	Email	<i>sergio@rbconcreteolutions.com</i>		
Percent of Total Contract	<i>20%</i>				
Specific Scope of Work	<i>Trenching, Excavation, Backfill, Concrete, CMU, Walls</i>				
Subcontractor Name	<i>Wakeland Electric</i>				
Address	<i>12003 Temescal Canyon Rd. STE B Corona, CA 92883</i>				
DIR Registration No.	<i>1000580743</i>	CSLB No.	<i>90732</i>	Class	<i>C-10</i>
Phone	<i>951 399 0987</i>	Email	<i>josh@wakelandelectric.com</i>		
Percent of Total Contract					
Specific Scope of Work	<i>Electrical</i>				
Subcontractor Name	<i>East West Building Solutions</i>				
Address	<i>4144-A Avenida De la Playa, Oceanside CA 92056</i>				
DIR Registration No.	<i>1000040753</i>	CSLB No.	<i>1014556</i>	Class	<i>B</i>
Phone	<i>760 859 5565</i>	Email			
Percent of Total Contract	<i>9%</i>				
Specific Scope of Work	<i>Metal Stud Framing, Paints, Doors</i>				
Subcontractor Name	<i>KFT Training</i>				
Address	<i>5 Pearl Court UNIT D Allendale, NJ 07401</i>				
DIR Registration No.	<i>1000044756</i>	CSLB No.	<i>912139</i>	Class	<i>A</i>
Phone	<i>201 300 8100</i>	Email	<i>arlene.rosenberg@kt.firetrainer.com</i>		
Percent of Total Contract	<i>30%</i>				
Specific Scope of Work	<i>Fire Props</i>				
Subcontractor Name	<i>Asa WHP Training Towers Tanketous Constructors</i>				
Address					
DIR Registration No.	<i>PWLR-1000867913</i>	CSLB No.	<i>065784</i>	Class	<i>C61/04</i>
Phone	<i>801 351 2525</i>	Email	<i>rob@trainingtowers.com</i>		
Percent of Total Contract	<i>15%</i>				
Specific Scope of Work	<i>High Temp Liner</i>				

3G: DESIGNATION OF SURETIES

The following are the names, addresses and phone numbers for all brokers and sureties from whom Bidder intends to procure insurance and bonds.

Name	Alliant Insurance Services, Inc.
Address	701 B Street, 6th Floor, San Diego CA 92101-8156
Phone No.	858-472-5547
Name	
Address	
Phone No.	
Name	
Address	
Phone No.	
Name	
Address	
Phone No.	

3H: BIDDER'S CERTIFICATION OF COMPLIANCE WITH
INSURANCE REQUIREMENTS FOR PUBLIC WORKS CONSTRUCTION

BIDDER agrees, acknowledges and is fully aware of the insurance requirements as specified in the INSTRUCTIONS TO BIDDERS FOR RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS and accepts all conditions and requirements contained therein.

BIDDER acknowledges that ACORD forms will not be accepted when policy forms or endorsements are required.

BIDDER acknowledges that some insurance companies may be unwilling to issue all of the policy coverage and endorsements required in the conditions and requirements. It is BIDDER's responsibility to ensure that it will be able to provide evidence of all required types and amounts of insurance and all policy endorsements required hereunder.

BIDDER represents and warrants that, prior to signing below, BIDDER has confirmed with BIDDER's insurer(s) or insurance broker(s) that all required evidence of the types and amounts of insurance, and all required endorsements of insurance coverage, will be timely provided to OCFA in accordance with the conditions and requirements. Failure to provide all required evidence of insurance and endorsements when required will constitute a material breach of the agreement.

Neuroth Construction, Inc.

Bidder



By Rob Neuroth

12/6/2023

Date

3I: CERTIFICATION OF SITE EXAMINATION

By signing below, Bidder certifies each of the following:

1. Bidder is fully informed of the conditions relating to the construction of the work and the employment of labor thereon
2. The specifications for the work show conditions as they are believed to exist. The conditions shown do not constitute a representation or warranty express or implied by the OCFA, its officers or agents that such conditions actually exist.
3. Bidder has thoroughly examined the site for the work described herein and attended the mandatory pre-bid inspection of the building(s) and site(s), conducted by the OCFA. Failure to attend the mandatory pre-bid inspection shall be cause for rejection of the bid.
4. Bidder has observed the designated Contractor work areas, material equipment storage areas, access routes, as well as the ability to protect existing surface and subsurface improvements. No claim for allowance of time or money will be allowed for such matters.
5. Bidder is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the work to be performed.
6. Bidder acknowledges that there are certain peculiar and inherent conditions existent in the construction of the work that may create, during the work, unusual or peculiar unsafe conditions hazardous to persons and property and expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the work with respect to such hazards.

To the Orange County Fire Authority:

I certify that I have examined the site and the bid is complete and there will be no requests for additional payment for failure to examine the site thoroughly.

Date of Site Examination: 11/8/2023

Company Name: Neuroth Construction, Inc.

Signature: 

Printed Name / Title of Company Representative: Rob Neuroth, President

Date: 12/06/2023

3J: BID SHEETS

Cost Analysis: The bid information is relevant to a determination of whether the pricing offered is fair and reasonable in light of the Scope of Services to be provided. **Failure to submit the information in the format requested may result in the bid being deemed non-responsive.**

Instructions: - Input your information in the blank cells as follows:

- Insert a description for each Line
- Insert the lump sum subtotal for each category
- Add all categories to arrive at the Project Grand Total

CATEGORY I: Labor		
Line	Description	
1	Labor	
SUBTOTAL LABOR:		900,000
CATEGORY II: Permanent & Non-Permanent Materials/Supplies		
Line	Description	
2	Materials	
SUBTOTAL MATERIALS:		1,700,000
CATEGORY III: EQUIPMENT		
Line	Description	
3		
SUBTOTAL EQUIPMENT:		30,000
CATEGORY IV: OVERHEAD & INDIRECT COSTS		
Line	Description	
4	Overhead Gc	
SUBTOTAL OVERHEAD:		180,000
PROJECT SUBTOTAL		
CATEGORY V: PROFIT		
Line	Description	% Profit
5	Provide the percentage of the project subtotal (above) that will be assessed as profit:	8%
SUBTOTAL PROFIT (IN DOLLARS)		180,000
CATEGORY VI: PERMITS/FEES		
Line	Description	Estimated Permits/Fees
6	Provide an estimate of the permits and fees for the project. These fees will be reimbursed at actual cost or may be paid directly to the regulating agency by OCFA.	NA
SUBTOTAL PERMITS/FEES		
PROJECT GRAND TOTAL		2,347,227.00

3K: PROJECT APPROACH AND TIMELINE

Failure to provide the information requested below may result in the bid being deemed non-responsive:

1. Submit a Rough Construction Schedule. This will be the basis for the approved Construction Schedule.
2. Submit a Rough Schedule of Values, including mobilization and field office costs, in a format consistent with AIA Document G703 – 1992. This will be the basis for the approved Schedule of Values.
3. Submit a narrative explanation of the proposed Construction Schedule and Schedule of Values. The narrative should include project phases and major project milestones.

CONTINUATION SHEET

PAGE OF PAGES

APPLICATION AND CERTIFICATION FOR PAYMENT, containing

Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

RFOTC Training Grounds Modification

Draft Not Actual Value ARCHITECT'S PROJECT NO:

APPLICATION NO:

APPLICATION DATE:

PERIOD TO:

Draft

Draft

Draft

NA

A	B	C	D	E	F	G		H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED		MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	%(G ÷ C)	BALANCE TO FINISH (C - G)	RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD					
									5%
1	Mobilization	\$ 175,000	\$ -	\$ -		\$ -	0%	\$ 175,000	\$ -
2	Demolition @ Tower Interior/ Exterior	\$ 185,000	\$ -	\$ -		\$ -	0%	\$ 185,000	\$ -
3	Trenching for Electrical	\$ 40,000					0%	\$ 40,000	
4	Interior Framing	\$ 40,000		\$ -		\$ -	0%	\$ 40,000	\$ -
5	CMU Installation	\$ 25,000					0%	\$ 25,000	
6	Electrical	\$ 180,000	\$ -	\$ -		\$ -	0%	\$ 180,000	\$ -
7	Doors Frames and Hardware	\$ 40,000		\$ -		\$ -	0%	\$ 40,000	\$ -
8	Concrete	\$ 100,000		\$ -		\$ -	0%	\$ 100,000	\$ -
9	Painting	\$ 20,000		\$ -		\$ -	0%	\$ 20,000	\$ -
10	(Material)	\$ 325,000					0%	\$ 325,000	
11	Installation of FT Mockups	\$350,000					0%	\$ 350,000	
12	High Temperature Fire Lining	\$325,000					0%	\$ 325,000	
	Change orders					\$ -		\$ -	\$ -
TOTALS		\$ 1,805,000.00	\$ -	\$ -	\$ -	\$ -	0%	\$ 1,805,000.00	\$ -



RFOTC Training Grounds Modification
Schedule Narrative

Project Approach:

Neuroth Construction's approach to scheduling is to minimize the impact on the tenant. Neuroth Construction has worked in numerous occupied spaces and realizes the importance of keeping the flow of the daily activities going.

Neuroth Construction, in working with the suppliers of the Fire Props has identified that the procurement period (18 Weeks) exceeds the 120-day duration of the RFQ and proposes that a two-part NTP be issued. During this period, Neuroth Construction will also seek submittals from other subcontractors, and begin procurement of all other materials that may be considered a long lead item (potentially electrical).

Per the attached "Rough Construction Schedule" the critical path is identified with a 30 week duration as follows:

- **Submittal Process- 5 weeks (Sub agreements, Sub Submittal, AE Review and Approval)**
- **Fabrication and Procurement of Fire Props- 18 weeks**
- **Installation of Fire Props- 5 Weeks**
- **Acceptance Testing- 1 week**
- **Punchlist and Closeout- 1 week**

Due to this critical path exceeding the allotted 120-day period it is necessary to begin the procurement process of the fire props early and push other work out to align with the finish date.

Neuroth Construction estimates that the onsite work will be able to be finished within the 120 day duration as shown in the attached schedule. Activities are shown in 1-week durations, with items estimated to take up to there allotted week duration time and not to exceed. Neuroth Construction anticipates that several of the activities will be able to run concurrent but show them as sequential in anticipation of potential unforeseen. The attached schedule reflects the following weeks and activities during those weeks.

Weeks 1-5- Submittal Process, which includes the following:

- GC to issue subcontract to subcontractors (1 week)
- Subcontractors to issue submittals (2 weeks)
- A/E Review Period (2 weeks)

Weeks 6-14

- Fabrication and Procurement of Fire Props
- Electrical Equipment



Week 15 (Issue NTP for Construction)

- Fabrication and Procurement (Continues)
- Utilities Locating (prior to trenching)

Week 16

- Fabrication and Procurement (Continues)
- Concrete Cutting and Demolition at Site

Week 17

- Fabrication and Procurement (Continues)
- Concrete Cutting and Demolition at Site
- Demolition of Existing Fire Props

Week 18

- Fabrication and Procurement (Continues)
- Demolition of Existing Fire Props
- Trenching

Week 19

- Fabrication and Procurement (Continues)
- Trenching
- Demo of existing Walls

Week 20

- Fabrication and Procurement (Continues)
- Compaction of Trench
- Modify Existing Floor Plan

Week 21

- Fabrication and Procurement (Continues)
- Installation of Electrical Utilities
- Modify Existing Floor Plan

Week 22

- Fabrication and Procurement (Continues)
- Installation of Electrical Utilities
- Modify Existing Floor Plan

Week 23

- Fabrication and Procurement (Continues)
- Installation of Doors
- Installation of Electrical Utilities

Week 24

- Fabrication and Procurement (Complete)
- Backfill Compaction of trench
- Exterior Improvements



Week 25

- Concrete Patchback
- Installation of gas fire props

Week 26

- Asphalt Patchback
- Installation of gas fire props

Week 27

- Punchlist Items Electrical Site Work
- Installation of gas fire props

Week 28

- Installation of gas fire props
- Punch items complete at Electrical and site work

Week 29

- Installation of Gas Fire props complete
- Punchlist items

Week 30

- Acceptance and Testing
- Training
- Turnover

This sequencing is the anticipated path of construction activities. Neuroth Construction understands that the training facility will be active and will work closely with OCFA to minimize interruptions to ongoing activities.

3L: LIST OF PROJECT REFERENCES

The Bidder must demonstrate knowledge of public construction techniques and must possess a working ability to perform a similar scope of construction work for other public agencies. The information provided below may be used to determine whether the bid is submitted by a "responsible bidder" for purposes of the Public Contract Code, as stated in this IFB document. The OCFA expressly reserves the right to reject the bid of any bidder who has failed to complete three (3) similar projects of substantially the same type of work in a timely or satisfactory manner. **Failure to provide the requested information may cause your bid to be rejected as non-responsive.**

1. Submit the following information for three public agencies for which the Bidder has performed similar work within the past three (3) years:

- a) Agency Name
- b) Address
- c) Contact Name and Title
- d) Telephone Number
- e) Email Address
- f) Project Name
- g) Project Value
- h) Description of Scope of Work

2. References will be asked the following information:

- a) Did the Contractor perform the work as agreed?
- b) Did the Contractor perform the work within the allocated time frame?
- c) Were you satisfied with the Contractor's performance?
- d) Would you recommend the Contractor for a future contract?
- e) Did you have easy accessibility to the Contractor?

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: API Hospital Kitchen Renovation

Location: 7050 Parkway Drive La Mesa, Ca

Owner: Alvarado Parkway Institute

Owner Contact (name and current phone number): Patrick Walsh (619) 465-4411

Architect or Engineering Firm: NA

Architect or Engineer Contact

(name and current phone number): NA

Construction Manager (name and current phone number): Patrick Walsh (619) 465-4411 pwalsh1962@gmail.com

Inspector of Record (name and current phone number): Troy Perasco (619) 867-8646

Description of Project, Scope of Work Performed:

This project included the renovation of kitchen in API's main hospital, which required coordination with HCAI (formerly OSHPD). Scope included: demo, plumbing, mechanical, electrical, concrete, and install of commercial kitchen appliances. This project needed to be completed in 4 days which required around the clock working to meet the schedule goal. NCI was able to meet the goal despite unforeseen issues with exhaust system in kitchen, which required quick response and coordination with TAB subcontractor to meet OSHPD requirements. NCI also was required to install barrier with neg. air

Total Value of Construction

(including change orders): \$57,500

Date Construction Commenced: 03/03/2021

Original Contractual Completion Deadline: 3/7/2021

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 3/7/2021

Actual Date of Completion: 03/07/2021

General Contractor's Project Manager (lead contact in office), if applicable:

Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:

NA

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: API Outpatient Exterior Renovations

Location: 5538 Univeristy Ave. San Diego, 92105 215/225 W. Madison St. Ave El Cajon, 92020

Owner: Alvarado Parkway Institute

Owner Contact (name and current phone number): Patrick Walsh (619) 465-4411

Architect or Engineering Firm: NA

Architect or Engineer Contact

(name and current phone number): NA

Construction Manager (name and current phone number): Patrick Walsh (619) 465-4411 pwalsh1962@gmail.com

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

The project consisted of improvement of exterior of 3 buildings, including demo and install of siding, painting, framing, roofing, and flashing. These building were behavioral health clinics, which required close coordination to limit the disturbance of ongoing daily activities of patients.

Total Value of Construction

(including change orders): \$90,965

Date Construction Commenced: 06/01/2021

Original Contractual Completion Deadline: 08/31/2021

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 08/31/2021

Actual Date of Completion: 08/07/2021

General Contractor's Project Manager (lead contact in office), if applicable:

Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:

NA

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: Renovate Laguna Campground Picnic Tables

Location: Mount Laguna, CA

Owner: USDA National Forest Service

Owner Contact (name and current phone number): Nathan Hay (619) 782-3790

Architect or Engineering Firm: NA

Architect or Engineer Contact

(name and current phone number): NA

Construction Manager (name and current phone number): Nathan Hay (619) 782-3790 nathan.hay@usda.gov

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

The project consisted of demolition of 108 wooden picnic tables and procurement and install of 108 concrete picnic tables. The install required managing to get the tables to remote camp sites in the National forest, including Bobcat and Corral Canyon, as well as Laguna Campground. This required offloading tables, from semi truck delivery, roughly 4-5 miles away and putting them on flat bed truck to offload at camp sites. The project also required removing and re installation of bollards to access the campsites with forklift

Total Value of Construction

(including change orders): \$324,454 (No Change Order's)

Date Construction Commenced: 09/15/2022

Original Contractual Completion Deadline: 2/15/2023

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 5/19/2023

Actual Date of Completion: 04/14/2022

General Contractor's Project Manager (lead contact in office), if applicable:

Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:

Sergio Ruiz Betancourth

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: Loma Linda Fire Station 251

Location: Loma Linda, CA

Owner: City of Loma Linda

Owner Contact (name and current phone number): Brian Bolger- (909) 478-4270

Architect or Engineering Firm: Miller Architects

Architect or Engineer Contact
(name and current phone number): Kathy Oswalt- (909) 910-2437 koswalt@miller-aip.com

Construction Manager (name and current phone number): Brian Bolger- (909) 478-4270 bbolger@lomalinda-ca.gov

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

Renovation of Fire Station in including restroom and living area renovation, as well as
ADA upgrades throughout. The scope included: demo, framing, electrical, concrete, plumbing,
mechanical, Fire Suppression, Fire Alarm, Station Alerting, Flooring, drywall, paint, acoustic ceiling tiles
Ceramic tiles, epoxy, restroom fixtures, stucco, doors, frames, and hardware, as well as mill work.

Total Value of Construction

(including change orders): \$799,341

Date Construction Commenced: 05/25/2021

Original Contractual Completion Deadline: 11/4/21

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 1/18/2022

Actual Date of Completion: 01/18/2022

General Contractor's Project Manager (lead contact in office), if applicable:
Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:
Ed Hearn

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

Another Reference for this project was the city Manager: Jarb Thaipejr email:jthaipejr@lomalinda-ca.gov

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: Norco Riley Gymnasium

Location: Norco, CA

Owner: City of Norco

Owner Contact (name and current phone number): Robin Sheperd- (951) 270-5631 rshepard@ci.norco.ca.us

Architect or Engineering Firm: Miller Architects

Architect or Engineer Contact
(name and current phone number): Kathy Oswalt- (909) 910-2437

Construction Manager (name and current phone number): Robin Sheperd- (951) 270-5631

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

Renovation of Norco's Gymnasium, including main gym area, restrooms, and Dance Studio renovation

Scope Included: demo, electrical, acoustic insulation install, flooring, plumbing, tile work, restroom accessories, Low Voltage security, Glazing and storefront install, painting, structural framing, siding, and minor mechanical work.

Total Value of Construction

(including change orders): \$502,950

Date Construction Commenced: 01/03/2022

Original Contractual Completion Deadline: 4/03/2022

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 4/30/2022

Actual Date of Completion: 04/14/2022

General Contractor's Project Manager (lead contact in office), if applicable:
Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:
Ed Hearn

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: Tenant Improvements at OCFA Fire Stations 14 and 16

Location: Silverado, CA

Owner: Orange County Fire Authority

Owner Contact (name and current phone number): Julie Samaniego (949) 697-4593 juliesamaniego@ocfa.org

Architect or Engineering Firm: Gillis and Panichapan Architects, Inc.

Architect or Engineer Contact
(name and current phone number): Cynthia Perez (714) 668-4264

Construction Manager (name and current phone number): Bryce Bunker (949) 933-8758 bbunker@griffinstructures.com

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

Concurrent renovation of two Fire Stations in including restroom and living area renovation, as well as
ADA upgrades throughout. The scope included: demo, framing, electrical, concrete, plumbing,
mechanical, Fire Suppression, Fire Alarm, Station Alerting, Flooring, drywall, paint, acoustic ceiling tiles
Ceramic tiles, epoxy, restroom fixtures, stucco, doors, frames, and hardware, as well as mill work, and
renovation of parking lot.

Total Value of Construction
(including change orders): \$937600.75

Date Construction Commenced: 07/20/2022

Original Contractual Completion Deadline: 12/1 /2022

Adjusted Completion Deadline Based on
Time Extensions Granted by Owner: 2/13/23

Actual Date of Completion: 2/13/23

General Contractor's Project Manager (lead contact in office), if applicable:
Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:
Ed Hearn

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: Tenant Improvements at OCFA Fire Stations 32 and 53

Location: Yorba Linda, CA

Owner: Orange County Fire Authority

Owner Contact (name and current phone number): Julie Samaniego juliesamaniego@ocfa.org

Architect or Engineering Firm: Gillis and Panichapan Architects, Inc.

Architect or Engineer Contact
(name and current phone number): Cynthia Perez

Construction Manager (name and current phone number): Bryce Bunker (949) 933-8758 bbunker@griffinstructures.com

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

Concurrent renovation of two Fire Stations in including restroom and living area renovation, as well as
ADA upgrades throughout. The scope included: demo, framing, electrical, concrete, plumbing,
mechanical, Fire Suppression, Fire Alarm, Station Alerting, Flooring, drywall, paint, acoustic ceiling tiles
Ceramic tiles, epoxy, restroom fixtures, stucco, doors, frames, and hardware, as well as mill work.

Total Value of Construction

(including change orders): \$829,841.68

Date Construction Commenced: 03/01/2022

Original Contractual Completion Deadline: 7/11/2022

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 07/19/2022

Actual Date of Completion: 07/19/2022

General Contractor's Project Manager (lead contact in office), if applicable:
Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:
Ed Hearn

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: CSUSM ASI Cougar Pantry

Location: 333 S. Twin Oaks Valley Rd. San Marcos, CA 92096

Owner: California State University San Marcos

Owner Contact (name and current phone number): Steve Watters (760) 715-8538

Architect or Engineering Firm: CPCArchitects

Architect or Engineer Contact

(name and current phone number): Jean Claude Constandse (858) 449-3066

Construction Manager (name and current phone number): Steve Watters (760) 715-8538 swatters@csusm.edu

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

The project consisted of improvement of interior spaces to provide "Pantry" store for low income students

Scope included: Demo, plumbing, concrete, framing, drywall, electrical, mechanical, wet pipe fire suppression system, fire alarm, LVT flooring, Carpet, doors frames and hardware install, acoustic ceiling painting, storefront install with glazing, and coordination with concurrent work under seperate contract for FF&E.

Total Value of Construction

(including change orders): \$252,852

Date Construction Commenced: 03/01/2021

Original Contractual Completion Deadline: 06/01/2021

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 6/30/2021

Actual Date of Completion: 06/14/2021

General Contractor's Project Manager (lead contact in office), if applicable:

Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:

Ed Hearn

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

PROJECT REFERENCES

Provide information about the firm's six most recently completed public works projects and its three largest completed private projects within the last three years. Names and references must be current and verifiable. Use separate sheets of paper that contain all of the following information*:

For General Contractors: Only list projects your firm performed as the general contractor.

For Subcontractors: Only list projects your firm performed as the prime contractor if a single trade job or as a subcontractor on a multiple trade contract. For multiple trade contracts, indicate the general contractor's name and contact information.

Project Name: GAOA San Jacinto Restroom and Structural Upgrades

Location: 56570 State Highway 74, Mountain Center, CA and Lake Fulmor, Idyllwild, CA

Owner: USDA National Forest Service

Owner Contact (name and current phone number): Joshua Direen (909) 382-2609 joshua.direen@usda.gov

Architect or Engineering Firm: NA

Architect or Engineer Contact

(name and current phone number): NA

Construction Manager (name and current phone number): Joshua Direen (909) 382-2609

Inspector of Record (name and current phone number): NA

Description of Project, Scope of Work Performed:

The project consisted of replacing 4 picnic area shade structures with pre-engineered Steel Shade structures at Lake Hemet. Which required Demo, Excavation, rebar install, form work, concrete footings and slab on grade, as well as structural steel install and Standing Seam Metal Roofing.

Scope at Lake Fulmor consisted of demo of existing Vaulted restroom facility and install of new Pre-Eng. 4 Vault restroom facility. Scope included: demo, earthwork, excavation, plumbing, concrete, CMU install framing, roofing, finish carpentry, paint, masonry, epoxy flooring, and install of rock veneer on CMU

Total Value of Construction

(including change orders): \$1,025,032.55

Date Construction Commenced: 08/28/2022

Original Contractual Completion Deadline: 5/11/2023

Adjusted Completion Deadline Based on

Time Extensions Granted by Owner: 7/31/2023

Actual Date of Completion: 06/30/2023 With original scope, see below*

General Contractor's Project Manager (lead contact in office), if applicable:

Robert Neuroth

General Contractor's Superintendent (lead contact on project site), if applicable:

Ed Hearn

* You may also provide information about other projects that you have completed that are similar to the project(s) for which you expect to bid using the same format.

3M: QUALIFICATIONS QUESTIONNAIRE

The information and documents provided below may be used to determine the responsibility of Bidder's submittal, as stated in Section 33 of this IFB document. **Failure to provide the requested information may cause your bid to be rejected as non-responsive.**

1. Provide the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest in this proposal:
2. Provide the dates of any voluntary or involuntary bankruptcy judgments against any principal having an interest in this proposal.
3. Provide all current and prior DBA's, aliases, and fictitious business names for any principal having an interest in this proposal.
4. For each violation of labor law determined by any Federal, State or local agency to have been committed by the Bidder or any principal having an interest in this proposal, identify any measures that have been imposed by, or agreed upon with, the Federal, State or local agency as punishment for past violations or to prevent future violations.
5. State the title and date, and attach a copy of, each written threat, bid depository, claim, lawsuit, discipline or other written action by the Contractor State License Board against the Bidder or any principal having an interest in this proposal.
6. Identify the following information about each claim asserted against the Bidder or any principal having an interest in this proposal relating to industrial safety within the past eight (8) years: name of the agency/entity asserting the claim; the date of the claim; the date of the alleged violation giving rise to the claim; the claim number, if any. Attach a copy of the claim.
7. Has the Bidder or any principal having an interest in this proposal been disqualified from bidding on, or from finishing, any other public works project in the past 8 years? If so, for each such disqualification, identify: who was disqualified; which public agency disqualified; the date of the disqualification; the alleged basis for the disqualification;
8. Has the Bidder or any principal having an interest in this proposal: (a) filed (voluntarily or involuntarily) for bankruptcy protection; (b) been sued or arbitrated a dispute; been involved in a contract termination involving a public works project; or (c) failed to complete work required by a construction contract? If so, provide detailed information.
9. Please submit an attachment detailing the following information about all current projects:
 - a) Project Name
 - b) Description of Bidder's Work
 - c) Completion Date
 - d) Project Cost



Orange County Fire Authority

Tenant Improvements FS 14 and 16
Qualifications Questionnaire

1. Corporate Officers

- a. President/ CEO- Robert Neuroth
 - i. Address: 1165 Linda Vista Dr. Ste 102, San Marcos, CA 92078
 - ii. Phone: (517) 652-3156
- b. COO- Alexandra Neuroth
 - i. 2927 Rancho Vacada, Carlsbad, CA 92009
 - ii. Phone: (949) 228-2353

2. Bankruptcy Judgements- **NA**

3. DBA's:

- a. Neuroth Construction Inc. is the only name that Neuroth Construction Inc. has operated under.

4. Labor Law- **NA**

5. CSLB Claims- **NA**

6. Safety Claims- **NA**

7. Disqualification- **NA**

8. Suits, Bankruptcy claims, etc.. - **NA**

9. Current Projects

- a. SJC City Council Chambers
- b. The work consists of renovation and expansion of community center to accommodate new city council. Scope included: demo, concrete, all MEP's, including underground utilities, framing, acoustic ceiling, tile, fire suppression, fire alarm, station alerting systems.
- c. 02/2/2024
- d. \$2,747,227
- a. San Geronio Pass Perimeter Fence
- b. The work consists of demo of existing perimeter fence and install of new perimeter fence.
- c. 03/30/2024
- d. \$2, 474,227

3N: PARTY AND PARTICIPANT DISCLOSURE FORMS

Campaign Contributions Disclosure: In conformance with the statutory requirements of the State of California Government Code Section 84308, part of the Political Reform Act and Title 2, California Code of Regulations 18438 through 18438.8, regarding campaign contributions to members of appointed Boards of Directors, Offeror is required to complete the attached Party and Participant Disclosure Forms and submit as part of the proposal, **if applicable**.

Offeror is required to submit only one copy of the completed form(s) as part of its proposal. This/these form(s) should be included in the original RFP. The Offeror and subcontractors must complete the form entitled "Party Disclosure Form". Lobbyists or agents representing the Offeror in this procurement must complete the form entitled "Participant Disclosure Form". Reporting of campaign contributions is a requirement from the proposed submittal date up and until the OCFA Board of Directors takes action.

**ORANGE COUNTY FIRE AUTHORITY
BOARD OF DIRECTORS**

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Katrina Foley, Director County of Orange	

PARTY DISCLOSURE

The attached Party Disclosure Form must be completed and submitted by the Offeror and subcontractors with the proposal by all firms subject to the campaign contribution disclosure requirements stated in Section VI this solicitation. It is anticipated that a recommendation for award of this contract will be presented to the Board of Directors of OCFA for approval. (Please see next page for definitions of these terms.)

IMPORTANT NOTICE

Basic Provisions of Government Code Section 84308

- A. If you are an applicant for, or the subject of, any contract award, you are prohibited from making a campaign contribution of more than \$250 to any board member or his or her alternate. This prohibition begins on the date the solicitation is initiated, and the prohibition ends three months after a final decision is rendered by the Board of Directors. In addition, no board member or alternate may solicit or accept a campaign contribution of more than \$250 from you during this period.
- B. These prohibitions also apply to your agents, and, if you are a closely held corporation, to your majority shareholder as well. These prohibitions also apply to your subcontractor(s), joint venturer(s), and partner(s) in this proceeding. Also included are parent companies and subsidiary companies directed and controlled by you, and political action committees directed and controlled by you.
- C. You must file the attached disclosure form and disclose whether you or your agent(s) have in the aggregate contributed more than \$250 to any board member or his or her alternate during the 12-month period preceding the contract award.
- D. If you or your agent have in the aggregate contributed more than \$250 to any individual board member or his/or her alternate during the 12 months preceding the decision on the contract award or proceeding, that board member or alternate must disqualify himself or herself from the decision. However, disqualification is not required if the board member or alternate returns the campaign contribution within 30 days from the time the director knows, or should have known, about both the contribution and the fact that you are a party in the proceeding. The Party Disclosure Form should be completed and filed with your proposal, or with the first written document you file or submit after the proceeding commences.
 1. A proceeding involving "a license, permit, or other entitlement for use" includes all business, professional, trade and land use licenses and permits, and all other entitlements¹ for use, including all entitlements for land use, all contracts² (other than competitively bid, labor or personal employment contracts), and all franchises.
 2. Your "agent" is someone who represents you in connection with a proceeding involving a license, permit or other entitlement for use. If an individual acting as an agent is also acting in his or her capacity as an employee or member of a law, architectural, engineering, consulting firm, or similar business entity, both the business entity and the individual are "agents."
 3. To determine whether a campaign contribution of more than \$250 has been made by you, campaign contributions made by you within the preceding 12 months must be aggregated with those made by your agent within the preceding 12 months or the period of the agency, whichever is shorter. Contributions made by your majority shareholder (if a closely held corporation), your subcontractor(s), your joint venturer(s), and your partner(s) in this proceeding must also be included as part of the aggregation. Campaign contributions made to different directors or their alternates are not aggregated.

This notice summarizes the major requirements of Government Code Section 84308 of the Political Reform Act and 2 Cal. Adm. Code Sections 18438-18438.8 as it relates to contract awards.

¹ Entitlement for the purposes of this form refers to contract award. ² All Contracts for the purposes of this form refer to the contract award of this specific solicitation.

PARTY DISCLOSURE FORMParty's Name: Nervotz Construction IncParty's Address: 1165 Linde Vista Dr. Ste 102, SAN Marcos CA 92078

Party's Telephone: _____

Solicitation Title and Number: _____

Based on the party disclosure information provided, are you or your firm subject to party disclosures?
No ☒ If no, check the box and sign below. Yes ☐ If yes, check the box, sign below and complete the form.

Date: 12/7/22 [Signature]
Signature of Party and/or Agent

To be completed only if campaign contributions have been made in the preceding twelve (12) months. Attach additional copies if needed.

Board Member(s) to whom you and/or your agent made campaign contributions and dates of contribution(s) in the preceding 12 months:

Name of Member: _____

Name of Contributor (if other than Party): _____

Date(s): _____

Amount(s): _____

Name of Member: _____

Name of Contributor (if other than Party): _____

Date(s): _____

Amount(s): _____

PARTICIPANT (AGENT) DISCLOSURE

The Participant Disclosure Form must be completed by lobbyists or agents representing the Offeror in this procurement. It is anticipated that a recommendation for award of this contract will be presented to the Board of Directors of OCFA for approval.

IMPORTANT NOTICE

Basic Provisions of Government Code Section 84308

- A. If you are a participant in a proceeding involving any contract award, you are prohibited from making a campaign contribution of more than \$250 to any Board member. This prohibition begins on the date you begin to actively support or oppose an application for contract award pending before OCFA or any of its affiliated agencies, and continues until three months after a final decision is rendered on the application or proceeding by the Board of Directors. No Board member may solicit or accept a campaign contribution of more than \$250 from you and/or your agency during this period if the Board member knows or has reason to know that you are a participant.
- B. The attached disclosure form must be filed if you or your agent has contributed more than \$250 to any Board member for OCFA or any of its affiliated agencies during the 12-month period preceding the beginning of your active support or opposition (The disclosure form will assist the Board members in complying with the law).
- C. If you or your agent have made a contribution of more than \$250 to any Board member during the 12 months preceding the decision in the proceeding, that Board member must disqualify himself or herself from the decision. However, disqualification is not required if the Board member returns the campaign contribution within 30 days from the time the Board member knows, or should have known, about both the contribution and the fact that you are a participant in the proceeding.

The Participant Disclosure Form should be completed and filed with the proposal submitted by a party, or should be completed and filed the first time that you lobby in person, testify in person before, or otherwise directly act to influence the vote of the Board members of OCFA or any of its affiliated agencies.

1. An individual or entity is a "participant" in a proceeding involving an application for a license, permit or other entitlement for use if:
 - a. The individual or entity is not an actual party to the proceeding, but does have a significant financial interest in the OCFA's or one of its affiliated agencies' decisions in the proceeding;
AND
 - b. The individual or entity, directly or through an agent, does any of the following:
 - i. Communicates directly, either in person or in writing, with a Board member of OCFA or any of its affiliated agencies for the purpose of influencing the Board member's vote on the proposal;
 - ii. Communicates with an employee of OCFA or any of its affiliated agencies for the purpose of influencing a Board member's vote on the proposal; or
 - iii. Testifies or makes an oral statement before the Board of Directors of OCFA or any of its affiliated agencies.
2. A proceeding involving "a license, permit, or other entitlement for use" includes all business, professional, trade and land use licenses and permits, and all other entitlements for use, including all entitlements for land use; all contracts (other than competitively bid, labor, or personal employment contracts) and all franchises.
3. Your "agent" is someone who represents you in connection with a proceeding for this proposed involving a contract award. If an agent acting as an employee or member of a law, architectural, engineering, or consulting firm, or a similar business entity or corporation, both the business entity or corporation and the individual are agents.
4. To determine whether a campaign contribution of more than \$250 has been made by a participant or his or her agent, contributions made by the participant within the preceding 12 months shall be aggregated with those made by the agent within the preceding 12 months or the period of the agency, whichever is shorter. Campaign contributions made to different Board members are not aggregated.

This notice summarizes the major requirements of Government Code Section 84308 and 2 Cal. Adm. Code Sections 18438-18438.8

PARTICIPANT (AGENT) DISCLOSURE FORMPrime's Firm Name: Neuroth Construction Inc.Party's Name: Neuroth Construction Inc.Party's Address: 1165 Linda Vista Dr. Ste 102, San Marcos CA 92078

Party's Telephone: _____

Solicitation Title and Number:

Based on the participant disclosure information provided, are you or your firm subject to participant disclosures?

No ☒ If no, check the box and sign below. Yes ☐ If yes, check the box, sign below and complete the form.Date: 12/7/23
Signature of Party and/or Agent**To be completed only if campaign contributions have been made in the preceding twelve (12) months. Attach additional copies if needed.**

Board Member(s) to whom you and/or your agent made campaign contributions and dates of contribution(s) in the preceding 12 months:

Name of Board Member: _____**Name of Contributor (if other than Party):** _____**Date(s):** _____**Amount(s):** _____**Name of Board Member:** _____**Name of Contributor (if other than Party):** _____**Date(s):** _____**Amount(s):** _____

SECTION 4: CONTRACT DOCUMENTS**CONTRACT SUBMITTALS (SUCCESSFUL BIDDER ONLY)**

Within fourteen calendar days (14) of the issuance of the Notice to Proceed, the successful Bidder must submit the documents below. Failure to do so may result in the contract being deemed abandoned.

- ☒ **Transmittal Page Two – Bid Award Documents** (Exhibit 4A)
- ☒ **Original Performance Bond** (Exhibit 4B)
- ☒ **Original Payment (Labor and Materials) Bond** (Exhibit 4C)
- ☒ **Award Certifications** (Exhibit 4D)
- ☒ **IRS Form W9** (Exhibit 4E)
- ☒ **All required Insurance Certificates and Endorsements**
- ☒ **Signed Contract Agreement** (Exhibit 4F)
- ☒ **General Conditions** (Exhibit 4G)

4A: TRANSMITTAL PAGE TWO – BID AWARD DOCUMENTS**TO:** Orange County Fire Authority**FROM:** Neuroth Construction, Inc.

(Legal Name of Contractor)

PROJECT: RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS**AWARDED CONTRACTOR'S CHECKLIST:**

The awarded Contractor is required to provide the following documents:

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Transmittal Page (<i>Exhibit 4A</i>) | <input type="checkbox"/> Award Certifications (<i>Exhibit 4D</i>) | <input type="checkbox"/> Signed Agreement (<i>Exhibit 4F</i>) |
| <input type="checkbox"/> Performance Bond (<i>Exhibit 4B</i>) | <input type="checkbox"/> W9 (<i>Exhibit 4E</i>) | |
| <input type="checkbox"/> Payment Bond (<i>Exhibit 4C</i>) | <input type="checkbox"/> Insurance Certificates | |

TO THE OCFA:

Signature below acknowledges that, should the Contractor fail to provide the above documents in a form satisfactory to OCFA within fourteen days of the issuance of the Notice of Award, OCFA may, at its option, consider the Contractor to have abandoned the agreement, upon which the full payment of the sum stated in the Bidder's Bond shall be due immediately.

SIGNATURE OF CONTRACTOR:**PRINTED NAME:**

Rob Neuroth

TITLE:

President

4B: FAITHFUL PERFORMANCE BOND

(100% of Agreement Price)

Bidders must use this form, NOT a surety company form

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Orange County Fire Authority, ("OCFA") and Neuroth Construction, Inc. ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

IFB RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS

("Contract") which Contract dated _____, and all of the Bid Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract.

NOW, THEREFORE, the Principal and The Gray Casualty & Surety Company ("Surety") are held and firmly bound unto the Board of the OCFA in the penal sum of TWO MILLION, THREE HUNDRED FORTY-SEVEN THOUSAND, TWO HUNDRED TWENTY-SEVEN DOLLARS (\$2,347,227), lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

- Perform all the work required to complete the Project; and
- Pay to the OCFA all damages the OCFA incurs as a result of the Principal's failure to perform all the work required to complete the Project.

The condition of the obligation is such that, if the above bounden Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warranties of materials and workmanship, and shall indemnify and save harmless the OCFA, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the OCFA from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the OCFA's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

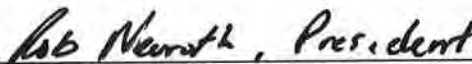
[Signature Page Follows]

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 25th day of January, 2024 in accordance with Article 5, commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract:

CONTRACTOR:

(Affix Corporate Seal)

Neuroth Construction Inc.

Principal**By****Print Name and Title of Signatory**SEE ATTACHED
NOTARIZED DOCUMENT**SURETY:**

(Affix Corporate Seal)

The Gray Casualty & Surety Company

Surety**By** Lawrence F. McMahon, Attorney-in-Fact

Alliant Insurance Services, Inc.

Name of California Agent of Surety

701 B Street, 6th Floor, San Diego, CA 92101

Address of California Agent of Surety

(619)238-1828

Telephone Number of California Agent of Surety

Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Diego)
On JAN 25 2024 before me, N. Kirk-Smith, Notary Public,
Date Here Insert Name and Title of the Officer
personally appeared Lawrence F. McMahon
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature N. Kirk-Smith
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☒ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: Surety Company

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

**THE GRAY INSURANCE COMPANY
THE GRAY CASUALTY & SURETY COMPANY**

GENERAL POWER OF ATTORNEY

Bond Number: GS55700030 **Principal:** Neuroth Construction Inc.
Project: IFB RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Lawrence F. McMahon, Sarah Myers, Ryan E. Warnock, Maria Guise, Janice Martin, and Christopher J. Conte of San Diego, California jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of \$25,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 4th day of November, 2022.



By:

Michael T. Gray

Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske

Cullen S. Piske
President
The Gray Casualty & Surety Company



State of Louisiana

ss:

Parish of Jefferson

On this 4th day of November, 2022, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.



Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

I, Mark S. Manguno, Secretary of The Gray Insurance Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 25th day of January, 2024.

Mark S. Manguno

I, Leigh Anne Henican, Secretary of The Gray Casualty & Surety Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 25th day of January, 2024.

Leigh Anne Henican



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of ORANGE)

On JANUARY 30TH, 2024 before me, STEVEN ELIZONDO, NOTARY PUBLIC
(insert name and title of the officer)

personally appeared ROBERT NEUROTH
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature  (Seal)



4C: PAYMENT BOND
Contractor's Labor & Material Bond
(100% of Agreement Price)
Bidders must use this form, NOT a surety company form

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Orange County Fire Authority, ("OCFA") and Neuroth Construction, Inc., ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

IFB RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS

("Contract") which Contract dated _____, and all of the Bid Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to one hundred percent (100%) of the Contract price, to secure the claims to which reference is made in sections 9000 through 9510 and 9550 through 9566 of the Civil Code, and division 2, part 7, of the Labor Code.

NOW, THEREFORE, the Principal and, The Gray Casualty & Surety Company ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of TWO MILLION, THREE HUNDRED FORTY-SEVEN THOUSAND, TWO HUNDRED TWENTY-SEVEN DOLLARS (\$2,347,227), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal or any of his or its subcontractors of any tier under Section 13020 of the Unemployment Insurance Code with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under section 9100 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and affect.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of Contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

[Signature Page Follows]

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 25th day of January, 2024.

CONTRACTOR:

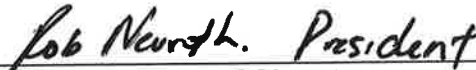
(Affix Corporate Seal)

Neuroth Construction Inc.

Principal



By




Print Name and Title of Signatory

SEE ATTACHED
NOTARIZED DOCUMENT**SURETY:**

(Affix Corporate Seal)

The Gray Casualty & Surety Company

Surety



By Lawrence F. McMahon, Attorney-in-Fact

Alliant Insurance Services, Inc.

Name of California Agent of Surety

701 B Street, 6th Floor, San Diego, CA 92101

Address of California Agent of Surety

(619)238-1828

Telephone Number of California Agent of Surety

Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Diego)
On JAN 25 2024 before me, N. Kirk-Smith, Notary Public,
Date Here Insert Name and Title of the Officer
personally appeared Lawrence F. McMahon
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature N. Kirk-Smith
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☒ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: Surety Company

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

**THE GRAY INSURANCE COMPANY
THE GRAY CASUALTY & SURETY COMPANY**

GENERAL POWER OF ATTORNEY

Bond Number: GS55700030

Principal: Neuroth Construction Inc.

Project: IFB RO2633B - RFOTC TRAINING GROUNDS MODIFICATIONS

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Lawrence F. McMahon, Sarah Myers, Ryan E. Warnock, Maria Guise, Janice Martin, and Christopher J. Conte of San Diego, California jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of \$25,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 4th day of November, 2022.



By:

Michael T. Gray

Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske

Cullen S. Piske
President
The Gray Casualty & Surety Company



State of Louisiana

ss:

Parish of Jefferson

On this 4th day of November, 2022, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.



Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

I, Mark S. Manguno, Secretary of The Gray Insurance Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 25th day of January, 2024.

Mark S. Manguno

I, Leigh Anne Henican, Secretary of The Gray Casualty & Surety Company, do hereby certify that the above and forgoing is a true and correct copy of a Power of Attorney given by the companies, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Company this 25th day of January, 2024.

Leigh Anne Henican



ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of ORANGE

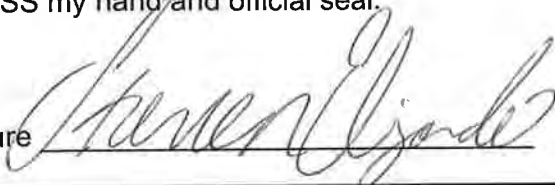
On JANUARY 30TH, 2024 before me, STEVEN ELIZONDO, NOTARY PUBLIC
(insert name and title of the officer)

personally appeared ROBERT NEUROTH
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in
his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the
person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

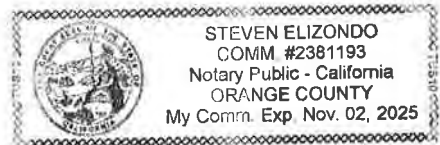
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing
paragraph is true and correct.

WITNESS my hand and official seal.

Signature



(Seal)

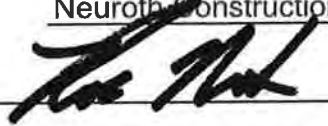


4D: AWARD CERTIFICATIONS**Prevailing Wage:**

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hour notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project, including, without limitation, the State labor compliance monitoring and enforcement by the Compliance Monitoring Unit of the Department of Industrial Relations, if this Project is subject to a labor compliance.

Workers' Compensation:

In accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract. CA Labor Code section 3700 in relevant part provides that every employer except the State shall secure the payment of compensation in one or more of the following ways: (1) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state; (2) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees. I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of work of this contract.

Date:1/18/2024**Legal Name of
Contractor:**Neuroth Construction, Inc.**Signature:****Printed Name:**Rob Neuroth**Title:**President

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

► Go to www.irs.gov/FormW9 for instructions and the latest information.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

Neuroth Construction Inc

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ►

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ►

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.

1165 Linda Vista Dr. Ste 102

6 City, state, and ZIP code

San Marcos, CA 92078

7 List account number(s) here (optional)

Requester's name and address (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

____ - ____ - ____

or

Employer identification number

8 5 - 0 9 5 6 7 0 3

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign
Here

Signature of
U.S. person ►

Date ► 1/18/2024

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.



NEURCON-02

SDEVARAJ

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/19/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER License # 0C36861
San Diego-Alliant Insurance Services, Inc.
701 B St 6th Fl
San Diego, CA 92101

CONTACT NAME: Susan Koelle

PHONE:

(A/C, No, Ext):

FAX (A/C, No):

E-MAIL ADDRESS: Susan.Koelle@alliant.com

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURER A: Evanston Insurance Company

35378

INSURER B: State Compensation Insurance Fund of California

35076

INSURER C:

INSURER D:

INSURER E:

INSURER F:

INSURED

Neuroth Construction, Inc.
1165 Linda Vista Dr. Suite 102
San Marcos, CA 92078

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	X	X	MKLV5PBC005515	2/12/2023	2/12/2024	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 DEDUCTIBLE \$ 5,000 COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$			MKLV5EUL104795	2/12/2023	2/12/2024	EACH OCCURRENCE \$ 4,000,000 AGGREGATE \$ 4,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	X	9329950-2023	12/22/2023	12/22/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: OCFA Bid #RO2633B, OCFA RFOTC Training Grounds Modifications project.

The Orange County Fire Authority and its officials, officers, employees, agents, representatives, attorneys and volunteers are included as Additional Insureds on primary and non-contributory basis, waiver of subrogation applies. Umbrella/Excess Liability follow form for General Liability.

CERTIFICATE HOLDER

Orange County Fire Authority
1 Fire Authority Road
Irvine, CA 92602

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



EVANSTON INSURANCE COMPANY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

SCHEDULE

Name Of Person Or Organization:

Any person(s) or organization(s) with whom the Named Insured agrees, in a written contract executed prior to the "occurrence", to waive rights of recovery

Additional Premium: Included

The following is added to Condition 8. Transfer Of Rights Of Recovery Against Others To Us under Section IV – Commercial General Liability Conditions:

We waive any right of recovery we may have against any person or organization shown in the Schedule of this endorsement. This waiver applies only to the person or organization shown in the Schedule of this endorsement.

All other terms and conditions remain unchanged.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

PRIMARY AND NONCONTRIBUTORY – OTHER INSURANCE CONDITION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

The following is added to the **Other Insurance** Condition and supersedes any provision to the contrary:

Primary And Noncontributory Insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured under your policy provided that:

- (1) The additional insured is a Named Insured under such other insurance; and

- (2) You have agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
As required by written contract signed by both parties and executed prior to commencement of operations.	All Locations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
As required by written contract executed by both parties prior to loss	All locations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
 2. Available under the applicable Limits of Insurance shown in the Declarations;
- whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.



ENDORSEMENT AGREEMENT
WAIVER OF SUBROGATION
BLANKET BASIS

BROKER COPY

POLICY NUMBER: 9329950-2023

RENEWAL
SD
8-88-54-69
PAGE 1 OF 1

HOME OFFICE
SAN FRANCISCO

EFFECTIVE DECEMBER 22, 2023 AT 12.01 A.M.
AND EXPIRING DECEMBER 22, 2024 AT 12.01 A.M.

ALL EFFECTIVE DATES ARE
AT 12:01 AM PACIFIC
STANDARD TIME OR THE
TIME INDICATED AT
PACIFIC STANDARD TIME

NEUROTH CONSTRUCTION, INC.
1165 LINDA VISTA DRIVE, SUITE 102
ELFIN FOREST, CA 92078

WE HAVE THE RIGHT TO RECOVER OUR PAYMENTS FROM ANYONE
LIABLE FOR AN INJURY COVERED BY THIS POLICY. WE WILL
NOT ENFORCE OUR RIGHT AGAINST THE PERSON OR
ORGANIZATION NAMED IN THE SCHEDULE.

THIS AGREEMENT APPLIES ONLY TO THE EXTENT THAT YOU
PERFORM WORK UNDER A WRITTEN CONTRACT THAT REQUIRES YOU
TO OBTAIN THIS AGREEMENT FROM US.

THE ADDITIONAL PREMIUM FOR THIS ENDORSEMENT SHALL BE
2.00% OF THE TOTAL POLICY PREMIUM.

SCHEDULE


<u>PERSON OR ORGANIZATION</u>	<u>JOB DESCRIPTION</u>
ANY PERSON OR ORGANIZATION FOR WHOM THE NAMED INSURED HAS AGREED BY WRITTEN CONTRACT TO FURNISH THIS WAIVER	BLANKET WAIVER OF SUBROGATION

NOTHING IN THIS ENDORSEMENT CONTAINED SHALL BE HELD TO VARY, ALTER, WAIVE
OR EXTEND ANY OF THE TERMS, CONDITIONS, AGREEMENTS, OR LIMITATIONS OF THIS
POLICY OTHER THAN AS STATED. NOTHING ELSEWHERE IN THIS POLICY SHALL BE
HELD TO VARY, ALTER, WAIVE OR LIMIT THE TERMS, CONDITIONS, AGREEMENTS OR
LIMITATIONS OF THIS ENDORSEMENT.

COUNTERSIGNED AND ISSUED AT SAN FRANCISCO: DECEMBER 26, 2023

2572


AUTHORIZED REPRESENTATIVE


PRESIDENT AND CEO

4G: GENERAL CONDITIONS**ORANGE COUNTY FIRE AUTHORITY GENERAL CONDITIONS****51 Definitions**

As used in these General Conditions and in the Project Manual generally, the following terms have the meaning indicated:

Acts of God: An earthquake in excess of a magnitude of 3.5 on the Richter Scale or a tidal wave.

Addendum: A written or graphic instrument issued by Project Manager on behalf of the OCFA prior to the execution of the Contract which sets forth additions, deletions, or other revisions to the Project Manual or clarifications thereof.

Authority: The Orange County Fire Authority, a California Joint Powers Authority.

Board of Directors: The governing body of the Orange County Fire Authority.

Change Order: A written Modification executed by both parties (except in the event of a unilateral Change Order as herein provided) and consisting of additions, deletions or other changes to the Contract. A Change Order may be accompanied by and/or may identify additional or revised Drawings, sketches or other written instructions which become and form a part of the Project Manual by virtue of the executed Change Order. Except as otherwise provided in Subparagraph 1.1.5., a Change in the Work, or a change in the Contract Time or the Contract Sum shall only be approved by written Change Order.

Construction Contract or Contract: The written "Contract Agreement" covering the performance of the Work and the furnishing of labor, materials, tools, and equipment in the construction of the Work. The term "Construction Contract" also includes the Project Manual.

Contract Directive: A written document issued by the Project Manager and consisting of additions, deletions, clarifications, interpretations, or other written instructions issued by the Project Manager with respect to the performance of the Work or the activities of the Contractor on the Job Site or the property of OCFA. A Contract Directive can be a response to a Request for Information; however, all responses to Requests for Information need not be Contract Directives. A Contract Directive may become the subject of a Change Order only if such Directive involves a substantial change in the Work, or a change in the Contract Time or the Contract Amount, approved as a Change Order by the Project Manager.

Contractor's Construction Schedule: The detailed schedules, based on a critical path method ("CPM"), prepared by the Contractor, presenting an orderly and realistic plan for completion of the work required in the Project Manual. The Contractor's Construction Schedule shall also include the completion dates of the Milestones and a final proposal narrative as described in the Project Manual.

Contractor: The person or entity awarded the Contract to perform the work.

Day: All references to days in the Project Manual refer to calendar day unless otherwise specifically indicated.

Design Professional: Officers, employees, and consultants, the architectural and engineering firm, a party to the design-build entity responsible for the overall design of the Project.

Excusable Labor Dispute: Any labor dispute directed against an entire industry, or any labor dispute that is not directed solely against the Project, the Contractor, or any subcontractor or supplier, and which prevents Contractor from obtaining labor or materials necessary for the performance of the Work and that actually delays the performance of the Work; provided, however, that suitable substitute labor or materials are not reasonably obtainable.

Excusable Transportation Delay: Any labor dispute directed at an entire industry, or any labor dispute that is not directed solely against the Project, the Contractor, or any subcontractor or supplier, or other delay not within the reasonable control of the Contractor which prevents the transportation of necessary materials to the Project and actually delays the performance of Work; provided, however, that suitable substitute transportation for such materials is not reasonably available.

Fire Chief: The Fire Chief of the OCFA or the Fire Chief's Designee.

Laws: Each and every Federal, state, and local law, ordinance, code, rule, and regulation, as well as the lawful order or decree of any public or quasi-public authority and each of their respective inspectors or officials, including but not limited to all applicable building codes, bearing on or otherwise applicable to the Project. The term "Laws" also includes any and all conditions of approval of each and every entitlement or permit issued or approved by the Local Jurisdictions.

Local Jurisdictions: Any governmental agency with land use authority over the Project or part of the Project and each regulatory agency or authority with jurisdiction over the project, and their respective inspectors and representatives.

Modification or Contract Modification: (1) a written amendment to this Contract signed by both Parties; (2) a Change Order; or (3) a Contract Directive or other written interpretation or order issued as a response to a Request for Information or otherwise issued by the Project Manager pursuant to the terms of the Project Manual. Contractor acknowledges that the execution on its behalf of any such Modification by any one person with apparent authority shall be binding against the Contractor. A Modification may be made only after execution of the Contract. No Contract Directive or response to a Request for Information shall be construed as a Change Order or other Modification unless it expressly so states.

Non-Conformance Notice: A notice issued by the Project Manager documenting that the work or some portion thereof has not been performed in accordance with the requirements of the Project Manual.

Notice to Proceed: The written notice of the OCFA to the Contractor to commence work under the Contract.

OCFA: The Orange County Fire Authority, a California Joint Powers Authority.

Plans: The drawings, supplemental drawings, or reproductions thereof, the project plans, standard plans, profiles, cross-sections, and all graphic depictions, which show the location, character, dimensions, and details of the work to be performed and contained in the Project Manual.

Project: The Project is the performance, construction, installation, and completion of the entire scope of all work as described in the Contract Documents.

Project Manager: The person or persons designated by the OCFA to serve as the Project Manager of the project.

Project Manual: Defined in Section 41 of the Contract Agreement.

Provide: To furnish, fabricate, complete, deliver, install, and erect including all labor, materials, equipment, apparatus, appurtenances, and expenses, necessary to complete in place, ready for operation or use under the terms of the Project Manual.

Regulatory Agency – A Federal, State or local governmental agency that has regulatory jurisdiction over one or more aspects of the Project. (Examples may include, but are not limited to the Regional Water Quality Control Board, the California Coastal Commission, or the South Coast Air Quality Management Board.)

Related Work: Work performed by the OCFA or by any separate Contractor retained or hired by the OCFA, related to the completion of the Project and which is not required to be performed by the Contractor pursuant to this Contract and the Project Manual.

Requests for Information: A written request from the Contractor or one of the Subcontractors to the Project Manager seeking an interpretation or a clarification of some requirement of the Project Manual. Contractor shall clearly and concisely set forth in writing the issue for which Contractor seeks clarification or interpretation and why a response is needed from the Project Manager. Contractor shall set forth Contractor's interpretation or understanding of the Project Manual's requirements along with reasons why Contractor reached such an understanding. Responses from the Project Manager will not change any requirements of the Project Manual unless so noted in the Request for Information response.

Scheduled Completion Date: The number of days specified in the Construction Schedule for completion of the Project.

Site or Sites: The land on which the Project will be constructed as specifically described in the Project Manual.

Specifications: The directives, provisions, and requirements contained in Project Manual, however such may be labeled or otherwise described.

Subcontractor: A person or organization having a direct contract with the Contractor to perform any of the Work at the Site or to supply any materials, equipment, or supplies to be incorporated in, or utilized in connection with, the Work and as used herein shall include the Subcontractor's authorized representative.

Substantial Completion of the Project: occurs when all of the following are achieved: (1) substantial completion of all Work; and (2) suitable to meet the requirements for the issuance of a certificate of occupancy and receipt of all other required approvals of construction from the Local Jurisdictions; and (3) in strict accordance with the Project Manual; and (4) such that OCFA may fully utilize the Project for the use for which it is intended. Early occupation of the Project by OCFA does not constitute Substantial Completion of the Project if one or more of the four factors above has not yet been achieved. (See Section General Conditions, Section 74.)

Supplemental Agreements: The written agreements covering alterations, amendments, or extensions to the Construction Contract and include contract change orders.

Work: All the work specified, indicated, shown, or contemplated in the Construction Contract to construct the Project, including all alterations, amendments, or extensions thereto made by contract change order or other written orders of the Project Manager, including each activity, labor, task, service, acquisition, purchase, installation, or action of any kind required to be performed under the terms of this Contract and as specified in the Project Manual.

52 The Project Manual

- 52.1 The Project Manual is defined in **Section 41** of the Contract Agreement. The Contractor has examined carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the Contractor has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the proposal, plans, specifications and the Construction Contract. The Contractor warrants and represents that, in executing the Contract and undertaking the Work, it has not relied upon any oral inducement or representation by OCFA, Project Manager, or any of their officers or agents as to the nature of the Work, the Site, the Project conditions or otherwise.
- 52.2 All parts and provisions of the Project Manual are complementary, and what is required by any one shall be as binding as if required by all. If the Project Manual does not specifically allow the Contractor a choice as to quality or cost of items to be furnished, but could be interpreted to permit such choice, subject to confirmation or approval by Project Manager, they shall be construed to require the Contractor to provide the best quality. Words and abbreviations which have well-known technical or trade meanings are used in the Project Manual in accordance with such recognized meanings.
- 52.3 Where conflict exists within or between parts of the Project Manual, or between the Project Manual and either applicable industry standards or applicable codes, ordinances, or other legal requirements, the more stringent requirements shall apply; otherwise, the following order of precedence shall be used: the Construction Contract; the Special Conditions of the Contract for Construction; these General Conditions of the Construction Contract; the balance of the Project Manual, and the Drawings. If the Contractor is required to perform any extra or corrective Work to comply with the preceding sentence, it shall not be entitled to an increase in the Contract Sum or Contract Time, and no claim shall result from such compliance. Subject to confirmation or approval by OCFA, more detailed Drawings take precedence over less detailed scaled Drawings, figured dimensions on the Drawings take precedence over scaled dimensions, and otherwise noted matters on the drawings take highest precedence.
- 52.4 Drawings take precedence over graphic representations. Contractor shall bring or submit to the Project Manager any such conflicts as soon as Contractor or its Subcontractors discover or learn about such apparent conflicts in the form of an RFI.
- 52.5 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings, are not intended to influence the Contractor in its division of the Work among Subcontractors or its establishment of the extent of the Work to be performed by any trade.
- 52.6 The Contractor shall request in writing that Project Manager provide any interpretations or clarifications necessary for the proper execution, coordination or progress of the Work. Such interpretations shall be issued by Project Manager in writing for implementation by the Contractor. The Contractor shall make all such requests for interpretation or clarification in writing.

- 52.7 The Project Manual reflects conditions as they are believed to exist, but it is not intended or to be inferred that the conditions as shown thereon constitute a representation by or on behalf of Authority that such conditions actually exist. The Contractor shall inspect the Site and conduct any tests or surveys it deems necessary or desirable prior to the commencement of the Work and shall accept full responsibility for any loss sustained by it as a result of any variances between the conditions as shown on the Project Manual and the actual conditions revealed during the progress of the Work or otherwise. The Contract Sum shall in no event be increased by reason of any such variance unless otherwise specifically provided herein.
- 52.8 The Contractor shall develop and maintain current "as-built" Plans to be provided to Project Manager in accordance with the Construction Contract and Section 01770 of the Project Manual. Project Manager may inspect and copy such Plans at any time during the course of the Work.
- 52.9 The intent of the plans and specifications is to prescribe the details for the construction and completion of the work which the Contractor undertakes to perform in accordance with the terms of the Construction Contract. Where the plans or specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall provide all labor, materials, tools, equipment, and incidentals, and do all the work involved in executing the contract in a satisfactory and workmanlike manner.

53 Contract Bonds.

Both the Faithful Performance Bond and the Material and Labor Bond shall each be for not less than one hundred percent (100%) of the total Contract amount. The Material and Labor Bond shall remain in force until thirty-five (35) days after the date of recordation of the Notice of Completion. The Faithful Performance Bond will be held for one year after the date of recordation of the Notice of Completion.

Prior to the acceptance of any bond, the OCFA shall verify that the surety is an admitted surety in the State of California. If requested by the OCFA, the Contractor shall provide other information specified in the Code of Civil Procedure Section 995.660 to enable the OCFA to verify the sufficiency of the bond.

Should any bond become insufficient, the Contractor shall correct the insufficiency within ten (10) calendar days after receiving notice from the OCFA. The Contractor shall provide the OCFA with evidence of the correction within ten (10) calendar days of said correction. Should any surety at any time be unsatisfactory to the OCFA, written notice will be given to the Contractor to that effect. No further payments shall be deemed due or will be payable under the Contract until Contractor submits an acceptable bond from a surety accepted by the OCFA. Changes to the work or extensions of time made pursuant to the Contract Agreement shall in no way release the Contractor or the surety from its obligations. Notice of such changes or extensions shall be waived by the surety.

54 OCFA AND OCFA'S REPRESENTATIVES

- 54.1 The work will be under the general direction of the Fire Chief. The Project Manager is the authorized representative of the Fire Chief and has complete charge of the work, and shall exercise full control of the work, so far as it affects the interest of the OCFA.
- 54.2 The provisions in this General Conditions or elsewhere in the Contract Documents regarding approval or direction by the Fire Chief, the OCFA, the Board of Directors, or the Project Manager, or action taken pursuant thereto, are not intended to and shall not relieve the

Contractor of responsibility for the accomplishment of the work, either as regards sufficiency or the time of performance, except as expressly otherwise provided herein.

- 54.3 The Project Manager is the OCFA's exclusive representative and agent to the Contractor with respect to this Project during construction and until the completion of the Project. The OCFA's communications with the Contractor shall be exclusively through the Project Manager.
- 54.4 Project Manager shall at all times have access to the work whenever it is in preparation or progress. The Contractor shall provide safe facilities for such access.
- 54.5 The OCFA shall not be responsible for or have control or charge of the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, and will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.
- 54.6 The OCFA will not be responsible for the failure of the Contractor to plan, schedule, and execute the work in accordance with the approved schedule or the failure of the Contractor to meet the Contract Documents completion dates or the failure of the Contractor to Schedule and coordinate the work of Contractor's own trades and subcontractors or to coordinate with other Separate Contractors.
- 54.7 The OCFA will not be responsible for the acts or omissions of the Contractor, or any subcontractor, or any Contractor's or subcontractor's agents or employees, or any other persons performing any of the work.
- 54.8 The Project Manager has the authority to disapprove or reject work on behalf of the OCFA when, in the Project Manager's opinion, the work does not conform to the Contract Documents. Whenever, in the Project Manager's reasonable opinion, it is considered necessary or advisable to ensure the proper implementation of the intent of the Contract Documents, the Project Manager has the authority to require special inspection or testing of any work in accordance with the provisions of the Contract Documents whether or not such work shall then be fabricated, installed, or completed.
- 54.9 The Project Manager has the authority to require special inspection or testing of the work. However, neither the Project Manager's authority nor any decision made by the Project Manager in good faith whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the OCFA to the Contractor, or any subcontractor, or any of their agents, or employees, or any other person performing any portion of the work.
- 54.10 The Project Manager has the authority and discretion, but not the obligation, to call, schedule, and conduct job meetings to be attended by the Contractor and representatives of Contractor's subcontractors, to discuss such matters as safety, procedures, progress, problems, and scheduling.
- 54.11 The Project Manager will establish procedures to be followed for processing all submittals, Change Orders, Progress payments, other project reports, documentation, and test reports.
- 54.12 The Project Manager will review all requests for changes and shall implement the processing of Change Orders including application for extensions of time.
- 54.13 The Project Manager will review and process all Progress Payment Requests by the Contractor including Final Progress Payment Requests.

- 54.14 Nothing contained in the Project Manual shall create any contractual relationship between Project Manager and the Contractor.
- 54.15 Except as otherwise provided in the Project Manual, and until the Contractor is notified in writing to the contrary, all actions to be taken by, all approvals, notices, consent, directions and instructions to be given by, all notices and other matters to be delivered to, all determinations and decisions to be made by and, in general, all other action to be taken by, or given to, OCFA shall be taken, given and made by, or delivered or given to, Project Manager in the name of and on behalf of OCFA. Only those so designated are authorized to grant on behalf of OCFA any approval, consent or waiver with respect to the Project Manual or the Work, or to otherwise act for OCFA in any capacity whatsoever.
- 54.16 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Project Manual either by the activities or duties of the Project Manager in its administration of the Contract, including, without limitation, by any inspections or tests required, or by approvals or other similar action with regard to shop drawings or submittals (of any type), or by the activities of persons other than the Contractor with respect to the Project. Further, notwithstanding the fact that a dispute, controversy or other question may have arisen between the parties hereto relating to the execution or progress of the Work, the interpretation of the Project Manual, the payment of any monies, the delivery of any materials or any other matter whatsoever, the Contractor shall not be relieved of its obligations to pursue the Work diligently under the Project Manual pending the determination of such dispute, controversy, or other question.
- 54.17 OCFA reserves the right, but assumes no duty, to establish and enforce standards, and to change the same from time to time, for the safety and protection of persons and property, with which the Contractor shall comply, and to review the efficiency of all protective measures taken by the Contractor. The exercise of or failure to exercise any or all of these acts by OCFA shall not relieve the Contractor of its duties and responsibilities under the Project Manual, and OCFA shall not thereby assume, nor be deemed to have assumed, such duties or responsibilities of the Contractor.

55 **CONTRACTOR**

- 55.1 Composition: If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.
- 55.2 Examination of Plans, Specifications, and Site of Project: In addition to the representations and warranties contained in the Contract, the Contractor acknowledges that prior to execution of the Contract it has thoroughly reviewed and inspected the Project Manual, and satisfied itself regarding any error, inconsistency, discrepancy, ambiguity, omission, insufficiency of detail or explanation. OCFA shall not be responsible for any costs, nor liable to the Contractor for any damage, resulting from any such matter that the Contractor reasonably should have discovered. The Contractor shall perform no portion of the Work at any time which is not as provided or specified in the Project Manual or, where required, shop drawings, product data, or samples, for such portions bearing the Design Professional's appropriate action stamp. Work performed in violation of this provision shall be at the Contractor's risk
- 55.3 Contractor Certification: Contractor certifies and agrees that all the terms, conditions, and obligations of the Project Manual, the location and condition of the Site, and the conditions under which the work is to be performed have been thoroughly reviewed and investigated and Contractor enters into this Contract based upon Contractor's review and investigation of all such matters. Contractor certifies and agrees that Contractor is in no way relying upon

- any opinions or representations of OCFA or the OCFA's officers, employees, agents, and consultants, including but not limited to, the Project Manager and the Design Professional.
- 55.4 Preparation of Documents: The Contractor shall carefully review and where appropriate or as may be required in the Scope of Work or at the direction of the Project Manager prepare drawings, specifications, and other instructions and shall at once report to Project Manager any error, inconsistency, or omission which Contractor may discover. Except as otherwise specifically provided hereinafter under warranties, the Contractor shall not be an agent for the OCFA.
- 55.5 Superintendence: The Contractor shall maintain on the site, during all construction activity, a competent superintendent and any necessary assistants, all satisfactory to the Project Manager. The superintendent shall not be changed except with the consent of the Project Manager, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ, in which case he/she shall be replaced immediately and in no case more than 24 hours with a superintendent acceptable to the Project Manager. The superintendent shall represent the Contractor and all directions given to the superintendent shall be as binding as if given to the Contractor. The Contractor shall provide Project Manager with complete work history profiles of management staff associated with this Project for Project Manager's review.
- 55.6 Licenses and Certificates: The Contractor represents and warrants that it has all necessary licenses and permits required by the laws of the United States, State of California, County of Orange, and any local jurisdiction, and all other appropriate governmental agencies, and agrees to maintain these licenses and permits in effect for the duration of this Contract. Further, Contractor warrants that its employees, agents, and contractors and subcontractors shall conduct themselves in compliance with all applicable laws and licensure requirements now in effect or as subsequently enacted or modified, as promulgated by any local, state, or federal governmental entities, including, without limitation, compliance with laws applicable to non-discrimination, harassment, and ethical behavior. Contractor shall notify the Project Manager immediately and in writing of its inability to obtain or maintain, irrespective of the pendency of any appeal, any such permits, licenses, approvals, certificates, waivers, and exemptions. Such inability shall be cause for termination of this Contract.
- 55.7 Materials and Equipment: The Contractor shall cause all materials and equipment to be delivered to the Site in accordance with any schedule or schedules therefore established from time to time and approved by Project Manager and, in any event, in a manner which will assure the timely progress and completion of the Work but will not encumber the Site unreasonably. Materials delivered to the Site for incorporation in the Work shall not be removed from the Site without the consent of Project Manager. The Contractor shall give, or shall require its Subcontractors to give, full and accurate quality, performance and delivery status reports, in a form satisfactory to Project Manager, regarding any materials and equipment, or such other data with respect thereto as may be requested by Project Manager, and shall obtain for Project Manager the written assurances of any manufacturer that its material or equipment is designed, and appropriate, for the use intended. The Contractor warrants to OCFA that all materials and equipment furnished under this Contract shall be new unless otherwise specified in the Project Manual and that all Work shall be of good quality, free from faults and defects and in conformance with the Project Manual. All Work not so conforming to these standards may be considered defective. All warranties and guarantees from Subcontractors (including, without limitation, manufacturers) shall be assignable to OCFA regardless of whether it is so stated therein, and the Contractor agrees to assign all such warranties and guarantees to the OCFA.

- 55.8 Completion Schedule: The Contractor shall prepare and submit, for Project Manager's approval, a Construction Schedule for the work which shall provide for expeditious and practicable execution of the work for completion within the Contract Time. This schedule shall be coordinated with the entire Project Construction Schedule to the extent required by the Contract Documents.
- 55.9 Reports by Contractor: Daily reports of the site and construction activities shall be provided to Project Manager. The reports shall follow the OCFA approved format including, but not limited to, information regarding trades at work, manpower, weather conditions, construction progress, and solutions to problems.
- 55.10 Contractor Responsibility: The Contractor shall supervise and direct the Work, using its best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, coordination, scheduling and procedures, for all cleanup and for all safety and weather precautions and programs, in connection with the Work. Contractor shall be solely responsible for the work and the Project as described in the Contract Documents. Contractor shall have complete control over the construction methods, techniques, and procedures, except as may be specifically provided in the Contract Documents. Contractor shall, at its sole cost and expense, perform all labor and services and furnish all material, tools, appliances, and equipment necessary and proper for performing and completing the Work of the Project in strict compliance with the terms and conditions of the Project Manual. Contractor shall provide all labor, materials, and equipment in conformity with the Project Manual and other directions as may be provided by the Project Manager. Contractor shall, at its sole cost and expense, prepare and fully comply with all provisions of the Quality Assurance/Quality Control Program as provided in the Project Manual.
- 55.11 Ongoing Oversight: Contractor shall keep itself continuously informed of the progress of the Work and the Related Work and will attend all meetings related to the Work and the Related Work as specified in the Project Manual and as identified in the Contractor's Construction Schedule. Contractor further agrees to work in a prompt, efficient, expert, and diligent manner and to furnish sufficient manpower to complete the Work in accordance with the Contractor's Construction Schedule. Contractor shall prosecute the Work diligently to completion. Contractor shall be responsible for the coordination and scheduling of all Work and the Related Work.
- 55.12 Ongoing Self-Inspection: Contractor shall, at its sole cost and expense, inspect its work to determine strict conformance to the requirements of the Project Manual. (This obligation of the Contractor is in addition to the Contractor's obligations to make repairs or to remedy deficient or unacceptable work as may be required under this Contract or any other provision of the Project Manual.) If some of the work performed on the Project does not comply with the requirements of the Project Manual, Contractor shall repair or replace such defective work at its sole cost and expense. Contractor shall gain no protection or right of reliance on the Project Manager's or Fire Chief's inspection of the work. If it is determined that the Project Manager or Fire Chief inspected work and failed to call defects or non-conforming items to the attention of Contractor, the OCFA shall not be deemed to have waived the requirements of the Project Manual or accepted the work.
- 55.13 Monitoring and Compliance: The Project Manager shall, at all times, have safe access to the Project site and its related work during its construction, and shall be furnished with every reasonable facility for ascertaining that the materials and the workmanship are in accordance with the requirements and intentions of Contract Documents. All work done and all materials furnished shall be subject to Project Manager inspection. In the event the Project Manager finds or determines that the work or material are not in accordance with

the requirements and the intentions of the Contract Documents, the Project Manager shall issue a Non-Conformance Notice. Upon receipt of a Non-Conformance Notice the Contractor shall provide a written Response to the Non-Conformance Notice within five (5) working days after receipt of the Notice. The Contractor's response shall detail either (a) why Contractor believes that the work was performed in accordance with the Project Manual or (b) what corrective action Contractor intends to take, at its sole cost and expense, to correct the non-conforming work. If Contractor disputes issuance of the Notice, the Project Manager has five- (5) working days in which to respond by either (a) withdrawing the Notice of Non-Conformance or (b) directing the Contractor to correct the work. Such determination of the Project Manager shall be final and conclusive of the matter. If directed to correct the work, Contractor shall do so within five (5) working days after receipt of such direction from the Project Manager, or such other time as may be agreed in writing from the Project Manager.

- 55.14 **Inspectors:** In addition to the Project Manager, inspectors of Local Jurisdictions are authorized to enforce strict compliance with the terms and conditions of the Contract and the Project Manual and to determine the acceptability of materials and workmanship. Inspectors are authorized to reject work or materials if they determine that such work or materials do not conform to the requirements of the Contract and the Project Manual. Whenever an inspector determines that some work installed by the Contractor, or any Subcontractor or supplier at any tier does not conform to the requirements of the Contract, a Notice of Non-Conformance will be issued to record this determination. In the event of a dispute between the Contractor and an inspector concerning non-conforming work, the Contractor shall pursue the issue in accordance with the requirements of Subsection M above this Section 1.03 of this contract, relating to Non-Conforming Work. Inspectors other than the Project Manager are not authorized to issue or direct changes to the requirements of the Contract. In the event that the Contractor believes some direction given by an inspector does constitute a change to the requirements of the Contract, Contractor shall within two (2) days provide written notice to the Project Manager detailing the direction given, by whom, when and under what circumstances, and why the Contractor believes that such direction constitutes a change to the requirements of the Contract. Failure to provide such written notice to the Project Manager within the specified timeframe shall constitute a waiver of claim with respect to the direction received by the Contractor.
- 55.15 **Remedy and Repair of Work:** The inspection of the work or materials shall not relieve the Contractor of any of the Contractor's obligations to fulfill the Construction Contract as prescribed. Work and materials not meeting the requirements shall be made good, and unsuitable work or materials may be rejected, notwithstanding that the work or materials have been previously inspected by the Project Manager or that payment therefor has been included in a progress payment. All work which has been rejected as indicated in a Non-Conformance Notice shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed to the Contractor for the removal, replacement or remedial work. Payment shall not be made on any portion of the work for which a Non-Conformance Notice has been issued and the work not corrected to the satisfaction of the Project Manager.
- 55.16 **Failure to Comply:** Upon failure of the Contractor to comply promptly with any order of the Project Manager made under Paragraphs L, M, N, and O above, the Project Manager, with the approval of the Fire Chief, may cause rejected or unauthorized work to be remedied, removed, or replaced, and to deduct the costs from any moneys due or to become due the Contractor.
- 55.17 **Contractor Liabilities:** The Contractor shall be responsible to OCFA for the acts and omissions of its employees. The Contractor shall be held responsible for all damages

resulting from its employees or its subcontractors or agents from all errors, omissions, or negligence in the performance of the work and completion of the Project.

- 55.18 Deficiencies in Contract Documents: Contractor covenants and agrees that Contractor, its employees, agents, subcontractors, and suppliers have an affirmative duty and obligation to promptly disclose to the Project Manager any deficiency, error, or inconsistency in the Contract Documents and any of the plans and specifications contained therein, so that Project Manager, the OCFA, and the Design Professional can affect any required or necessary modification or clarification thereof in a timely and cost effective manner. In this regard and in furtherance of the Contractor's obligations, the Contractor agrees not to take advantage of errors or omissions in the Project Manual. It is the duty of the Contractor to promptly notify the Project Manager in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified methods and fails to promptly notify the Project Manager in writing of this belief, the Contractor thereby waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the OCFA, or in any subsequent arbitration or settlement conference between the OCFA and the Contractor. The Project Manager, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after the Contractor becomes aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.
- 55.19 Ongoing Duty to Disclose: If the Contractor, either before commencing work or in the course of the work, finds any discrepancy within the Project Manual, or between the Project Manual and the physical conditions at the Site, or finds an error or omission on the Plans, Specifications, or in any survey, the Contractor shall promptly notify the Project Manager in writing of such discrepancy, error, or omission. If the Contractor observes that the Project Manual is at variance with any applicable law, regulation, order, or decree, the Contractor shall promptly notify the Project Manager in writing of such conflict. The Project Manager, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, work done by the Contractor after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.
- 55.20 Duty to Coordinate: The Contractor shall be responsible for coordinating any work carried on at the Site by other parties or by the OCFA, including the Related Work, simultaneously with the Work. The compensation to be paid to Contractor under this Contract includes any costs which the Contractor may incur as a result of coordinating the Work with such other work, including the Related Work. In no case shall the Contractor be entitled to extra compensation from the OCFA for damages suffered as a result of work being carried on at the Site by other parties or the OCFA simultaneously with the construction work for this Project. Nevertheless, if such work results in a delay to the Contractor's work beyond reasonable time allocations afforded to such work and Related Work identified on the Contractor's Construction Schedule as approved by the Project Manager, the Contractor may be eligible for an extension of time as specified in this Contract.
- 55.21 Failure to Pay for Labor or Materials: If Contractor fails to pay for labor or materials when due, OCFA may settle such claims by making demand upon the surety to this Agreement. In the event of the failure or refusal of the surety to satisfy said claims, OCFA may settle any claims directly and deduct the amount of payments from the Contract price and any amounts

due to Contractor. In the event OCFA receives a stop notice from any laborer or material supplier alleging non-payment by Contractor, OCFA shall be entitled to deduct all of its costs and expenses incurred relating thereto, including but not limited to administrative and legal fees.

- 55.22 Compliance with Laws: The Contractor shall, at its cost and expense, comply with all Laws, as any may now exist or be hereafter changed or added. It shall be the responsibility of the Contractor to familiarize itself with all such Laws, and any performance of the Work by or on behalf of the Contractor which is not in compliance with the Laws shall be at the Contractor's sole risk and expense. The Contractor shall notify OCFA prior to execution of the Contract (and, without limiting the continuous duty of the Contractor to advise the OCFA) of any instances where the Contract Documents are, or where the Contractor believes the Contract Documents are, not in compliance with the Laws.
- 55.23 Ongoing Responsibility: Any work or material not specified in the Project Manual but which by fair implication, in the judgment of the Project Manager, should be included therein, shall be accomplished, furnished, or provided by the Contractor as part of the Project Manual.
- 55.24 Taxes, Fees, and Licenses: The Contractor shall pay, or cause to be paid, all import duties and sales, consumer, use, excise, value added and ad valorem taxes required to be paid in connection with the Work or upon materials, tools or equipment brought to the Site or used in the Work. If any of the foregoing taxes are not paid in a timely manner, OCFA may withhold the amount of any such taxes from any amounts owing to the Contractor under the Project Manual, submit the amount so withheld to the appropriate taxing authority on behalf of the Contractor or its Subcontractors or Sub-subcontractors and offset said amount against the Contract Sum. The Contractor shall secure and pay for all governmental fees, permits and licenses which OCFA is not specifically required to provide and pay for under the Project Manual.
- 55.25 Tests: If the Project Manual, or any laws, ordinances, rules, regulations, or any orders or decrees of any public or quasi-public authority having jurisdiction, or common practice in the industry, require or dictate that the Contractor have any portion of the Work inspected, tested or approved, the Contractor shall advise Project Manager in a timely manner (in writing, if practicable) of its readiness and of the date arranged so that Project Manager may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests and approvals except as otherwise specified. Project Manager may require any special inspection, testing or approval of the Work not included under above, or any more stringent inspection, testing or approval thereof, in which event it shall instruct the Contractor to order such inspection, testing or approval, and the Contractor shall advise Project Manager in a timely manner (in writing, if practicable). If such inspection or testing reveals any failure of the Work or the performance thereof to comply with the more stringent of: (a) the requirements of the Project Manual; (b) applicable industry standards; or (c) applicable laws, ordinances, codes, rules, regulations or orders or decrees of any public or quasi-public authority having jurisdiction, or reveals any defect in the Work, the Contractor shall bear the costs of such inspection or testing and all costs to correct the Work to the satisfaction of Project Manager, which, if incurred by OCFA, may be offset by OCFA against any amounts then or thereafter due to the Contractor. If such inspection or testing proves that the Work was performed properly, OCFA shall bear the costs of such inspection or testing. Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by it to the Project Manager.
- 55.26 General: The duties and responsibilities of the Contractor as set forth in this Section 1.03 are in addition to, and not in lieu of, other duties and responsibilities of the Contractor enumerated elsewhere in the Project Manual.

56 - RESPONSIBILITIES OF THE CONTRACTOR

56.1 CONTRACTOR'S EQUIPMENT AND FACILITIES.

56.1.1 General.

56.1.1.1 Conduct of the Work. The Contractor shall behave, at all times, in a courteous, professional manner. While on site, or entering or exiting the site, there shall be no extraneous activity that might cause disruption to the Project site, surrounding areas, or residents. Failure to comply may result in the suspension of work, or removal of contractor's staff from the Project.

56.1.1.2. Noise Levels. A noise level limit of 86 dbA Max at a distance of fifty feet (50') shall apply to all construction equipment on or related to the job whether owned by the Contractor or not. The use of excessively loud warning signals shall be avoided except in those cases required for the protection of personnel. In addition to those requirements, all work shall comply with all applicable noise ordinances at all times.

56.2 COOPERATION AND COLLATERAL WORK.

The Contractor is advised as to the possibility of other construction projects within the proposed construction zone by the OCFA, other governing agencies or private enterprises. In the event of such projects, the Contractor shall coordinate with the applicable parties as to the extent of any time required to complete their work and shall schedule its work and conduct its operations so as to permit access and time as required for the concurrent work. The Contractor shall immediately notify the Engineer in the event of a delay in scheduling caused solely by this concurrent work. Payment for the above, if any, shall be deemed as included in the items of work as shown on the proposal bid sheet and no additional compensation will be allowed.

56.3 PROJECT SITE MAINTENANCE.

56.3.1. Cleanup and Dust Control.

The Contractor shall keep adjacent properties clean and free of rubbish and debris in a timely manner as necessary and/or as directed by the Engineer.

The Contractor shall implement effective handling, storage, usage, and disposal practices to control material pollution and manage waste and nonstormwater at the job site before they come in contact with storm drain systems and receiving waters.

56.3.1.1 Construction Cleaning

The Contractor shall:

- (a) Initiate and maintain a daily program to prevent accumulation of debris on-site and along access roads and haul routes. Maintain areas under Contractor's control free of waste materials, debris, weeds 6" high, and rubbish. Maintain site in a clean and orderly condition.
- (b) Provide suitable covered containers for deposit of debris and rubbish. Dispose of accumulation of extraneous materials, prohibit overloading of trucks to prevent spillages on access and haul routes and provide daily inspection of haul routes to enforce requirements.
- (c) The Contractor shall supply self-loading motorized street sweepers equipped with a

functional water spray system as part of his daily program.

- (d) Schedule at a minimum, weekly collection and disposal of debris. Provide additional collections and disposals of debris whenever the weekly schedule is inadequate to prevent accumulation.

The Contractor shall remove debris from closed or remote spaces prior to closing the space, control cleaning operations to minimize dust and other particulates and immediately remove clay and earth which adhere to the paved surface of the roadway. Remove by hand scraping, washing, sweeping, and/or other method(s) which will leave a clean non-skid surface without impairing, injuring or loosening the surface.

The Contractor is required to control dust throughout the life of the Contract. The control may be required by job conditions or Engineer. In any case, the Contractor shall use water or other effective means to control the dust. No chemical agents may be used without written authorization from the Agency. The Contractor shall be solely responsible for safety problems, accidents or any other complications or claims arising from inadequate dust control.

No separate payment will be made for any work performed or material used to control dust resulting from the Contractor's performance of the work, or by public traffic, either inside or outside the right-of-way. Full compensation for such dust control will be considered as included in the price paid for the various items of work involved.

No separate payment will be made for any work performed or material used in cleaning the Project. Full compensation for such cleaning shall be considered as included in the price paid for the various items of work involved and no additional compensation will be allowed therefore.

57 Subcontracts

57.1 Licensed Subcontractors: The Contractor shall comply with the provisions of the Subletting and Subcontracting Fair Practices Act (the "Act") (Public Contracts Code Section 4100 et seq.). The Contractor shall not terminate the employment of a Subcontractor or Sub-subcontractor engaged in the Work prior to the expiration of that subcontract without complying with the Act. The Contractor shall in all respects select the subcontractors in the manner provided under law. Each subcontractor selected for the work shall be licensed in the State of California in the subcontractor's particular field.

57.2 Transactions: Transactions with subcontractors shall be made through the Contractor. OCFA may assign to the Contractor any contracts or purchase orders entered into between OCFA and any other person or organization in any way related to the Project or the Work, at any time, in which event the Contractor shall assume full responsibility for such person or organization and its portion of the Work as if such person or organization was originally a Subcontractor. Such assignment may occur by Change Order or other Modification to the Contract, and any increase in the Contract Sum shall be governed by Section 01200 of the Project Manual.

57.3 Writing: All subcontracts and sub-subcontracts shall be in writing. Each subcontract and sub-subcontract shall contain a reference to this Contract and shall incorporate the terms and conditions hereof to the full extent applicable to the portion of the Work covered thereby. Each Subcontractor must agree, for the benefit of OCFA, to be bound by, and to require each of its Subcontractors to be bound by, such terms and conditions to the full extent applicable to its portion of the Work.

57.4 Responsibility: The Contractor shall be fully responsible to the OCFA for the acts and omissions of subcontractors and all persons directly or indirectly employed by them as Contractor is for the acts and omissions of Contractor and of persons directly or indirectly employed by

Contractor and shall pay each subcontractor promptly the amount allowed Contractor on account of such subcontractor's work to the extent of such subcontractor's interest therein.

- 57.5 Incompetent or Disorderly Conduct: If any Subcontractor or person employed by the Contractor shall appear to the Project Manager to be incompetent or to act in a disorderly or improper manner, such person shall be discharged immediately on the request of the Project Manager, and that person shall not again be employed on the work.
- 57.6 Mandatory Subcontract Terms: Each subcontract shall provide for its termination by the Contractor if, in Project Manager's opinion, the Subcontractor fails to comply with the requirements of the Project Manual insofar as the same may be applicable to its portion of the Work; and each Subcontractor shall be required to insert a similar provision in each of its sub-subcontracts. In the event of any such failure by a Subcontractor or Sub-subcontractor to comply with the requirements of the Project Manual, such Subcontractor or Sub-subcontractor, as the case may be, shall be removed immediately from the Work and shall not again be employed on the Work. The Contractor shall be responsible for all costs and expenses arising out of, and shall indemnify OCFA on account of, any such failure by a Subcontractor or Sub-subcontractor (specifically including, without limitation, a failure to pay for labor (including applicable fringe benefits) or materials).
- 57.8 Contractual Relations: Nothing contained in this Contract shall create any contractual relationship between OCFA or the Project Manager or the Design Professional on the one hand, and a subcontractor on the other.

58 Drawings And Specifications

- 58.1 Checking: The Contractor, as part of this Contract, shall agree not to take advantage of errors or omissions in the Contract Documents, including any plans and specifications thereto. It is the duty of the Contractor to promptly notify the Project Manager in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified methods and fails to promptly notify the Project Manager in writing of this belief, the Contractor thereby waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the OCFA, or in any subsequent arbitration or settlement conference between the OCFA and the Contractor. The Project Manager, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after the Contractor becomes aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.
- 58.2 Discrepancy in Contract Documents: If the Contractor, either before commencing work or in the course of the work, finds any discrepancy within the Contract Documents, or between the Contract Documents and the physical conditions at the Project site, or finds an error or omission on the plans, specifications, or in any survey, the Contractor shall promptly notify the Project Manager in writing of such discrepancy, error, or omission. If the Contractor observes that the Contract Documents is at variance with any applicable law, regulation, order, or decree, the Contractor shall promptly notify the Project Manager in writing of such conflict. The Project Manager, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, work done by the Contractor after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.

- 58.3 Implication: Any work or material not specified in the Contract Documents but which by fair implication, in the judgment of the Project Manager, should be included therein, shall be accomplished, furnished, or provided by the Contractor as part of the Contract Documents.
- 58.4 Precedence: Figures marked on drawings shall in general be followed in reference to scale measurements. Large scale drawings shall in general govern small scale drawings. Specifications and schedules shall govern over drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors. When measurements are affected by conditions already established, the Contractor shall take measurements notwithstanding the giving of scale or figure dimensions in the drawings. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of discrepancy in the Plans or Specifications, the matter shall be immediately submitted to the Project Manager, without whose decision Contractor shall not adjust said discrepancy save only at Contractor's own risk and expense. The decision of the Project Manager shall be final.
- 58.5 Shop Drawings: The Contractor shall establish, implement, and supervise the submission of shop drawings and other submittals (of any type) in accordance with the Schedule and any Milestones. The Contractor shall note any variances between any such shop drawings or other submittals and the Project Manual for the benefit of OCFA at the time of submission. No approval or other similar action regarding any such submission shall be binding in any way upon OCFA.
- 58.6 Drawings and Specifications at the Site: The Contractor shall keep available at the site for ready reference a complete set of all contract drawings, details, supplementary drawings and approved shop drawings, a complete copy of the specifications with all addenda, bulletins, amendments, and copies of Project correspondence. The Contractor shall maintain on the site a complete "as built" record set of prints. In addition, the Contractor shall keep on the site as required a copy of each manufacturer's current printed recommendations. Contractor shall also submit a copy to the Project Manager.
- 58.7 Deviations: Deviations from the drawings and the dimensions therein given, whether or not error is believed to exist, shall be made only after written authority is obtained from the Project Manager.

59 Divisions Of The Specifications

- 59.1 For convenience, the work as described in the Contract Documents are arranged in several divisions and sections, but such separations shall not be considered as the limits of the work required for any subcontract or trade: the terms and conditions of such limitations are wholly between the Contractor and his subcontractors, and the OCFA will not be responsible for any division of work by subcontractors. The Contractor will be solely responsible for all subcontract arrangements of work regardless of the location of provisions in the specifications.
- 59.2 Schedules of work included in the sections, where listed, are given for convenience only, and shall not be considered as a comprehensive list of items or work necessary to complete the work of any section.
- 59.3 Where devices or items or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many soon devices, items, or parts as are required to properly complete the work.

- 59.4 Each section of the specifications is covered by applicable requirements of the Contract Documents and other related sections as if therein written.

60 Site Conditions

- 60.1 Existing Site Conditions: Information respecting the site of the work given in drawings or specifications has been obtained by OCFA's representatives and is believed to be reasonably correct, but the OCFA does not warrant either the completeness or accuracy of such information, and it is the responsibility of the Contractor to verify all such information.
- 60.2 Changed Conditions: The Contractor shall promptly, and before such conditions are disturbed, notify the Project Manager in writing of:
- 60.2.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or
- 60.2.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents. The Project Manager shall promptly investigate the conditions, and if, as a result, finds that such conditions do so materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for performance an equitable adjustment shall be made and the Contract Documents modified in writing accordingly. Any claim of the Contractor for adjustment hereunder shall not be allowed unless Contractor has given notice as above required.
- 60.3 Public Utility Facilities on Project Site: Pursuant to Government Code, Section 4215, the Contractor shall be compensated for the costs of locating and repairing damage to public utility facilities on the Project site which was not due to failure of Contractor to exercise reasonable care, and removing or relocating main or trunk line utility facilities located on the Project site, if such work is required in the Contract Documents or the Project Manager. Such compensation shall also cover the cost of Contractor's equipment necessarily idled during such work. This provision shall not be deemed to require compensation when the presence of existing service laterals or appurtenances can be inferred from the presence of visible facilities such as buildings, meter and junction boxes, on or adjacent to the construction site. If the Contractor discovers such unidentified utility facilities during construction, Contractor shall immediately notify the Project Manager and the utility in writing.
- 60.4 Space at Site: The Contractor shall be allowed reasonable space at the site of the work as available and access thereto and shall confine Contractor operations to the space assigned. The work shall be done without interference with the ordinary use of the fire station. The Contractor shall cooperate with other Contractors of the OCFA and shall not commit or permit any act which will interfere with the performance of work by any other Contractor or employees of the OCFA whether at the site or not.

61 Conditions Affecting The Work

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve Contractor from responsibility for successfully performing the work without additional expense to the OCFA. The OCFA assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the Contract Documents, unless such understanding or representations by the OCFA are expressly stated in the Contract Documents.

62 OCFA's Property On Site

All fixtures, facilities, equipment, vehicles, furniture, and all other personal property of the OCFA located at the job site which are removed in the course of construction of the Project remain the property of the OCFA unless express provision to the contrary is made in the Contract Documents, and the Contractor shall exercise reasonable care to prevent loss or damage to said property and shall deliver promptly such property to the place designated by the Project Manager.

63 Protection

- 63.1 The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work, all material and supplies, and temporary facilities against loss or damage from whatever cause, shall protect the property of OCFA and third parties from loss or damage from whatever cause, and shall comply with the requirements of OCFA and its insurers and with all applicable laws, codes, rules and regulations with respect to the prevention of loss or damage to property as a result of fire or other hazards.
- 63.2 The Project Manager may, but shall not be required to, make periodic patrols of the Site as a part of its normal security and safety program. In such event, however, the Contractor shall not be relieved of its aforesaid responsibilities and OCFA shall not assume same, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the Contractor by the Contract.
- 63.3 Until final acceptance of the Work by OCFA, the Contractor shall have full and complete charge and care of and, except as otherwise provided in this Subparagraph, shall bear all risk of loss of, and injury or damage to, the Work or any portion thereof (specifically including OCFA-furnished supplies, equipment or other items to be utilized in connection with, or incorporated in, the Work), materials, equipment, and supplies, from any cause whatsoever, subject to the limitations set forth below.
- 63.4 The Contractor shall rebuild, repair, restore, replace, and make good all losses of, and injuries or damages to, the Work or any portion thereof (specifically including OCFA-supplied, equipment or other items to be utilized in connection with, or incorporated in, the Work), material, equipment, and supplies before final acceptance of the Work. Such rebuilding, repair, replacement, or restoration shall be at the Contractor's sole cost and expense.
- 63.5 Contractor shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. Contractor shall comply with the provisions of the Construction Safety Orders issued by the State Division of Occupational Safety & Health. Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted.
- 63.6 The Contractor shall maintain continuously adequate protection of all work from damage and shall protect the OCFA's property from injury or loss arising in connection with the Contract Documents. Contractor shall make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or representatives of the OCFA. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents, and shall maintain reasonable security of the site at all times, if necessary. Contractor shall limit visitors to the site to those necessary for construction and inspections. Visitors for other purposes shall be referred to the Project Manager. Contractor's and subcontractors' employees shall possess means of identification at all times as required by the Project Manager while on the job site.

- 63.7 In an emergency affecting the safety of life or of the work or of adjoining property the Contractor, without special instruction or authorization from the OCFA, is hereby permitted to act at Contractor's discretion to prevent such threatened loss or injury. Contractor shall so act if directed or instructed by the Project Manager. Any dispute as to compensation claimed by the Contractor on account of emergency work shall be determined by agreement as hereinafter set forth.
- 63.8 The Project Manager may notify the Contractor of any noncompliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately correct such conditions. Such notices, when delivered to the Contractor or Contractor's representative at the site of the work, shall be deemed sufficient for said purpose. Failure of receipt of such notice from the Project Manager shall not relieve the Contractor of responsibility.
- 63.9 If the Contractor fails or refuses to comply promptly, the Project Manager may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of a claim for extension of time or for excess costs or damages to the Contractor. The Contractor will be responsible for ensuring that his subcontractors comply with the provisions of this Section 63.
- 63.10 Surface or Subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved in writing by OCFA. The proposed location and coordination of temporary channels and conduits conducting accumulated water from the Site shall be submitted to Project Manager for its prior written approval. All such work shall be done at the sole expense of the Contractor, and in accordance with the Federal National Pollutant Discharge Elimination System (NPDES) and the NPDES General Construction Permit which includes the Contractor's Storm Water Pollution Prevention Plan (SWPPP) pursuant thereto.

64 Payments

The OCFA shall make payments upon the contract price in accordance with the Contract Documents.

65 Assignment

The Contract Documents, and any portion thereof, may not be assigned by the Contractor. Claims for monies due or to become due the Contractor from the OCFA under the Contract Documents may be assigned, with the written consent of the Board of Directors, to a bank, trust company, or other financing institution and may thereafter be further assigned or reassigned to any such institution. To effect such assignments, the Contractor, or Contractor's assignee, shall submit a written request to the Board of Directors enclosing a letter from the proposed assignee indicating that it will accept such assignment. Any attempted assignment contrary to provisions of this paragraph shall be void.

66 Other Contracts

The Board of Directors may undertake or award other contracts for additional work or other work, and the Contractor shall fully cooperate with such other contractors and OCFA employees and carefully fit Contractor's own work to such additional work as may be directed by the Project Manager. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by OCFA employees.

67 Warranty / Warranty Work

- 67.1 One-Year Warranty: The Contractor agrees to maintain and guarantees for a period of twelve (12) months from the date of the issuance of the certificate of acceptance of the Project or the issuance of a temporary certificate of occupancy as requested by the Fire Chief in the Fire Chief's sole discretion, whichever event occurs first, (and for such additional or extended periods for portions of the Work as provided in the Project Manual), that the completed work is free from all defects due to faulty materials, equipment or workmanship and that Contractor shall promptly make whatever adjustments or corrections which may be necessary to cure any defects, including repairs or any damage to the Site, Project, Work, or any system installed therein resulting from such defects. .
- 67.2 Warranty Work / Normal Response Time: In the event of failure to comply with the above-mentioned conditions within one (1) week after being notified in writing, the OCFA is hereby authorized to proceed to have the defects remedied and made good at the expense of the Contractor who hereby agrees to pay the cost and charges therefore immediately on demand.
- 67.3 Warranty Work / Emergency Response Time: If in the opinion of the OCFA, defective work creates a dangerous condition, affects the OCFA's essential operations / essential use of the facility, affects the safety or preservation of property or personnel, or requires immediate correction or attention to prevent further loss to the OCFA, the Contractor shall be required to take corrective action within 24 hours after personal or telephonic notice by the OCFA's Property Management Section. If the Contractor cannot be contacted or does not comply with the OCFA's request for correction within 24 hours (or a reasonable time as determined by the OCFA), the OCFA may, notwithstanding the provisions of this Section 67, proceed to make such correction, the cost of which shall be charged against the Contractor.
- 67.4 Failure to Take Corrective Action: Failure by the Contractor to take corrective action as specified above shall constitute a material breach of this agreement and will result in the OCFA taking whatever corrective action it deems necessary including termination of this agreement. All costs resulting from such action by the OCFA will be claimed against Contractor or, if necessary, the Contractor's Performance Bond. The Contractor's Performance Bond shall remain in full force and effect through the warranty period.
- 67.5 Alternative Remedy: In the event that the Contractor fails to make adjustments, repairs, corrections or other work made necessary by such defects, or to properly maintain and service the Project, the OCFA may do so and charge the Contractor the cost incurred. The performance bond shall remain in full force and effect through the guarantee period or, at the option of the Contractor, a warranty bond in the amount of one hundred percent of the Contract price may be substituted for the performance bond. Such warranty bond must be in a form approved by OCFA General Counsel, be issued by a surety authorized by the State Insurance Commissioner to transact business in the State of California as a surety, and must have and maintain, throughout the warranty period, at least an "A-" policyholder's rating, or better, and a financial rating of "Class VII," or better, in accordance with the most current A.M. Best's Rating Guide.
- 67.6 All Inclusive Remedies: The Contractor's obligations under this clause are in addition to the Contractor's other express or implied assurances of this Contract, Project Manual, or state law and in no way diminish any other rights that the OCFA may have against the Contractor for faulty materials, equipment, or work.

68 Extra Work And Changes

68.1 The Contract price as set forth in the Contract and the Contractor's Bid, includes compensation for all work performed by Contractor, unless Contractor obtains a written change order signed by the Project Manager specifying the exact nature of the extra work and the amount of extra compensation to be paid all as more particularly set forth in this Section 1.16. OCFA shall extend the time fixed in the Contract Documents for completion of the Project by the number of days reasonably required for Contractor to perform the extra work only if Contractor is actually delayed in the performance of any item of the Project on the critical path by:

68.1.1 Any act or neglect of OCFA, Project Manager, Design Professional, or any employee, agent, or representative of OCFA; or

68.1.2 Combined action of workers, either those employed on the Project or in any industry essential to the conduct of the Work not caused by or resulting from default, negligence, or collusion on the part of Contractor or its Subcontractors of every tier; or

68.1.3 Unusually severe weather conditions not reasonably anticipatable for that portion of the Site is located, based upon U.S. Weather Bureau climatological reports for the months included plus a report indicating average precipitation, temperature, etc. for the last ten (10) years from the nearest reporting station; or

68.1.4 Excusable Transportation Delays; or

68.1.5 Excusable Labor Disputes; or

68.1.6 Acts of God; or

68.1.7 National Emergency, declared by the President of the United States.

In the event one or more of the specific situations described above occurs, the Scheduled Completion Date may be extended by Change Order for a period not to exceed the length of such delay, provided that Contractor presents a written request to Project Manager, with demonstrated justification, for such time extension within five (5) days of the commencement of such delay. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor as determined by Project Manager. The decision of the Project Manager shall be final.

68.2 The Project Manager may, at any time, by written order, and without notice to the sureties, make changes in the drawings or specifications of the Contract Documents if within the general scope thereof. A change order shall also be any other written order (including direction, instruction, interpretation or determination) from the OCFA which causes any change, provided Contractor gives the OCFA written notice stating the date, circumstances and source of the order and that Contractor regards the order as a change order.

68.3 If any change under this Section 1.16 causes an increase or decrease in Contractor's actual direct cost or the time required to perform any part of the work under this Contract, whether or not changed by any order, the Project Manager shall make an equitable adjustment and modify the Contract in writing. Except for claims based on defective specifications, no claim for any change shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as required below. In the case of defective specifications for which the OCFA is responsible, the equitable adjustment shall include any increased direct cost Contractor reasonably incurred in attempting to comply with those defective specifications.

68.4 No extension of time shall be given unless the delay for which a request is made is included in those items for which an extension to the Scheduled Completion Date is appropriate pursuant to the provisions of this Section 1.16 and the Project Manager finds that such reason for the delay actually adversely affected the ability of the Contractor to complete the Project

by the Scheduled Completion Date or to complete a Milestone. Project Manager's decision will be conclusive on the parties to this Contract.

- 68.5 No claims by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies the Project Manager that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took all available measures to mitigate such damages. The Project Manager's decision will be conclusive on all parties to this Contract.
- 68.6 No extension of the Scheduled Completion Date or the right on the part of Contractor to secure any such extension pursuant to this Section 1.16 shall prejudice any right OCFA may have under the Project Manual, or otherwise, to terminate this Contract.
- 68.7 The Contract Price includes compensation for all work performed by Contractor, unless Contractor obtains a written change order signed by the Project Manager specifying the exact nature of the extra work and the amount of extra compensation to be paid all as more particularly set forth in in this Section 1.16.
- 68.8 Project Manager may extend the Scheduled Completion Date by the number of days reasonably required for Contractor to perform the extra work, but only to the extent such extra work actually adversely affects the Scheduled Completion Date, as determined by Project Manager. The decision of the Project Manager shall be final.
- 68.9 The OCFA or the Fire Chief may order modifications or authorize change orders for any reason. Such modifications shall be reviewed, evaluated, and processed in the manner specified in this Section 1.16.
- 68.10 Project Manager may at any time, without notice to any surety, by written order designated or indicated to be a Class 1 or Class 2 Change Order, make any change in the work within the general scope of the Contract, including, but not limited to, changes in:
 - 68.10.1 The Project Manual (including drawings and designs);
 - 68.10.2 The time, method, or manner of performance of the work;
 - 68.10.3 The OCFA-furnished facilities, equipment, materials, services, or site; or
 - 68.10.4 Directing acceleration in the performance of the work.
- 68.11 Except as provided in this Section 68, no order, statement or conduct of the OCFA or its representatives, including, but not limited to the Fire Chief, Project Manager, or the Design Professional, shall be treated as a change under this Section 1.16 or entitle Contractor to an equitable adjustment.
- 68.12 If any change under this Section 68 causes an increase or decrease in Contractor's actual, direct cost or the time required to complete the Project or a Milestone under this Contract and Project Manual, whether or not changed by any order, the Project Manager shall make an equitable adjustment and the OCFA shall modify the Contract in writing. Except for Class 1 claims based on defective provisions of the Project Manual, no claim for any change under Section 1.16 shall be allowed for any costs incurred more than 15 days before the Contractor gives written notice as required in this Section 1.16. In the case of defective specifications for which the OCFA is responsible, the equitable adjustment shall include any increased direct cost Contractor reasonably incurred in attempting to comply with those defective specifications.

- 68.13 If Contractor intends to assert a claim for an equitable adjustment under this Section 1.16, it must, within fifteen (15) days after receipt of a written change order under this Section 1.16 or the furnishing of a written notice hereunder, submit a written statement to the Project Manager setting forth the general nature and monetary extent of such claim. Such claim shall contain the documentation and information as specified herein. The Project Manager may extend the 15-day period so long as the request for the extension is submitted within such 15-day period and only for good and justified cause. Project Manager's decision regarding any request for extension shall be final and binding on all parties.
- 68.14 Claim documentation shall conform to generally accepted accounting principals and all supporting documentation shall be cited by reference, photocopies, or explanation. Supporting documentation may include, but shall not be limited to, general conditions, general requirements, technical specifications, drawings, correspondence, conference notes, shop drawings logs, survey books, inspection reports, delivery schedules, test reports, daily reports, subcontracts, fragmentary schedules or time impact analyses, photographs, technical reports, requests for information, field instructions, and all other related records necessary to support Contractor's claim.
- 68.15 Supporting documentation of damages for each claim shall be cited, photocopied, or explained. Supporting documentation may include, but shall not be limited to, any or all documents related to the preparation and submission of the bid; certified, detailed labor records including labor distribution reports, material and equipment procurement records, construction equipment ownership cost records or rental records, Subcontractor or vendor files and cost records, service cost records, purchase orders, invoices, project as planned and as-built records, general ledger records, variance reports, accounting adjustment records, and any other accounting materials necessary to support Contractor's claim.
- 68.16 Each copy of the claim documentation shall be certified by a responsible office of the Contractor in accordance with the requirements of the Project Manual.
- 68.17 Should Contractor be unable to support any part of the claim and it is determined that such inability is attributable to falsity of such certification or misrepresentation of fact or fraud on the part of Contractor, the Contractor shall be liable to OCFA as provided for under California Government Code Section 12650 et seq.
- 68.18 Disputed work shall be performed as ordered in writing by the Project Manager, so long as the cost of such work is within the OCFA of the Project Manager as described above, so as to minimize the impact on, and delays to, the Work.
- 68.19 Costs which shall not be allowed or paid in Change Orders or claim settlements under this Contract include, but are not limited to, interest cost of any type other than those mandated by statute; claim preparation or filing costs; legal expenses; the costs of preparing or reviewing proposed Change Orders or change order proposals concerning change orders which are not issued by the OCFA; lost revenues; lost profits; lost income or earnings; rescheduling costs; costs of idled equipment when such equipment is not yet at the Site or has not yet been employed on the Work; lost earnings or interest on unpaid retainage; claims consulting costs; the costs of corporate officers or staff visiting the Site or participating in meetings with the OCFA; any compensation due to the fluctuation of foreign currency conversions or exchange rates; loss of other business; or any other cost identified as unallowable cost under the provisions of the Federal Acquisition Regulations.
- 68.20 No claim by Contractor for an equitable adjustment shall be allowed if made after final payment under this Agreement. Contractor hereby agrees to make any and all changes, furnish the materials and perform the work that OCFA or its Project Manager may require without

nullifying this Contract. Contractor shall adhere strictly to the Contract Documents unless a change therefrom is authorized in writing by the Project Manager, subject to the limitations contained herein. Under no condition shall Contractor make any changes to the Project, either in additions or deductions, without the written order of the OCFA or its Project Manager and the OCFA shall not pay for any extra charges made by Contractor that have not been agreed upon in advance in writing by the OCFA. Contractor shall submit immediately to the OCFA written copies of its firm's cost or credit proposal for change in the work. Disputed work shall be performed as ordered in writing by the OCFA or the Project Manager and the proper cost or credit breakdowns therefor shall be submitted without delay by Contractor to the Project Manager.

- 68.21 Project Manager is authorized by the Board of Directors to make, by written order, changes or additions to the work within the scope of the Contract Documents. This authority to approve changes is limited to 10% of the original contract amount. All changes over the amounts specified above shall be subject to the approval of the Board of Directors. Any change or addition of any kind pursuant to any provision of the Contract Documents which exceeds the limits described in this subsection and which have not been approved by the Board of Directors is void and can not be enforced against the OCFA.
- 68.22 Any claim of the Contractor for adjustment under this Section 1.16 or any other provision of the Project Manual must be asserted in writing within 15 days from the date of receipt by the Contractor of the notification of change unless the Board of Directors or Project Manager grants a further period of time before the date of final payment under the Contract Documents. Nothing provided in this Section 68 shall excuse the Contractor from proceeding with the prosecution of the work as changed. Except as otherwise provided in this Contract, no charge for any extra work or material will be allowed.
- 68.23 Labor wage rates shall not exceed the Prevailing Wage Rates supported by payroll records. Equipment rental rates should be based on latest edition of equipment rental rates published by the State of California Department of Transportation; Division of Construction.
- 68.24 Nothing in this Section shall excuse the Contractor from proceeding with the Contract Documents as changed.

69 No Verbal Modifications

No verbal statement of any person whomsoever shall in any manner or degree modify or otherwise affect the terms of the Contract or the Project Manual.

70 Material, Workmanship, And Acceptance

- 70.1 Where materials are specified by reference to standard specifications of the American Society for Testing Materials (A.S.T.M.), Federal Specifications, or others, all applicable provisions of the designated specifications shall be considered as forming a part of the Contract Documents to the same force and effect as if repeated therein.
- 70.2 All work under this Contract Documents shall be performed in a skillful and workmanlike manner. The Project Manager may, in writing, require the Contractor to remove from the work any employee the Project Manager deems incompetent, careless, or otherwise objectionable.
- 70.3 The Contractor shall, without charge, replace any material or correct any workmanship found by the Project Manager not to conform to the contract requirements, unless in the public interest the Project Manager consents to accept such material or workmanship with an

appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

- 70.4 If the Contractor does not promptly replace rejected material or correct rejected workmanship, the OCFA (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with these General Conditions.
- 70.5 Unless otherwise provided in the Contract Documents, acceptance by the OCFA shall be accomplished by recordation of Notice of Completion which shall be made as promptly as practicable after completion and inspection of all work required by the Contract Documents. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud, or as regard the OCFA's rights under any warranty or guarantee. Informal procedures such as "punch lists" are not to be deemed final or conditional acceptance.

71 Termination For Default & Damages For Delay

- 71.1 The Contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party, provided that no termination may be effected unless the other party is given: (1) Not less than ten (10) calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate; and (2) An opportunity for consultation with the terminating party prior to termination.
- 71.2 If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in the Contract Documents or any extension thereof, or fails to complete said work within such time, the Board of Directors may, by written notice to the Contractor, terminate Contractor's right to proceed with the work or such part of the work as to which there has been delay. In such event, the OCFA may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completion the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, Contractor and Contractor's sureties shall be liable for any damage to the OCFA resulting from Contractor's refusal or failure to complete the work within the specified time.
- 71.3 Fixed and agreed liquidated damages are provided in the Contract Documents, these General Conditions, paragraph 1.38 J. If the OCFA so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the OCFA in completing the work.
- 71.4 Fixed and agreed liquidated damages are provided in the Contract Documents, these General Condition, paragraph 1.38 J. If the OCFA does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.
- 71.5 The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if the Contractor is actually delayed in the performance of any item of the Project on the critical path by:
- 71.5.1 Any act or neglect of OCFA, Project Manager, Design Professional, or any employee, agent, or representative of OCFA; or

71.5.2 Combined action of workers, either those employed on the Project or in any industry essential to the conduct of the Work not caused by or resulting from default, negligence, or collusion on the part of Contractor or its Subcontractors of every tier; or

71.5.3 Unusually severe weather conditions not reasonably anticipatable for that portion of the County of Orange where the Project site is located, based upon U.S. Weather Bureau climatological reports for the months included plus a report indicating average precipitation, temperature, etc. for the last ten (10) years from the nearest reporting station; or

71.5.4 Excusable Transportation Delays; or

71.5.5 Excusable Labor Disputes; or

71.5.6 Acts of God; or

71.5.7 National Emergency, declared by the President of the United States.

The Scheduled Completion Date may be extended by Change Order for a period not to exceed the length of such delay, provided that Contractor presents a written request to Project Manager, with demonstrated justification, for such time extension within five (5) days of the commencement of such delay. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor. No extension of time shall be given unless the delay for which a request is made is included in those items for which an extension to the Scheduled Completion Date is appropriate as provided above and the Project Manager finds that such reason for the delay actually adversely affected the ability of the Contractor to complete the Project by the scheduled completion date. Project Manager's decision will be conclusive on the parties to this Contract. No claims by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies the Project Manager that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took all available measures to mitigate such damages. The Project Manager's decision will be conclusive on all parties to this Contract. Project Manager may extend the time indicated for completion of the Project by the number of days reasonably required for Contractor to perform the extra work, but only to the extent such extra work actually adversely affects the Scheduled Completion Date, as determined by Project Manager. The decision of the Project Manager shall be final.

The rights and remedies of the OCFA provided in this Section 71 are in addition to any other rights and remedies provided by law or under the Contract Documents.

72 OCFA's Rights Regarding Work

72.1 If the Work or any portion thereof is defective and/or does not conform to the Project Manual, or if Contractor fails to supply sufficient skilled workers and suitable material, services, or equipment, or if Contractor fails to make prompt payments to Subcontractors or for labor, materials, or equipment, or if Contractor fails to supervise or coordinate the Work, or if grounds exist pursuant to any other provision of the Project Manual, Project Manager may order Contractor to stop the Work, or any portion thereof, until cause for the order to stop has been eliminated. Project Manager's exercise of this right to stop the Work shall not give rise to any duty on the part of the Project Manager to exercise this right for the benefit of Contractor or any other party. This right to stop the Work pursuant to this Section is in addition to and not in limitation of OCFA's rights to terminate this Contract in accordance with the Project Manual.

- 72.2 Project Manager may at any time and without cause suspend the Work or any portion thereof by written notice to Contractor and a Change Order shall be issued extending the Scheduled Completion Date by the number of days of such suspension. For suspensions of the Work which are fourteen (14) days or less, Contractor shall recommence the Work at the direction of Project Manager with the Lump Sum Price remaining unchanged. Provided Contractor is not in default of the terms of the Project Manual, if there is a suspension of Work or suspensions which in the aggregate extend beyond fourteen (14) days, Contractor shall recommence the Work at the direction of Project Manager and Contractor and Project Manager shall, at Contractor's written request and through good faith negotiations, equitably adjust the Scheduled Completion Date and any Milestones, and shall equitably adjust the Lump Sum Price, in an amount to be approved by the Fire Chief or the OCFA, which approval shall not be unreasonably withheld, for each day of such suspension exceeding fourteen (14) days. Adjustments to the Scheduled Completion Date or completion of a Milestone shall only be provided to the extent the suspension of Work actually adversely affects the Scheduled Completion Date or completion of a Milestone, as determined by Project Manager. The decision of the Project Manager shall be final.
- 72.3 In the event the Project Manager determines that the progress of the Work is behind the progress set forth in the Contractor's Construction Schedule, Project Manager may require Contractor to take such actions as the Project Manager deems necessary to expedite the progress of the Work in conformance with the progress set forth in the Contractor's Construction Schedule. Such actions may include without limitation, increasing the number of workers performing the Work, utilizing overtime work, and requiring additional work shifts. Such action by Project Manager to place Contractor back on schedule shall not be the subject of a Change Order increasing the Lump Sum Price, nor shall Contractor receive any additional compensation for these activities.
- 72.4 Contractor shall cooperate with OCFA, Project Manager, Design Professional, and all other persons as OCFA may retain or employ for (by way of illustration only) installation of furniture, decoration, and training, and the like at the Project. Contractor acknowledges that it is critical to OCFA that separate Contractors are allowed to perform and coordinate the installation of furnishings, fixtures, and equipment not covered by this Contract but necessary for the Project. Contractor covenants to use its best efforts to prevent OCFA from suffering delay in completion of the Work as a result of Contractor's failure to cooperate and coordinate its work with Related Work as required by the Project Manual.
- 72.5 To the extent that OCFA timely provides to Contractor information relating to the work of its separate Contractors, the interrelationships between the work of separate Contractors and/or third parties such as OCFA's purchasing agent and any other special consultants shall be indicated on the Contractor's Construction Schedule to allow OCFA to provide for proper phasing.

73 Contract Price; Method of Payment; Retention Of Funds

- 73.1 OCFA agrees to pay and the Contractor agrees to accept as full consideration for the faithful performance of this Contract, subject to any subsequent additions or deductions as provided in approved change orders, the sum as itemized in the Exhibit K: Schedule of Values.
- 73.2 Progress payments shall be made to the Contractor per month for each successive month as the work progresses. The Contractor shall be paid such sum as will bring the total payments received since the commencement of the work up to ninety percent (90%) of the value of the work completed, less all previous payments, provided that the Contractor submits the request for payment prior to the end of the day required to meet the payment schedule. The OCFA

will retain ten percent (10%) of the amount of each such progress estimate and material cost until 30 days after the recordation of the Notice of Completion.

- 73.3 The Contractor shall request payment through the preparation and submission to OCFA of an Invoice in accordance with the Project Manual. It shall show in detail all monies properly payable to the Contractor, approved by the Project Manager, in accordance with the previously approved activities as identified on the Contractor's Construction Schedule, including those items of labor, materials, and equipment used or incorporated in the Work (and, if OCFA has agreed in advance in writing, suitably stored at the Site) through and including the Payment Application Date. The Application for Partial Payment shall have, as attachments waivers of mechanics' and materialmen's liens by the Contractor and its Subcontractors and Sub-subcontractors as of the date of submission of the Application for Partial Payment, which waivers shall conform in all material respects with the then current provisions of Section 3262 of the California Civil Code (or any successor thereto), certifications of payrolls (30 days in arrears), and such other evidence of performance of the Work, the costs thereof and payment therefor as OCFA may deem necessary or desirable.
- 73.4 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Partial Payment shall pass to OCFA, free and clear of all liens, claims, security interests or encumbrances, upon the sooner occurrence of: (a) the delivery of any such materials or equipment to the Site; or (b) the tender of payment of the applicable Application for Partial Payment by OCFA to the Contractor; and that no Work, materials, or equipment covered by an Application for Partial Payment shall have been acquired, whether by the Contractor or by any Subcontractor or Sub-subcontractor, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person. The passage of title to OCFA as provided herein shall not alter or limit the obligations and duties of the Contractor with respect to the Work and the materials or equipment incorporated therein or used in connection therewith as set forth in the Project Manual. In this regard, it is specifically noted that neither the OCFA, nor its Directors, officers, employees, or agents shall be held responsible in any manner for any loss that may happen to the Work or any part thereof during the course of construction; for any loss or damage to any of the materials, equipment, supplies, or other things used or employed in performing the Work; for injury to or death of any person, either workers or the public; or for damage to property, from any cause that might have been prevented by the Contractor, Contractor's workers, employees, Subcontractors, suppliers, or agents.
- 73.5 If the Contractor has submitted an Application for Partial Payment in the manner prescribed in the Project Manual, The Project Manager shall, with reasonable promptness, review, approve the same (or such portions thereof covering amounts it determines to be properly due), or shall state in writing its reasons for withholding its approval (whether of all or a part).
- 73.6 The Project Manager's approval of an Application for Partial Payment shall not constitute a representation by OCFA that the conditions precedent to the Contractor's entitlement to payment have been fulfilled, nor shall approval of an Application for Partial Payment by OCFA be deemed a representation by OCFA: (a) that it has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (b) that it has reviewed the construction means, methods, techniques, sequences, coordination or procedures, or the cleanliness of the Site, or the safety precautions and programs, in connection with the Work; (c) that it has made any examination to ascertain how or for what purposes the Contractor has used the monies previously paid on account of the Contract Sum.
- 73.7 No approval of an Application for Partial Payment, progress payment or any beneficial, partial or entire use or occupancy of the Project by OCFA shall constitute an acceptance of any Work which is not in accordance with the Project Manual; and regardless of approval of an

Application for Partial Payment by OCFA, the Contractor shall remain totally obligated and liable for the performance of the Work in strict compliance with the Project Manual.

73.8 Subject to OCFA's rights to offset or withhold as set forth in these General Conditions, after OCFA has approved an Application for Partial Payment, in whole or in part, it shall make payment of the amount approved to the Contractor as provided in the Project Manual.

73.9 Pursuant to California Public Works Contract Code Section 22300, the Contractor will be entitled to post approved securities with the OCFA or an approved financial institution in order to have the OCFA release funds retained by the OCFA to ensure performance of the Contract. Contractor shall be required to execute an addendum to this Contract together with escrow instructions and any other documents in order to effect this substitution.

74 Right To Occupy - Beneficial Use

74.1 OCFA reserves the right, prior to Substantial Completion of the entire Project, to use a portion or portions of the Work when Project Manager determines that such portion or portions may be safe for such use provided such use will not unreasonably interfere with the Contractor's orderly progress of the Work. Such use ("beneficial use") shall not be construed as an acceptance of any such Work, or a part of the Work, as substantially complete, nor shall it affect the dates and times when payments shall become due from the OCFA to Contractor, nor shall it prejudice OCFA's rights pursuant to the Contract or any bonds guaranteeing the same. Notwithstanding such occupancy or use, Contractor shall continue to provide insurance, security, maintenance, utilities, and protection to the Work, unless otherwise agreed by the parties in writing.

74.2 At the sole discretion of the Fire Chief, any time after beneficial use and prior to issuance of a certificate of occupancy by the Local Jurisdictions, the Fire Chief may request one or more of the local Jurisdictions to issue a temporary certificate of occupancy for a portion or portions of the Project. Upon the issuance of such temporary certificate of occupancy, the OCFA may occupy such portion or portions of the Project, and such portions shall be deemed to be substantially complete.

74.3 Beneficial Occupancy shall not constitute acceptance by OCFA or Project Manager of the completed Work or any portion thereof, shall not relieve the Contractor of its full responsibility for correcting defective Work and repairing the Work, shall not be deemed to be the equivalent of completion of the Work and shall not entitle the Contractor to any increase in the Contract Sum.

74.4 Anything in this Section 74 to the contrary notwithstanding, OCFA may certify any portion of the Work to be occupied or used hereunder to be Substantially Completed and, upon the Contractor's timely completion or correction of the items on the "punch-list" with respect thereto, accept that portion of the Work.

75 Final Completion and Final Payment.

75.1 When all permits for the Work have been approved, accepted, or otherwise signed off as complete by the inspectors of the Local Jurisdictions, Contractor shall certify to the Project Manager in writing within ten (10) days that the Work is complete in accordance with the Project Manual and is ready for occupancy. Project Manager, Design Professional, and Fire Chief will make an investigation and inspection of all phases of the Work. If all contractual obligations have not been met, Project Manager shall furnish Contractor a detailed list of all remaining work (the "Punchlist") and Contractor shall commence correction of all items on the Punchlist. A letter of acceptance shall be issued upon completion of all Work specified on the

Punchlist to the satisfaction of the Project Manager. In no case will the letter of acceptance relieve Contractor of any obligations of Contractor that may be outstanding. Within five (5) business days after issuance of a letter of acceptance, Project Manager and the Design Professional shall issue a certificate of final completion. Upon receipt of the certificate of final completion, Contractor shall submit its final application for payment ("Final Application for Payment") which shall set forth all amounts due and remaining unpaid to Contractor and upon approval thereof by the Project Manager and the Design Professional, OCFA shall pay to Contractor the amount due under such Final Application for Payment as provided herein.

75.2 Before OCFA makes the Final Payment to Contractor, all requirements of the Project Manual shall have been fulfilled, including the following:

- (1) Receipt by Project Manager of a complete list of Subcontractors and principal vendors, including addresses, telephone numbers, and names of individuals to contact who are familiar with the Project, including Contractor;
- (2) Receipt by Project Manager of all operation and maintenance manuals, approved by the Design Professional;
- (3) Receipt by OCFA of all releases and written guarantees from all Subcontractors and material suppliers for the Project in a form and content satisfactory to the Project Manager, which Contractor hereby agrees to obtain for, and deliver to, Project Manager prior to completion of the Project;
- (4) Receipt by Project Manager of all "As-Built" records, approved by Project Manager and the Design Professional as specified in the Project Manual;
- (5) Copies of any other warranties or guarantees received from manufacturers, suppliers, or Subcontractors of Contractor or any Subcontractor; and
- (6) Evidence satisfactory to the Project Manager showing that the Contractor has promptly and satisfactorily settled all claims, if any, for services performed and materials furnished in connection with the Work.
- (7) Receipt by Project Manager of all documentation necessary to demonstrate compliance with the Leadership and Environmental Design program requirements.

75.3 Final Payment shall not become due until Contractor submits to Project Manager: (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which OCFA or OCFA's property might in any way be responsible, have been paid or otherwise satisfied; (2) the consent of the surety to Final Payment; and (3) if reasonably required by the Project Manager, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Project Manager. Project Manager may require affidavits or certificates of payment and/or releases from any Subcontractor, laborer, or material supplier.

75.4 If any Subcontractor or material supplier refuses to furnish a release or waiver required by Project Manager, Contractor may satisfy its obligation with respect to such Subcontractor or material supplier by furnishing a cash bond, assignment of a certificate of deposit, or other liquid security satisfactory to Project Manager to indemnify OCFA against any lien. If any lien remains unsatisfied after all payments are made, Contractor shall refund to OCFA all monies that the OCFA may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

75.5 The acceptance of Final Payment shall constitute a waiver of all claims by Contractor except those previously made in writing and identified by Contractor as unsettled at the time of the Final Application for Payment.

- 75.6 The making of Final Payment shall constitute a waiver of all claims by OCFA except those arising from (1) unsettled claims; (2) faulty or defective Work appearing after Final Completion of the Work; (3) failure of the Work to comply with the requirements of the Project Manual; (4) terms of any special warranties required by the Project Manual; (5) "Punchlist" items not yet completed by the Contractor; (6) discrepancies noted in subsequent audits performed by OCFA or its agents within one (1) year following Final Payment; or (7) any claims identified by Project Manager as unsettled prior to making of Final Payment.
- 75.7 Final Payment shall not relieve Contractor of its warranty and indemnification obligations pursuant to the Project Manual, which shall survive such payment.
- 75.8 Contractor shall keep and present within fifteen (15) days after request by OCFA or its agents, in a form reasonably approved by the Project Manager, a final itemized accounting of all expenditures made in connection with the Work together with appropriate suplf any Subcontractor or Sub-subcontractor refuses to furnish any release, satisfaction or waiver of lien required at any time by OCFA under Paragraphs 9.1., or files a claim of lien against OCFA's property, the Contractor shall, if requested by Project Manager and at the Contractor's expense, furnish and record a Mechanic's Lien Release Bond (separate and apart from any other bond provided by the Contractor hereunder) that is in full compliance with the requirements of the then current provisions of Section 3143 of the California Civil Code. If any Subcontractor or Sub- subcontractor serves a Stop Notice (bonded or otherwise) on OCFA, Contractor shall, if requested by OCFA and at Contractor's expense, furnish a Stop Notice Release Bond (separate and apart from any other bond provided by the Contractor hereunder) that is in full compliance with the then current provisions of Section 3171 of the California Civil Code. The Contractor authorizes OCFA, and shall cause its Subcontractors and Sub-subcontractors to authorize OCFA, to check directly with any suppliers of labor and material with respect to any item chargeable to OCFA's property, to confirm balances due and to obtain sworn statements and waivers of lien, all if OCFA so elects. If any lien remains unsatisfied after all payments are made to the Contractor, the Contractor shall reimburse OCFA on account of all monies that the latter may be compelled to pay in discharging such lien, including all costs and attorneys' fees.

76 Surety Bonds.

Contractor shall, upon entering into performance of this Agreement, furnish a bond in the amount of one hundred percent (100%) of the Contract price bid, to guarantee the faithful performance of the work, and an additional bond in the amount of one hundred percent (100%) of the Contract price bid to guarantee payment of all claims for labor and materials furnished. The bonds required pursuant to this Section shall be issued by a surety authorized by the State Insurance Commissioner to transact business in the State of California as a surety and shall have and maintain throughout the life of the Project, at least an "A-" policyholder's rating, or better, and a financial rating of "Class VII," or better, in accordance with the most current A.M. Best's Rating Guide. This Contract shall not become effective until such bonds are supplied to and approved by the OCFA.

77 Risk And Indemnification

- 77.1 Indemnification: To the fullest extent permitted by law, Contractor shall indemnify, defend (at Contractor's sole cost and expense and with legal counsel approved by OCFA, which approval shall not be unreasonably withheld), protect and hold harmless OCFA and all of OCFA's officers, directors, employees, consultants, agents, successors and assigns (collectively the "Indemnified Parties"), from and against any and all claims (including, without limitation, claims for bodily injury, death or damage to property), demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other

professional, expert or consultants' fees and costs and OCFA's general and administrative expenses) of every kind and nature whatsoever (individually, a "Claim"; collectively, "Claims") which may arise from or in any manner related (directly or indirectly) to any work performed or services provided under this Agreement (including, without limitation, the negligent and/or willful acts, errors and/or omissions of Contractor, its principals, officers, agents, employees, Contractors, suppliers, consultants, subconsultants, subcontractors, anyone employed directly or indirectly by any of them or for whose acts they may be liable or any or all of them) regardless of any active or passive negligence or strict liability of an Indemnified Party. Contractor understands and acknowledges that the indemnification obligation hereunder is intended to constitute a "Type I" indemnity under California law and extends to and includes Claims arising from the active or passive negligence of Indemnified Parties. Notwithstanding the foregoing, nothing herein shall be construed to require Contractor to indemnify the Indemnified Parties from any Claim arising from the sole negligence or willful misconduct of the Indemnified Parties.

- 77.2 **Duty to Defend:** The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend exists regardless of any ultimate liability of Contractor. Such defense obligation shall arise immediately upon presentation of a Claim by any party and written notice of such Claim being provided to Contractor. Payment to Contractor by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. Contractor's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations or statute of repose. Contractor's liability for indemnification hereunder is in addition to any liability Contractor may have to OCFA for a breach by Contractor of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit Contractor's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the parties hereto. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code Section 1654) that ambiguities are to be construed against the drafting party shall not be employed in the interpretation of this Agreement.

78 Insurance.

78.1 Compliance with Insurance Requirements.

- 78.1.1 As a condition precedent to the effectiveness of this Agreement, and without limiting the indemnity provisions set forth in this Agreement, Contractor shall obtain, maintain, and keep in full force and effect during the term of this Agreement, at its sole cost and expense, and in a form and content satisfactory to OCFA, all insurance required under this section. Contractor shall not commence any work or services under this Agreement unless and until it has provided evidence satisfactory to OCFA that it has secured all insurance required under this section. If Contractor's existing insurance policies do not meet the insurance requirements set forth herein, Contractor agrees to amend, supplement or endorse the policies to do so.
- 78.1.2 The amount of insurance coverage available to pay claims under each policy required hereunder shall be the higher of (a) the minimum limits required below, or (b) the actual limits established in each policy. Thus, by way of example only, if the minimum policy limit is \$2 million per occurrence but insurance actually carried by the Contractor or subcontractor is \$4 million per occurrence, the coverage required to be available for claims

under that policy would be \$4 million. (Nothing herein requires the Contractor to purchase insurance at limits greater than the minimum limits established below.)

78.2 Types of Insurance Required.

Contractor shall obtain and maintain in full force and effect during the term of this Agreement, including any extension thereof, the following policies of insurance:

78.2.1 Commercial General Liability Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Commercial General Liability Insurance (Insurance Services Office form CG 00 01) written on an occurrence basis with limits of at least five million dollars (\$5,000,000.00) per occurrence, five million dollars (\$5,000,000.00) in the general aggregate, and five million dollars (\$5,000,000.00) for completed operations aggregate. Defense costs shall be paid in addition to (and shall not reduce) the limits. The policy shall contain no endorsements or provisions limiting coverage for: (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) any other exclusion contrary to the Agreement.

78.2.2 Automobile Liability Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Automobile Liability Insurance (Insurance Services Office form CA 001) written on a per occurrence basis with limits of at least one million dollars (\$1,000,000.00) combined limit for each occurrence covering bodily injury and property damage. The policy shall specifically include coverage for owned, non-owned, leased, and hired automobiles.

78.2.3 Workers' Compensation Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Workers' Compensation Insurance in at least the minimum statutory amounts, and in compliance with all other statutory requirements, as required by the State of California. Contractor hereby waives, and agrees to obtain endorsements from its workers' compensation insurer waiving, all subrogation rights against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, and to require each of its subcontractors, if any, to waive the same and to obtain endorsements waiving the same subrogation rights under their workers' compensation insurance policies. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Employer's Liability Insurance written on a per occurrence basis with limits of at least one million dollars (\$1,000,000.00) per incident for bodily injury, disease or other covered claim.

78.2.4 Builders Risk (Course of Construction) Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a Builders Risk (Course of Construction) Insurance policy with limits of at least five million dollars (\$5,000,000.00). [Covered causes of loss shall include, or be endorsed to include, earthquake, flooding and other acts of God.] Contractor and each subcontractor agree to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers. The Builders Risk policy shall be endorsed to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers.

78.3 Acceptability of Insurers.

Insurance required by this section 78 shall be issued by a licensed company authorized to transact business in the state by the Department of Insurance for the State of California with a current rating

of A:VII or better (if an admitted carrier), or a current rating of A:X or better (if offered by a non-admitted insurer listed on the State of California List of Approved Surplus Line Insurers (LASLI), by the latest edition of A.M. Best's Key Rating Guide, except that the OCFA will accept workers' compensation insurance from the State Compensation Fund. In the event the OCFA determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the OCFA, the Contractor agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the OCFA. Contractor shall immediately substitute any insurer whose A.M. Best rating drops below the levels specified herein.

78.4 Insurance Endorsements.

Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the OCFA for written approval. Required insurance policies shall contain the following provisions, or Contractor shall provide endorsements issued by the insurance company on forms approved by the OCFA to add the following provisions to the insurance policies:

- 78.4.1 Additional Insured: The OCFA and its officials, officers, employees, agents, representatives, attorneys and volunteers shall be additional insureds with regard to liability and defense of suits and claims arising out of the performance of the Agreement; and
- 78.4.2 Additional Insured Endorsements: Additional insured endorsements shall not: (1) be restricted to "ongoing operations", (2) exclude "contractual liability", (3) restrict coverage to "sole" liability of Contractor, or (4) contain any other exclusions contrary to the Agreement. The coverage shall contain no special limitations on the scope of protection afforded to additional insureds; and
- 78.4.3 Primary and Non-Contributing Insurance: All policies of Commercial General Liability Insurance and Automobile Liability Insurance shall be primary and any other insurance, deductible, or self-insurance maintained by the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, shall not contribute with this primary insurance. Policies shall contain, or be endorsed to contain, such provisions.
- 78.4.4 Waiver of Subrogation: All policies of Commercial General Liability, Automobile Liability Insurance and Worker's Compensation shall contain or be endorsed to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, or shall specifically allow Contractor or others providing insurance evidence in compliance with the requirements set forth in this section to waive their right to recovery prior to a loss. Contractor hereby agrees to waive its own right of recovery against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, and Contractor hereby agrees to obtain similar written express waivers and insurance clauses from each of its subcontractors prior to commencement of work by the subcontractor.
- 78.4.5 Notice: Each policy of insurance required by this section 78 shall be endorsed to state that coverage shall not be suspended, voided, cancelled, or modified, or reduced in coverage or in limits, except after thirty (30) days prior written notice by First Class U.S. Mail, postage-prepaid, has been provided to the OCFA. Notwithstanding the foregoing, if coverage is to be suspended, voided, or cancelled because of Contractor's failure to pay the insurance premium, the notice provided to OCFA shall be by ten (10) days prior written notice. (Note: an endorsement that fails to state that the insurance company will provide the notice required by this subsection (e.g., "will endeavor to" or similar non-

committal phrases) does not comply with the requirements of this subsection. Similarly, Contractor's offer to provide the required notice in lieu of the insurance company doing so will not comply with this subsection. It is the Contractor's obligation to ensure that its insurance company(ies) will provide all policy endorsements required under this Contract.)

78.4.2 For all policies of Commercial General Liability Insurance, Contractor shall provide endorsements for completed operations to effectuate this requirement.

78.5. Deductibles and Self-Insured Retentions.

Any deductible or self-insured retention must be approved in writing by the OCFA in advance and shall protect the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention. Contractor shall be solely responsible for the payment, and if required by the insurer the advancement, of any and all deductible amounts and self-insured retentions.

78.6. Evidence of Coverage.

Within seven (7) calendar days after the date of the Notice of Apparent Low Bidder, Contractor shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required by this section. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the OCFA for written approval. The certificates of insurance and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. (ACORD form Certificates of insurance will not be accepted in lieu of approved endorsements.) At least fifteen (15) days prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the OCFA. If such coverage is cancelled or reduced and not replaced immediately so as to avoid a lapse in the required coverage, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the OCFA evidence of insurance showing that the required insurance has been reinstated or is being provided through another insurance company or companies. Contractor shall promptly furnish, at OCFA's request, copies of actual policies including all declaration pages, endorsements, exclusions and any other policy documents OCFA requires to verify coverage.

78.7 Requirements Not Limiting.

Requirement of specific coverage or minimum limits contained in this section are not intended as a limitation on coverage, limits, or other requirements, or a waiver of any coverage normally provided by any insurance. Nothing in this section shall be construed as limiting in any way the indemnification provision contained in this Agreement, or the extent to which Contractor may be held responsible for payments of damages to persons or property.

78.8 Enforcement of Agreement (Non-Estoppel).

Contractor acknowledges and agrees that actual or alleged failure on the part of the OCFA to inform Contractor of any non-compliance with any of the insurance requirements set forth in this section imposes no additional obligation on the OCFA nor does it waive any rights hereunder.

78.9 Insurance for Subcontractors.

Contractor shall either: (1) include all subcontractors engaged in any work or services for Contractor relating to this Agreement as additional named insureds under the Contractor's insurance policies; or (2) Contractor shall be responsible for causing its subcontractors to procure and maintain the same types and amounts of insurance in compliance with the terms of the insurance requirements set forth in this section (except Builders Risk (Course of Construction) Insurance), including but not limited to adding the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, as additional insureds to their respective policies. All policies of Commercial General Liability Insurance and Automobile Liability Insurance provided by Contractor's subcontractors performing any work or services related to this Agreement shall be endorsed to name the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, as additional insureds. Contractor shall not allow any subcontractor to commence any work or services relating to this Agreement unless and until the Contractor has received confirmation that the subcontractor has secured all required insurance. Upon request of OCFA, Contractor shall deliver to OCFA all certificates of insurance and endorsements required from subcontractors. (Note: Contractor's duty to obtain all required insurance for subcontractors required under this Agreement applies whether or not OCFA requests delivery of evidence of such coverage.)

78.10. Insurance for Large Equipment Suppliers

Suppliers of large equipment that will be installed as part of the Project must have and maintain General Liability Insurance and Automobile Insurance with all endorsements required hereinabove unless the Contractor or Subcontractor that will install the large equipment maintains General Liability Insurance and Automobile Liability Insurance that is endorsed to name the large equipment supplier as an additional named insured and such endorsement is provided to OCFA prior to delivery of the large equipment.

78.11 Other Insurance Requirements.

The following terms and conditions shall apply to the insurance policies required of Contractor pursuant to this Agreement:

- 78.11.1 Contractor shall provide immediate written notice to OCFA if (1) any of the insurance policies required herein are terminated, cancelled or suspended, (2) the limits of any of the insurance coverage types or amounts required herein are reduced by the insurer or depleted by other claims, or (3) the deductible or self-insured retention is increased.
- 78.11.2 All insurance coverage and limits provided by Contractor and available or applicable to this Agreement are intended to apply to each insured, including additional insureds, against whom a claim is made or suit is brought to the full extent of the policies. Nothing contained in this Agreement or any other agreement relating to the OCFA or its operations shall limit the application of such insurance coverage.
- 78.11.3 None of the insurance coverages required herein will be in compliance with the requirements of this section if they include any limiting endorsement which substantially impairs the coverages set forth herein (e.g., elimination of contractual liability or reduction of discovery period), unless the endorsement has first been submitted to the OCFA and approved in writing.
- 78.11.4 Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may delay commencement of the Project. It is

Contractor's obligation to ensure timely compliance with all insurance submittal requirements as provided herein.

78.11.5 Contractor agrees to ensure that subcontractors, if any, and any other parties involved with the Project who are brought onto or involved in the Project by Contractor, have, or are provided by Contractor's insurer, the same minimum insurance coverage required of Contractor. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. Contractor agrees that upon request, all agreements with subcontractors and others engaged in the Project will be submitted to the OCFA for review. Claims for which coverage is required but not provided due to Contractor's failure to comply with this section (e.g., allowing subcontractors to proceed with disallowed limitations on their insurance coverage, or failing to require subcontractors to provide required insurance coverage or endorsements) will result in retention of payments in amounts necessary to cover the anticipated costs associated with defending and paying the claims.

78.11.6 Contractor agrees to provide immediate written notice to OCFA of any claim, demand or loss against Contractor arising out of the work or services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to pay claims, demands or losses arising out of this Agreement.

79. Contractor's Liability; OCFA Not Liable; Claims Resolution

79.1 Contractor's liability. The Contractor shall be responsible for any loss or damage that may occur to:

- The work or any part thereof;
- Any of the materials or other things used or employed in performing the work;
- Any injury to any person or persons, either workers or the public;
- Any damage to property resulting from any cause which might have been prevented by the Contractor, including defects or obstructions at any time before completion of the work and its final acceptance.

79.2. OCFA ordered precautions. If, in the opinion of the Engineer, the precautions taken by Contractor are not safe or adequate at any time during the term of the Contract, the Engineer may order the Contractor to take further precautions, and if the Contractor shall fail to do so, the Engineer may order the work done by others and charge the Contractor for the cost thereof, such cost to be deducted from any moneys due or becoming due the Contractor. Failure of the Engineer to order such additional precautions, however, shall not relieve the Contractor from his full responsibility for public safety.

79.3 OCFA not liable. The OCFA shall not be answerable or accountable in any manner, for any loss or damage that may occur to any of the following from any cause which might have been prevented by the Contractor:

- The work or any part thereof;
- Any of the materials or other things used or employed in performing the work;
- Any injury to any person or persons, either workers or the public;
- Any damage to property.

79.4 Claims Resolution.

79.4.1. From time to time during the period of this contract, the OCFA and/or the Contractor may be served with third-party claims, as a result of alleged conduct by Contractor. The following procedures shall be followed by OCFA and Contractor:

For claims received by Contractor:

(1) Contractor shall provide OCFA on a monthly basis details regarding any claim for damages to persons or property, including, date claim made, date of alleged damages, type of damages, alleged cause of damages and, as claims are resolved, details regarding Contractor's denial or payment of such claim and the reasons for denial or payment.

(2) Contractor shall resolve or deny any claim received within thirty (30) days of receipt. If Contractor is unable to resolve a claim within the thirty (30) days set forth above, it shall, prior to the expiration of the thirty (30) days request and extension in writing from the OCFA.

For claims received by OCFA:

(1) OCFA shall process any claims received pursuant to the California Government Claims Act.

(2) If after investigation of the claim, the OCFA determines the Contractor is liable under this Contract, OCFA shall tender the claim to the Contractor for proper handling and resolution.

79.5. Retention of Claimed Damages by OCFA. The OCFA may retain so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the OCFA until disposition has been made of such suits or claims for damages aforesaid.

80 Termination

80.1 The performance of work under the Contract Documents may be terminated in whole, or from time to time in part, whenever the Board of Directors shall determine that such termination is in the best interest of the OCFA, provided that the Contractor is given (1) Not less than ten (10) calendar days' written notice (delivered by email, followed by overnight delivery with proof of delivery) of intent to terminate; (2) the extent to which performance of work under the Contract Documents is terminated; (3) the date upon which such termination becomes effective; and (4) An opportunity for consultation with the terminating party prior to the effective date of the termination.

80.2 This Contract may be terminated, or the right of the Contractor to complete the Project may be terminated, without liability or damage, when in the OCFA's opinion, the Contractor is not complying with the Contract requirements in good faith, has become insolvent, or has assigned or subcontracted any part of the Work without the OCFA's consent. In the event of such termination, the Contractor will be paid the actual amount due based upon the quantity of work completed at the time of termination, less damages caused to the OCFA by acts of the Contractor causing the termination. The Contractor, in having tendered a bid, shall be deemed to have waived any and all claims for damages because of termination of the Contract or the right of the Contractor to complete the Project for any cause stated in this Section 80.

- 80.3 If termination is effected by the OCFA, an equitable adjustment in the price provided for in this Contract shall be made, but (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and (2) any payment due to the Contractor at the time of termination may be adjusted to cover any additional costs to the OCFA because of the Contractor's default. The equitable adjustment for any termination shall provide for payment to the Contractor for services rendered and expenses incurred in accordance with Section 8 of the California, Department of Transportation Standard Specifications.
- 80.4 After receipt of a Notice of Termination, and except as otherwise directed by the Board of Directors, the Contractor shall:
- (1) Stop work under the Contract Documents on the date and to the extent specified in the Notice of Termination; and
 - (2) Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the Contract Documents as is not terminated; and
 - (3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination; and
 - (4) Assign to the OCFA, all of the right, title and interests of the Contractor under the orders and subcontracts so terminated, in which case the OCFA shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; and
 - (5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, subject to the approval of the Board of Directors; and
 - (6) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and
 - (7) Deliver or otherwise make available to the OCFA all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the Contractor in performing this Contract whether completed or in process; and
 - (8) Take such action as may be necessary, or as the Project Manager may direct, for the protection and preservation of the property related to the Contract Documents which is in the possession of the Contractor and in which the OCFA has, or may acquire, interest.
- 80.5 After receipt of a Notice of Termination, the Contractor shall submit to the Project Manager a verified termination claim. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Board of Directors upon request of the Contractor made in writing within such one-year period or authorized extension thereof.
- 80.6 If any dispute concerning a question of fact arising under the terms of this Contract is not disposed of within a reasonable period of time by Contractor and Project Manager, such matter shall be brought to the attention of the OCFA via written notice of unresolved dispute(s). If agreement cannot be reached after a good faith effort to resolve the dispute, either party may assert its other rights and remedies within this Contract or within a court of competent jurisdiction. The Parties agree that, in the event of a dispute notwithstanding, they will continue without delay to carry out all their responsibilities under this Contract. The Contractor and the OCFA Board of Directors may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this Section 80, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not

terminated. The Contract Documents shall be amended accordingly, and the Contractor shall be paid the agreed amount.

81 Patent Infringement

- 81.1 The Contractor shall report to the Project Manager, promptly and in reasonable detail, each notice or claim of patent infringement based on the performance of the Contract Documents of which the Contractor has knowledge.
- 81.2 In the event of any suit against the OCFA, or any claim against the OCFA made before suit has been instituted, on account of any alleged patent infringement arising out of the performance of the obligations under the Contract Documents, or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall, at Contractor's own expense, furnish to the OCFA, upon request, all evidence and information in possession of the Contractor pertaining to such suit or claim. The Contractor further agrees to indemnify and hold harmless the OCFA against any and all claims or lawsuits based upon such patent infringement, to defend such suits, and to pay any judgment rendered against OCFA, its employees, or the Board of Directors.

82 No Waiver By OCFA

The failure of the OCFA in any one or more instances to insist upon strict performance of any of the terms of the Contract Documents or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion.

83 Disputes

- 83.1 In the event of a dispute between the parties as to performance of the work, the interpretation of the Contract Documents, or payment or nonpayment for work performed, the parties shall attempt to resolve the dispute. Pending resolution of the dispute, the Contractor shall continue the work diligently to completion as directed by Project Manager. If the dispute is not resolved, the Contractor agrees Contractor will neither rescind the Contract Documents nor stop the progress of the work.
- 83.2 With respect to any "claim" as that term is defined in Public Contract Code section 9204, Contractor shall submit such claim in accordance with Section 91 hereinbelow.

84 Attorneys' Fees

If any action at law or in equity is necessary to enforce or interpret the terms of this Contract, each party shall be responsible for their respective costs, including attorneys' fees. The prevailing party shall not be entitled to recover its attorneys' fees or related costs. Nevertheless, if any action is brought against the Contractor or any Subcontractor to enforce a Stop Notice or Notice to Withhold, which names the OCFA as a party to said action, the OCFA shall be entitled to reasonable attorneys' fees, costs and necessary disbursements arising out of the defense of such action by the OCFA. The OCFA shall be entitled to deduct its costs for any Stop Notice filed, whether court action is involved or not.

85 Contractor's Employees' Compensation

- 85.1 General Prevailing Rate: OCFA has been advised by the State of California Director of Industrial Relations of the Director's of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which the work is to be performed for each craft or type of work needed to execute this Contract, and copies of the same are on file in the Office of the Engineer of OCFA. The Contractor agrees that not

less than said prevailing rates shall be paid to workers employed on this public works contract as required by Labor Code Section 1774 of the State of California.

- 85.2 Forfeiture For Violation: Contractor shall, as a penalty to the OCFA, forfeit Fifty Dollars (\$50.00) for each calendar day or portion thereof for each worker paid (either by the Contractor or any subcontractor under it) less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.
- 85.3 Apprentices: Sections 1777.5, 1777.6 and 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices is applicable to this Contract and the contractor shall comply therewith if the prime contract involves Thirty Thousand Dollars [\$30,000.00] or more or twenty (20) working days, or more; or if contracts of specialty contractors not bidding for work through the general or prime contractor are Two Thousand Dollars [\$2,000.00] or more or Five (5) working days or more. Information relative to apprenticeship standards, contributions, wage schedules and other requirements may be obtained from the State Director of Industrial Relations or from the Division of Apprenticeship Standards.
- 85.4 Workday: In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and Contractor shall not require more than eight (8) hours of labor in a day from any person employed by him hereunder except as provided in Section 11.4.2 above. Contractor shall conform to Article 3, Chapter 1, Part 7 (Sections 1810 et seq.) of the Labor Code of the State of California and shall forfeit to the OCFA as a penalty, the sum of twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by Contractor or any Subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one calendar day and forty (40) hours in any one week in violation of said Article. Contractor shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the Project.
- 85.5 Record of Wages; Inspection: The Contractor and each subcontractor performing any portion of the work under the Contract Documents shall keep an accurate record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by Contractor in connection with the work. Said payroll records shall be certified and shall be available for inspection at the principal office of the Contractor on the basis set forth in Labor Code Section 1776. The Contractor shall file a certified copy of said payroll records with the OCFA within ten days after receipt of a written request therefor from Project Manager or otherwise from the OCFA. The Contractor shall inform the OCFA of the location of said payroll records, including the street address, City and State, and shall, within five working days, provide a notice of change of location and address of said payroll records. It shall be the responsibility of the Contractor to ensure the compliance with the provisions of this Section 85 and the provisions of Labor Code Section 1776. In the event of noncompliance with the requirements of this Section or the requirements of Labor Code Section 1776, the Contractor shall have ten days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply. Should noncompliance exist after said ten-day period, the Contractor shall, as a penalty to the OCFA, forfeit Twenty-five Dollars (\$25) for each calendar day, or portion thereof, for each worker to whom the noncompliance pertains until strict compliance is effectuated. The Contractor acknowledges that, without limitation as to other remedies of enforcement available to the OCFA, upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the California Department of Industrial Relations, such penalties shall be withheld from progress payments then due the Contractor.

- 85.6 Pursuant to California Labor Code Section 1771.4, Contractor's services are subject to compliance monitoring and enforcement by the Department of Industrial Relations. Contractor shall post job site notices as prescribed by DIR regulations and furnish the records specified in California Labor Code Section 1776 directly to the Labor Commissioner in the manner prescribed by California Labor Code Section 1771.4(a)(3) and (c)(2).

86 SAFETY & HEALTH

- 86.1 The General Contractor (the Contractor) shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all precautions and follow all procedures for the safety of, and shall provide all protection to prevent injury to, all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of OCFA who may be involved. These precautions shall include, but in no event be limited to the:
- (1) Provisions of Local, State and Federal Regulations.
 - (2) Posting of danger signs and personal notification to all affected persons of the existence of a hazard, of whatever nature.
 - (3) Furnishing and maintaining of necessary traffic control barricades and flagman services.
 - (4) Use or storage of required explosives or other hazardous materials only under the supervision of qualified personnel.
 - (5) Maintenance of adequate quantities of operable fire protection equipment at the Work Site, as required by Local and /or State regulations.
- 86.2 The Contractor shall set forth in writing its site specific safety precautions and programs in connection with the Work, including an Anti-Substance Abuse Program which meets or exceeds any and all applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to the:
- (1) California Occupational Safety and Health Act of 1973, as amended, and rules and regulations now or hereafter in effect pursuant to said Act.
 - (2) California Code of Regulations, Title 8, as amended.
 - (3) The Labor Code of the State of California, as amended.
 - (4) Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act.
 - (5) Code of Federal Regulations, Title 29, as amended.
 - (6) The Drug-Free Workplace Act of 1988.
 - (7) In the event of conflicting requirements, the more stringent shall govern and if requested by OCFA, submit the same to OCFA for review. OCFA may, but shall not be obligated to, make suggestions and recommendations to the Contractor. OCFA shall review and approve the Contractor's Site Specific Program.
- 86.3 All work, whether performed by the Contractor or its Subcontractors, of all tiers or anyone directly or indirectly employed by any of them, and all equipment, machinery, materials, tools and like items incorporated or used in the Work, shall be compliance with and conform to:
- (1) All applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act, and California Code of Regulations, Title 8, as amended; and,

- (2) All codes, rules, regulations and requirements of OCFA and its insurance carriers relating thereto. In the event of conflicting requirements, the more stringent shall govern.
- 86.4 The Contractor shall designate a responsible and qualified member of its organization at the Work Site who has the authority to enforce the Contractor's Safety and Anti-Substance Abuse Programs, to assure compliance with Paragraph 10.1 and to prevent accidents.
- 86.5 The Contractor shall have a safety representative. The Contractor's safety representative will have:
- (1) The authority to stop work when safety problems are identified.
 - (2) The authority to implement corrective actions.
 - (3) Extensive training in safety and loss control practices regarding the Contractor's type of work.
 - (4) Certification in the OSHA Construction Outreach 10/30 Hour Program.
 - (5) Certification in first aid and CPR.
- 86.6 The Contractor shall require its Subcontractors of all tiers to designate a competent and responsible safety representative to assist the Contractor's representative in the performance of his or her duties.
- 86.7 Should the Contractor fail to provide a safe work environment in accordance with the provisions in 10.1.1, OCFA or Project Manager shall have the right, but not the obligation, to suspend Work in the unsafe area, as specified in 10.6. All costs of any nature resulting from the suspension, by whomsoever incurred, shall be paid by the Contractor.
- 86.8 After a Contractor has been awarded the construction contract for the Project, it will be required to attend a pre-construction safety meeting. The purpose of the meeting is to review the Project's Safety Program and requirements. At this time, specific safety concerns related to the Contractor's work will be discussed.
- 86.9 If deemed necessary by the Project Manager or Project Safety Coordinator, or other OCFA representative, a written Job Safety Analysis (JSA) will be required of the Contractor. The JSA will be required for frequency and severity exposures such as steel erection, deep excavations, spray painting, crane handling of large/expensive equipment, etc. This is to ensure that appropriate controls are established prior to work beginning.
- 86.10 Workplace violence (Type III), verbal intimidation or threats to the Project Manager, OCFA or designee will result in immediate removal from the Project. Contractor shall develop and implement a workplace violence policy and procedure.
- 86.11 The Contractor shall provide, or cause to be provided, each worker on the Site the proper safety equipment for the duties being performed by that worker and will not permit any worker on the Site who fails or refuses to use the same. OCFA and/or Project Manager shall have the right, but not the obligation, to order the Contractor to send a worker off the Site for the day or to require the contractor to not allow the worker any further work on OCFA's site for his or her failure to comply with safety practices, with which order the Contractor shall promptly comply.
- 86.12 **Safety Indemnification.** The Contractor shall defend, indemnify, and hold the Project Manager, OCFA, and their respective officers, directors, agents, employees, and assigns harmless from and against any and all liability, public or private, penalties, contractual or otherwise, losses, damages, costs, attorneys' fees, expenses, causes of action, claims or judgments resulting either in whole or in part from any failure of the Contractor, or its

Subcontractors, of all tiers or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with provisions of the Project Manual, including but not limited to all applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, all Cal/OSHA laws and regulations and the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to thereto. The Contractor shall not be relieved of its responsibilities under this Subsection should OCFA act or fail to act pursuant to its rights hereunder, nor shall OCFA thereby assume, nor be deemed to have assumed, any responsibilities otherwise imposed on the Contractor by this Contract, by virtue of providing OCFA's Safety Policies & Procedures, or any other manner whatsoever.

86.12.1 The Contractor shall not raise a defense as to its obligation to indemnify under Subsection 86.12 above any contributing negligence of any of those indemnified hereunder, its being understood and agreed that no such contributing negligence shall relieve the Contractor from its liability to so indemnify nor entitle the Contractor to any contribution, either directly or indirectly, by those indemnified hereunder.

86.12.2 In any and all claims against those indemnified hereunder by any employee of the Contractor or its Subcontractors of all tiers, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Section 86.12 shall not be limited in any way to any limit on the amount or type of damage, compensation or benefits payable by or for the Contractor or its Subcontractors of any tiers under any Worker's Compensation Acts, Disability Benefit Acts or other Employee Benefit Acts.

86.13 In connection with the performance of this contract, OCFA shall have the authority to enter the worksite at any time for the purpose of identifying the existence of conditions, either actual or threatened, that may present a danger or hazard to any or all employees. Contractor agrees that OCFA, in its sole authority and discretion, may order the immediate abatement of any and all conditions that may present an actual or threatened danger or hazard to any and all employees at the worksite. Contractor acknowledges that provisions of Section 6400 of the California Labor Code, which requires that employers shall furnish employment and a place of employment that is safe and healthful for all employees working therein. In the event OCFA identifies the existence of any condition that presents an actual or threatened danger or hazard to any or all employees at the worksite, OCFA is hereby authorized to order the immediate abatement of that actual or threatened condition pursuant to this Section. OCFA may also, at its sole authority and discretion, issue an immediate stop work order to Contractor to ensure that no employee working at the worksite is exposed to a dangerous or hazardous condition. Any stop work order issued by OCFA to Contractor in accordance with the provisions of this Section, shall not give rise to any claim or cause of action for delay damages by Contractor or Contractor's agents or subcontractors against OCFA.

87 Non-Discrimination

87.1 Contractor covenants that, by and for itself, successors, and assigns, including its Subcontractors and suppliers, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry in the performance of this Contract. Contractor shall take steps to ensure that applicants for any job and that employees are treated without regard to their race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry in full compliance with applicable federal, state, and local laws and regulations.

- 87.2 Contractor shall not engage in, nor permit its agents, including its Subcontractors and suppliers, to engage in discrimination in employment of persons or provision of services or supplies, on the grounds of race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry.
- 87.3 Contractor, and Contractor's Subcontractors and suppliers, shall employ fair employment practices with regard to all employees and all applicants for employment and shall act in accordance with all applicable federal, state, and local laws and regulations relating to such fair employment practices. In furtherance of such obligation, Contractor agrees that Contractor, Subcontractors, and suppliers shall not discriminate in employment and/or provision of services under this Contract and all employment practices shall be without regard to a person's race, color, creed, religion, gender, national origin, age, ancestry, physical handicap, medical condition, marital status, all in accordance with applicable federal, state, and local laws or regulations. Fair employment practices shall include, but not be limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other form of compensation and selection for training including apprenticeship.
- 87.4 In the performance of the terms of the Contract Documents, Contractor agrees that Contractor will not engage in nor permit such subcontractors as Contractor may employ to engage in discrimination against any employee or applicant for employment on the basis of race, sex, color, religion, ancestry, national origin, marital status, age or as an otherwise qualified handicapped individual. This prohibition shall pertain to employment, upgrading, demotion, or transfer, recruitment advertising, layoff or termination, rates of pay and other forms of compensation, selection for training, including apprenticeship, and any other action or inaction pertaining to employment matters.

88 Assignment of Antitrust Actions

In accordance with Public Contract Code Section 7103.5, by entering into the Contract Documents or into a subcontract to supply goods, services, or materials pursuant to the Contract Documents, the Contractor, or subcontractor, offers and agrees to assign to the OCFA all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract Documents or the subcontract. This assignment shall be made and become effective at the time the OCFA tenders final payment to the Contractor, without further acknowledgment by the parties. The contractor shall cause to be inserted in any such subcontract stipulations to effectuate this Section 88 and the provision of Public Contract Code Section 7103.5.

89 Time of Commencement; Time Is of the Essence

- 89.1 **Commencement:** Contractor agrees to commence the Project within ten (10) calendar days from the date the OCFA's Board approves this Contract, and Contractor shall diligently prosecute the work to Substantial Completion of the Milestones as identified in the Contractor's Construction Schedule and Substantial Completion of the Project no later than the Scheduled Completion Date, excluding modifications for delays caused or authorized by the OCFA as set forth in Section 71.5.
- 89.2 **Construction Schedule:** Within 30 days of the Award of the Contract, Contractor shall furnish to the Project Manager one reproducible, three prints, and an electronic or digital copy in a format approved by the Project Manager of the Contractor's Construction Schedule. The schedule shall be supported by written statements from each supplier of materials or equipment indicating that all orders have been placed and acknowledged, and setting forth

the dates that each item will be delivered. The schedule shall establish the order of work which minimizes disruption of existing travel lanes. Upon submission by Contractor, and approval by the Project Manager, the Contractor's Construction Schedule shall be attached to Project Manual as an Exhibit and shall be deemed the baseline schedule. The Contractor's Construction Schedule shall identify and specify scheduling for the Work based on the critical path method (or other scheduling method acceptable to the Project Manager) and updating thereof, and shall provide other schedules that would further the efficient completion of the Project, including the Work and the Related Work in the most expeditious and economical manner. The Contractor's Construction Schedule shall depict in detail the sequence and timing of all activities of the Work and Related Work, including, without limitation, commencement and Completion Dates of Milestones and for all other significant portions of the Work and Related Work. The Contractor's Construction Schedule shall be updated at least monthly, except that the Scheduled Completion Date shall not be changed or modified unless otherwise approved by the Project Manager pursuant to the terms of this Contract.

89.3 Progress Reports: Concurrently with its submission of Applications for Payment, Contractor shall provide the Project Manager with a report (1) detailing the actual progress of the Work and Related Work as of the date of such report; (2) stating any discrepancies between the actual progress of the Work and Related Work; (3) identifying the progress anticipated by the Contractor's Construction Schedule as of the date of such reports; and (4) stating a recovery schedule to place the Work and Related Work back on schedule, at no cost to the OCFA. The Contractor's Construction Schedule shall include Milestones for each aspect of the Work and the timing for completion of Related Work that could affect completion of the Work by the date listed in the Contractor's Construction Schedule.

89.4 Acceleration.

89.4.1 The OCFA reserves the right to accelerate the work of the Contract at any time during its performance. In the event the OCFA directs acceleration, such directive will be given to the Contractor in writing. The Contractor shall keep cost and other Project records related to the acceleration directive separately from the normal Project cost records and shall provide a written record of acceleration costs to the OCFA on a daily basis.

89.4.2 In the event the Contractor believes that some action or inaction on the part of the OCFA constitutes an acceleration directive, the Contractor shall immediately notify the OCFA in writing that the Contractor considers the actions or inactions an acceleration directive. The Contractor shall not accelerate their work efforts until the OCFA responds to the written notification. If acceleration is then directed or required by the OCFA, all cost records referred to in the previous paragraph shall be maintained by the Contractor and provided to the OCFA on a daily basis.

89.4.3 In order to recover additional costs due to acceleration, the Contractor must document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will only be overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will only be the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

89.5 TIME IS THE ESSENCE OF THIS CONTRACT: NOTWITHSTANDING OCFA'S APPROVAL OF ANY UPDATED CONTRACTOR'S CONSTRUCTION SCHEDULE, THE SCHEDULED COMPLETION DATE SHALL BE STRICTLY ADHERED TO DURING THE TERM OF THIS

CONTRACT. THE SCHEDULED COMPLETION DATE MAY ONLY BE CHANGED AS PROVIDED IN THE CONSTRUCTION CONTRACT.

- 89.6 **Ongoing Responsibility of Contractor:** As required by the Project Manual, Contractor shall prepare and obtain approval of all shop drawings, submittals, details, and samples, and do all other things necessary and incidental to the prosecution of Contractor's work in conformance with the Project Manual and Contractor's Construction Schedule. Contractor shall coordinate the Work with the Related Work through the Project Manager, in a manner that will facilitate the efficient completion of the Project in accordance with the Project Manual.
- 89.7 **Control of the Site and Order of Work:** Contractor shall have control of the Site and shall have the right to decide the time or order in which the various portions of the work shall be constructed or installed consistent with the Contractor's Construction Schedule and shall establish the priority of the work of Subcontractors of the Work and the Related Work, and, in general, all matters representing the timely and orderly completion of the Project.
- 89.8 **Cooperation:** Notwithstanding the Scheduled Completion Date, Contractor will cooperate with the OCFA and the OCFA's separate Contractors, consultants, and employees and Contractor agrees to provide for and coordinate access to the Project prior to the Scheduled Completion Date.
- 89.9 **Contractor's Risk Of Non-Performance:** IT IS SPECIFICALLY AGREED THAT CONTRACTOR ASSUMES THE RISK OF NONPERFORMANCE, LATE PERFORMANCE, AND NONCOMPLIANCE WITH THE REQUIREMENTS OF THE PROJECT MANUAL BY CONTRACTOR, CONTRACTOR'S SUBCONTRACTORS, SUPPLIERS, AND AGENTS. CONTRACTOR SHALL NOT BE ENTITLED TO AN EXTENSION OF ANY COMPLETION DATE OF THE SCHEDULED COMPLETION DATE FOR THE ABOVE STATED REASONS OR ANY OTHER REASONS, EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THE PROJECT MANUAL.
- 89.10 **Notification of Inability to Comply:** If the Contractor, at any time, ascertains that for any reason it is unable to complete the phases of the Work by the Milestones, or complete the Project by the Scheduled Completion Date, Contractor shall promptly and without delay notify the Project Manager in writing of this fact.
- 89.11 **Liquidated Damages:** The Parties acknowledge and agree that if Contractor fails to achieve Substantial Completion of the Project by the Scheduled Completion Date or fails to achieve Substantial Completion of a Milestone, as such dates may be extended in accordance with the Project Manual, OCFA will suffer, as a result of Contractor's failure, substantial damages which are both extremely difficult and impracticable to ascertain. Therefore the Parties having reasonably endeavored, but failed, to ascertain an amount bearing a reasonable relationship to the actual damage that OCFA will incur if Contractor fails to achieve Substantial Completion of the Project by the Scheduled Completion Date or fails to achieve completion of a Milestone as such dates may be extended in accordance with the Project Manual, agree that in addition to all other damages to which OCFA may be entitled, Contractor agrees to pay to OCFA as liquidated damages, and not as a penalty but as a reasonable estimate of the amount of damages OCFA will suffer, the amount of Five Hundred Dollars (\$500.00) per day for each calendar day occurring after the completion date of a Milestone during which Contractor fails to achieve Substantial Completion for each such Milestone. In addition, the OCFA shall have the right to charge to the Contractor and to deduct from payments for the Work the actual cost to the OCFA of engineering, inspection, superintendence, and other overhead expenses, which are directly chargeable to the Contract and which accrue during the period of such delay. The expenses and damages described above shall be deducted

from any money due the Contractor under this contract. The Contractor and its sureties shall be liable for any excess cost.

- 89.12 **Additional Remedies:** The Parties also acknowledge and agree that OCFA is entitled to any and all legal and equitable remedies OCFA may have that exceed the amount of Liquidated Damages.

90 **Audit And Access To Records**

- 90.1 Contractor shall maintain all books, records, documents, and other evidence directly pertinent to the performance of the work under this Contract in accordance with generally accepted accounting principles and practices consistently applied. Contractor shall also maintain all financial information and data used by the Contractor in the preparation or support of any cost submission, including the Contractor's original bid required for this Contract, or any Change Order, claim, or other request for any adjustment, and a copy of the cost summary or information submitted to the OCFA. The Project Manager or the Fire Chief shall have access upon twenty-four hours advanced written notice, at all times during normal business hours, to all such books, records, documents, financial information, and all other evidence for the purpose of inspection, audit, and copying. The Contractor shall, at no cost to the OCFA, provide proper facilities for such access, inspection, and copying purposes.
- 90.2 The Parties agree that the provisions of this Section 90 are applicable to Project Manual and all Change Orders, claims, and any other request for adjustment affecting the time or price of this Contract. The Contractor agrees to include the provisions of this Section in all Subcontracts and purchase orders, at any tier, and make this Section 90 applicable to all Change Orders, claims, and other requests for adjustment related to Project performance by Contractor's Subcontractors and suppliers.
- 90.3 Audits conducted under this Section shall be in accordance with generally accepted auditing standards and established procedures and guidelines.
- 90.4 The Contractor agrees to the disclosure of all information and reports resulting from access to records under the provisions of this Section to the OCFA, the Fire Chief, the Project Manager, and any affected or interested state or local agency.
- 90.5 Records under the provisions of this Section shall be maintained and made available during the performance of the Work under this Contract until three years past final payment and until final settlement of all disputes, claims, or litigation, whichever occurs later. In addition, those records which relate to any portion of this Contract to any Change Order, dispute, litigation, settlement of any claim arising out of such performance, or to the cost of items to which an audit exception has been taken, shall be maintained and made available until final payment or final resolution of such dispute, litigation, claim, or exception, whichever occurs later.
- 90.6 These rights to access provisions as provided in this Section apply to all financial records pertaining to this Contract and all Change Orders and claims. In addition, this right to access applies to all records pertaining to all contracts, Change Orders, and any amendments to this Contract: (1) To the extent the records pertain directly to Contract performance; (2) If there is any indication that fraud, gross abuse, or corrupt practices may be involved; or (3) If the Contract is terminated for default or convenience.
- 90.7 Access to records is not limited to the required retention periods. The Fire Chief shall have access to records at any reasonable time for as long as the records are maintained.

91 Resolution Of Construction Claims

- 91.1 California Public Contract Code (PCC) section 9204 as adopted by Assembly Bill 626 prescribes a process to present, confer, and mediate construction claims relating to the OCFA's public works project. Notwithstanding any provisions to the contrary in the Project Manual, this section shall govern all disputes to which section 9204 applies.
- 91.2 For purposes of this Section 91, "Claim" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested for (A) a time extension, including, without limitation for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled, or the amount the payment of which is disputed by the local agency. (PCC 9204(c)(1))
- 91.3 For purposes of this Section 91, "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or another public improvement of any kind.
- 91.4 For any Claim subject to this Section 91, California Public Contract Code section 9204 requires the following:
- 91.4.1 The claim shall be submitted by the Contractor in writing, sent by registered mail or certified mail with return receipt requested and must include the documents necessary to substantiate the claim. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims. However, upon receipt of a claim, the OCFA, and the Contractor may, by mutual agreement, extend the time period provided by statute.
- 91.4.2 For claims of all amounts, the OCFA shall respond within 45 days of receipt of the claim, and provide the claimant a written statement identifying which portion of the claim is disputed and which portion of the claim is undisputed. If the OCFA requires approval from the Board of Directors, and the Board of Directors does not meet within the 45-day period to respond, the OCFA shall have up to three days to issue its response following the Board of Directors meeting.
- 91.4.3 For all portions of a claim determined to be undisputed, the OCFA must process payment to the claimant within 60 days of issuing the OCFA's written determination.
- 91.4.4 If the claimant disputes the OCFA's response, or if the OCFA fails to respond within the time limits provided, the claimant may demand an informal conference to meet and confer for settlement of the issues in dispute. The demand must be sent in writing by registered or certified mail, return receipt requested. Upon receipt of a demand, the OCFA must schedule a meet and confer conference within 30 calendar days for settlement of the disputed claim.
- 91.4.5 Within ten (10) business days following the conclusion of the meet and confer conference, if any portion of the claim remains in dispute, the OCFA shall provide the claimant an addition written statement identifying the portion of the claim that is undisputed and the portion that remains in dispute.

- 91.4.6 For all portions of a claim determined to be undisputed, the OCFA must process payment to the claimant within 60 calendar days of issuing the OCFA's written determination.
- 91.4.7 Any remaining undisputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation in which the parties share the cost evenly. The OCFA and the claimant shall mutually agree on a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree, each party shall select a mediator and those mediators shall jointly select a qualified, neutral third party to mediate the remaining undisputed claim. Each party shall bear the respective costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside of PCC section 9204.
- 91.4.8 Unless otherwise agreed to by the OCFA and the Contractor in writing, the mediation conducted pursuant to this Section 91 shall excuse any further obligation under PCC Section 20104.4 to mediate after litigation has been commenced.
- 91.4.9 Public Contract Code Section 9204 does not preclude the OCFA from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program if mediation under this section does not resolve the parties' dispute.
- 91.4.10 Should the OCFA fail to respond to a claim, or fail to issue written statements as required, the Contractor's claim is deemed denied. A claim denied by reason of the OCFA's failure to respond shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
- 91.4.11 Amounts not paid in a timely manner as required by PCC 9204 shall bear interest at seven percent per annum.

92 Notice Of Third-Party Claims

When required by PCC Section 9201, the OCFA will provide timely notification to Contractor of the receipt of any third-party claim relating to the Agreement. The Contractor agrees to reimburse the OCFA for its reasonable costs incurred in providing such notice.

93 Cleanup

- 93.1 The Contractor shall at all times keep the Site clean and free from accumulation of waste materials or rubbish (including, without limitation, hazardous waste), caused by his performance of the Work, and shall continuously throughout performance of the Work remove and dispose of all such materials from the Site and the Project.
- 93.2 Project Manager may require the Contractor to comply with such standards, means and methods of cleanup, removal or disposal as Project Manager may make known to the Contractor. In event the Contractor fails to keep the Site clean and free from such waste or rubbish, or to comply with such standards, means and methods, OCFA may take such action and offset any and all costs or expenses of whatever nature paid or incurred by OCFA in undertaking such action against any sums then or thereafter due to the Contractor.
- 93.3 The Contractor shall notify OCFA in advance of the generation, importation, storage, transportation or disposal, of any hazardous waste, toxic materials or contaminants of any type in connection with the Project. Contractor shall provide Project Manager with Material

Safety Data Sheets (MSDS's) and the Uniform Hazardous Waste documents. The Contractor will develop and implement a written and effective Spill Control and Containment Plan.

94 Trenches and Excavations

- 94.1 The Contractor shall promptly, and before any of the following conditions are disturbed, notify the Project Manager, in writing, of any:
- (1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class 1, Class II, or Class III disposal site in accordance with the provisions of existing law; or
 - (2) Subsurface of latent physical conditions at the Site differing from those indicated; or
 - (3) Unknown physical conditions at the Site of unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract and Project Manual.
- 94.2 The Project Manager shall promptly investigate the conditions, and if the Project Manager finds that the conditions materially so differ, or do involve hazardous waste, and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order, subject to the provisions of the Project Manual.
- 94.3 In the event that a dispute arises between the Project Manager and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any Scheduled Completion Date provided for in the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes and protests between parties.

95 Uncovering and Correction of Work; OCFA's Right To Carry Out Work

- 95.1 If any portion of the Work should be covered contrary to the instructions or request of Project Manager or the requirements of the Project Manual, the Contractor shall, if required by Project Manager, uncover such portion of the Work for Project Manager's observation and shall replace such Work all at the Contractor's expense.
- 95.2 If any portion of the Work should be covered prior to a specific request for observation or instruction by Project Manager, Project Manager may request to see such Work, and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Project Manual and without defect, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to OCFA. If such Work is found to be defective or not in accordance with the Project Manual, the Contractor shall bear such costs.
- 95.3 Project Manager shall have the authority to reject any portion of the Work which is defective or does not conform to the Project Manual, and the Contractor shall promptly correct all Work so rejected by Project Manager, whether observed before or after the Date of Substantial Completion and whether or not fabricated, installed or completed. In order that such corrective Work shall not interrupt or delay Contractor's Construction Schedule or the completion date of the Project, the Contractor shall perform such Work according to a schedule therefor established by Project Manager (which may provide that the same be performed on overtime, shiftwork, Saturdays, Sundays and/or holidays), utilizing in the performance thereof such manpower as is necessary to complete the corrective Work in accordance with said schedule. The Contractor shall bear all costs of correcting such rejected

Work including, without limitation, compensation for any additional architectural and engineering services made necessary thereby.

- 95.4 If, within one (1) year after the Completion of the Work (as determined by OCFA) or within such longer period of time as may be prescribed by law or by the terms of any applicable warranty or guarantee required by the Project Manual, any of the Work is found to be defective or not in accordance with the Project Manual, the Contractor shall correct it promptly after receipt of written instructions to that effect from OCFA unless OCFA has previously given the Contractor a written acceptance of such condition.
- 95.5 The Contractor shall remove from the Site all Work which is defective or non-conforming and not corrected under the provisions of these General Conditions unless removal is waived in writing by OCFA.
- 95.6 If the Contractor does not remove such uncorrected defective or non-conforming Work within a reasonable time fixed by written instructions to that effect from Project Manager, OCFA may remove it and store the materials and equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten (10) days thereafter, OCFA may, upon ten (10) additional days written notification to the Contractor, sell such materials and equipment at public or private sale and account to the Contractor for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for any additional architectural and engineering services and attorneys' fees made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be offset against any amounts then or thereafter due to the Contractor. If the amounts then or thereafter due to the Contractor are not sufficient to cover such difference, the Contractor shall, upon demand, pay the same to OCFA. The obligations of the Contractor under this Subsection shall be in addition to, and not in limitation of, any obligations imposed on it by law, by any other provision of this Contract or by any warranty or guarantee under this Contract.
- 95.7 If the Contractor fails to correct any defective or non-conforming Work, OCFA may correct it with its own forces or by contract with a third party contractor. In the event of a defect found after final acceptance of the Work by OCFA which the Contractor is obligated to correct pursuant to Project Manual, OCFA may, at its option, after giving the Contractor an opportunity to correct such defect, cause such corrective Work to be performed by others and charge the Contractor with the cost thereof. Such charge shall be due and payable by the Contractor upon demand.
- 95.8 If the Contractor defaults or neglects to carry out the Work in accordance with the Project Manual or fails to perform any provision of this Contract, and such default, neglect or non-performance shall continue for a period of 48 hours after written notification thereof from OCFA (or if such default, neglect or non-performance cannot be reasonably remedied within such 48-hour period, and Contractor does not (in the sole determination of OCFA) undertake in good faith the remedy of the same within said period and thereafter proceed diligently to completion), then OCFA may, without prejudice to any other remedy OCFA may have, make good such deficiencies; provided, however, that in the event of an emergency, as determined by OCFA, no notification shall be required. OCFA shall have the right to take possession of such portion of the Site as will enable it to make good such deficiencies and, in connection therewith, to utilize the materials, equipment, tools, construction equipment and machinery of the Contractor located on the Site. If OCFA makes good any such deficiencies, the costs of correcting the same including, without limitation, compensation for additional architectural and engineering services made necessary by such default, neglect or non-performance, shall be offset against any amounts then or thereafter due to the Contractor. If the amounts then

or thereafter due to the Contractor are not sufficient to cover such costs, then the Contractor shall, upon demand, pay the difference to OCFA.

- 95.9 If OCFA prefers to accept defective or non-conforming Work, it may do so instead of requiring its removal and correction, in which case an appropriate amount shall be offset against any amounts then or thereafter due to the Contractor; or, if the said appropriate amount of offset is determined after final payment (or if there is not then or thereafter due to the Contractor an amount sufficient to cover the offset available to OCFA), the Contractor shall, upon demand, pay the appropriate amount (or the difference after offset, as applicable) to OCFA.

96 Plans, Specifications and Survey

The Contractor shall maintain a control set of Plans, Specifications and survey on the Project site at all times. All final locations determined in the field by survey, and any deviations from the Plans and Specifications, shall be marked in red on this control set to show the as-constructed conditions. Upon completion of all work, the Contractor shall return the control set to the Engineer. Final payment will not be made until this requirement has been met.

97 Permits

OCFA will reimburse the Contractor for the public agency-charged fee for permits, inspections. No profit amount shall be added to such reimbursement.

98 Compliance with Laws; Non-Discrimination

Contractor shall ensure that its officers, employees, agents, contractors, and subcontractors: (1) conduct themselves in compliance with all applicable laws and licensure requirements including, without limitation, compliance with laws applicable to nondiscrimination, harassment, and ethical behavior, throughout the duration of the Contract; and (2) comply with all OCFA, State, and Federal, Local Agency and Regulatory Agency orders regarding affirmative action to ensure equal employment opportunities and fair employment practices. Failure to file any report due under said orders will result in suspension of periodic progress payments. The Contractor shall ensure unlimited access to the job site for all equal employment opportunity compliance officers.

99 Right-Of-Way And Easements

In the event any required easements have not yet been acquired by the OCFA, the Contractor shall conduct its operation so as to confine its work to the limits of the existing right-of-way.

100 Disputed Work

Contractor shall keep all records of disputed work in accordance with the General Conditions. In any case where the Contractor believes extra compensation is due the Contractor for work or materials not clearly covered in the Contract, or not ordered by the OCFA as "extra work", the Contractor shall notify the OCFA in writing of the Contractor's intention to make claim for such extra compensation before the Contractor begins the work on which Contractor bases the claim. All "claims" as that term is defined in Public Contract Code section 9204 shall be submitted and processed in accordance with Section 91 hereinabove. Such notice by the Contractor, and the fact that the OCFA has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. The validity of the claim must be determined by the OCFA. If the OCFA determines that all or a portion of the claim is well founded, the valid portion shall be allowed and paid for as "extra work"; if the OCFA determines that all or a portion of the claim is not well founded, the portion that is not well founded shall be disallowed and not paid, subject to Section 91. Nothing herein limits the authority of the OCFA to consider, approve or disapprove of Change Orders in accordance with the Project Manual.

101 Time of Completion.

Work will be deemed completed on the same date when the Notice of Completion is recorded with the County of Orange.

102 Delivered Materials.

Materials and equipment delivered but not incorporated into the work shall not be included in the estimate for progress payment.

103 Mobilization.

103.1 Mobilization shall consist of preparatory work and operations, including but not limited to those necessary for the movement of personnel, equipment, supplies, and incidentals to the Project site; for the establishment of all offices, buildings and other facilities necessary for the work on this Project; and for all other work and operations which must be performed or cost incurred prior to beginning work on the various contract items on the Project site. Mobilization is deemed to include all aspects of mobilization and de-mobilization work occurring during the life of the Project for any reason.

103.2 Full compensation for mobilization shall be included in the Contract lump sum price bid for Mobilization and shall include full compensation for all costs incurred by the Contractor for doing all the work involved in mobilization as specified herein, and no additional compensation will be allowed. Mobilization shall not exceed 5% of the entire bid, excluding mobilization and as shown in the Proposal Bid Sheet.

104 Facilities For Contract Personnel.**104.1 Extended Field Office Overhead Cost.**

104.1.1 Within fourteen (14) calendar days after receipt of the Notice to Proceed, the Contractor shall submit a written statement to the OCFA detailing its field office overhead costs which are time related. The OCFA will review this first cost submittal and reach a written agreement with the Contractor on a daily field office overhead cost rate which shall be memorialized in a no cost change order. The daily rate agreed to in this change order will be applicable throughout the duration of the Contract. No field office costs will be paid until such an agreement is reached between the OCFA and the Contractor and the change order concerning this daily rate is executed by both parties. Progress payments will be withheld pending receipt of the above-referenced cost submittal and executed change order.

104.1.2 The individual cost components of the daily field office overhead rate shall represent costs which increase as a direct result of any time extension caused solely and exclusively by an act or omission of the OCFA. This listing may include such cost items as on-site project management, supervision, Engineering and clerical salaries; on-site utilities and rent; on-site company vehicles and their operating expenses; and site maintenance and security expenses. Field office overhead costs which are unaffected by increased time shall not be allowable cost in calculating the daily field office overhead rate. These non-time related costs include, but are not limited to, acquisition and installation of stationary equipment; temporary construction facilities; utilities and office furnishings (unless such items are rented or leased); the preparation of the site

including clearing, grubbing, grading, fencing, mobilizations and demobilization costs; and the costs of permits, bonds and insurance coverage for the Project.

104.1.3 The individual wage cost components used to calculate the daily field office rate shall be supported by actual employee payroll records, not salary ranges or estimates. Hourly rates for management, supervisory, engineering, and clerical employees shall be based upon 2080 work hours per year and shall not include allowances for holidays, vacations, or sick time.

104.1.4 When applicable, the daily field office overhead rate shall be multiplied by the number of days the Contract is delayed or extended by change order and shall be added to the agreed upon change order cost. The days of delay shall be those caused solely by the acts or omissions of the OCFA and documented by a time impact analysis prepared and submitted by the Contractor. In the event a deductive change order is issued which reduces time under the Contract, the daily field office overhead rate shall be used to calculate the deductive amount. No allowance for overhead costs and no profit allowance shall be added to the extended field office overhead cost.

105 **OCFA Officers And Employees; Non-Discrimination**

105.1 No member, officer, member of the OCFA Board of Directors, or employee of the OCFA shall be personally liable to Contractor, or any successor in interest, in the event of any default or breach by OCFA or for any amount which may become due to Contractor or to its successor, or for breach of any obligation of the terms of this Contract.

105.2 Pursuant to the provisions of the OCFA's conflict of interest code, the Political Reform Act as set forth in Government Code Section 81000 et seq., and/or the prohibition against self-dealing in contracts as set forth in Government Code Section 1090 et. seq., the Parties acknowledge that no officer or employee of the OCFA, or any member of the OCFA Board, shall have any personal interest, direct or indirect, in this Contract or any Subcontract under the Contract, nor shall any such officer, employee, or member of the OCFA Board participate in any decision relating to the Contract which effects his or her personal interest or the interest of any corporation, partnership, or association in which he or she is, directly or indirectly, interested. In the furtherance of such acknowledgement, Contractor:

- i. Contractor agrees that no officer, employee, member of the OCFA Board of Directors, agent, or assignee of the OCFA having direct or indirect control of any monies allocated by OCFA to finance this Project, shall serve as an officer, director, employee, or agent of Contractor, or as a officer, director, employee, or agent of any Subcontractor of supplier of Contractor under this Contract; and
- ii. Any conflict or potential conflict of interest of any officer, director, employee, or agent of Contractor or any Subcontractor or supplier of Contractor has been fully disclosed to the OCFA prior to execution of this Contract and such disclosure shall be deemed a part of this Contract.

105.3 Contractor shall not expend any funds for the purpose of influencing or attempting to influence an officer, member, employee, or member of the OCFA Board in the connection with the awarding and the administration of this Contract or any subcontract in furtherance of the Project.

106 Entire Agreement

It is agreed that this Contract (which incorporates the Project Manual) represents the entire agreement. It is further agreed that the Project Manual is incorporated in this Contract by this reference, with the same force and effect as if the same were set forth at length within the Contract, and that Contractor and Contractor's officers, employees, agents, trades, material suppliers, and Subcontractors will be and are bound by any and all of said Project Manual insofar as they relate in any part or in any way, directly or indirectly, to the work covered by this Contract.

107 Written Notices

Any written notice required to be given in any part of the Contract Documents shall be performed by dispatching the same via email directed to the email address of the Contractor as set forth in the Contract Documents, and to the OCFA addressed as follows:

- A. ORANGE COUNTY FIRE AUTHORITY
ATTENTION: SARA KENNEDY, PURCHASING DIVISION MANAGER
1 FIRE AUTHORITY RD.
IRVINE, CA 92602
- B. NEUROTH CONSTRUCTION, INC.
ATTENTION ROB NEUROTH, PRESIDENT
1165 LINDA VISTA DR. SUITE 102
SAN MARCOS, CA 92078

108 Miscellaneous Provisions

- 108.1 Assignment: Contractor shall neither delegate its duties or obligations, nor assign its rights with respect to this Contract, either in whole or in part. Any such attempted delegation and/or assignment shall be void and deemed void at such occurrence, if it were to occur.
- 108.2 Computation of Time: When any period of time is referred to in the Project Manual by days, it shall be computed to exclude the first and include the last day of the period, provided, however, that if the last day of the period falls on a Saturday, Sunday, or legal holiday, that day shall be omitted from the computation. "Days" refers to calendar days unless otherwise expressly provided.
- 108.3 Remedies Cumulative: No remedy herein reserved to OCFA is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to any other given in the Project Manual as now or hereafter existing or at law, equity, or by statute.
- 108.4 Nonwaiver: The failure of the OCFA to notify the Contractor of any default under the Project Manual shall not be deemed to be a waiver by OCFA of any continuing default by Contractor of any term, covenant, or condition set forth in this Contract, nor of the OCFA's right to declare a default for any such continuing breach, and the failure of OCFA to insist upon strict performance of any of the terms, covenants, or conditions of the Project Manual, or to exercise any option in the Project Manual in any one or more instances, shall not be construed as a waiver or relinquishment of any such terms, covenants, conditions or options, but the same shall be and remain in full force and effect.
- 108.5 Severability: In case any one or more provisions set forth in the Project Manual shall for any reason be held invalid, illegal, or unenforceable in any respect, any such invalidity,

illegality, or unenforceability shall not affect any other provision of the Project Manual, and the Project Manual and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been incorporated therein so long as the deletion of such provision does not, in the OCFA's judgment, materially alter this Contract.

- 108.6 No Third Party Beneficiaries: The Project Manual and this Contract are not intended and shall not be deemed or construed, to confer any rights, powers, or privileges on any person, firm, partnership, corporation, or other entity not a party to this Contract except as may be expressly provided in the Contract to the contrary.
- 108.7 No Verbal Agreements: No verbal order, objection, claim, or notice by any party to the other shall affect or modify any of the terms or obligations contained in this Contract or the Project Manual, and none of the provisions of the Project Manual shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or Modification in writing and executed in the manner required in this Contract by authorized officers or representatives of the Parties. No evidence shall be introduced in any proceeding of any other waiver or modification.
- 108.8 Counterparts: This Contract may be executed in any number of counterparts, and each of such counterparts for all purposes shall be deemed to be an original, and all of such counterparts should constitute one and the same agreement.
- 108.9 Governing Law/Venue: The Contract, including the Project Manual, shall be governed by the laws of the State of California. Venue for all disputes related to the Project, the Contract Agreement and/or the Project Manual shall be in Orange County, California.
- 108.10 Services Prior to Execution: Notwithstanding the fact that this Contract is executed as of the date first set forth above, the Parties recognize that a portion of the Work required under the Project Manual may have been performed prior to such date, all of which Work shall be governed by the terms and conditions of this Contract and shall be deemed to be a part of the Work. Without limiting the foregoing, all of Contractor's liabilities and obligations to OCFA under the Project Manual shall apply to all Work and services provided by the Contractor for the Work prior hereto, notwithstanding the fact that the Work may have been performed prior to the date hereof pursuant to prior negotiations, representations, agreements, understandings, or otherwise.
- 108.11 Survival of Rights: Any indemnity, warranty, guarantee given by the Contractor to the OCFA under this Contract shall survive the expiration or termination of this Contract and shall be binding upon Contractor until any action under this Contract is barred by the applicable statute of limitations.
- 108.12 Notice: All notices (whether or not designated as such herein) which are required under this Contract to be given between the parties pursuant to this Paragraph shall be in writing and deemed given and, unless otherwise provided herein, effective when delivered personally to an officer of the party to be served (including the Contractor's Project Manager, in the case of the Contractor), when deposited in the United States mail, or in a sealed envelope, with postage thereon prepaid, sent by registered or certified mail, return receipt requested, and addressed to the appropriate party at the address set forth in the Contract or such other address as may be designated by either party hereto by notice to the other, or when transmitted by wire or facsimile to the appropriate party at the aforesaid address (a complimentary confirming letter shall also be mailed to the appropriate party on the same date).

- 108.13 Maintenance of Harmonious Relations: The Contractor is hereby advised that any portion of the Project, or other projects in proximity to the Project may be subject to, and governed by, certain union or trade agreements. It is the policy of OCFA to promote and maintain harmonious relationships in connection with the Project. The Contractor and its Subcontractors and Sub-subcontractors shall follow this policy; and shall utilize only qualified persons or organizations in the performance of the Work. A qualified person or organization is one: which is not likely to promote labor unrest on the Project; which shall abide by all local, state and federal labor and employment relation rules, regulations and laws; whose financial stability is reasonably assured throughout the duration of the Contract; and whose commitments to other projects are not likely to interfere with its ability to perform its portion of the Work efficiently and cost effectively. OCFA reserves the right to disapprove, or to require the removal of, any person or organization who is being considered for, or has received, an award to perform all or a portion of the Work but has failed to demonstrate the willingness or ability to follow this policy.
- 108.14 Union Agreements: Regardless of the expiration of any collective bargaining agreement during the term of this Contract which may affect the Contractor in any of its activities including, without limitation, with respect to the Work or the Project, the Contractor is obligated to man the job and properly and timely perform the Work in a diligent manner. Upon notification of expected or actual labor disputes or job disruption arising out of any such collective bargaining negotiations, the expiration of any union or trade agreement or any other cause, the Contractor and its Subcontractors and Sub-subcontractors shall cooperate with OCFA concerning any legal, practical or contractual actions to be taken by OCFA in response thereto and shall perform any actions requested by OCFA to eliminate, neutralize or mitigate the affects of such actions on the progress of the Work and the impact of such actions on the public access to OCFA's facilities. It is the Contractor's obligation, at the Contractor's own cost and expense, to take all steps available to prevent any persons performing the work from engaging in any disruptive activities such as strikes, picketing, slowdowns, job actions or work stoppages of any nature or ceasing to work due to picketing or other such activities, which steps shall include, without limitation, execution of an appropriate project agreement with appropriate unions prohibiting all such activities on or about the Project. Notwithstanding any such occurrences, the Contractor shall not be relieved of its obligation to man the job and properly and timely perform the Work in a diligent manner.
- 108.15 Immigration Reform Control Act: All Contractors, Subcontractors, and Sub-subcontractors must adhere to the Immigration Reform Control Act of 1986 and shall maintain I-9 forms regarding all employees. It is not OCFA's obligation to insure compliance with this law, however, OCFA reserves the right to inspect and copy the Contractor's records in this regard upon request.
- 108.16 General: The captions of divisions, sections, articles, Paragraphs, Subparagraphs, clauses and the like in the Project Manual are for convenience only and shall in no way define the content or limit the meaning or construction of the wording of the divisions, sections, articles, Paragraphs, Subparagraphs, clauses and the like. The parties agree that the Project Manual shall not be construed more strictly against any party regardless of the identity of their drafter. Unless otherwise specified, Section and Subsection references appearing in these General Conditions are to Section and Subsections of the Contract Agreement.
- 108.17 Evidence of Corporate Existence and Good Standing. A corporation to which an award is made may be required, before the Contract Agreement is executed by the OCFA, to furnish evidence of its corporate existence and good standing, of its right to enter into contracts in

the State of California, and that the officers signing the Contract and bonds for the corporation have the authority to do so. (Ref: California Corporations Code section 7214.)

END OF DOCUMENT

SECTION 5: TECHNICAL SPECIFICATIONS

**5A: THE CITY OF IRVINE BUILDING PLANS – OCFA REGIONAL FIRE OPERATIONS & TRAINING
CENTER TRAINING GROUNDS MODIFICATIONS**



ATTIC AND UNDERFLOOR VENT COVERS [IMC 5-9-401 H. & 5-9-402 D.]	
ROOF AND UNDERFLOOR VENT OPENINGS SHALL BE COVERED WITH NON-COMBUSTIBLE, CORROSION RESISTANT, METAL WIRE MESH OR OTHER MATERIALS HAVING OPENINGS OF 1/16 INCH MINIMUM TO 1/8 INCH MAXIMUM. (CBC 706A.2)	N/A

18. A NEW HVAC UNIT EXCEEDING A 2,000 CFM CAPACITY SHALL BE PROVIDED WITH A DUCT SMOKE DETECTOR. THIS DETECTOR SHALL SHUT DOWN ONLY THE AFFECTED INDIVIDUAL HVAC UNIT UPON SMOKE DETECTION. THIS DETECTOR MUST ALSO BE INTERFACED TO AN EXISTING FIRE ALARM SYSTEM. THE DETECTOR SHALL ONLY PROVIDE A SUPERVISORY SIGNAL AT THE FIRE ALARM PANEL UPON SMOKE DETECTION.

CALIFORNIA BUILDING CODE, CHAPTER 11B REQUIRES COMPLIANCE WITH ALL PATH OF TRAVEL REQUIREMENTS. IS THE PROFESSIONAL OF RECORD USING CODE EXCEPTIONS FOR COMPLIANCES NO.

SHEET T-1
OF 1

STATEMENT OF SPECIAL INSPECTION

23. N/A **Mechanical and Electrical Components, Section 1705.12.6** Periodic special inspection is required during installation and anchorage of:
- ☐ Electrical equipment for emergency or standby power systems.
- ☐ The piping system(s) and associated mechanical units intended to hazardous materials as indicated on plan sheet(s): _____
- ☐ The HVAC ducts intended to carry hazardous materials as indicated on plan sheet(s): _____
- ☐ The vibration isolation system as indicated on plan sheet(s): _____
24. N/A **Storage Racks and Access Floors, Section 1705.12.7** Periodic special inspection is required during the anchorage of storage racks 8 feet or greater.
25. N/A **Seismic Isolation System, Section 1705.12.8** Periodic special inspection is required during the fabrication and installation of ☐ Isolator units and ☐ energy dissipation devices.
26. N/A **Cold-Formed Steel Special Bolted Moment Frames, Section 1705.12.9** Periodic special inspection shall be provided for the installation of cold-formed steel special bolted moment frames.

SECTION 1705.13: TESTING FOR SEISMIC RESISTANCE

27. N/A **Structural Steel, Section 1705.13.1** The following describes required testing of welds, base metal, weld tab removal sites, and thermally cut surfaces of beam copes or access holes per CBC Section 1708 and AISC 341. MT= Magnetic Particle Testing per Appendix W of Section 1742; AISC 341, UT= Ultrasonic Testing per Appendix W, Section 4.1. Testing procedures and acceptance criteria shall conform to AISC 341 and AWS D1.1.
- ☐ K-area welding; web area shall be MT'd for cracks in the k-area base metal within 3 inches minimum of the weld.
- ☐ Complete joint penetration groove welds. All shall be UT'd for materials 5/16 inches or thicker.
- ☐ Complete joint penetration groove welds. 25% of all beam to column connections shall be MT'd.
- ☐ Base metal for lamellar tearing: UT testing for discontinuities behind and adjacent to weld fusion line for all complete joint penetration groove welded connections for tension loading in the through thickness direction of base metal greater than 1 1/2 inch thickness to connected piece greater than 3/4 inch.
- ☐ Flange and web thickness exceeding 1 1/2 inches—welded spikes and connections, —thermally cut surfaces of beam copes and access holes shall be MT or penetrant tested.
- ☐ End of welds from which a weld tab has been removed shall be MT'd. (NOTE: N/A for continuity plate weld tabs)
- ☐ UT percentage reduction protocol is as follows (NOTE: May not exceed that allowed by AISC 341): _____
- ☐ MT percentage reduction protocol is as follows (NOTE: May not exceed that allowed by AISC 341): _____

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STATEMENT OF SPECIAL INSPECTION

7. N/A **Metal-Plate-Connected Wood Trusses, Section 1705.5.2** Special inspection of wood trusses with an overall height greater than or equal to 60 inches, or with a clear span greater than or equal to 60 feet is required in accordance with CBC 1705.5.2.
8. X **Soils, Section 1705.6** Footing excavations are subject to verification that proper depth and bearing material have been reached prior to placement of concrete per CBC Table 1705.6 (NOTE: Work performed under a grading permit is subject to separate special inspection requirements.)
9. N/A **Driven Deep Foundations, Section 1705.7** Driven deep foundations are subject to special inspection per CBC Table 1705.7.
10. N/A **Cast-in-Place Deep Foundations, Section 1705.8** Cast-in-place deep foundations are subject to special inspection per CBC Table 1705.8.
11. N/A **Helical Pile Foundation, Section 1705.9** Helical pile foundations are subject to special inspection per CBC Section 1705.9.
12. N/A **Sprayed Fire-Resistant Materials, Section 1705.14** Special inspections and tests of sprayed fire-resistant materials applied to floor, roof, and wall assemblies and structural members shall be performed in accordance with Sections 1705.14.1 through 1705.14.
13. N/A **Mastic and Intumescent Fire-Resistant Coatings, Section 1705.15** Mastic and intumescent fire-resistant coatings applied to structural elements and decks shall be performed in accordance with Association of the Wall and Ceiling Industry (AWCI) Technical Manual 12-B.
14. N/A **Exterior Insulation and Finish Systems (EIFS), Section 1705.16** Exterior insulation and finish systems (EIFS) are subject to special inspection per CBC Section 1705.16.
15. N/A **Fire-Resistant Penetrations and Joints, Section 1705.17** In high-rise buildings or in buildings assigned to Risk Category III or IV, special inspections for through-penetrations, membrane penetration firestops, fire-resistant joint systems, and perimeter fire barrier systems that are tested and listed in accordance with Sections 714.3.1.2, 714.4.2, 715.3, and 715.4 shall be in accordance with Section 1705.17.1 or 1705.17.2.
16. N/A **Smoke Control, Section 1705.18** Via Orange County Fire Authority (OCFA) procedures.

SECTION 1705.12: SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE

The following are applicable to specified seismic force-resisting systems, designated seismic systems, and architectural, mechanical, and electrical components. See CBC Sections 1705.12.1 through 1705.12.9 to determine applicability.

Seismic-Force Resisting Systems. The following describes the seismic-force resisting systems(s) subject to special inspection per applicable CBC Sections 1705.12.1 through 1705.12.9 as indicated below:

17. N/A **Structural Steel, Section 1705.12.1** Special inspections of structural steel in the seismic force resisting systems of buildings shall be performed in accordance with the quality assurance requirements of American Institute of Steel Construction (AISC) 341.

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STATEMENT OF SPECIAL INSPECTION

28. N/A **Nonstructural Components, Section 1705.13.2** The registered design professional shall specify on the approved construction documents the requirements for seismic qualification. Certificate of compliance for the seismic qualification shall be provided to the building official as specified in Section 1704.5.
29. N/A **Designated Seismic Systems, Section 1705.13.3** The registered design professional shall specify on the approved construction documents the requirements for seismic qualification. Certificate of compliance for the seismic qualification shall be provided to the building official as specified in Section 1704.5.

SECTION 1705.11: SPECIAL INSPECTIONS FOR WIND RESISTANCE

Special inspections for wind resistance, Section 1705.11 Special inspections for wind resistance specified in Sections 1705.11.1 through 1705.11.3

30. N/A **Structural Wood, Section 1705.11.1** Continuous special inspection is required during field gluing operations of elements of the main windforce-resisting system. Periodic special inspection is required for nailing, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, and hold-downs.
- Exception:** Special inspections are not required for wood shear walls, shear panels, and diaphragms where the fastener spacing of the sheathing is more than 4 inches on center.
31. N/A **Cold-Formed Steel Light-Frame Construction, Section 1705.11.2** Periodic special inspection is required for welding operations of elements of the main windforce-resisting system. Periodic special inspection is required for screw attachment, bolting, anchoring, and other fastening of elements of the main windforce-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs. See Section 1705.11.2 for exceptions.
32. N/A **Wind-Resisting Components, Section 1705.11.3** Periodic special inspection is required for fastening of the following systems and components:
1. Roof covering, roof deck, and roof framing connections.
 2. Exterior wall covering and wall connections to roof and floor diaphragms and framing.

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STATEMENT OF SPECIAL INSPECTION

18. N/A **Structural Wood, Section 1705.12.2** For the seismic force-resisting systems:
1. Continuous special inspection shall be required during field gluing operations of elements of the seismic force-resisting system.
 2. Periodic special inspection shall be required for nailing, bolting, anchoring, and other fastening of elements of the seismic force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold-downs.
- Exception:** Special inspections are not required for wood shear walls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening to other elements of the seismic force-resisting system, where the fastener spacing of the sheathing is more than 4 inches on center.
- Provide plan sheet or detail reference where the special inspection is required.
19. N/A **Cold-Formed Steel Light-Frame Construction, Section 1705.12.3** For the seismic force-resisting systems of structures, periodic special inspection shall be required:
1. For welding operations of elements of the seismic force-resisting system; and
 2. For screw attachment, bolting, anchoring, and other fastening of elements of the seismic force-resisting system, including shear walls, braces, diaphragms, collectors (drag struts), and hold-downs.
- Provide plan sheet or detail reference where the special inspection is required.
20. N/A **Designated Seismic Systems, Section 1705.12.4** The special inspector shall examine designated seismic systems requiring seismic qualification in accordance with Section 13.2.2 of ASCE 7 and verify that the label, anchorage and mounting conform to the certificate of compliance.
21. N/A **Architectural Components, Section 1705.12.5** Periodic special inspection is required during the erection and fastening of:
- ☐ Exterior cladding, and exterior or interior veneer, more than 30 feet in height above grade or walking surface, or weighing more than 5 psf as indicated on plan sheet(s): _____
- ☐ Non-bearing walls more than 30 feet in height or weighing more than 15 psf as indicated on plan sheet(s): _____
22. N/A **Access Floors, Section 1705.12.5.1** Periodic special inspection is required for the anchorage of access floors.

FORM 66-110 REV 01/20
PAGE 3 of 5COMMUNITY DEVELOPMENT
Building and Safety

SPECIAL INSPECTION PROGRAM SUMMARY

BUILDING ADDRESS	
1 FIRE AUTHORITY ROAD, IRVINE, CA	
PROJECT DESCRIPTION	
TENANT IMPROVEMENTS TO EXISTING FIRE TRAINING PROPS AND NEW FIRE TRAINING PROPS	
PLAN CHECK NUMBER	
I, as the owner, or agent of the owner (contractors may not employ the special inspector), certify that I, or the architect/engineer of record, will be responsible for employing the special inspector(s) as required by Uniform Building Code (UBC) Section 1701.1 for the construction project located at the site listed above. UBC Section 106.3.5.	
SIGNED	11/09/2022 DATE
ROBERT SCHEIBEL	<input type="checkbox"/> OWNER <input checked="" type="checkbox"/> ENGINEER <input type="checkbox"/> ARCHITECT
PRINT NAME	
RSSE STRUCTURAL ENGINEERS INC.	
FIRM	
I, as the engineer/architect of record, certify that I have prepared the following special inspection program as required by UBC Section 106.3.5 for the construction project located at the site listed above.	
SIGNED	11/09/2022 DATE
RSSE STRUCTURAL ENGINEERS INC.	(949) 461-7007
FIRM PHONE	
1. LIST OF WORK REQUIRING SPECIAL INSPECTION	
<input checked="" type="checkbox"/> CONCRETE	<input checked="" type="checkbox"/> STRUCTURAL WELDING
<input checked="" type="checkbox"/> BOLTS IN CONCRETE AND EPOXY INSTALLATION	<input checked="" type="checkbox"/> HIGH-STRENGTH BOLTING
<input type="checkbox"/> SPECIAL-MOMENT RESISTING FRAME	<input checked="" type="checkbox"/> STRUCTURAL MASONRY
<input checked="" type="checkbox"/> REINFORCING STEEL	<input type="checkbox"/> INSULATING CONCRETE FILL OR REINFORCED GYPSUM CONCRETE
<input type="checkbox"/> PRESTRESSED CONCRETE	<input type="checkbox"/> SPRAY-APPLIED FIREPROOFING
<input type="checkbox"/> PILING AND DRILLED PIERS	<input type="checkbox"/> SHOTCRETE
<input type="checkbox"/> SMOKE-CONTROL SYSTEM	<input type="checkbox"/> OTHER:
2. NAME(S) OF INDIVIDUAL(S) OR FIRM(S) RESPONSIBLE FOR THE SPECIAL INSPECTIONS LISTED ABOVE:	
A. SHALL BE DETERMINED PRIOR TO START OF CONSTRUCTION.	
B.	
C.	
3. DUTIES OF THE SPECIAL INSPECTORS FOR THE WORK LISTED ABOVE: (Attach additional sheets as necessary)	
A. SHALL BE DEFINED ON SHEET S1, SECTION III AND SECTION IV.	
B.	
C.	

Special inspectors shall notify the City of Irvine Building and Safety Division at 949-724-6331 and present their credentials for approval prior to beginning work on the job site.

FORM 65-09 REV 04/13

COMMUNITY DEVELOPMENT
Building and Safety

STATEMENT OF SPECIAL INSPECTION

Special inspections shall be performed in accordance with Chapter 17 of the California Building Code (CBC) and the City of Irvine Special Inspection Manual.

INSTRUCTIONS: Place an X preceding each applicable section or indicate N/A if not applicable. Provide a complete and detailed description, detail, or plan sheet reference where required to complete an applicable section. Incorporate this completed form in its entirety into the project construction plans for plan check review.

SECTION 1705: SPECIAL INSPECTIONS

1. N/A **Special Cases, Section 1705.1.1** The following describes additional systems or elements subject to special inspection as required by the Chief Building Official, Engineer of Record, manufacturer's instructions, or Evaluation Report:
2. X **Structural Steel, Section 1705.2** Special inspections and nondestructive testing of structural steel elements shall be in accordance with AISC 360. Offsite fabrication may only be performed by an approved fabricator. See City of Irvine Informational Bulletin 311.
- Cold-Formed Steel Deck, Section 1705.2.2** Special inspections for cold formed steel floor and roof deck shall be in accordance with the quality assurance inspection requirements of SDI QA/QC.
- Open-Web Steel Joists and Joist Girders, Section 1705.2.3** Special inspections of open-web steel joists and joist girders shall be in accordance with Table 1705.2.3.
3. X **Concrete Construction, Section 1705.3** All structural concrete is subject to special inspection per CBC Table 1705.3 and City of Irvine Information Bulletin 181.
4. X **Masonry Construction, Section 1705.4** Special inspections and tests of masonry construction shall be performed in accordance with the quality assurance program requirements of TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 except masonry fireplaces, masonry heaters, or masonry chimneys installed or constructed in accordance with Section 2111, 2112, or 2113, respectively.
5. X **Wood Construction, Section 1705.5** Special inspections of prefabricated wood structural elements and assemblies shall be in accordance with Section 1704.2.5. Offsite fabrication may only be performed by an approved fabricator. See City of Irvine Informational Bulletin 311.
6. N/A **High Load Diaphragms, Section 1705.5.1** The following describes high load diaphragms (diaphragms designed in accordance to CBC Table 2306.2) subject to special inspection requirements as described in Section 1704.2 (plan sheet or detail reference is acceptable):

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PAGE 1 of 5City of Irvine, Building & Safety Division
1 Civic Center Plaza, Irvine, CA 92606
Phone No. (949) 724-6000

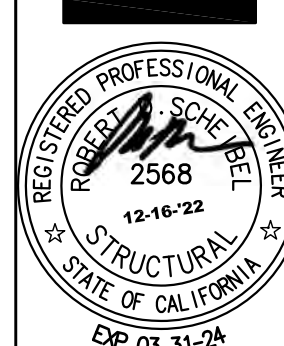
STRUCTURAL OBSERVATION PROGRAM

PROJECT ADDRESS: 1 FIRE AUTHORITY ROAD, IRVINE, CA PERMIT APPL. NO. _____

Description of Work: TENANT IMPROVEMENTS TO EXISTING FIRE TRAINING PROPS AND NEW FIRE TRAINING PROPS

Owner: ORANGE COUNTY FIRE AUTHORITY Architect: G² SOLUTIONS GROUP, INC. Engineer: RSSE STRUCTURAL ENGINEERS INC.

STRUCTURAL OBSERVATION (Only Checked Items Are Required)			
Firm or Individual to be responsible for the Structural Observation: RSSE STRUCTURAL ENGINEERS INC.			
Name: _____ Phone: () _____ Calif. Registration: _____			
FOUNDATION	WALL	FRAME	DIAPHRAGM
<input checked="" type="checkbox"/> Footing, Stem Walls, Piers	<input type="checkbox"/> Concrete	<input type="checkbox"/> Steel Moment Frame	<input type="checkbox"/> Concrete
<input type="checkbox"/> Mat Foundation	<input checked="" type="checkbox"/> Masonry	<input type="checkbox"/> Steel Braced Frame	<input checked="" type="checkbox"/> Steel Deck
<input type="checkbox"/> Calsson, Piles, Grade Beams	<input type="checkbox"/> Wood	<input type="checkbox"/> Concrete Moment Frame	<input type="checkbox"/> Wood
<input type="checkbox"/> Stopping/Retaining Foundation	<input type="checkbox"/> Others:	<input type="checkbox"/> Masonry Wall Frame	<input type="checkbox"/> Others
<input type="checkbox"/> Others	<input type="checkbox"/> Others:	<input type="checkbox"/> Others:	<input type="checkbox"/> Others
This project is structurally repetitive in the following manner: _____			
Due to the repetitive nature described above and subject to the conditions of City of Irvine Informational Bulletin No. 251, structural observation will be performed as follows: _____			

REGISTERED PROFESSIONAL ENGINEER
STRUCTURAL
RSSE
12568
12-10-23
STATE OF CALIFORNIA
EX-05-31-24G² Solutions Group, Inc.
14401 Wilshire Blvd., Suite 100
Beverly Hills, CA 90210
Tel: 310.279.7777
Fax: 310.279.7778ORANGE COUNTY
FIRE AUTHORITYOCFA REGIONAL FIRE OPERATIONS
TRAINING GROUNDS MODIFICATIONS

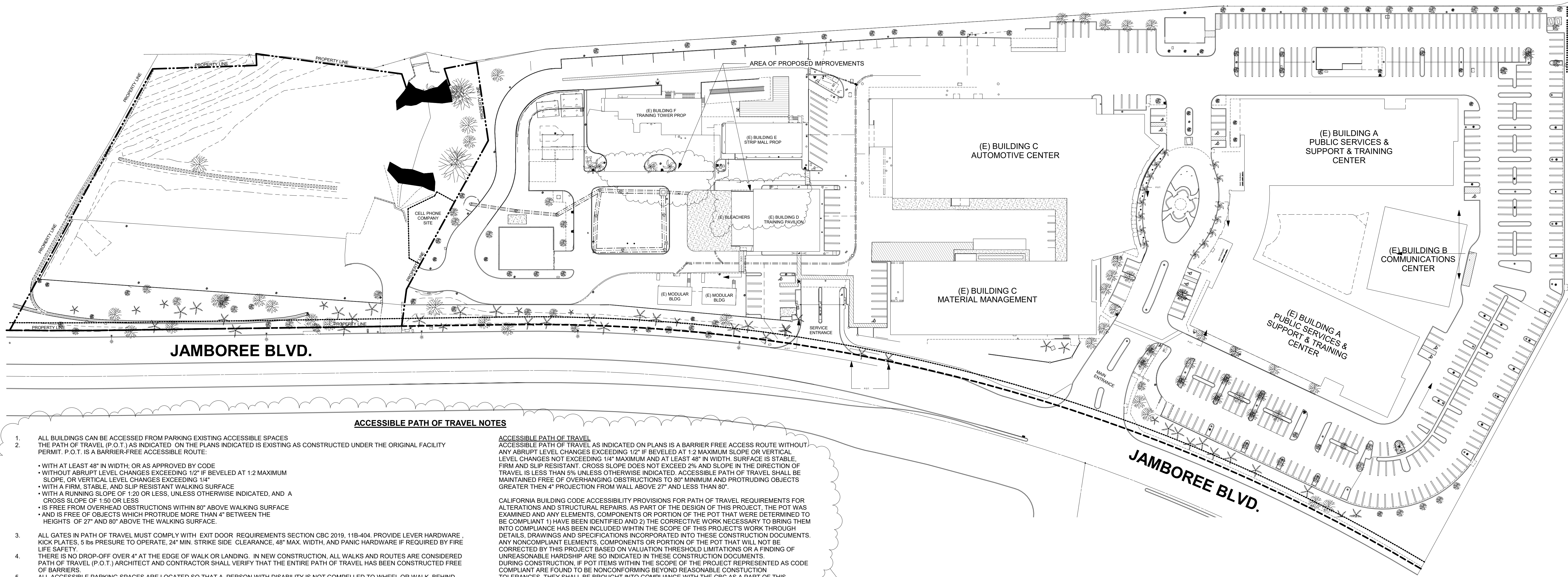
SPECIAL INSPECTION NOTES

December 16, 2022

SCALE: N.T.S.

SHEET NO.

T - 2



- ACCESSIBLE PATH OF TRAVEL NOTES**
- ALL BUILDINGS CAN BE ACCESSED FROM PARKING EXISTING ACCESSIBLE SPACES THE PATH OF TRAVEL (P.O.T.) AS INDICATED ON THE PLANS INDICATED IS EXISTING AS CONSTRUCTED UNDER THE ORIGINAL FACILITY PERMIT. P.O.T. IS A BARRIER-FREE ACCESSIBLE ROUTE.
 - WITH AT LEAST 48" IN WIDTH, OR AS APPROVED BY CODE
 - WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4"
 - WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE
 - WITH A RUNNING SLOPE OF 1:20 OR LESS, UNLESS OTHERWISE INDICATED, AND A CROSS SLOPE OF 1:50 OR LESS
 - IS FREE FROM OVERHEAD OBSTRUCTIONS WITHIN 8' ABOVE WALKING SURFACE
 - AND IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE
 - ALL GATES IN PATH OF TRAVEL MUST COMPLY WITH EXIT DOOR REQUIREMENTS SECTION CBC 2019, 11B-404. PROVIDE LEVER HARDWARE, KICK PLATES, 5 lbs PRESURE TO OPERATE, 24" MIN. STRIKE SIDE CLEARANCE, 48" MAX. WIDTH, AND PANIC HARDWARE IF REQUIRED BY FIRE LIFE SAFETY.
 - THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING. IN NEW CONSTRUCTION, ALL WALKS AND ROUTES ARE CONSIDERED PATH OF TRAVEL (P.O.T.) ARCHITECT AND CONTRACTOR SHALL VERIFY THAT THE ENTIRE PATH OF TRAVEL HAS BEEN CONSTRUCTED FREE OF BARRIERS.
 - ALL ACCESSIBLE PARKING SPACES ARE LOCATED SO THAT A PERSON WITH DISABILITY IS NOT COMPELLED TO WHEEL OR WALK BEHIND ANY OTHER CAR.
 - WALKS IN PATH OF TRAVEL SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. WHEN INSTALLED, OPENINGS SHALL BE 1/2" MAXIMUM IN DIRECTION OF TRAFFIC FLOW.
 - ALL ACCESSIBLE PARKING STALLS SHALL BE MARKED WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND A WARNING THAT VEHICLES IN VIOLATION OF THE ACCESSIBLE PATH OF TRAVEL.

- SITE ACCESSIBILITY NOTES**
- FOR TYPICAL SITE ACCESSIBLE PARKING DETAILS, REFER SHEET TD-1.

OVERALL TRAINING OCFA SITE PLAN

PARKING AREA TABULATION			
BUILDING	LEVEL/GSF	TOTAL	REQUIRED NO. OF SPACES
A PUBLIC SERVICES & SUPPORT & TRAINING CENTER	1	68,347	C.O.I. RATIO
	2	32,278	67,929 /250 =
	REDUCTION	-3,583	272 STALLS +
	70% GSF USE PER C.U.P.	97,042	35 STALLS (87 FIXED SEATS IN BRD RM) = 307 STALLS REQ'D.
B COMMUNICATIONS CENTER	B	NA*	C.O.I. RATIO
	1	12,100	16,940 /250 =
	2	12,100	68 STALLS REQ'D.
	70% GSF USE	16,940	
C AUTOMOTIVE & CENTER	1	70,970	
	2	18,643	
	A	2,892	43 SPACES
	1	9,750	C.O.I. RATIO
D TRAINING PAVILION			6,825 / 250 =
			28 STALLS REQ'D
E STRIP MALL /	1	5,550	NA
			NON-OCCUPIED
			0 SPACES
		5,550	
F TRAINING TOWER PROP		11,284	NA
			NON-OCCUPIED
			0 SPACES
		11,284	
SUBTOTAL:		243,894	
TOTAL NO. REQUIRED:		448	9 ACCESSIBLE SPACES
SUBTOTAL:		455	TOTAL REQUIRED
TOTAL NO. PROVIDED:		448	SPACES
SUBTOTAL:		455	TOTAL PROVIDED
TOTAL MOTORCYCLE AREAS REQUIRED PER CITY OF IRVINE ZONING CODE, SEC. 4-3-5 (1 AREA PER EVERY 100 AUTO SPACES; 56 S.F. MIN. AREA)		5	
TOTAL NO. PROVIDED:		5	
TOTAL BICYCLE SPACES REQUIRED @ 5%:		23	
TOTAL NO. PROVIDED:		28	

BUILDING DESCRIPTION			
LOCATION	NO. STORY	HEIGHT	
A EAST WING- PUBLIC SVCS. & SUPPORT	2 STORY	35'-0"	
	2 STORY	35'-0"	
	2 STORY	35'-0"	
	2 STORY	35'-0"	
B COMMUNICATION TOWER	2 STORY	35'-0"	
	2 STORY	35'-0"	
	2 STORY	35'-0"	
	2 STORY	35'-0"	
C EAST WING- MATERIEL MGMT. CENTER	2 STORY	30'-0"	
	2 STORY	30'-0"	
	2 STORY	30'-0"	
	2 STORY	30'-0"	
D TRAINING PAVILION	1 STORY	30'-0"	
	2 STORY	22'-0"	
	2 STORY	22'-0"	
	2 STORY	22'-0"	
E STRIP MALL/STORAGE PROP	1 STORY	22'-0"	
	2 STORY	22'-0"	
	2 STORY	22'-0"	
	2 STORY	22'-0"	
F TRAINING TOWER PROP	6 STORY	66'-6"	
	6 STORY	66'-6"	
	6 STORY	66'-6"	
	6 STORY	66'-6"	

TASK 1 - Modifications to Existing Strip Mall Structure

- Modifications to Strip Mall Structure:** The existing Strip Mall structure will require various modifications in order to address the need for various training scenarios not available within the training grounds.
- Construction of a new mansard roof element on the north side with a metal observation catwalk
 - Construction of a metal stud exterior face block wall with window openings along the east parapet wall
 - Construction of a new sloping roof above the existing sloped roof along the west wall
 - Full enclosure of the existing trash bin area which includes a north-facing wall, roof structure, overhead ceiling door and interior power for recirculated ice machines
 - Installation of existing CGDA Bottle Fill unit within existing 1st Floor Storage Room

TASK 2 - Modifications to Training Tower Structure

- Modifications to Training Tower Structure:** The existing Multi-Story Training tower structure will require various modifications to accommodate the proposed live fire prop replacement (Task 6) and address other training scenarios.
- Construction of a metal stud exterior face block low wall at 2nd level west facing balcony. This is to replace the existing metal guardrails.
 - Removal of noted non-bearing interior CMU walls for live fire prop room enlargement.
 - Addition of noted interior CMU walls to close off rooms and spaces.
 - Removal and infill of existing exterior wall louvers
 - Construction of new "Denver Window Prop" at 2nd floor
 - Removal of existing prop room vision panels

TASK 3 - Interior Live Fire Prop Replacement

- Modifications to Training Tower Structure:** The existing live fire props are in need of replacement. These props utilize 20-year old technology which restricts the training abilities. The system is also a single fuel source type which if one prop fails, all props within the building are non-functional. The proposed prop replacement will provide heightened training, with new technology and advancements in functionality. Below are the proposed replacements and associated room modifications required.

Tower Burn Room #1: 1st Floor Living Room Prop #F103

- Many deficiencies were noted in this room which should be addressed to increase the training potential and environment. The proposed plan is to replace the existing prop with a new multi-burner kitchen fire.
- Reduce exterior wall louver size
 - Reconfigure east exterior wall opening
 - Close off ceiling exhaust opening and utilize wall mounted exhaust fan at east exterior wall. This will increase the heat levels.

Tower Burn Room #2: 2nd Floor Bedroom #F202

- The most noticeable deficiency noted was the room and prop size. For this room the following should be considered to increase the training potential and environment. The prop would be replaced with multi-burner sofa prop with ceiling rollover effect fire.

- Reduce exterior wall louver size
- Remove Exterior windows
- Reduce emergency exhaust shaft size
- Remove or move interior west wall of prop room to increase size. Consider blind side entry into room.
- Replace bed prop with suitable smaller footprint prop such as entertainment center, sectional sofa or concealed cabinets with multiple burners and flame extension.
- Install forcible entry door at exterior access point(s)
- Remove steel heat shield protection at ceiling above prop
- Extend high temperature lining protection at ceiling and walls

Tower Burn Room #3: 3rd Floor Kitchen Prop #F303

- The existing kitchen fire prop is an early generation model with single use. For this room the following should be considered to increase the training potential and environment. The prop would be replaced with a multi-burner office fire prop

- Replace existing prop with multiple burner and flame spread style prop to simulate concealed fire, grease flare up or commercial hood fire.
- Reduce emergency exhaust shaft size
- Install forcible entry door at exterior access point(s)
- Remove steel heat shield protection at ceiling above prop
- Extend high temperature lining protection at ceiling and walls

ARCHITECTURAL PLANS

City of Irvine Title Sheets

- T-1 PROJECT INFORMATION, GENERAL NOTES & VICINITY MAP
T-2 PROJECT SPECIAL INSPECTIONS AND STRUCTURAL OBSERVATION

Master Plans

- M-CVR MASTER COVER SHEET
M-SITE MASTER SITE PLAN

Task No. 1

- T1-A1 STRIP MALL STRUCTURE LEVEL 1 MODIFICATION PLANS
T1-A2 STRIP MALL STRUCTURE LEVEL 2 MODIFICATION PLANS
T1-A3 STRIP MALL STRUCTURE ROOF PLANS, BUILDING "D" FLOOR PLANS
T1-A4 STRIP MALL STRUCTURE SECTIONS
T1-A5 STRIP MALL STRUCTURE EXTERIOR ELEVATIONS

Task No. 2

- T2-A1 TOWER STRUCTURE LEVEL 1 MODIFICATION PLANS
T2-A2 TOWER STRUCTURE LEVEL 2 MODIFICATION PLANS
T2-A3 TOWER STRUCTURE LEVEL 3 MODIFICATION PLANS

Task No. 3

- T3-A1 TOWER FIRE PROP REPLACEMENT FLOOR PLANS
T3-A2 TOWER FIRE PROP REPLACEMENT CEILING PLANS
T3-A3 TOWER FIRE PROP EXTERIOR ELEVATIONS

Task Details

- TD-1 EXTERIOR & SITE DETAILS
TD-2 INTERIOR DETAILS
TD-3 ROOF DETAILS
TD-4 DOOR DETAILS
TD-5 WINDOW DETAILS

STRUCTURAL PLANS

- SE-2.1 STRIP MALL FOUNDATION PLAN
SE-2.2 STRIP MALL SECOND FLOOR PLAN
SE-2.3 STRIP MALL ROOF PLAN
SE-2.1 TOWER PARTIAL FLOOR PLANS
S-4.1 STRUCTURAL GENERAL NOTES
S-4.2 STRUCTURAL GENERAL NOTES
S-5.1 STRUCTURAL DETAILS
S-6.1 STRIP MALL TRAINING PROP DETAILS
S-6.2 STRIP MALL TRAINING PROP DETAILS
S-6.3 STRIP MALL TRAINING PROP DETAILS
S-7.1 TRAINING TOWER DETAILS
S-7.2 TRAINING TOWER DETAILS
S-9.1 VENT PROP PLANS & DETAILS
S-9.2 VENT PROP DETAILS
S-9.3 STRUCTURAL DETAILS

EXISTING FACILITY PARKING TABULATION

EXISTING FACILITY BUILDING DESCRIPTIONS

TASK DESCRIPTIONS

SHEET INDEX

ORANGE COUNTY
FIRE AUTHORITY

OCFA REGIONAL FIRE OPERATIONS
TRAINING GROUNDS MODIFICATIONS

MASTER COVER SHEET
September 15, 2023

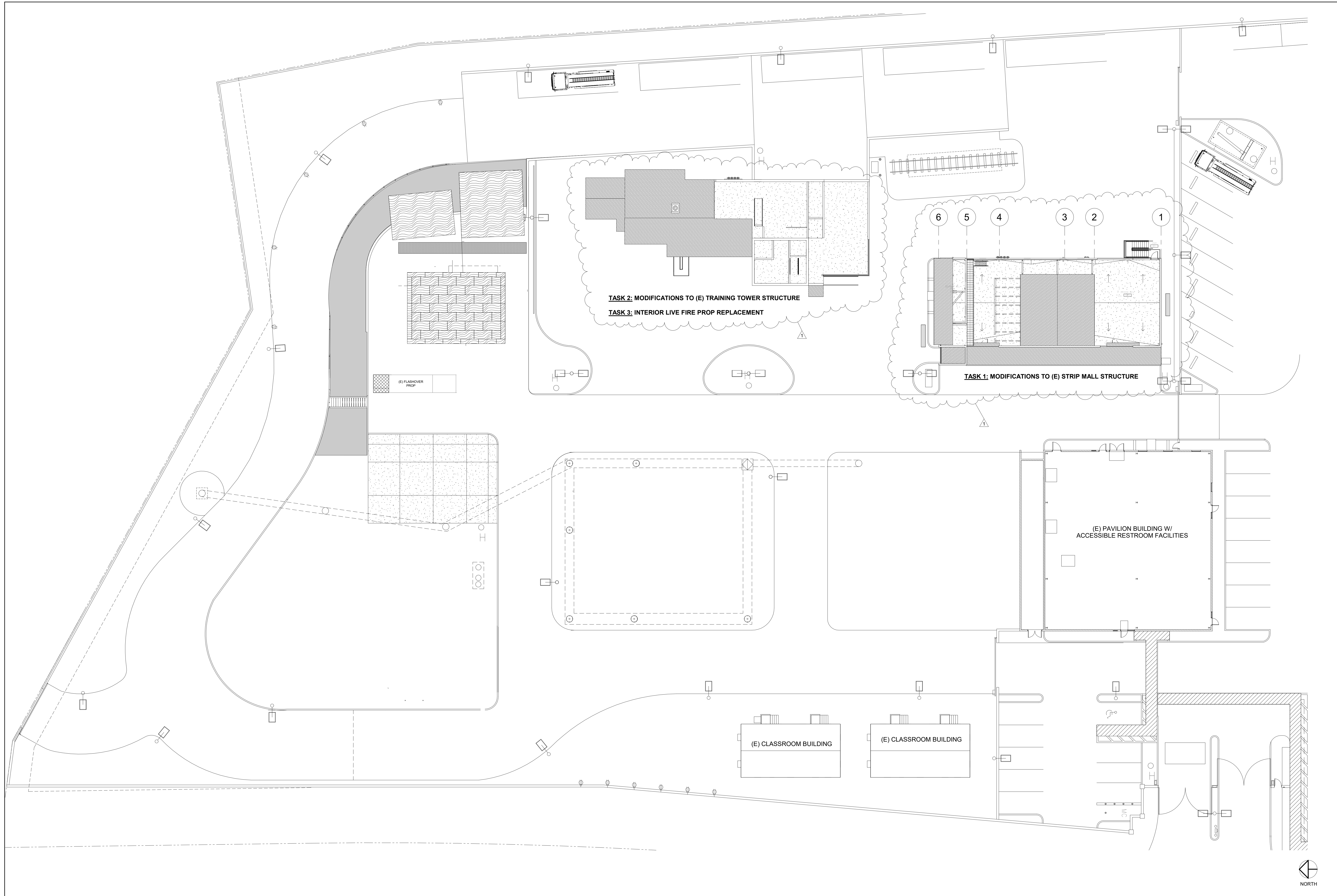
SCALE As Indicated



Ray M. J. H. H.

SHEET NO.

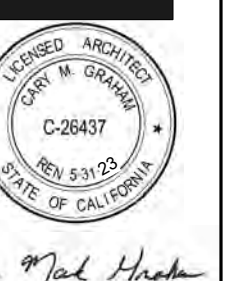
M-CVR



TRAINING GROUNDS MASTER SITE PLAN

1/16" = 1'-0" 1

SITE PLAN NOTES



SHEET NO.

M-SITE

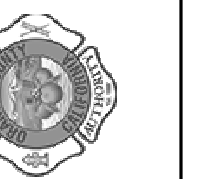
MASTER SITE PLAN

SCALE 1/16" = 1'-0"

September 15, 2023

REV.	DATE	DESCRIPTION
1	09/22/23	PLAN CHECK CORRECTIONS
2	09/25/23	CONNECTIONS

OCFA REGIONAL FIRE OPERATIONS
TRAINING GROUNDS MODIFICATIONS

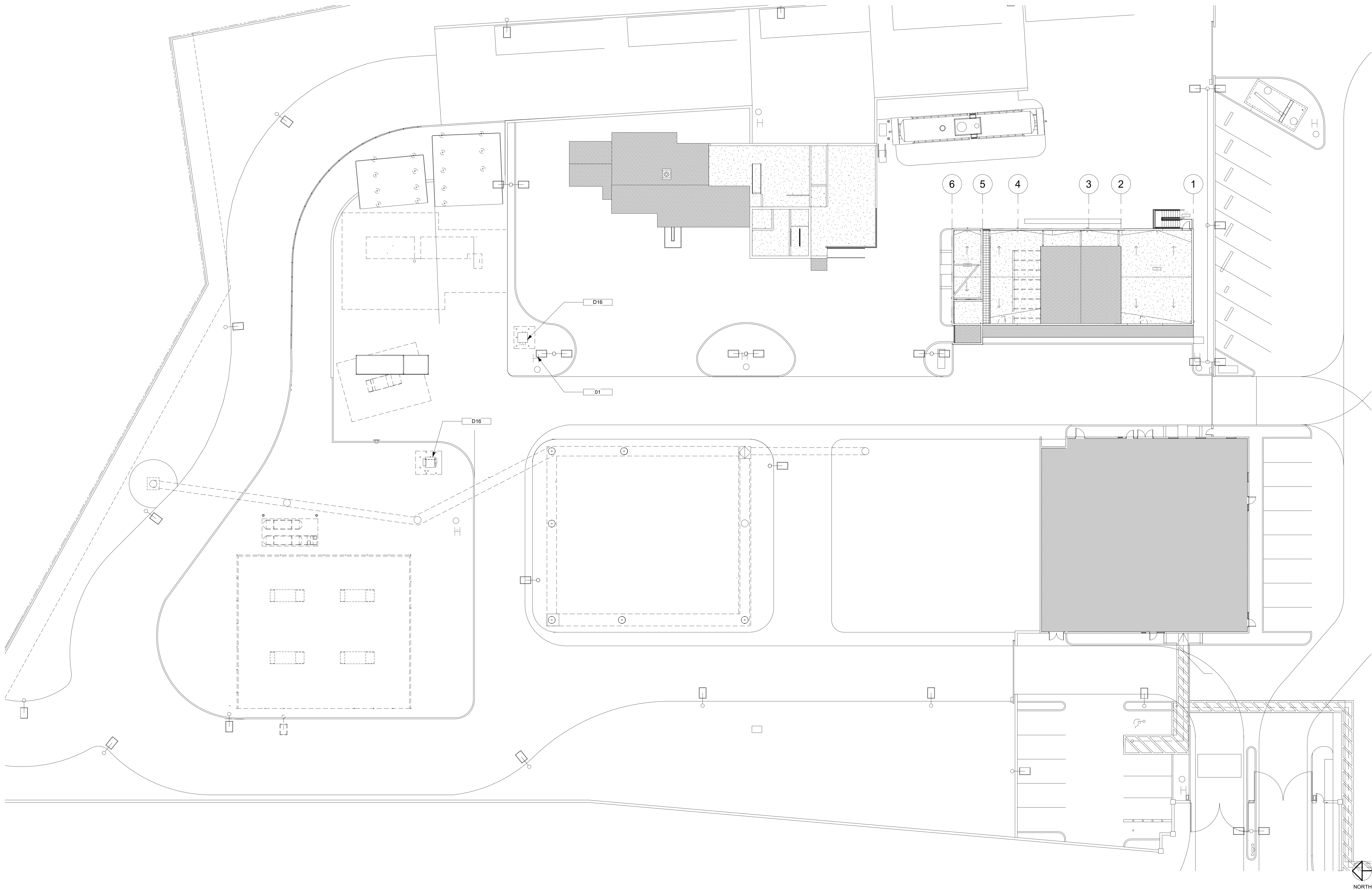


ORANGE COUNTY
FIRE AUTHORITY

C² Solutions Group, Inc.
1400 Holladay Road, Suite 100, Santa Ana, CA 92705
P 714.380.0575

RSSE
STRUCTURAL ENGINEERS

Structural Engineers, Inc.
1400 Holladay Road, Suite 100, Santa Ana, CA 92705
P 714.380.0575



TRAINING GROUNDS SITE DEMOLITION PLAN

1/16" = 1'-0"

1

Key Value	Keynote Text
01	EXISTING FIRE HYDRANT: PROTECT IN PLACE
D16	REMOVE (E) LIVE FIRE PROP CONTROLS AND CONCRETE PAD

1.

CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING.
2.

DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY IN ACTUAL LOCATIONS BASED ON EXISTING FIELD CONDITIONS.
3.

CONTRACTOR SHALL REVIEW ALL ASSOCIATED DISCIPLINE DRAWINGS, SUCH AS CIVIL, ELECTRICAL AND STRUCTURAL PRIOR TO BEGINNING OF WORK FOR COORDINATION.
4.

PRIOR TO ANY EXCAVATION WORK, CONTRACTOR SHALL CONFIRM SUB-SURFACE UTILITIES TO AVOID DAMAGE AND/OR INTERRUPTIONS.
5.

CONTRACTOR SHALL BE AWARE THAT THE FACILITY WILL REMAIN IN USE DURING PLANNED CONSTRUCTION. ALL WORK, INCLUDING, DELIVERIES, STAGING, EXCAVATION AND SAFETY INCORPORATION SHALL BE COORDINATED WITH ORANGE COUNTY FIRE SITE PERSONNEL PRIOR.
6.

SITE DEMOLITION. DRAWINGS WERE PREPARED WITH BASED ON THE LATEST AVAILABLE ELECTRONIC INFORMATION. ARCHITECT IS AWARE THAT VARIOUS DISCREPANCIES MAY EXIST WITHIN THE SITE INCLUDING, BUT NOT LIMITED TO: PAVEMENT MODIFICATIONS, ADDITIONAL STRUCTURES, PREVIOUSLY REMOVED EQUIPMENT AND ELEMENTS, ETC.

KEYNOTES

SITE DEMOLITION NOTES

REV.	DATE	DESCRIPTION
1	10-22-22	PLAN CHECK CORRECTIONS
2	01-23-23	CONNECTIONS

September 15, 2023

SITE DEMOLITION PLAN
SCALE 1/16" = 1'-0"



SHEET NO.

S-00

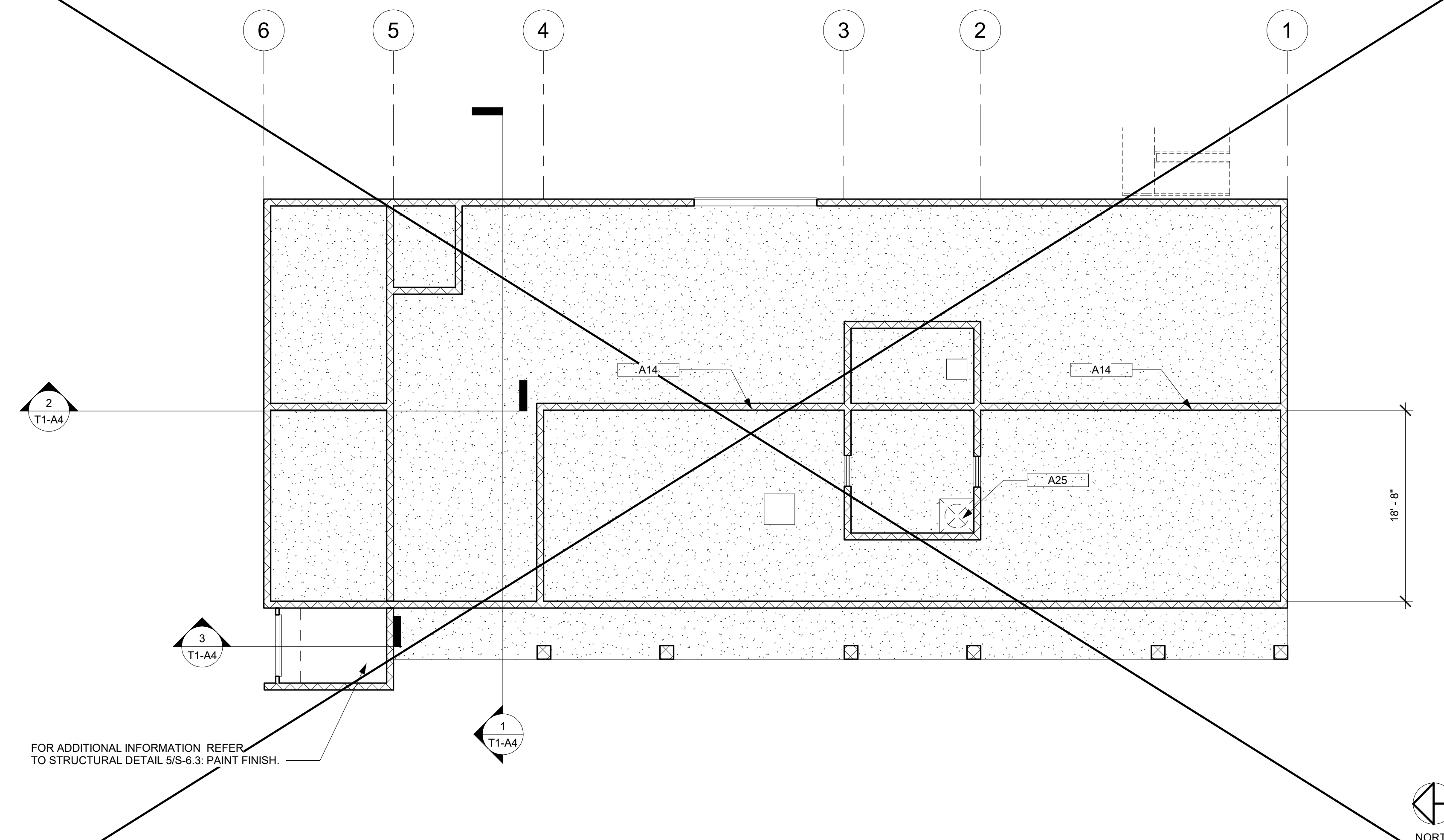
OCFA REGIONAL FIRE OPERATIONS
TRAINING GROUNDS MODIFICATIONS



ORANGE COUNTY
FIRE AUTHORITY

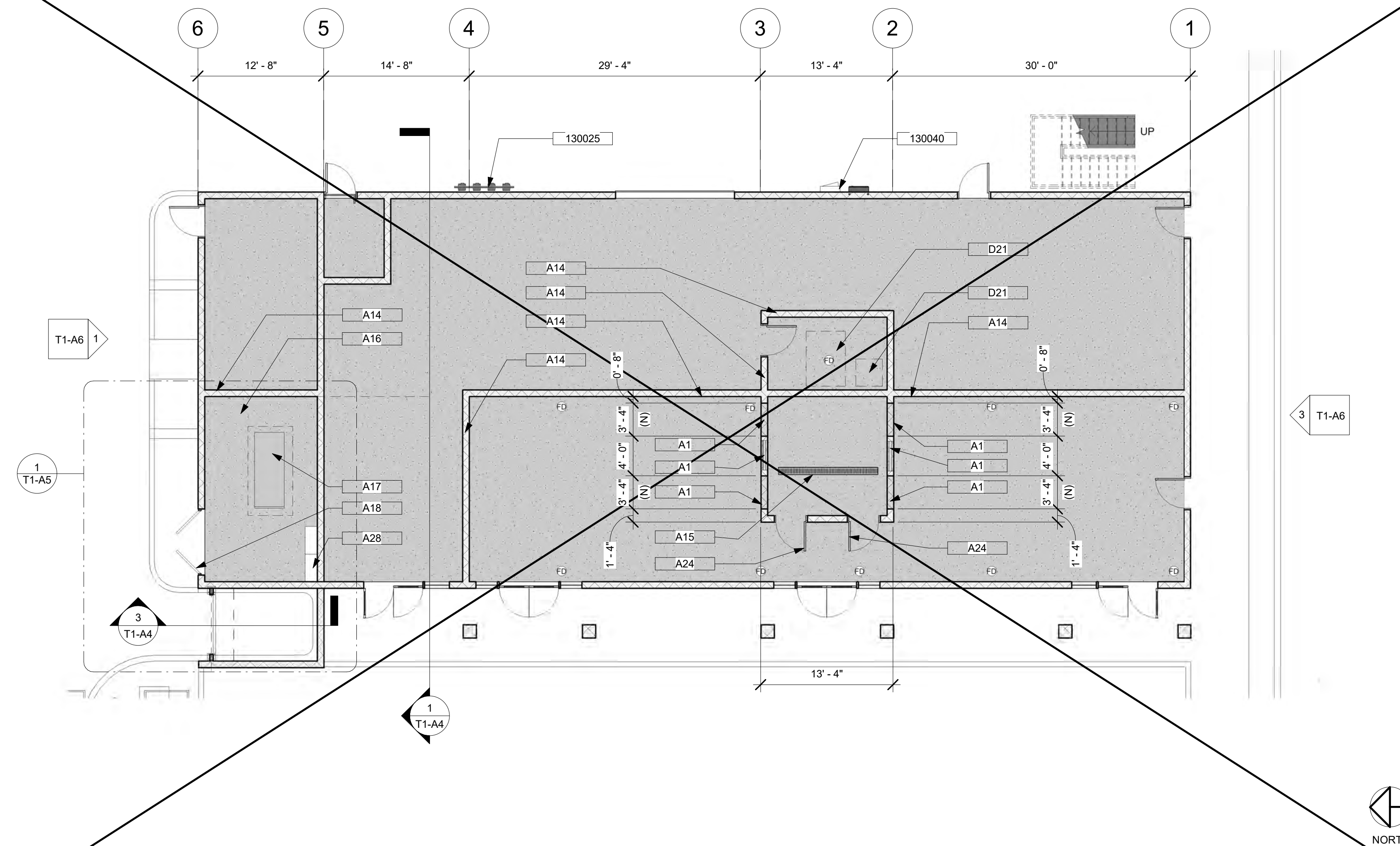
C² Solutions Group, Inc.
1400 Holladay Road, Suite 100, Tustin, CA 92680
P 714.380.0075

RSSE
STRUCTURAL ENGINEERS
1400 Holladay Road, Suite 100, Tustin, CA 92680
P 714.380.0075



$3/32" = 1'-0"$	4
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3/32" = 1'-0" 3



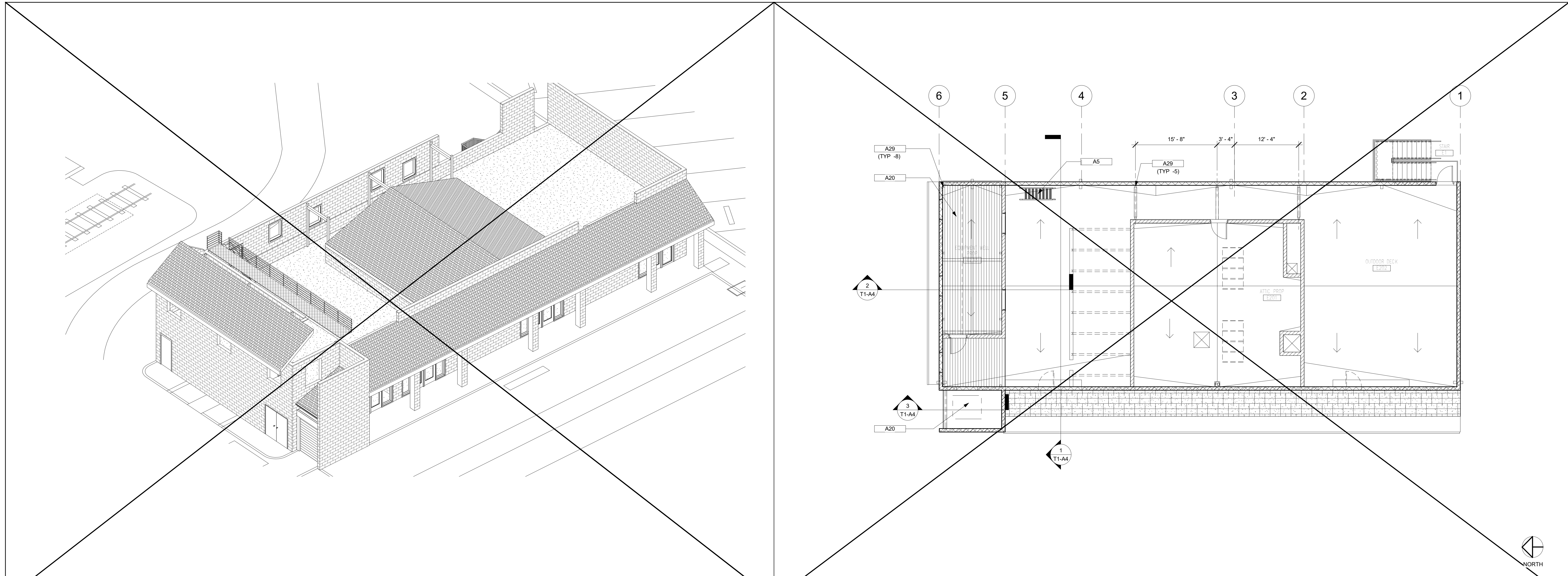
$3/32" = 1'-0"$	2
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$$3/32" = 1'-0"$$

Key Value	Keynote Text
A25	EXISTING LIVE FIRE PROP EMERGENCY FAN: REFER TO SPECIFICATIONS
A28	FURNISHINGS & EQUIPMENT BY OWNER
D7	REMOVE EXISTING HOLLOW METAL DOOR AND FRAME IN CMU WALL
D8	REMOVE (E) LIVE FIRE PROP CABINET AND EQUIPMENT
D9	REMOVE (E) NATURAL GAS MANIFOLD AND SHUT-OFF ASSEMBLY
D11	REMOVE (E) STORAGE LIVE FIRE PROP AND ASSOCIATED INFRASTRUCTURE
D24	REMOVE (E) LIVE FIRE PROP EQUIPMENT, PIPING AND SYSTEMS: SALVAGE
D22	REMOVE (E) CONCRETE CURB AT (E) WALL
D26	REMOVE (E) WALL LOUVER

- | | | | |
|----|---|----|--|
| 1. | CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING. | 6. | CONTRACTOR SHALL REVIEW STRUCTURAL DRAWINGS AND DETAILS IN CONJUNCTION WITH THE ARCHITECTURAL PLANS FOR ADDITIONAL SCOPE OF WORK REQUIREMENTS. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER OF ANY DISCREPANCIES. |
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TASK 1: STRIP MALL MODIFICATION GENERAL NOTES



2nd LEVEL ISOMETRIC FLOOR PLAN

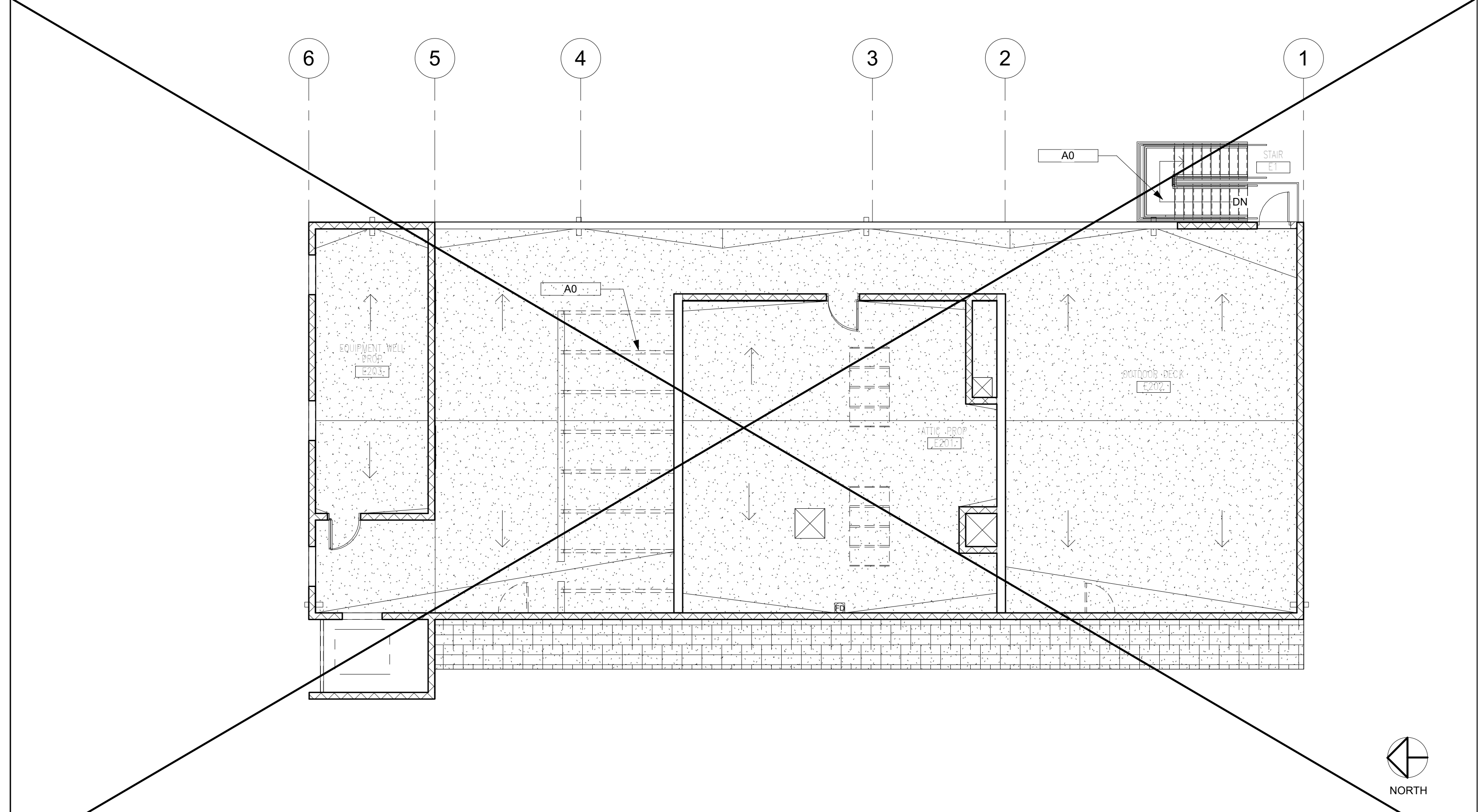
3/32" = 1'-0"

4

2nd LEVEL REFLECTED CEILING PLAN

3/32" = 1'-0"

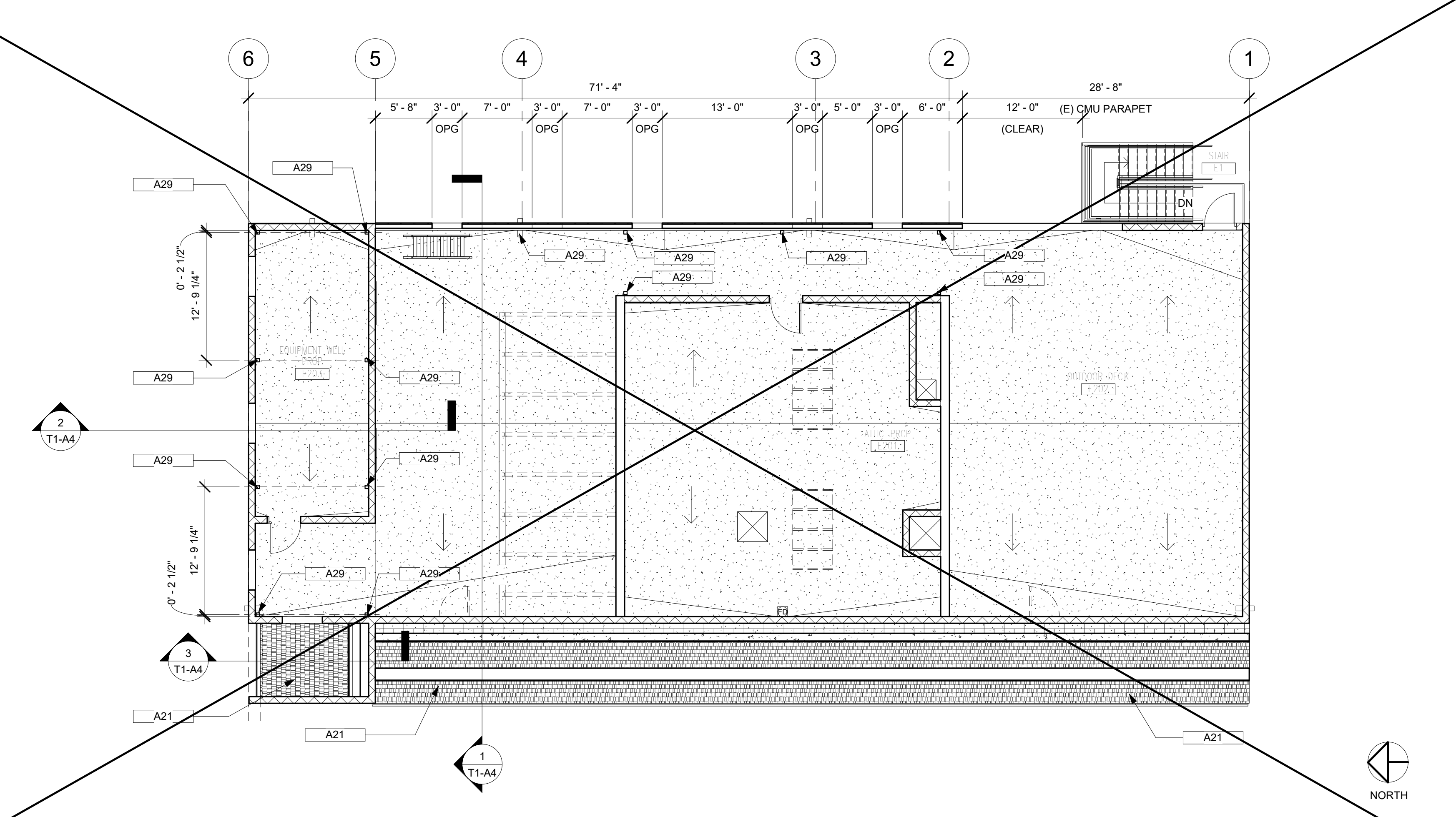
3



2nd LEVEL DEMOLITION PLAN

3/32" = 1'-0"

2



2nd LEVEL MODIFICATION PLAN

3/32" = 1'-0"

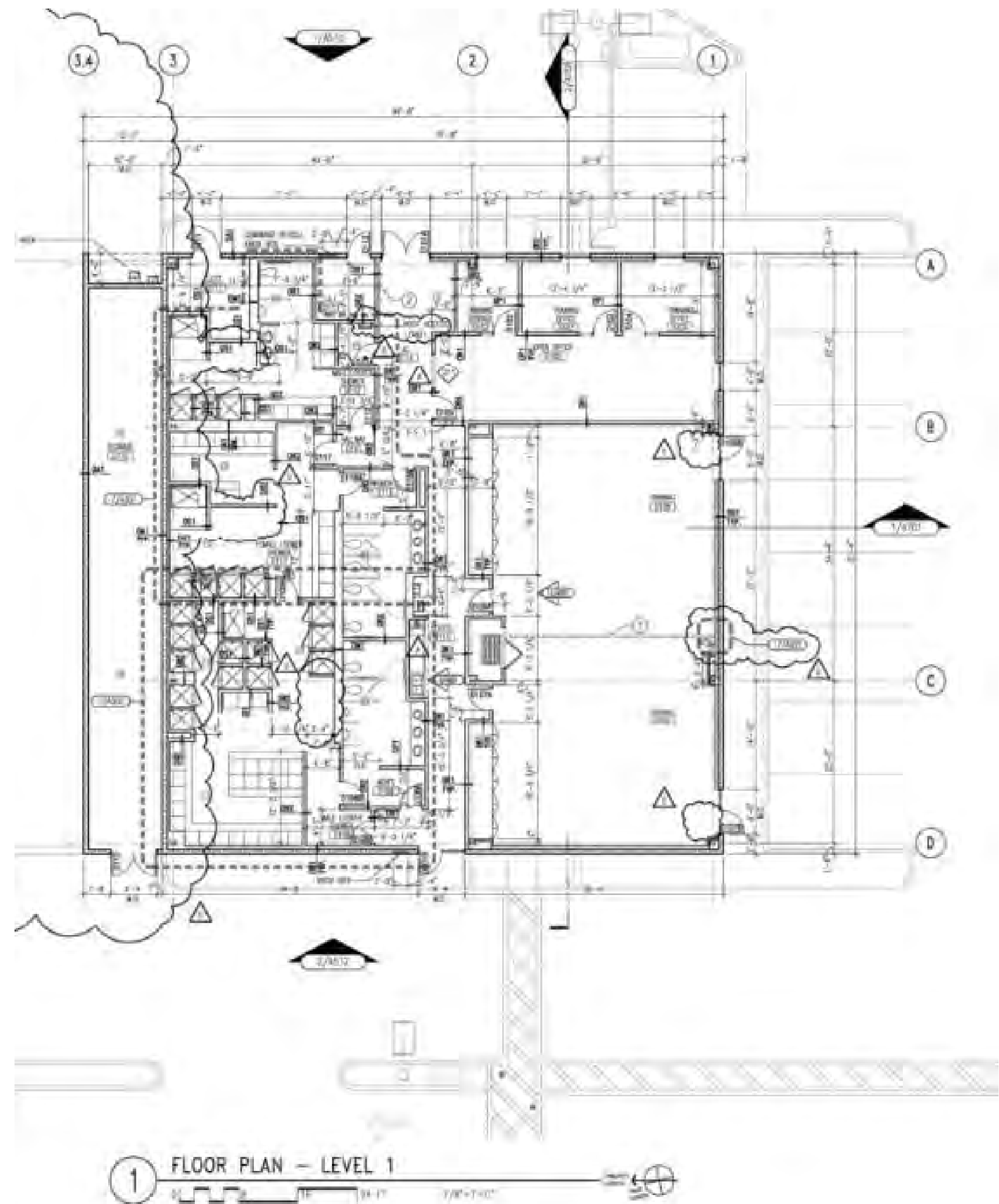
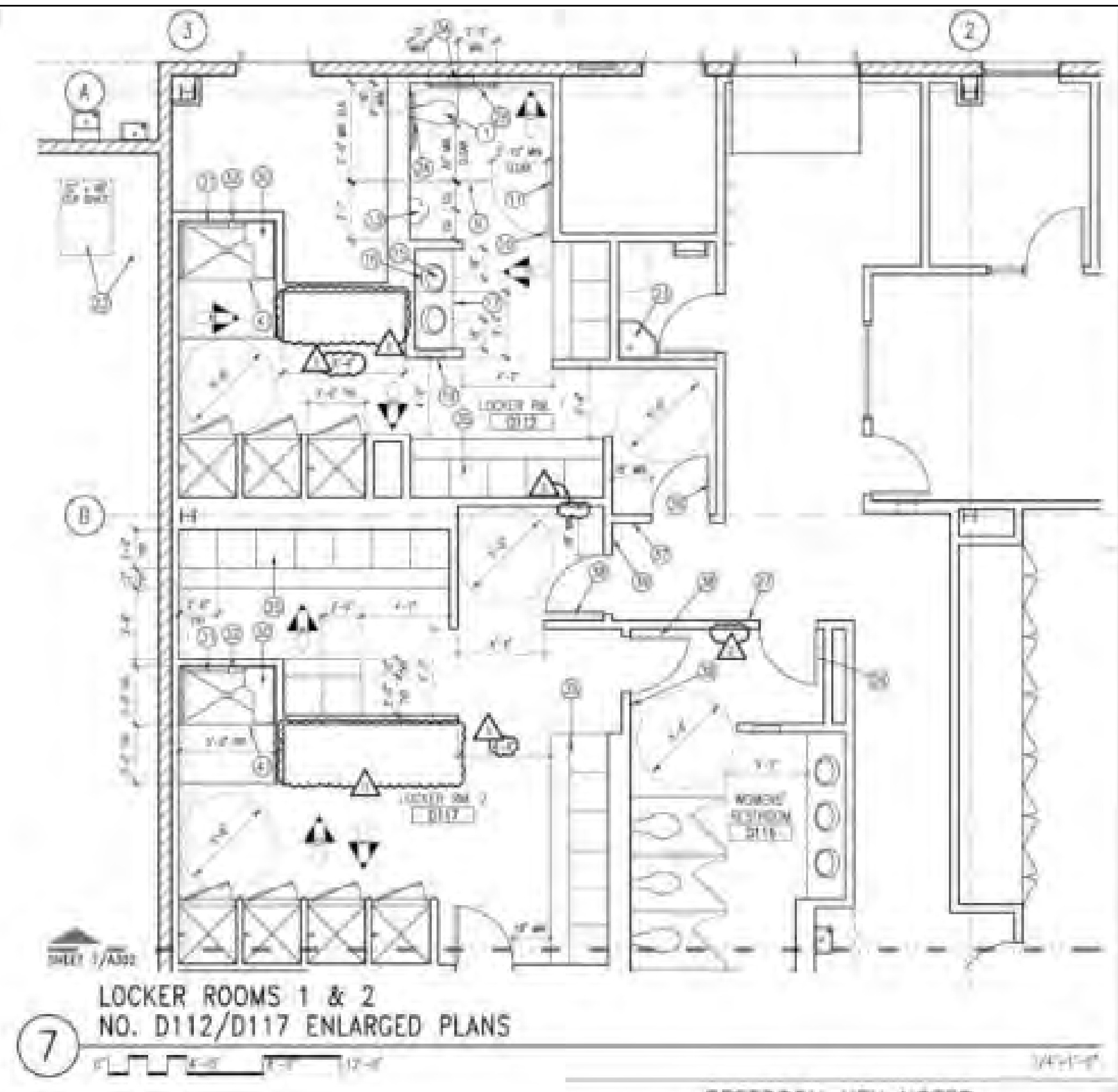
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Key Value	Keynote Text
A0	EXISTING CONSTRUCTION: PROTECT IN PLACE
A5	NEW RETRACTABLE SHIP LADDER AT WALL: REFER TO DETAIL REFERENCE
A20	NEW STRUCTURAL COLUMN, PAINT FINISH: REFER TO STRUCTURAL PLANS
A21	NEW SLOPED ROOF SECTION: REFER TO DETAILS AND STRUCTURAL
A29	NEW STEEL COLUMN, PAINT FINISH: REFER TO STRUCTURAL

KEYNOTES

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TASK 1: STRIP MALL MODIFICATION GENERAL NOTES



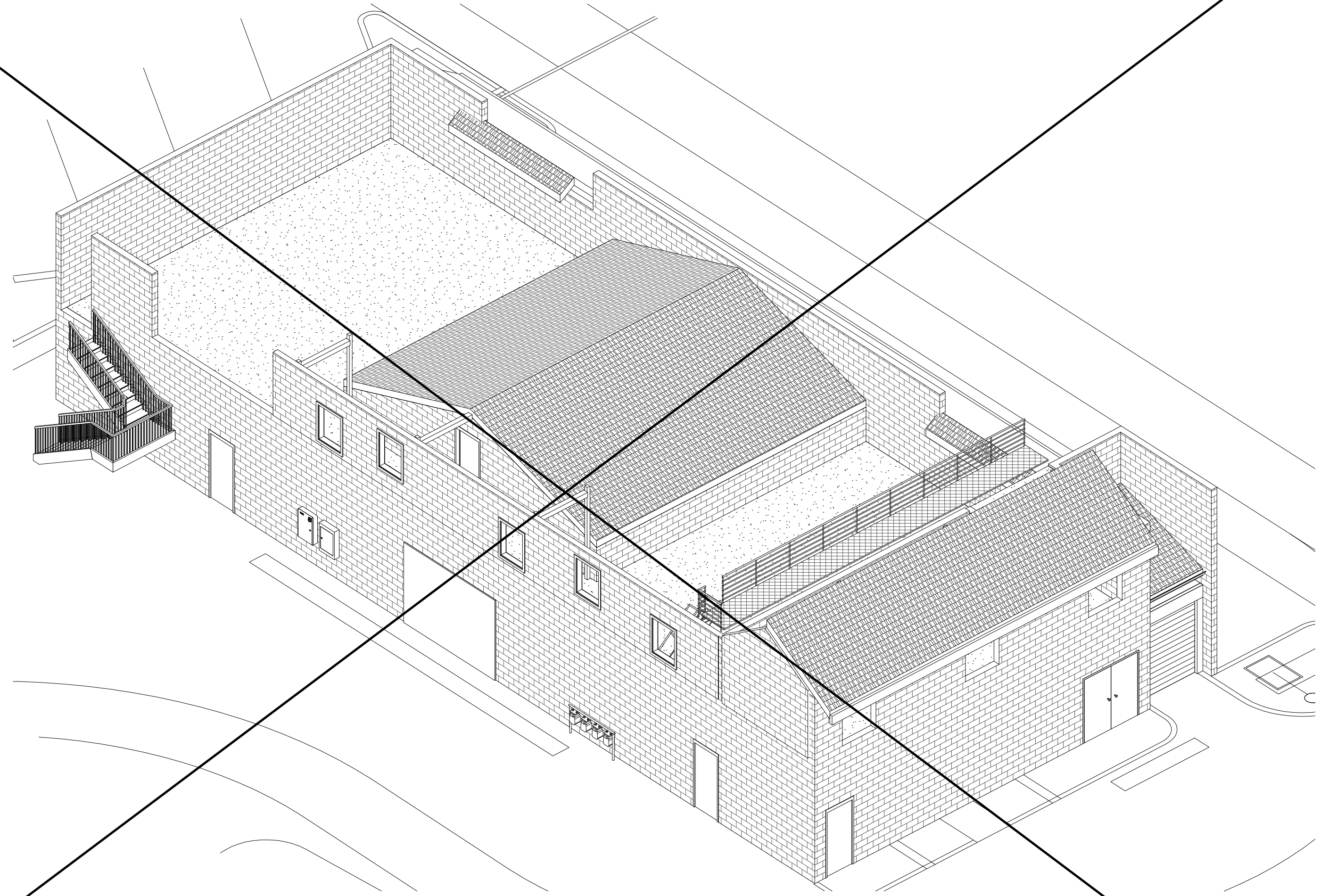
EXISTING BUILDING "D" FLOOR PLANS

NONE

3

Key Value	Keynote Text
A0	EXISTING CONSTRUCTION: PROTECT IN PLACE
A2	NEW MANSARD ROOF SYSTEM OVER (E) SLOPING ROOF: REFER TO DETAILS
A3	NEW FRAMED WALL SYSTEM ATOP (E) CMU WALL: REFER TO DETAILS
A5	NEW RETRACTABLE SHIP LADDER AT WALL: REFER TO DETAIL REFERENCE
A6	NEW CONCRETE ROOF DECK SYSTEM & FRAMING: REFER TO STRUCTURAL
A8	NEW ROOF MANSARD: REFER TO DETAILS & STRUCTURAL

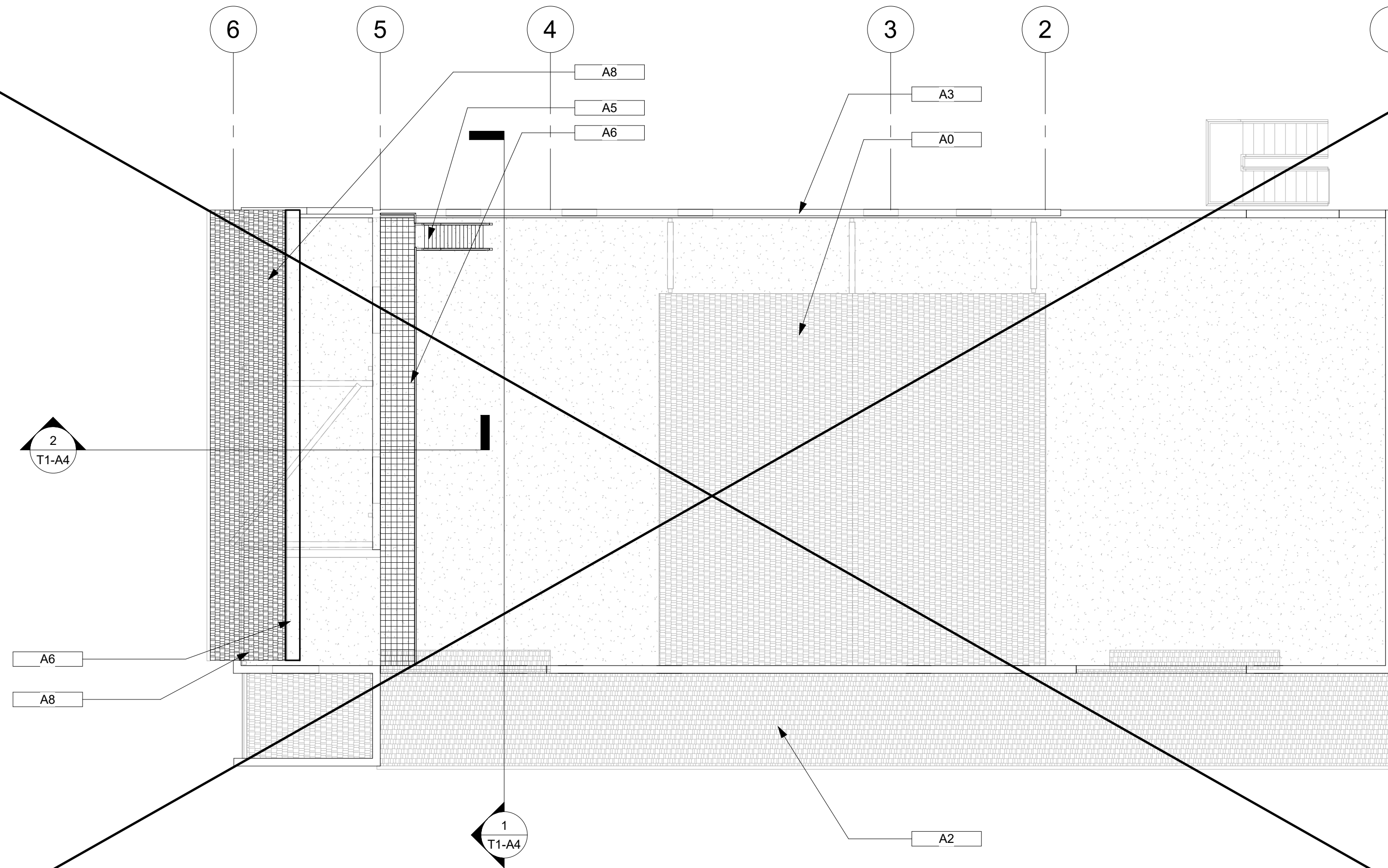
KEYNOTES



ROOF LEVEL ISOMETRIC FLOOR PLAN

3/32" = 1'-0"

2



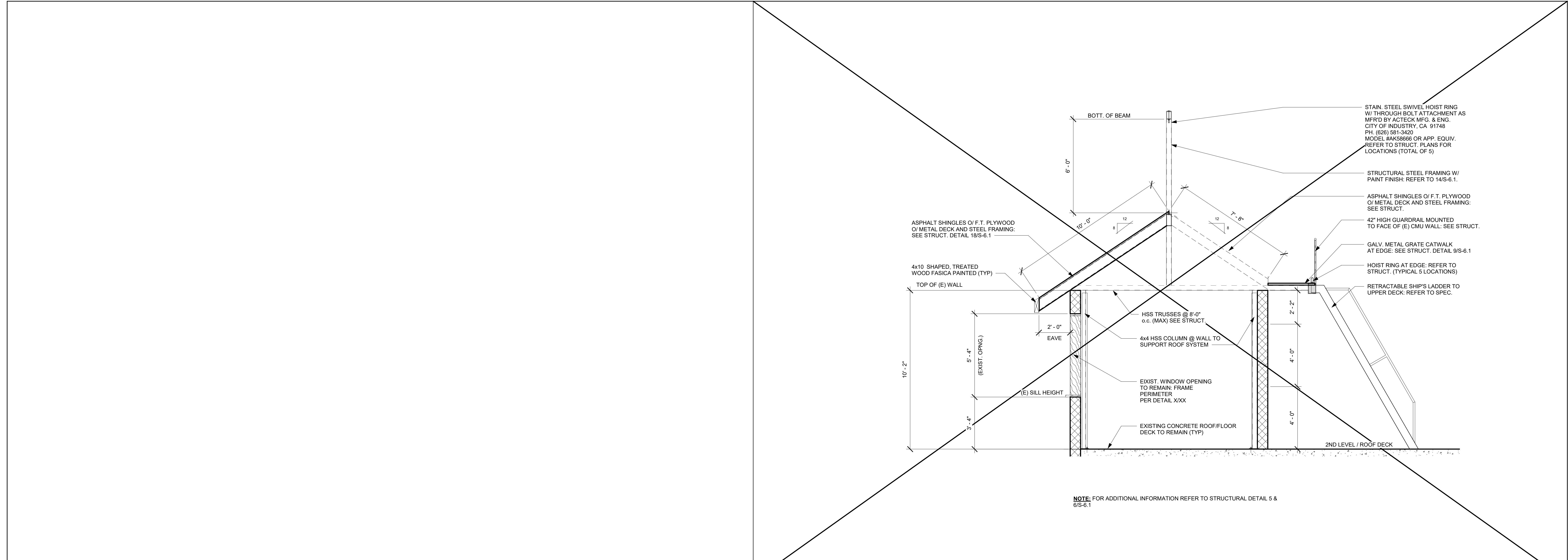
ROOF LEVEL MODIFICATION PLAN

3/32" = 1'-0"

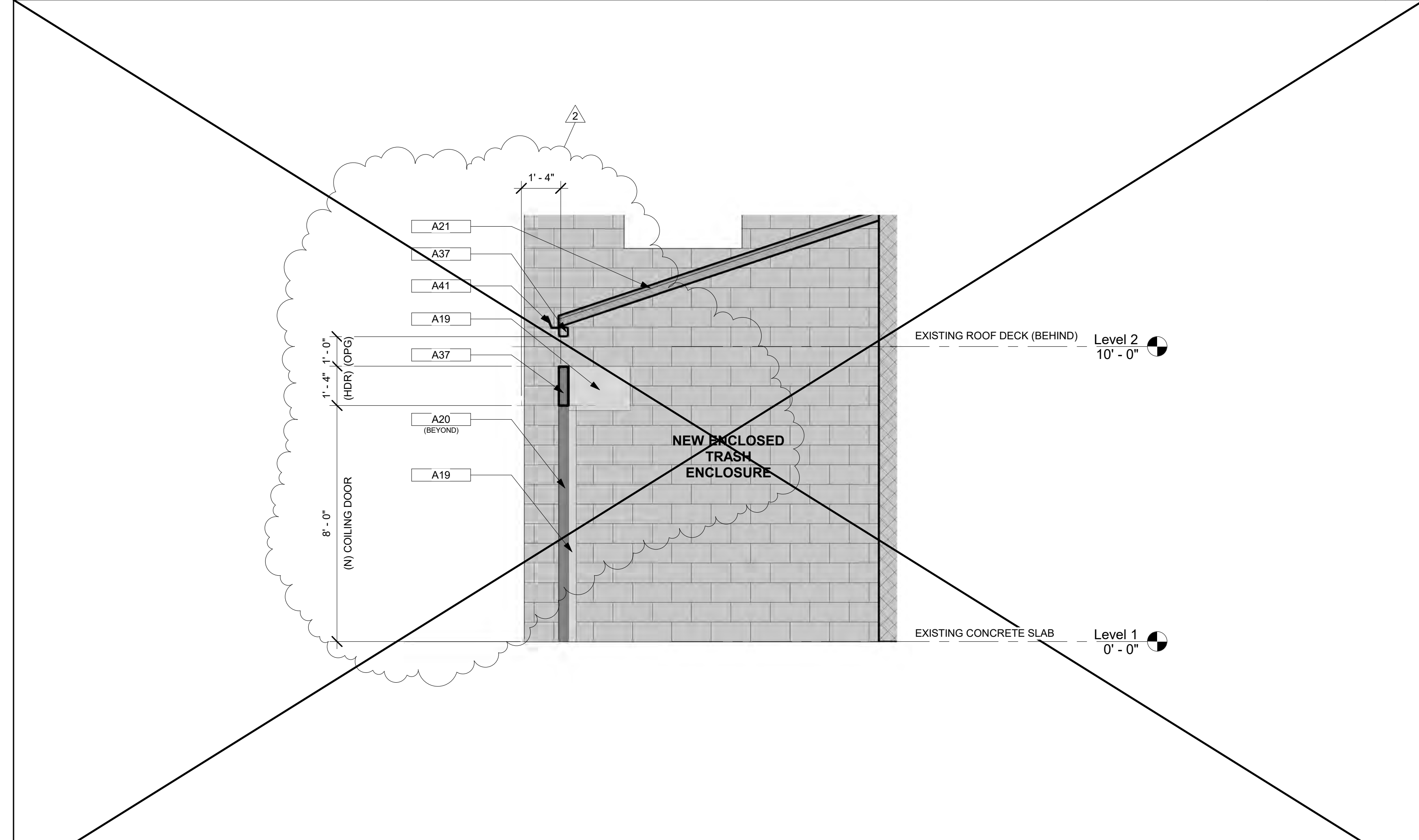
1

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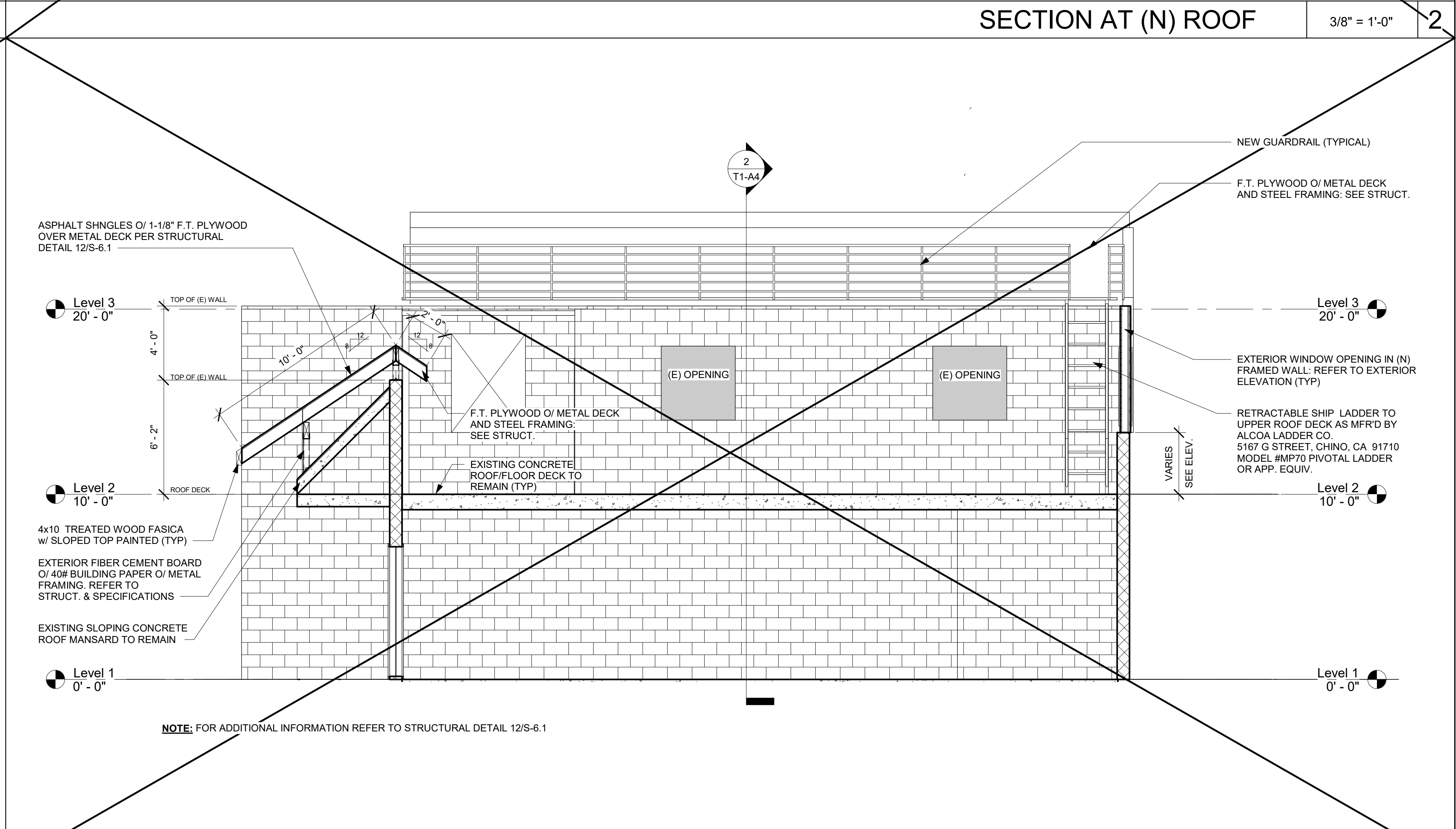
TASK 3: STRIP MALL MODIFICATION GENERAL NOTES



DETAIL NOT USED 1/8" = 1'-0" 4



SECTION AT (N) STORAGE ROOM 3/8" = 1'-0" 3



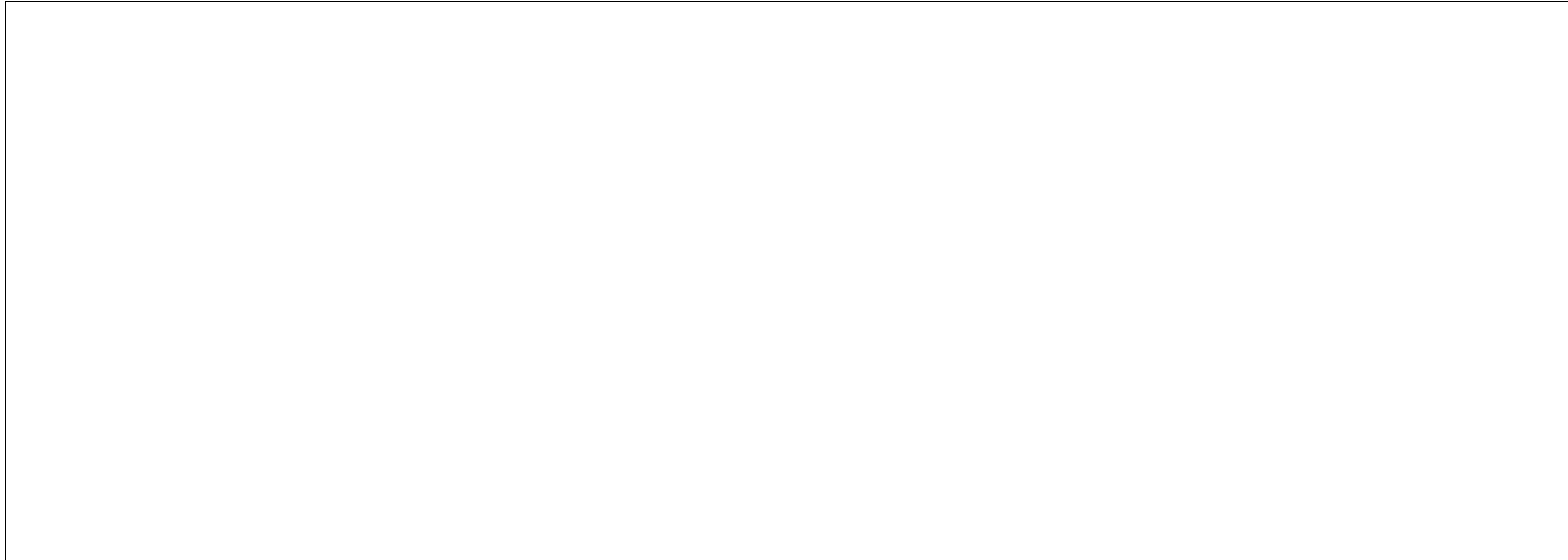
STRIP MALL BUILDING CROSS SECTION 1/4" = 1'-0" 1

Key Value	Keynote Text
A19	NEW OVERHEAD COILING DOOR UNIT: REFER TO DETAILS 1-5/TD-4
A20	NEW STRUCTURAL COLUMN. PAINT FINISH: REFER TO STRUCTURAL PLANS
A21	NEW SLOPED ROOF SECTION: REFER TO DETAILS AND STRUCTURAL
A37	NEW EXPOSED STEEL BEAM PER STRUCTURAL, PAINT FINISH
A41	PRE-FINISHED ALUM. GUTTER & DOWNSPOUT TO FINISH CONCRETE SLAB

KEYNOTES

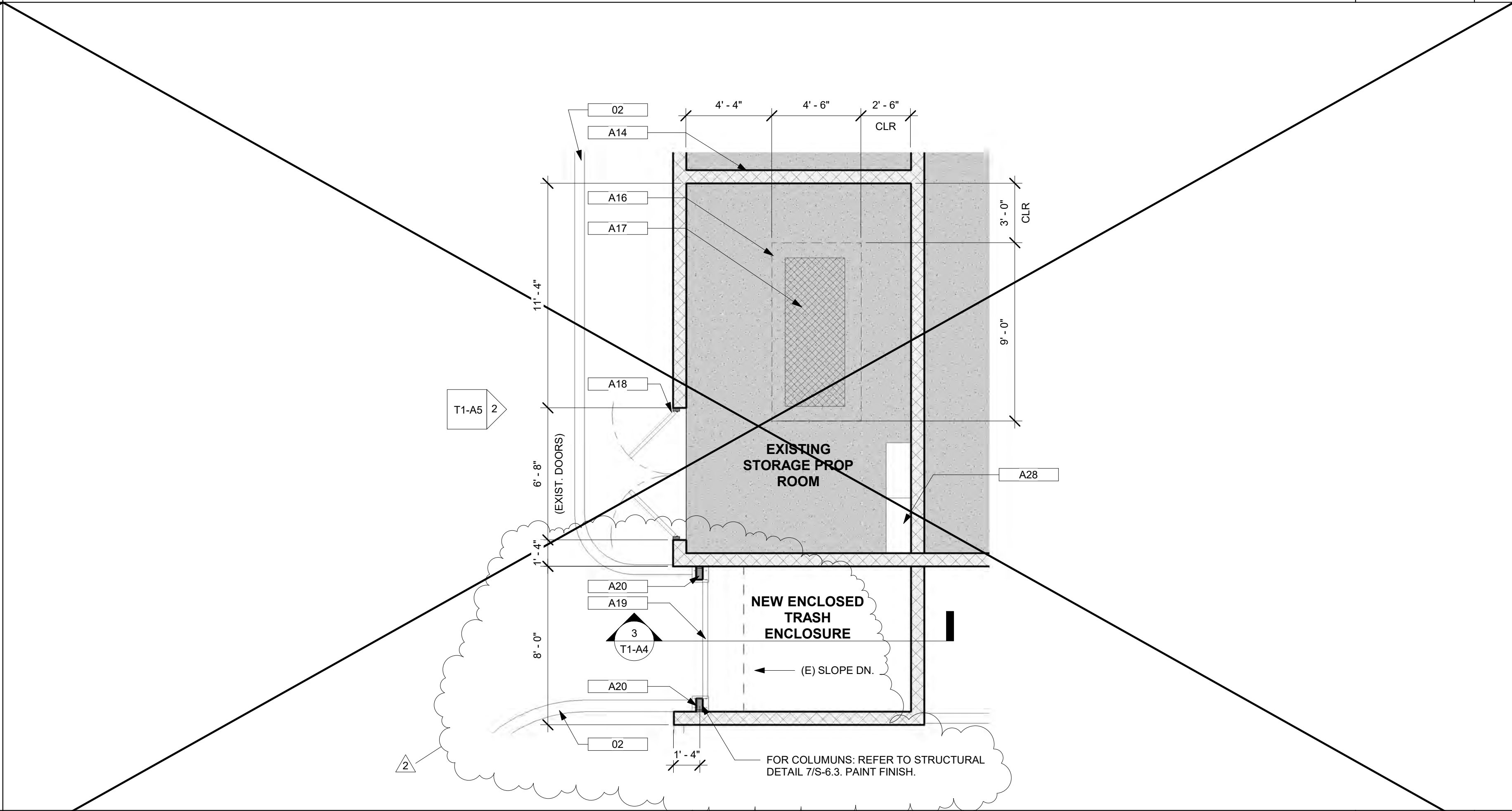
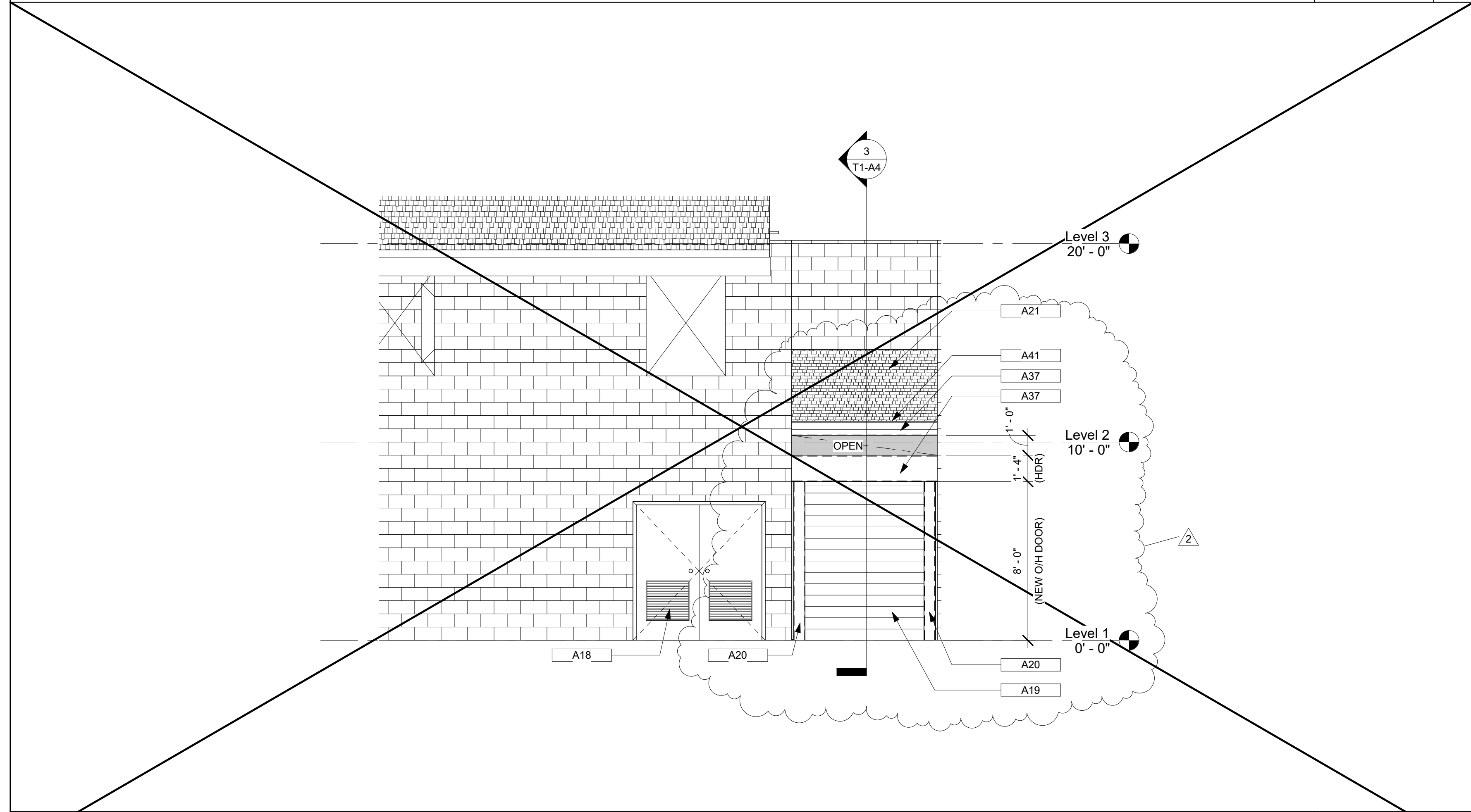
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TASK 3: STRIP MALL MODIFICATION GENERAL NOTES



DETAIL NOT USED 1/8" = 1'-0" 4

DETAIL NOT USED 3/8" = 1'-0" 3



STRIP MALL EXTERIOR ELEVATION AT NEW STORAGE ROOM 1/4" = 1'-0" 2

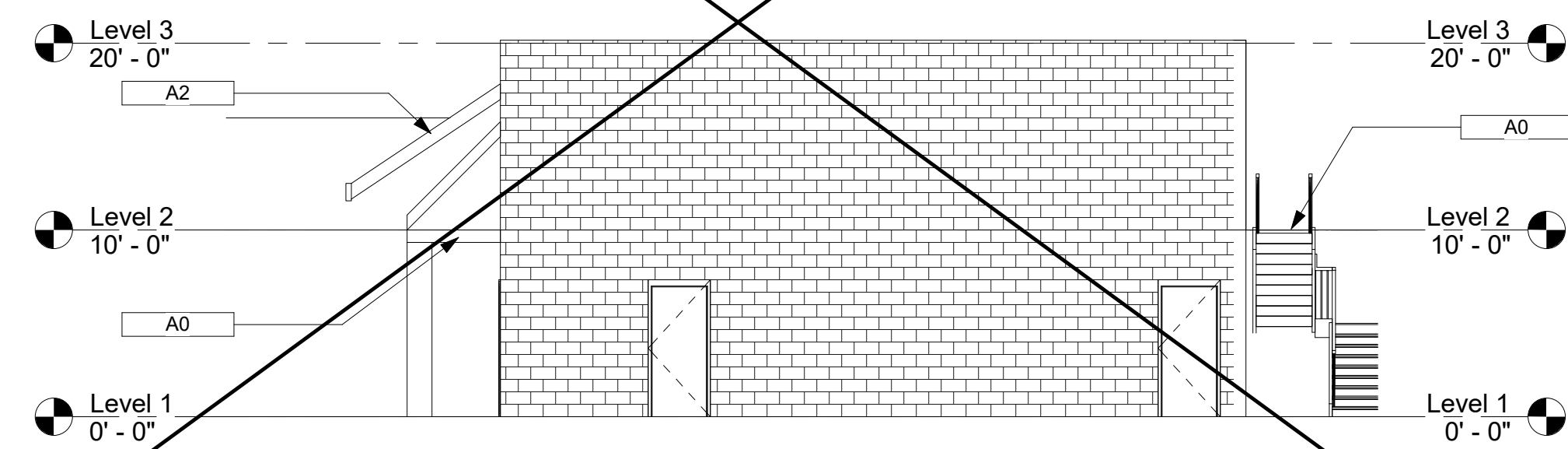
STRIP MALL ENLARGED PLAN @ NEW STORAGE ROOM 1/4" = 1'-0" 1

Key Value	Keynote Text
02	EXISTING SITE CURB; REFER TO CIVIL DRAWINGS
A14	EXISTING INTERIOR CMU WALL TO REMAIN; PROTECT IN PLACE
A16	SAWCUT AND REMOVE (E) CONCRETE SLAB; REFER TO DETAIL 1/1D-2
A17	SCBA BOTTLE FILL UNIT; OWNER FURNISHED, CONTRACTOR TO INSTALL
A18	EXISTING H.M. DOORS; MODIFY PER DETAIL 6/1D-4
A19	NEW OVERHEAD COILING DOOR UNIT; REFER TO DETAILS 1-5/1D-4
A20	NEW STRUCTURAL COLUMN, PAINT FINISH; REFER TO STRUCTURAL PLANS
A21	NEW SLOPED ROOF SECTION; REFER TO DETAILS AND STRUCTURAL
A28	FURNISHINGS & EQUIPMENT BY OWNER
A37	NEW EXPOSED STEEL BEAM PER STRUCTURAL, PAINT FINISH
A41	PRE-FINISHED ALUM. GUTTER & DOWNSPOUT TO FINISH CONCRETE SLAB

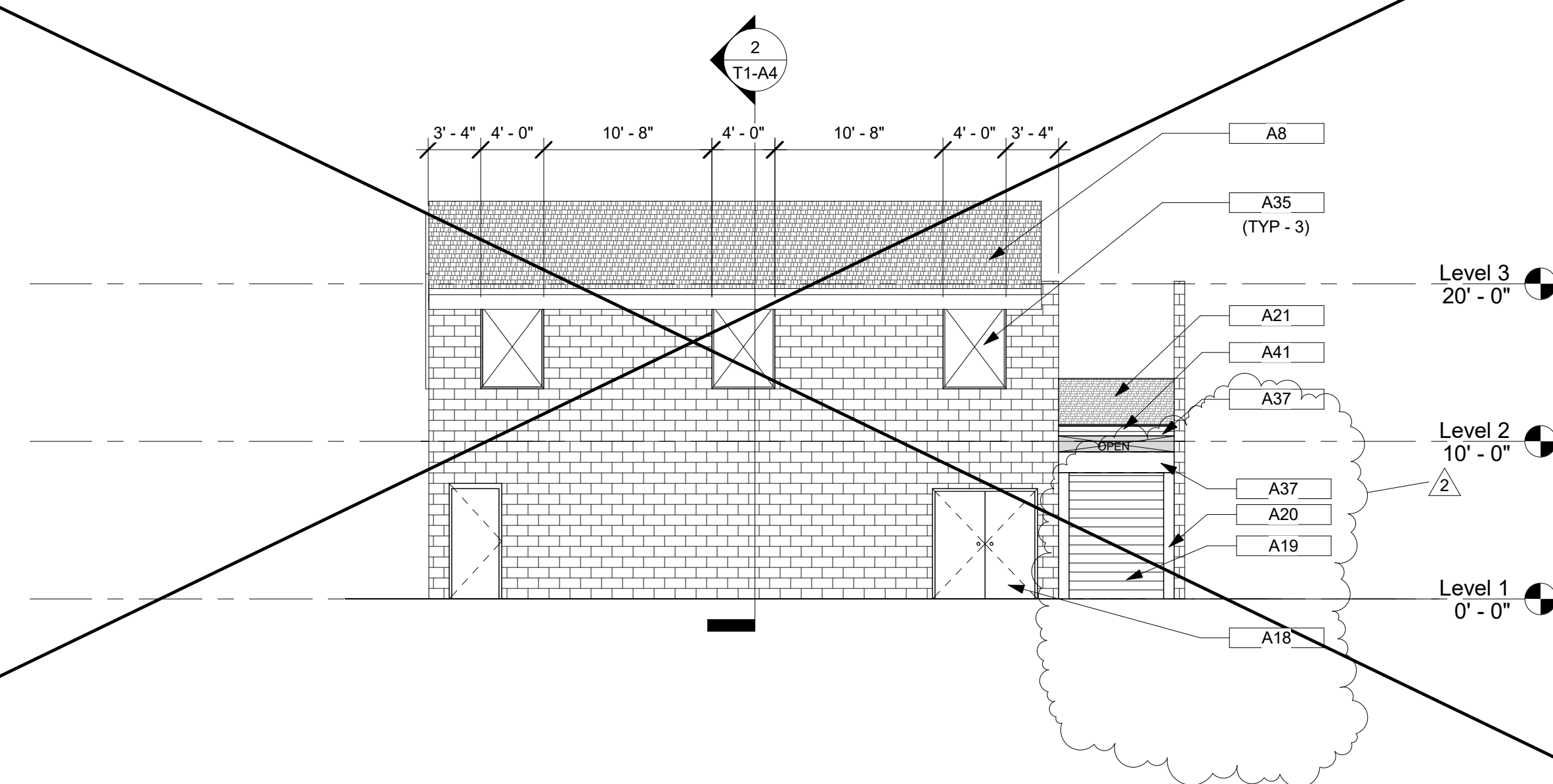
KEYNOTES

- CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING.
- DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY FROM ACTUAL LOCATIONS BASED ON EXISTING FIELD CONDITIONS.
- CONTRACTOR SHALL REVIEW ALL ASSOCIATED DISCIPLINE DRAWINGS, SUCH AS CIVIL, ELECTRICAL AND STRUCTURAL PRIOR TO BEGINNING OF WORK FOR COORDINATION.
- PRIOR TO ANY EXCAVATION WORK, CONTRACTOR SHALL CONFIRM SUB-SURFACE UTILITIES TO AVOID DAMAGE AND/OR INTERRUPTIONS.
- CONTRACTOR SHALL BE AWARE THAT THE FACILITY WILL REMAIN IN USE DURING PLANNED CONSTRUCTION. ALL WORK, INCLUDING DELIVERIES, STAGING, EXCAVATION AND SAFETY INCORPORATION SHALL BE COORDINATED WITH ORANGE COUNTY FIRE SITE PERSONNEL PRIOR.
- CONTRACTOR SHALL REVIEW STRUCTURAL DRAWINGS AND DETAILS IN CONJUNCTION WITH THE ARCHITECTURAL PLANS FOR ADDITIONAL SCOPE OF WORK REQUIREMENTS. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER OF ANY DISCREPANCIES.
- ALL ROOF PLYWOOD SHALL BE FIRE TREATED PLYWOOD, CLASS 1, TYPE A WITH A FLAME SPREAD RATING LESS THAN 25, AND A UFA (C-20) STANDARDS, UL LISTED AS MANUFACTURED BY ROYAL PLYWOOD CO. 14171 E. PARK PLACE, CERRITOS, CA 90703 (562) 404-2989 OR APPROVED EQ.

TASK 3: STRIP MALL MODIFICATION GENERAL NOTES



STRIP MALL SOUTH ELEVATION



STRIP MALL NORTH ELEVATION

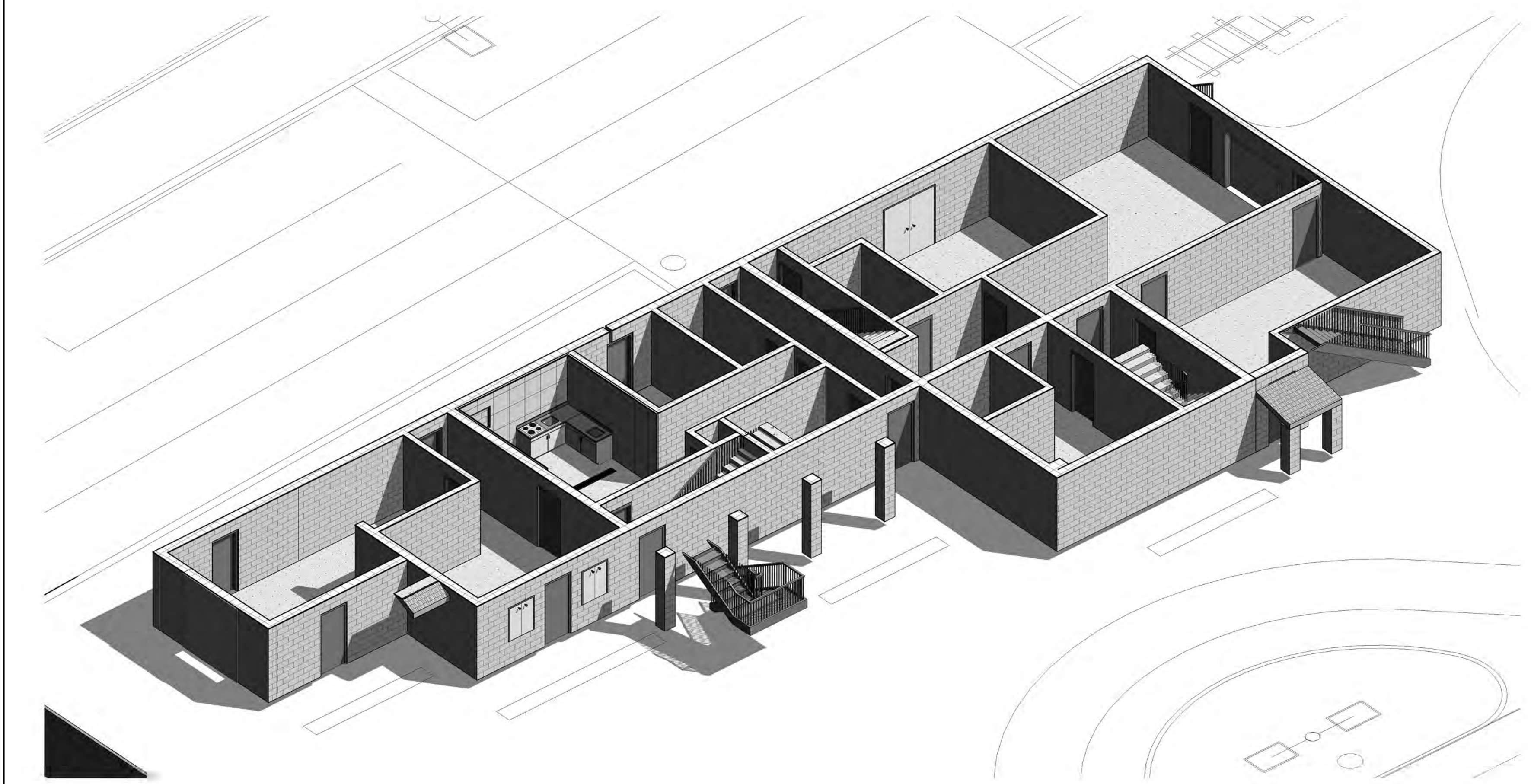
Key Value	Keynote Text
1300025	(N) WALL EXTERIOR WALL MOUNTED GAS METER MANIFOLD PROP
130040	(N) WALL EXTERIOR WALL MOUNTED SIMULATED ELECTRICAL PANEL PROP
A0	EXISTING CONSTRUCTION: PROTECT IN PLACE
A2	NEW MANSARD ROOF SYSTEM OVER (E) SLOPING ROOF: REFER TO DETAILS
A7	NEW GALVANIZED GUARDRAIL FACE-MOUNTED: REFER TO DETAIL
A8	NEW ROOF MANSARD: REFER TO DETAILS & STRUCTURAL
A18	EXISTING H.M. DOORS: MODIFY PER DETAIL 6/TD-4
A19	NEW OVERHEAD COILING DOOR UNIT: REFER TO DETAILS 1-5/TD-4
A20	NEW STRUCTURAL COLUMN, PAINT FINISH: REFER TO STRUCTURAL PLANS
A21	NEW SLOPED ROOF SECTION: REFER TO DETAILS AND STRUCTURAL
A35	EXISTING OPENING FRAMED; REFER TO DETAIL 1/TD-5
A36	NEW FRAMED OPENING; REFER TO DETAIL 2/TD-5
A37	NEW EXPOSED STEEL BEAM PER STRUCTURAL, PAINT FINISH
A41	PRE-FINISHED ALUM. GUTTER & DOWNSPOUT TO FINISH CONCRETE SLAB

- | | | | |
|----|--|----|---|
| 1. | CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING. | 6. | CONTRACTOR SHALL REVIEW STRUCTURAL DRAWINGS AND DETAILS IN CONJUNCTION WITH THE ARCHITECTURAL PLANS FOR ADDITIONAL SCOPE OF WORK REQUIREMENTS. CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER OF ANY DISCREPANCIES. |
| 2. | DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY IN ACTUAL LOCATIONS BASED ON FIELD CONDITIONS. | 7. | ALL ROOF PLYWOOD SHALL BE FIRE TREATED PLYWOOD, CLASS 1, TYPE A WITH A FLAME SPREAD RATING LESS THAN 25, AWPA UCF-A (C-20) STANDARDS, AS LISTED AS MANUFACTURED BY ROYAL PLYWOOD CO. 14171 E. PARK PLACE, CERRITOS, CA 90703 (562) 404-2989 OR APPROVED EQ. |
| 3. | CONTRACTOR SHALL REVIEW ALL ASSOCIATED DISCIPLINE DRAWINGS, SUCH AS CIVIL, ELECTRICAL AND STRUCTURAL PRIOR TO BEGINNING OF WORK FOR COORDINATION. | | |
| 4. | PRIOR TO ANY EXCAVATION WORK, CONTRACTOR SHALL CONFIRM SUB-SURFACE UTILITIES TO AVOID DAMAGE AND/OR INTERRUPTIONS. | | |
| 5. | CONTRACTOR SHALL BE AWARE THAT THE FACILITY WILL REMAIN IN USE DURING PLANNED CONSTRUCTION. ALL WORK, INCLUDING, DELIVERIES, STAGING, EXCAVATION AND SAFETY INCORPORATION SHALL BE COORDINATED WITH ORANGE COUNTY FIRE DEPARTMENT PERSONNEL PRIOR. | | |



1/8" = 1'-0"

4



1st LEVEL ISOMETRIC FLOOR PLAN

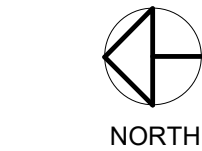
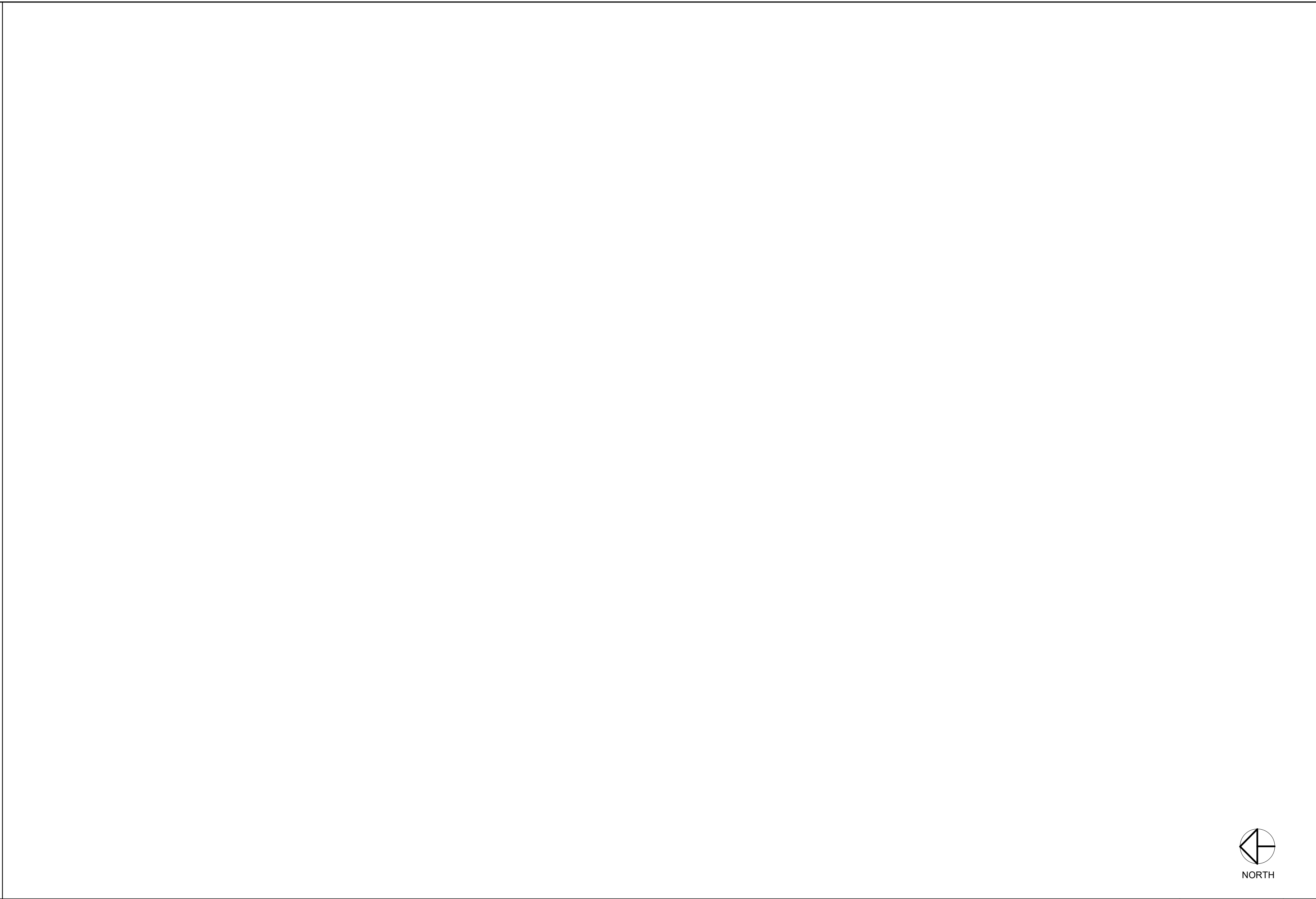
1/8" = 1'-0"

2

Key Value	Keynote Text
119510-2	NEW CLASS "B" LIVE FIRE KITCHEN COUNTER W/ CONCEALED FIRE PROP
119511-W	NEW CLASS "B" HIGH TEMPERATURE WALL LINING SYSTEM
130025	(N) WALL EXTERIOR WALL MOUNTED GAS METER MANIFOLD PROP
130040	(N) WALL EXTERIOR WALL MOUNTED SIMULATED ELECTRICAL PANEL PROP
A13	NEW HOLLOW METAL DOOR & FRAME: PAINT FINISH SEE DETAIL
A14	EXISTING INTERIOR CMU WALL TO REMAIN: PROTECT IN PLACE
A15	EXISTING FLOOR DRAIN ASSEMBLY: PROTECT IN PLACE
A23	NEW BREACH DOOR: REFER TO DETAIL 7/TD-4
A30	NEW FULL HEIGHT CMU WALL: REFER TO STRUCTURAL
D1	REMOVE (E) HIGH TEMPERATURE WALL LINING AND FRAMING
D2	REMOVE (E) HIGH TEMPERATURE CEILING LINING AND FRAMING
D3	REMOVE (E) SOFA LIVE FIRE PROP AND ASSOCIATED INFRASTRUCTURE
D8	REMOVE (E) LIVE FIRE PROP CABINET AND EQUIPMENT

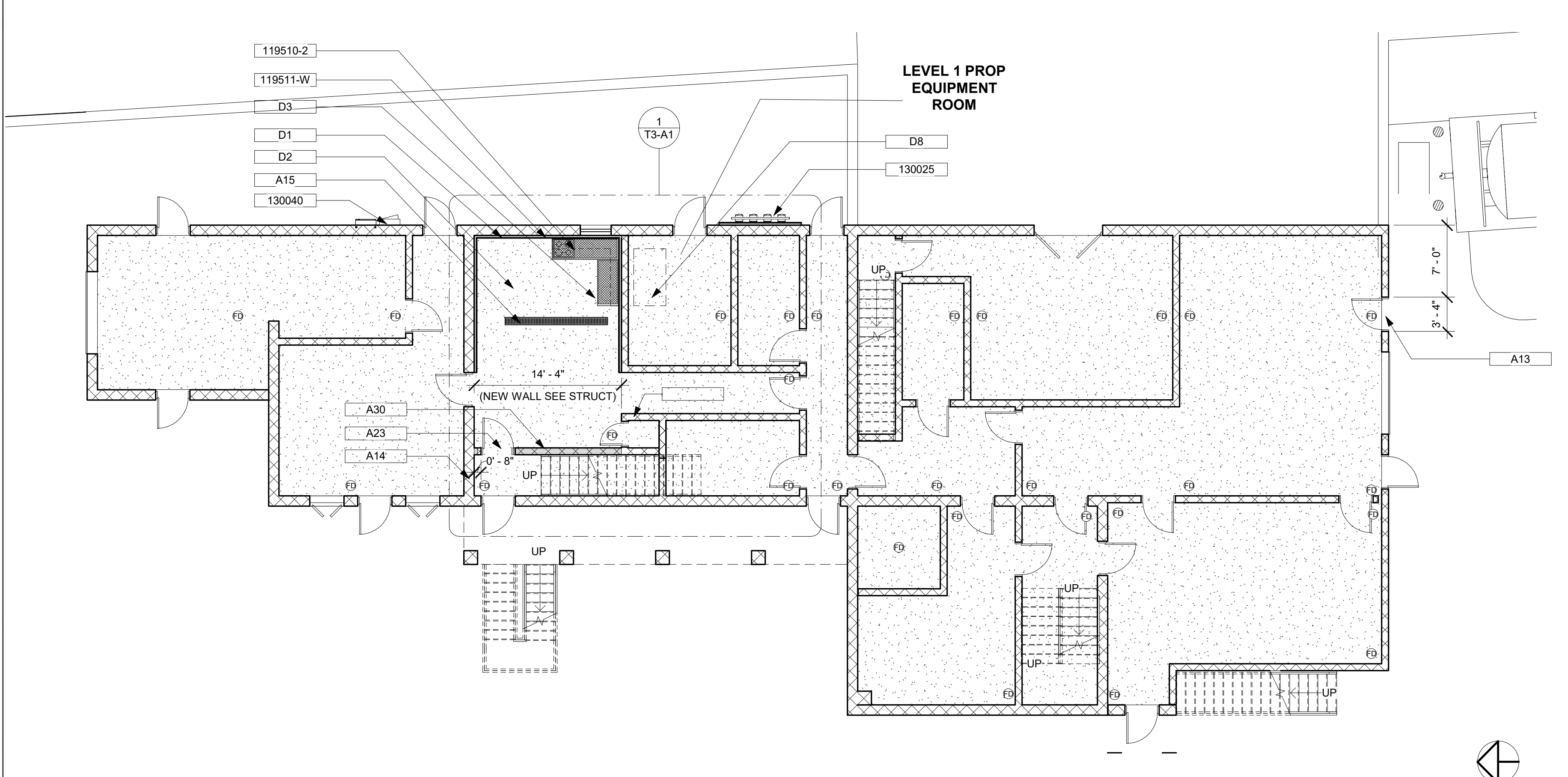
Key Value	Keynote Text
119510-2	NEW CLASS "B" LIVE FIRE KITCHEN COUNTER W/ CONCEALED FIRE PROP
119511-W	NEW CLASS "B" HIGH TEMPERATURE WALL LINING SYSTEM
130025	(N) WALL EXTERIOR WALL MOUNTED GAS METER MANIFOLD PROP
130040	(N) WALL EXTERIOR WALL MOUNTED SIMULATED ELECTRICAL PANEL PROP
A13	NEW HOLLOW METAL DOOR & FRAME: PAINT FINISH SEE DETAIL
A14	EXISTING INTERIOR CMU WALL TO REMAIN: PROTECT IN PLACE
A15	EXISTING FLOOR DRAIN ASSEMBLY: PROTECT IN PLACE
A23	NEW BREACH DOOR: REFER TO DETAIL 7/TD-4
A30	NEW FULL HEIGHT CMU WALL: REFER TO STRUCTURAL
D1	REMOVE (E) HIGH TEMPERATURE WALL LINING AND FRAMING
D2	REMOVE (E) HIGH TEMPERATURE CEILING LINING AND FRAMING
D3	REMOVE (E) SOFA LIVE FIRE PROP AND ASSOCIATED INFRASTRUCTURE
D8	REMOVE (E) LIVE FIRE PROP CABINET AND EQUIPMENT

KEYNOTES



1/8" = 1'-0"

3



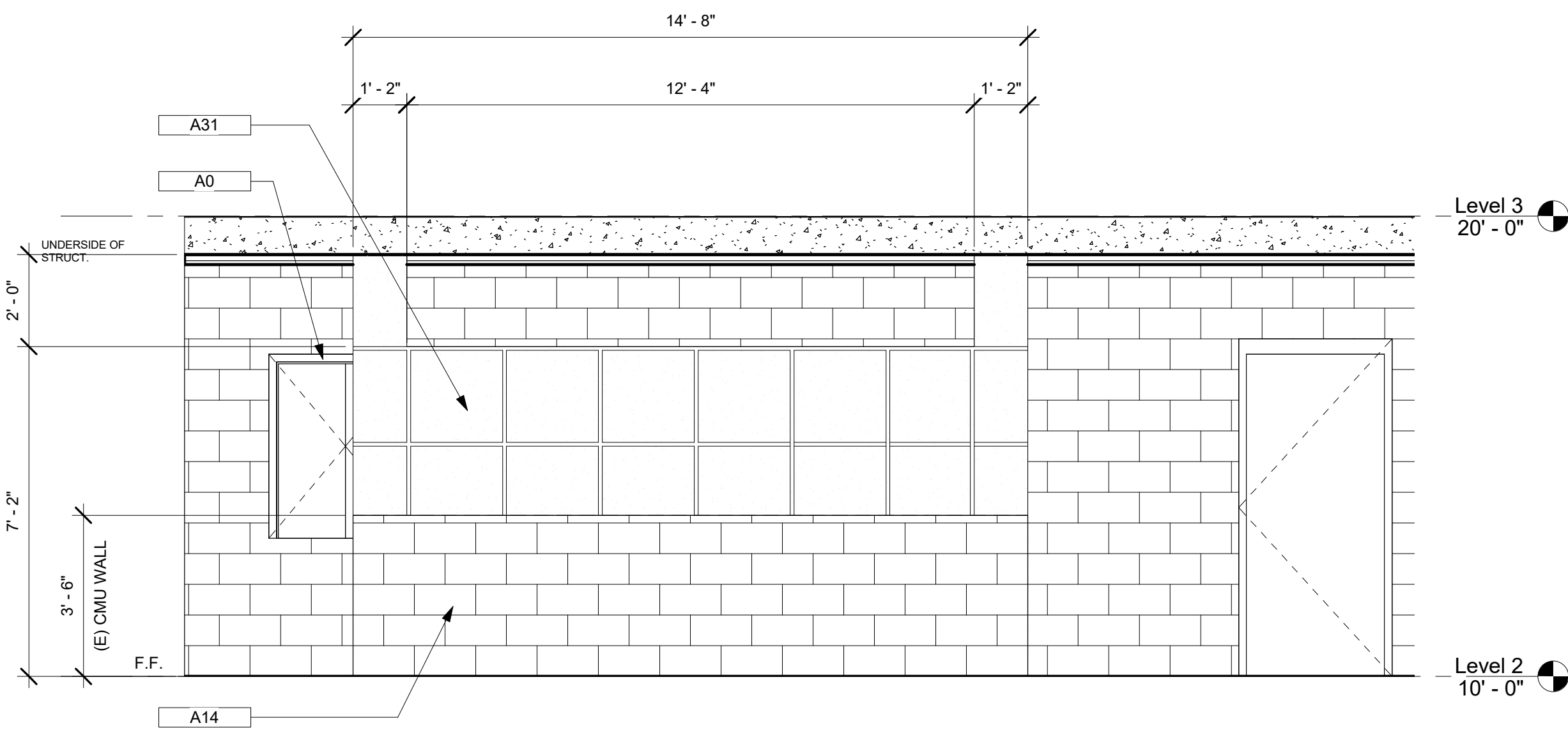
1st LEVEL MODIFICATION PLAN

1/8" = 1'-0"

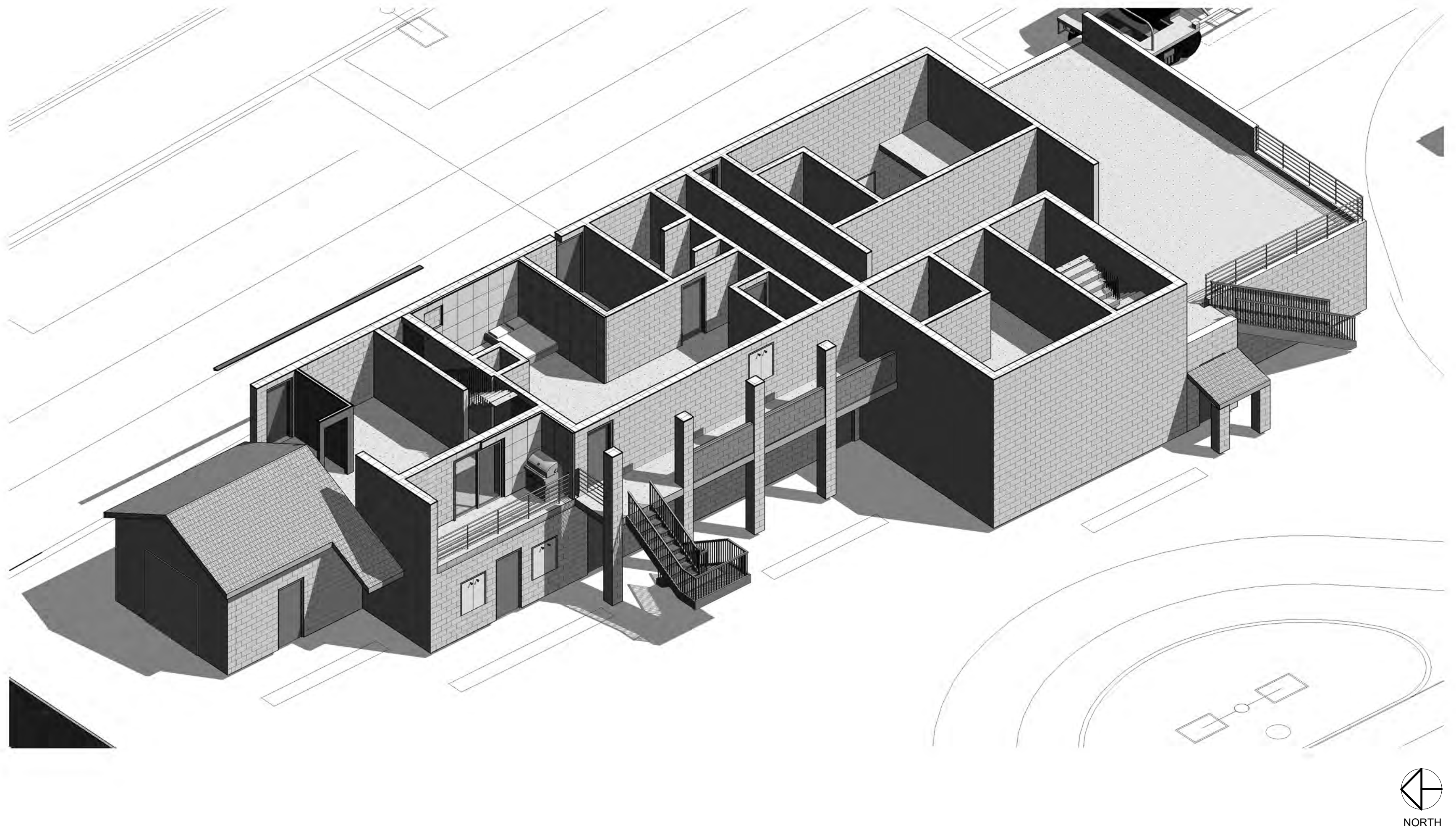
1

- CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS DIMENSIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING.
- DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY IN ACTUAL LOCATIONS BASED ON EXISTING FIELD CONDITIONS.
- CONTRACTOR SHALL REVIEW ALL ASSOCIATED DISCIPLINE DRAWINGS, SUCH AS CIVIL, ELECTRICAL AND STRUCTURAL PRIOR TO BEGINNING OF WORK FOR COORDINATION, INCLUDING BUT NOT LIMITED TO EXISTING 'AS-BUILT' DOCUMENTS/
- PROP VENDOR SHALL PREPARE COMPREHENSIVE SHOP DRAWINGS DEPICTING ALL PROPOSED NEW AND EXISTING CONDITIONS AND EQUIPMENT, INCLUDING MECHANICAL, ELECTRICAL AND INFRASTRUCTURE MODIFICATIONS AND/OR CHANGES.
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- TRAINING TOWER CONTAINS EXISTING LIVE FIRE PROPS AND ASSOCIATED HIGH TEMPERATURE LINING SYSTEMS ON WALLS AND CEILINGS INSTALLED DURING ORIGINAL CONSTRUCTION. CONTRACTOR MAY REUSE EQUIPMENT, LINING OR INFRASTRUCTURE AS DESIRED. REFER TO CONTRACT SPECIFICATIONS.
- CONTRACTOR SHALL THOROUGHLY REVIEW ACCOMPANYING STRUCTURAL DRAWINGS AND THE WORK DESCRIBED THEREIN AND COORDINATE ACCORDINGLY WITH ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS. ANY DISCREPANCIES SHALL REPORTED TO THE ARCHITECT DIRECTLY.

TASK 2 : TOWER MODIFICATION GENERAL NOTES



NOTE: REFER TO STRUCTURAL DETAIL 12A/S7.1 FOR ADDITIONAL INFORMATION



2nd LEVEL INTERIOR ELEVATION @ NEW STAIRWELL WALL

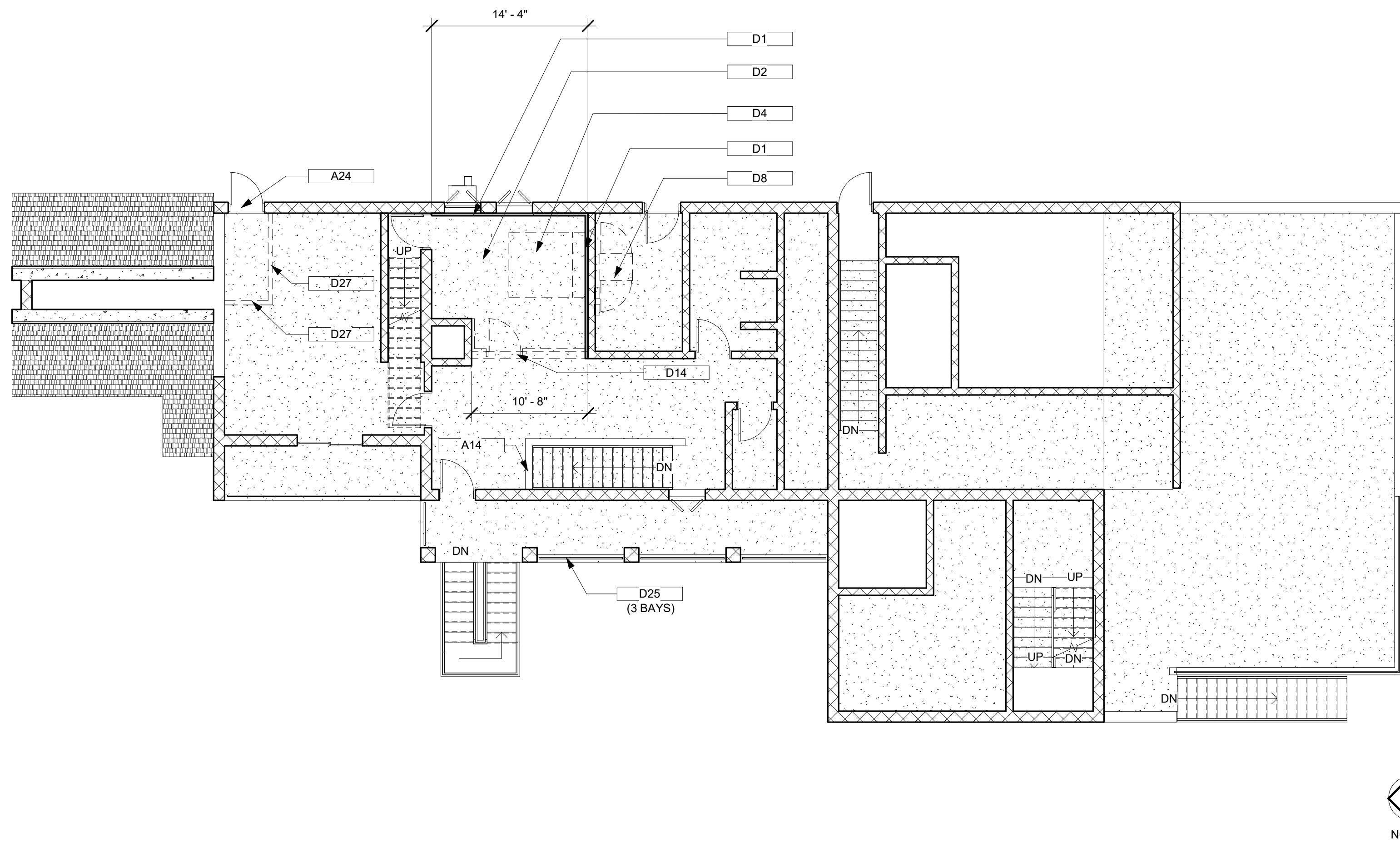
3/8" = 1'-0"

4

2nd LEVEL ISOMETRIC FLOOR PLAN

3/32" = 1'-0"

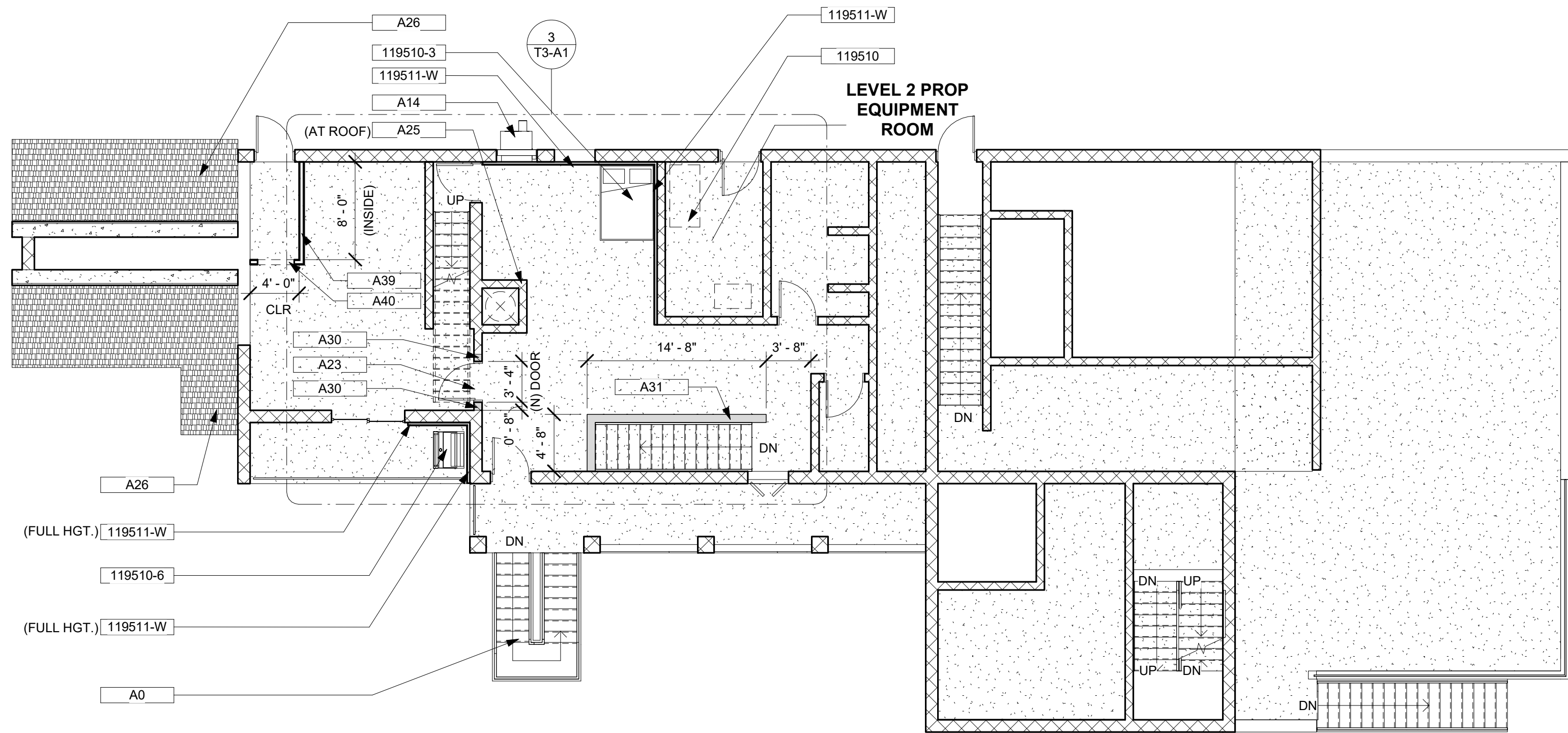
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2nd LEVEL DEMOLITION PLAN

3/32" = 1'-0"

2



2nd LEVEL MODIFICATION PLAN

3/32" = 1'-0"

1

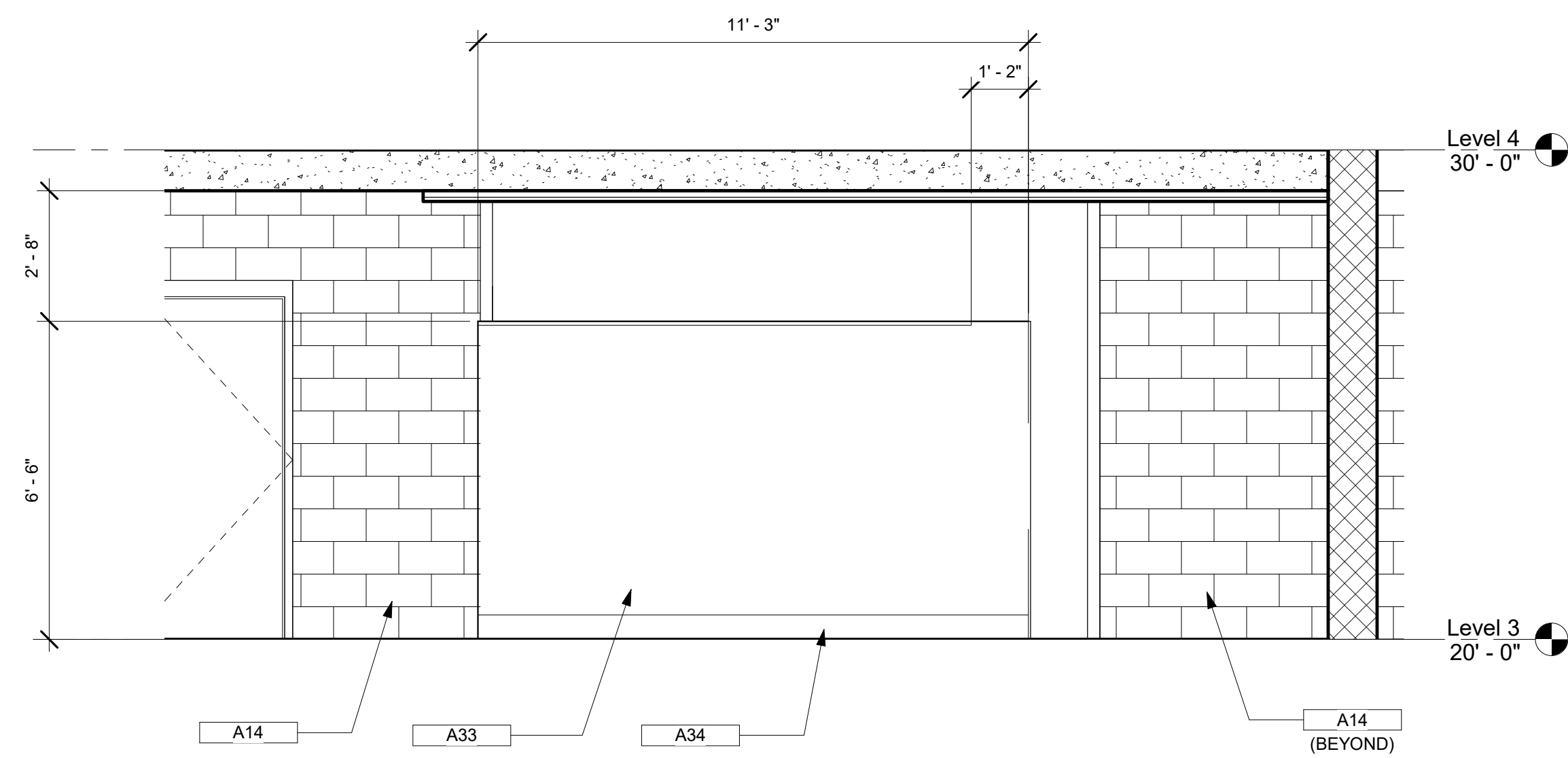
Key Value	Keynote Text
119510	NEW LIVE FIRE PROP EQUIPMENT, CABINET & INFRASTRUCTURE, REFER TO SPEC.
119510-3	NEW CLASS "B" LIVE FIRE BEDROOM PROP
119510-6	NEW CLASS "B" LIVE FIRE EXTERIOR BALCONY BBQ PROP
119511-W	NEW CLASS "B" HIGH TEMPERATURE WALL LINING SYSTEM
A0	EXISTING CONSTRUCTION: PROTECT IN PLACE
A14	EXISTING INTERIOR CMU WALL TO REMAIN: PROTECT IN PLACE
A23	NEW BREACH DOOR: REFER TO DETAIL 7/TD-4
A24	EXISTING HOLLOW METAL DOOR: PROTECT IN PLACE
A25	EXISTING LIVE FIRE PROP EMERGENCY FAN: REFER TO SPECIFICATIONS
A26	EXISTING SLOPING SHINGLE ROOF TO REMAIN: PROTECT IN PLACE
A30	NEW FULL HEIGHT CMU WALL: REFER TO STRUCTURAL

Key Value	Keynote Text
A31	NEW STUD WALL @ STAIRWELL: REFER TO DETAIL 9/TD-2 AND STRUCTURAL
A39	NEW FULL HEIGHT, 4" METAL STUD WALL W/ 3/4" PLYWOOD EA. SIDE
A40	36" x 80" FRAMED DOOR OPENING
D1	REMOVE (E) HIGH TEMPERATURE WALL LINING AND FRAMING
D2	REMOVE (E) HIGH TEMPERATURE CEILING LINING AND FRAMING
D4	REMOVE (E) BEDROOM LIVE FIRE PROP AND ASSOCIATED INFRASTRUCTURE
D8	REMOVE (E) LIVE FIRE PROP CABINET AND EQUIPMENT
D14	REMOVE (E) NON-BEARING CMU WALL AND DOOR: REFER TO DETAIL
D25	REMOVE (E) METAL GUARDRAIL AT BALCONY EDGE
D27	REMOVE (E) STUD WALL AND DOOR SYSTEM

KEYNOTES

- CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS DIMENSIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING.
- DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY IN ACTUAL LOCATIONS BASED ON EXISTING FIELD CONDITIONS.
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- TRAINING TOWER CONTAINS EXISTING LIVE FIRE PROPS AND ASSOCIATED HIGH TEMPERATURE LINING SYSTEMS ON WALLS AND CEILINGS INSTALLED DURING ORIGINAL CONSTRUCTION. CONTRACTOR MAY REUSE EQUIPMENT, LINING OR INFRASTRUCTURE AS DESIRED. REFER TO CONTRACT SPECIFICATIONS.
- CONTRACTOR SHALL THOROUGHLY REVIEW ACCOMPANYING STRUCTURAL DRAWINGS AND THE WORK DESCRIBED THEREIN AND COORDINATE ACCORDINGLY WITH ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS. ANY DISCREPANCIES SHALL REPORTED TO THE ARCHITECT DIRECTLY.

TASK 5: TOWER MODIFICATION GENERAL NOTES



NOTE: REFER TO STRUCTURAL DETAIL 8A/S7.1 FOR ADDITIONAL INFORMATION.

3rd LEVEL INTERIOR ELEVATION AT NEW OFFICE PROP WALL

3/8" = 1'-0"

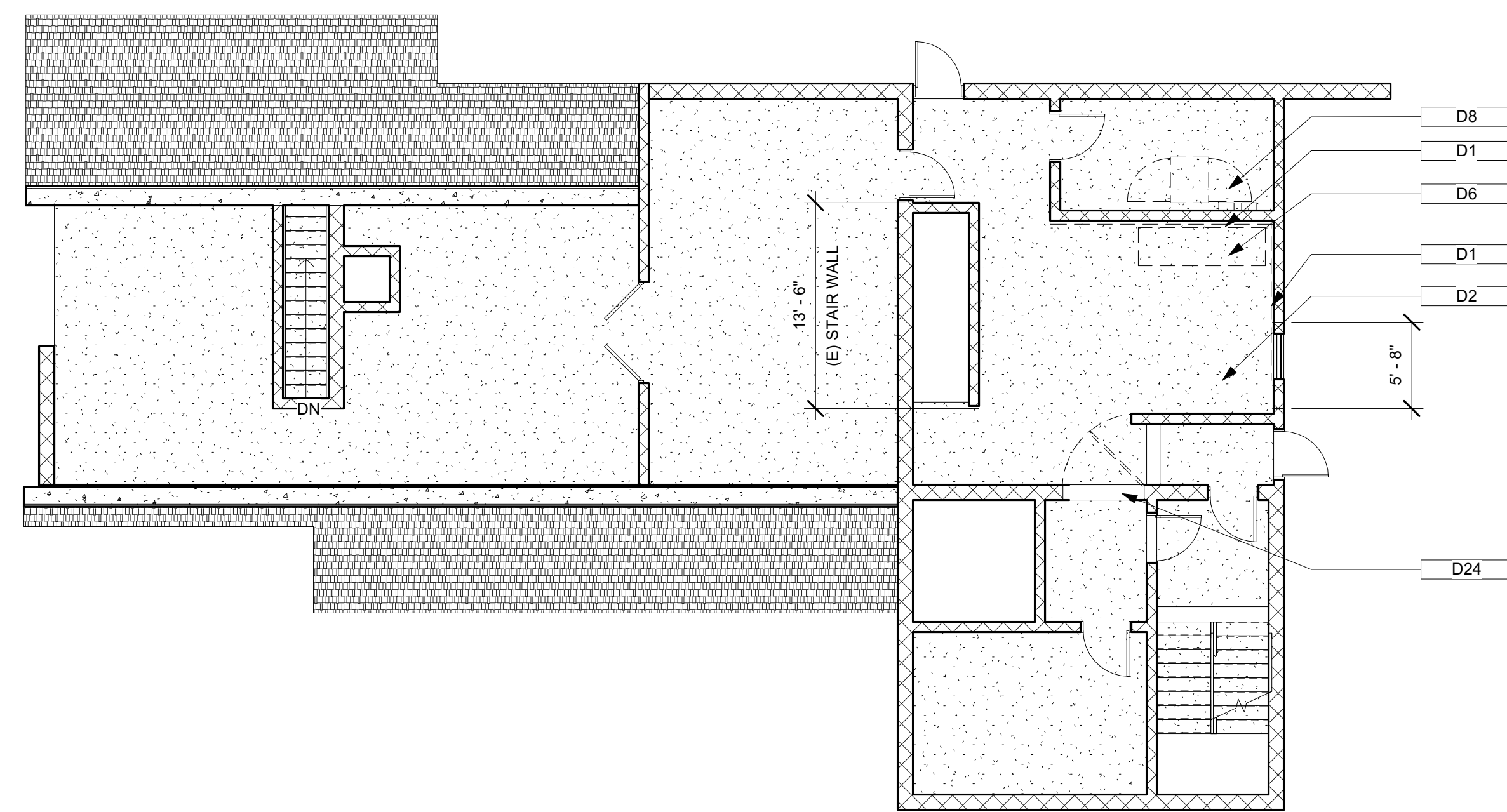
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3rd LEVEL ISOMETRIC FLOOR PLAN

3/32" = 1'-0"

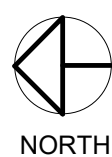
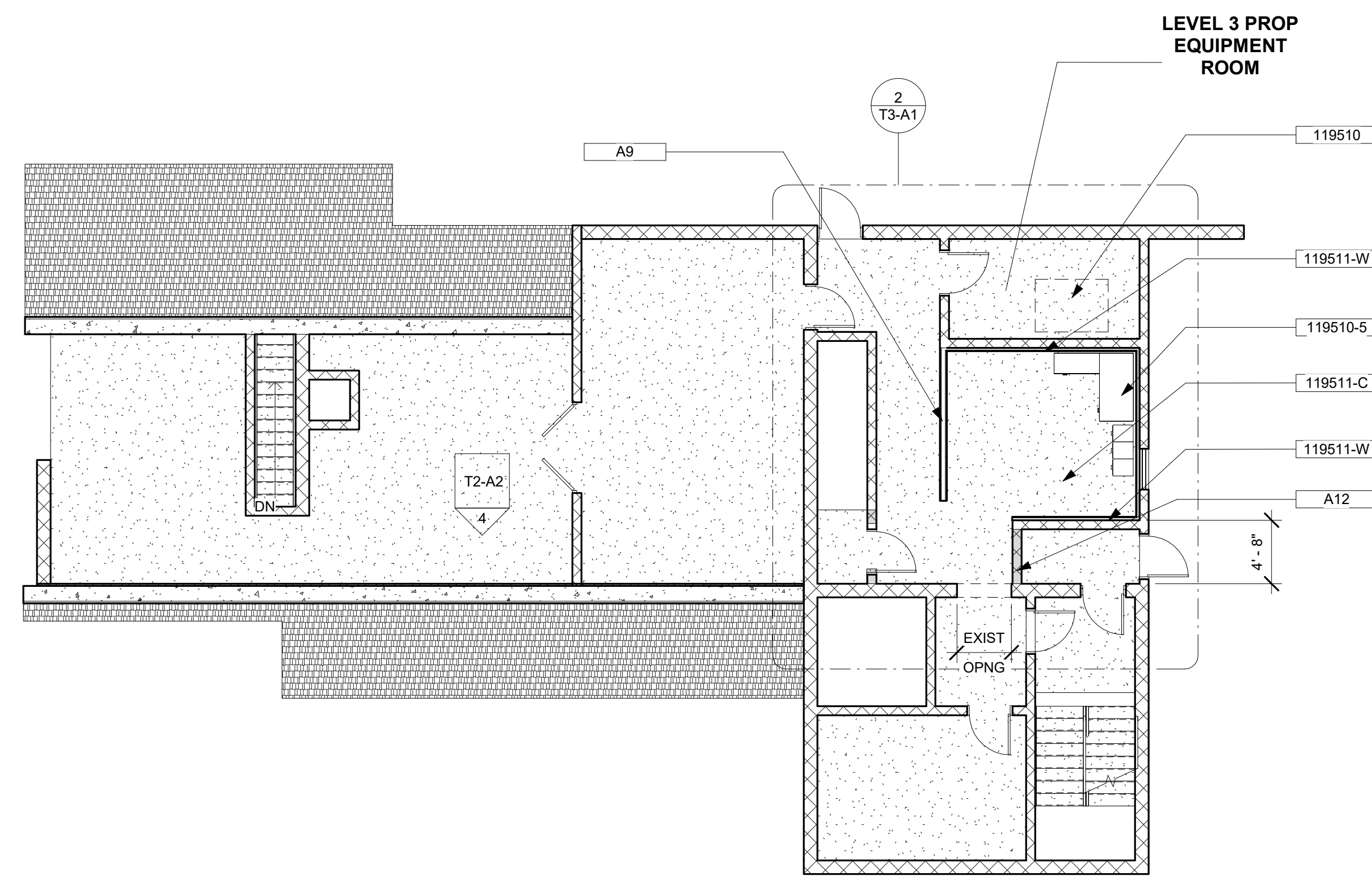
3



3rd LEVEL DEMOLITION PLAN

3/32" = 1'-0"

2



3rd LEVEL MODIFICATION PLAN

3/32" = 1'-0"

1

Key Value	Keynote Text
119510	NEW LIVE FIRE PROP EQUIPMENT, CABINET & INFRASTRUCTURE, REFER TO SPEC.
119510-5	NEW CLASS "B" LIVE FIRE OFFICE DESK W/ EXTENSION FILE PROP
119511-C	NEW CLASS "B" HIGH TEMPERATURE CEILING LINING SYSTEM
119511-W	NEW CLASS "B" HIGH TEMPERATURE WALL LINING SYSTEM
A9	NEW 72" HIGH FRAMED WALL: REFER TO DETAILS
A12	NEW CMU INFILL AT (E) DOOR OPENING TO MATCH: REFER TO 3B/S7.2

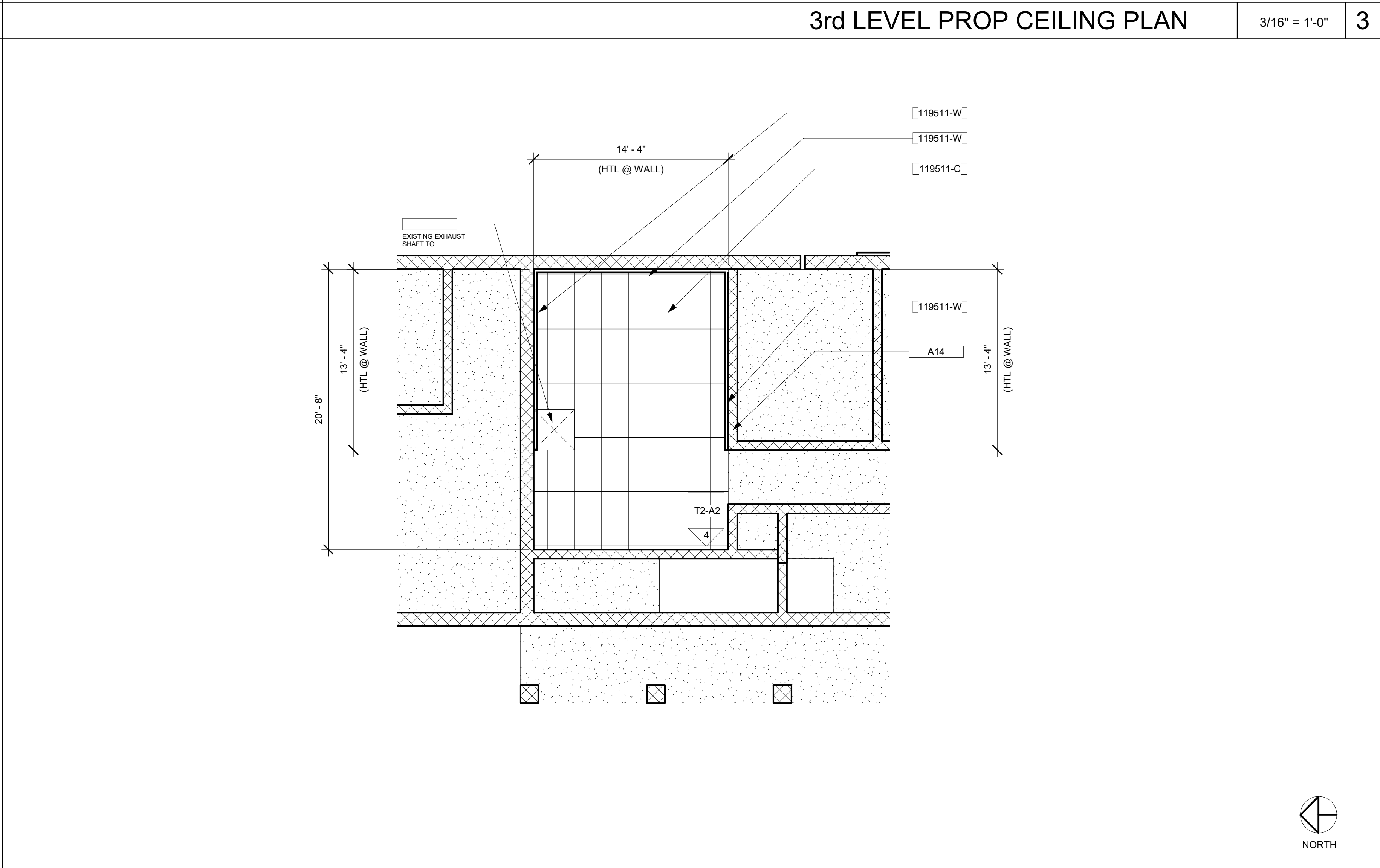
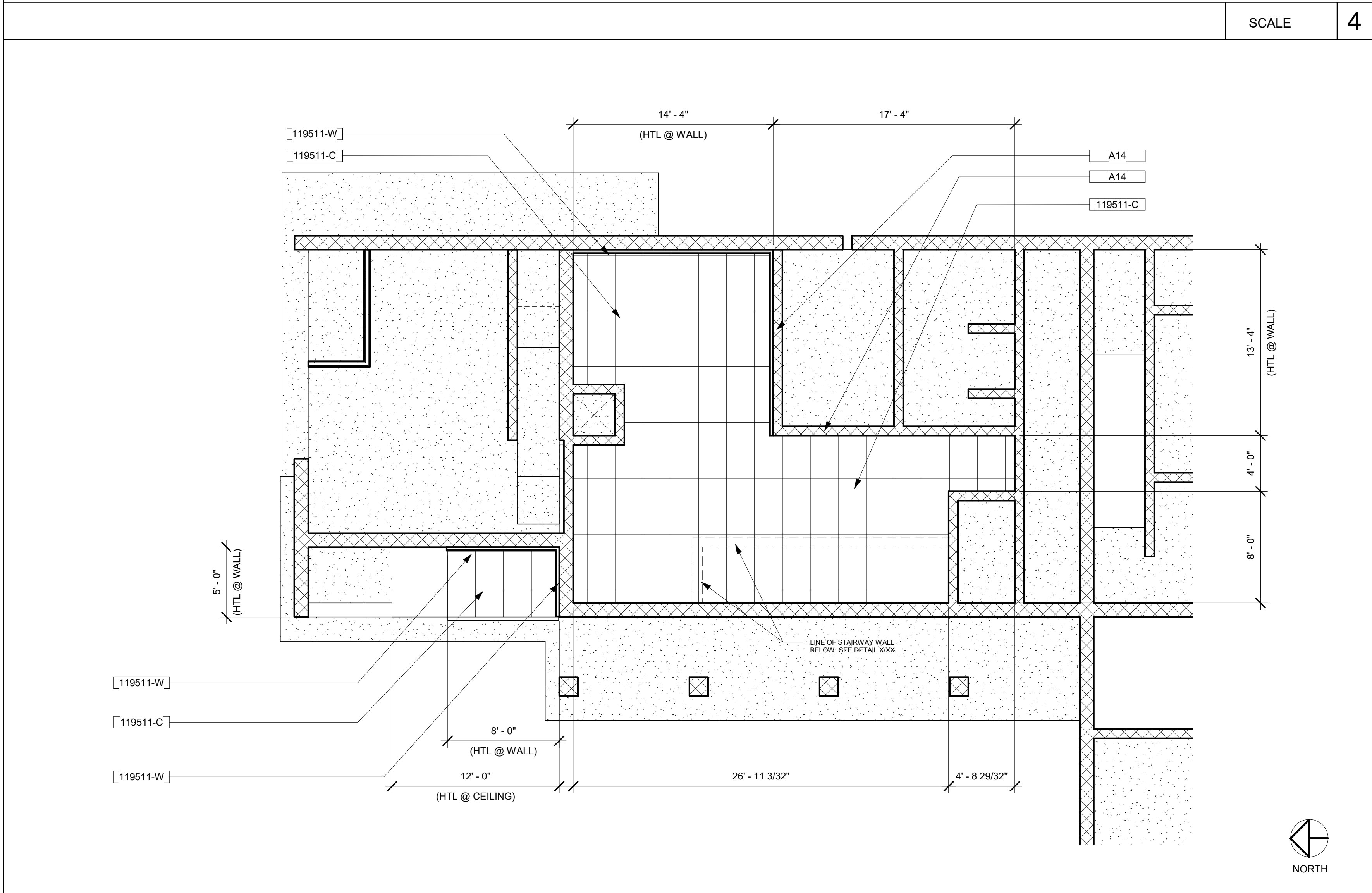
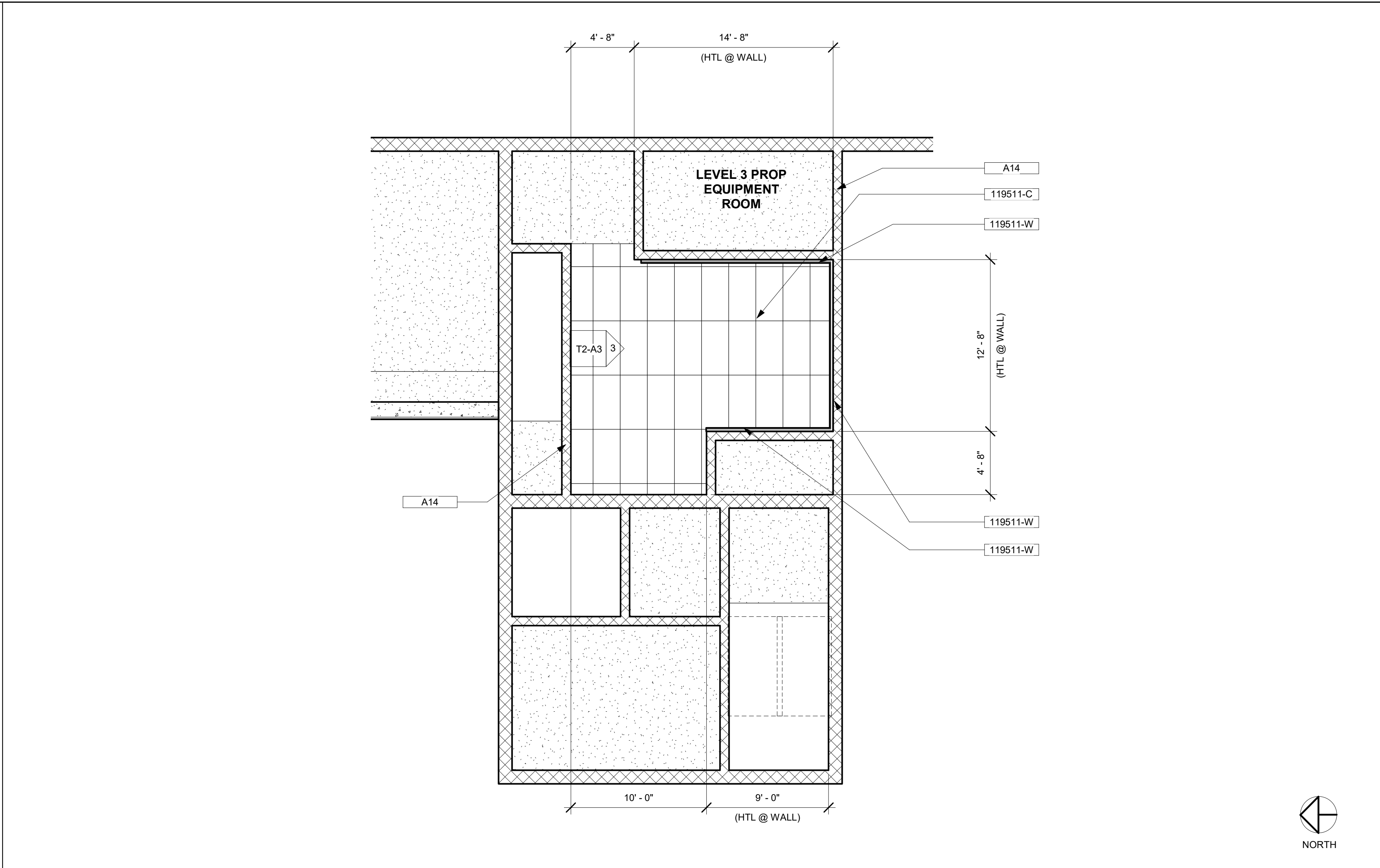
Key Value	Keynote Text
A14	EXISTING INTERIOR CMU WALL TO REMAIN: PROTECT IN PLACE
A33	EXTERIOR FIBER CEMENT WALL BOARD: REFER TO DETAIL REFERENCED
A34	6" HIGH RUBBER TOPSET BASE FULL WIDTH
D1	REMOVE (E) HIGH TEMPERATURE WALL LINING AND FRAMING
D2	REMOVE (E) HIGH TEMPERATURE CEILING LINING AND FRAMING
D6	REMOVE (E) KITCHEN LIVE FIRE PROP AND ASSOCIATED INFRASTRUCTURE
D8	REMOVE (E) LIVE FIRE PROP CABINET AND EQUIPMENT
D24	REMOVE (E) DOOR AND FRAMES

KEYNOTES

- CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS DIMENSIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING.
- DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY IN ACTUAL LOCATIONS BASED ON EXISTING FIELD CONDITIONS.
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- PROP VENDOR SHALL PREPARE COMPREHENSIVE SHOP DRAWINGS DEPICTING ALL PROPOSED NEW AND EXISTING CONDITIONS AND EQUIPMENT, INCLUDING MECHANICAL, ELECTRICAL AND INFRASTRUCTURE MODIFICATIONS AND/OR CHANGES.
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- TRAINING TOWER CONTAINS EXISTING LIVE FIRE PROPS AND ASSOCIATED HIGH TEMPERATURE LINING SYSTEMS ON WALLS AND CEILINGS INSTALLED DURING ORIGINAL CONSTRUCTION. CONTRACTOR MAY REUSE EQUIPMENT, LINING OR INFRASTRUCTURE AS DESIRED. REFER TO CONTRACT SPECIFICATIONS.
- CONTRACTOR SHALL THOROUGHLY REVIEW ACCOMPANYING STRUCTURAL DRAWINGS AND THE WORK DESCRIBED THEREIN AND COORDINATE ACCORDINGLY WITH ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT DIRECTLY.

TASK 5: TOWER MODIFICATION GENERAL NOTES

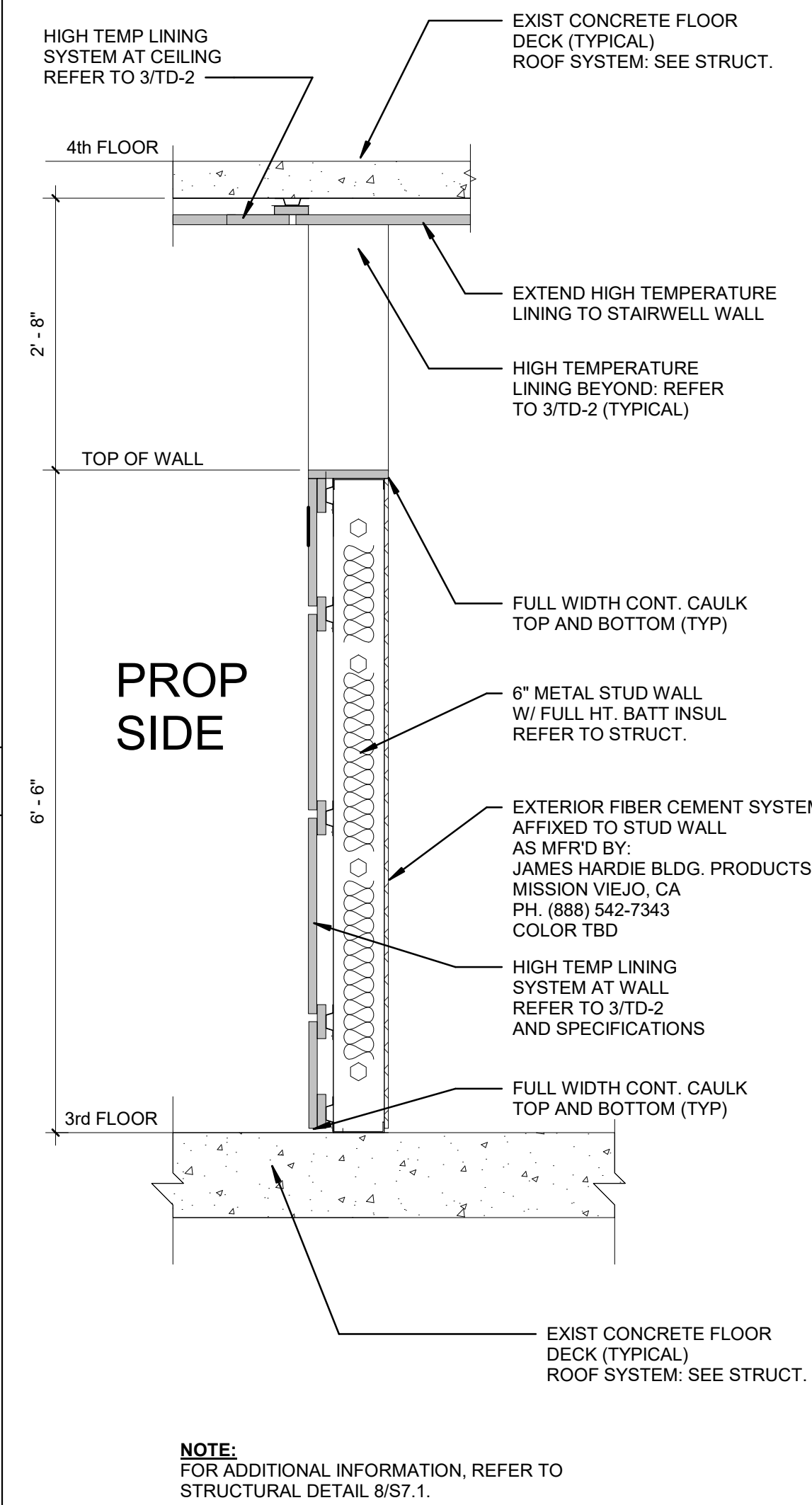




Key Value	Keynote Text
119511-C	NEW CLASS "B" HIGH TEMPERATURE CEILING LINING SYSTEM
119511-W	NEW CLASS "B" HIGH TEMPERATURE WALL LINING SYSTEM
A14	EXISTING INTERIOR CMU WALL TO REMAIN: PROTECT IN PLACE

KEYNOTES

- TASK 6: PROP REPLACEMENT GENERAL NOTES
- CONTRACTOR SHALL VISIT THE EXISTING SITE AND REVIEW ALL EXISTING CONDITIONS DIMENSIONS PRIOR TO SUBMISSION OF BID. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IN WRITING.
 - DIMENSIONS SHOWN ARE FROM EXISTING ELEMENTS ON SITE. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR ACCURACY. NEW CONSTRUCTION AND INSTALLATION MAY VARY IN ACTUAL LOCATIONS BASED ON EXISTING FIELD CONDITIONS.
 - CONTRACTOR SHALL REVIEW ALL ASSOCIATED DISCIPLINE DRAWINGS, SUCH AS CIVIL, ELECTRICAL AND STRUCTURAL PRIOR TO BEGINNING OF WORK FOR COORDINATION, INCLUDING BUT NOT LIMITED TO EXISTING 'AS-BUILT' DOCUMENTS/
 - PROP VENDOR SHALL PREPARE COMPREHENSIVE SHOP DRAWINGS DEPICTING ALL PROPOSED NEW AND EXISTING CONDITIONS AND EQUIPMENT, INCLUDING MECHANICAL, ELECTRICAL AND INFRASTRUCTURE MODIFICATIONS AND/OR CHANGES.
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 - CONTRACTOR SHALL THOROUGHLY REVIEW ACCOMPANYING STRUCTURAL DRAWINGS AND THE WORK DESCRIBED THEREIN AND COORDINATE ACCORDINGLY WITH ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS. ANY DISCREPANCIES SHALL REPORTED TO THE ARCHITECT DIRECTLY.



KEY NOTE: 00.000

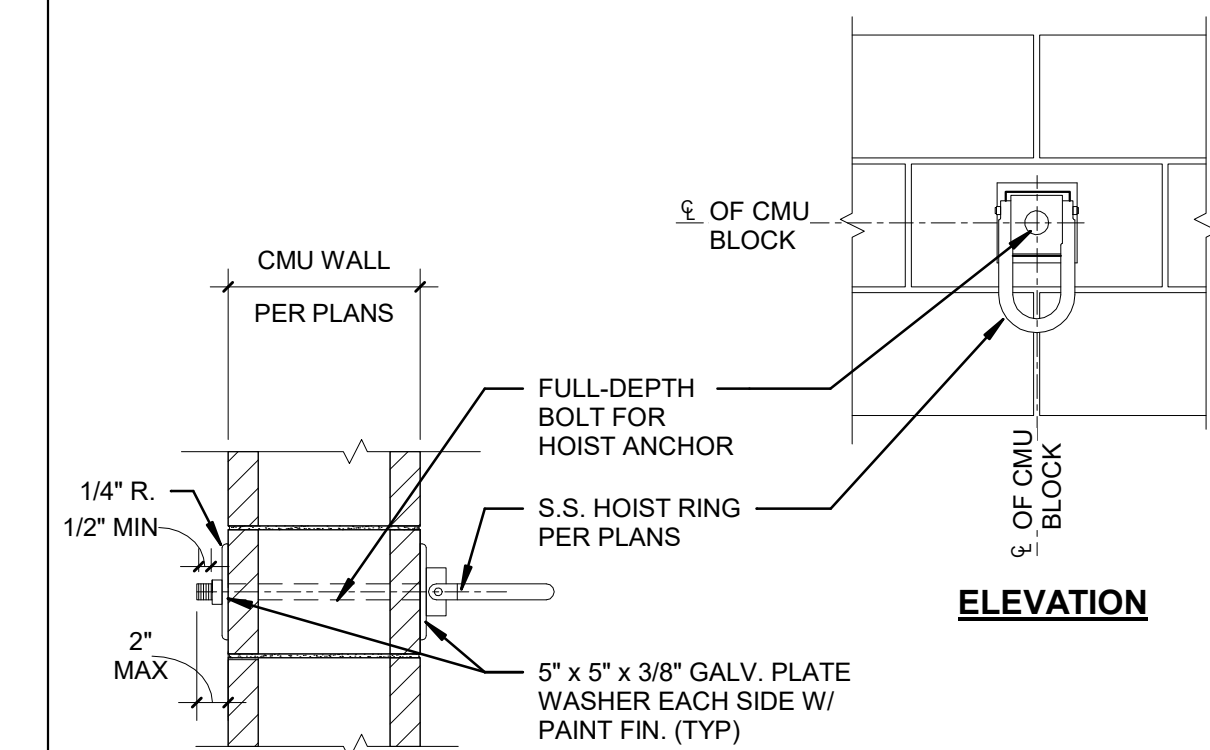
STUD WALL @ 3rd FLOOR OFFICE PROP

KEY NOTE: 00.000

DETAIL NOT USED

 $1^{\circ} = 1.0^{\circ}$

NOTE:
AS PART OF THE BASE CONTRACT, CONTRACTOR SHALL INCLUDE PROVISION AND INSTALLATION OF TWENTY (20) ADDITIONAL HOIST RINGS & WASHERS AS SHOWN. LOCATIONS OF ADDITIONAL RINGS TO BE DIRECTED BY O.C.F.A. TRAINING DEPT. PERSONNEL. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.



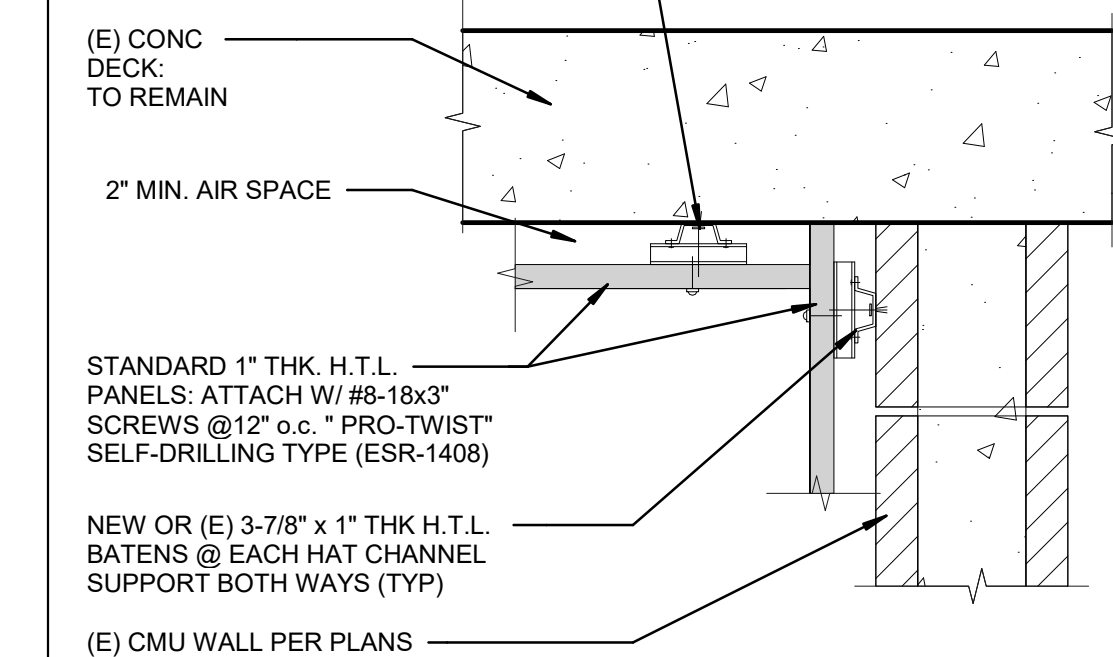
SECTION

KEY NOTE: 00.000

8 TYPICAL WALL MOUNTED REPELLING ANCHOR

 $1^{\circ} = 1' \cdot 0^{\circ}$

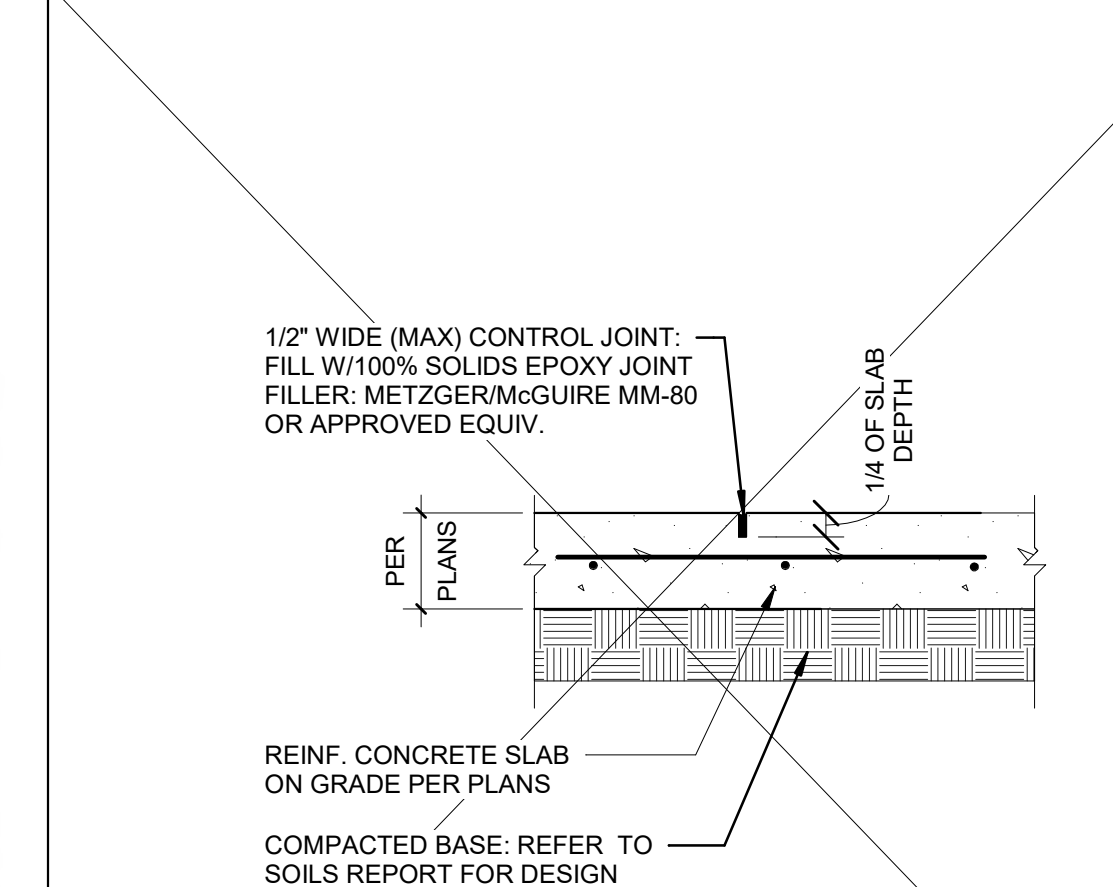
NEW OR (E) 7/8" x 18 GA GALV HAT
CHANNELS. @ 48" o.c.: ATTACHED
W/POWDER ACTUATED FASTENERS
SIMPSON TYPE PDP-125, 1-1/8"
PENETRATION (ESR-2138)



	<p>NOTES:</p> <ol style="list-style-type: none"> 1. FOR ADDITIONAL HIGH TEMPERATURE LINING INFORMATION, REFER TO PROJECT SPECIFICATIONS. 2. CONTRACTOR TO REMOVE ALL EXISTING HIGH TEMPERATURE LINING CALCIUM SILICATE BOARDS AND PROTECTIVE CEILING PLATES FROM BURN ROOMS PRIOR TO INSTALLATION. CONTRACTOR MAY REUSE EXISTING WALL FURRING FOR NEW PANEL BOARDS.
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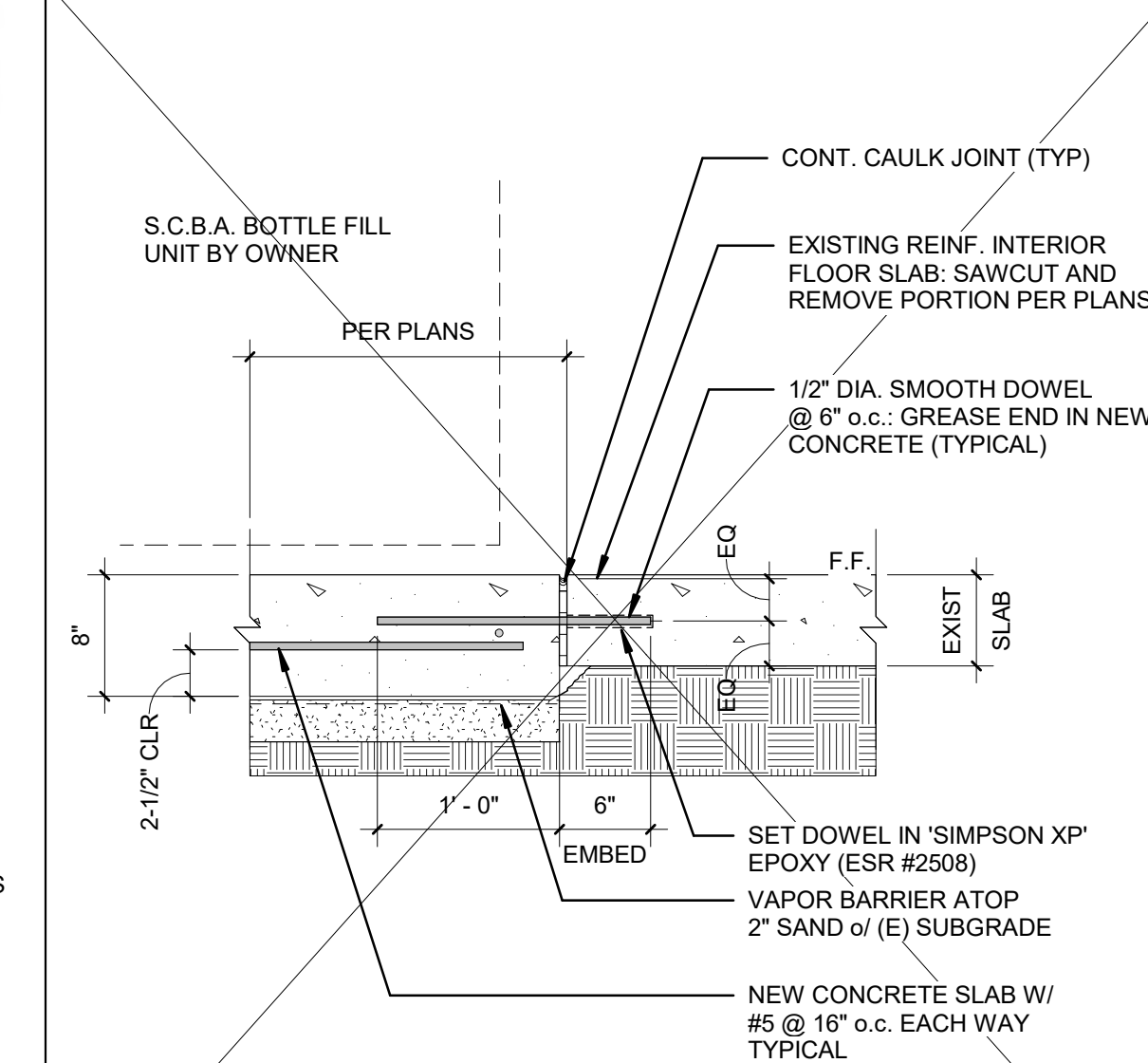
KEY NOTE: 00.000

TYPICAL HIGH TEMPERATURE LINING

 $1^{\circ} = 1'-0''$ 

KEY NOTE: 17

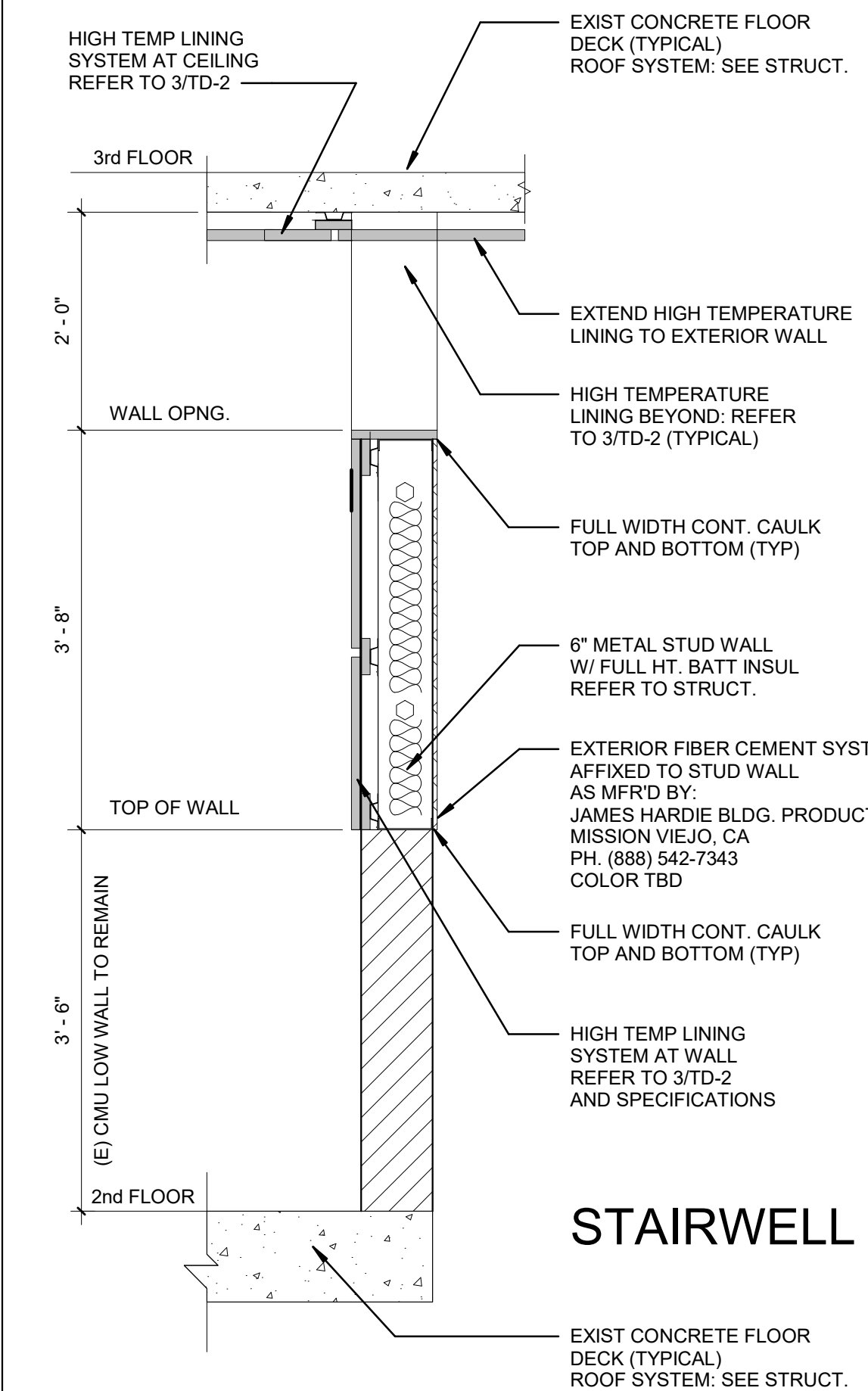
DETAIL NOT USED

 $1^* \equiv 1' \cdot 0^*$ 

KEY NOTE: A16

5 SECTION AT (N) THICKENED SLAB FOR SCBA

1" = 1'-0"



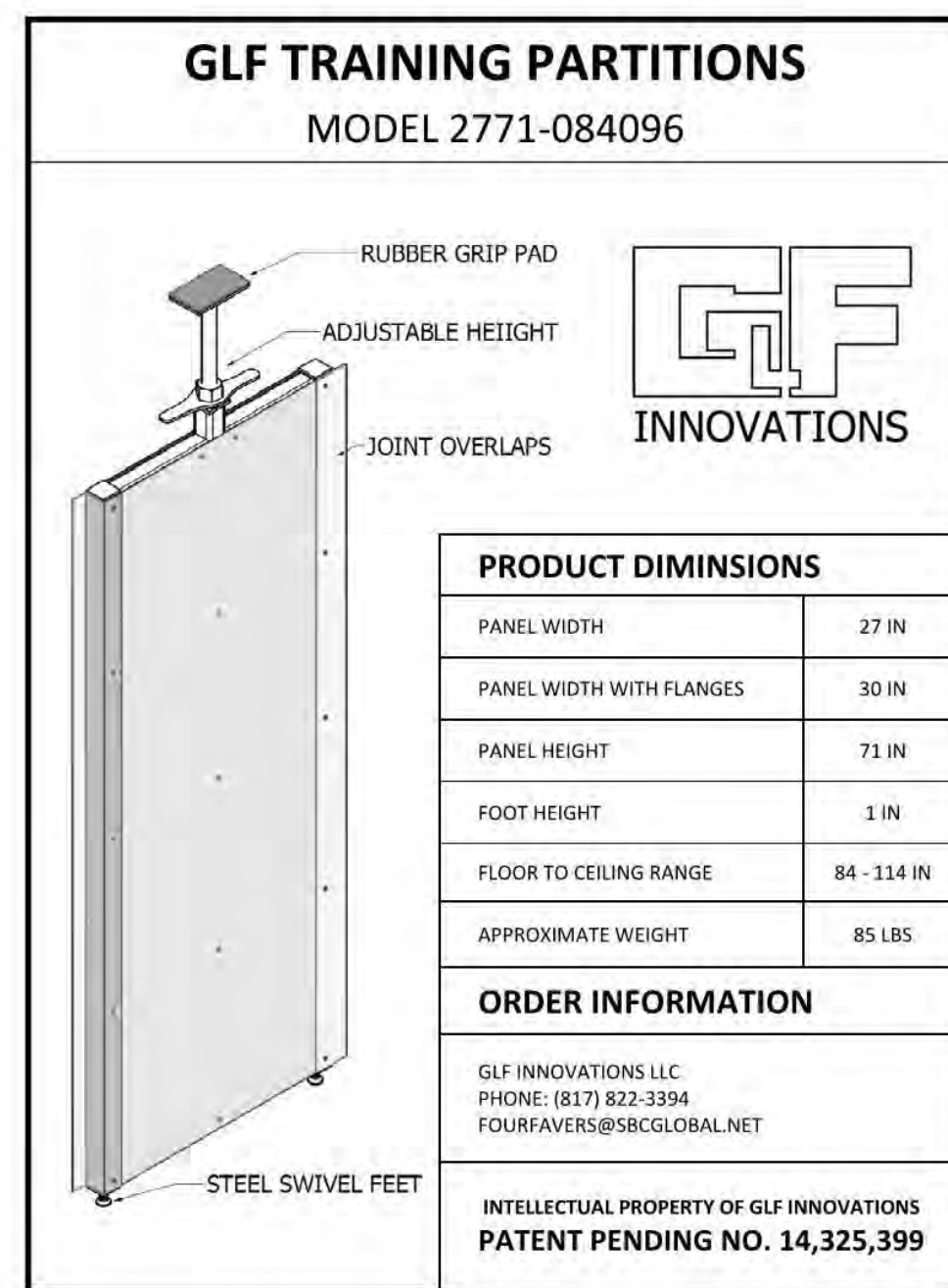
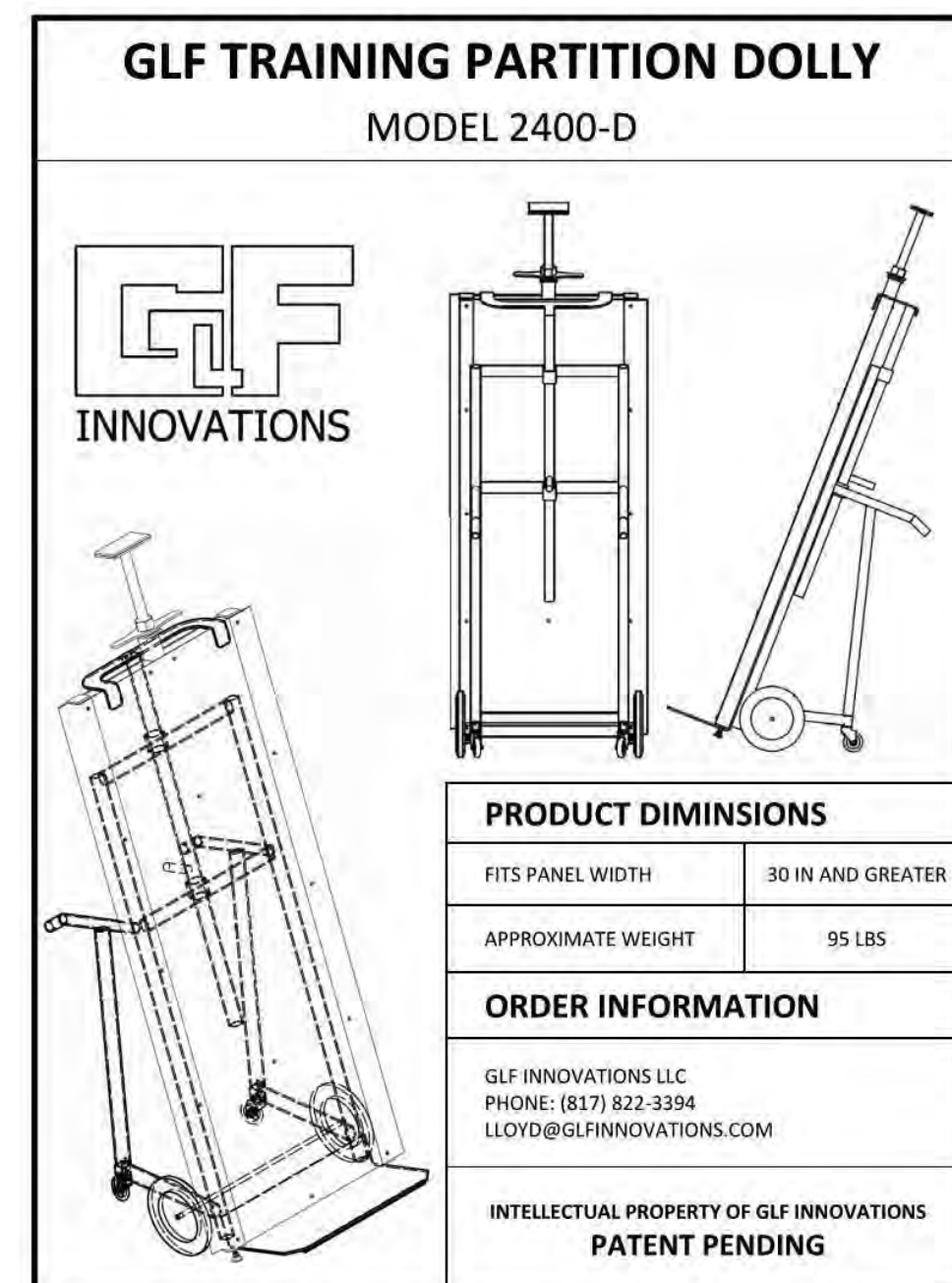
NOTE:
FOR ADDITIONAL INFORMATION, REFER TO
STRUCTURAL DETAIL 12/S7.1.

KEY NOTE: A31

STUD WALL @ 2nd FLOOR STAIRWELL

KEY NOTE: 00.000

TYPICAL MAZE PANEL WALL SYSTEM

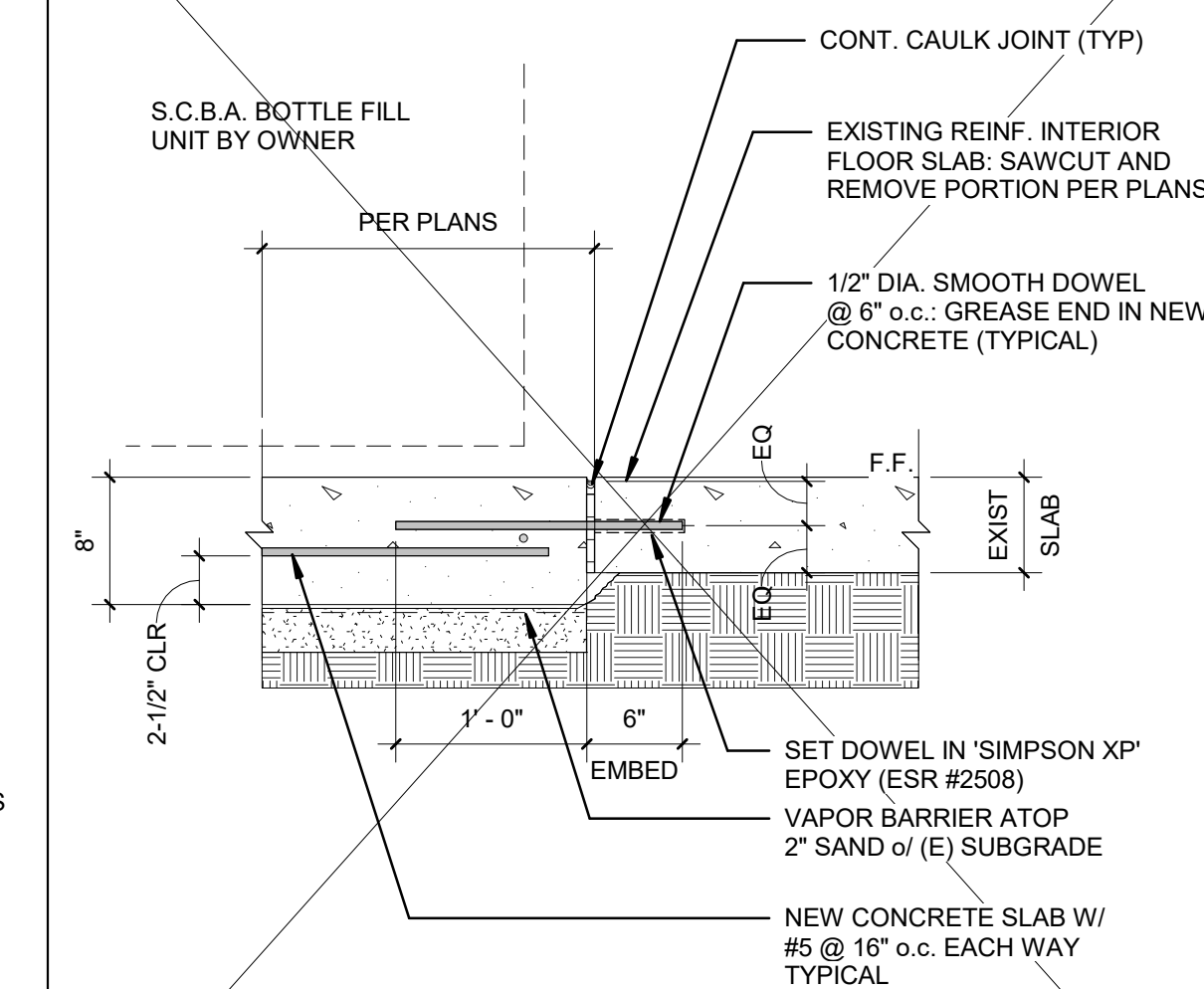
$$1^* = 1 \cdot 0^*$$


NOTES:

1. CONTRACTOR TO PROVIDE A TOTAL OF THIRTY (30) 36" WIDE MAZE PANEL UNITS AS SHOWN ABOVE. UNITS SHALL BE INSTALLED THROUGHOUT BUILDING AS DEPICTED IN THE DRAWINGS.
2. AS PART OF THE SYSTEM, CONTRACTOR TO INCLUDE ONE (1) MANUFACTURER'S CUSTOMER SERVICE POLICY TO MOVE AND STORE MAZE PANEL UNITS. REFER TO ABOVE.
3. CONTRACTOR TO PROVIDE A TOTAL OF FIVE (5) 48" WIDE MAZE PANEL UNITS WITH INTEGRAL PASSAGE DOOR & HARDWARE.

KEY NOTE: 00.000

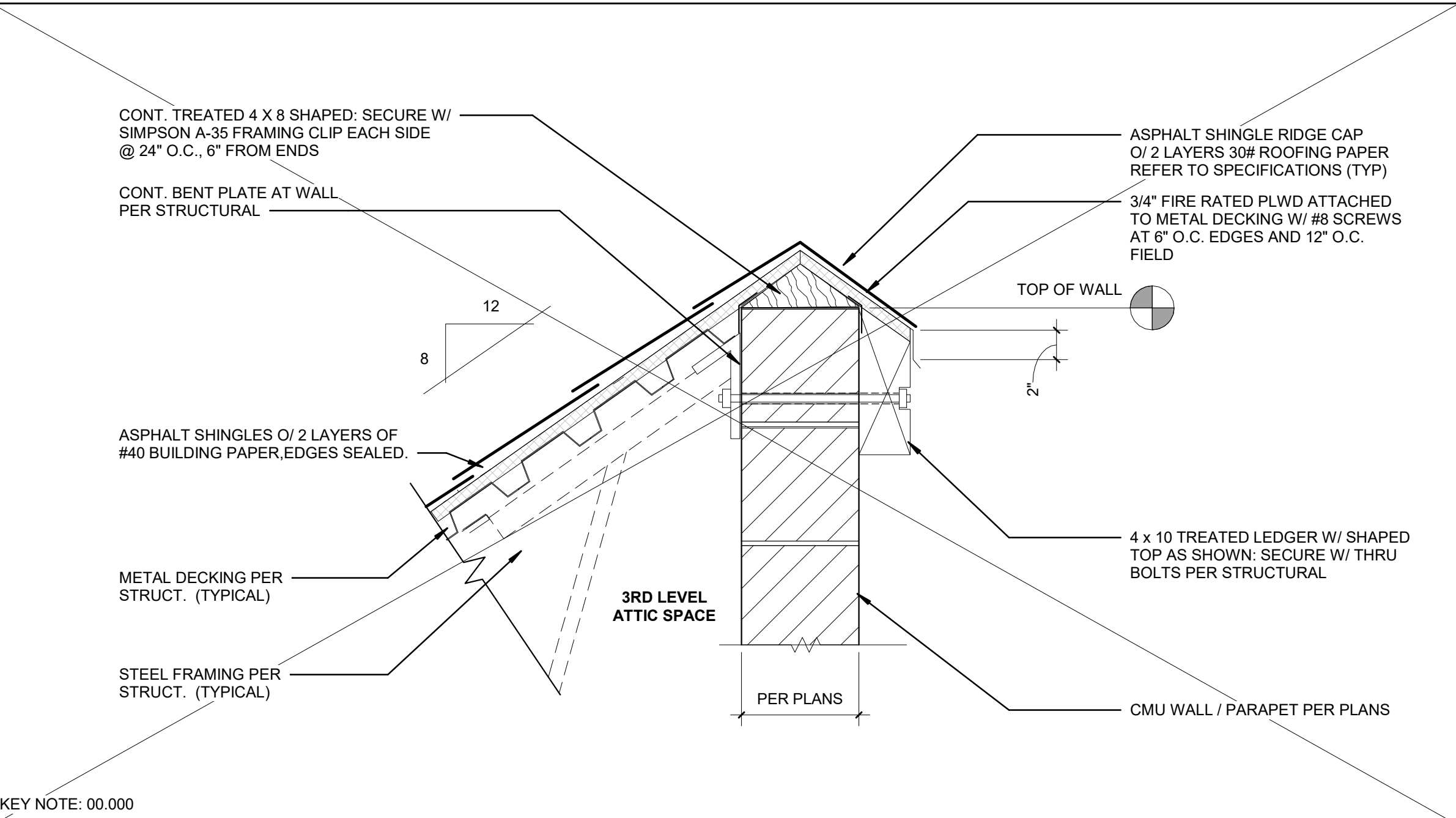
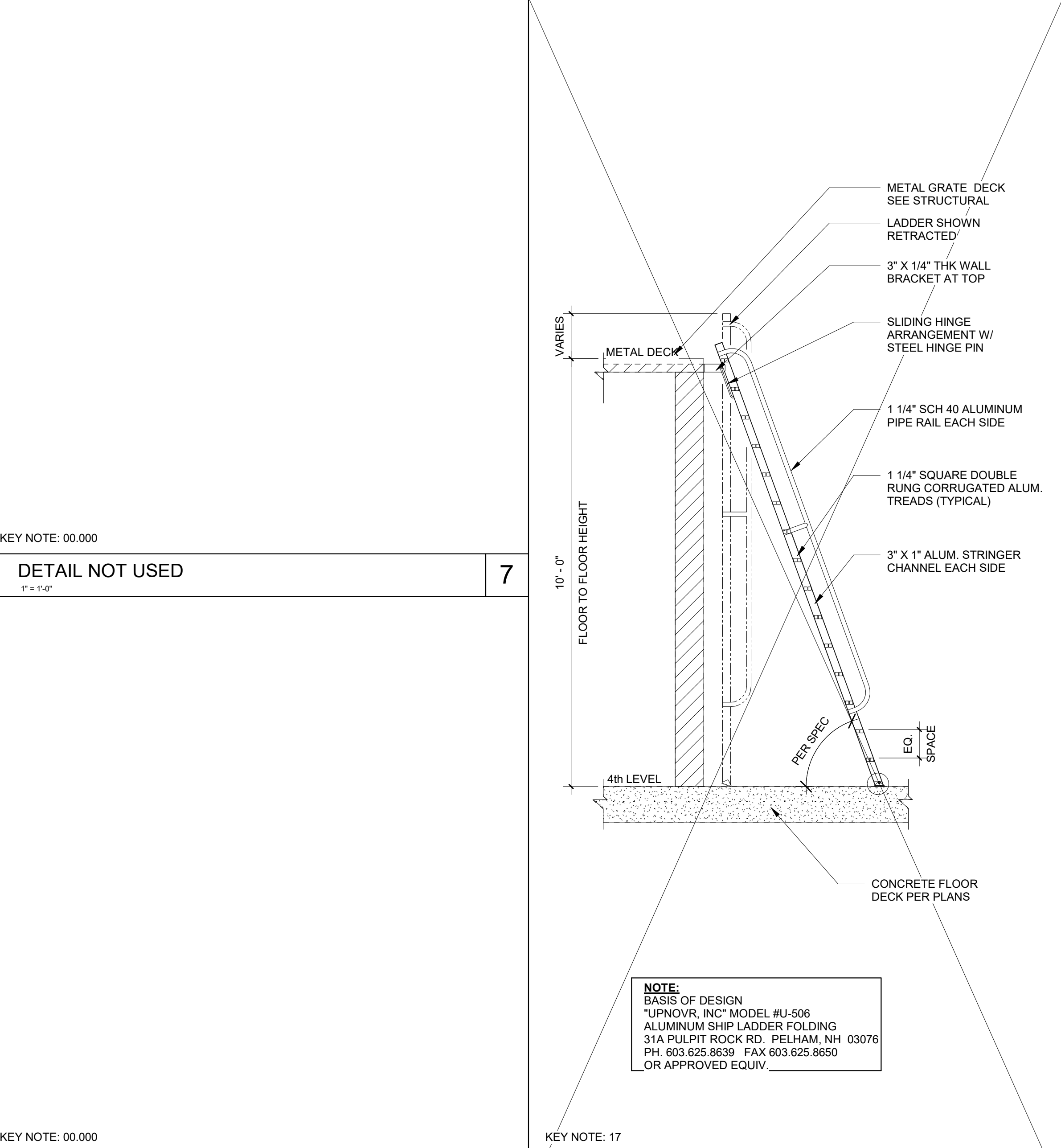
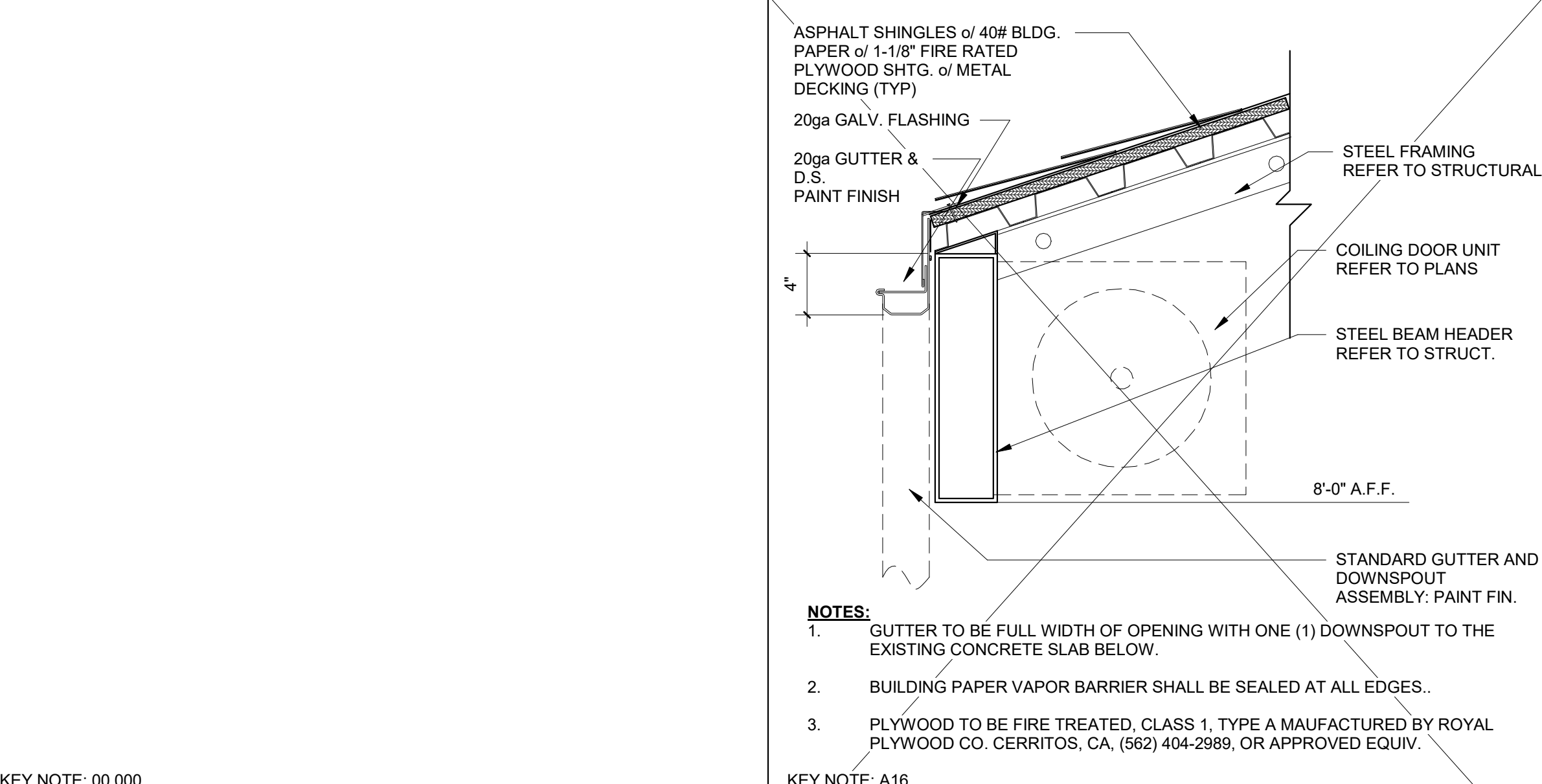

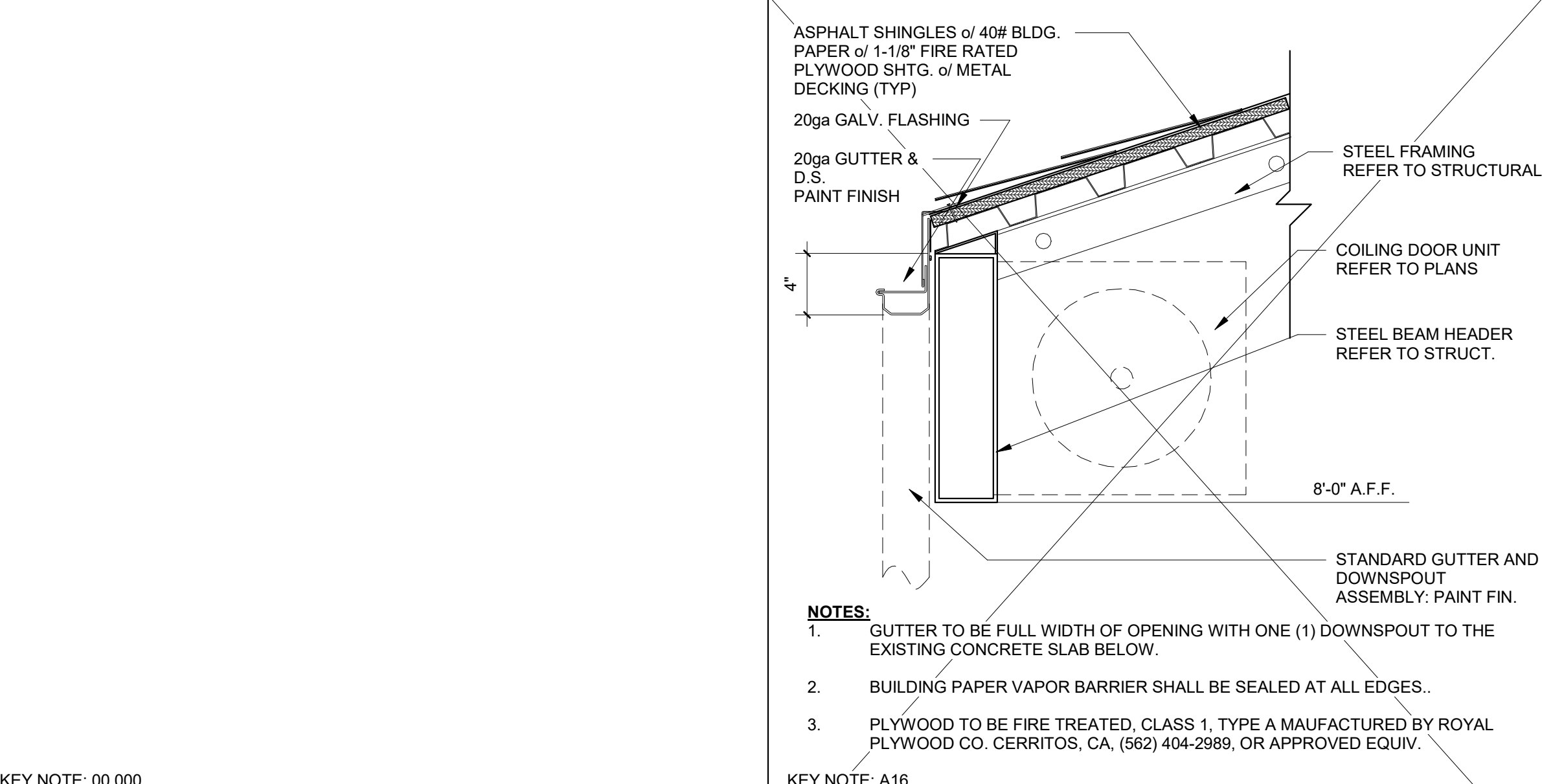

TYPICAL MAZE PANEL WALL SYSTEM

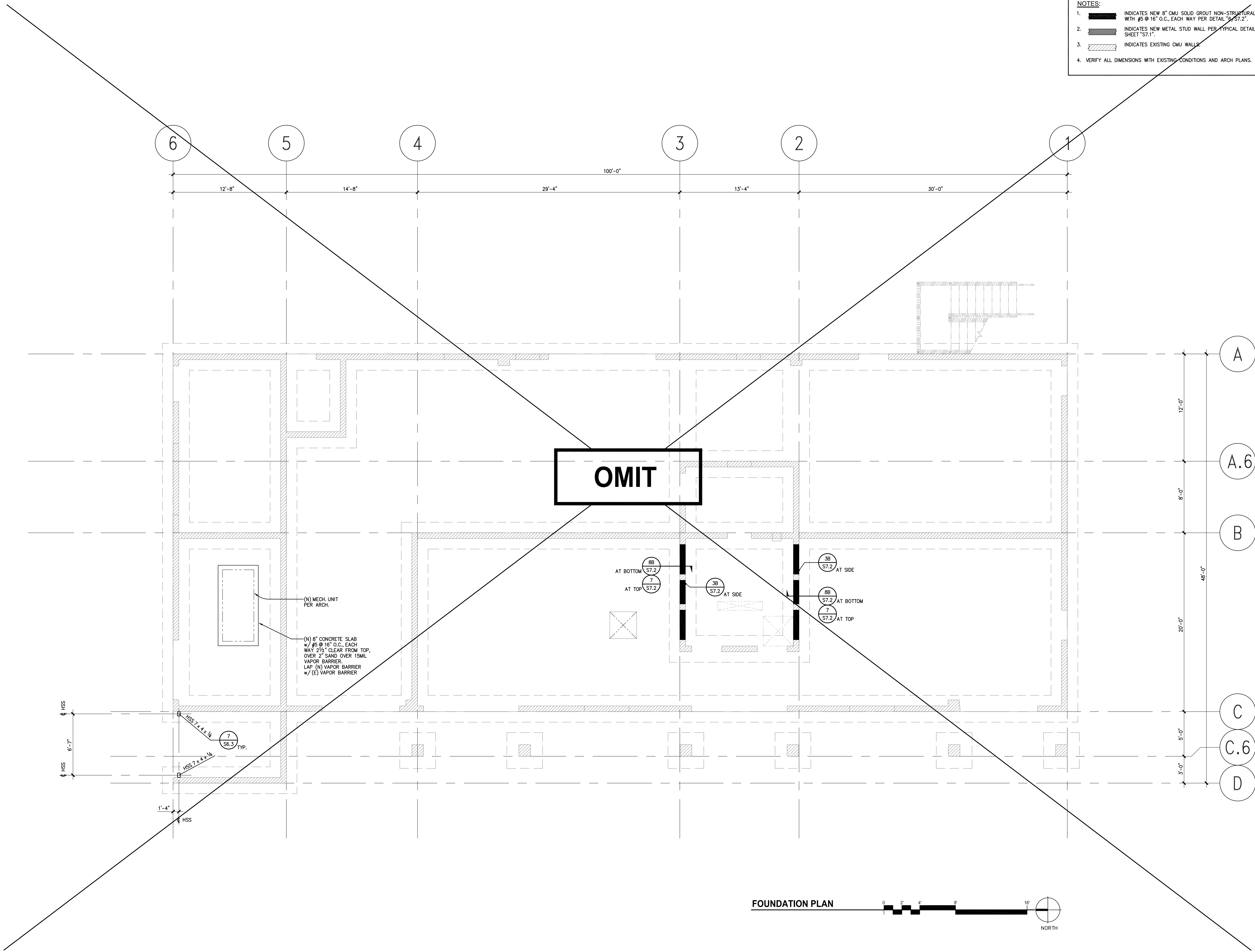
$$1^* = 1 \cdot 0^*$$


KEY NOTE: A16

5 SECTION AT (N) THICKENED SLAB FOR SCBA

1" = 1'-0"

				 <p>CONT. TREATED 4 X 8 SHAPED. SECURE W/ SIMPSON A-35 FRAMING CLIP EACH SIDE @ 24" O.C. 6" FROM ENDS</p> <p>CONT. BENT PLATE AT WALL PER STRUCTURAL</p> <p>ASPHALT SHINGLES O/ 2 LAYERS OF #40 BUILDING PAPER. EDGES SEALED.</p> <p>METAL DECKING PER STRUCT. (TYPICAL)</p> <p>STEEL FRAMING PER STRUCT. (TYPICAL)</p> <p>ASPHALT SHINGLE RIDGE CAP O/ 2 LAYERS 30# ROOFING PAPER REFER TO SPECIFICATIONS (TYP)</p> <p>3/4" FIRE RATED PLWD ATTACHED TO METAL DECKING W/ #8 SCREWS AT 6" O.C. EDGES AND 12" O.C. FIELD</p> <p>TOP OF WALL</p> <p>4 X 10 TREATED LEDGER W/ SHAPED TOP AS SHOWN. SECURE W/ THRU BOLTS PER STRUCTURAL</p> <p>CMU WALL / PARAPET PER PLANS</p> <p>PER PLANS</p> <p>3RD LEVEL ATTIC SPACE</p> <p>KEY NOTE: 00.000</p>	DETAIL NOT USED 1" = 1'-0"	4
				 <p>METAL GRATE DECK SEE STRUCTURAL</p> <p>LADDER SHOWN RETRACTED</p> <p>3" X 1/4" THK WALL BRACKET AT TOP</p> <p>SLIDING HINGE ARRANGEMENT W/ STEEL HINGE PIN</p> <p>1 1/4" SCH 40 ALUMINUM PIPE RAIL EACH SIDE</p> <p>1 1/4" SQUARE DOUBLE RUNG CORRUGATED ALUM. TREADS (TYPICAL)</p> <p>3" X 1" ALUM. STRINGER CHANNEL EACH SIDE</p> <p>VARIES</p> <p>10' - 0" FLOOR TO FLOOR HEIGHT</p> <p>METAL DECK</p> <p>4th LEVEL</p> <p>PER SPEC</p> <p>E.Q. SPACE</p> <p>CONCRETE FLOOR DECK PER PLANS</p> <p>NOTE: BASIS OF DESIGN "UPNOVR, INC" MODEL #U-506 ALUMINUM SHIP LADDER FOLDING 31A FULLPT ROCK RD. PELHAM, NH 03076 PH. 603.625.8639 FAX 603.625.8650 OR APPROVED EQUIV.</p> <p>KEY NOTE: 00.000</p>	DETAIL NOT USED 1" = 1'-0"	7
				 <p>ASPHALT SHINGLES O/ 40# BLDG. PAPER O/ 1-1/2" FIRE RATED PLYWOOD SHTG. O/ METAL DECKING (TYP)</p> <p>20ga GALV. FLASHING</p> <p>20ga GUTTER & D.S. PAINT FINISH</p> <p>STEEL FRAMING REFER TO STRUCTURAL</p> <p>COILING DOOR UNIT REFER TO PLANS</p> <p>STEEL BEAM HEADER REFER TO STRUCT.</p> <p>8'-0" A.F.F.</p> <p>STANDARD GUTTER AND DOWNSPOUT ASSEMBLY. PAINT FIN.</p> <p>NOTES: 1. GUTTER TO BE FULL WIDTH OF OPENING WITH ONE (1) DOWNSPOUT TO THE EXISTING CONCRETE SLAB BELOW. 2. BUILDING PAPER VAPOR BARRIER SHALL BE SEALED AT ALL EDGES. 3. PLYWOOD TO BE FIRE TREATED, CLASS 1, TYPE A MANUFACTURED BY ROYAL PLYWOOD CO. CERRITOS, CA. (562) 404-2989, OR APPROVED EQUIV.</p> <p>KEY NOTE: 00.000</p>	DETAIL NOT USED 1" = 1'-0"	6
				 <p>ASPHALT SHINGLES O/ 40# BLDG. PAPER O/ 1-1/2" FIRE RATED PLYWOOD SHTG. O/ METAL DECKING (TYP)</p> <p>20ga GALV. FLASHING</p> <p>20ga GUTTER & D.S. PAINT FINISH</p> <p>STEEL FRAMING REFER TO STRUCTURAL</p> <p>COILING DOOR UNIT REFER TO PLANS</p> <p>STEEL BEAM HEADER REFER TO STRUCT.</p> <p>8'-0" A.F.F.</p> <p>STANDARD GUTTER AND DOWNSPOUT ASSEMBLY. PAINT FIN.</p> <p>NOTES: 1. GUTTER TO BE FULL WIDTH OF OPENING WITH ONE (1) DOWNSPOUT TO THE EXISTING CONCRETE SLAB BELOW. 2. BUILDING PAPER VAPOR BARRIER SHALL BE SEALED AT ALL EDGES. 3. PLYWOOD TO BE FIRE TREATED, CLASS 1, TYPE A MANUFACTURED BY ROYAL PLYWOOD CO. CERRITOS, CA. (562) 404-2989, OR APPROVED EQUIV.</p> <p>KEY NOTE: A16</p>	DETAIL NOT USED 1" = 1'-0"	5
				 <p>ASPHALT SHINGLES O/ 40# BLDG. PAPER O/ 1-1/2" FIRE RATED PLYWOOD SHTG. O/ METAL DECKING (TYP)</p> <p>20ga GALV. FLASHING</p> <p>20ga GUTTER & D.S. PAINT FINISH</p> <p>STEEL FRAMING REFER TO STRUCTURAL</p> <p>COILING DOOR UNIT REFER TO PLANS</p> <p>STEEL BEAM HEADER REFER TO STRUCT.</p> <p>8'-0" A.F.F.</p> <p>STANDARD GUTTER AND DOWNSPOUT ASSEMBLY. PAINT FIN.</p> <p>NOTES: 1. GUTTER TO BE FULL WIDTH OF OPENING WITH ONE (1) DOWNSPOUT TO THE EXISTING CONCRETE SLAB BELOW. 2. BUILDING PAPER VAPOR BARRIER SHALL BE SEALED AT ALL EDGES. 3. PLYWOOD TO BE FIRE TREATED, CLASS 1, TYPE A MANUFACTURED BY ROYAL PLYWOOD CO. CERRITOS, CA. (562) 404-2989, OR APPROVED EQUIV.</p> <p>KEY NOTE: 17</p>	EXTERIOR RETRACTING LADDER 1" = 1'-0"	2
				 <p>ASPHALT SHINGLES O/ 40# BLDG. PAPER O/ 1-1/2" FIRE RATED PLYWOOD SHTG. O/ METAL DECKING (TYP)</p> <p>20ga GALV. FLASHING</p> <p>20ga GUTTER & D.S. PAINT FINISH</p> <p>STEEL FRAMING REFER TO STRUCTURAL</p> <p>COILING DOOR UNIT REFER TO PLANS</p> <p>STEEL BEAM HEADER REFER TO STRUCT.</p> <p>8'-0" A.F.F.</p> <p>STANDARD GUTTER AND DOWNSPOUT ASSEMBLY. PAINT FIN.</p> <p>NOTES: 1. GUTTER TO BE FULL WIDTH OF OPENING WITH ONE (1) DOWNSPOUT TO THE EXISTING CONCRETE SLAB BELOW. 2. BUILDING PAPER VAPOR BARRIER SHALL BE SEALED AT ALL EDGES. 3. PLYWOOD TO BE FIRE TREATED, CLASS 1, TYPE A MANUFACTURED BY ROYAL PLYWOOD CO. CERRITOS, CA. (562) 404-2989, OR APPROVED EQUIV.</p> <p>KEY NOTE: A16</p>	ROOF EAVE @ NEW STORAGE ROOM 1" = 1'-0"	1



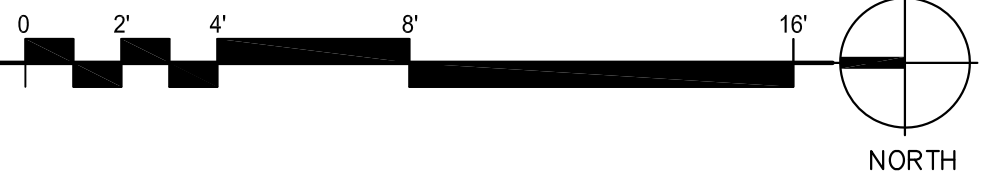
- NOTES:**
- INDICATES NEW 8" CMU SOLID GROUT NON-STRUCTURAL WALL WITH #5 @ 16" O.C., EACH WAY PER DETAIL "S7.2".
 - INDICATES NEW METAL STUD WALL PER TYPICAL DETAILS ON SHEET "S7.1".
 - INDICATES EXISTING CMU WALLS.
 - VERIFY ALL DIMENSIONS WITH EXISTING CONDITIONS AND ARCH PLANS.

OMIT

(N) MECH. UNIT PER ARCH.
(N) 8" CONCRETE SLAB w/ #5 @ 16" O.C., EACH WAY 2 1/2" CLEAR FROM TOP, OVER 2" SAND OVER 15MIL VAPOR BARRIER. LAP (N) VAPOR BARRIER w/ (E) VAPOR BARRIER

8B S7.2 AT BOTTOM
7 S7.2 AT TOP
3B S7.2 AT SIDE
8B S7.2 AT BOTTOM
7 S7.2 AT TOP

FOUNDATION PLAN



RSSE
REGISTERED STRUCTURAL ENGINEERS

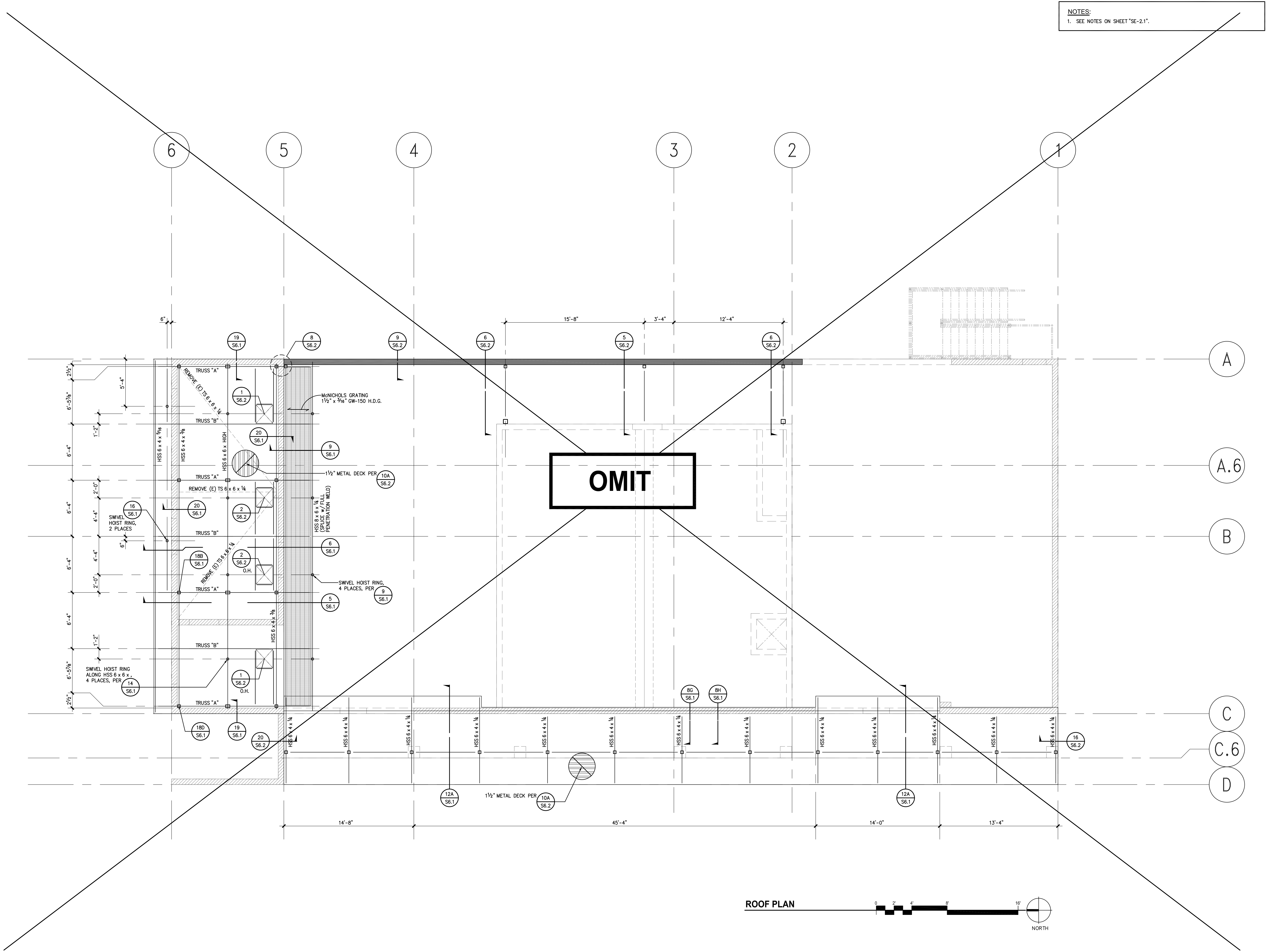
C Solutions Group, Inc.
18450 Redwood Highway, Suite 100, Redwood City, CA 94061
Tel: 650.961.1200 Fax: 650.961.1201

ORANGE COUNTY FIRE AUTHORITY

OCFA REGIONAL FIRE OPERATIONS TRAINING GROUNDS MODIFICATIONS

STRIP MALL FOUNDATION PLAN
September 15, 2023
SCALE: 1/4" = 1'-0"

SHEET NO.
SE-2.1



NOTES:
1. SEE NOTES ON SHEET "SE-2.1".

RSSE 2568
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
STATE OF CALIFORNIA
EXP. 05-31-24

C Solutions Group, Inc.
REGISTERED PROFESSIONAL ENGINEERING FIRM
CIVIL ENGINEERING
STATE OF CALIFORNIA
EXP. 05-31-24

**ORANGE COUNTY
FIRE AUTHORITY**

**OCFA REGIONAL FIRE OPERATIONS
TRAINING GROUNDS MODIFICATIONS**

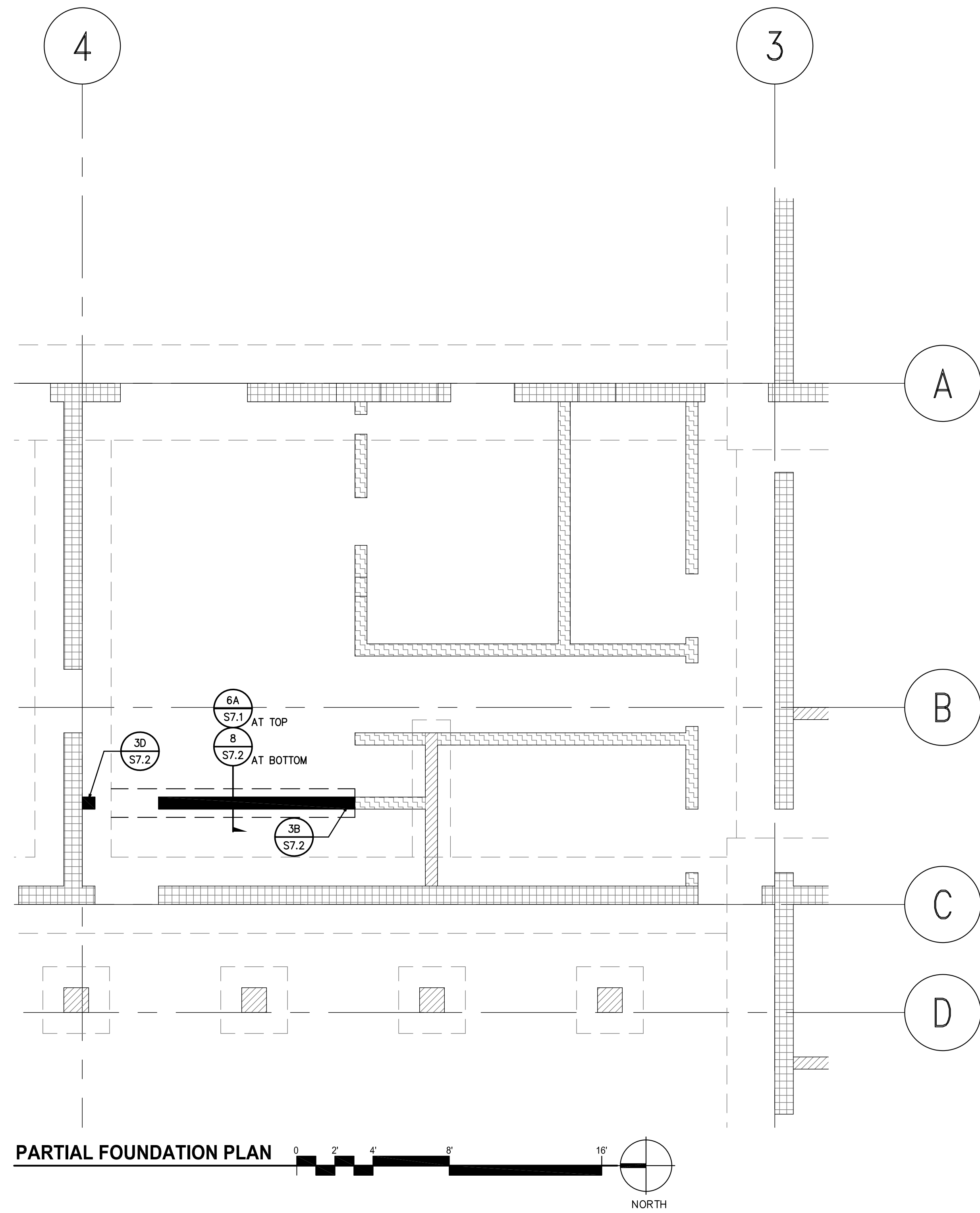
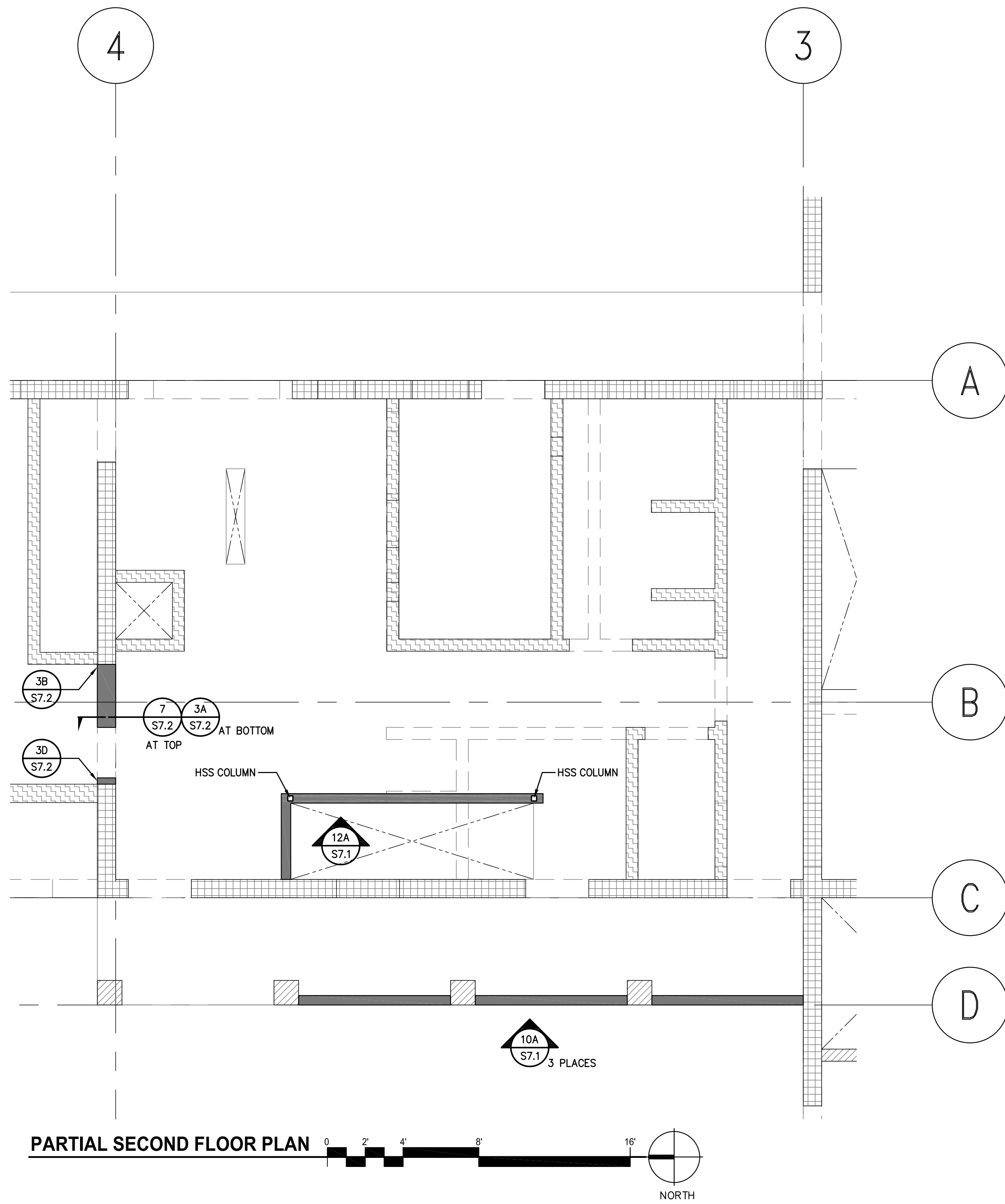
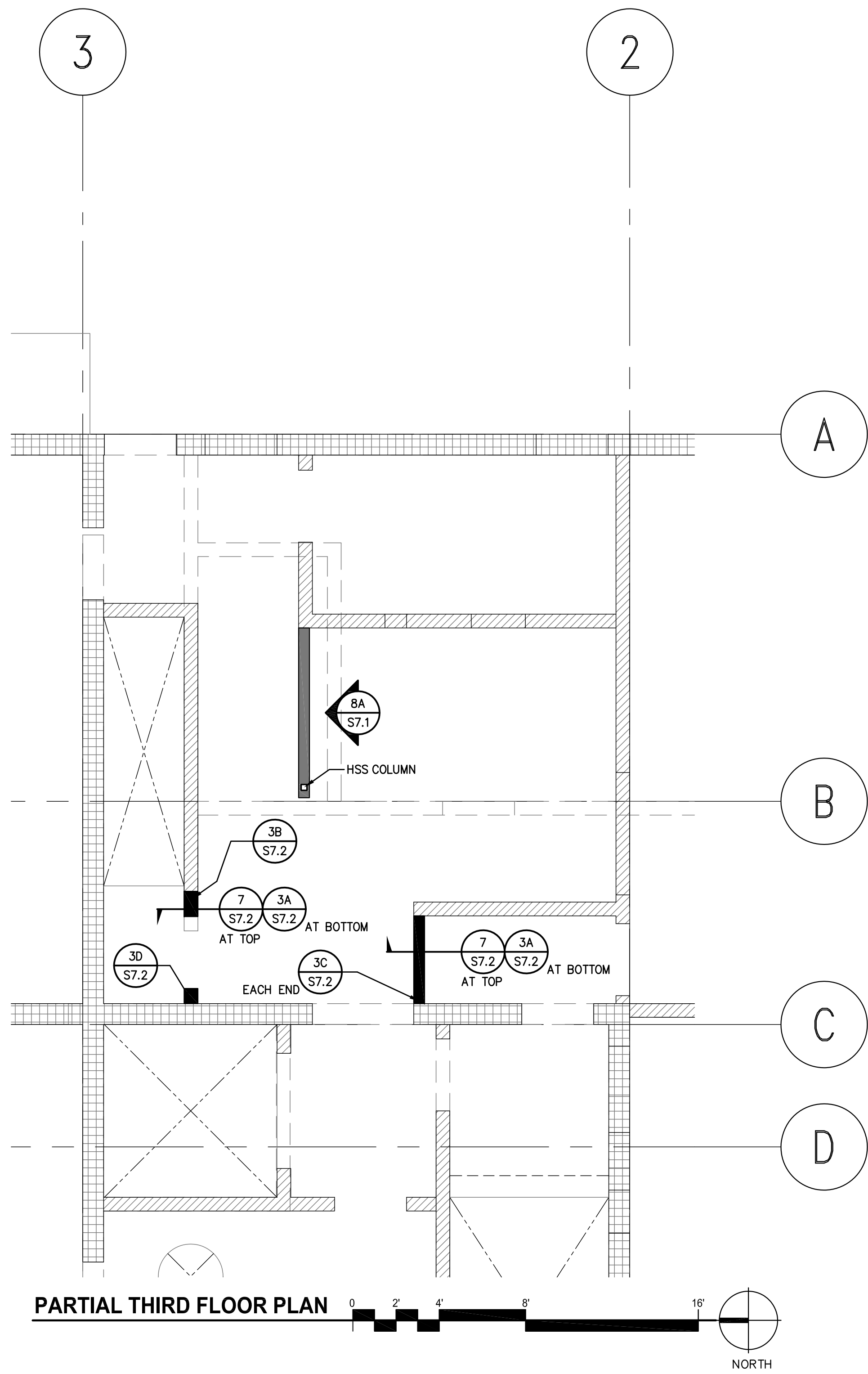
STRIP MALL ROOF PLAN

September 15, 2023

SCALE: 1/4" = 1'-0"

SHEET NO.

SE-2.3



- NOTES:**
- INDICATES NEW 8" CMU 'SOLID GROUT NON-STRUCTURAL WALL WITH #5 @ 16" O.C., EACH WAY PER DETAIL "6/S7.2".
 - INDICATES NEW METAL STUD WALL PER TYPICAL DETAILS ON SHEET "S7.1".
 - AND INDICATES EXISTING CMU WALLS.
 - INDICATES EXISTING 8" NON-BEARING CMU WALLS.
 - VERIFY ALL DIMENSIONS WITH EXISTING CONDITIONS AND ARCH PLANS.

DIAMETER
& AT
ANCHOR BOLT
ACI AMERICAN CONCRETE INSTITUTE
ACSS ARCHITECTURAL EXPOSED STRUCTURAL STEEL
AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI AMERICAN IRON AND STEEL INSTITUTE
ARCH. ARCHITECTURAL
ASTM AMERICAN SOCIETY FOR TESTING MATERIALS
AWS AMERICAN WELDING SOCIETY
B.D.G. BUILDING
BW. BEAM
BOT. OR (B) BOTTOM
& CENTER LINE
C.B. COLUMN BASE
C.C. CENTER OF GRAVITY
C.J. CONSTRUCTION JOINT
C.J.P. COMPLETE JOINT PENETRATION
CLR. CLEAR
CMU. CONCRETE MASONRY UNIT
COL. COLUMN
CONN. CONNECTION
CONT. CONTINUOUS
CTR. CENTER
CTSK COUNTERSUNK
DET. DETAIL
DWG. DRAWING
(E) EXISTING
E.A. EACH
E.F. EACH FACE
EL./ ELEV. ELEVATION
E.W. EACH WAY
EXT. EXTERIOR
FDN. FOUNDATION
FIN. FINISH
FLR. FLOOR
F.O.C. FACE OF CONCRETE
F.S. FAR SIDE
FTG. FOOTING
GA. GAUGE
GALV. GALVANIZED
GLB. GLUE LAM BEAM
HORIZ. HORIZONTAL
H.D. HOT DIPPED GALVANIZED
HGP. HIGH POINT
HSB. HIGH STRENGTH BOLT
HT. HEIGHT
I.C.C. INTERNATIONAL CODE COUNCIL
INT. INTERIOR
JT. JOINT
KM. KILOMETER
LG. LONG
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
L.T. WT. LIGHT WEIGHT
M.B. MACHINE BOLT
MAX. MAXIMUM
MECH. MECHANICAL
MFR. MANUFACTURER
MTL. METAL
MIN. MINIMUM
MISC. MISCELLANEOUS
NDOS NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION
(N) NEW
N.L.C. NOT IN CONTRACT
N.O.M. NOMINAL
N.S. NEAR SIDE
N.T.S. NOT TO SCALE
O.C. ON CENTER
OPG. OPENING
OPP. OPPOSITE
P.A.F. POWER ACTUATED FASTENER
& PLATE
P.J.P. PARTIAL JOINT PENETRATION
PT. POST-TENSIONED
PT. POINT
REF. REFERENCE
REF. REF. REINFORCEMENT
REQ. REQUIRED
S.A.D. SEE ARCHITECTURAL DRAWINGS
S.C.D. SEE CIVIL DRAWINGS
S.E.D. SEE ELECTRICAL DRAWINGS
S.M.D. SEE MECHANICAL DRAWINGS
S.P.D. SEE STRUCTURAL DRAWINGS
SC SLIP-CRITICAL JOINT PER ASTM SPECS
SCHED. SCHEDULE
SECT. SECTION
SHT. SHEET
SIM. SIMILAR
S.J. STEEL JOIST INSTITUTE
SMRF SPECIAL MOMENT RESISTING FRAME
S.M.S. SHEET METAL
SPEC. SPECIFICATION
SQ. SQUARE
S.S. STAINLESS STEEL
ST STAINLESS-TEMPERED JOINT PER ASTM
STAGG. STAGGERED
STD. STANDARD
STL. STEEL
STRUCT. STRUCTURAL
SYM. SYMMETRICAL
(T) TOP
T&B TOP AND BOTTOM
THD. THREADED
T.L. TOP OF LEDGER
T.C. TOP OF CONCRETE
T.O.N. TOP OF NAILER
T.O.S. TOP OF STEEL
TYP. TYPICAL
U.N.O. UNLESS NOTED OTHERWISE
VERT. VERTICAL
W/ WITH
W/O WITHOUT
WH.S. WHEADED HEADED STUD
W.P. WORK POINT
WT. WEIGHT

1. ALL WOOD MEMBERS SHALL BE DOUGLAS FIR (DF) OR LARCH GRADE MARKED BY A
RECOGNIZED GRADING AGENCY (WCLA, WMPA, OR WCLB) AND SHALL HAVE A 19% MAXIMUM
MOISTURE CONTENT AT THE TIME OF INSTALLMENT.
2. WOOD STRUCTURAL PANELS SHALL BE A PA PERFORMANCE RATED PANELS CONFORMING TO
LATEST EDITION OF THE U.S. PRODUCT STANDARD DCO PS1 (PLYWOOD) OR PS2 (ORIENTED
STRAND BOARD), AND SHALL BE GRADE MARKED BY APA.
3. WOOD GRADES (UNLESS NOTED OTHERWISE):
 - (A) HORIZONTAL MEMBERS: JOISTS AND RAFTERS GRADE #1
BEAMS AND STRINGERS GRADE #1
LEDGERS GRADE #1
 - (B) VERTICAL MEMBERS: 2x4 STUDS CONSTRUCTION GRADE
2x6 AND LARGER STUDS GRADE #1
POSTS AND TIMBERS GRADE #1
 - (C) SHEATHING STRUCTURAL 1
4. CUTTING, NOTCHING OR DRILLING OF BEAMS OR JOISTS TO BE PERMITTED ONLY AS DETAILED
OR APPROVED BY THE ENGINEER.
5. UNLESS OTHERWISE SPECIFIED, ALL NAILING SHALL CONFORM TO THE LATEST EDITION
OF THE C.B.C. TABLE 230K.01-1.
6. ALL NAILS SHALL BE STANDARD COMMON NAILS, UNLESS NOTED OTHERWISE AND SHALL BE
HOT-DIPPED ZINC-COATED GALVANIZED CONFORMING TO ASTM A153.
7. DIAPHRAGM AND SHEAR WALL NAILS SHALL BE DRIVEN SO THEIR HEAD IS FLUSH WITH THE
SURFACE OF THE SHEATHING.
8. ALL BOLTS FOR WOOD CONNECTIONS SHALL BE A307, GRADE A.
9. ALL SILLS OR PLATES RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED
DOUGLAS FIR. BOLTS SHALL BE PLACED NOT MORE THAN 12" OR LESS THAN 4" FROM THE
END OF A BOARD OR FROM A NOTCH AND SPACED AT INTERVALS NOTED. ALL SILL BOLTS
SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED.
10. ALL HEADS AND NUTS ON WOOD SHALL HAVE STANDARD OUT WASHERS.
ALL BOLT HOLES IN WOOD SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" DIAMETER
LARGER THAN THE BOLT DIAMETER.
11. ALL FRAMING HARDWARE SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY"
OR ENGINEER APPROVED EQUIVALENT. FASTENER HOLES IN FRAMING HARDWARE SHALL BE FILLED
WITH THE MANUFACTURER'S SPECIFIED NUMBER AND TYPE OF FASTENERS TO ACHIEVE THE
MAXIMUM MANUFACTURED RATED CAPACITY, U.N.O.
12. ALL SCREWS DENOTED AS "SDS" SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE
COMPANY" AND SHALL HAVE "DOUBLE BARREL" CORROSION PROTECTION.
13. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS.
14. PROVIDE BLOCKING OR BRIDGING PER LATEST EDITION OF THE C.B.C.
15. TOP PLATES OF ALL WOOD STUD WALLS TO BE 2x2 #2 (SAME WITH AS STUDS), UNLESS
OTHERWISE NOTED, LAP 48" (MINIMUM) WITH NOT MORE THAN 6-16D NAILS AT EACH LAP AND
NOT MORE THAN 12" BETWEEN NAILS.
16. ADHESIVES USED FOR ANY FIELD GLUING SHALL CONFORM TO APA PERFORMANCE
SPECIFICATION 450-01.
17. ALL LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1.
 - a. THE CLEARANCE HOLE FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS AS THE
SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK
 - b. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60% TO
70% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF
THE THREADED PORTION.
 - c. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY
TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER.
 - d. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LEAD
HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE LAG SCREW.

1. MATERIALS, MANUFACTURE, AND QUALITY CONTROL FOR STRUCTURAL GLUED LAMINATED TIMBER SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF AMERICAN NATIONAL STANDARD (ANSI/APA 109) STRUCTURAL GLUED LAMINATED TIMBER, AND AOTC 117, "DESIGN AND MANUFACTURING".

2. GLU-LAM BEAMS SHALL BE FABRICATED USING EXTERIOR GLUE (WATERPROOF).

3. GLU-LAM BEAMS SHALL BE IN ACCORDANCE WITH NDS SUPPLEMENT TABLE 5A AND SHALL HAVE THE FOLLOWING COMBINATION:

SIMPLE SPAN 5/8" & WIDER	24F-V4	D/F/D/F
SIMPLE SPAN 3/4" & NARROWER	24F-V5	D/F/D/F
CANTILEVER 5/8" & WIDER	24F-V8	D/F/D/F
CANTILEVER 3/4" & NARROWER	24F-V10	D/F/D/F

4. GLU-LAMINATED BEAMS SHALL BE STAMPED, OR DECATONED, WITH THE MARK OF A QUALIFIED INSPECTION ORGANIZATION. CERTIFICATES OF CONFORMANCE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

5. GLU LAM BEAMS WITH SURFACES EXPOSED TO WEATHER SHALL BE PROTECTED IN AN APPROPRIATE MANNER PER CODE REQUIREMENTS.

6. AT THE TIME OF GLUING THE MOISTURE CONTENT OF THE WOOD SHALL NOT EXCEED 10 PERCENT AND SHALL NOT BE LESS THAN 7 PERCENT.

1. POST-INSTALLED ANCHORS SHALL BE INSTALLED WITH PERIODIC INSPECTION IN ACCORDANCE WITH C.B.C. SECTION 1705 AND AN APPROVED EVALUATION REPORT.
2. EXPANSION BOLTS INSTALLED IN CONCRETE SHALL BE ZINC-COATED CARBON STEEL OR STAINLESS STEEL CONFORMING WITH:
 - a. HLTI KWM-BOLT T2 INSTALLED IN ACCORDANCE WITH CURRENT ICC REPORT ESR-1917
 - b. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHOR INSTALLED IN ACCORDANCE WITH CURRENT ICC REPORT ESR-3037.
3. EXPANSION BOLTS INSTALLED IN CONCRETE MASONRY SHALL BE ZINC-COATED CARBON STEEL OR STAINLESS STEEL CONFORMING WITH:
 - a. HLTI KWM-BOLT T2 INSTALLED IN ACCORDANCE WITH CURRENT ICC REPORT ESR-1385.
 - b. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHOR INSTALLED IN ACCORDANCE WITH CURRENT IAMPO UES ER-240.
4. SCREW ANCHORS INSTALLED IN CONCRETE SHALL BE ZINC-COATED CARBON STEEL OR STAINLESS STEEL CONFORMING WITH:
 - a. SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR INSTALLED IN ACCORDANCE WITH CURRENT ICC REPORT ESR-2073 (STAINLESS STEEL) OR IAMPO UES ER-403 (STAINLESS STEEL)
 - b. SCREW ANCHORS INSTALLED IN CONCRETE MASONRY SHALL BE ZINC-COATED CARBON STEEL OR STAINLESS STEEL CONFORMING WITH:
 - a. SIMPSON STRONG-TIE TITEN HD SCREW ANCHOR INSTALLED IN ACCORDANCE WITH CURRENT ICC REPORT ESR-1056.
5. POST-INSTALLED ANCHORS SHALL BE LOCATED TO AVOID CUTTING OR DAMAGING REINFORCING STEEL.

1. ALL EPOXY GROUTED DOWELS SHALL BE INSTALLED UNDER SPECIAL INSPECTION IN ACCORDANCE WITH G.B.C. SECTION 1705.
2. ALL EPOXY DOWELS SHALL BE INSTALLED WITH "SIMPSON STRONG-TIE SET-XP" ADHESIVE AND SHALL BE INSTALLED IN ACCORDANCE WITH ICC REPORT ESR-2508.
3. THREADED RODS SHALL BE FREE OF OIL, SCALE AND RUST. THREADED RODS SHALL BE WELDED IN PLACE AND END-DRILLED WITH A DIAMETER CORRESPONDING TO THE ICC REPORT, DRILL BITS USED SHALL COMPLY WITH ANSI B21.15 - 1994.
4. THE HOLE SHALL BE DRY AND CLEANED WITH OIL-FREE COMPRESSED AIR AND A NYLON BRUSH PRIOR TO EPOXY INSTALLATION.

1. BAR REINFORCEMENT SHALL CONFORM TO:

ASTM A615, GRADE 60	ALL REBAR U.N.O.
ASTM A706, GRADE 60	ALL SPECIAL MOMENT FRAME REBAR
ASTM A706, GRADE 60	WELDED REBAR

2. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4

3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

4. REINFORCING DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE" LATEST EDITION.

5. LAPS AT BAR SPICES SHALL BE PER TYPICAL DETAILS OR AS NOTED OTHERWISE ON THE PLANS FOR CONCRETE AND 40 BAR SPICES SHALL BE PER TYPICAL DETAILS FOR MASONRY UNLESS NOTED OTHERWISE.

6. VERTICAL BARS IN WALLS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF WALL UNLESS OTHERWISE NOTED ON DETAILS, & SHALL BE TIED IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 12 BAR DIA.

7. REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING AMOUNTS OF CONCRETE COVER, UNLESS NOTED OTHERWISE:

CONCRETE DEPOSITED AGAINST EARTH	3"
CONCRETE FORMED EXPOSED TO EARTH OR WEATHER	2"
COLUMN REINFORCING (INCLUDING COLUMN TIES)	1 1/2"
BEAMS AND GIRDERS	1 1/2"
SLAB (#1 OR SMALLER)	3/4"

8. REINFORCING STEEL, ANCHORS, BOLTS, DOWELS, AND INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.

9. UNLESS OTHERWISE NOTED IN DETAILS, FURNISH #3 SPACER TIES AT APPROXIMATELY 2'-0" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING STEEL IN PLACE.

STEEL	DESCRIPTION	ASTM GRADE	MIN. Fy
WF SHAPES	TYPICAL U.N.O.	A992	50 KSI
MISC. SHAPES	ANGLES, CHANNELS, WT	A36	36 KSI
PLATES	3/8" AND THICKER	A572	50 KSI
PLATES	LESS THAN 3/8" THICK	A36	36 KSI
HOLLOW STRUCTURAL SECTIONS (HSS)	TYPICAL U.N.O.	A500, GRADE "B"	46 KSI
PIPES	TYPICAL U.N.O.	A53, GRADE "B"	35 KSI

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2. ALL MAIN MEMBERS SHALL HAVE BOLTS CONFORMING TO ASTM A325 TYPE 1 AND MEET THE DIMENSIONAL REQUIREMENTS OF ANS/A588 B16.2.6 WITH NUTS CONFORMING TO ASTM A563 AND WASERS CONFORMING TO ASTM A563. ALL BOLTS CONFORMING TO ASTM A325 TYPE 1 SHALL BE USED AT BOLTED CONNECTION WITHOUT PRIOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD. MACHINE BOLTS SHALL CONFORM TO ASTM A307, GRADE "A" AND MACHINE NUTS SHALL CONFORM TO ASTM A309, GRADE "A". ALL BOLTS SHALL BE HOT-DIP GALVANIZED.
3. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS", AND AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" WITH THE EXCEPTION OF SECTIONS "3.1" AND "3.2" WHERE THE REFERENCE TO "STRUCTURAL STEEL" SHALL BE DELETED AND THE REFERENCE "DESIGN DRAWINGS" THEREBY INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS.
4. WELDING OF STRUCTURAL STEEL SHALL BE BY THE SHIELDED METAL ARC (SMAW), FLUX CORED ARC (FCAW) OR OTHER APPROVED PROCESS PER AWS D1.1 USING APPROVED E70XX WELD ELECTRODES OR ELECTRODE-FLUX COMBINATIONS CAPABLE OF DEPOSITING WELD METAL WITH A MAXIMUM DIFFUSIBLE HYDROGEN CONTENT OF 8 MILLITERS (ml) PER 100 GRAMS (HG) OF WELD METAL.
5. ALL STRUCTURAL STEEL FABRICATION SHALL BE DONE IN A LICENSED SHOP APPROVED BY THE BUILDING DEPARTMENT AND ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS.
6. UNLESS NOTED OTHERWISE, ALL METAL CONTACT EDGES SHALL RECEIVE MINIMUM SIZE FILLET WELDS PER AISC TABLE D2.
7. ALL STRUCTURAL STEEL EXPOSED TO EARTH SHALL HAVE "3" CONCRETE COVER.
8. WELDED STEAR STUD CONNECTIONS SHALL BE AWS D1.1 "TYPE B" HEADED STUDS MANUFACTURED FROM ASTM A108, GRADE 1015 OR 1020, COIL FINISHED CARBON STEEL. DIMENSIONS SHALL COMPLY WITH AWS D1.1 FOR SIZES SPECIFIED. ALL W.H.S. SHALL USE COMPLETE PENETRATION WELDS.
9. STRUCTURAL STEEL INDICATED AS ARCHITECTURAL EXPOSED (AESS) SHALL COMPLY WITH SECTION 10 OF THE LATEST AISC CODE OF PRACTICE FOR STEEL BUILDINGS.
10. THE USE OF ROLLED STEEL SECTIONS AND/OR BOLTS MANUFACTURED OUTSIDE OF THE UNITED STATES WILL REQUIRE VERIFICATION THAT THE PRODUCTS COMPLY WITH APPLICABLE ASTM STANDARD. WILL CERTIFY THAT ALL STEEL SECTIONS AND/OR BOLTS MANUFACTURED OTHER THAN ASTM-A36 WILL REQUIRE TESTING BY AN APPROVED LABORATORY. ALL FOREIGN BOLTS MUST BE APPROVED PRIOR TO USE.
11. ALL STEEL NOTED AS GALVANIZED "HOG" SHALL NOT BE HOT DIPPED ZINC COATED GALVANIZED STEEL. STEEL COMPLY WITH ASTM A1234, FASTENERS/FASTENERS SHALL CONFORM TO ASTM A153. ALL DAMAGED GALVANIZING SHALL BE REPAIRED AND SHALL COMPLY WITH ASTM A780.
12. ALL STEEL AND FASTENERS SHALL BE H.D.O., U.O.O.
13. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL AT ALL EXTERIOR OR WET USE CONDITIONS.

1. STEEL DECKING SHALL BE OF THE TYPES AND GAUGES AS INDICATED ON THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS EXCEPT AS NOTED OTHERWISE.
2. ALL STEEL DECKING SHALL BE FABRICATED TO CONFORM TO THE RECOMMENDATIONS OF THE AMERICAN INSTITUTE OF STEEL DECKING AND FLASHING SHALL BE FABRICATED OF SHEET METAL CONFORMING TO ASTM A653 WITH G90 GALVANIZATION COATING DESIGNATION.
3. ALL NECESSARY ACCESSORY ITEMS SUCH AS CLOSURES, INSULATION CLIPS, ROOF SUMPS, FLASHINGS, ETC. SHALL BE OF THE TYPE AND FUNCTION AS INSTALLED AS REQUIRED.
4. WELDING OF STEEL DECKING SHALL CONFORM TO AWS D1.3.
5. ALL WELDS AND ABRASIONS SHALL BE GIVEN A PROTECTIVE COAT OF "GALVALLOY," "DRY-GALV," "GALVALUME" OR APPROVED EQUAL.
6. METAL DECK SUPPORTING CONCRETE SLAB SHALL HAVE TENTS BAR FOR CONCRETE VENTILATION, UNLESS NOTED OTHERWISE.
7. CONDUCITS OR PIPES SHALL NOT BE PLACED IN CONCRETE FILL OVER METAL DECK.

1. ALL STUDS AND TRACKS SHALL BE FORMED FROM STANDARD COMMERCIAL STEEL WITH A MINIMUM YIELD POINT PER PLANS CONFORMING TO EITHER ASTM A1008 GRADE "C", ASTM A1011, OR ASTM A653-SS WITH $F_y = 33$ KSI FOR 43 MIL (18 GAGE) AND LIGHTER, AND $F_y = 50$ KSI FOR HEAVIER GAGES.

MILLIMETER	GAGE
33	20
43	18
54	16
68	14

2. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY OR AT AN ANGLE AS REQUIRED TO SQUARELY FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY IN POSITION UNTIL PROPERLY FASTENED.
3. STUDS AND TRACKS SHALL BE ATTACHED BY WELDING AND SELF DRILLING SCREWS AS NOTED ON THE DRAWINGS.
4. BUTT WELDS OR SPLICES SHALL BE USED AT ALL JOINTS IN TRACK, SPLICES IN STUDS OR BRACES SHALL NOT BE PERMITTED. ALL WELDS SHALL BE FILLET, PLUG, BUTT OR SEAM WELDS. STUDS BURNED THROUGH BY WELDING SHALL BE PROVIDED WITH A SUITABLE STITCH PLATE OF SAME GAUGE.
5. STEEL STUDS SHALL BE AS MANUFACTURED BY STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) IN ACCORDANCE WITH ICC-ES REPORT NO. ESR-3064P UNLESS APPROVED OTHERWISE.
6. RUNNER TRACKS SHALL BE THE SAME GAUGE AS STUDS SUPPORTED, UNLESS OTHERWISE NOTED. TRACKS SHALL BE FASTENED TO STRUCTURE AT 24" O.C. MAXIMUM UNLESS OTHERWISE NOTED.
7. PROVIDE BLOCKING OF WALL STUDS AT 4'-0" O.C. MAXIMUM WHERE SHEATHING IS NOT PRESENT ON BOTH SIDES OF STUDS.
8. WHERE NECESSARY, STEEL STUDS SHALL BE COORDINATED WITH GLAZING MANUFACTURER, MECHANICAL, ELECTRICAL AND ALL OTHER TRADES.
9. ALL LIGHT GAUGE STEEL FRAMING INCLUDING CLIPS AND ANGLES SHALL BE 600 GALVANIZED.
10. ALL SCREWS SHALL BE SELF DRILLING TYPE, SHALL BE CORROSION RESISTANT, AND SHALL COMPLY WITH ASTM A153, ASME B16.6.4 AND ICC-ES AC 118. SCREWS SHALL HAVE MINIMUM 3 EXPOSED THREAD PROTRUDING THROUGH FASTENED STEEL FACE.
11. THE DISTANCE FROM THE EDGE OF THE STUD TO THE EDGE OF ANY PART SHALL NOT BE LESS THAN 1.5d. THE DISTANCE BETWEEN THE CENTERS OF FASTENERS SHALL NOT BE LESS THAN 3d.
12. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1, USE E60XX SERIES ELECTRODES. ALL FIELD WELDING SHALL HAVE SPECIAL INSPECTION.
13. POWER ACTUATED FASTENER (P.A.F.) SHALL BE INSTALLED PER CURRENT ICC-ES REPORT(S). PAF IN STEEL SHALL HAVE MINIMUM 1" SPACING AND MINIMUM 1/2" EDGE DISTANCE.
14. ALL STUDS SHALL BE SOLID WITHOUT PUNCH OUTS.

AREA	LIVE LOAD ⁽¹⁾	
	UNIFORM	CONCENTRATED
ROOF	20 PSF	—
—	—	—
—	—	—

- (1) THE CONDITION OF UNIFORM OR CONCENTRATED LIVE LOAD PRODUCING THE GREATER STRESS OR DEFLECTION GOVERNS DESIGN. UNIFORM AND CONCENTRATED LIVE LOADS ARE NOT ADDITIVE U.N.O.
- (2) THE MINIMUM DESIGN UNIFORM LIVE LOAD IS REDUCED BASED ON MEMBER TRIBUTARY AREA IN ACCORDANCE WITH CBC SECTION 1607.
- (3) CONCENTRATED LIVE LOAD PLACED UPON ANY AREA $2\frac{1}{2}$ FEET SQUARE IN ACCORDANCE WITH CBC SECTION 1607.4.

1. SEISMIC:

IMPORTANCE FACTOR, I = 1.0

SEISMIC DESIGN CATEGORY = D

RISK CATEGORY = II

SITE CLASS = D

MAPPED WCE SPECTRAL RESPONSE ACCELERATION, $S_S = 1.328g$

MAPPED WCE SPECTRAL RESPONSE ACCELERATION, $S_1 = 0.472g$

SPECTRAL RESPONSE ACCELERATION PARAMETER, $S_{RS} = 0.886g$

SPECTRAL RESPONSE ACCELERATION PARAMETER, $S_{D1} = 0.575g$

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

STRUCTURAL SYSTEM "R" & SEISMIC RESPONSE COEFFICIENT AS FOLLOWS:

BASIC STRUCTURAL SYSTEM	LATERAL-FORCE-RESISTING SYSTEM	R	SEISMIC RESPONSE COEFFICIENT, C_s
BEARING WALL	SPECIAL REINFORCED CONCRETE MASONRY SHEAR WALLS	5.0	0.177g
CANOPIES	NONBUILDING STRUCTURE INVERTED PENDULUM	2.0	0.443g

ULTIMATE DESIGN WIND SPEED = 96 MPH
EXPOSURE = C

1. REFER TO TH

1. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR ALLOWABLE FOUNDATION LOADS;
PROPOSED TRAINING GROUND IMPROVEMENT
ORANGE COUNTY FIRE AUTHORITY, IRVINE, CA
BY GEOTECH WEST, INC.
REPORT NO. W006-88-02, DATED FEBRUARY 11, 2020
2. A QUALIFIED SOILS ENGINEER SHALL VERIFY THAT CONSTRUCTION AT THE SITE IS IN ACCORDANCE WITH GENERALLY ACCEPTED GEOTECHNICAL PRACTICES AND THE GEOTECHNICAL REPORT. FINISHED EXCAVATION FOR FOUNDATION SHALL BE NEAT AND TRUE TO LINE WITH ALL LOOSE MATERIAL AND DEBRIS REMOVED FROM EXCAVATIONS.
3. PRIOR TO PLACING CONCRETE, EXCAVATIONS SHALL BE CHECKED AND APPROVED BY A QUALIFIED SOILS ENGINEER FOR COMPLIANCE WITH THE GEOTECHNICAL REQUIREMENTS.
4. ALL FILL MATERIAL IS TO BE APPROVED BY THE SOILS ENGINEER AND SHALL BE COMPACTED TO MINIMUM 90% OF OPTIMUM DENSITY OR AS REQUIRED BY THE GEOTECHNICAL REPORT. INSPECTION IS REQUIRED DURING FILL AND COMPACTION.
5. ANY UTILITY LINES ENTERING UNDER THE BUILDING SHALL HAVE A NON-PERVOUS BACKFILL MATERIAL USED AT THE BUILDING FOOTING TO PREVENT ANY TRANSMISSION OF SUBSURFACE MOISTURE PENETRATION UNDER THE BUILDING THROUGH THE UTILITY TRENCH.
6. CLASS 2 AGGREGATE BASE SHALL BE PER STATE OF CALIFORNIA DEFINITION OF TRANSPORTATION STANDARD SPECIFICATIONS.

1. CEMENT SHALL CONFORM TO ASTM C-150, SEE NOTE "5" BELOW FOR CEMENT TYPE REQUIRED BASED ON CONCRETE. FLY ASH NOT ALLOWED.
2. AGGREGATES SHALL CONFORM TO ASTM C-33 FOR STRUCTURAL NORMAL-WEIGHT CONCRETE (1" MAXIMUM SIZE).
3. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94.
4. CONCRETE DESIGN MIXES SHALL BE IN ACCORDANCE WITH CHAPTER 26 OF ACI 318 AND SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF CALIFORNIA, AND SIGNED BY THE CITY ENGINEER.
5. ALL CONCRETE SHALL SATISFY BOTH THE MINIMUM STRENGTH REQUIREMENT AND MAXIMUM WATER-CEMENT RATIO BY WEIGHT AS FOLLOWS:

CONCRETE USE	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS F _c	MAXIMUM WATER CEMENT RATIO BY WEIGHT	CEMENT TYPE
RAISED SLAB	4,500 PSI	0.45	II / Y
SLAB ON GRADE	4,500 PSI	0.45	II / Y
FOOTINGS	4,500 PSI	0.45	II / Y

6. THE SLUMP SHALL BE 4" FOR ALL CONCRETE WORK.
7. ADMIXTURES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
8. ADMIXTURES USED TO INCREASE THE WORKABILITY OF THE CONCRETE SHALL NOT BE CONSIDERED TO REDUCE THE SPECIFIED MINIMUM CEMENT CONTENT.
9. REFERENCE TO ARCHITECTURAL DRAWINGS FOR FINISHES, REELS, SLOPPERS, TRIMMINGS, CLIPS OR TEXTURES REQUIRED TO BE CAST INTO JOINTS AND LOCATIONS AND EXTENTS OF DEPRESSIONS, CURBS AND RAMPS.
10. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 1/4" CHAMFER UNLESS OTHERWISE NOTED. CONCRETE FORM TOLERANCES SHALL BE WITHIN ACI 318 & ACI 301 STANDARDS.
11. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE SECURED IN POSITION AND INSPECTED BY THE LOCAL BUILDING DEPARTMENT INSPECTOR PRIOR TO POURING OF AND CURING OF CONCRETE.
12. LOCATION OF ALL CONSTRUCTION JOINTS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING REINFORCING STEEL.
13. THE AGGREGATE GRADATION FOR CONCRETE MIXES FOR SLABS-ON-GRADE AND METAL DECK FILL SHALL RANGE, BY WEIGHT, FROM 8% MINIMUM TO 18% MAXIMUM ON EACH SIZE SIZE EXCLUDING 1/2" AND NO. 100.

1. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY: $f_m = 1,500$ PSI.
2. UNITS: MEDIUM WEIGHT OPEN END BLOCKS CONFORMING TO ASTM C90.
3. REINFORCING STEEL: ASTM A615, GRADE 60.
4. MORTAR: ASTM C270, TYPE S.
5. GROUT: ASTM C476, COMPRESSIVE STRENGTH OF 2,000 PSI FOR $f_m = 1,500$ PSI BLOCK. ALL CELLS SHALL BE FULLY GROUTED.
6. GROUT DESIGN MIXES SHALL BE IN ACCORDANCE WITH TMS 602/ACI 530.1/ASCE 6, ARTICLE 2.2, AND SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF CALIFORNIA, AND HIRED BY CONTRACTOR.
7. GROUTING OF ANY WALL SECTION SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS SHALL BE ALLOWED.

8. BETWEEN GROUT POURS A HORIZONTAL CONSTRUCTION JOINT SHALL BE FORMED BY STOPPING MASONRY AT THE SAME ELEVATION WITH THE GROUT STOPPING 1/2" BELOW THE MORTAR JOINT, EXCEPT AT THE TOP OF THE GROUT POUR. GROUT POUR SHALL BE STOPPED A MINIMUM 1/2" BELOW THE TOP OF THE MASONRY.
9. CLEAN OUTS SHALL BE PROVIDED FOR ALL GROUT POURS OVER 5 FEET IN HEIGHT. CLEAN OUTS SHALL BE PROVIDED IN THE BOTTOM COURSE OF ALL VERTICAL BARS, BUT ALL NOT BE SPACED MORE THAN 10 FEET CENTER. CLEAN OUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.
10. MASONRY UNITS MAY BE LAID TO THE FULL HEIGHT OF THE GROUT POUR AND GROUT SHALL BE PLACED IN A CONTINUOUS POUR IN LIFTS NOT EXCEEDING 6'-0".
11. VERTICAL CONTROL JOINT FOR WALLS SHALL BE PLACED AT SPACINGS NOT TO EXCEED 10 FEET, UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWINGS FOR CONTROL JOINT DETAILS AT EXTERIOR FINISHES.

A. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY, AND THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND THEY SHALL BE IN ACCORDANCE WITH ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

C. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEREFORE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN OR OTHER PERSONS DURING CONSTRUCTION, SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING, PROTECTIVE COVERING, PROTECTIVE SHOOTING, THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING AND SAFETY NETS. CONTRACTOR, AT HIS OWN EXPENSE, SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONS FOR PROTECTION OF THE STRUCTURE AND INSPECTION OF SAME IN THE FIELD OBSERVATION VISITS BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DO NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.

D. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, AND CONFIRMING THAT WORK OR MATERIALS AS SHOWN BEFORE PROCEEDING WITH CONSTRUCTION. IF THERE ARE ANY QUESTIONS REGARDING THESE OR OTHER COORDINATION ITEMS, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH WORK OR MATERIALS.

E. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK AND NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

F. ALL OMISSIONS AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH WORK OR MATERIALS.

G. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

H. NO PIPES, DUCTS, SLEEVES, CHASES, ETC., SHALL BE PLACED IN SLABS, BEAMS, OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, OR OTHER ITEMS UNLESS SPECIFICALLY SHOWN OR NOTED. BEFORE ANY CUT, THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, OR OTHER ITEMS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS.

I. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FINISHES IN FLOOR SLABS, FINISHES IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.

J. HOLES AND OPENINGS THROUGH WALLS, FLOORS AND ROOF'S FOR DUCTS, PIPING AND VENTILATION SHALL BE COORDINATED BY THE CONTRACTOR WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.

K. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION FOR THE USE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE CALLED FOR OR SHOWN.

L. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY LICENSES AND PERMITS. THE CONTRACTOR SHALL CONFORM TO ALL STATE AND LOCAL LAWS GOVERNING THE WORK.

M. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BEFORE BEGINNING WORK. SPECIAL CARE SHALL BE TAKEN TO PROTECT UTILITIES THAT ARE TO REMAIN IN SERVICE DURING CONSTRUCTION.

N. ALL FINISHES, STRUCTURAL ELEMENTS AND ARCHITECTURAL FEATURES AFFEY BY CONSTRUCTION ARE TO BE REPAIRED OR REPLACED TO MATCH EXISTING CONDITIONS.

O. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL LABOR, MATERIALS AND SERVICES NECESSARY FOR THE COMPLETION OF ALL WORK SHOWN, DESCRIBED OR REASONABLY IMPLIED, BUT NOT LIMITED TO THAT EXPLICITLY IN THE CONTRACT DOCUMENTS.

P. DETAILS ON SHEETS TITLED "TYPICAL DETAILS" AND DETAILS TITLED "TYPICAL" APPLY TO DETAILS OCCURRING ON THE SAME OR SIMILAR TO THE SAME OR SIMILAR TO DETAILS OR SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.

Q. REFER TO DRAWINGS BY OTHERS FOR INFORMATION NOT SHOWN ON THE STRUCTURAL DRAWINGS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- 1. MECHANICAL EQUIPMENT SEISMIC ANCHORAGE AND BRACING - SEE MECHANICAL DRAWINGS AND DEFERRED CONTRACTOR SUBMITTAL.
- 2. VERTICAL SUPPORT AND LATERAL BRACING FOR SUSPENDED UTILITY PIPING AND MECHANICAL DUCTING - SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND DEFERRED CONTRACTOR SUBMITTAL.
- 3. MISCELLANEOUS STEEL FABRICATION, INCLUDING GUARDRAILS, HANDRAILS AND STAIR FRAMING, - SEE ARCHITECTURAL DRAWINGS AND/OR DEFERRED CONTRACTOR SUBMITTAL.

R. IN AS MUCH AS DESIGN FOR REMODELING AND REHABILITATION REQUIRES THAT CERTAIN PORTIONS BE MAINTAINED REGARDLESS OF THE EXTENT OF THE WORK, HOWEVER, THE ASSUMPTIONS CANNOT BE VERIFIED WITHOUT PREMATURELY DESTROYING OTHERWISE CURRENTLY ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING THE CONTRACTOR SHALL BE AWARE THAT THERE MAY BE DISCREPANCIES BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT ACTUALLY EXISTS IN THE FIELD. ANY DISCREPANCIES, OMISSIONS, OR INCONSISTENCIES IF DISCOVERED, THEY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE ARCHITECT BEFORE PROCEEDING WITH THE AFFECTED WORK.

S. EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM THE ORIGINAL DRAWINGS OF THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN ALL EXISTING CONSTRUCTION DRAWINGS AND VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ALL DISCREPANCIES AND EXCEPTIONS BEFORE PROCEEDING WITH THE WORK.

T. ORIGINAL CONSTRUCTION DRAWINGS FOR THE EXISTING BUILDING AND SITE FEATURES ARE NOT FOR REVIEW OR EXISTING STRUCTURE INFORMATION NOT SHOWN ON THESE PLANS. REFER TO THE ORIGINAL PLANS.

A. SEE DRAWINGS OTHER THAN STRUCTURAL FOR EXTENT AND LOCATION OF ALL DEMOLITION WORK.

B. THE REMOVAL, CUTTING, DRILLING, ETC. OF EXISTING WORK SHALL BE PERFORMED WITH CARE AND SMALL TOOLS IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDING, DO NOT OVERCUT. IF STRUCTURAL MEMBER NOT INDICATED FOR REMOVAL, WORKERS WITH THE NEW WORK, SHALL BE IMMEDIATELY NOTIFIED AND PRIOR APPROVAL OBTAINED BEFORE REMOVAL OF MEMBERS.

C. THE CONTRACTOR SHALL SAFELY SHORE EXISTING CONSTRUCTION WHEREVER EXISTING WORK IS TO BE REMOVED TO ALLOW FOR THE PROGRESS OF THE NEW EXISTING CONSTRUCTION SHALL BE CONNECTED AND/OR EMBEDDED INTO THE NEW CONSTRUCTION AS SHOWN ON THE SPECIFIED. SHORING SHALL REMAIN IN PLACE UNTIL ALL NEW CONSTRUCTION HAS BEEN COMPLETED.

- A. THE FOLLOWING WORK REQUIRES TESTS AND/OR INSPECTIONS, FOR SPECIFIC REQUIREMENTS SEE SPECIFICATION. INSPECTIONS SHALL BE MADE IN ACCORDANCE WITH C.B.C. SECTION 110 AND CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR RETAINED BY THE OWNER.
 - 1. FOOTING EXCAVATION.
 - 2. SOIL COMPACTION.
 - 3. PLACEMENT OF REINFORCING STEEL, METAL EMBEDS AND ANCHOR BOLTS.
 - 4. CONCRETE.
 - 5. ADHESIVE DOWELS.
 - 6. FIELD WELDING: REBAR, STRUCTURAL STEEL, METAL DECK, WELDED STUDS.
 - 7. HIGH STRENGTH BOLTS.
 - 8. CONCRETE MASONRY TYPICAL U.N.O.
- B. A PARTIAL LISTING OF REQUIRED STRUCTURAL SUBMITTALS FOLLOWS. REFER TO THE SPECIFICATIONS FOR COMPLETE SUBMITTAL REQUIREMENTS.
 - 1. CONCRETE MIX DESIGNS
 - 2. GROUT MIX DESIGNS.
 - 3. REINFORCING STEEL SHOP DRAWINGS
 - 4. CONSTRUCTION AND CONTROL JOINT LAYOUT FOR CONCRETE SLABS ON GRADE.
 - 5. STRUCTURAL STEEL SHOP DRAWINGS
 - 6. PREFABRICATED STAIRS SHOP DRAWINGS AND ENGINEERING CALCULATIONS.
 - 7. MANUFACTURER'S DATA FOR INSERTS, GROUT AND ADHESIVE.
- C. STRUCTURAL OBSERVATIONS.

STRUCTURAL OBSERVATION CONSISTING OF VISIBLE OBSERVATION OF THE STRUCTURAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS FOR GENERAL CONFORMANCE TO THE APPROVED STRUCTURAL PLANS AND SPECIFICATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD AT SIGNIFICANT CONSTRUCTION STAGES AS DETERMINED BY THE STRUCTURAL ENGINEER OF RECORD.

A. OWNER'S TESTING AGENCY SHALL PERFORM THE FOLLOWING TESTS AND SUBMIT APPROPRIATE REPORTS TO THE ARCHITECT, ENGINEER AND BUILDING DEPARTMENT.

B. PERFORM CONCRETE TESTING FOR CONCRETE IN ACCORDANCE WITH ACI 318.

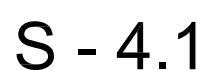
1. MAKE AND CURE A MINIMUM OF THREE SPECIMEN CYLINDERS ACCORDING TO ASTM C31 AT EACH FREQUENCY FOR EACH CLASS OF CONCRETE. PROVIDE AT LEAST TWO CYLINDERS PER DAY, FOR EACH, NOT LESS THAN ONCE FOR EACH 150 CUBIC YARDS, NOR LESS THAN ONCE FOR EACH 5,000 SQ. FT.

2. RETAIN ONE CYLINDER FOR SEVEN-DAY TEST AND TWO MORE FOR THE 28 DAY TEST.

C. PERFORM CHL WALL TESTING IN ACCORDANCE WITH CBC SECTION 19-0105.

D. PERFORM NON-DESTRUCTIVE TESTING FOR ALL COMPLETE PENETRATION AND PARTIAL PENETRATION JOINT FIELD WELDS.

E. SPECIAL INSPECTOR SHALL SUBMIT REGULAR INSPECTION REPORTS PER C.B.C. SECTION 17-04.



8 CONCRETE CONSTRUCTION (CBC SECTION 1705.3, TABLE 1705.3, AND AISC 318)

- 8.1 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION AS FOLLOWS:
- A. DURING THE PLACEMENT OF REINFORCEMENT AND CONCRETE IN SEISMIC FORCE RESISTING MOMENT FRAMES AND SEISMIC SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F (IN ACCORDANCE WITH CBC 1705.12) AND ALL STRUCTURES CONSTRUCTED IN WIND EXPOSURE CATEGORIES A, B, C, AND D (AS REQUIRED IN CBC 1705.11).
 - B. DURING PNEUMATIC APPLIED CONCRETE FOR REPAIRS AND SEISMIC STRENGTHENING OF BUILDINGS AND STRUCTURES.
 - C. PRIOR TO AND DURING THE INSTALLATION OF ADHESIVE/GROUTED ANCHORS AND EMBEDMENTS.
 - D. DURING THE MOLDING OR CONSTRUCTION OF CONCRETE TEST CYLINDERS, BEAMS, CORES, OR PANELS FOR SHOTCRETE CORES.
 - E. DURING PLACEMENT OF REINFORCING STEEL AND CONCRETE FOR DRILLED PILES OR CAISSONS.
 - F. DURING THE APPLICATION OF PRESTRESSING FORCES AND GROUTING OF TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.
 - G. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND ANCHOR BOLTS.
- 8.2 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION AS FOLLOWS:
- A. AT THE START AND DURING EACH PHASE OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
 - B. ANCHORAGES FOR EQUIPMENT AND NON-STRUCTURAL COMPONENTS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F (CBC 1705.12).
 - C. DURING THE PLACEMENT OF CONCRETE (ONLY WHERE PERMITTED BY CODE AND AISC 318)
 - D. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STIRRUPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (I.E. AT OPENINGS, BEAMS, CORNERS, COLUMNS, PIERS AND CAISSONS) BEFORE THEY ARE COVERED.
 - E. DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.
 - F. VERIFICATION OF DELIVERED MIX DESIGN BEFORE ANY CONCRETE IS PLACED.
 - G. VERIFICATION OF THE TRAVEL TIME AND ROTATIONS OF THE DRUM OF THE DELIVERED MIX BEFORE ANY CONCRETE IS PLACED. (ASTM C94)
 - H. MAINTENANCE OF SPECIFIED/APPROVED CURING TEMPERATURE AND TECHNIQUES.
 - I. FABRICATION AND PLACING OF PRECAST CONCRETE MEMBERS.

9 MASONRY CONSTRUCTION (CBC SECTION 1705.4 AND 2104)

- 9.1 THE SPECIAL INSPECTOR SHALL VERIFY COMPLIANCE OF THE FOLLOWING, PRIOR TO CONSTRUCTION:
- A. CERTIFICATES OF COMPLIANCE FOR MATERIALS USED IN MASONRY CONSTRUCTION. (CBC 1705.4)
 - B. PROPORTIONS OF MATERIALS – INCLUDING ADMIXTURES – IN MORTAR AND GROUT.
 - C. F/M PRIOR TO CONSTRUCTION, AND FOR EVERY 5,000 SQ. FT. DURING CONSTRUCTION. (CBC 1705.4)
- 9.2 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION AS FOLLOWS:
- A. DURING PLACEMENT OF ALL MASONRY NON-OPEN END UNITS, REINFORCEMENT, CONNECTORS.
 - B. DURING INSTALLATION AND IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS.
 - C. DURING ALL GROUTING OPERATIONS.
 - D. DURING PREPARATION AND TAKING OF PRISMS OR TEST SPECIMENS.
 - E. DURING WELDING OF REINFORCING STEEL.
- 9.3 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION AS FOLLOWS:
- A. AT THE START AND DURING EACH PHASE OF THE PROJECT TO CONFIRM MATERIAL CERTIFICATIONS AND TESTING REQUIREMENTS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
 - B. AT SUCH FREQUENCY AS NECESSARY, TO VERIFY THAT THE CLEANLINESS, MORTAR PROJECTIONS AND REINFORCEMENT CLEARANCES WITHIN GROUT SPACES, CONFORM TO THE MINIMUM REQUIREMENTS.
 - C. TO VERIFY THAT THE GROUT POURS AND CONSTRUCTION JOINTS ARE IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
 - D. TO VERIFY THAT ALL DOWELS, ANCHOR BOLTS, EMBED PLATES, INSERTS, AND ANY OTHER DETAILS OF ANCHORAGE TO MASONRY ARE SECURED IN PLACE.
 - E. TO VERIFY TYPE, SIZE AND LOCATION OF STRUCTURAL ELEMENTS INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.
 - F. TO VERIFY PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 F) OR HOT WEATHER (TEMPERATURE ABOVE 90 F).

10 LIGHT FRAMED CONSTRUCTION (CBC SECTION 1705.5 AND 1706.12)

- 10.1 SHOP FABRICATED ASSEMBLIES (CBC 1704.2.5): THE SPECIAL INSPECTOR SHALL VERIFY THE QUALITY AND WORKMANSHIP FOR THE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES. THE SPECIAL INSPECTOR SHALL REVIEW THE FABRICATOR'S DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES FOR COMPLETENESS AND ADEQUACY. APPROVAL TO WAIVER SPECIAL INSPECTION REQUIREMENTS OF FABRICATED MEMBERS SHALL BE BASED ON REVIEW OF THE FABRICATOR'S WRITTEN AND PROCEDURAL QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY.
- 10.2 SITE FABRICATED ASSEMBLIES (CBC 1705.5): THE SPECIAL INSPECTOR SHALL INSPECT THE WOOD STRUCTURAL PANEL SHEATHING OF HIGH-LOAD DIAPHRAGMS TO ASCERTAIN WHETHER IT IS OF THE GRADE AND THICKNESS SHOWN ON THE APPROVED BUILDING PLANS. HE MUST VERIFY THE NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAIL OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS AGREES WITH THE APPROVED BUILDING PLANS.
- 10.3.1 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION TO VERIFY THE MATERIALS FOR CONSTRUCTION FOR COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM AS FOLLOWS:
- A. NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS.
 - B. LUMBER SIZES, GRADING, ADHESIVES AND PRESERVATIVES USED.
 - C. IDENTIFICATION OR QUALITY MARK ON PRESERVATIVE-TREATED WOOD BY AN ACCREDITED INSPECTION AGENCY, COMPLYING WITH REQUIREMENTS OF THE AMERICAN LUMBER STANDARDS TREATED WOOD PROGRAM.
 - D. MOISTURE CONTENT AND LUMBER SPLITS.
 - E. SURFACE TREATMENT FOR PROPER PRESERVATIVE, SEALER, PRIME AND PAINT.
 - F. CAMBER.
- 10.3.2 CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING FIELD GLUING OPERATIONS OF ELEMENTS OF THE SEISMIC-FORCE-RESISTING SYSTEM.
- 10.4 COLD FORMED STEEL MEMBERS (CBC 2211)
- 10.4.1 THE SPECIAL INSPECTOR SHALL VERIFY THE MATERIALS FOR CONSTRUCTION AS FOLLOWS:
- A. PHYSICAL PROPERTIES (GRADE, TYPE AND QUALITY), STUDS AND TRACK SIZES, LENGTH OF WEB, FLANGES, RETURN UPS AND GAGE (STEEL SHEET) THICKNESS.
 - B. METALLIC COATING DESIGNATION, COLOR OR PROTECTIVE COATING (GALVANIZED PER ASTM A 1003).
 - C. MECHANICAL PROPERTIES, YIELD STRENGTH, PRODUCT DESIGNATE, AND MANUFACTURER.
 - D. FASTENERS (PINS AND INSTALLATION SCREWS (WITH PROTECTIVE COATING WHEN SPECIFIED) FOR SCREW SHEAR, PULL-OUT REQUIREMENTS, DIAMETER, AND POINT STYLE IN RELATION TO COMBINED THICKNESS OF ALL CONNECTED STEEL FRAME MEMBERS.
- 10.5 CONSTRUCTION (CBC 1705.2, 1705.3, 2211, 2304 AND 2308)
- 10.5.1 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION TO VERIFY THE FOLLOWING FOR COMPLIANCE TO APPROVED PLANS AND CODE REQUIREMENTS:
- A. ROOF DIAPHRAGM TO BLOCKING OR TOP TRACK FASTENER SIZE AND SPACING.
 - B. FIELD INSTALLATION AND CONNECTION DETAILS, NAILING, BOLTING, ANCHORING, DRILLING, CUTTING, NOTCHING, BLOCKING AND BRIDGING.
 - C. INSTALLATION AND LOCATION OF DRAG STRUT, DIAPHRAGM COLLECTOR, BRACES, ANCHORS AND HOLD DOWNS.
 - D. FRAMING SHEAR WALL PANEL TYPE/GRADE INCLUDING PANEL LAYOUT, SHEAR WALL LENGTH, PANEL THICKNESS AND GRADE, STUD SIZE AND GRADE/TYPE, SPACING, AND NAILING/FASTENING CONDITIONS.
 - E. SHEAR WALL (BOUNDARY AND FIELD) FASTENING DETAILS.
 - F. OPENING/PENETRATION LOCATIONS AND REQUIREMENTS FOR SUPPLEMENTAL STRAPPING WITH BLOCKING.
 - G. ACCEPTABILITY OF BLOCKING FIT, CONNECTION, SIZE, LOCATION AND ORIENTATION.
 - H. SHAKERS (NAILS PENETRATING STRUCTURAL PANEL SHEATHING ONLY).
 - I. STORAGE AND CUTTING OF LUMBER.
 - J. WELDING AND FRAMING CONSTRUCTION FOR PROPER FIT OF JOINTS AND CONNECTIONS.
 - K. CONNECTION HARDWARES, SUCH AS STRAPS, ANGLES, HANGERS, FRAMING CLIPS AND FASTENERS (NAIL, BOLT, LAG, OR SCREW) FOR COMPLIANCE WITH SPACING, EDGE DISTANCE, SIZE PENETRATION, AND GAGE REQUIREMENTS.

6 CONTRACTOR RESPONSIBILITIES

- 6.1 NOTIFICATIONS: THE CONTRACTOR SHALL COORDINATE THE TESTING, INSPECTION, AND STRUCTURAL OBSERVATION SERVICES WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR AND TESTING AGENCY 24 HOURS IN ADVANCE, AND THE STRUCTURAL OBSERVER 48 HOURS IN ADVANCE OF REQUIRED OBSERVATIONS FOR SCHEDULING PURPOSES. FAILURE BY THE CONTRACTOR TO MEET OBSERVATION SCHEDULES MAY REQUIRE REMOVAL OF ANY SUBSEQUENT WORK FOR OBSERVATION. THE CONTRACTOR SHALL BE LIABLE FOR EXPENSES ENTAILLED IN THE REMOVAL AND REPLACEMENT OF ANY MATERIAL REQUIRED TO ALLOW INSPECTION OR STRUCTURAL OBSERVATION.
- 6.2 THE CONTRACTOR SHALL REPAIR AND/OR REPLACE WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE CHOICE OF REPAIR OR REPLACEMENT IS SUBJECT TO THE APPROVAL OF THE OWNER, THE RDP, THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN, AND THE AUTHORITIES HAVING JURISDICTION IN WHICH THE PROJECT IS CONSTRUCTED.
- A. THE CONTRACTOR SHALL ENGAGE AN ENGINEER OR ARCHITECT TO PREPARE REPAIR AND/OR REPLACEMENT PROCEDURES.
 - B. THE ENGINEER OR ARCHITECT SHALL BE REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE ENGINEER OR ARCHITECT SELECTED SHALL BE SUBJECT TO THE APPROVAL OR REJECTION OF THE RDP, AUTHORITIES HAVING JURISDICTION, AND OWNER.
 - C. PROCEDURES SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE RDP, ENFORCEMENT AGENCY, AND OWNER BEFORE PROCEEDING WITH CORRECTIVE ACTION.
- 6.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS OF:
- A. REVIEW OF PROPOSED REPAIR AND/OR REPLACEMENT PROCEDURES BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND THE INSPECTORS AND TESTING AGENCIES
 - B. REPAIR OR REPLACEMENT OF WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
 - C. RE-TESTING AND RE-INSPECTION OF MATERIALS, WORK, AND/OR PRODUCTS THAT DO NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS/SUBMITTAL DATA.
- 6.4 SUBMITTALS:
- A. SUBMIT SHOP DRAWINGS, DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S FIELD REPORTS, AND OTHER QUALITY CONTROL SUBMITTALS AS REQUIRED BY THE CONTRACT DOCUMENTS FOR REVIEW BY THE RDP.

7 STEEL CONSTRUCTION (CBC SECTION 1705.2 AND AISC 360)

- 7.1 SUBMITTALS
- 7.1.1 THE CONTRACTOR SHALL PROVIDE COPIES OF THE SUBMITTALS REVIEWED BY THE RDP TO EACH SPECIAL INSPECTOR.
- 7.1.2 THE SPECIAL INSPECTOR SHALL OBTAIN COPIES OF THE FOLLOWING SUBMITTALS FOR THEIR REVIEW:
- A. SHOP AND ERECTION DRAWINGS.
 - B. WELDING PROCEDURE SPECIFICATIONS (WPS).
 - C. MANUFACTURER'S MILL CERTIFICATE
 - D. MILL TEST REPORTS
 - E. CHARTER V-NOTCH (CVN) IMPACT TEST REPORTS
 - F. WELDERS CERTIFICATES
- 7.2 WELDING (IN COMPLIANCE WITH AWS D1.1)
- 7.2.1 THE SPECIAL INSPECTOR SHALL:
- A. ASCERTAIN THAT ALL FABRICATION AND ERECTION BY WELDING IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED CONSTRUCTION DOCUMENTS, THE BUILDING CODE AND AWS STANDARDS.
 - B. VERIFY THAT ONLY MATERIALS AND PROCEDURES CONFORMING TO THE REQUIREMENTS OF AWS, AISC OR ASTM, AND SPECIFIED ON APPROVED PLANS ARE USED.
 - C. REVIEW ALL WELDING PROCEDURE SPECIFICATION (WPS), VISUALLY INSPECT THE PREPARATIONS, WELDING PROCESS, ELECTRODES AND EQUIPMENT USED, FOR COMPLIANCE, AND VERIFY THE VARIABLES ARE WITHIN ESTABLISHED PARAMETERS.
 - D. VERIFY THAT INDIVIDUAL QUALIFICATION OF WELDERS, WELDING OPERATORS AND TACK WELDERS ARE CURRENT, AND IN ACCORDANCE WITH THE WORK TO BE PERFORMED.
 - E. VERIFY THAT THE FILLER METAL FOR DEMAND CRITICAL WELDS AND ALL WELDS IN MEMBERS AND CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM, AS DESIGNATED IN THE CONTRACT DOCUMENTS, MEETS THE MINIMUM CHARTER V-NOTCH TOUGHNESS REQUIREMENTS. (AWS D1.6)
 - F. VISUALLY INSPECT ALL WELDS AND VERIFY THAT ALL DISCONTINUITIES (SUCH AS THOSE CREATED BY ERRORS/FABRICATION/ER ECTION OPERATIONS) ARE REPAIRED.
- 7.2.2 PERIODIC INSPECTIONS ARE PERMITTED DURING WELDING OF THE FOLLOWING ITEMS, PROVIDED VISUAL INSPECTION IS CONDUCTED PRIOR TO COMPLETION AND/OR SHIPMENT OF SHOP WELDS:
- A. SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 IN.
 - B. FLOOR AND ROOF DECK WELDING.
 - C. WELDED STUDS IN STRUCTURAL DIAPHRAGM OR COMPOSITE SYSTEMS.
 - D. WELDED SHEET STEEL FOR COLD-FORMED STEEL FRAMING STUDS AND JOISTS.
 - E. STAIR AND RAILING SYSTEMS.
- 7.2.3 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION FOR SHOP AND FIELD WELDING PER CBC 1705.12 AND AISC 341. CONTINUOUS INSPECTION IS ALSO REQUIRED FOR SINGLE PASS FILLET WELDS EXCEEDING 5/16" MULTI-PASS WELDS, GROOVE WELDS, WHERE SPECIFICALLY INDICATED ON DRAWINGS, AND OTHER WELDS NOT LISTED FOR PERIODIC INSPECTION.
- 7.2.4 EXCEPT FOR SPECIAL MOMENT-RESISTING FRAMES, SPECIAL CONCENTRIC BRACED FRAMES, ECCENTRIC BRACED FRAMES, OR BUCKLING RESTRAINED BRACED FRAMES, SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS PERFORMED ON THE PREMISES OF A FABRICATOR CURRENTLY REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION PER SECTION CBC 1704.2.5, UNLESS OTHERWISE REQUIRED BY THE RDP.
- 7.2.5 PROVIDE NON-DESTRUCTIVE TESTING FOR FULLY RESTRAINED CONNECTIONS BY ULTRASONIC TESTING OR BY RADIOGRAPHY, UNLESS REQUIRED OTHERWISE IN AWS D1.1 OR AS SPECIFIED BY THE RDP:
- A. COMPLETE JOINT PENETRATION GROOVE WELDS.
 - B. PARTIAL PENETRATION GROOVE WELDS IN COLUMN SPICES.
 - C. BASE METAL THICKER THAN 1-1/2 INCHES WHERE SUBJECT TO THROUGH-THICKNESS WELD SHRINKAGE STRAINS.
 - D. OTHER NON-DESTRUCTIVE TESTING AS REQUIRED BY AISC 341 AND THE RDP.
- 7.2.6 REQUIRED VERIFICATION AND INSPECTION FOR STEEL CONSTRUCTION AS DETAILED IN AISC 360, CHAPTER N.
- 7.3 HIGH STRENGTH BOLTING
- 7.3.1 HIGH STRENGTH BOLTING SHALL BE INSTALLED IN ACCORDANCE WITH THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RSCC), UNLESS OTHERWISE NOTED ON THE APPROVED PLANS AND SPECIFICATIONS.
- 7.3.2 THE SPECIAL INSPECTOR SHALL:
- A. DETERMINE THAT THE SPECIFIED REQUIREMENTS FOR BOLTS, NUTS, WASHERS AND PAINT, BOLTED PARTS, INSTALLATION AND TIGHTENING STANDARDS ARE MET.
 - B. OBSERVE THE PRE-INSTALLATION TESTING AND CALIBRATION PROCEDURES (WHEN SUCH PROCEDURES ARE REQUIRED OR SPECIFIED). THE CALIBRATED WRENCH TIGHTENING INSTALLATION PROCEDURE SHALL BE CALIBRATED DAILY FOR EACH BOLT DIAMETER, LENGTH AND GRADE USING FASTENER ASSEMBLIES THAT ARE BEING INSTALLED.
 - C. VERIFY THAT THE SELECTED PROCEDURE FOR INSTALLATION IS PROPERLY USED TO TIGHTEN BOLTS, AND TO ACHIEVE THE REQUIRED PRETENSION (WHEN SPECIFIED).
- 7.3.3 IN BOLTED CONNECTIONS THAT ARE SLIP-CRITICAL OR REQUIRE PRETENSIONING, THE SPECIAL INSPECTOR SHALL DETERMINE THAT ALL AREAS ON THE FAYING SURFACE BETWEEN BOLTS ARE FREE OF PAINT OR ZINC-COATING, UNLESS QUALIFIED/TESTED IN ACCORDANCE WITH THE 2009 RSCC SPECIFICATION APPENDIX A AND APPROVED BY THE RDP.
- 7.3.4 SLIP-TIGHT AND PRETENSIONED BEARING CONNECTIONS, IDENTIFIED AS NOT BEING SLIP-CRITICAL, NEED NOT BE INSPECTED FOR BOLT TENSION, OTHER THAN TO ENSURE THAT ALL PILES OF THE CONNECTED MATERIALS HAVE BEEN DRAWN TOGETHER IN FIRM CONTACT.
- 7.3.5 PERIODIC INSPECTION FOR BOLTED CONNECTIONS MAY BE PERFORMED IN ACCORDANCE WITH AISC SPECIFICATIONS AND RSCC SPECIFICATIONS, INCLUDING:
- A. THE TURN-OF-NUT METHOD WITH MATCH-MARKING TECHNIQUES.
 - B. THE DIRECT TENSION INDICATOR METHOD.
 - C. THE ALTERNATE DESIGN FASTENERS (TWIST-OFF BOLTS).
 - D. JOINTS DESIGNATED AS SNUG TIGHT.
- 7.3.6 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS MONITORING FOR :
- A. TURN-OF-NUT METHOD WITHOUT MATCH-MARKING.
 - B. PRETENSIONING USING THE CALIBRATED WRENCH METHOD.

1 DEFINITIONS

- 1.1 APPROVED AGENCY: THE APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, AND APPROVED BY THE RDP AND THE BUILDING OFFICIAL. (CBC 1702.1).
- 1.2 APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES WITHOUT SPECIAL INSPECTION. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL AND THE RDP (CBC 1704.2.1).
- 1.3 CERTIFICATE OF COMPLIANCE: A CERTIFICATE STATING THAT THE MATERIALS AND PRODUCTS MEET SPECIFIED STANDARDS OR THE WORK WAS DONE IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS (CBC 1702).
- 1.4 RDP: REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THE PROJECT. A REGISTERED DESIGN PROFESSIONAL SHALL BE A REGISTERED STRUCTURAL ENGINEER, A REGISTERED CIVIL ENGINEER, OR A LICENSED ARCHITECT HOLDING A VALID CERTIFICATE TO PRACTICE IN THE STATE OF CALIFORNIA.
- 1.5 SPECIAL INSPECTOR: A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND RDP, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION, REQUIRING SPECIAL INSPECTION (CBC 1704.2). THE SPECIAL INSPECTOR SHALL HAVE ACTUAL PERSONAL KNOWLEDGE, OBTAINED BY PERSONAL INSPECTION OF THE WORK OF CONSTRUCTION.
- 1.6 SPECIAL INSPECTION: INSPECTION OF THE MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS (CBC 110, 1702 & 1704). THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS BY THE BUILDING OFFICIAL (CBC 110).
- 1.7 SPECIAL INSPECTION, CONTINUOUS: CONSTANT FULL-TIME INSPECTION OF THE WORK OF CONSTRUCTION, IN ALL STAGES OF ITS PROGRESS, BY THE APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED, TO ENSURE THAT THE REQUIREMENTS OF THE APPROVED PLANS AND SPECIFICATIONS ARE BEING COMPLETELY EXECUTED. (CBC 1702)
- 1.8 SPECIAL INSPECTION, PERIODIC: PART-TIME OR INTERMITTENT INSPECTION OF WORK OF CONSTRUCTION BY THE APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE WORK HAS BEEN OR IS BEING PERFORMED AND AT COMPLETION OF THE WORK. (CBC 1702)
- 1.9 STRUCTURAL OBSERVATION: VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE DESIGNATED STRUCTURAL OBSERVER FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM (CBC 110, 1702 & 1704.6). STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED PER CBC 110 & 1704.
- 1.10 STRUCTURAL OBSERVER: THE STRUCTURAL OBSERVER SHALL BE THE INDIVIDUAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURAL SYSTEMS. ALTERNATIVELY, THE STRUCTURAL OBSERVER SHALL BE A PROFESSIONAL ENGINEER DESIGNATED BY EITHER THE RDP OR PROFESSIONAL ENGINEER DELEGATED RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURAL SYSTEMS OF THE BUILDING. THE STRUCTURAL OBSERVER SHALL BE EMPLOYED BY THE OWNER, THE RDP, OR THE PROFESSIONAL ENGINEER DELEGATED RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURAL SYSTEMS OF THE BUILDING.
- 1.11 PROJECT INSPECTOR: THE PROJECT INSPECTOR SHALL BE THE INDIVIDUAL APPROVED BY THE ENFORCEMENT AGENCY AS THE ON-SITE INSPECTOR. THE PROJECT INSPECTOR SHALL ACT UNDER THE GENERAL DIRECTION OF THE RDP AND UNDER THE SUPERVISION OF THE ENFORCEMENT AGENCY. THE PROJECT INSPECTOR SHALL BE RESPONSIBLE FOR INSPECTING ALL WORK INCLUDED IN THE CONSTRUCTION CONTRACT, EXCEPT FOR THE WORK THAT MUST BE INSPECTED BY AN APPROVED SPECIAL INSPECTOR. (CAC 4-207)

2 GENERAL REQUIREMENTS AND PREPARATION

- 2.1 THIS INSPECTION AND OBSERVATION PROGRAM HAS BEEN DEVELOPED WITH THE UNDERSTANDING THAT THE OWNER SHALL DESIGNATE A RESPONSIBLE INDIVIDUAL OR FIRM, ACCEPTABLE TO THE RDP AND BUILDING OFFICIAL, TO OVERSEE AND COORDINATE THE IMPLEMENTATION OF THE PROGRAM, AND MONITOR THE SPECIAL INSPECTOR ACTIVITIES ON THE JOB SITE TO ASSURE THAT THE SPECIAL INSPECTORS PERFORM THEIR DUTIES, AS DESCRIBED HEREIN.
- 2.2 THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS, INSPECTION AGENCIES OR FIRMS, APPROVED BY THE BUILDING OFFICIAL AND BUILDING OFFICIAL, TO PROVIDE INSPECTION DURING CONSTRUCTION ON THE TYPES OF WORK REQUIRING SPECIAL INSPECTION (CBC 1704.2).
- 2.3 THE OWNER OR ITS DESIGNEE SHALL EMPLOY MATERIALS TESTING LABORATORY/ TESTING AGENCY AS APPROVED BY THE RDP AND THE BUILDING OFFICIAL TO PERFORM TESTS SPECIFIED IN THIS SECTION.
- 2.4 THE OWNER SHALL EMPLOY A PROJECT INSPECTOR APPROVED BY THE RDP AND THE BUILDING OFFICIAL TO PROVIDE INSPECTION DURING CONSTRUCTION OF ALL WORK. (CAC 4-207)

3 TESTING AND APPROVALS

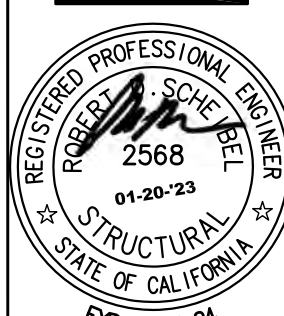
- 3.1 THE APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY UNDER THE RESPONSIBLE CHARGE OF A LICENSED PROFESSIONAL ENGINEER, REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, AND APPROVED BY THE RDP AND THE BUILDING OFFICIAL.
- 3.2 THE APPROVED AGENCY RETAINED FOR CONDUCTING TESTS SHALL NOT BE EMPLOYED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR.
- 3.3 THE APPROVED AGENCY SHALL HAVE ADEQUATE EQUIPMENT AND PERSONNEL TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS AND VERIFY CONFORMANCE WITH CONSTRUCTION DOCUMENTS AND APPLICABLE STANDARDS. (CBC 1703.1)
- A. ALL EQUIPMENT NECESSARY TO PERFORM REQUIRED TESTS SHALL BE PERIODICALLY CALIBRATED PER THE REFERENCED STANDARDS AND AS RECOMMENDED BY THE MANUFACTURER.
 - B. THE APPROVED AGENCY SHALL EMPLOY EXPERIENCED PERSONNEL, EDUCATED IN CONDUCTING, SUPERVISING AND EVALUATING TESTS, AND/OR INSPECTIONS.
- 3.4 APPROVAL OF ANY MATERIAL, APPLIANCE, EQUIPMENT, SYSTEM OR METHOD OF CONSTRUCTION MEETING THE REQUIREMENTS OF THIS CODE SHALL BE IN WRITING. A RECORD OF SUCH APPROVAL SHALL BE KEPT ON FILE IN THE BUILDING OFFICIAL'S OFFICE. SUCH APPROVAL RECORDS SHALL ALSO INCLUDE THE CONDITIONS AND LIMITATIONS OF THE APPROVAL.(CBC 1703.2, 1703.3)
- 3.5 THE APPROVED AGENCY SHALL MAINTAIN A RECORD OF TESTS PERFORMED IN SUFFICIENT DETAIL TO VERIFY COMPLIANCE WITH THE TEST STANDARD. (CBC 1703.5.1)
- 3.6 TEST REPORTS BY THE APPROVED AGENCY SHALL BE PROVIDED TO THE RDP AND THE BUILDING OFFICIAL TO DETERMINE THAT THE CONSTRUCTION MATERIALS COMPLY WITH APPLICABLE CODE REQUIREMENTS. (CBC 1703.2)

4 SPECIAL INSPECTIONS

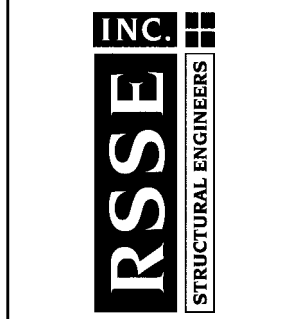
- 4.1 THE SPECIAL INSPECTOR OR INSPECTION AGENCY RETAINED FOR CONDUCTING INSPECTIONS SHALL NOT BE EMPLOYED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR.
- 4.2 THE SPECIAL INSPECTOR SHALL NOTIFY THE BUILDING OFFICIAL PRIOR TO INSPECTION COMMENCEMENT, DOCUMENT INSPECTION RECORDS AND FURNISH THEM TO THE BUILDING OFFICIAL AND TO THE RDP IN RESPONSIBLE CHARGE. (CBC 1704.2.4).
- 4.3 THE INSPECTION REPORT SHALL INDICATE THAT THE WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWINGS:
- A. PROJECT ADDRESS.
 - B. PERMIT NUMBER AND THE AUTHORITIES HAVING JURISDICTION.
 - C. DATE OF INSPECTION.
 - D. DESCRIPTION OF INSPECTIONS PERFORMED, APPLICABLE STANDARD, AND LOCATION (BUILDING ID, GRID LINES, AND ELEVATION OR FLOOR LEVEL).
 - E. STATEMENT THAT THE WORK INSPECTED CONFORMS TO APPROVED PLANS AND SPECIFICATIONS.
 - F. LIST OF DISCREPANCIES, UNRESOLVED DEVIATIONS, AND EXCLUSIONS OR ADDITIONS TO APPROVED PLANS AND SPECIFICATIONS AUTHORIZED BY THE RDP.
 - G. CORRECTIONS TO PREVIOUSLY LISTED ITEMS.
 - H. LIST OF TEST SPECIMENS TAKEN, TEST RESULTS AND MILL CERTIFICATIONS RECEIVED.
 - I. NAME, INSPECTION LICENSE OR IDENTIFICATION NUMBER, AND SIGNATURE OF SPECIAL INSPECTOR PERFORMING THE INSPECTION.
- 4.4 ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE BUILDING OFFICIAL AND TO THE RDP (CBC 1704.2.4)
- 4.5 TEST AND INSPECTION REPORTS SHALL BE SUBMITTED WITHIN FIVE (5) WORKING DAYS OF THE INSPECTION OR THE OBTAINING THE RESULTS OF THE TEST.
- 4.6 DEVIATION LOG: EACH SPECIAL INSPECTOR SHALL MAINTAIN A LOG OF WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THIS DEVIATION LOG SHALL INCLUDE REFERENCE TO THE ORIGINAL TEST, INSPECTION, OR OBSERVATION REPORT, THE SUBSEQUENT DATES OF RE-INSPECTION OR RETESTING, AND THE DATE THE CORRECTED WORK WAS VERIFIED TO BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE DEVIATION LOG SHALL BE UPDATED DAILY AND SUBMITTED AT MONTHLY INTERVALS. (CBC 1704.2.4)
- 4.7 UPON COMPLETION OF THE PROJECT, EACH SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT TO THE RDP AND THE BUILDING OFFICIAL, STATING THAT THE WORK REQUIRING SPECIAL INSPECTIONS WAS COMPLETED IN SUBSTANTIAL CONFORMANCE TO THE APPROVED PLANS, SPECIFICATIONS AND THE APPLICABLE PROVISIONS OF THE CODE. ANY WORK NOT IN COMPLIANCE SHALL BE DESCRIBED IN THE REPORT (CBC 1704.2.4, ASCE 7-10 SECTION 11A.4).

5 STRUCTURAL OBSERVATION

- 5.1 THE PURPOSE OF STRUCTURAL OBSERVATION IS TO OBSERVE IF THE STRUCTURAL SYSTEM IS CONSTRUCTED IN GENERAL CONFORMANCE WITH CONSTRUCTION DOCUMENTS. (CBC 1702)
- 5.2 STRUCTURAL OBSERVATION CONSISTING OF VISIBLE OBSERVATION OF THE STRUCTURAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS, FOR GENERAL CONFORMANCE TO THE APPROVED STRUCTURAL PLANS AND SPECIFICATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD AT SIGNIFICANT REPRESENTATIVE CONSTRUCTION STAGES AS DETERMINED BY THE STRUCTURAL ENGINEER OF RECORD.
- 5.3 OBSERVED DEFICIENCIES:
- 5.3.1 OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING.
- 5.3.2 THE CONTRACTOR SHALL RESOLVE ALL IDENTIFIED DEFICIENCIES TO THE SATISFACTION OF THE STRUCTURAL OBSERVER.
- 5.3.3 AT THE CONCLUSION OF THE PROJECT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED (1704.6).



REGISTERED PROFESSIONAL ENGINEER
IN THE STATE OF CALIFORNIA
License No. 2568
Expires 01-30-24



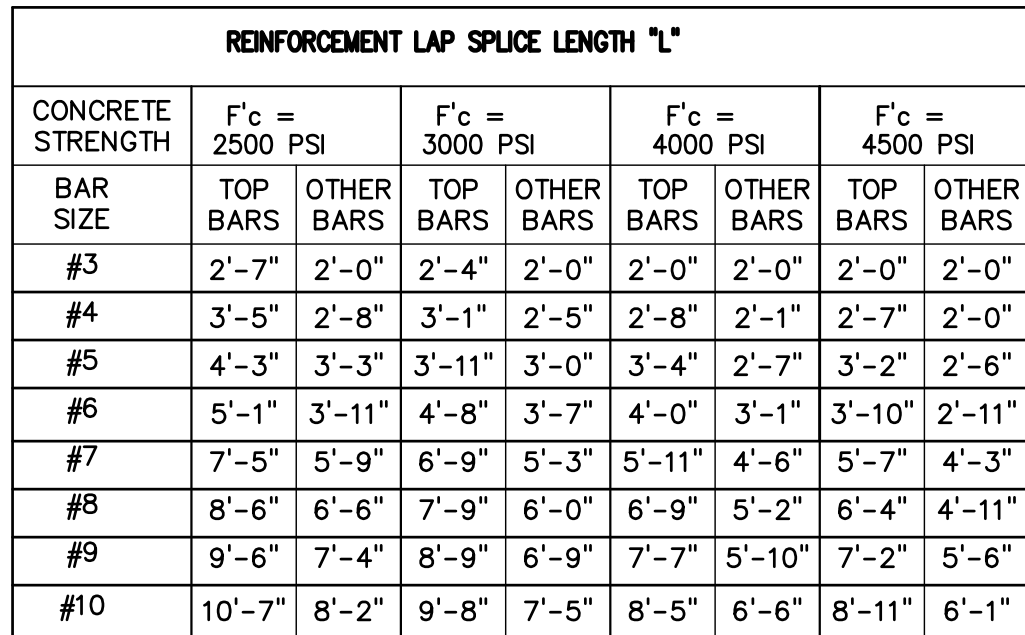
C Solutions Group, Inc.
14000 Wilshire Blvd., Suite 1000
Beverly Hills, CA 90210
Tel: 310.274.1111
Fax: 310.274.1112
www.csgroup.com

ORANGE COUNTY
FIRE AUTHORITY



OCFA REGIONAL FIRE OPERATIONS
TRAINING GROUNDS MODIFICATIONS

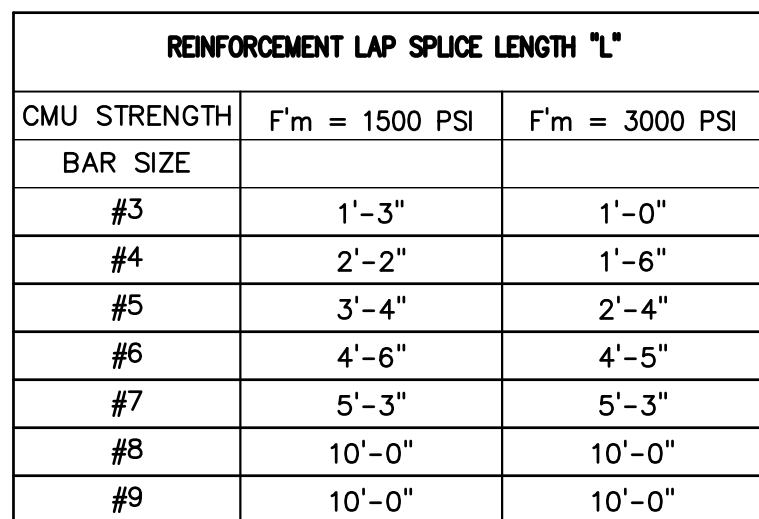
STRUCTURAL GENERAL NOTES
September 15, 2023
SCALE: N.T.S.



NOTES:

1. THE LAP SPLICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
2. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPLICE LENGTH BY 30%.
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
4. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
5. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.

18 REBAR OFFSET AND LAP SPLICE
IN CONCRETE - TYPICAL



NOTES:

1. THE LAP SPICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
2. DEVELOPMENT LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE SCHEDULED LENGTH.
3. SPICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
4. SPICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.
5. LAP SPICE IN MASONRY SHALL BE MIN. 48 BAR DIA.

19 MASONRY LAP SPLICE
TYPICAL



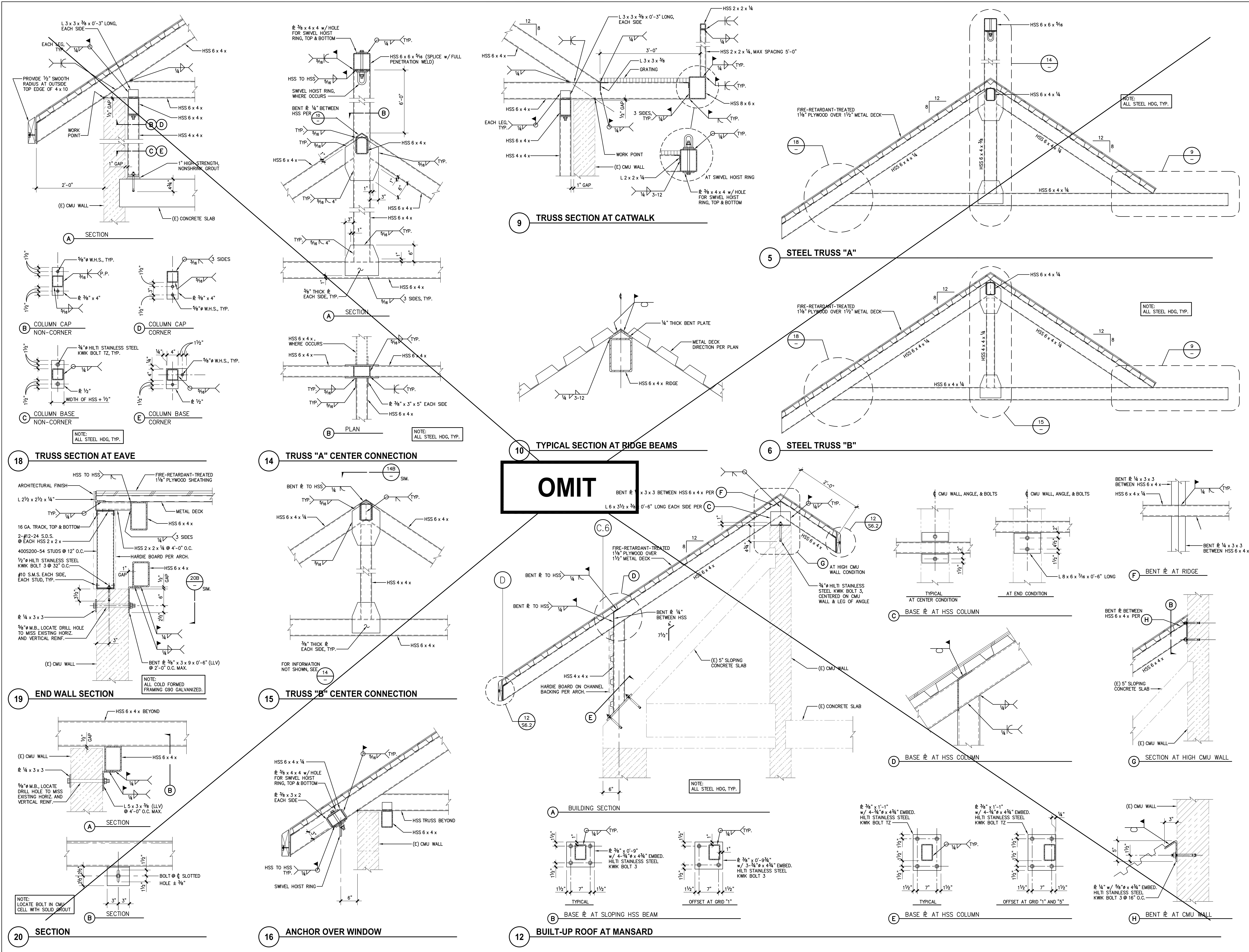
1. MINIMUM BOLT SPACING SHALL BE 12 BOLT DIAMETERS WITH A MINIMUM EDGE DISTANCE OF 6 DIAMETERS AND WITH A MINIMUM OF 6" TO END OF WALL.
2. STAGGER ANCHOR BOLT SPACING WHEN BOLTS OCCUR ON BOTH SIDES OF WALL.

6 TYPICAL CMU ANCHOR BOLT (A.B.) LAYOUT



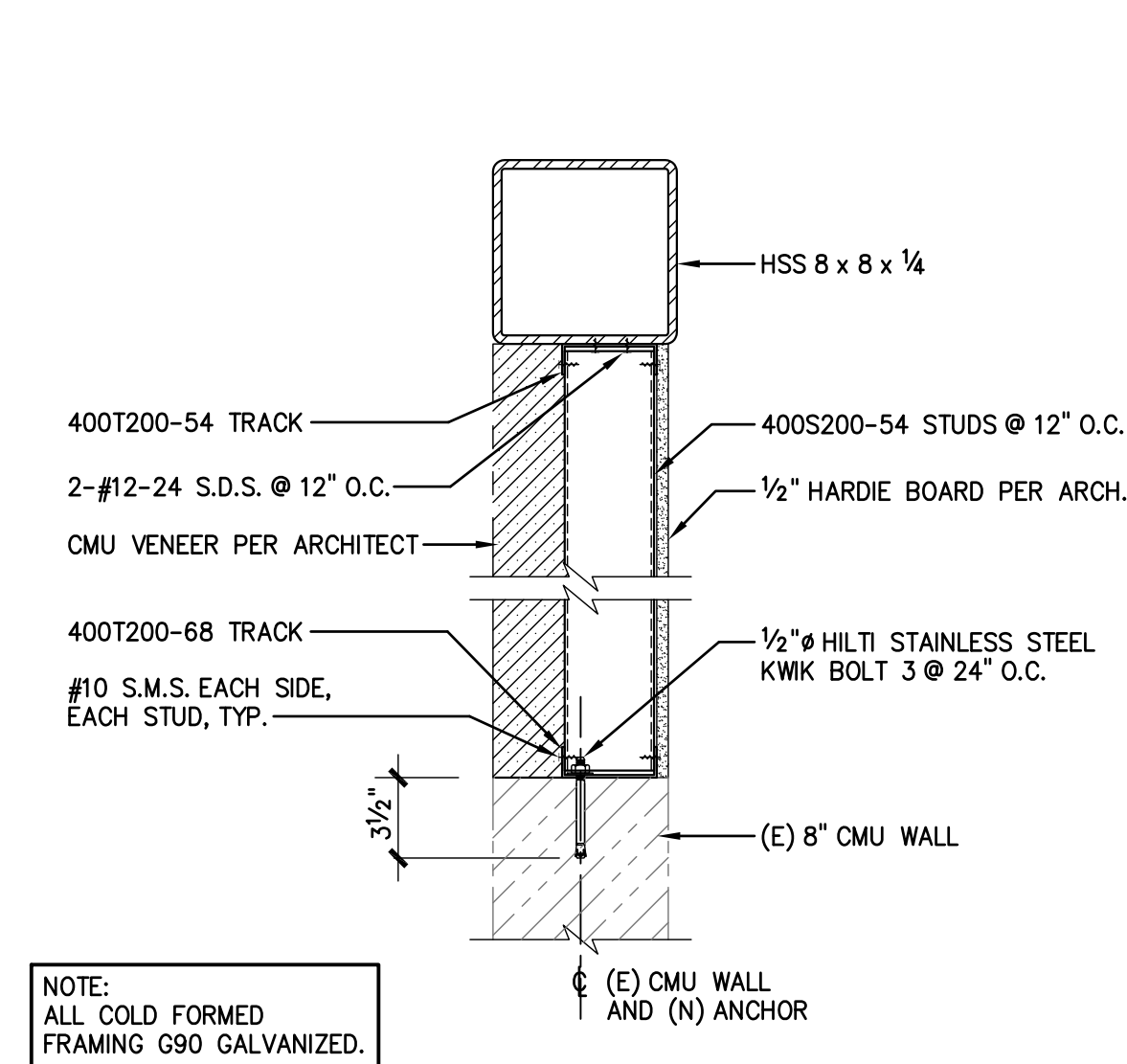
1 HSS TO HSS CONNECTION

NOTE:
ALL HSS ENDS TO BE CAPPED, TYP

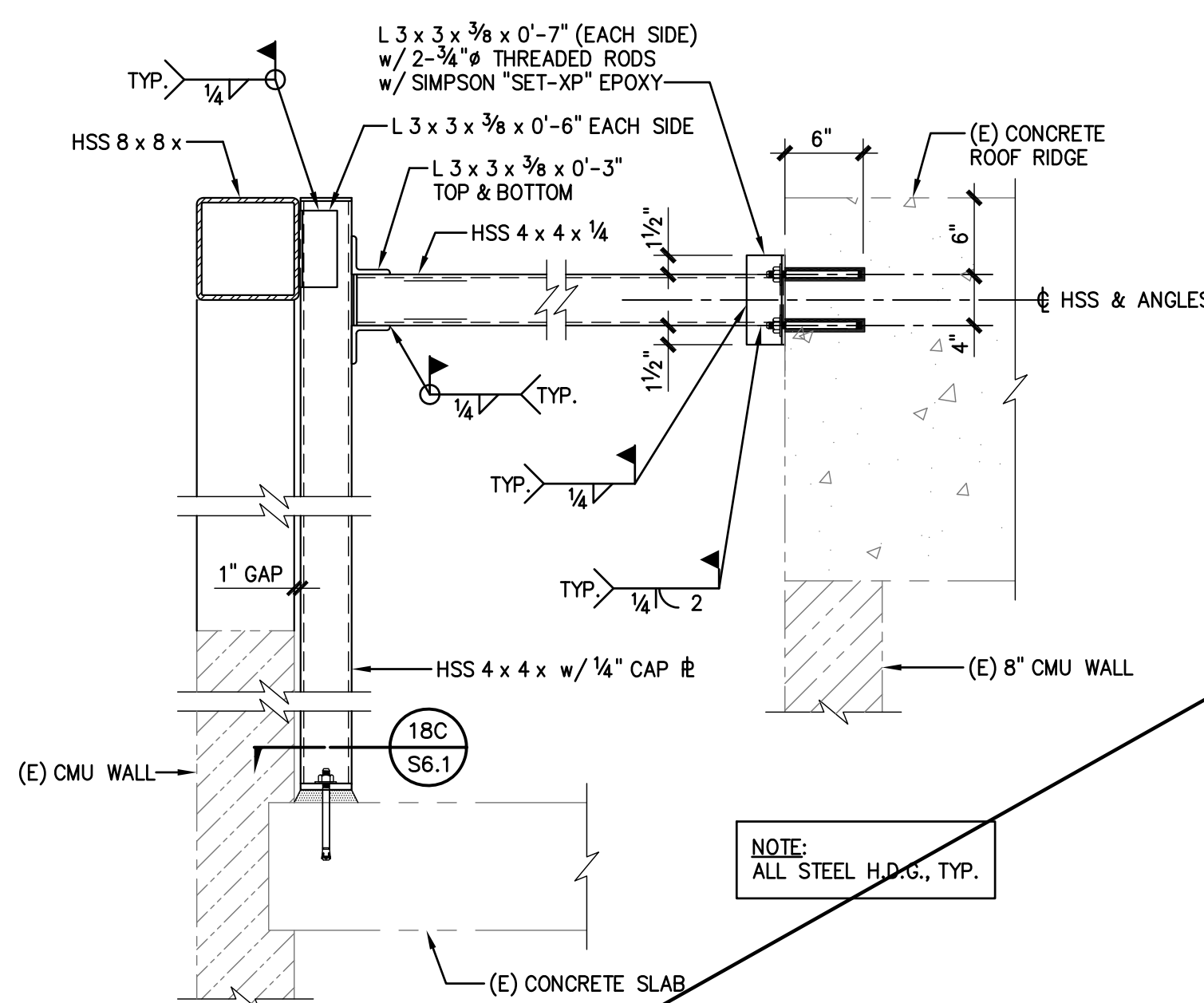


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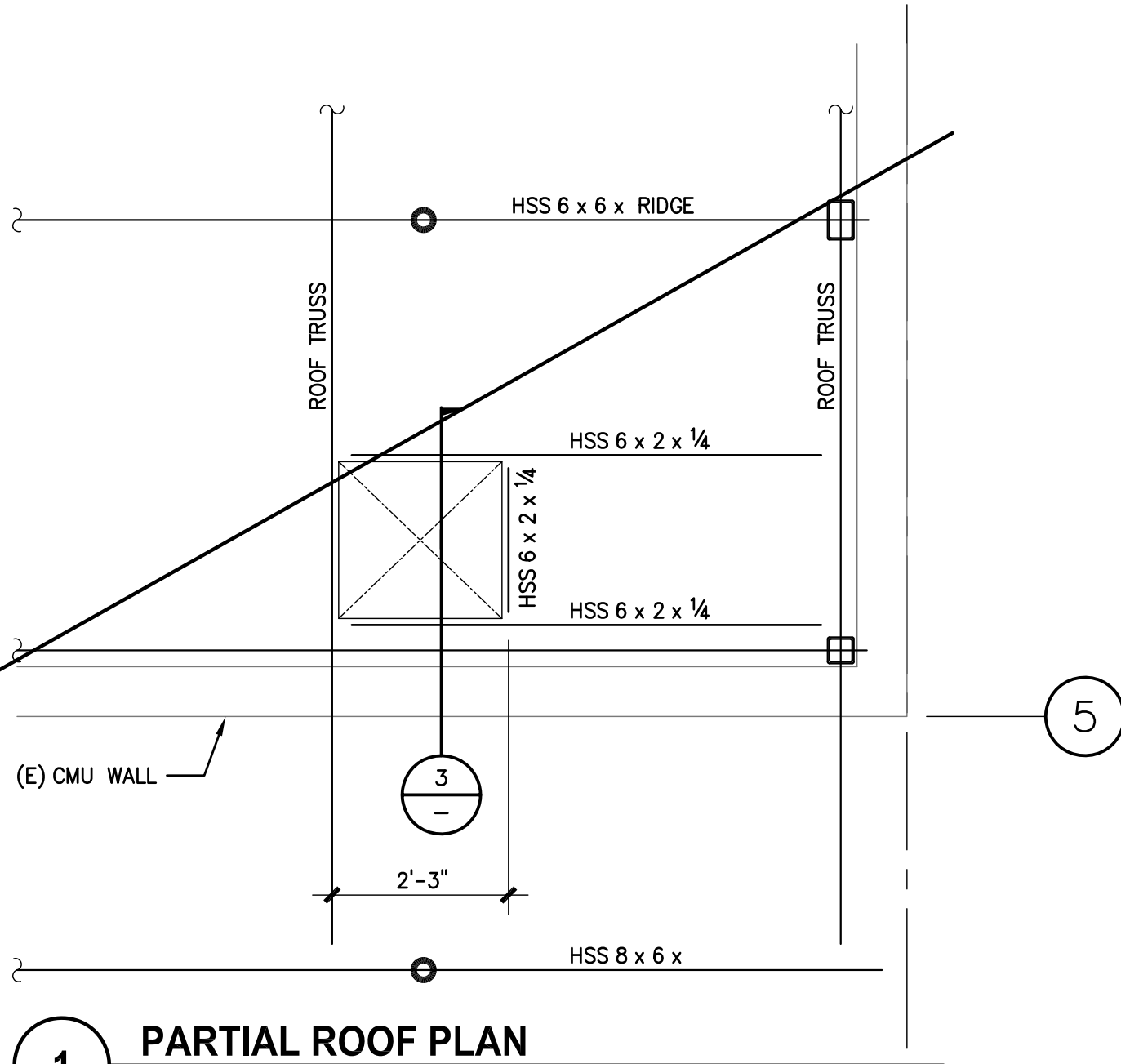
9 NEW STUD WALL SECTION



5 WALL BRACING SECTION



1 PARTIAL ROOF PLAN

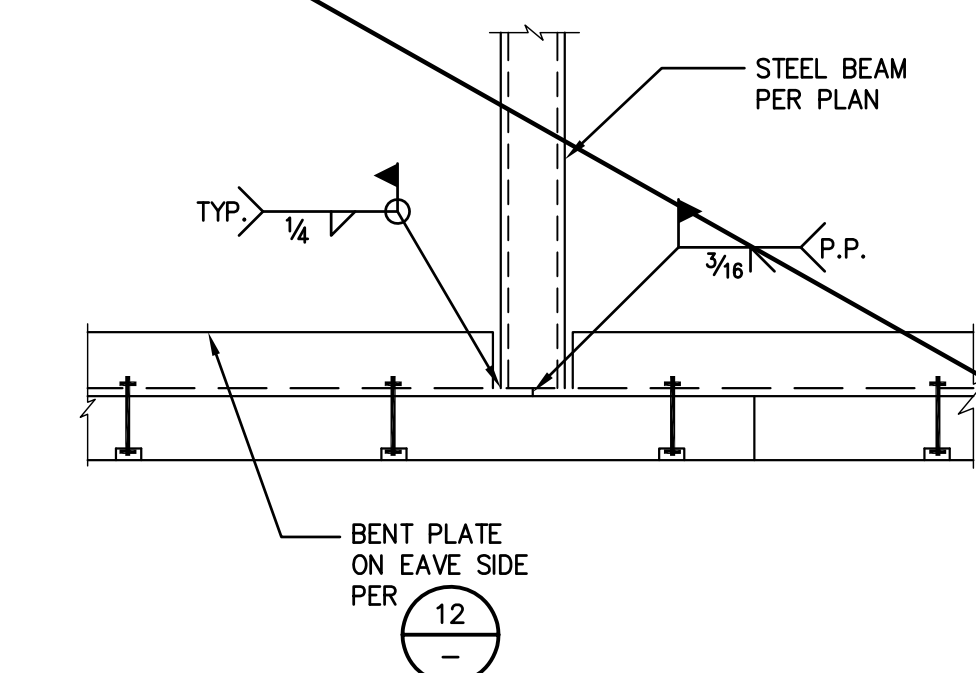


METAL DECK				DECK WELD ATTACHMENT		
TYPE	LOCATION	DECK	GAUGE	AT SUPPORT	AT PARALLEL SUPPORT	AT SIDE LAPS
A	ROOF	HSB-36 NON-VENTED G90	1 1/2" 16	7 WELDS PER 36" SHEET	1/2" WELDS @ 12" O.C.	TOP SEAM WELD @ 18" O.C.

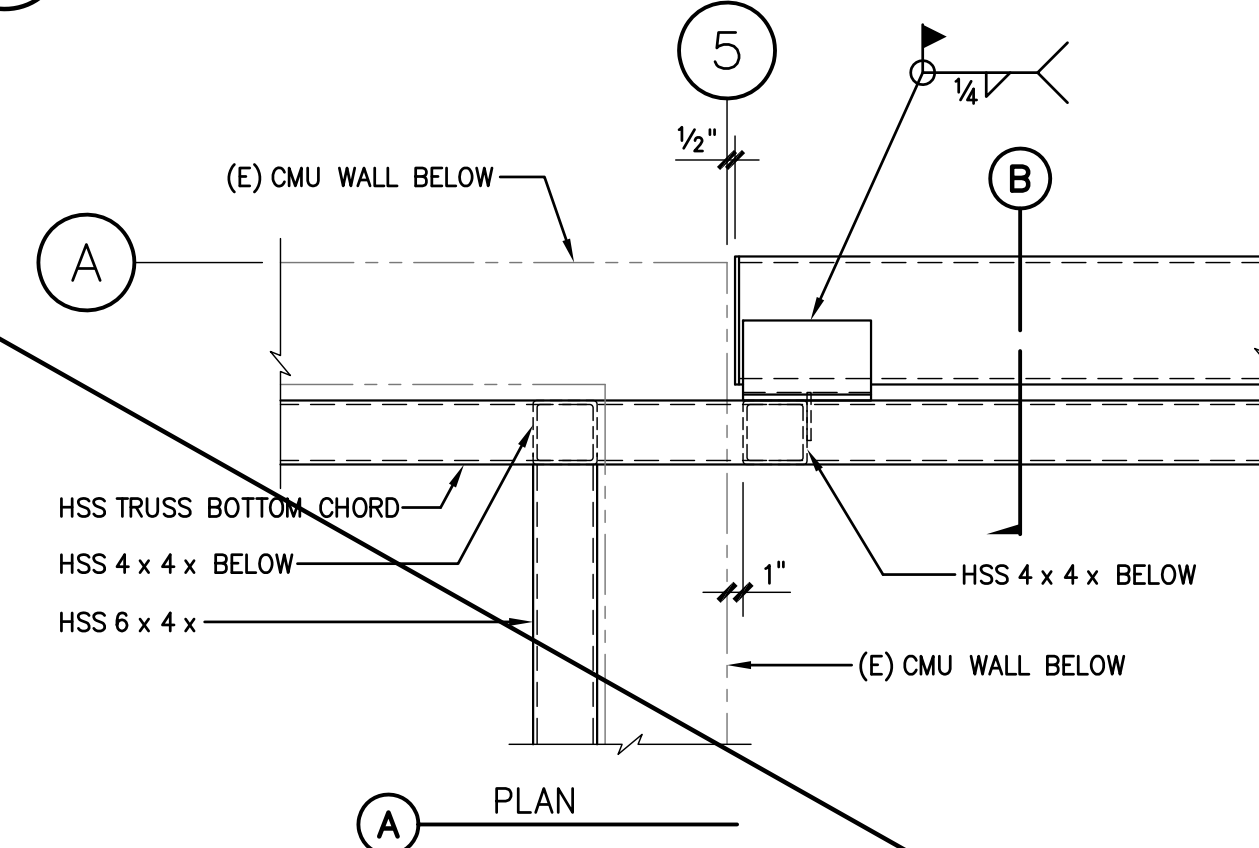
- NOTES:
- WELD ATTACHMENT FOR STEEL DECK AT SUPPORT MEMBER SHALL BE ARC SEAM OR BUTT (PUDDLE) WELDS AND SHALL HAVE AN EFFECTIVE FUSION AREA TO SUPPORTING MEMBER AT LEAST EQUIVALENT TO 3/8 INCH BY 1 INCH LONG OR 1/2" IN DIAMETER, RESPECTIVELY. TWO LINES OF WELD REQUIRED AT ALL DRAG LINES FULL LENGTH OR WIDTH OF BUILDING.
 - WELD ATTACHMENT FOR STEEL DECK PANEL SEAMS AT SIDE LAPS WHERE SPECIFIED SHALL BE SEAM WELDS WITH A MINIMUM LENGTH OF 1 1/2" AT SPACING PER SCHEDULE ABOVE.
 - DECKING SHALL BE CONTINUOUS OVER 3 OR MORE SUPPORTS WHEREVER POSSIBLE. OTHERWISE PROVIDE SHORING AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. SPLICES SHALL BE LOCATED OVER SUPPORTS.
 - STEEL DECKING TO BE AS NOTED: VERO DECKS PER I.C.C. REPORT No. ER-2078P WITH MINIMUM SECTION PROPERTIES PER FOOT OF WIDTH AS FOLLOWS:

DECK TYPE	GAUGE	I(in ⁴)	+S(in ³)	-S(in ³)
HSB-36	16	0.381	0.399	0.410

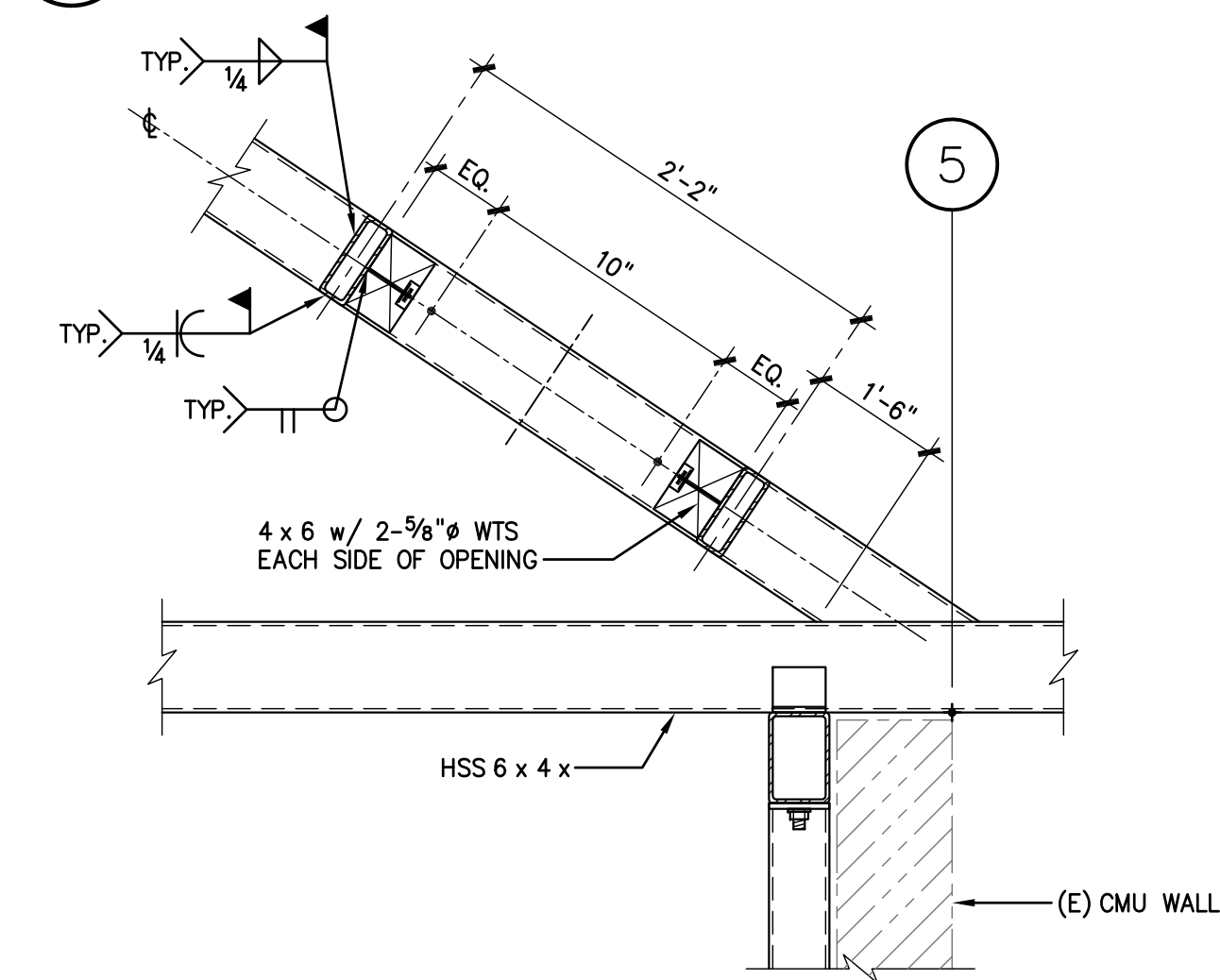
10 STEEL DECK SCHEDULE AND NOTES TYPICAL



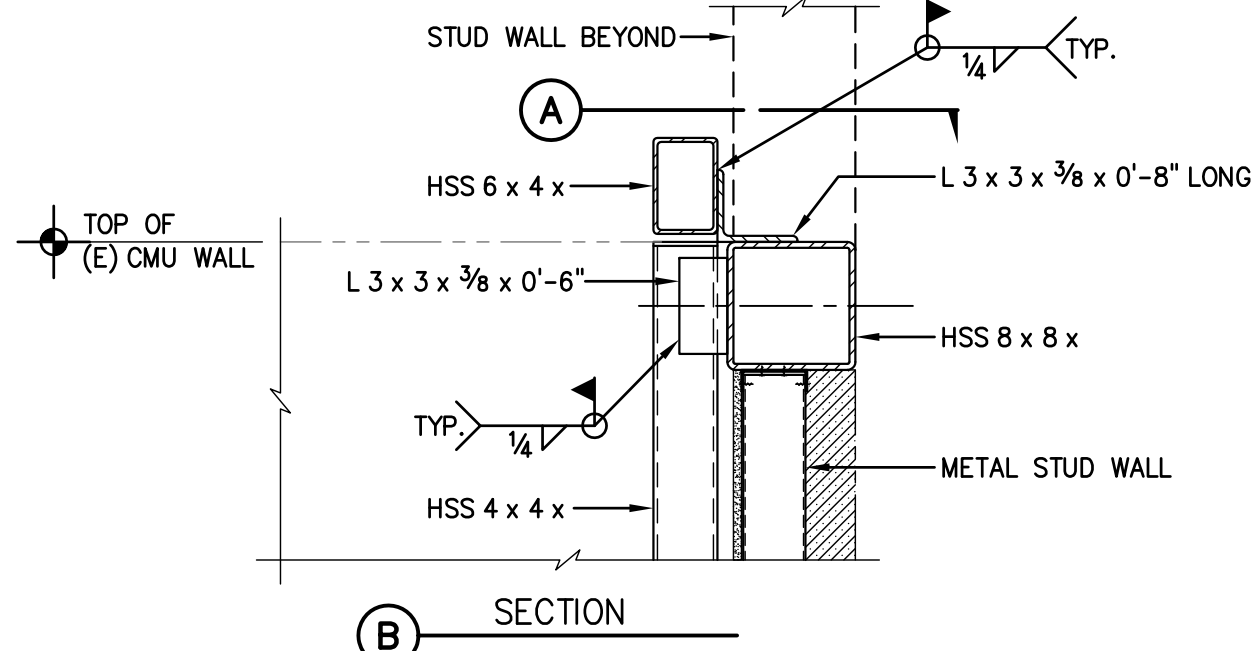
6 WALL BRACING SECTION



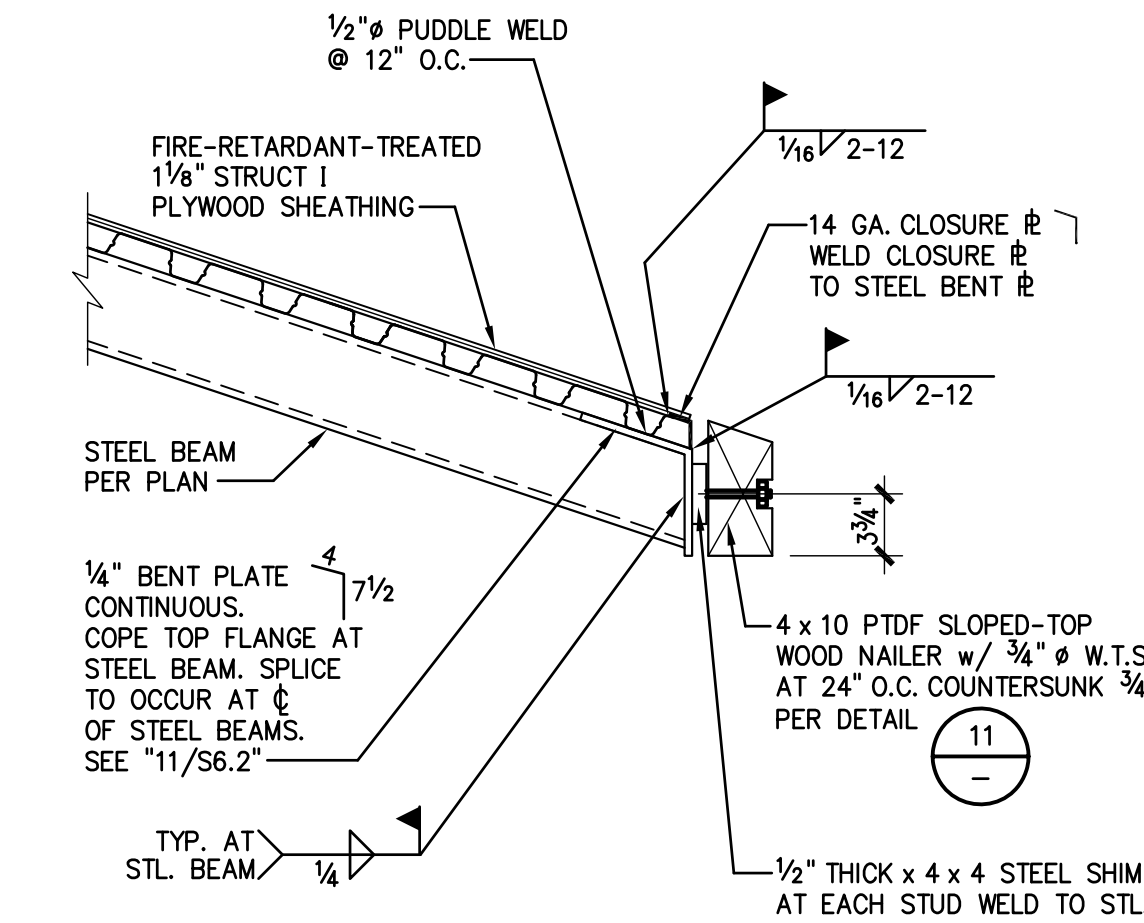
3 TRUSS SECTION BREACH PROP



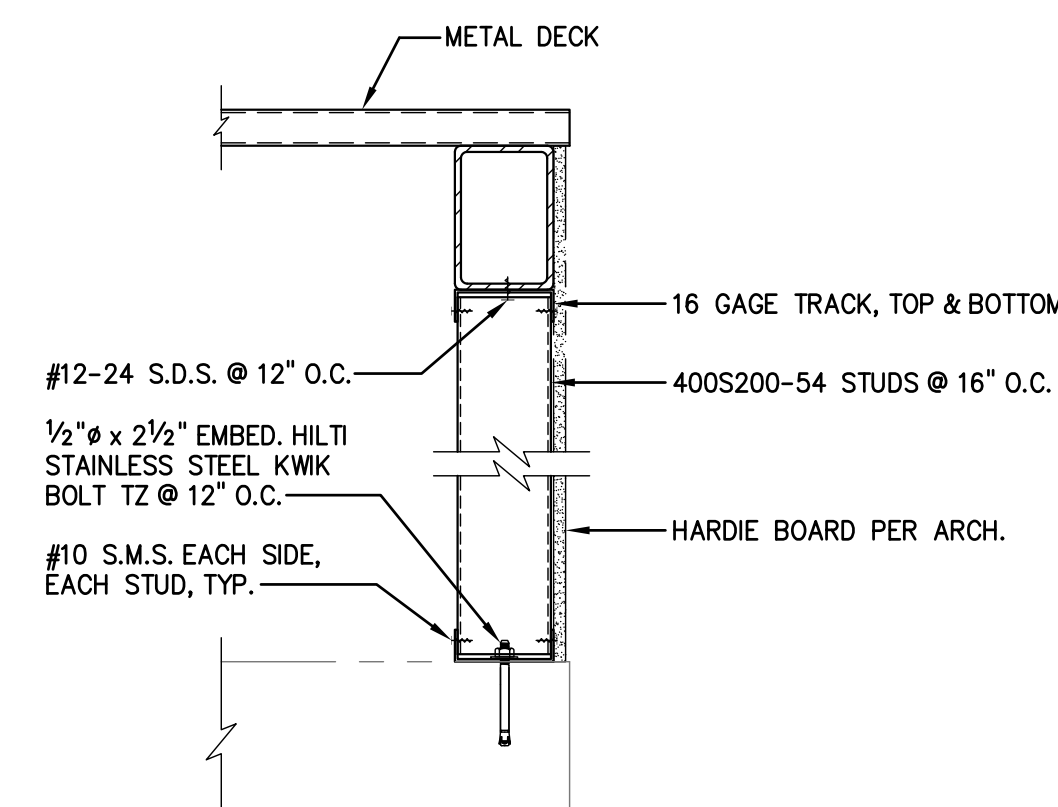
8 HSS 8x8x TO TRUSS CONNECTION



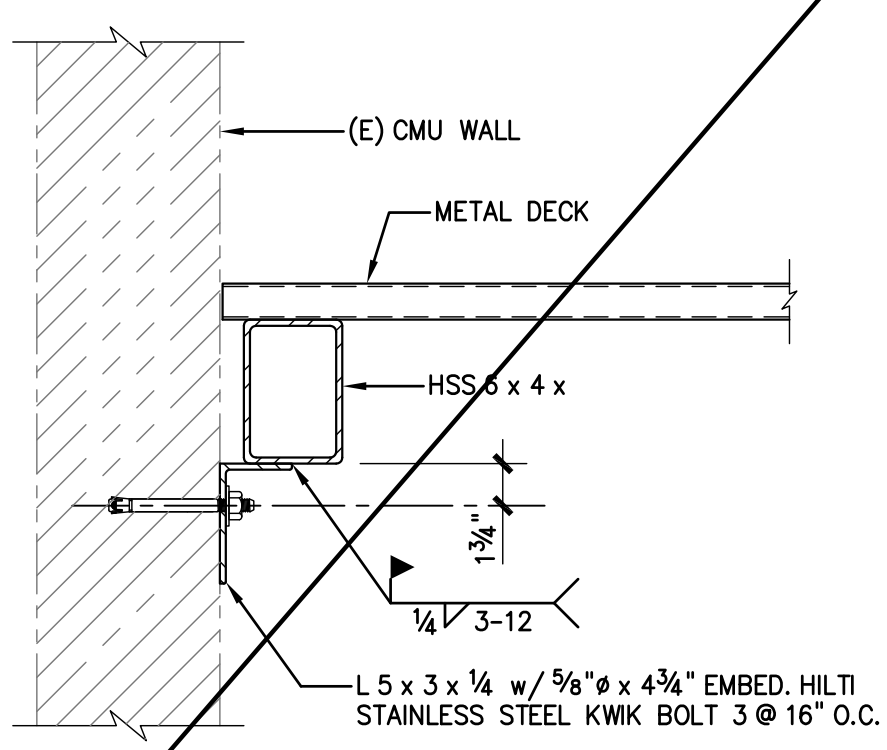
12 ROOF EDGE



16 SECTION

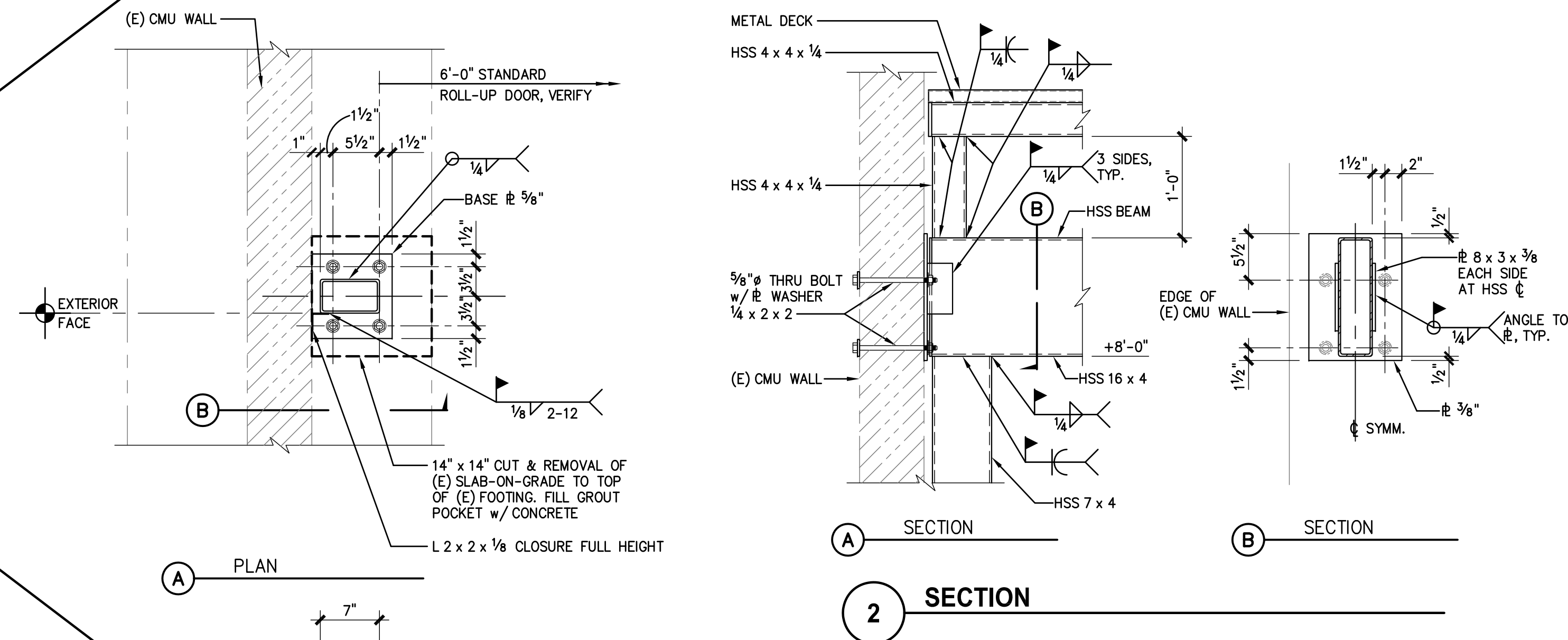
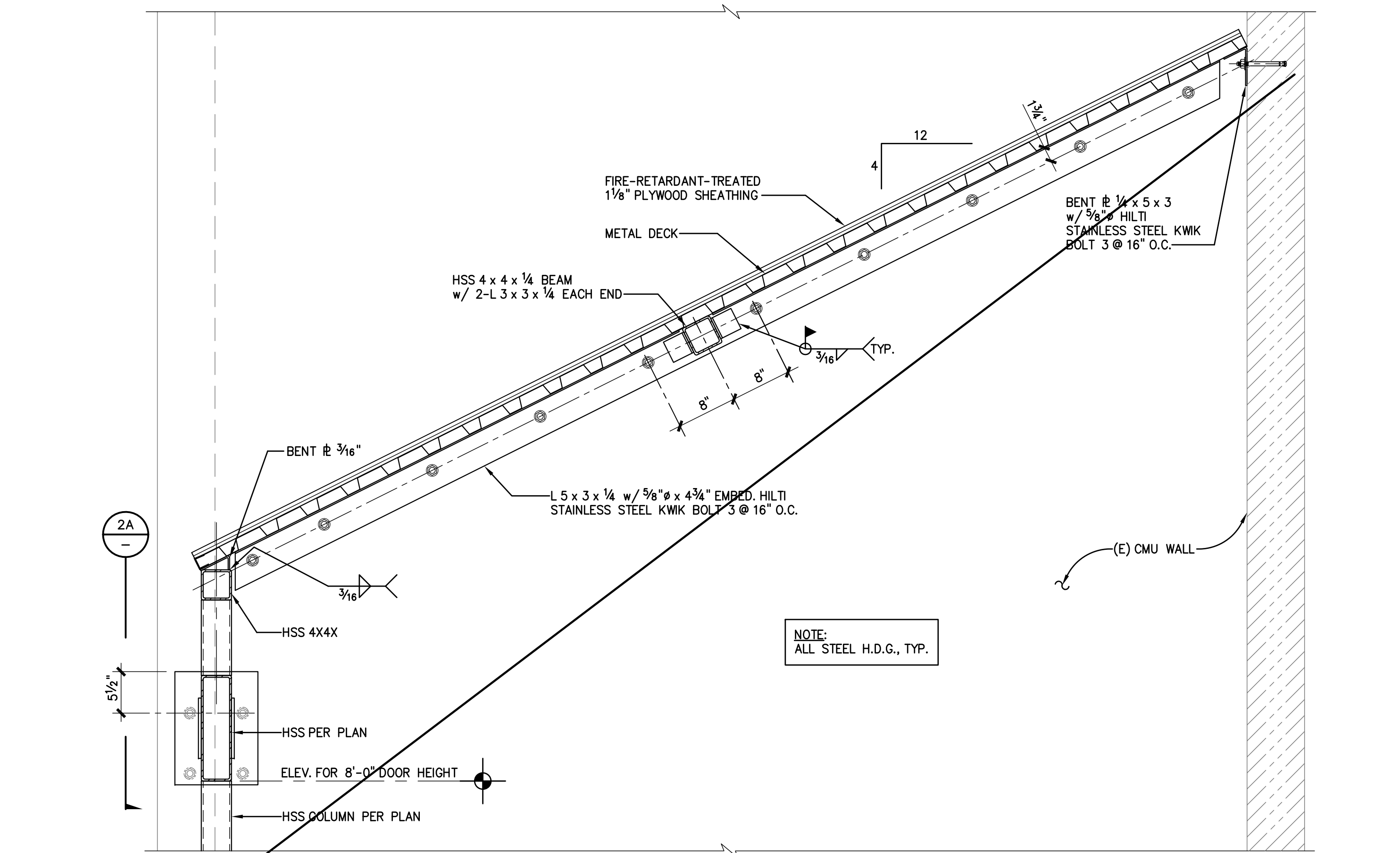


20 SECTION

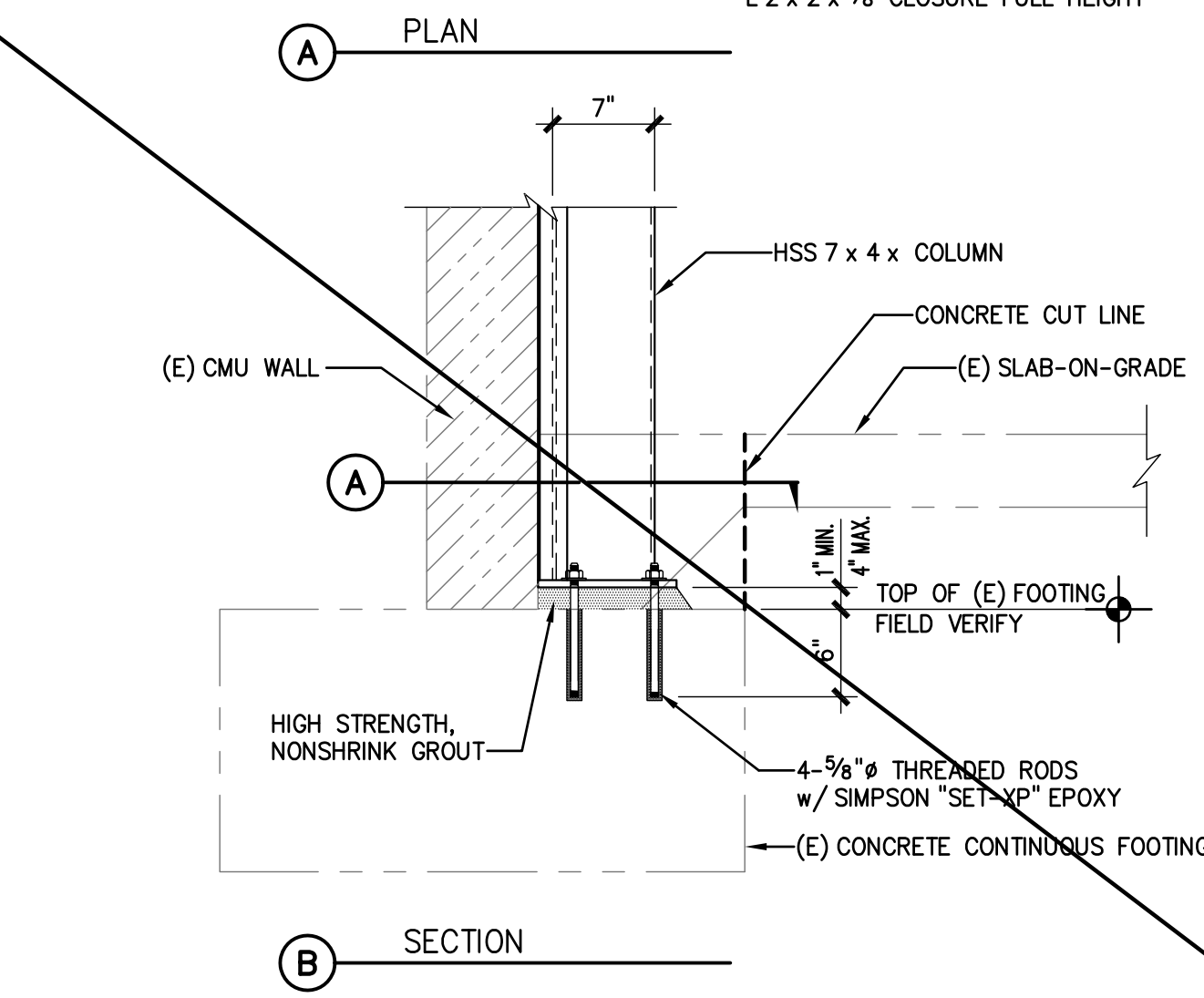


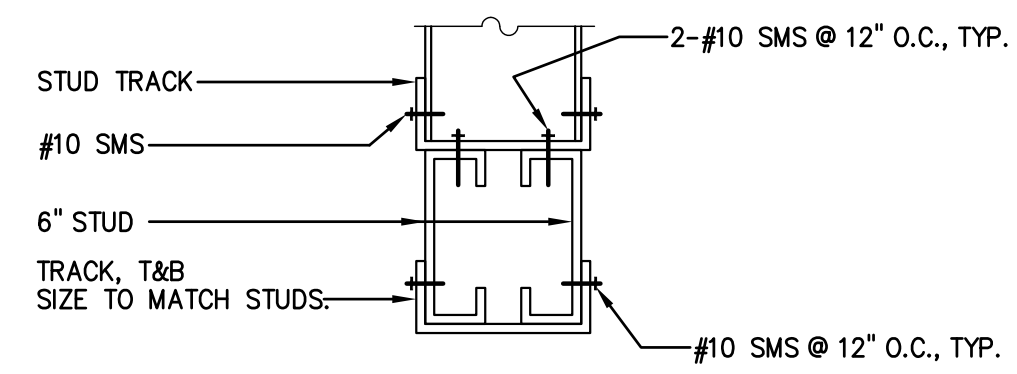
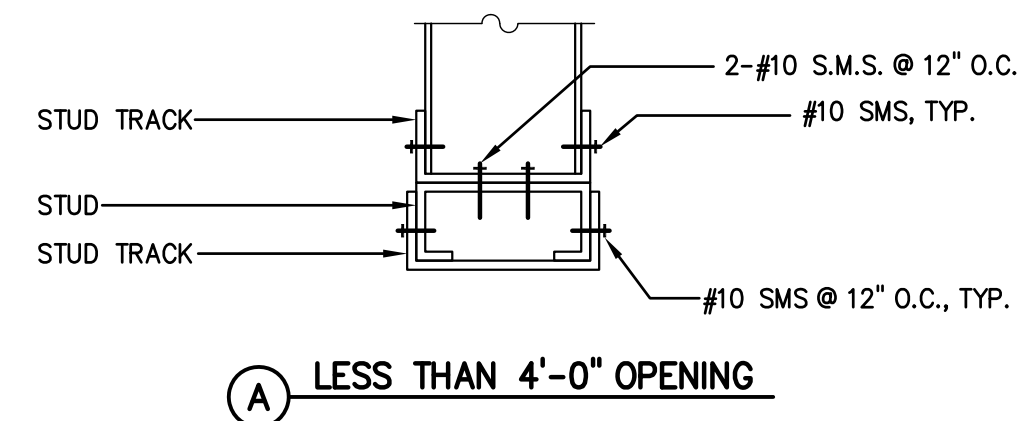
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5 STORAGE ROOM SECTION

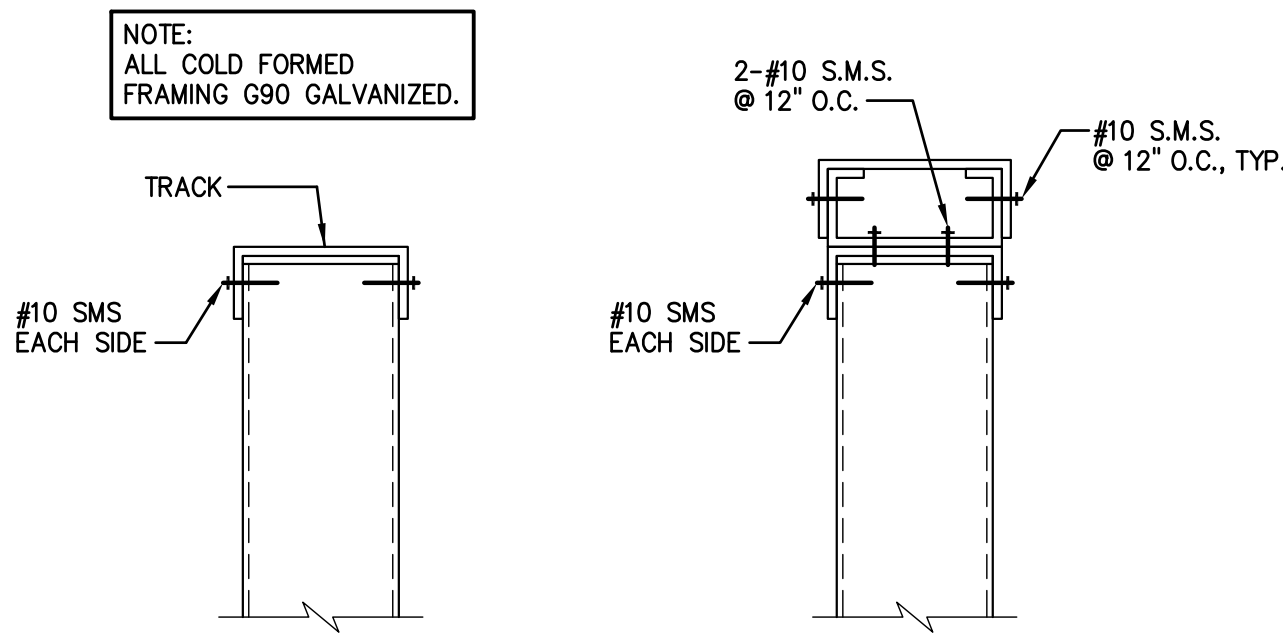


7 COLUMN AT ROLL-UP DOOR

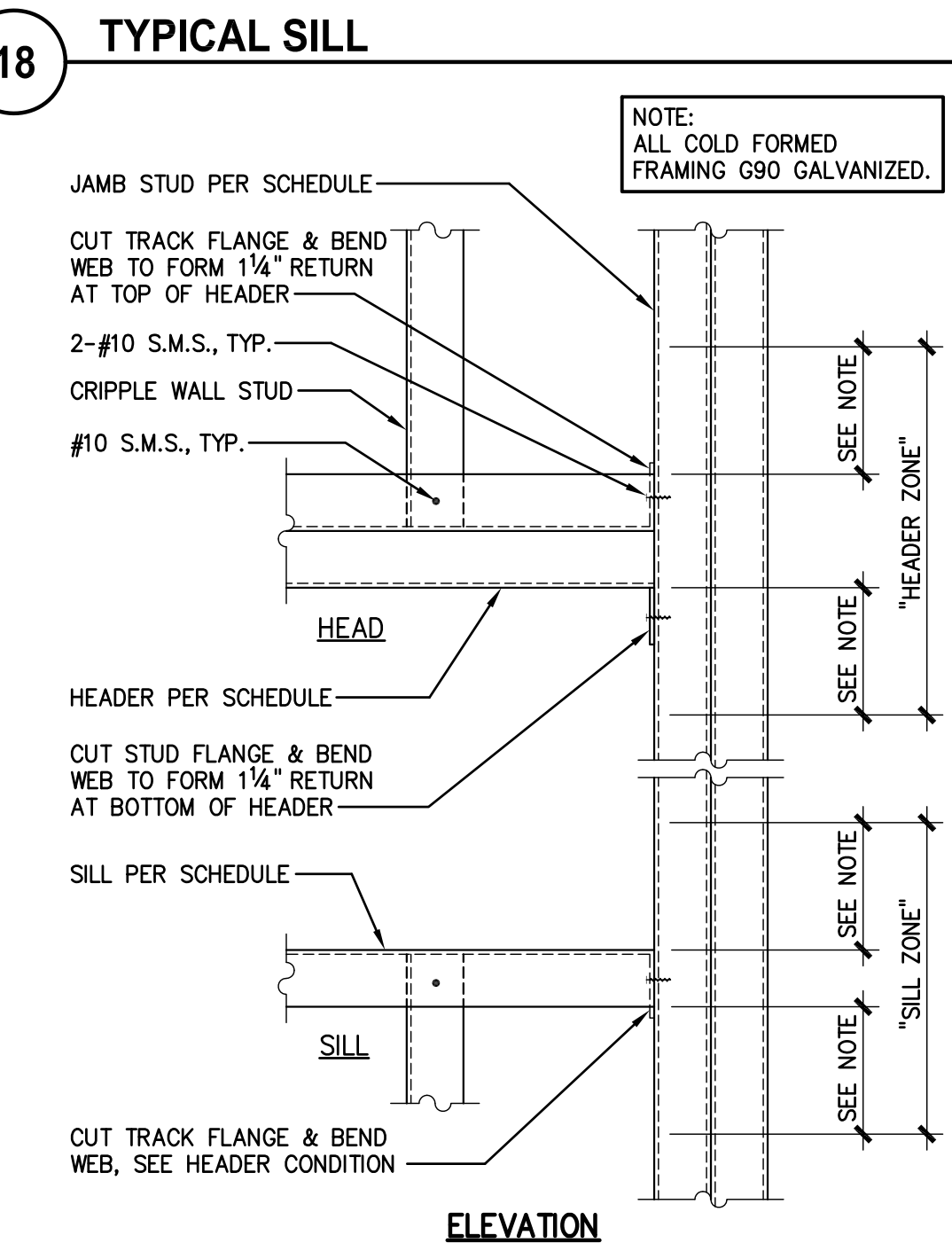




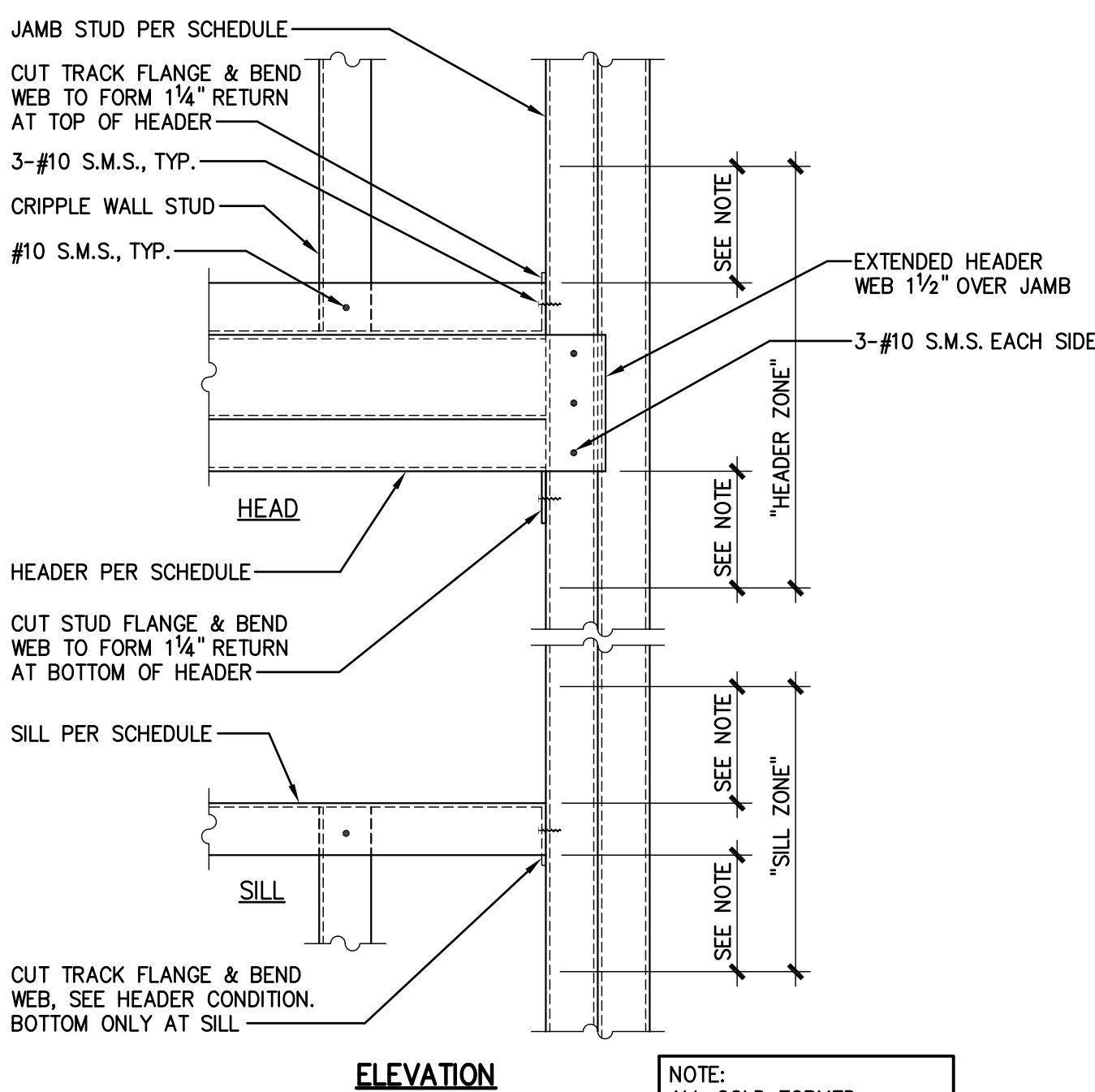
17 TYPICAL HEADER



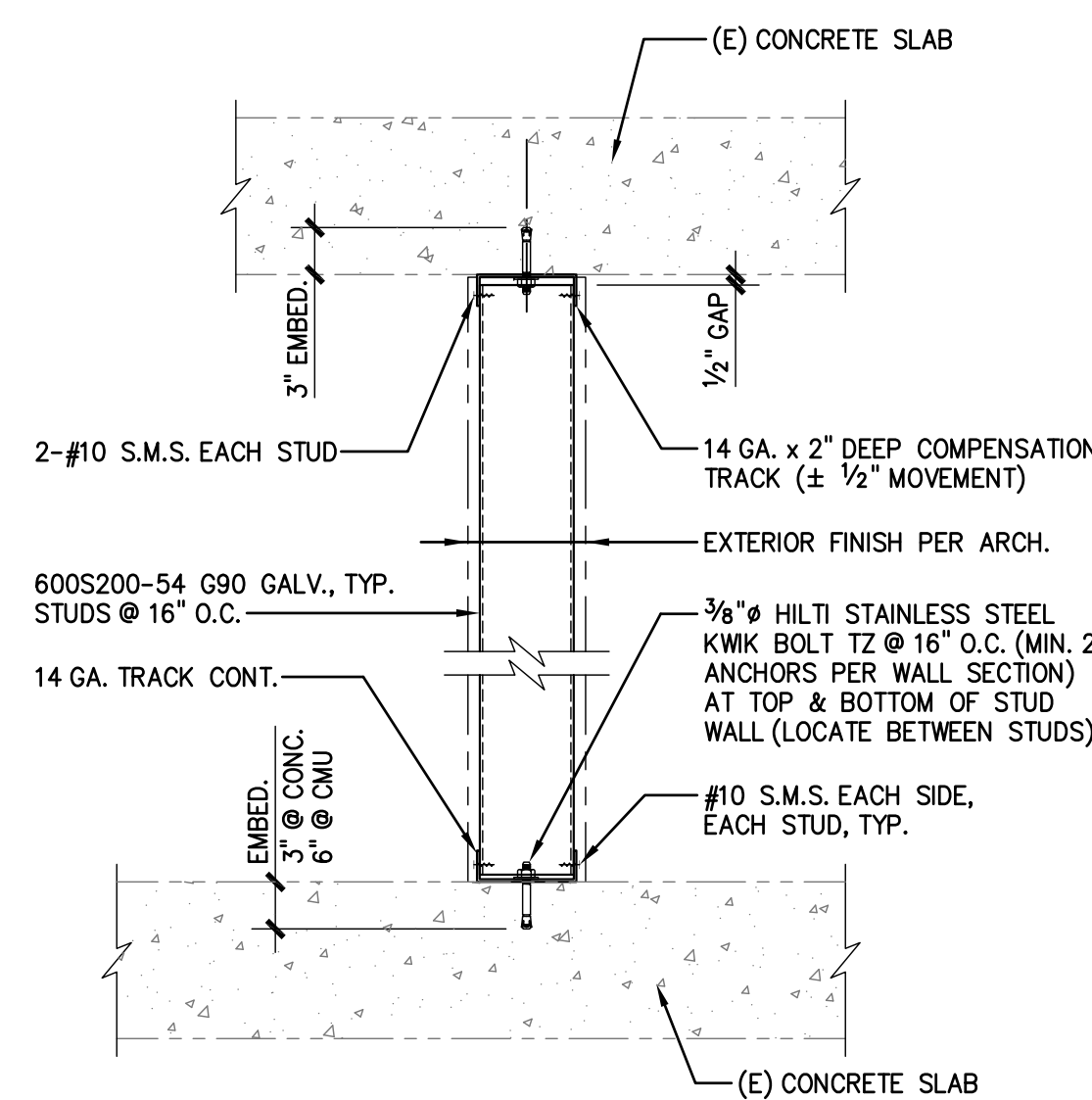
18 TYPICAL SILL



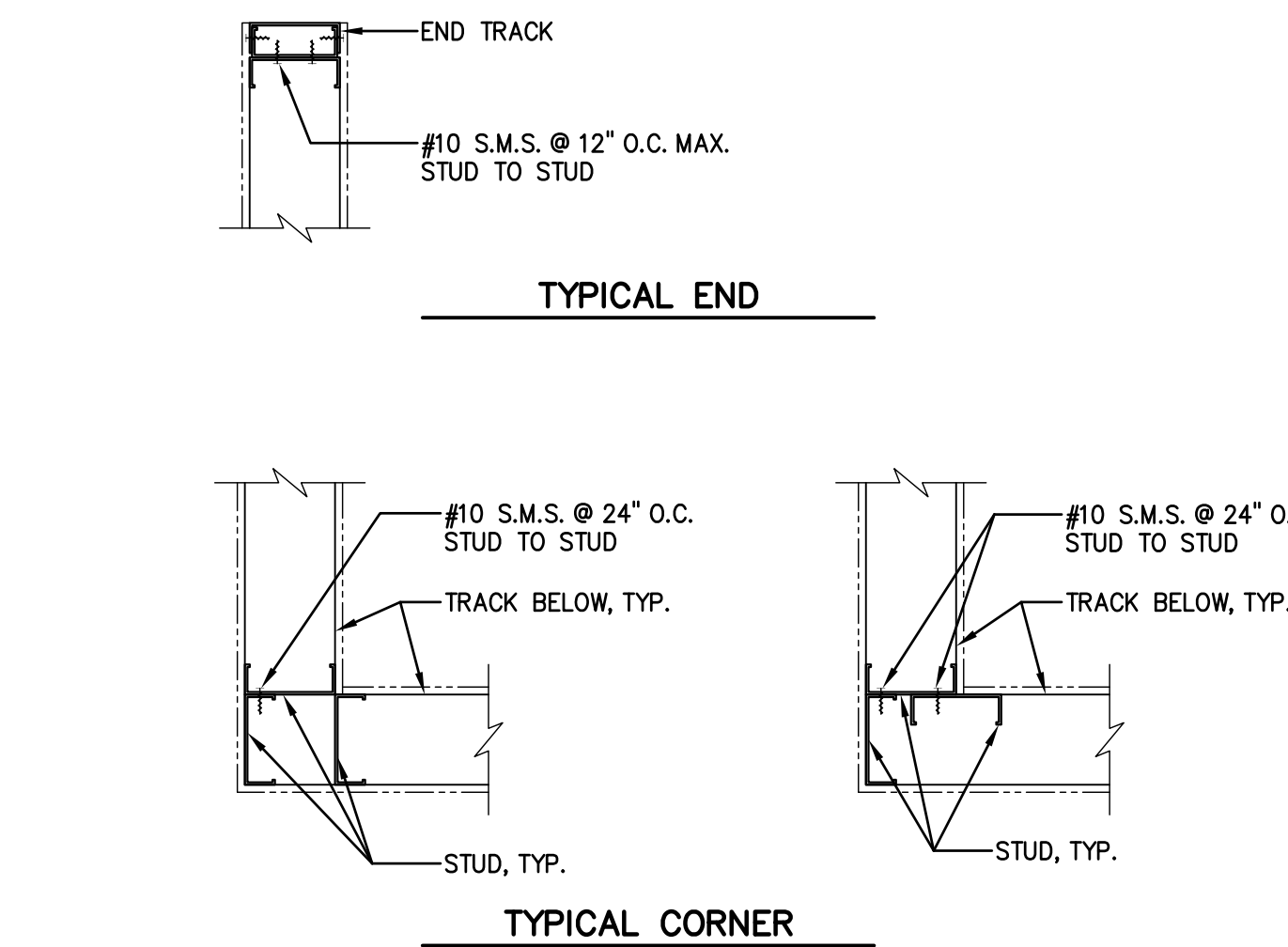
19 HEAD & SILL AT JAMB FOR 4'-0" MAX OPENING PARTITION WALL, TYPICAL



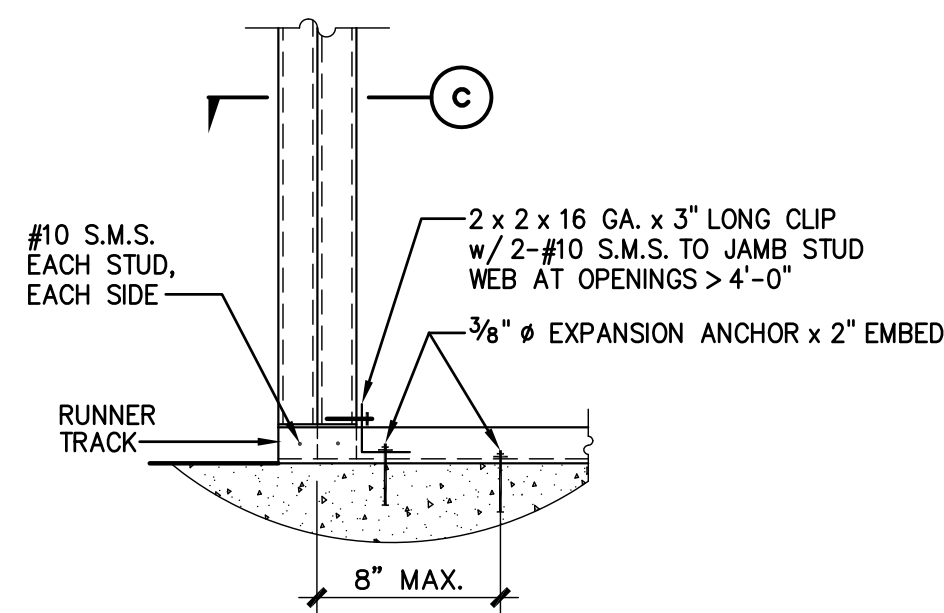
20 HEAD & SILL AT JAMB FOR 4'-0" TO 10'-0" MAX OPENING PARTITION WALL, TYPICAL



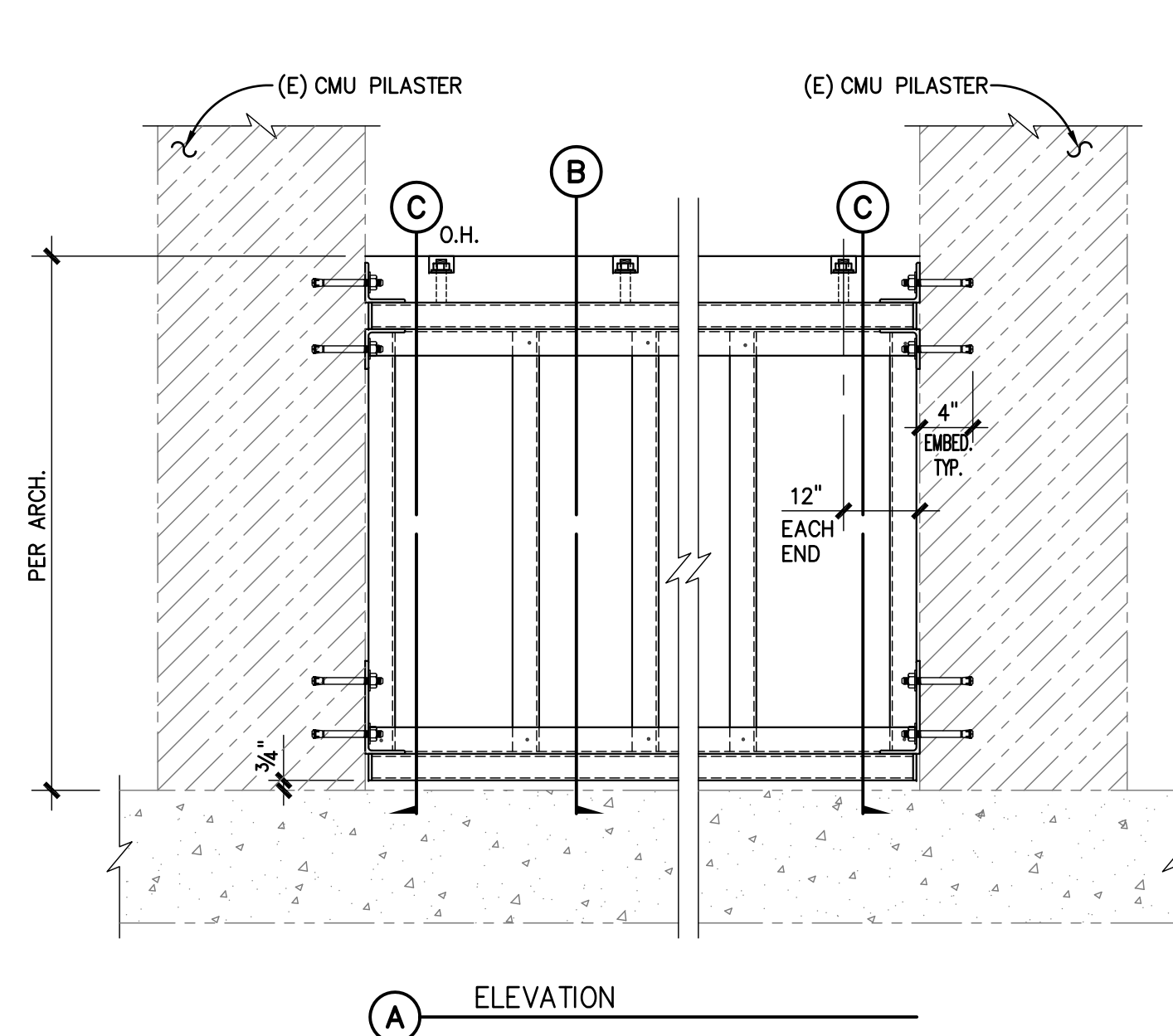
13 NONSTRUCTURAL STUD WALL



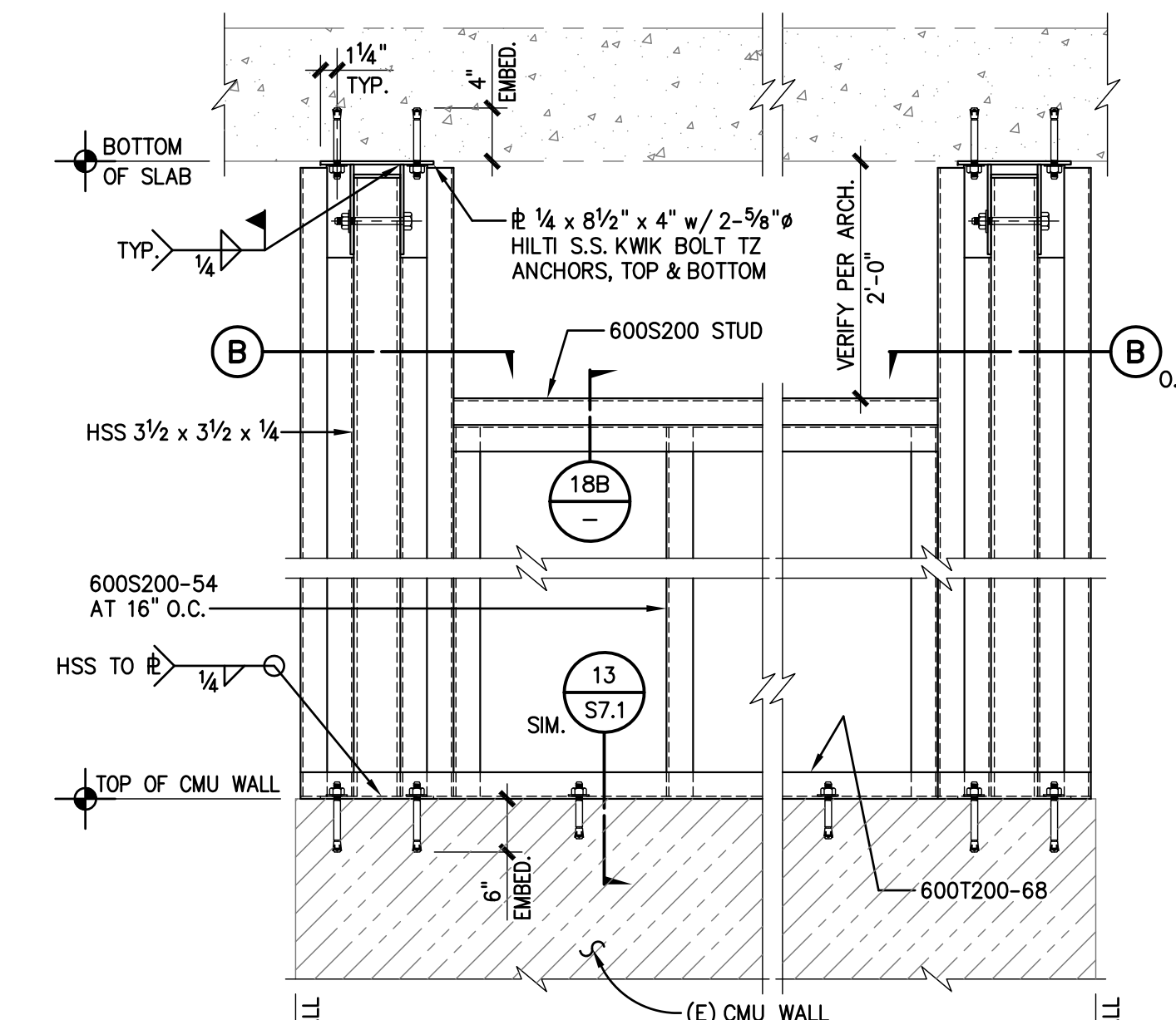
15 TYPICAL METAL STUD WALL INTERSECTION



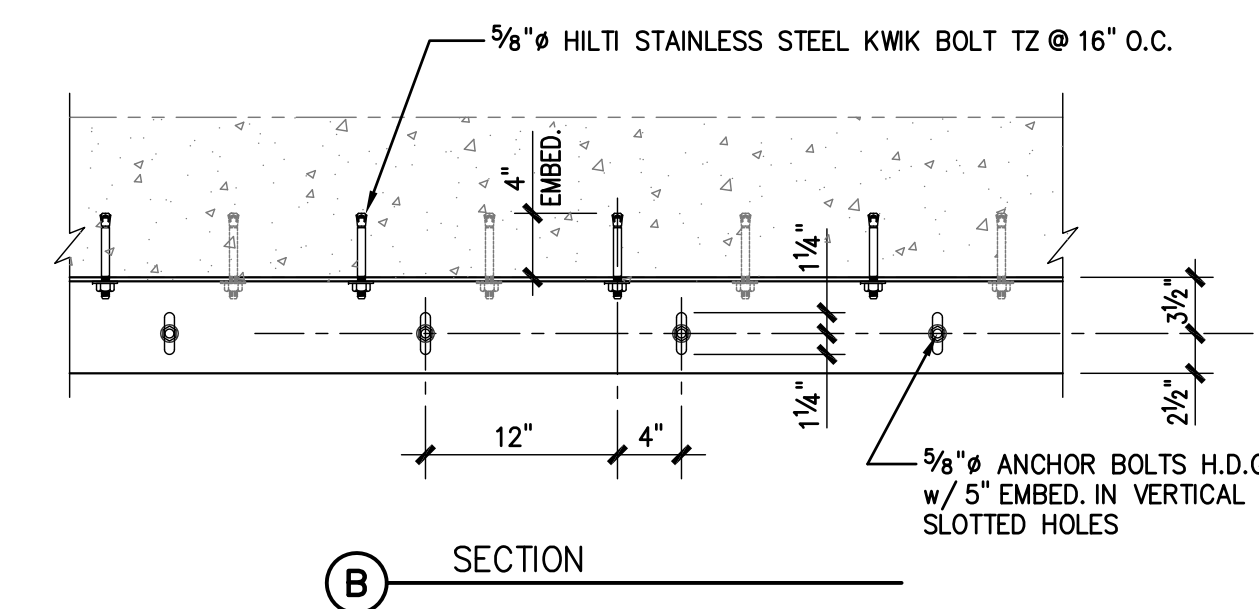
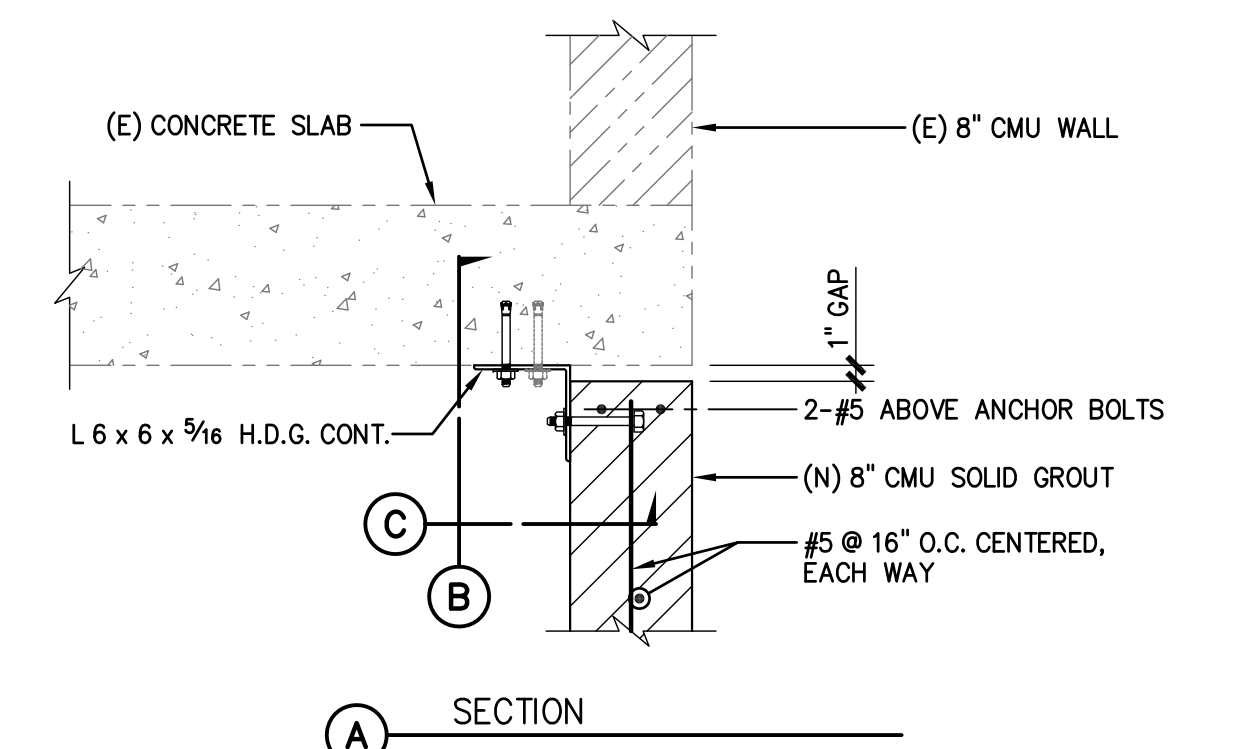
16 BOXED STUD JAMB BASE SIMILAR AT TOP - TYPICAL



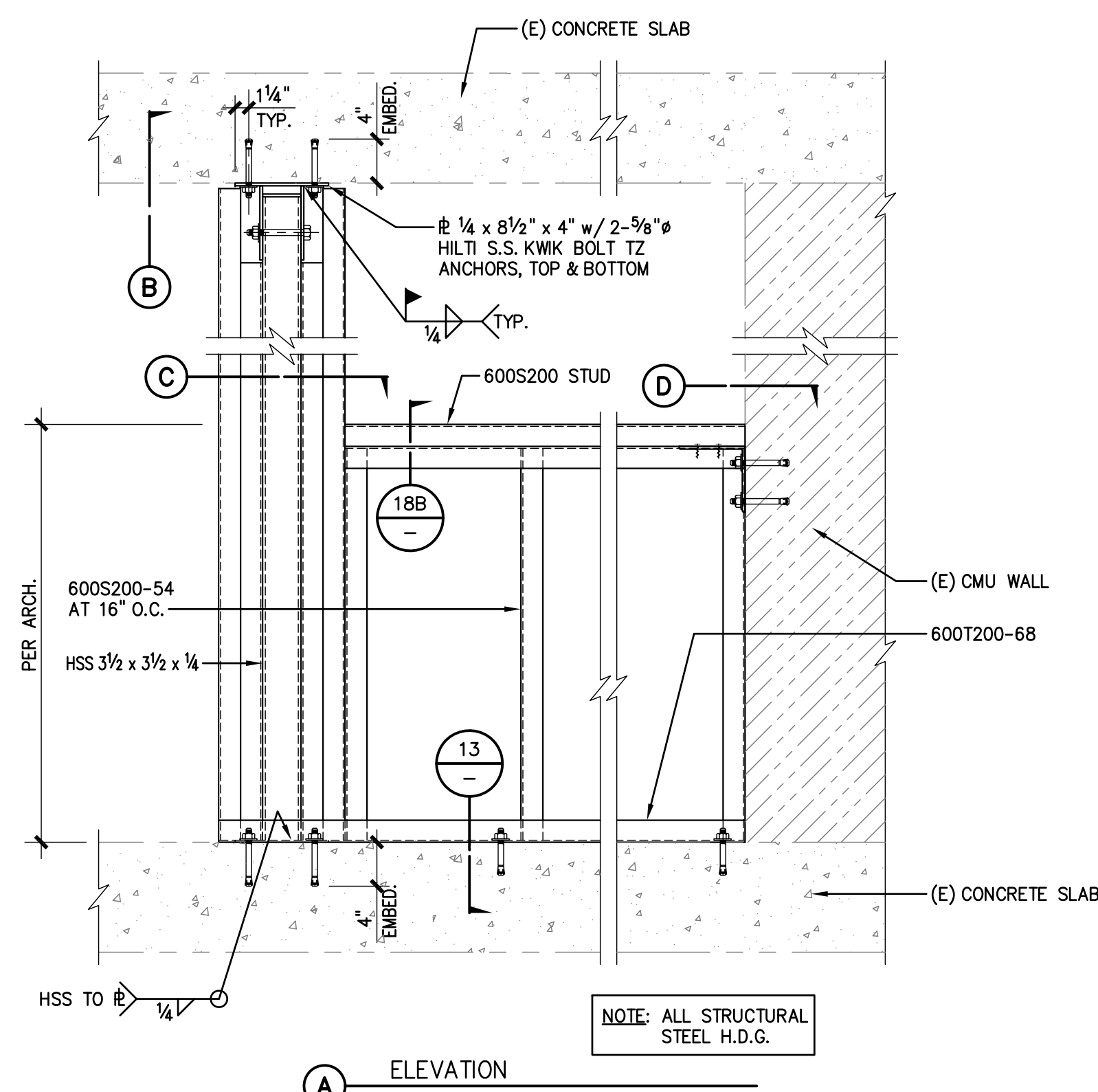
10 GUARD RAIL INFILL



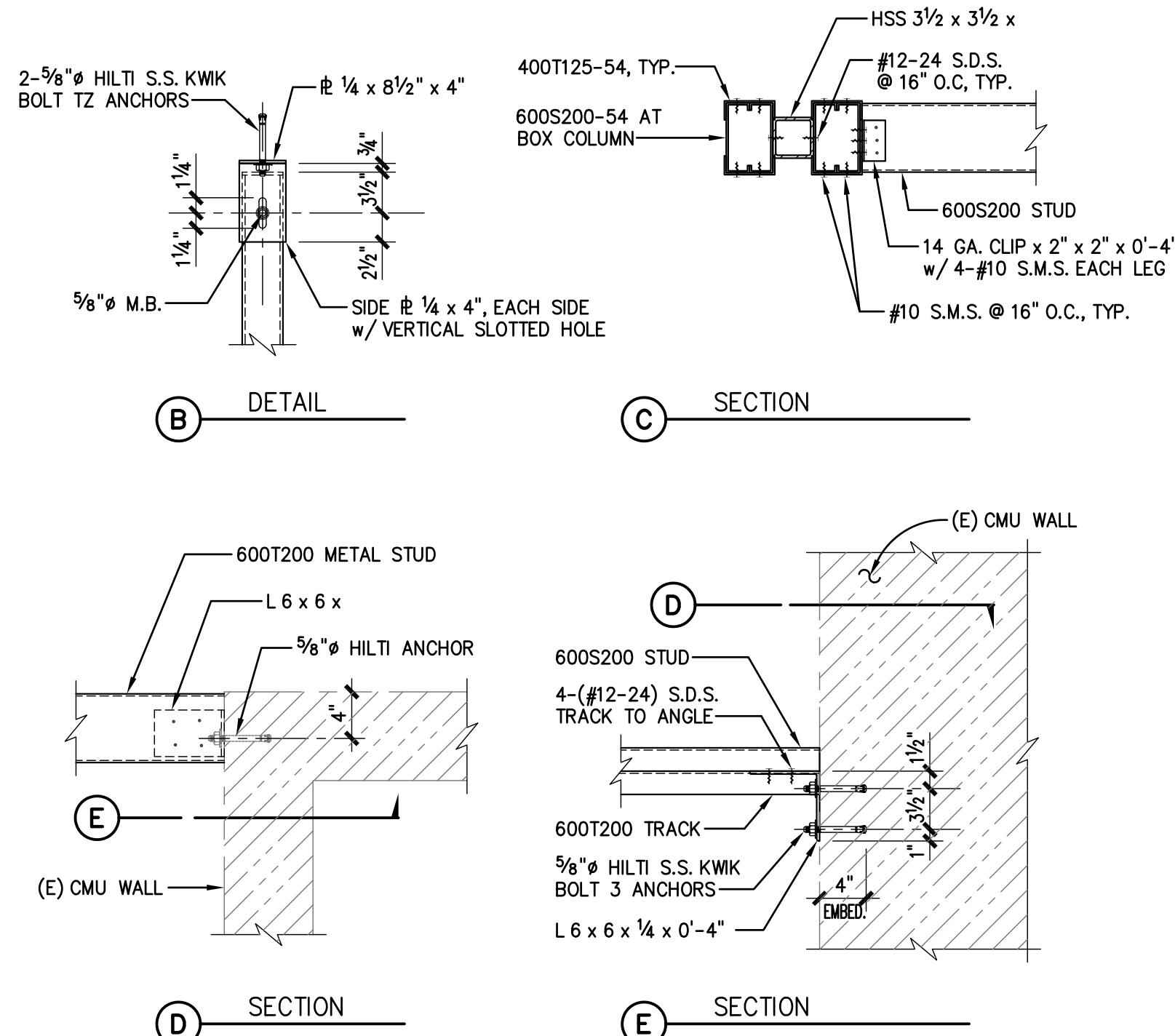
12 STEEL STUD WALL



6 NON-BEARING CMU WALLS



8 PARTIAL HEIGHT STUD WALL





7 BRACING AT TOP OF NON-BEARING WALLS



3 (N) CMU WALL TO (E) CONCRETE/CMU



5B: DRAWINGS – EMERGENCY ELECTRICAL POWER DISTRIBUTION TRAINING CTR











SCOPE OF WORK

1. NEW NORTH EXPANSION FEEDER CABLE, 2 SETS OF 600MCM PER PHASE FED FROM 400A BREAKER IN MSB-2. ADD 400A, 3P C-B. IN MSB-2 AND INSTALL 4 600MCM INTO EACH EXISTING C.O. TO P.B.-N, THEN ADD 2-4"-4#600MCM FROM P.B.-N TO NEW DP-TCL AT NORTH EXPANSION PER SINGLE LINE.
2. RE-FEED EXISTING MODULAR ROOMS.
3. FEED NEW: 24 FIRE TRUCK BATTERY CHARGERS.
4. FEED NEW AND FUTURE PROPS (FOR NORTH TRAINING).



SHEET INDEX	
SHEET NUMBER	SHEET NAME/DESCRIPTION
E0.1	ELECTRICAL SITE & KEY PLAN, SYMBOLS, NOTES & COVER SHEET.
E1.0	ELECTRICAL ENLARGED SITE PLANS
E2.0	ELECTRICAL SINGLE LINE DIAGRAM

	GENERAL ELECTRICAL NOTES
--	--------------------------

STANDARD SYMBOLS – POWER	
SYMBOL	DESCRIPTION
	STANDARD DUPLEX OR QUAD RECEPTACLE, MH +15" TO CENTER AFF
	DISCONNECT SWITCH, FUSED PER UL NAMEPLATE RATING
	COMBINATION STARTER AND FUSED DISCONNECT SWITCH
	STARTER ONLY
	J BOX
	NON-STANDARD J-BOX (J) OR PULL BOX AS NOTED ON PLAN
	SURFACE MOUNTED OR RECESSED PANEL, PER SCHEDULE
	PUSHBUTTON
	TELEPHONE BACKBOARD PER PLAN
<div> <div>STARTER SIZE</div>  </div>	
CODES	
1.	2019 – CALIFORNIA BUILDING CODE (CBC)
2.	2019 – CALIFORNIA ELECTRICAL CODE (CEC)

STANDARD SYMBOLS LIST -- ABBREVIATIONS									
A	AMPS	F	FUSH	MSC	MISCELLANEOUS	RM	ROOM		
AC1	AIR CONDITIONER /	FA	FIRE ALARM	MSB	MAIN SWITCHBOARD	RSS	ROOM STEEL GALVANIZED		
AT	ASIDE PNEUMATIC FLOOR	FBD	FURNISHED BY OTHERS			RVT	REDUCED VOLTAGE AUTOTRANSFORMER		
AC	AVAILABLE INTERRUPTING CURRENT	FON	FOUNDATION	N	NEUTRAL	R/W	RIGHT OF WAY		
AL	ALARM	FL	FLOOR	N.C.	NORMALLY CLOSED				
AMP	AMPLIFIER	FLUOR	FLUORESCENT	NES	NATIONAL ELECTRICAL CODE	SIZE	SOUTHERN CALIFORNIA EDISON		
ARCH	ARCHITECTURAL	FUT	FUTURE	NEM	NATIONAL ELECTRICAL MGR'S ASSOC.	SO	SMOKE DETECTOR		
RSC	RMS SHUNT CIRCUIT	FVR	FULL VOLTAGE NON REVERSING	NH	NOT IN CONTACT	SMS	SMALL DUCT GAS & ELECTRIC	1L2L...	1 LAMP, 2 LAMP, ETC
ATS	AUTOMATIC TRANSFER SWITCH	FVR	FULL VOLTAGE REVERSING	NL	NIGHT LIGHT	SSE	SECONDARY	1P2P...	1 POLE, 2 POLE, ETC
BAS	BUILDING AUTOMATION SYSTEM	G	GROUND	N.O.	NORMALLY OPEN	SM	SMALL		
BKBD	BACKBOARD	GTI	GROUND FAULT INTERRUPTER	NOS	NOT TO SCALE	SW	SURFACE MOUNTED		
BWP	BUILDING WIRE PANEL	GRD	GROUND	OH	OVERHEAD	SP	SPECIAL, SEE SCHEDULE		
CAB	CABINET	GRD	GRADE	OL	OVERLOAD	SS	SQUARE		
CB	CIRCUIT BREAKER	H	HAND-OFF-AUTO	P	POLE	SS FT	SQUARE FEET		
CCTV	CABLE TELEVISION	HDA	HAND-OFF-AUTO	PA	PUBLIC ADDRESS	SS	SOLID STATE		
CCT	CLOCK	HDP	HAND-OFF-AUTO	PB	PULL BOX	SSR	STAINLESS STEEL		
CL	CLOCK	HPI	HEADPUMP /	PC	PHOTOCELL	SNGR	SINGLE		
CLF	CIRCUIT LIMITING FUSE	HVAC	HEATING VENTILATION AIR CONDITIONING	PKG	PARKING	IC	TIMECLOCK		
CNG	CEILING	I	INTERCOM	PLC	PROGRAMMABLE LOGIC CONTROLLER	TELE	TELEPHONE		
CONN	CONNECTION	IBC	INSTALLED BY CONTRACTOR	PLUMB	PLUMBING	TV	TELEVISION		
CPI	CONTROL PANEL /	IC	INTERCOM	PML	PANEL	TYP	TYPICAL		
		INCAND	INCANDESCENT	PP	PLY PHONE				
D	DATA OUTLET	IRR CONT	IRRIGATION CONTROLLER	PPJ	POWER POLE /	UG	UNDERGROUND		
DA	DAMETER	IS	INTRUSION SWITCH	PR	PRIMARY	UGPS	UNDERGROUND PULL SECTION		
DM	DOWN	J	J BOX	PS	PRESSURE SWITCH	UL	UNDERWRITES LABORATORY		
DWR	DIGITAL VIDEO RECORDER	LS	LINE SWITCH	PT	PRESSURE TRANSDUCER	UNL	UNLESS NOTED OTHERWISE		
DWG	DRAWING	LT	LIGHT	QTY	QUANTITY	UPS	UNINTERRUPTIBLE POWER SUPPLY		
EDF	ELECTRIC DRINKING FOUNTAIN	MAX	MAXIMUM						
EF1	EXHAUST FAN /	MCC	MASTER CONTROL CENTER	R	ROOF MOUNTED	WP	WEATHERPROOF	A	AMBER
ELECT	ELECTRIC	MCP	MASTER CONTROL PANEL	REL	RELAY	WR	WAPPED	B	BLUE
EM	EMERGENCY	MCH	MECHANICAL	REC	RECEPTACLE			G	GREEN
ENGR	ENGINEER	MGR	MANUFACTURER	RETR	REFRIGERATOR	XTMR	TRANSFORMER	R	RED
EQUIP	EQUIPMENT	MH	MOUNTING HEIGHT	REL	RELAY			W	WHITE
EW	ELECTRIC WATER COOLER	MIN	MINIMUM	RGS	ROOM GALVANIZED STEEL				

STANDARD SYMBOLS LIST		SINGLE LINE DIAGRAMS	
SYMBOL	DESCRIPTION		
	UTILITY METER, 200A OR LESS, 400A OR MORE, RESPECTIVELY		
	CIRCUIT BREAKER		
	PHASE INDICATOR		
	CONTROL INTERFACE MODIFIER		
	BUSMAN FUSE TYPE		
	FUSED SWITCH		
	STARTER SIZE		
	TYPE		
	GROUNDING ELECTRODE AND BONDING CONDUCTOR		
	PLAN VIEW		
	POTENTIAL TRANSFORMER		
	CURRENT TRANSFORMER		
	MAIN DISCONNECT GROUND FAULT DEVICE		
	AUTOMATIC TRANSFER SWITCH		
	GENERATOR		
	KILOWATTMETER		
	DIGITAL METERING DEVICE		
TYPICAL		TYPICAL	
	MISCELLANEOUS LOAD		
	EQUIPMENT LOAD		
	EQUIP. NUMBER, PER MECH. OWNER, OR ARCHITECT		
	CONTROL DIAGRAM CONTACT REF.		
	EQUIPMENT DESCRIPTION		
	MOTOR LOAD		
	MOTOR HORSEPOWER		
	PACKAGE UNIT LOAD (MECHANICAL)		
	EQUIPMENT NUMBER		
	PANEL LOADS		
	LIGHTING LOADS		
	HEATING LOADS		

CRITICAL NOTES

CONTRACTOR MUST HAVE BEEN PRIME ELECTRICAL CONTRACTOR (C-10) ON AT LEAST 3 PROJECTS INVOLVING FURNISHING AND INSTALLATION OF HIGH CURRENT, 480V, OR 1200V (OR HIGHER) CABLEING, 1200A A.I.S. AND GENERATOR TESTING.

14. **CONTROL PANELS**

ALL CUSTOM CONTROL PANELS OR PLC'S MUST BE DESIGNED, CONSTRUCTED, PROGRAMMED AND TESTED BY A U.L. 508 APPROVED PANEL SHOP. SUBMIT ALL FABRICATION DRAWINGS INCLUDING SCHEMATICS, WIRING DIAGRAMS, WITH WIRE HAIRBENDS, BILL OF MATERIALS AND OPERATION MANUAL TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. ELECTRICAL CONTRACTORS (C-10'S) ARE NOT ACCEPTABLE FOR THIS WORK. A LIST OF TYPICAL U.L. PANEL SHOPS FOLLOWS:

1.) Z-Power (714) 307-9180	4.) TR-NAUT (714) 255-8680
2.) PAULSONS ENG'S (714) 523-5927	5.) QUANTUM AUTOMATION (714) 854-0800
3.) MEDIA SYSTEMS (805) 482-7041	6.) OR SUBMIT ELOU FOR APPROVAL

15. **TESTING**

THE CONTRACTOR SHALL ENGAGE AND PAY FOR THE SERVICES OF AN OUTSIDE PARTY, THIRD PARTY TESTING COMPANY TO SET AND TEST ALL TRIP SETTINGS ON ALL ADJUSTABLE CIRCUIT BREAKERS AND GROUND FAULT DEVICES AND PROVIDE "TEST REPORT DATA SHEETS" TO WALLEN AND ASSOCIATES, INC. ORDERED PRIOR TO ENERGIZING AND NEW FEEDERS OR ELECTRICAL SERVICES. IN ADDITION, ALL NEW MEDIAL VOLUME CABLE SHALL HAVE INSULATION RESISTANCE TESTED BEFORE AND AFTER INSTALLATION WITH "INSULATION RESISTANCE DATA SHEET" SUBMITTED TO WALLEN AND ASSOCIATES, INC. ORDERED PRIOR TO ENERGIZING. ALL TESTING SHALL COMPLY WITH NFPA 70E, 70C. SAFETY REQUIREMENTS AND N.E.T.A. A15-85 SPECIFICATIONS. USE ONE OF THE FOLLOWING TESTING COMPANIES OR AN APPROVED EQUIVALENT:

- 1.) VISTAM (BALAZAR@VISTAM.COM)
- 2.) PAULSONS ENG'S (714) 523-5927 (OR 714-523-2166)
- 3.) TRANSPOWER, FRANK SARGHAI, (949) 235-3215
- 4.) OR SUBMIT ELOU FOR APPROVAL.

16. **ARC-FLASH HAZARD**

ALL ELECTRICAL EQUIPMENT WITH ENERGIZED PARTS SUBJECT TO EXAMINATION OR MAINTENANCE SHALL BE LABELED IN A CLEARLY VISIBLE WAY TO WARN QUALIFIED PERSONNEL OF POTENTIAL ARC FLASH HAZARDS. PROVIDE STICK-ON LABELS FOR EACH OPERABLE ENCLOSURE DOOR, PER NFPA 70E, 130.6 AND 130.6(B) AND ANSI Z359.4-1998. ALL WORK ON ENERGIZED ELECTRICAL EQUIPMENT REQUIRES PERSONAL PROTECTION EQUIPMENT (PPE) PER NFPA 70E:

- NON-MELTING LONG SLEEVE SHIRT, PANTS, AND UNDERWEAR;
- TRY-ARC-RATED JACKET AND GLOVES; SHIRT AND PANTS; COVERALLS.
- HARD HAT AND LEATHER WORK SHOES
- SAFETY GLASSES, SAFETY GOGGLES OR FACE SHIELD
- HEARING PROTECTION (EAR CANAL INSERTS)
- INSULATED RUBBER GLOVES WITH ELECTRICAL PROTECTORS

17. THE CONTRACTOR SHALL CONTACT THE ELECTRIC, TELEPHONE, AND CABLE TV COMPANIES AND OBTAIN FROM THEM THEIR REQUIREMENTS FOR CONDUITS, SUBSTRUCTURES, POTS, METERS, BACKBOXES, PULL BOXES, ETC., AND INCLUDE COST OF FURNISHING AND INSTALLING THIS REQUIRED EQUIPMENT IN BID.

18. OBTAIN MAXIMUM AVAILABLE FAULT CURRENT FROM THE POWER COMPANY PRIOR TO BID. EQUIPMENT, BUSES, AND CIRCUIT PROTECTIVE DEVICES SHALL HAVE INTERRUPTING RATING TO PROTECT THE ELECTRICAL SYSTEM AGAINST THE MAXIMUM AVAILABLE FAULT CURRENT.

19. ALL UNDERGROUND RISERS AND SHEEPS TO BE PVC COATED RIGID STEEL GALVANIZED CONDUIT.

20. CONTRACTOR IS TO SLEEVE BUILDING FOUNDATION FOR ALL UTILITY CONDUITS PER STRUCTURAL/ARCHITECTURAL DETAIL AND INSTALL ALL EQUIPMENT AND CONDUITS PER S.M.A.C.N.A. STRUCTURAL AND SEISMIC REQUIREMENTS.

21. TEMPORARY POWER FOR CONSTRUCTION, DEMOLITION, OR SYSTEM CHECKOUT IS TO BE PROVIDED BY THE CONTRACTOR AND SHALL BE PER N.E.C. AND CAL OSHA REQUIREMENTS.

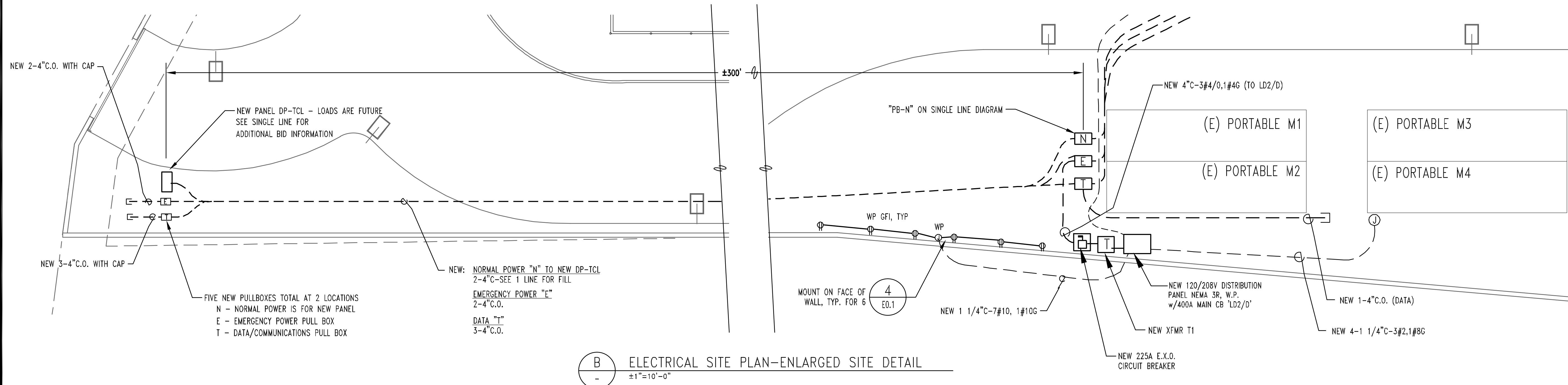
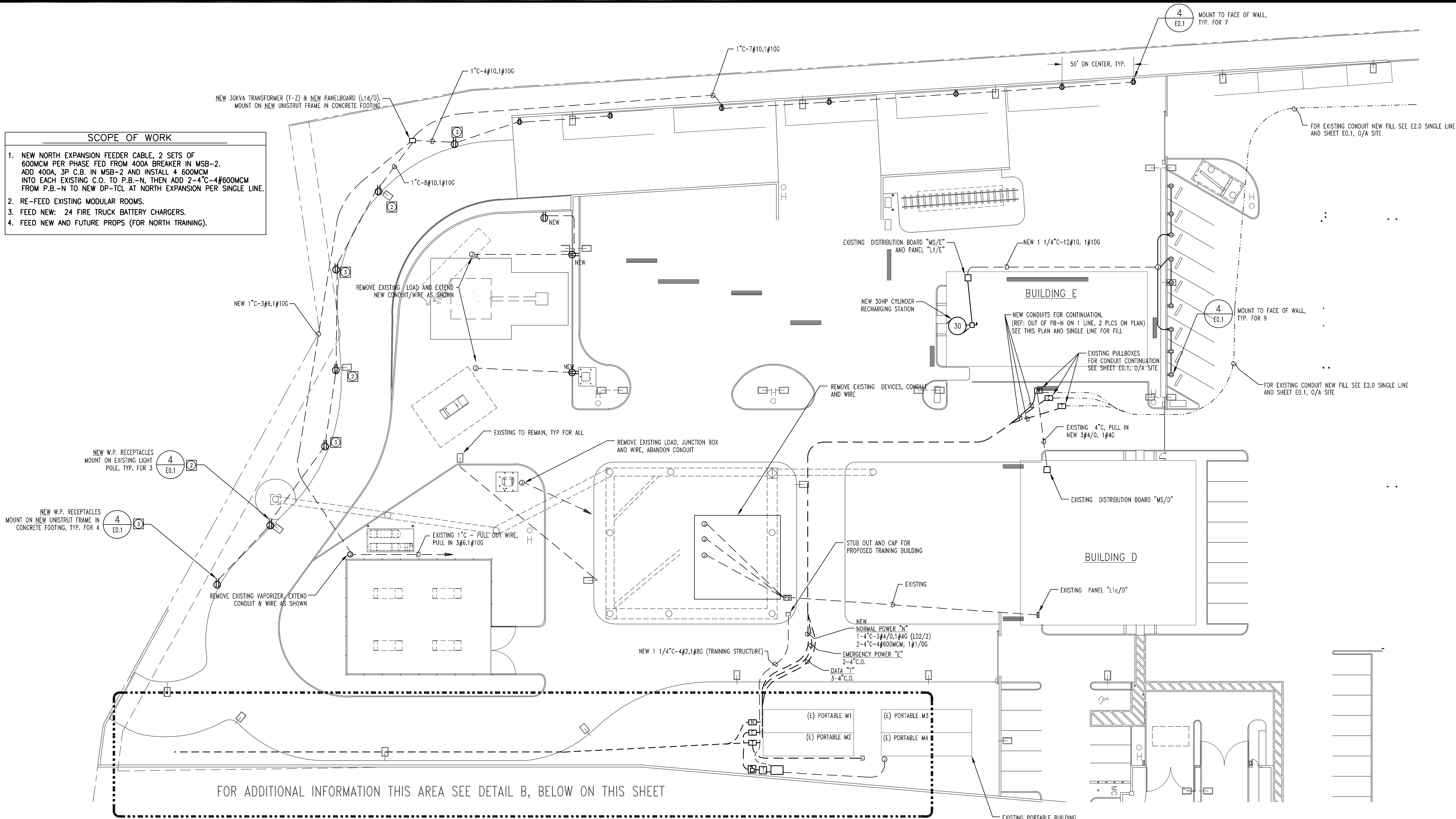
22. PULL BOXES NOT SPECIFICALLY SIZED ON THE DRAWINGS SHALL BE SIZED PER N.E.C. ARTICLE 370 AND FURNISHED WITH BOLT DOWN TRAFFIC RATED CABLE, SET ON 12" PFA GRADING BEEL.

23. PRIOR TO DIGGING OR EXCAVATION, LOCATE U.G. UTILITIES BY CALLING 1-800-422-4133.

24. ELECTRICAL EQUIPMENT SHALL BE LISTED BY A CITY OF IRVINE RECOGNIZED ELECTRICAL TESTING LAB OR APPROVED DEPARTMENT.

X:\OCA\2019021-North Training Expansion\Elec_E1.0-Electrical Site Plan\OCA Training_8/12/2023 1:02:44 PM_1.1_MullenAndAssociates, Inc.

- SCOPE OF WORK**
1. NEW NORTH EXPANSION FEEDER CABLE, 2 SETS OF 600MCM PER PHASE FED FROM 400A BREAKER IN MSB-2. ADD 400A, 3P C.B. IN MSB-2 AND INSTALL 4 600MCM INTO EACH EXISTING C.O. TO P.B.-N, THEN ADD 2-4"C-4#600MCM FROM P.B.-N TO NEW DP-TCL AT NORTH EXPANSION PER SINGLE LINE.
 2. RE-FEED EXISTING MODULAR ROOMS.
 3. FEED NEW: 24 FIRE TRUCK BATTERY CHARGERS.
 4. FEED NEW AND FUTURE PROPS (FOR NORTH TRAINING).



B ELECTRICAL SITE PLAN-ENLARGED SITE DETAIL
1"=10'-0"

A ELECTRICAL SITE PLAN-FIREMAN TRAINING YARD
1"=20'-0"

- NOTE:**
- 1 ALL POLE LIGHT FIXTURES ARE EXISTING TO REMAIN.
 - 2 THREE EXISTING LIGHT FIXTURES TO HAVE RECEPTACLES MOUNTED TO THEIR RESPECTIVE POLES.
 - 3 FOUR EXISTING UNISTRUT FRAMES TO HAVE RECEPTACLES MOUNTED TO THEIR RESPECTIVE STRUCTURES.

**Emergency Electrical Power Dist Training Ctr
for Regional Fire Operations and Training Center**

Shr Title ELECTRICAL SITE PLAN
Project Emergency Electrical Power Dist Training Ctr
RFP Number 1 Fire Authority Road
Irvine, California 92602

Drawn CLD
Chkd LDM
Date 12/20/2022

Sheet
E1.0
of 3

MULLEN & ASSOCIATES, INC.
ELECTRICAL ENGINEERS
2019021
Project Number 1500 N. Jefferson St., Suite D Anaheim, Cal. 92807 (714) 852-4800



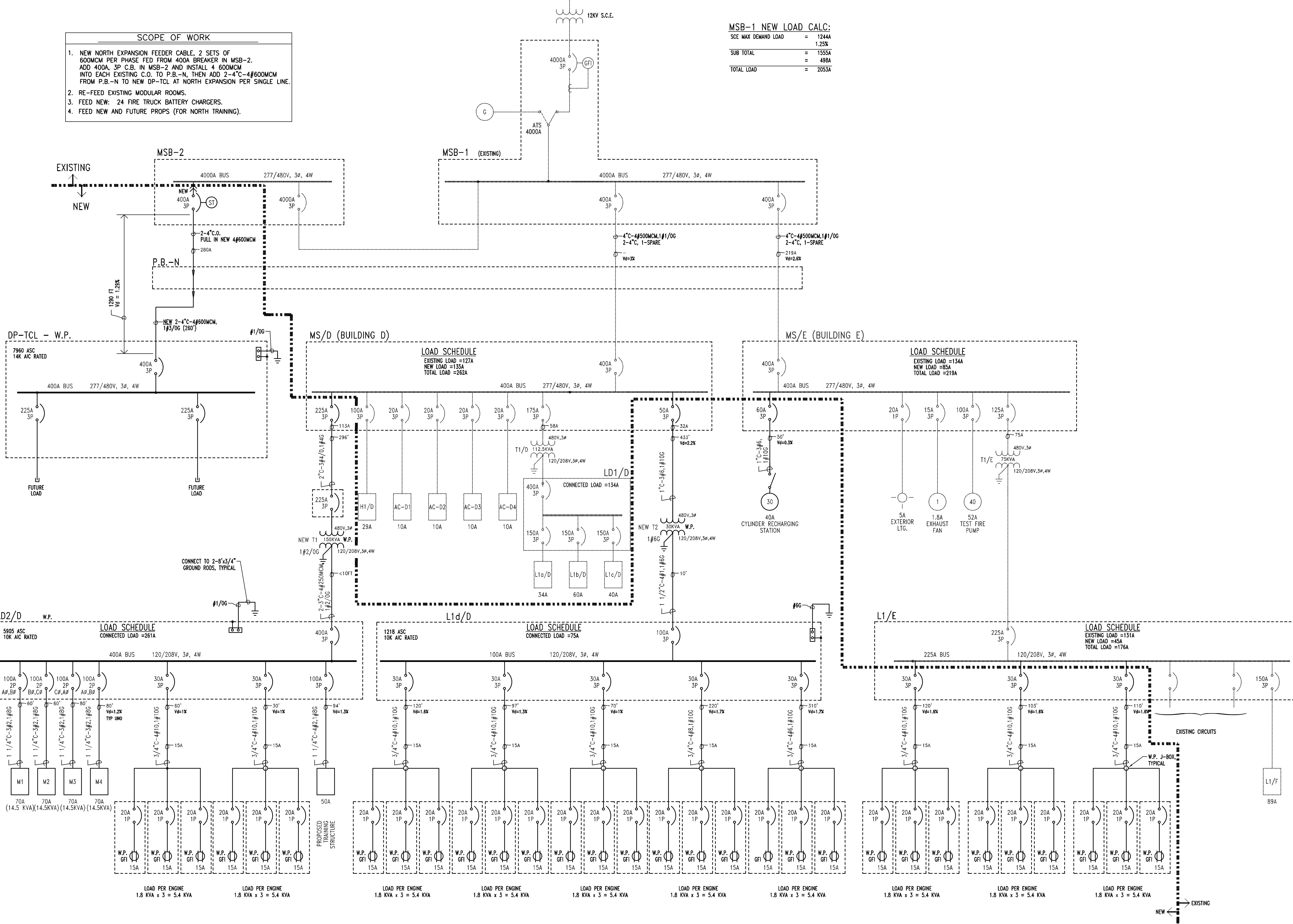
Revisions	By	Descr.	Date

SCOPE OF WORK	
1.	NEW NORTH EXPANSION FEEDER CABLE, 2 SETS OF 600MCM PER PHASE FROM 400A BREAKER IN MSB-2. ADD 400A, 3P C.B. IN MSB-2 AND INSTALL 600MCM INTO EXISTING CO. TO P.B.-N, THEN ADD 2"- ϕ 4#600MCM FROM P.B.-N TO NEW DP-TCL AT NORTH EXPANSION PER SINGLE LINE.
2.	RE-FEED EXISTING MODULAR ROOMS.
3.	FEED NEW: 24 FIRE TRUCK BATTERY CHARGERS.
4.	FEED NEW AND FUTURE PROPS (FOR NORTH TRAINING).

2. RE-FEED EXISTING MODULAR ROOMS.
3. FEED NEW: 24 FIRE TRUCK BATTERY CHARGERS.
4. FEED NEW AND FUTURE PROPS (FOR NORTH TRAINING)

SCE MAX DEMAND LOAD	=	1244A
		1.25%
SUB TOTAL	=	1555A
	=	498A
TOTAL LOAD	=	2053A

SCE MAX DEMAND LOAD	=	1244A
		1.25%
SUB TOTAL	=	1555A
	=	498A
TOTAL LOAD	=	2053A



NO SCALE

NOTE:

1. BATTERY CHARGERS PROGRAMMED TO DRAW 15A EACH.
USE: MIDWEST #UO10C OR EQUAL.
2. ST - SHUNT TRIP

$$(120') \quad V_d = \frac{3 \times 1.1 \times 0.120 \times 15A}{\#10} = 3.4V/208 = 1.6\%$$
$$(310') \text{ } V_{d\#6} = 3 \times 0.45 \times 0.310 \times 15A = 3.62V = 1.7\%$$

Revisions	Sym.	Descrip.	Date	By

**Emergency Electrical Power Dist Training Ctr
for Regional Fire Operations and Training Center**
OC Fire Authority
Irvine, California 92602
1 Fire Authority Road
Phone: 714-573-6475

ELECTRICAL SITE & KEY PLAN, SYMBOLS & NOTES

Emergency Electrical Power Dist. Training Ctr
RFP Number:
Fire Authority Road
vine, California 92602

Drawn _____ CLD _____
Chkd. _____ LDM _____
Date _____ 12/20/2022 _____

Sheet

E2.0

of 3

**5C: PROJECT SPECIFICATIONS AND DRAWINGS - G2 SOLUTIONS GROUP & RSSE
STRUCTURAL ENGINEERS**

Orange County Fire Authority



Regional Fire Operations and Training Center

1 Fire Authority Road, Irvine CA 92602

Training Grounds Modifications & Upgrades

This document contains an overview and summary for the General Contractor proposed modifications and upgrades to be performed at the at the Regional Fire Operations and Training Center in Irvine, California.

Prepared By:

**G2 Solutions Group
&
RSSE Structural Engineers, Inc.
September 17, 2023**

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- | | | | |
|-----|--------|----------------------------------|--------------|
| 1) | SE-2.1 | Strip Mall Foundation Plan | (NOT A PART) |
| 2) | SE-2.2 | Strip Mall Second Floor Plan | (NOT A PART) |
| 3) | SE-2.3 | Strip Mall Roof Plan | (NOT A PART) |
| 4) | SF-2.1 | Tower Partial Floor Plans | |
| 5) | S-4.1 | Structural General Notes | |
| 6) | S-4.2 | Structural General Notes | |
| 7) | S-5.1 | Structural Details | |
| 8) | S-6.1 | Strip Mall Training Prop Details | (NOT A PART) |
| 9) | S-6.2 | Strip Mall Training Prop Details | (NOT A PART) |
| 10) | S-6.3 | Strip Mall Training Prop Details | (NOT A PART) |
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| 12) | S-7.2 | Tower Training Prop Details | |

A. SUMMARY / OVERVIEW

Orange County Fire Authority (OCFA) is seeking proposals for to conduct modifications and additions to the existing fire training tower located within the training grounds. The scope of work is defined within the attached project specifications and approved contract drawings. Below is a brief summary for the administration of the work.

1. **Project Understanding:** Each bidder acknowledges that he or she has carefully read the included specifications and contract drawings and has examined all documents for the scope of work prior to submission of their bid proposal.
2. **Project Permits:** The current approved architectural and structural drawings are on file with the City of Irvine. It shall be the responsibility of the contractor to procure the proper permits from the city prior to beginning work.
3. **Project Schedule:** The contractor shall be advised that the work described herein shall be performed at an occupied and active site. Prior to beginning of work, contractor shall prepare a schedule of work and submit to **OCFA** for review and acceptance. Any work, deliveries or efforts which may impede the existing circulation roadways within the training grounds shall be scheduled at least seven (7) days in advance with the **OCFA** Fire Training department personnel.
4. **Project Workers:** All contractors and subcontractors performing work shall have and maintain the following current registrations.
 - a. Contractor License registered with the State of California Contractors State License Board (CSLB)
 - b. Registration with the State of California Department of Industrial Relations (DIR)
 - c. City of Irvine business license.
 - d. Insurances
5. **Project Submittals:** Submittals shall be prepared by the general contractor or subcontractor after award of contract as described within the respective specification section or noted within the approved contract drawings. Submittals are to be submitted to **Orange County Fire Authority (OCFA)** for review and approval by the architect and/or engineer of record prior to the beginning of work.
 - a. Contractor shall provide five (5) copies of information required or one (1) electronic version.
 - b. Submittals shall be reviewed and returned within ten (10) working days of submission. Failure to provide submittals in a timely manner will not justify delays in construction. Corrections to submittals shall be addressed as noted. Failure to address may result in rejection of work.
 - c. Contractor shall maintain one (1) copy of each approved submittal at the construction site for the duration of the project.
6. **Project Documentation and As-Built Drawings:** Upon completion of work, contractor shall provide the following documents for final review and acceptance by **OCFA** and the architect or engineer of record.
 - a. **Warranties:** Provide written warranties for all elements as noted within the project specifications and approved contract drawings.
 - b. **Operation and Maintenance Manuals:** Provide copies of manuals with cover pages as referenced within the project specifications.
 - c. **As-Built Drawings:** Provide one (1) electronic copy of as-built drawings noting actual installation and dimensions marked in legible "red".

B. PACKAGE 1 - Live Fire Prop Replacement

Contractor to conduct modifications and additions to the existing fire training tower and strip mall structures located within the training grounds. The scope of work is defined herein and within the attached project specifications and approved contract drawings.

TASK 2-1: Modifications to Training Tower Structure

Modifications to Training Tower Structure: The existing Multi-Story Training tower structure will require various modifications to accommodate the proposed live fire prop replacement and address other training scenarios.

- Construction of a metal stud/exterior face block low wall at 2nd level west facing balcony. This is to replace the existing metal guardrails.
- Removal of noted non-bearing interior CMU walls for live fire prop room enlargement.
- Addition of noted interior CMU walls to close off rooms and spaces.
- Removal and infill of existing exterior wall louvers
- Construction of new "Denver Window Prop" at 2nd floor
- Removal of existing prop room vision panels

TASK 3-1: Interior Live Fire Prop Replacement

Modifications to Training Tower Structure: The existing live fire props are in need of replacement. These props utilize 20-year old technology which restricts the training abilities. The system is also a single fault source type which if one prop fails, all props within the building are non-functional. The proposed prop replacement will provide heightened training, with new technology and advancements in functionality. Below are the proposed replacements and associated room modifications required.

Tower Burn Room #1: 1st Floor Living Room Prop #F103

Many deficiencies were noted in this room which should be addressed to increase the training potential and environment. The proposed plan is to replace the existing prop with a new multi-burner kitchen fire.

- Reduce exterior wall louver size
- Reconfigure east exterior wall opening
- Close off ceiling exhaust opening and utilize wall mounted exhaust fan at east exterior wall. This will increase the heat levels.

Tower Burn Room #2: 2nd Floor Bedroom #F202

The most noticeable deficiency noted was the room and prop size. For this room the following should be considered to increase the training potential and environment.

The prop would be replaced with multi-burner sofa prop with ceiling rollover effect fire.

- Reduce exterior wall louver size.
 - Remove Exterior windows
 - Reduce emergency exhaust shaft size.
 - Remove or move interior west wall of prop room to increase size. Consider blind side entry into room.
 - Replace bed prop with suitable smaller footprint prop such as entertainment center, sectional sofa or concealed cabinets with multiple burners and flame extension.
 - Install forcible entry door at exterior access point(s)
 - Remove steel heat shield protection at ceiling above prop.
-

- Extend high temperature lining protection at ceiling and walls.

Tower Burn Room #3: 3rd Floor Kitchen Prop #F303

The existing kitchen fire prop is an early generation model with single use. For this room the following should be considered to increase the training potential and environment.

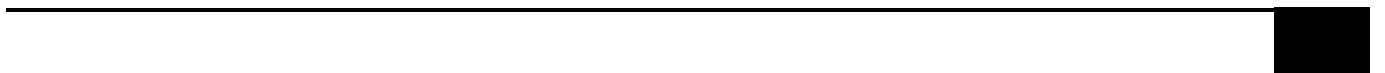
The prop would be replaced with a multi-burner office fire prop.

- Replace existing prop with multiple burner and flame spread style prop to simulate concealed fire, grease flare up or commercial hood fire.
 - Reduce emergency exhaust shaft size.
 - Install forcible entry door at exterior access point(s)
 - Remove steel heat shield protection at ceiling above prop.
 - Extend high temperature lining protection at ceiling and walls.
-

PACKAGE 1

Live Fire Prop Replacement

City of Irvine Permit No. 00895986-SBPT



SECTION 09 97 13

HIGH-TEMPERATURE PAINT

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. This Section includes surface preparation and application of high-temperature-resistant paint to all exposed metal surfaces within the shown live fire burn rooms/areas of the multi-story, Fire Training Structure. Surfaces include, but are not limited to the following:
 - 1. Hollow metal doors and frames
 - 2. Hollow metal window frames
 - 3. Exposed interior and exterior metal
 - 4. Exposed steel framing and steel members.

1.02 SUBMITTALS

- A. General: Submittals shall be prepared by the contractor as described herein and be submitted to Orange County Fire Authority (OCFA) for review and approval by the architect and/or engineer of record prior to the beginning of work.
- B. Product Data: For each paint coating system specified.
 - 1. Manufacturer's Information: Manufacturer's technical information, including preparation and application.
 - 2. Certification by the manufacturer that the product supplied complies with local and State of California regulations controlling the use of VOCs.
- C. Samples for Initial Selection: Manufacturer's standard color charts showing the full range of colors available for type of finish-coat material indicated.

1.03 QUALITY ASSURANCE

- A. Applicator Qualifications: An experienced applicator who has experience in the application of completed high-temperature-resistant painting of applications similar in material and extent to that indicated for the Project and with a record of successful in-service performance.
- B. Source Limitations: Obtain primers and undercoat materials for each coating system from the same manufacturer as finish coats.
- C. All on-site work shall be performed by qualified personnel licensed in the State of California for the applicable work discipline. Qualified personnel shall also be licensed and insured per both Orange County Fire Authority and the City of Irvine's requirements and provide proof thereof. The contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in regards to the project of scope of work.

1.04 WARRANTY

- A. High temperature lining systems shall have a carry a full manufacturer warranty against defects or failures for a period of not less than ten (10) years from the date of project acceptance.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
 - 1. Add other requirements to suit specific Project circumstances.
 - 2. Product name or title of material.
 - 3. Product description (generic classification or binder type).
 - 4. Manufacturer's stock number and date of manufacture.
 - 5. Contents by volume, for pigmen and vehicle constituents.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.
 - 9. Handling instructions and precautions.
- B. Store materials not in use in tightly covered containers in a well-ventilated area, protected from sunlight and weather, at a minimum ambient temperature of 50 deg F and a maximum ambient temperature of 100 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
 - 1. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure workers and work areas are protected from fire and health hazards resulting from handling, mixing, and applying coatings.

1.06 PROJECT CONDITIONS

- A. Manufacturer's Written Recommendations: Comply with manufacturer's written recommendations for optimum temperature and humidity conditions for applying and curing high-temperature-resistant coatings. Do not apply coatings until these conditions have been attained and stabilized.
- B. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85%; at temperatures less than 50 deg F above dew point; or to damp or wet surfaces.
 - 1. Allow wet surfaces to dry thoroughly and attain temperature and conditions specified before proceeding with coating operation.
 - 2. Coating application may continue during inclement weather only if surfaces to be coated are enclosed and heated within temperature limits specified by the manufacturer during application and curing periods.

1.07 ADDITIONAL STOCK

- A. Upon completion of work, contractor shall deliver a minimum of 10% additional product in manufacturer's sealed containers.

PART 2 - PRODUCTS**2.01 MANUFACTURERS**

- A. Manufacturer's Names: The following manufacturer is the "Basis of Design" for the specified material. Alternative manufacturers are acceptable upon compliance of described performance.
1. Dampney Co., Inc. 85 Paris Street, Everett, MA 02149 (800) 537-7023, Website: www.stovepaint.com.
 2. Approved Equivalent

2.02 PAINT, GENERAL

- A. Basis of Design: Thurmalox 270, Stove Paint, as manufactured by Dampney Co., Inc.
1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish the manufacturer's material data and certificates of performance for proposed substitutions
- B. Material Compatibility: Provide primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience
- C. Material Characteristics: The following lists the technical data and information of the specified high-temperature resistant paint.
- | | |
|---------------------------------|---|
| 1. Generic Type: | Silicone |
| 2. Finish: | Low sheen and metallic |
| 3. Temperature Resistance: | Continuous: 1,000°F (538°C)
Intermittent: 1,200°F (649°C). |
| 4. Percent of solids by volume: | 18 (Varies with Color) |
| 5. Viscosity | 300-450 cps (Varies with Color) |
| 6. Dry film Thickness | 0.75–1.0 mils per coat(25 microns) |
| 7. Theoretical Coverage | 289 mil. Sq. ft. per gallon |
| 8. Weight per gallon | |
| a. Thurmalox 270 Series | 8.8 lb (4.1 kg.) |
| b. Dampney 100 Thinner | 7.1 lb (3.2 kg) |
| 9. Volatile Organic Compounds | 420 g/l or less |
- D. Colors: Provide manufacturer's standard colors for selection by the Architect.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions which high-temperature-resistant paints will be applied, for compliance with coating application requirements.
 - 1. Apply coatings only after unsatisfactory conditions have been corrected and surfaces to receive coatings are thoroughly dry.
- B. Coordinate primers specified in other Sections with undercoats and finish coatings specified in this Section to ensure compatibility of materials. Some high-temperature-resistant coatings will lift incompatible primers or may have poor adhesion when applied over zinc-based or baked primers.
- C. Coordination of Work: Review other Sections in which primers or other coatings are provided to ensure compatibility of total systems for various substrates. On request, furnish information on characteristics of specified finish materials to ensure compatible primers.
 - 1. Where a potential incompatibility of primers applied by others exists, obtain the following from the applicator of the primer before proceeding:
 - a. Confirmation of the suitability of the primer for the expected service temperature.
 - b. Confirmation of the primer's ability to be top-coated with materials specified.
 - 2. Notify the Architect about anticipated problems using the coatings specified over substrates primed by others.

3.02 PREPARATION

- A. Cleaning: Before applying high-temperature-resistant paint, clean substrates of substances that could impair bond. Remove oil and grease before cleaning.
 - 1. Schedule cleaning and coating application so dust and other contaminants from cleaning process will not fall on wet, newly coated surfaces.
- B. Surface Preparation: Clean and prepare surfaces to be coated according to the manufacturer's written instructions for each particular substrate condition, and as specified.
 - 1. Coordination of shop-applied prime coats with high-temperature-resistant coatings is critical. See "Coordination of Work" Paragraph in "Examination" Article. If compatibility problems exist, it may be necessary to provide barrier coats over primers or to remove primer and reprime substrate.
 - 2. Provide barrier coats over incompatible primers or remove and re-prime.
 - 3. Ferrous Metal: Clean ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC recommendations.
 - a. Blast-clean steel surfaces according to requirements of SSPC standard recommended by coating system manufacturer.
 - b. Treat bare and sandblasted or pickled-clean metal with a metal-treatment wash coat before priming.
 - c. Touch up bare areas and areas where shop-applied prime coats have been damaged. Wire brush, solvent clean, and touch up with the same primer as the shop coat.

- C. Material Preparation: Mix and prepare materials according to coating manufacturer's written instructions.
 - 1. Maintain containers used for mixing and applying coatings in a clean condition, free of foreign materials and residue.
 - 2. Stir materials before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain coating material before using.
 - 3. Use only the type of thinners approved by manufacturer and only within recommended limits.

3.03 APPLICATION

- A. General: Apply high-temperature-resistant paint according to the manufacturer's written instructions. Use applicators and techniques best suited for material being applied.
 - 1. Do not apply coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
 - 2. Coating colors, surface treatments, and finishes are indicated in the schedules.
 - 3. Provide finish coats compatible with primers used.
- B. Scheduling Coating: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.
 - 1. Number of coats and film thickness required is the same regardless of application method employed. Do not apply succeeding coats until previous coat has cured, as recommended by the manufacturer.
 - 2. When undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance. Give special attention to edges, corners, crevices, welds, exposed fasteners, and similar surfaces to ensure they receive a dry film thickness equivalent to that of flat surfaces.
 - 3. Allow sufficient drying time between successive coats to permit proper curing. Do not recoat until coating has dried so it feels firm and does not deform or feel sticky under moderate thumb pressure, and where applying another coat does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply coatings by spray according to the manufacturer's written instructions.
 - 1. Spray Equipment: Use spray equipment with orifice size as recommended by the manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply each coat per the manufacturer's recommended spreading rate. Minimum of two (2) coats. Provide total dry film thickness of entire system as recommended by the manufacturer.
 - 1. Each Coat a minimum thickness of 1.0 mil (25 microns)
- E. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to substrate to be coated that has not been prime coated by others. Recoat primed and sealed substrates where there is evidence of suction spots or unsealed areas in first coat to ensure a finish coat with no burn through or other defects caused by insufficient sealing.
- F. Applying high-temperature-resistant coatings by brush is not always suitable. Before specifying, consult manufacturer to determine that brush application will produce an acceptable finish coat.

- G. Mechanical Applications: Use mechanical methods to apply coating when permitted by the manufacturer's written recommendations and governing regulations.
 - 1. Where using spray application, apply each coat to provide equivalent hiding of brush-applied coats. Do not double back with spray equipment, building up film thickness of two coats in one pass, unless recommended by manufacturer.

3.04 CLEANING

- A. Cleanup: At the end of each workday, remove rubbish, empty cans, rags, and other discarded coating materials from the Project site.
 - 1. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

3.05 PROTECTION

- A. Protect work of other trades, whether being coated or not, against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by the Architect.
 - 1. Provide "Wet Paint" signs to protect newly coated finishes. Remove temporary protective wrappings provided by others to protect their work after completing coating operations.
 - 2. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces. Comply with procedures specified in PDCA P1.

3.06 COATING SCHEDULE

- A. Ferrous Metal: Provide the following coating system over ferrous-metal surfaces:
 - 1. Retain coating system below for an acrylic or alkyd organic coating over ferrous-metal surfaces subject to surface temperatures between 200 and 300 deg F (93 and 149 deg C) and exposed to weather and chemical environments. Glidden does not offer an acrylic or alkyd organic coating in this temperature range that is similar to products of other manufacturers.
 - 2. Retain coating system below for an epoxy coating over ferrous-metal surfaces subject to surface temperatures between 200 and 300 deg F (93 and 149 deg C) and exposed to weather and chemical environments. Devoe and Porter do not offer an epoxy coating in this temperature range that is similar to products of other manufacturers.
 - 3. Retain coating system below for a silicone-resin-based coating over ferrous-metal surfaces subject to surface temperatures between 800 and 1000 deg F (427 and 538 deg C).
 - 4. Silicone Based Paint: Provide two coats over a primer.
 - a. Prime Coat: Manufacturer's recommended metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.0 mils (0.508 mm).
 - b. First and Second Coats: Manufacturer's recommended silicone-based, high-temperature-resistant coating applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.0 mils (0.25 mm) for each coat.

END OF SECTION

SECTION 11 95 10**INTERIOR STRUCTURAL FIRE TRAINERS****PART 1 - GENERAL****1.01 SUMMARY OF WORK**

- A. This section is to define the work associated with the removal and replacement of the existing live fire props as shown in the contract drawings.
- B. This specification defines the functional and performance characteristics of the computer-controlled interior natural gas-fueled live fire training system for the OCFA Fire Training Center in Irvine, California. Fire Training Equipment Supplier (FTES) shall be responsible for the complete provision, installation, testing and start-up of the structural live fire trainers.
- C. The purpose of the live fire trainers is to meet both the minimum requirements for the live fire training certification of entry level fire service personnel, as specified in the NFPA 1001, and advance training scenarios to provide refresher skills and meet ongoing training requirements for the seasoned veteran.
- D. Scope of Work:
 - 1. Conduct a comprehensive job walk to observe the existing live fire props, burn rooms, equipment rooms and supporting infrastructure systems.
 - 2. Provide all required reference material and product certifications with required Specification Submittal noted in paragraph 1.04.
 - 3. Provide on-going assistance in coordination and document review for all adjacent structure trades affected by the live fire prop systems including, but not limited to masonry, doors, windows and electrical.
 - 4. Provide complete review of contract documents for conflicts and coordination requirements. All discrepancies shall be identified prior to beginning of construction.
 - 5. Permits for project will be secured by the General Contractor for the approved plans and specifications. Any additional agency required permits for prop installation and systems, if required by the City of Irvine shall be the responsibility of the Fire Training Equipment Supplier (FTES).
 - 6. Extend interior infrastructure from existing point(s) of connections within the live fire prop equipment rooms to proposed live fire systems including, but not limited to natural gas, electrical power, conduits for system automation and controls. All new exposed conduits and piping shall be rigid type and painted.
 - 7. Provide and install fully-integrated natural gas fired props as listed in Paragraph 2.01.D of this Section.
 - 8. Wall penetrations, equipment securing, attachments and accessories as required for complete installation
 - 9. Provide and install fully-integrated emergency exhaust ventilation system and exhaust shaft mounted fan unit to serve multiple floors. Refer to plans
 - 10. Provide and install system control and diagnostic control units for each fire trainer.
 - 11. Provide complete testing and certification of each fire trainer.
 - 12. Provide manuals and training for each fire trainer and system diagnostics.
 - 13. Provide system and equipment maintenance for designated period listed I Paragraph 3.01.H.

1.02 RELATED SECTIONS

- A. Section 09 97 13: High Temperature Paint
- B. Section 11 95 11: High Temperature Lining Systems
- C. Section 11 95 13: Smoke Distribution System

1.03 SUBMITTALS

- A. General: Submittals shall be prepared by the contractor as described herein and be submitted to Orange County Fire Authority (OCFA) for review and approval by the architect and/or engineer of record prior to the beginning of work.
- B. Product Data: For each gas fired prop and affiliated equipment as indicated.
- C. Product and Material Certifications: For all equipment and systems provide certification of compliance with state and local agencies including, but not limited to; Underwriters Laboratory (UL), National Fire Protection Agency (NFPA), National Electrical Manufacturer's Association (NEMA), American Society for Testing and Materials (ASTM), American Concrete Institute (ACI), etc.
- D. Shop Drawings: Include; plans, elevations, sections, details, and attachments to other Work and to building structure.
- E. Installer Certificates: Signed by the system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install system.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified third party testing agency, for components of system
- G. Warranties: Warranties specified in this Section
- H. Inspection Report: Final inspection acceptance and start-up report signed by system vendor certifying completion and proper working order.
- I. Training Information: Provide training course outline of goals and materials to be covered.

1.04 INSTRUCTIONS

- A. Each bidder acknowledges that he or she has carefully read the included specifications and examined all documents for the equipment requested prior to submitting an offer. All offers shall be in compliance with current codes and standards for this type of equipment. Current codes shall supersede errors in specification.
- B. The performance standards of the live fire trainers set forth in these specifications are the minimum acceptance without exception. Equivalent substitutions will be considered if in compliance with this Specifications Section. Contractor assumes full responsibility to provide alternate products or materials as specified for any items deemed unacceptable as a submitted substitution.

- C. The work to be included in this proposal consists of the furnishing of all labor, materials, equipment, tools, and services, and all costs related for installation of natural gas fired training props within the existing concrete and masonry training building. Any cost that may be necessary to complete the work, in accordance with the specifications and drawing documents, shall be furnished by the vendor at no additional cost to the owner.
- D. All equipment utilized shall conform to all applicable codes and standards. All electrical equipment/components shall be UL approved electrical control equipment. All State and Local code requirements shall be observed and adhered to.
- E. All on-site work shall be performed by qualified personnel licensed in the State of California for the applicable work discipline. Qualified personnel shall also be licensed and insured per both Orange County Fire Authority and the City of Irvine's requirements and provide proof thereof. The contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in regards to the project scope of work.

1.05 QUALITY ASSURANCE

- A. Qualifications: Fire Training System Supplier must be a qualified company that possesses the following requirements. Failure to comply with requirements may be cause for rejection.
 - 1. Company history including all business names that the company has offered live fire training equipment under. The history must include any and all business names (including acquisitions) that the company has done business as (DBA). Demonstrated experience in coordination, design, installation and training of computerized environment training systems using natural gas fuel for interior applications as specified.
 - 2. Company history including a minimum of ten (10) years offering computerized live fire training systems utilizing natural and natural gas fuels.
 - 3. Five (5) Customer References of completed projects, which are of equal or greater size, utilize computer controls and natural gas a fuel source. Must use form provided in section 3.04.
 - 4. A complete history of any accidents or incidents, whether they resulted in injury or not, that occurred within or around a training unit produced by the manufacture offering the equipment. Failure to include all incidents, including operator error or system failures, will be considered non-responsive and may result in rejection. The list shall include any and all equipment produced under any business name (including acquisitions) that the company has done business as (DBA).
 - 5. Written documentation of the equipment certification for the completed live fire training equipment offered:
 - a. Certification by a Nationally Recognized testing Laboratory (NRTL) (Dated within 12 months of contract award) in compliancy to UL 508A, NFPA 54, 58, 86, and 1402. The NRTL must meet the requirements of OSHA 29 CFR 1910.7.
 - b. A compliancy letter from an Independent Engineering firm of a completed safety analysis and flame failure analysis of the operational system. The FTA and FFA must be in compliancy with MIL-STD 882D at a minimum.
- B. Trainer equipment shall be designed and installed in accordance with the latest version of the following standards:
 - 1. NFPA 54: Fuel Gas Code
 - 2. NFPA 70: National Electrical Code
 - 3. NFPA 1402: Guide to Building Fire Service Training Centers
 - 4. NFPA 86, the Standard for Ovens and Furnaces, Sixteenth Edition
 - 5. UL 508A, the Standard for Industrial Control Equipment.
 - 6. ANSI Z21 & 83: Series Standard for Gas Utilization Equipment

- C. Live structural fires shall be compliant and meet the criteria for training as specified in the following NFPA manuals:
 - 1. NFPA 1001: Standard for Fire Fighter Professional Qualifications
 - 2. NFPA 1403: Standard on Live Fire Training Evolutions
 - 3. NFPA 1500: Standard on Fire Department Occupational Health & Safety.
- D. All work performed at the construction site shall be by qualified personnel licensed to perform applicable work in the State of California, with a current City of Irvine business license, and shall maintain current insurance in accordance with OCFA and the City of Irvine requirements.

1.06 WARRANTY

- A. Warrant the system to be free from defects in material and workmanship for a period of not less than five (5) years after the final system training and acceptance date. Provide a replacement part for any part that fails in normal use.
- B. The Fire Training Equipment Supplier shall provide a customer service telephone number that can be used by the Owner 24 hours per day, 7 days per week. Responses to initial call must be made within 24 hours by the FTES's customer service department.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable manufacturers for the provision and installation of the live fire interior fire trainers are listed below. The Basis-of-Design is the following product model and manufacturer:
 - 1. Structural Fire Trainer Model "Raven" as manufacturer by:
FireBlast451, Inc., 545 Monica circle, Corona CA 92880
Telephone (800) 716-1977
Website: www.fireblast.com
 - 2. Structural Fire Trainer Model "T-1000" as manufacturer by:
KFT, Inc., 17 Philips Parkway, Montvale, NJ 07645
Telephone (201) 300-8100
Website: www.kiddeft.com
 - 3. **Lion® Inc.** 20 Corporate Circle, Albany NY 12203.
Telephone (518) 689-2023.
Website www.bullex.com .
 - 4. Approved Equivalent.
NOTE: Equivalent providers to provide qualifications, certifications and references described within this specification section a minimum of ten (10) days prior to published date of bid for review and consideration by OCFA and the architect.
- B. The live fire training system for the facility shall consist of multiple gas fired props as listed within the table 2.1 below. Refer to approved contract drawings for additional information describing the locations of props.

C. Table 2.1 listing prop description and location:

FIRE TRAINING STRUCTURE – Bldg. 2			
FLOOR	PROP LOCATION	DESCRIPTION	PROP EQUIPMENT ROOM LOCATION
1	1 ST FLOOR KITCHEN FIRE	Kitchen Fire Prop with Flare-Up	Existing 1 st Floor Prop Equip. Room
2	2 ND FLOOR BEDROOM FIRE	Double bed mock-up fire	Existing 2 nd Floor Prop Equip. Room
2	2 ND FLOOR CEILING FLASHOVER FIRE	Ceiling Flashover/Rollover to extend over stairwell	Existing 2 nd Floor Prop Equip. Room
2	2 ND FLOOR EXTERIOR BBQ BALCONY FIRE	Small free-standing BBQ fire mounted in existing balcony	Existing 2 nd Floor Prop Equip. Room
3	3 RD FLOOR OFFICE FIRE PROP WITH ROLLOVER	Office Fire desk prop with Ceiling Flashover/Rollover	Existing 3 rd Floor Prop Equip. Room

D. General Prop Descriptions:

1. Office Fire with Extension
 - a. Office fire shall simulate a commercial desk fire within an office environment. The fire structure shall consist of a single desk unit with integral burners as the base fire.
 - b. The extension fire, or secondary fire shall be an overhead ceiling rollover fire intended to extend beyond the shown low office wall which can be seen as one enters the room.
 - c. The flames from the desk and shall extend to the ceiling and also capable of rolling toward the firefighters.
 - d. Desk Fire prop shall utilize the water bath technology for the fire. Pans within the mock-up shall have integral drain valves for easy servicing.
 - e. The Ceiling Rollover fire shall operate independently or concurrently with the office desk and extension fire below. The flame of the rollover shall extend toward the north wall
 - f. Upon initialization by the operator, smoke shall be emitted and the fire shall begin to grow according to parameters selected by the instructor at the scenario control panel. The fully involved fire shall reach to the underside of the ceiling approximately six feet above the mockup and shall cover the majority of the desk surface

2. Kitchen Fire with Flare-Up or Concealed Fire in cabinet :
 - a. The kitchen fire shall simulate a class B grease spill fire and a class A countertop fire. The fire structure shall consist of a mockup of a kitchen countertop with a range top at one end. Class A and B fires shall be simulated simultaneously.
 - b. The kitchen fire shall have a flare-up feature incorporated whereby in the event that the firefighter discharges water at the prop, the automatic sensor ignites a flare-up up fire simulating that of a common grease fire.
 - c. As an alternate the kitchen range-top fire shall be designed for automatic flame-spread to concealed cabinet fire above the countertop. The control system shall allow the selection of the start point of the fire, flame-spread sequence, and flame spread as selected by the operator. The concealed fire shall consist of an overhead kitchen cabinet with an internal flame element controlled through the prop control system. The flame can be initiated independent of the range fire or as part of the automated fire extension simulation.
 - d. Upon initialization by the operator, smoke shall be emitted and the fire shall begin to grow according to parameters set by the instructor at the scenario control panel. The fully involved fire shall reach the ceiling and shall cover the majority of the countertop area.
3. Bedroom Fire with Extension Ceiling Flashover:
 - a. The bedroom fire shall simulate a typical residential bedroom fire. The fire structure shall consist of a small double bed mockup
 - b. The structural training fire shall be designed for automatic flame-spread to overhead ceiling flashover . The control system shall allow the selection of the start point of the fire, flame-spread sequence, and flame spread as selected by the operator.
 - c. The Ceiling Rollover fire shall operate independently or concurrently with the bedroom fire below. The flame of the rollover shall extend toward and over western stairwell interior wall. Refer to plans
 - d. Upon initialization by the operator, smoke shall be emitted and the fire shall begin to grow according to parameters selected by the instructor at the scenario control panel. The fully involved fire shall reach to the underside of the ceiling approximately six feet above the mockup and shall cover the majority of the desk surface
4. Balcony BBQ Fire:
 - a. The balcony BBQ fire is to replicate a small fire which flames can be seen from the exterior of the structure. It shall consist of a free-standing BBQ mockup with integral burner assembly.
 - b. The balcony BBQ fire shall be capable of operating independently via the wireless control.
- E. The live fire prop system shall utilize a standard industrial personal computer (PC) for operator/trainer interface. The PC based system shall allow for independent controls of each live fire prop whereby a single prop failure will not prohibit the use and operations of other live fire props within the structure.. PC controller shall have the capability of wireless connectivity to the master control.
- F. The system shall include a programmable logic controller (PLC) for each prop equipment room control rack. The PLC shall monitor all safety devices and operational controls while recording and archiving message logs and event data. The PLC shall be programmed to place the system in fail safe shut down in the event of safety device activation, manual E-stop depressed or system inaccuracy.

- G. The burn props shall be constructed of corrosion resistant steel. The props must be factory tested prior to delivery. Each burner must include stainless steel pilot and burner assemblies.
- H. The system shall include a smoke generation machine capable of up to 10,000 cubic feet per minute (cfm) distribution minimum. The smoke generation system shall be operated from the wireless or fixed pendant controller. The unit must provide the operator the ability to vary discharge duration and intervals between cycles from the main control unit without the use of any external equipment.
- I. The system shall include a gas detection unit that is based on infrared absorption principle incorporating a heated double-compensated optical bench (2 lamps, 2 detectors) with non-focusing optics design in two locations. The sensor must be temperature compensated and able to operate within an ambient temperature range of -40°F to 150°F and within ambient humidity conditions of 0 to 100%. Optics and electronics shall be hermetically sealed.
 - 1. The gas detection units shall verify a safe atmosphere within the burn room prior to and during all burn operations. The system shall verify a safe atmosphere prior to system operation. These units shall be interlocked with additional safety features.
 - 2. The gas concentration levels must constantly be displayed on the industrial computer and the operator mobile Touch Panel device screen.
 - 3. The systems shall be preset to a 10% Lower Explosive Level (LEL) warning level and 25% LEL alarm and shut down. A purge cycle shall then activate automatically. The gas monitoring unit features are interlocked to gas delivery and exhaust fan systems. An audible and visual alarm is activated during all elevated LEL conditions.
- J. Each burn prop room shall include temperature monitoring. Constant temperature monitoring shall exist whenever power is supplied to the system. Temperature sensors shall be located 60-inches above the finish floor level and initiate warning and automatic compartment ventilation at predetermined levels within the PLC program.
 - 1. Training room temperature activation shall occur when the room temperature reaches 450°F 60-inches above the floor level. The system shall activate the ventilation system and display on the PC and MTP a color indicator that represents to the operator that an over temperature shut down is approaching.
 - 2. Training room temperature shutdown shall occur when the room temperature reaches 500°F 60-inches above the floor level. The systems shall activate an emergency shut- down. All gas delivery system functions and smoke machine operation must cease. A full cycle purge shall then activate automatically through interlocks in the safety system and provide compartment ventilation until the temperature is reduced below the warning point.
- K. The system shall include an exhaust ventilation system. The exhaust system shall be designed to remove heat and by product of combustion from the training environment. The system design shall provide for a compartment air exchange every 60 seconds. The system shall be programmed upon start up of the equipment, the facility shall begin to exchange air and establish a safe training environment. Upon a system safety fault (over temperature, high gas level, system malfunction status) or manual activation of an emergency stop, automatic activation of the exhaust system shall initiate. The purge cycle shall continue until predetermined safety levels have been reached and reset. Safety reset parameters shall insure that a complete air exchange is provided prior to reactivation of the training equipment. This system shall include fan controls.

- L. Independent constant monitoring of flame propagation at each pilot burner shall be supplied. The pilot burner shall be designed to be inextinguishable. In the event that there is a failure of adequate pilot flame production, the fuel delivery system and all inline safety valves, shall close. Display status messaging shall activate on the industrial computer and the mobile Touch Panel device. The fuel delivery system shall be installed within a ULI approved cabinet. The fuel delivery system shall be equipped with fail-safe, safety shutoff valves that are UL listed and FM approved for gas use. A proof of closure switch and position status shall be included on all prop valves. The gas valve train shall include a secondary safety valve for all operational valves per NFPA 86. All gas pipe installation shall be compliant with NFPA 54 and 58. The fuel delivery system shall utilize stainless steel piping.
- M. All electronic components shall be UL approved for the application in which they are utilized. Control panels shall be designed, manufactured and certified to UL 508A compliancy. The NEC (NFPA 70) shall be utilized for all electrical installations.
- N. All live fire props shall be controlled via Wireless Remote Pendant Controller. The controller at minimum, must include the following functions and visual display features:
 - Dead Man Activation
 - E-stop
 - Burner enable
 - Pilot and burner flame activation
 - Flame Intensity Control
 - Smoke Generation
 - Flame Pause and Control
 - System Reset
 -
- O. The system shall include multiple levels of operator password protection. Each level shall provide varied levels of operator access. The system administrator level shall allow access by the fire agency to create and assign training officers to the varied levels of system operation.
- P. The system shall include data tracking and system monitoring of all system functions. Functions stored shall include operator commands as well as PLC functions and safety device inputs. Recording of data must include password logging, event messaging, system messaging, alarm messaging, operator display notes, run timers and counters and fault counters. All operation events shall be stored for retrieval. The information shall be stored in the hard drive of the operating system in addition to a compact flash card that can be removed for data retrieval. The information shall be viewable from the main operator control screen at any time by selecting the appropriate icon on the Windows® based operational screen.

Information shall be tracked by time, date, event, action and operator. Each log shall be designated by a number for file retrieval. The system shall integrate the data tracking within the industrial operating system and not require the use of additional external equipment for data removal, viewing or storage.
- Q. The operating system must have remote access capabilities. The FTES shall include the ability to conduct a remote diagnostic program for internet servicing and system upgrades as they are available.

- R. Walls and ceilings within burn rooms and areas shall be protected with high temperature lining systems specified elsewhere in these specifications. Thermal lining is rated to withstand temperatures in excess of 2000°F and thermal shock from the continuous heating and cooling typically found in live fire training exercises.
- S. Training fires and effect fires shall be instructor controlled. The control system shall, however automatically monitor all trainer safety systems, and shall stop all training fires and begin building ventilation as appropriate for the specific safety system alarm or malfunction.

2.02 SYSTEM SPECIFICATIONS

- A. Electrical Supply: As shown on Drawings.
- B. All components in this system shall perform to the following minimum standards:
 - 1. Compartment Equipment:
 - a. Temperature: 32 deg F to max. (Operating); -20 to 125 deg F (Storage)
 - b. Humidity: 0 to 100 percent
 - 2. Mechanical: All training compartment equipment shall withstand direct hose pressure of 100 PSI at 100 GPM from a distance of three feet.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

- A. The fire training equipment supplier (FTES) shall manufacture, provide, install, integrate and test the live fire training system defined in this specification.
- B. Prior to shipping the system and equipment to the site, an inspection team from the fire training equipment supplier shall perform a final site inspection to determine the readiness of the work to accept the system. The fire training system supplier shall be responsible for all costs associated with shipping and storage of their equipment.
- C. The fire training equipment supplier (FTES) shall provide and extend natural gas supply from the existing gas shut-off valve within the prop equipment room to the point of connection of the new fire training equipment.
- D. The fire training equipment supplier (FTES) shall provide and extend electrical service from existing prop equipment junction box within the prop equipment room to the point of connection of the new fire training equipment. Existing electrical conduits between electrical panel and prop system controls may be used. All other power and conduit required for proper control and operation shall be provided by the FTES.
- E. The fire training equipment supplier (FTES) shall employ a licensed mechanical engineer to calculate and verify required exterior ventilation louvers based on room size and use. Existing louvers within noted burn rooms may be reused or replaced as required to meet the calculated requirements. FTES shall provide and install the additional or replacement louvers.

- F. The fire training system supplier shall provide a minimum of two (2) paper copies of an Operator and Maintenance Manual to the Owner, and one (1) electronic version on standard USB flashdrive. The manual shall fully describe the delivered system and shall include sections on system operation, troubleshooting and maintenance, associated diagrams and drawings, and replaceable spare parts listing.
- G. The fire training system supplier shall conduct an operational readiness test with facility personnel in observance. The goal of this test shall be to show reliable operation of the system. Once this test has been completed the system shall be signed off by the Owner and be officially designated ready for training (RFT).
- H. The base contract shall provide a minimum of five (5) years for semi-annual maintenance, for a total of ten (10) site visits. This maintenance does not serve as a substitute for the operational and preventive maintenance that is to be performed by the Owner. This maintenance shall be performed quarterly starting six (6) months after the date of Owner acceptance.

3.02 START-UP AND TRAINING

- A. Conduct an operational readiness test with facility personnel in observance. The goal of this test shall be to show reliable operation of the system. Once this test has been completed the system shall be signed off by the Owner and be officially designated ready for training (RFT).
- B. Provide a minimum of two (2) 1-day operator's training courses for up to eight (8) OCFA Fire facility staff members. Each 1-Day course shall include at a minimum the following:
 - 1. Overview of each prop system and its functions
 - 2. Review of manuals and Equipment literature
 - 3. Complete Hands-On Live Fire Prop Operation
 - 4. Daily, weekly and monthly maintenance.
 - 5. Basic troubleshooting
 - 6. Equipment replacement such as burners, sensors and devices.
 - 7. What to do when system fails

3.03 FINAL CLEANING AND CLOSE-OUT

- A. Provide five (5) copies of an Operator and Maintenance Manual to the Owner. The manual shall fully describe the delivered system and shall include sections on system operation, troubleshooting and maintenance, associated diagrams and drawings, and replaceable spare parts listing.
- B. Contractor shall clean all areas of work free of debris and materials.
- C. Fire training equipment shall be cleaned using approved cleaning materials prior to training.

3.04 REFERENCES**Customer References**

The Fire Training Equipment Supplier (FTES) must utilize this form to supply customer references as described in paragraph 1.06.A.3. This document should be copied for each reference offered. A minimum of five (5) units must be supplied.

Department name:	
Address:	
Contact name:	Contact phone #:

Model name/number:	Delivery date:
Type of equipment:	Number of props:

List all props installed including options:

Prop #1	Prop #2	Prop #3	Prop #4	Prop #5
Prop #6	Prop #7	Prop #8	Prop #9	Prop #10

NRTL certifying agency:	Yes	No	Contact Name:	Contact Number:
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END OF SECTION

SECTION 11 95 11**HIGH TEMPERATURE LINING SYSTEMS****PART 1 - GENERAL****1.01 SUMMARY**

- A. This section is to define the work associated with the removal and installation of the high temperature lining system required for the protection of the existing concrete masonry walls.
 - 1. Removal all existing High Temperature Lining systems within the Strip Mall building per contract drawings. Material may be reused if undamaged in accordance with this section.
 - 2. Removal of High Temperature Lining Systems within the Training Tower building per contract drawings. Material by be reused if undamaged in accordance with this section.
- B. The installation of the specified high temperature lining systems shall include all associated work required for proper installation including, but not limited to attachments to walls and ceilings, metal support framing infrastructure and coordination with disciplines of adjacent work shown in the Multi--Story Training Structure (Building 2).
- C. Work in This Section includes the following:
 - 1. Removal of existing High Temperature Lining system on walls and ceilings.
 - 2. Reinstallation of undamaged panels where applicable.
 - 3. Installation of High Temperature Lining Panels on Walls
 - 4. Installation of High Temperature Lining Panels of Ceilings
 - 5. Installation of High Temperature Lining at wall openings. Refer to details.
 - 6. Installation of Cold Formed metal framing and furring for the support of High Temperature lining panels.
 - 7. Full-Height protective wall angles for all outside corners of lining material.
- D. Work to include full coordination of installation with interior Live Fire prop installation specified elsewhere for the Multi-Story Fire Training Structure. Coordination to include installation schedule, equipment and system infrastructure openings and attachments.
- E. Concrete refractory tiles, or metal lining systems will not be accepted.

1.02 RELATED SECTIONS

- A. Section 03 30 00 Cast in Place Concrete
- B. Section 09 97 13 High Temperature Paint
- C. Section 11 95 10 Interior Structural Fire Trainers.

1.03 WARRANTY

- A. High temperature lining systems shall have a full manufacturer warranty against defects or failures for a period of not less than ten (10) years from project acceptance.

1.04 REFERENCE

- A. NFPA 1403: Standard on Live Fire Training Evolutions
- B. NFPA 1500: Standard on Fire Department Occupational Health & Safety

1.05 SUBMITTALS

- A. General: Submittals shall be prepared by the contractor as described herein and be submitted to Orange County Fire Authority (OCFA) for review and approval by the architect and/or engineer of record prior to the beginning of work.
- B. Product Data: Material product and performance data and installation accessories.
- C. Shop Drawings: Provide complete drawings showing;
 - 1. Floor plans of each live fire prop room/area within training tower structure.
 - 2. Wall elevations receiving high temperature lining protection.
 - 3. Ceiling plans of each live fire prop/area within training tower structure.
 - 4. Installation details of framing, corners protection, openings etc.
- D. Samples: Provide samples of material, framing accessories and wall angle protection: Sample size to be a minimum of four inches by four inches square (4" x 4").
- E. Product test and certifications information showing temperature protection.
- F. Warranty and Maintenance manuals.

1.06 QUALITY ASSURANCE

- A. Employ only installers familiar with the application and installation of high temperature lining materials for fire training buildings.
- B. Installers must have a minimum of five (5) years experience in the provision and installation of high temperature lining systems.
- C. Provide full product data and certification certifying product for application and performance specified herein.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.
- B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.08 PRODUCT MAINTENANCE

- A. Provide written instructions for the proper required maintenance and replacement of high temperature panels.

1.09 ADDITIONAL PRODUCT

- A. Upon completion of installation, contractor shall provide to the owner in manufacturer packaging a minimum of the following additional materials
1. Five (5) full size high-temperature lining panels (24" x 48" or 24" x 24")
 2. Five (5) high temperature battens. (3-3/4" x 48")

PART 2 - PRODUCTS**2.01 MANUFACTURERS**

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. High Temperature Lining Panels
 - a) WHP Training Towers: 9121 Bond, Overland Park, Kansas 66214, Telephone (800) 351-2525, FAX (913) 385-7078 Website: www.trainingtowers.com
 - b) FireBlast Global: 545 Monica Circle, Corona, California 92880, Telephone (951) 221-8976: Website: www.fireblast.com
 - c) Approved Equivalent: Equivalent provider to submit qualifications, product data and certifications a minimum of ten (10) days prior to bid for review and acceptance by the city.
 2. Cold Formed Galvanized Framing and Furring:
 - a) Cemco Systems.
 - b) Dietrich Industries, Inc.
 - c) Western Metal Lath & Steel Framing Systems.
 - d) Approved Equivalent

2.02 HIGH TEMPERATURE PANELS & BATTENS

- A. Proprietary Thermal **Wall & Ceiling** Liner Panels: Comply with the following:
1. Basis of Design: WHP "Super Padgenite™ HD", or Fireblast Thermalblast™
 2. Weight: Maximum system weight including panels, battens and framing shall not exceed 10 lbs/SF.
 3. Core: Minimum one (1) inch thick, consisting of calcium silicate, reinforcing filler and natural organic fiber.
 4. Panel Size: 24" x 24" (Minimum)
 5. PCF Density: 65 PCF.
 6. Compressive Strength 5,500 psi
 7. Flex Strength: 1,400 psi.
 8. Continuous Service Temperature: 2,000° F.
 9. K-factor: 1.92 at a mean temperature of 800° F.
 10. Waterproofing: 2-part process on all sides
 11. Location: Refer to Schedule paragraph 3.02 of this section, and drawings.
- B. Proprietary Thermal **Batten** Panels: Comply with the following:
1. Basis of Design Product: WHP "Padgenite I" or Fireblast Thermalblast™
 2. Core: Minimum one (1) inch thick, consisting of calcium silicate, reinforcing filler and natural organic fiber.
 3. Batten Size: 3-3/4" x 48"
 4. PCF Density: 46 PCF.
 5. Flex Strength: 800 psi.
 6. Continuous Service Temperature: 1,200° F.
 7. K-factor: 0.81 at a mean temperature of 800° F.
 8. Waterproofing: 2-part process on all sides

2.03 PROTECTIVE TRIM ACCESSORIES

- A. Interior Galvanized Metal Trim: ASTM C 1047.
 - 1. Material: Aluminum, Galvanized or aluminum-coated steel.
 - 2. Shapes as follows:
 - a. 2" x 2" Full-Height Corner Protection: Use at all outside corners within burn room areas and adjacent spaces.
 - b. 18-gauge trim channels at all doors and windows in burn areas.

2.04 AUXILIARY MATERIALS

- A. General: Provide all auxiliary materials for installation and attachment of thermal panels in accordance with the published guidelines for **"Installation of Padgenite® Panels and Accessories"** provided by WHP Training Towers as the basis for installation.
- B. Galvanized Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 - 1. Use #8 x 3/4" HWH T-2 Tek screws complying with ASTM C 954 for fastening panels to steel members.
 - 2. Use 2-1/4" "Tapcon" concrete anchors for attachment CMU walls
 - 3. Use 5/8" S-12 screws for attaching angles.

2.05 METAL FRAMING AND FURRING

- A. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 18-gauge, a minimum 1/2-inch- wide flange, with manufacturer's standard corrosion-resistant zinc coating or hot-dipped galvanized.
- B. Furring Channels: Commercial-steel sheet with ASTM A 653/A 653M, G40, manufacturer's standard corrosion-resistant zinc coating or hot-dipped galvanized.
- C. 18-gauge Hat-Shaped, Rigid Furring Channels: ASTM C 645, 7/8 inch deep. Minimum Base Metal Thickness: 0.0179 inch.
- D. Resilient Furring Channels: 3/4-inch deep members designed to reduce sound transmission. Configuration: Asymmetrical, with face attached to single flange by a slotted leg
- E. Fasteners: Battens attached with #6 x 1-7/8" Tek fasteners. Panels attached with #8 x 3" Tek fasteners with 1/4 x 1-1/4" flat washers.

2.06 EXISTING HIGH TEMPERATURE LINING SYSTEM REUSE

- A. For purposes of bidding, contractor may assume that twenty-five percent (25%) of the existing high temperature lining panels may be reused. Panels shall be removed and reinstalled with the backside facing the burn room to appear as like new condition.
- B. For purposes of bidding, contractor may assume that fifty percent (50%) of the existing high temperature lining framing may be reused in all applicable areas.
- C. Contractor shall be responsible to supplement existing systems portions to be reused in order to provide a complete and safe interior environment for the use of live fire props. Supplements may include, but not be limited to: additional new high temperature panels, new additional wall framing and connectors, and new additional ceiling framing.

PART 3 - EXECUTION**3.01 GENERAL REQUIREMENTS**

- A. Examine areas and conditions with installer present for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected
- B. Prior to shipping the system and equipment to the site, an inspection team from the high temperature lining supplier shall perform a final site inspection to determine the readiness of the work to accept the system. The high temperature lining system supplier shall be responsible for all costs associated with shipping and storage of their equipment and materials.
- C. The high temperature lining system supplier shall provide five (5) copies of the manufacturer's Maintenance Manual to the OCFA. The manual shall fully describe the delivered system and shall include sections on troubleshooting, maintenance, associated diagrams and drawings.
- D. All on-site work shall be performed by qualified personnel licensed in the State of California for the applicable work discipline. Qualified personnel shall also be licensed and insured per both Orange County Fire Authority and the City of Irvine's requirements and provide proof thereof. The contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in regards to the project scope of work.

3.02 EXAMINATION

- A. Bidding contractor shall fully observe all locations where high temperature lining systems are to be installed as well as removed. Drawings depict information based on existing As-Built plans which may or may not reflect actual field conditions which have been modified. Contractor shall notify architect and owner in writing of any discrepancies affecting installation of work.
- B. High Temperature lining contractor to conduct meeting at site to examine all areas and substrates to receive the thermal liner, with Installer and fire training prop supplier present, to discuss and coordinate scope of work between the two entities. verify completeness of work and coordination of installation process requirements with all disciplines.
- C. Coordinate requirements of adjacent trades and disciplines.
- D. Notify architect of any discrepancies that would affect the proper installation of the thermal lining material. Proceed with installation only after unsatisfactory conditions have been corrected.
- E. Proceed with installation of thermal lining materials only upon verification that all discipline trade work adjacent to area has been completed and will not require removal and re-installation of panels.

3.03 SCHEDULE OF THERMAL LINING LOCATIONS:

- A. **One-Story Strip Mall Training Structure:** Within the strip mall building there exists one (1) existing burn room with wall and ceiling high temperature lining systems to be removed. These products and materials may be reused in noted locations of the multi-story fire training structure listed in 3.02.B.

- B. Multi-Story Training Tower Structure:** Within the multi-story tower building there exists three (3) existing burn rooms with wall and ceiling high temperature lining systems to be removed. These products and materials may be reused in noted herein.

Room	Walls	Ceilings	Notes
1st Floor Kitchen Fire Prop	North Wall East Wall South Wall	Partial Ceiling Area (Refer to Reflected Ceiling Plan)	
2nd Floor Bedroom Fire Prop	East Wall South Wall Partial West Wall	Partial Ceiling Area (Refer to Reflected Ceiling Plan)	*Refer to interior details for protection at stairwell
2nd Floor Flashover Prop	Partial West Wall	Partial Ceiling Area (Refer to Reflected Ceiling Plan)	*Refer to interior details for protection at stairwell
2nd Floor Exterior BBQ Prop	East Wall South Wall Exterior Face of Wall per plans	Entire Ceiling Area of Balcony	Refer to plans for locations and extent.
3rd Floor Office Fire Prop	East Wall South Wall West Wall New north wall (+72")	Partial Sloping Ceiling Area* (Refer to Reflected Ceiling Plan)	

3.04 INSTALLATION OF HIGH TEMPERATURE WALL LINING

- A. Install wall grid system using metal furring and framing system in strict accordance with the guidelines provided by the product manufacturer.
- B. Install high temperature wall battens to framing in accordance with guidelines provided by the product manufacturer. Direct attachment of panels and battens to the structure is not permitted.
- C. Install trims and accessories including protective wall edges and trims.

3.05 INSTALLATION OF HIGH TEMPERATURE CEILING LINING

- A. Install ceiling grid system using metal furring and framing system in strict accordance with the guidelines provided by the product manufacturer.
- B. Install high temperature ceiling battens to framing in accordance with guidelines provided by the product manufacturer. Direct attachment of panels and battens to the concrete structure is not permitted.
- C. Coordinate installation with live fire prop vendor and trade disciplines for all locations. Coordination to include, but not limited to:
 - 1. New construction applications
 - 2. Ceiling fire applications at stairwell
 - 3. Existing ceilings and openings.
 - 4. Existing wall and openings.

3.06 INSTALLATION OF HIGH TEMPERATURE WALL & DOOR PROTECTION

- A. For Fixed windows at 2nd floor bedroom fire: Span opening with typical framing materials and install full lining system over window unit creating uniform wall and opening protection.
- B. For Doors affected by live fire heat; Affix single layer of Padgenite material to interior face of door unit. Notch at hardware and at hinge side to allow proper operation. Interior lining system to wrap and protect door frame. Refer to project details.

3.07 CLEANING AND PROTECTION

- A. Upon completion of work, properly dispose of all trash, debris and materials.
- B. Clean all high temperature panels free from markings, dirt and smudges. Use only approved manufacturer cleaning agents on panel surfaces.
- C. Protect all panels in place for the duration of construction. Remove prior to testing and start-up of fire training simulators.

END OF SECTION

SECTION 13 00 20**EXTERIOR LIVE FIRE GAS METER PROP****PART 1 - GENERAL****1.01 SUMMARY OF WORK**

- A. General Description: The live fire gas meter prop is to simulate a flange fire atop the gas meter mock-up. The control for the ignition shall be via wireless control independent of other building live fire props.
- B. Work to include the following:
 - 1. Manufacture and install a commercial live fire gas meter training prop at the existing fire training structure where shown on drawings. Prop shall simulate a flange fire erupting from a commercial bank of meters comprised of at least three (3) meter units.
 - 2. Provide and install supporting equipment and infrastructure for proper operation including but not limited to:
 - a. Natural gas shut-off and piping from point of connection inside existing prop equipment room to prop control.
 - b. Wireless Control device
 - c. Conduit and wire for controls and power: Extend service from within the existing prop control room to shown prop location. Control Room to point of connection at exterior building wall to be verified by prop installer.
 - d. Coordination of installation and infrastructure requirements with discipline trades, including high temperature lining systems
 - e. Wall penetrations, equipment securing, attachments and accessories as required for complete installation.
- C. Work to include full coordination with all adjacent trades. Coordination to include:
 - 1. Installation of exterior prop mock-up.
 - 2. Utility infrastructure provision from point of connection to prop
 - 3. Testing, Start-Up and training
 - 4. Protection of work in place.
- D. Related Sections:
 - 1. Division 16 00 00 General Electrical

1.02 RELATED DOCUMENTS

- A. Approved contract drawings.

1.03 SUBMITTALS

- A. General: Submittals shall be prepared by the contractor as described herein and be submitted to Orange County Fire Authority (OCFA) for review and approval by the architect and/or engineer of record prior to the beginning of work.
- B. Complete Operation and Maintenance Manuals.
- C. Product literature
- D. Installation details showing required building modifications and coordination with other trades.

1.04 WARRANTY

- A. Warrant the system to be free from defects in material and workmanship for a period of five (5) years after the final system acceptance date. If for any reason, other than misuse and abuse, the system should fail, the training simulator supplier shall provide all labor, materials and replacement parts to the Owner for the duration of the warranty period. The fire training simulator provider shall also provide a customer service telephone number that can be used by the Owner during normal business hours to report system problems.

PART 2 - PRODUCTS**2.01 MANUFACTURERS**

- A. Acceptable manufacturers for the provision and installation of the live fire interior fire trainers are listed below. The Basis-of-Design is the following product model and manufacturer:
 1. **FireBlast 451, Inc.** 4131 Tigris Way, Riverside, CA 92503
Telephone (951) 277-8319
Website: <http://www.fireblast.com>
 2. **KFT, Inc.**, 17 Philips Parkway, Montvale, NJ 07645
Telephone (201) 300-8100
Website: www.kiddeft.com
 3. **Lion® Inc.** 20 Corporate Circle, Albany NY 12203.
Telephone (518) 689-2023.
Website www.bullex.com .
 4. Approved Equivalent.
NOTE: Equivalent providers to provide qualifications, certifications and references described within this specification section a minimum of ten (10) days prior to bidding for review and acceptance by the Orange County Fire Authority.

2.02 EQUIPMENT

- A. The burn props shall be constructed of corrosion resistant steel. The prop must be factory tested prior to delivery. The burner must include stainless steel pilot and burner assemblies.
- B. The fuel delivery system shall be installed within a UL approved cabinet. The fuel delivery system shall be equipped with fail-safe, safety shutoff valves that are UL listed and FM approved for gas use. A proof of closure switch and position status shall be included on all prop valves. The gas valve train shall include a secondary safety valve for all operational valves per NFPA 86. All gas pipe installation shall be compliant with NFPA 54 and 58. The fuel delivery system shall utilize stainless steel piping.
- C. All electronic components shall be UL approved for the application in which they are utilized. Control panels shall be designed, manufactured and certified to UL 508A compliancy. The NEC (NFPA 70) shall be utilized for all electrical installations.
- D. Training fires and effect fires shall be instructor controlled. The control system shall, however automatically monitor all trainer safety systems, and shall stop all training fires upon activation of emergency stop.

PART 3 - EXECUTION**3.01 GENERAL REQUIREMENTS**

- A. Examine areas and conditions with installer present for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected
- B. The fire training system supplier shall manufacture, provide, install, integrate and test the live fire training system defined in this specification.
- C. Prior to shipping the system and equipment to the site, an inspection team from the fire training equipment supplier shall perform a final site inspection to determine the readiness of the work to accept the system. The fire training system supplier shall be responsible for all costs associated with shipping and storage of their equipment.
- D. The fire training system supplier shall provide and extend natural gas supply from the existing shut off connection point within prop equipment room to the terminus point as required for operation of the fire training equipment.
- E. The fire training system supplier shall provide and extend electrical service from the existing junction box power supply within the prop equipment room to the terminus point as required for operation of the fire training equipment. All other power and conduit shall be provided by fire training system installer.
- F. The fire training system supplier shall provide five (5) copies of an Operator and Maintenance Manual to the Owner. The manual shall fully describe the delivered system and shall include sections on system operation, troubleshooting and maintenance, associated diagrams and drawings, and replaceable spare parts listing.
- G. The fire training system supplier shall conduct an operational readiness test with facility personnel in observance. The goal of this test shall be to show reliable operation of the system. Once this test has been completed the system shall be signed off by the Owner and be officially designated ready for training (RFT).
- H. All on-site work shall be performed by qualified personnel licensed in the State of California for the applicable work discipline. Qualified personnel shall also be licensed and insured per both Orange County Fire Authority and the City of Irvine's requirements and provide proof thereof. The contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in regards to the project scope of work.

3.02 START-UP AND TESTING

- A. Conduct an operational readiness test with facility personnel in observance. The goal of this test shall be to show reliable operation of the system. Once this test has been completed the system shall be signed off by the Owner and be officially designated ready for training (RFT).

- B. Provide a minimum of two (2) 1-day operator's training courses for up to eight Orange County Fire Authority staff personnel. Each 1-Day course shall include at a minimum the following:
 - 1. Overview of each prop system and its functions
 - 2. Review of manuals and Equipment literature
 - 3. Complete Hands-On Live Fire Prop Operation
 - 4. Daily, weekly and monthly maintenance.
 - 5. Basic troubleshooting
 - 6. Equipment replacement such as burners, sensors and devices.
 - 7. What to do when system fails

3.03 TRAINING

- A. Simulator contractor shall provide a minimum of two (2) training sessions with representatives of the Orange County Fire Authority for complete system operation, maintenance and basic troubleshooting. Simulator contractor shall provide training of system operation and maintenance.

END OF SECTION

SECTION 13 00 25**EXTERIOR GAS METER PROP LEAK SIMULATOR****PART 1 - GENERAL****1.01 SUMMARY OF WORK**

- A. General Description: The gas meter leak trainer shall provide training in the safe approach, of an exterior leaking commercial gas meter.
- B. Work to include the following:
 - 1. Manufacture and install a commercial gas meter training prop at existing Strip Mall where shown on drawings. Prop shall simulate a typical commercial bank of meters comprised of at least four (4) meter units.
 - 2. Provide and install supporting equipment and infrastructure for proper operation including but not limited to:
 - a. Air compressor for pressurizing system
 - b. Wireless Control device
 - c. Conduit and wire for air and power: Extend service from inside existing Prop Equipment Room to point of connection at exterior building prop installer.
 - d. Wall penetrations, equipment securing, attachments and accessories as required for complete installation.
 - e. Coordination of installation and infrastructure requirements.
- C. Work to include full coordination with all adjacent trades. Coordination to include:
 - 1. Exterior wall construction
 - 2. Utility infrastructure provision and location
 - 3. Testing, Start-Up and Training
 - 4. Protection of new work in place

1.02 RELATED DOCUMENTS

- A. Approved contract drawings for the Strip Mall Building

1.03 SUMMARY

- A. General Description: The gas meter leak trainer shall provide training in the safe approach, of an exterior leaking commercial gas meter.
- B. Work to include the following:
 - 1. Manufacture and install a commercial gas meter training prop at existing Strip Mall where shown on drawings. Prop shall simulate a typical commercial bank of meters comprised of at least four (4) meter units.
 - 2. Provide and install supporting equipment and infrastructure for proper operation including but not limited to:
 - a. Air compressor for pressurizing system
 - b. Wireless Control device
 - c. Conduit and wire for air and power: Extend service at exterior of building from Control Room to point of connection at exterior building wall to be verified by prop installer.
 - d. Coordination of installation and infrastructure requirements with discipline trades.

- C. Work to include full coordination with all adjacent trades. Coordination to include:
 - 1. Exterior wall construction
 - 2. Utility infrastructure provision and location
 - 3. Protection of work in place.
- D. Related Sections:
 - 1. Division 16 00 00 General Electrical

1.04 SUBMITTALS

- A. General: Submittals shall be prepared by the contractor as described herein and be submitted to Orange County Fire Authority (OCFA) for review and approval by the architect and/or engineer of record prior to the beginning of work.
- B. Complete Operation and Maintenance Manuals.
- C. Product literature
- D. Installation details showing required building modifications and coordination with other trades.

1.05 WARRANTY

- A. Warrant the system to be free from defects in material and workmanship for a period of five (5) years after the final system acceptance date. If for any reason, other than misuse and abuse, the system should fail, the training simulator supplier shall provide all labor, materials and replacement parts to the Owner for the duration of the warranty period. The fire training simulator provider shall also provide a customer service telephone number that can be used by the Owner during normal business hours to report system problems.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable manufacturers for the provision and installation of the live fire interior fire trainers are listed below. The Basis-of-Design is the following product model and manufacturer:
 - 1. **FireBlast 451, Inc.** 4131 Tigris Way, Riverside, CA 92503
Telephone (951) 277-8319
Website: <http://www.fireblast.com>
 - 2. **KFT, Inc.**, 17 Philips Parkway, Montvale, NJ 07645
Telephone (201) 300-8100
Website: www.kiddeft.com
 - 3. **BulEx® Inc.** 20 Corporate Circle, Albany NY 12203.
Telephone (518) 689-2023.
Website www.bullex.com .
 - 4. Approved Equivalent.
NOTE: Equivalent providers to provide qualifications, certifications and references described within this specification section a minimum of ten (10) days prior to bidding for review and acceptance by the Orange County Fire Authority.

2.02 EQUIPMENT

- A. Air Compressor: Small 110/208v, or compressed air tanks, with remote activation capability.
- B. Gas Meter mockup complete with simulated pipe fittings.

2.03 PERFORMANCE REQUIREMENTS

- A. The mockup shall consist of a gas piping assembly with an integrated commercial gas meter. The structure shall be designed to position the gas meter prop approximately 5 feet above the surface of the training area. The gas piping, near the body of the gas meter, shall be charged with air to create the simulated gas leak effect. The piping near the gas meter shall continue to leak until the operator commands the gas leak to cease in response to correct trainee techniques.

PART 3 - EXECUTION**3.01 GENERAL REQUIREMENTS**

- A. Examine areas and conditions with installer present for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected
- B. The fire training system supplier shall manufacture, provide, install, integrate and test the live fire training system defined in this specification.
- C. Prior to shipping the system and equipment to the site, an inspection team from the fire training equipment supplier shall perform a final site inspection to determine the readiness of the work to accept the system. The fire training system supplier shall be responsible for all costs associated with shipping and storage of their equipment.
- D. The fire training system supplier shall provide and extend electrical service from noted points of connection to terminus points as required for operation of the fire training equipment. Conduit between electrical panel and system PLC unit shall be provided by electrical contractor. All other power and conduit shall be provided by fire training system installer, unless otherwise noted on Drawings.
- E. The fire training system supplier shall provide five (5) copies of an Operator and Maintenance Manual to the Owner. The manual shall fully describe the delivered system and shall include sections on system operation, troubleshooting and maintenance, associated diagrams and drawings, and replaceable spare parts listing.
- F. The fire training system supplier shall conduct an operational readiness test with facility personnel in observance. The goal of this test shall be to show reliable operation of the system. Once this test has been completed the system shall be signed off by the Owner and be officially designated ready for training (RFT).
- G. All on-site work shall be performed by qualified personnel licensed in the State of California for the applicable work discipline. Qualified personnel shall also be licensed and insured per both Orange County Fire Authority and the City of Irvine's requirements and provide proof thereof. The contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in regards to the project scope of work.

3.02 INSTALLATION

- A. Examine areas and conditions with installer present for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected
- B. Simulator shall be installed in accordance with manufacturer's specifications and guidelines.

3.03 START-UP AND TESTING

- A. Upon completion of installation, simulator contractor shall test system and operation.

3.04 TRAINING

- A. Simulator contractor shall provide a minimum of two (2) training sessions with representatives of the Orange County Fire Authority for complete system operation, maintenance and basic troubleshooting. Simulator contractor shall provide training of system operation and maintenance.

END OF SECTION

SECTION 13 00 40**ELECTRICAL PANEL FIRE SIMULATOR****PART 1 - GENERAL****1.01 SUMMARY OF WORK**

- A. General Description: The electrical panel fire simulator shall consist of two (2) primary enclosures located in close proximity as indicated on Construction Documents and specified in this section.
- B. Work to include, but not limited to the following:
 - 1. Manufacture and install a simulated commercial electrical service fire training prop at Building 43, "Apartment".
 - 2. Provide and install supporting equipment and infrastructure for proper operation including but not limited to:
 - a. Primary control enclosure for equipment and smoke generation
 - b. Secondary control enclosure for service distribution prop simulation
 - c. Wireless Control device
 - Conduit and wire for power: Extend service at exterior of building from Prop Equipment Room #110 to point of connection at exterior building wall to be determined by owner..
 - d. Wall penetrations, equipment securing, attachments and accessories as required for complete installation.
 - e. Coordination of installation and infrastructure requirements with discipline trades.
- C. Related Sections:
 - 1. Division 16 00 00 General Electrical

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
 - 1. Refer to drawings for exterior location at Strip Mall Building
 - 2. Refer to drawings for exterior location at Training Tower Building

1.03 SUBMITTALS

- A. General: Submittals shall be prepared by the contractor as described herein and be submitted to Orange County Fire Authority (OCFA) for review and approval by the architect and/or engineer of record prior to the beginning of work.
- B. Complete Operation and Maintenance Manuals.
- C. Product literature
- D. Installation details showing required building modifications and coordination with other trades.

1.04 WARRANTY

- A. Warrant the system to be free from defects in material and workmanship for a period of five (5) years after the final system acceptance date. If for any reason, other than misuse and abuse, a part supplied should fail, the training simulator supplier shall supply a replacement part to the Owner. The contractor will provide a toll-free customer service telephone number that can be used by the Owner during normal business hours to report system problems.

PART 2 - PRODUCTS**2.01 MANUFACTURERS**

- A. Acceptable manufacturers for the provision and installation of the Electrical Panel Fire Simulator are listed below. The Basis-of-Design is the following product model and manufacturer:
1. Structural Fire Trainer Model "Raven" as manufacturer by:
FireBlast451, Inc., 545 Monica circle, Corona CA 92880
Telephone (800) 716-1977
Website: www.fireblast.com
 2. Structural Fire Trainer Model "T-1000" as manufacturer by:
KFT, Inc., 17 Philips Parkway, Montvale, NJ 07645
Telephone (201) 300-8100
Website: www.kiddeft.com
 3. **Lion® Inc.** 20 Corporate Circle, Albany NY 12203.
Telephone (518) 689-2023.
Website www.bullex.com .
 4. Approved Equivalent.
NOTE: Equivalent providers to provide qualifications, certifications and references described within this specification section a minimum of ten (10) days prior to bidding for review and acceptance by the Orange County Fire Authority.

2.02 EQUIPMENT

- A. Enclosure 1 shall represent a mockup of a commercial electrical load center that is approximately 32-inches wide by 74-inches high by 9-inches deep. The commercial electrical load center shall contain the following built-in components:
1. Speakers: Produce intermittent electrical arcing and burning sounds associated with a class C fire effect.
 2. Multiple Strobe Lamps: Simulate the visual effects of electrical arcing and fire.
 3. Agent Sensor: Detect the application of water.
 4. Ventilation Louvers: Serve as smoke outlet ports.
- B. Enclosure 2 shall represent a safety disconnect switch panel that is approximately 38-inches wide by 48-inches high by 12-inches deep. This panel shall be National Electrical Manufacturer's Association (NEMA) 4 rated and shall contain the following components
1. Power Indicator: Indicates that power (120 VAC, 20 AMPS) has been applied to the simulator.
 2. Two-Position, Safety Disconnect Switch – Works in conjunction with a position sensor. The disconnect switch shall be used as an active training device to secure simulated "POWER" to the commercial load center.
 3. Smoke Generator Assembly: Capable of a minimal smoke output of 500 CFM.
 4. Sound Generator Control System: Generate various sound effects.
 5. Wireless Control System: Used to operate the training simulator.

2.03 PERFORMANCE REQUIREMENTS

- A. The simulator shall start and stop using a small wireless transmitter.
 - 1. When started the simulator shall produce, in response to trainee action, the following visual and audio effects using multi-colored strobe lamps and sound generator:
 - 2. Simulated electrical arcing when the disconnect switch is closed. Effects shall be generated using random, intermittent activation of appropriately colored and paired strobe lamps in synchronization with sound generator.
 - 3. Simulated flame state when the disconnect switch is opened. Effects shall be generated using random, intermittent activation of appropriately colored and paired strobe lamps in synchronization with sound generator.
 - 4. Simulated audible alarm effect when agent is applied with the disconnect switch closed.
- B. Smoke shall be produced and present when the simulator is started and cease when the simulator is turned off by the operator.
- C. Simulator visual and audio effects shall change automatically in response to trainee action.

PART 3 - EXECUTION**3.01 GENERAL REQUIREMENTS**

- A. Examine areas and conditions with installer present for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected
- B. The fire training system supplier shall manufacture, provide, install, integrate and test the live fire training system defined in this specification.
- C. Prior to shipping the system and equipment to the site, an inspection team from the fire training equipment supplier shall perform a final site inspection to determine the readiness of the work to accept the system. The fire training system supplier shall be responsible for all costs associated with shipping and storage of their equipment.
- D. The fire training system supplier shall provide and extend electrical service from noted points of connection to terminus points as required for operation of the fire training equipment. Conduit between electrical panel and system PLC unit shall be provided by electrical contractor. All other power and conduit shall be provided by fire training system installer, unless otherwise noted on Drawings.
- E. The fire training system supplier shall provide five (5) copies of an Operator and Maintenance Manual to the Owner. The manual shall fully describe the delivered system and shall include sections on system operation, troubleshooting and maintenance, associated diagrams and drawings, and replaceable spare parts listing.
- F. The fire training system supplier shall conduct an operational readiness test with facility personnel in observance. The goal of this test shall be to show reliable operation of the system. Once this test has been completed the system shall be signed off by the Owner and be officially designated ready for training (RFT).
- G. All on-site work shall be performed by qualified personnel licensed in the State of California for the applicable work discipline. Qualified personnel shall also be licensed and insured per both Orange County Fire Authority and the City of Irvine's requirements and provide proof thereof.

The contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in regards to the project scope of work.

3.02 INSTALLATION

- A. Examine areas and conditions with installer present for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected
- B. Simulator shall be installed in accordance with manufacturer's specifications and guidelines.

3.03 START-UP AND TESTING

- A. Upon completion of installation, simulator contractor shall test system and operation.

3.04 TRAINING

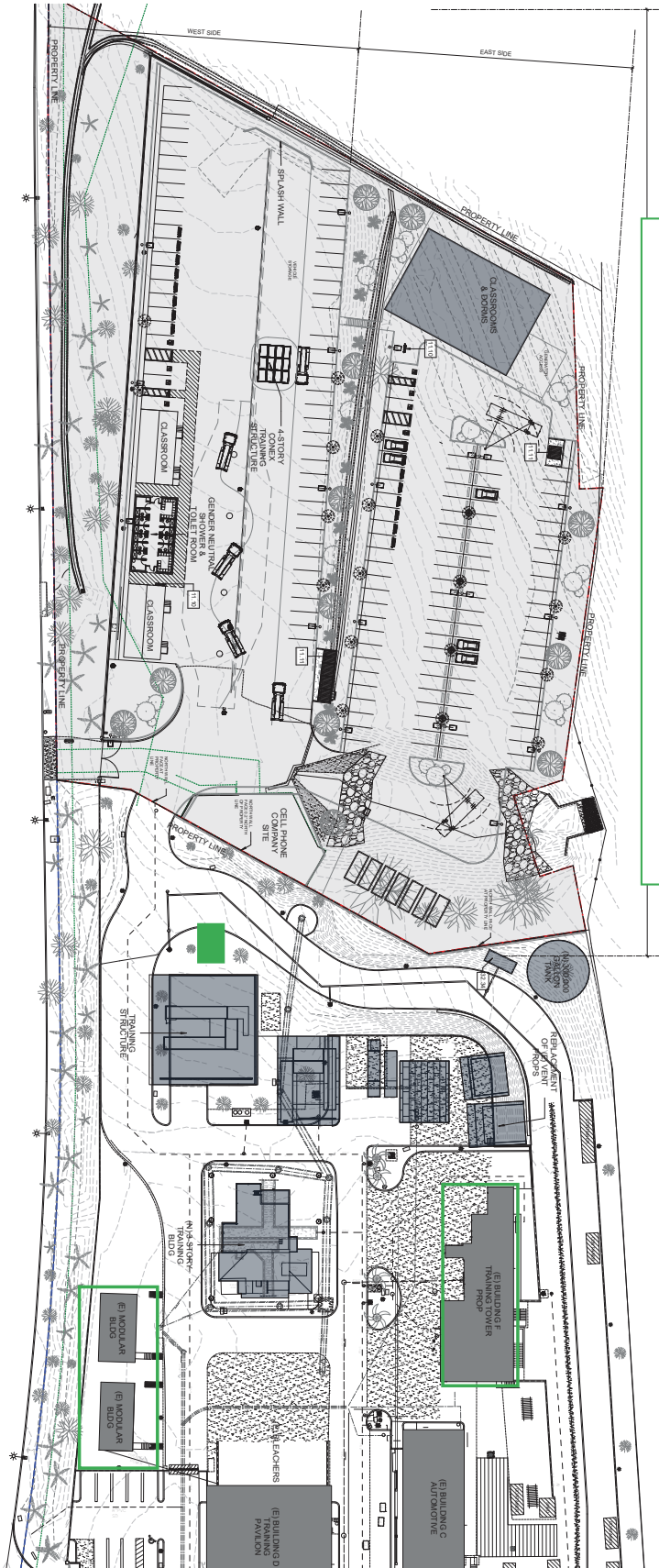
- A. Simulator contractor shall provide a minimum of two (2) training sessions with representatives of the Orange County Fire Authority for complete system operation, maintenance and basic troubleshooting Simulator contractor shall provide training of system operation and maintenance.

END OF SECTION

TRAINING GROUNDS UPGRADES

- New electrical upgrades to power the existing modular buildings.
- New power point of connection for future North 40 site development
- Live Fire Prop Replacement in the existing Training Tower, new higher rated high temperature lining at ceiling and walls, and modifications to room layouts.

JAMBOREE BLVD.



PARKING PROVIDED

BUILDING	TYPE	NO. OF SPACES	REMARKS
CL. A	CL. A	5,000	
CL. B	CL. B	5,000	
CL. C	CL. C	5,000	
CL. D	CL. D	5,000	
CL. E	CL. E	5,000	
CL. F	CL. F	5,000	
CL. G	CL. G	5,000	
CL. H	CL. H	5,000	
CL. I	CL. I	5,000	
CL. J	CL. J	5,000	
CL. K	CL. K	5,000	
CL. L	CL. L	5,000	
CL. M	CL. M	5,000	
CL. N	CL. N	5,000	
CL. O	CL. O	5,000	
CL. P	CL. P	5,000	
CL. Q	CL. Q	5,000	
CL. R	CL. R	5,000	
CL. S	CL. S	5,000	
CL. T	CL. T	5,000	
CL. U	CL. U	5,000	
CL. V	CL. V	5,000	
CL. W	CL. W	5,000	
CL. X	CL. X	5,000	
CL. Y	CL. Y	5,000	
CL. Z	CL. Z	5,000	
CL. AA	CL. AA	5,000	
CL. AB	CL. AB	5,000	
CL. AC	CL. AC	5,000	
CL. AD	CL. AD	5,000	
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CL. AJ	CL. AJ	5,000	
CL. AK	CL. AK	5,000	
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CL. AV	CL. AV	5,000	
CL. AW	CL. AW	5,000	
CL. AX	CL. AX	5,000	
CL. AY	CL. AY	5,000	
CL. AZ	CL. AZ	5,000	
CL. BA	CL. BA	5,000	
CL. BB	CL. BB	5,000	
CL. BC	CL. BC	5,000	
CL. BD	CL. BD	5,000	
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CL. BI	CL. BI	5,000	
CL. BJ	CL. BJ	5,000	
CL. BK	CL. BK	5,000	
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CL. IS	CL. IS	5,000	
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CL. JD	CL. JD	5,000	
CL. JE	CL. JE	5,000	
CL. JF	CL. JF	5,000	
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CL. JU	CL. JU	5,000	
CL. JV	CL. JV	5,000	
CL. JW	CL. JW	5,000	
CL. JX	CL. JX	5,000	
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Orange County Fire Authority
AGENDA STAFF REPORT

Board of Directors Meeting
February 22, 2024

Agenda Item No. 2D
Consent Calendar

**Award of Public Works Contract for
Fire Station 41 Airfield Modifications**

Contact(s) for Further Information

Jim Ruane, Assistant Chief
Logistics Department

jimruane@ocfa.org

714.573.6028

Tim Perkins, Assistant Chief
Fire Operations South

patrickbauer@ocfa.org

714.522.2113

Summary

This agenda item seeks approval of the plans and specifications for airfield modifications at OCFA Fire Station 41 and award of a public works contract to J&L Constructors Inc., the lowest, responsive and responsible bidder, responding to bid RO2614D.

Prior Board/Committee Action

None

RECOMMENDED ACTION(S)

1. Accept J&L Constructors, Inc. bid dated January 11, 2024.
2. Approve and award the public works contract to J&L Constructors, Inc. in the amount of \$790,000.
3. Approve the plans and specifications for the airfield modifications OCFA Fire Station 41, as included in the contract.

Impact to Cities/County

Not Applicable.

Fiscal Impact

Funding for this contract is available in the existing FY2023/24 Logistics Department Capital Improvement Budget, project *Fire Station 41/Air Operations and Aircraft Landing Facilities Improvements (P417)*.

Background

The new Air Operations aircraft platform (Blackhawk helicopters), going into operation in 2024, requires modifications and improvements to the runway and tarmac at Fullerton airport as needed to meet FAA compliance. Project *Fire Station 41/Air Ops Station and Aircraft Landing Facilities Improvements (P417)* was included in the FY 2023/24 5-Year CIP to provide both upgraded landing facilities as well as station improvements to accommodate the recently expanded Air Operations staffing. The project scope for this recommended contract is for the landing facilities upgrades.

Request for Statement of Qualifications (RFSQ) and Invitation for Bids (IFB) Process

On June 15, 2023, staff issued Request for Statement of Qualifications RO2614A to solicit statements from vendors interested in the Fire Station 41 airfield modifications project. A mandatory job-walk was held on July 5, 2023, with qualifications due on July 24, 2023. Four vendor statements of qualifications were received and reviewed by staff, all of which were deemed responsive and qualified.

Due to lack of sufficient participation from the four prequalified vendors in the subsequent bid process (IFB RO2614B), and to provide updated specifications and contractor requirements, this bid was cancelled, and staff reissued a solicitation for Statements of Qualifications (RFSQ RO2614C). A mandatory job-walk was held on September 27, 2023, with qualifications due on October 11, 2023. Seven vendor statements of qualifications were received and reviewed by staff, all of which were deemed responsive and qualified. See Attachment One for a detailed report of the responsive bidders' qualifications (for vendors that completed both the qualifications and bidding stages).

On October 25, 2023, staff issued IFB RO2614D to solicit competitive bids from the seven prequalified vendors. A mandatory job-walk was held on November 8, 2023, with bids due on December 7, 2023. Three construction bids were received and reviewed by staff for responsiveness.

Bidder	Lump Sum Pricing
J&L Constructors, Inc.	\$790,000
Lucas Builders, Inc.	\$1,358,064
HZS Construction	\$1,557,020

Additionally, staff reviewed the pricing submitted and confirmed the reasonableness of the bidder's pricing based on the engineer's estimate, individual cost categories, and comparison to other bidders' pricing. See Attachment Two for the Bid Tabulation with cost category comparison.

Subsequent to this review, a discussion was conducted between J&L Constructors, Inc. and the OCFA project team to confirm specifications, scope of work, and construction schedule of the project as provided in the bid submittal. As a result of the pre-qualification process, price analysis, and confirmation of the specifications, scope of work, and schedule, J&L Constructors, Inc. is deemed the lowest responsive and responsible bidder.

Recommendation

Based on the bid results, staff recommends contract award to J&L Constructors, Inc. as the lowest responsive, responsible bidder based on the base bid in the amount of \$790,000.

Attachment(s)

1. Executive Summary
2. Bid Tabulation
3. Proposed Public Works Contract (*Contract posted online and hard copy available in the Clerk's Office upon request*)



Executive Summary: Formal Public Works Bid

Bid #RO2614D: Airfield Modifications at OCFA Fire Station 41

Attachment 1

Section 1. Project Information

IFB Issue Date	10/31/2023	IFB Due Date	1/18/2024
Vendors Notified	802 from original RFSQ, 6 from pre-qualified vendors	Bids Received	3
Job Walk	1/4/2024	Job Walk Attendees	3
Addenda Issued	5	Engineer's Estimate	\$796,676.65
Project Description:	Airfield Modifications at OCFA Fire Station 41		
Solicitation Method:	Due to the public works nature of this project, the estimated value exceeding \$200,000, this project was solicited through the Formal Invitation for Public Works process.		

Section 2. Pre-Qualification of Responsive Bidders

Contractor		Pre-Qualification Determination
J&L Constructors, Inc.		<input checked="" type="checkbox"/> Qualified <input type="checkbox"/> Not Qualified
Contractor Reputation: <i>Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions</i>		<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Notes:	No notable findings.	
Contractor Capability to Perform Work: <i>CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination</i>		<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Prior & Current Contracts:	<u>Prior:</u> <ul style="list-style-type: none">- Lake Elsinore Valley Municipal Water District – Single Check Replacement, Ortega Valley Water Main Replacement- Lake Elsinore Unified School District – Water Line replacements, Site Grading, Concrete- General Water/Electric – Water Line project <u>Current:</u> <ul style="list-style-type: none">- Lake Hemet Municipal Water District – Water Line Replacement- City of Seal Beach – Service/Repair Water services- City of Lake Elsinore – Service/Repair PRWs	
Disposition of References:		<input checked="" type="checkbox"/> Favorable <input type="checkbox"/> Unfavorable
References Provided:	Shawnele Morales – EVMWD Octavio Nava- Telacu Jason Venable – LHMWD Gus Papagalos – City of Lake Elsinore	References Contacted: 3
Notes:	Per contacted references, contractor performed and completed work as agreed, were easy to reach for communication, project was completed within time and budget. Contractor would be recommended for future projects.	

Contractor			Pre-Qualification Determination
HZS Engineering & construction, Inc.			<input checked="" type="checkbox"/> Qualified <input type="checkbox"/> Not Qualified
Contractor Reputation: <i>Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions</i>			<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Notes:	No notable findings.		
Contractor Capability to Perform Work: <i>CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination</i>			<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Prior & Current Contracts:	<u>Prior:</u> <ul style="list-style-type: none"> - City of Los Angeles – Sanborne Avenue Reconstruction, CDBG Mid Valley Street Improvements - Los Angeles Unified School District – Friedman Occupational Center underground Waste Oil Tank removal, Olive Vista MS Asphalt, Lunch Shelter Removal, Other - City of Pico Rivera – Intersection Improvements - Champions Properties – Residential Garage ADU Improvements - Ben Leeds Properties – Structural Steel Columns <u>Current:</u> <ul style="list-style-type: none"> - City of Carson, Storm Drain and Access Ladder/Security Fencing 		
Disposition of References:			<input type="checkbox"/> Favorable <input type="checkbox"/> Unfavorable
References Provided:	Peter Bilkian – City of LA Cindy Mejia – City of LA Chris Mount – LAUSD Kenner Guerrero – City of Pico Rivera	References Contacted:	1
Notes:	Per contacted reference, we are unable to determine disposition, only that projects were completed.		
Contractor			Pre-Qualification Determination
Lucas Builders, Inc.			<input checked="" type="checkbox"/> Qualified <input type="checkbox"/> Not Qualified
Contractor Reputation: <i>Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions</i>			<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Notes:	No notable findings.		
Contractor Capability to Perform Work: <i>CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination</i>			<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory
Prior & Current Contracts:	<u>Prior:</u> <ul style="list-style-type: none"> - LINXS Constructors – Auto Peoplemover - Skansa - 6th Street Duct Replacement - MCTC – Station Canopies - Housing Authority LA – Underground Park Improvements - Granite Construction – Runway Refab <u>Current:</u> <ul style="list-style-type: none"> - Various provided 		
Disposition of References:			<input checked="" type="checkbox"/> Favorable <input type="checkbox"/> Unfavorable
References Provided:	Rachel Phariss – Linxs Geraldo Iniguez – Skansa	References Contacted:	1

	Rick Merina – MCTC Jon Gonzales – Granite		
Notes:	From the single reference, contractor performed and completed work as agreed, were easy to reach for communication, project was completed within time and budget. Contractor would be recommended for future projects.		

Section 3. Bid Pricing *See attached Bid Tabulation for Detailed Cost Comparison*

Lowest Responsive, Responsible Bidder:	J&L Constructors, Inc.
Comparison to Engineer's Estimate:	\$6,676.65 less
Pricing Determination:	<input checked="" type="checkbox"/> Reasonable <input type="checkbox"/> Not Reasonable

Section 4. Recommendation for Award

Award Documentation:

Payment Bond:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Performance Bond:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Award Certifications:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Insurance Certificates:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Discussion:

Additional research was completed by OCFA staff and to confirm responsiveness and responsibility of the bid and qualifications of the apparent low-bidder, J&L Constructors, Inc. A discussion was conducted with the apparent low bidder and OCFA staff for the project after bid opening to confirm specifications, scope of work, and construction schedule of the project as provided in the bid submittal.

OCFA Staff also verified the current California State License Board (CSLB) license statuses and registration with the Department of Industrial Relations (DIR) for J&L Constructors, Inc. as follows:

Contractor	CSLB License Number, Classification, and Expiration	DIR Registration Number
J&L Constructors	974212; A, B, C20, C53; exp 3/31/25	1000056885
Access General Contracting	992223; A, B, C8, C36, C39; exp 4/30/24	1000016718

As a result of the additional research, meeting, and verified qualifications of the apparent low bidder, its bid was accepted.

RO2614D - FS41 Airfiled Modifications	J&L Construction, Inc.			Lucas Builders Inc.			HZS Construction		
	Total Bid	Difference from Lowest Bid	Difference from Engineer's Estimate	Total Bid	Difference from Lowest Bid	Difference from Engineer's Estimate	Total Bid	Difference from Lowest Bid	Difference from Engineer's Estimate
	\$790,000.00	\$0.00	-\$6,676.65	\$1,358,064.00	\$568,064.00	\$561,387.35	\$1,557,020.00	\$767,020.00	\$760,343.35
Line Item Subtotal	Line Item Subtotal			Line Item Subtotal	Difference from Lowest Bid		Line Item Subtotal	Difference from Lowest Bid	
Category I: Labor Classifications (Prevailing Wage)	\$335,000.00			\$280,064.00	-\$54,936.00		\$543,228.00	\$208,228.00	
Category II: Permanent & Non-Permanent Materials/Supplies	\$135,000.00			\$635,000.00	\$500,000.00		\$341,457.60	\$206,457.60	
Category III: Equipment	\$100,000.00			\$158,000.00	\$58,000.00		\$403,540.80	\$303,540.80	
Category IV: Overhead & Indirect Costs	\$100,000.00			\$155,000.00	\$55,000.00		\$155,208.00	\$55,208.00	
Category V: Profit (% As written)	17.00%			9.50%	-7.50%		7.00%	-10.00%	
Category VI: Permits/Fees	\$5,000.00			\$0.00	-\$5,000.00		\$5,000.00	\$0.00	
Notes:	Price is .8% lower than engineer's estimate. Bid price is deemed reasonable.			Price is 70.47% higher than engineer's estimate. Bid price deemed unreasonable.			Price is 95.4% higher than engineer's estimate. Bid price deemed unreasonable.		

4F: CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter "Agreement" or "Contract" or "Contract Agreement") is made and entered into for the above identified Project this 28th day of March, 2024, BY AND BETWEEN THE **ORANGE COUNTY FIRE AUTHORITY** (hereinafter "OCFA"), and J&L Constructors, Inc., as CONTRACTOR.

WITNESSETH that OCFA and CONTRACTOR have mutually agreed as follows:

[SECTIONS 1 – 40 are set forth in the Solicitation Information and Instructions to Bidders above.]

41 – PROJECT MANUAL

This Contract consists of the Project Manual. The Project Manual includes the following component parts thereof, each of which is a part of this Contract:

- (1) RO2614D - Notice Inviting Bids
- (2) RO2614D - Instructions to Bidders
- (3) RO2614D - Bid Documents
- (4) RO2614D - Contract Documents
- (5) RO2614D - Technical Specifications
- (6) Any and all addenda and other supplemental notices and agreements issued by OCFA clarifying, amending, or extending the work contemplated as may be required to ensure its completion in an acceptable manner

All of the above component documents of the Project Manual are complementary and Work required by one of the above documents shall be done as if required by all. In the event of conflict among the component documents of the Project Manual, the conflict shall be resolved as set forth in Section 52 of the General Conditions.

42 - CONTRACT PRICE

OCFA shall pay to Contractor as full consideration for the faithful performance of the Contract, the sum of SEVEN HUNDRED NINETY THOUSAND DOLLARS (\$790,000). This sum is the total amount stipulated in the Bid. Payment shall be made as set forth in the General Conditions.

43 – CONTRACTOR'S COMMITMENT TO FURNISH MATERIALS AND WORK

For and in consideration of the payments and agreements to be made and performed by OCFA, CONTRACTOR agrees to furnish all materials and perform all work required for the above identified Project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

44 – CONTRACTOR'S COMMITMENT TO PRICES

CONTRACTOR agrees to receive and accept the prices set forth in the Proposal as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. Said compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

44.1 - NO INCREASE IN BID COST DUE TO SUBSTITUTION OF SUBCONTRACTOR. In the event that a subcontractor is substituted in any manner for any reason, any increased cost related to such substitution shall be the sole responsibility of the Contractor. Such substitution shall not cause or result, directly or indirectly, in any increase in the bid price. This subsection shall not be construed to be prior consent to substitution of subcontractors, nor to authorize any substitution that is prohibited by the Subletting and Subcontracting Fair Practices Act.

45 – PAYMENT TO CONTRACTOR

OCFA hereby promises and agrees to employ, and does hereby employ, CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in the Contract Documents.

46 - WORKER'S COMPENSATION

CONTRACTOR acknowledges the provisions of the Labor Code requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance in accordance with the provisions of that Code, and certifies compliance with such provisions.

47 – PRINCIPAL INTERESTS

CONTRACTOR affirms that the signatures, titles, and seals set forth hereinafter in execution of this Agreement represent all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest herein.

48 – COMPLIANCE WITH FEDERAL IMMIGRATION AND NATIONALITY ACT

CONTRACTOR hereby represents and warrants that it will comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C. Section 1101, *et seq.*, as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should CONTRACTOR so employ such unauthorized aliens for the performance of any work and/or services under this Agreement, and should any liability or sanctions be imposed against OCFA for such use of unauthorized aliens, CONTRACTOR hereby agrees to defend and indemnify OCFA against any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, or penalties which arise out of or are related to such employment, together with any and all costs, including attorneys' fees, incurred by OCFA.

49 – CERTIFICATION RE DEBARMENT

CONTRACTOR confirms that neither CONTRACTOR nor its principals are suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts from United States (U.S.) federal government procurement or nonprocurement programs, or are listed in the List of Parties Excluded from Federal Procurement or Nonprocurement Programs (<http://www.sam.gov/>) issued by the U.S. General Services Administration. "Principals" means officers, directors, owners, partners, and persons having primary management or supervisory responsibilities within a business entity (e.g. general manager, plant manager, head of a subsidiary, division or business segment, and similar positions). CONTRACTOR will provide immediate written notification to OCFA if, at any time prior to award, CONTRACTOR learns that this certification was erroneous when submitted or has become erroneous by reason of changed circumstances. This certification is a material representation of fact upon which reliance will be placed when OCFA executes this Agreement. If it is later determined that CONTRACTOR knowingly rendered an erroneous certification, in addition to the other remedies available to OCFA, OCFA may terminate this Agreement for default by CONTRACTOR.

50 - INDEMNIFICATION

To the fullest extent permitted by law, CONTRACTOR (at CONTRACTOR's sole cost and expense) shall defend (with legal counsel acceptable to OCFA in OCFA's sole discretion), indemnify, protect, and hold harmless the INDEMNIFIED PARTIES and each of them against all CLAIMS which arise out of, pertain to, or are related to CONTRACTOR's performance under, or failure to perform under, the Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit CONTRACTOR's indemnification obligation or other liability hereunder. Notwithstanding the foregoing, such obligation to defend, indemnify, protect, and hold harmless the INDEMNIFIED PARTIES shall not apply to the extent such CLAIMS arise from the sole negligence or willful misconduct of the OCFA.

As used herein, "INDEMNIFIED PARTIES" refers to OCFA and its appointed officials, officers, employees, agents, representatives, attorneys and volunteers.

As used in this Section 50, "CLAIMS" refers to any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, penalties, and expenses including legal costs, expert fees and attorney fees, including but not limited to CLAIMS arising from injuries to or death of persons (CONTRACTOR's employees included), or for damage to property, including property owned by OCFA.

51 – COMPLIANCE WITH WORK RULES

CONTRACTOR shall be familiar with, observe, and comply at all times during the term of this Agreement with any work rules for contractors as may be established and promulgated by the OCFA Fire Chief, which work rules shall be additional terms and conditions for providing the work and services to the OCFA pursuant to this Agreement, as may be updated and/or amended from time to time at the sole discretion of the Fire Chief.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first written.

ORANGE COUNTY FIRE AUTHORITY:

[NAME], CHAIR
OCFA BOARD OF DIRECTORS

ATTEST:

MARIA D. HUIZAR,
CLERK OF THE AUTHORITY

APPROVED AS TO FORM:

DAVID E. KENDIG
GENERAL COUNSEL

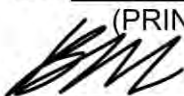
CONTRACTOR:

J&L Constructors Inc

(CORPORATION (NAME - TYPE))

BY: **Bryson Miller**

(PRINT)





(SIGNATURE)

Owner

(TITLE)

BY: _____

(PRINT)

(SIGNATURE)

(TITLE)

NOTE:

SIGNATURES OF CORPORATE OFFICIALS MUST BE NOTARIZED, ATTACH JURAT.

JURAT

State/Commonwealth of TEXAS)

☐ City ☒ County of Parker

On 02/05/2024, before me, Palursa Shepard
Date *Notary Name*

the foregoing instrument was subscribed and sworn (or affirmed) before me by:

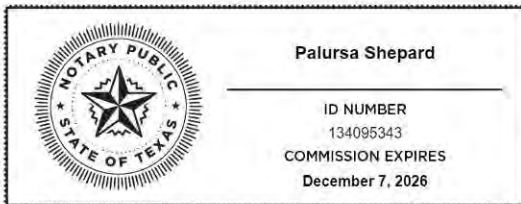
Bryson William Miller

Name of Affiant(s)

☐ Personally known to me -- OR --

☐ Proved to me on the basis of the oath of _____ -- OR --
Name of Credible Witness

☒ Proved to me on the basis of satisfactory evidence: driver_license
Type of ID Presented



WITNESS my hand and official seal.

Notary Public Signature: Delwara Shepard

Notary Name: Palursa Shepard

Notary Commission Number: 134095343

Notary Commission Expires: 12/07/2026

Notarized online using audio-video communication

DESCRIPTION OF ATTACHED DOCUMENT

Title or Type of Document: Contract Documents

Document Date: 02/05/2024

Number of Pages (including notarial certificate): 20



ORANGE COUNTY FIRE AUTHORITY FORMAL INVITATION FOR BIDS FIRE STATION 41 AIRFIELD MODIFICATIONS

FOR PROJECTS EXCEEDING \$200,000

October 31, 2023

Solicitation No. RO2614D

The Orange County Fire Authority is requesting bids to establish a construction agreement for Fire Station 41 Airfield Modification located at OCFA Fire Station #41, 3900 Artesia Ave., Fullerton CA 92833, as specified herein. Bids will only be accepted from the six pre-qualified firms resulting from RO2614C.

THIS PROJECT IS CONSIDERED A PUBLIC WORK.

Pursuant to SB 854, no contractor or subcontractor may be awarded a contract for a public works project unless registered with the CA Department of Industrial Relations per California Labor Code section 1725.5. This project is a public work and is subject to compliance monitoring and enforcement.

MANDATORY REQUIREMENTS:

- Meet Minimum Qualifications
- Attendance at Job Walk on **11/13/2023**
- Contractors' License: **A - General Engineering Contractor's License is required for airports and airway excavating, grading, trenching, paving and surfacing work, and cement and concrete works. B, C-12, C-32, or C-61 Specialty License may also apply based on specific parts of the scope of work.**
- Registration with the California Department of Industrial Relations
- Bid Bond - 10% of Bid Amount (*All Bidders*)
- Faithful Performance Bond – 100% of Agreement Price (*Awarded Contractor Only*)
- Payment Bond – 100% of Agreement Price (*Awarded Contractor Only*)

BID SUBMITTALS:

- Bids will be received no later than **11:00 A.M. on 11/29/2023**
- **Only paper bids will be accepted for this solicitation**
- Bids may be hand delivered or mailed to Orange County Fire Authority, Purchasing Department, 1 Fire Authority Road, Building C, Irvine, CA 92602 no later than the date and time specified.
- One (1) original hard copy and one (1) duplicate hard copy shall be sent to the attention of the Purchasing Section, within said time limit, in a sealed envelope.
- The envelope should include the Bidder's Business Name, Solicitation Number, and the Due Date.

LATE BIDS WILL NOT BE ACCEPTED.

Any questions concerning this Formal Invitation for Bids or the specifications should be submitted on-line via the Q&A Module available through PlanetBids before **5:00 P.M. on 11/14/2023**. OCFA will publish a response to all inquiries through the e-procurement system and/or may issue an addendum as a result.

Rothchild Ong, Assistant Purchasing Agent
rothchildong@ocfa.org | 714-573-6642

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SECTION 1: NOTICE INVITING BIDS

**1A: ORANGE COUNTY FIRE AUTHORITY NOTICE INVITING SEALED BIDS
FOR FIRE STATION 41 AIRFIELD MODIFICATIONS**

=====

ORANGE COUNTY FIRE AUTHORITY REQUEST FOR QUALIFICATIONS: SCOPE: Fire Station 41 Airfield Modification located at OCFA Fire Station #41, 3900 Artesia Ave., Fullerton CA 92833. Bids will only be accepted from the six pre-qualified firms resulting from RO2614C. For official bid documents visit: <https://www.planetbids.com/portal/portal.cfm?CompanyID=14773>. A MANDATORY job walk will be held November 13, 2023 AT 2:00P.M. Bid submittals will be accepted until November 29, 2023 AT 11:00 A.M.

=====

Published: Orange County Register

FIRST PUBLICATION DATE: November 4, 2023

SECOND PUBLICATION DATE: November 11, 2023

1B: SOLICITATION INFORMATION

1. ABBREVIATIONS

IFB: Invitation for Bids

OCFA: Orange County Fire Authority

DIR: California Department of Industrial Relations

CSLB: California Contractors State License Board

PCC: California Public Contract Code

2. OBJECTIVE

The Orange County Fire Authority is requesting bids to establish a construction agreement for the Fire Station 41 Airfield Modification located at OCFA Fire Station #41, 3900 Artesia Ave., Fullerton CA 92833, as specified herein. Project work will be coordinated by the OCFA Property Management section.

3. MANDATORY SITE INSPECTION

A mandatory job walk for prime contractors will be held on **MONDAY, NOVEMBER 13, 2023, 2:00P.M. at OCFA Fire Station #41, 3900 Artesia Ave., Fullerton CA 92833.**

Contractor's representative must attend the entirety of the job walk. **Late arrivals will not be granted access to the site, nor permitted to attend the job walk.** This informational meeting will be held to allow for site inspection and questions or clarifications concerning OCFA's IFB process and subsequent contract award. Prospective Bidders should be familiar with the IFB prior to attending the job walk.

DUE TO COVID-19, ATTENDEES WHO ARE NOT FULLY VACCINATED MUST PROVIDE AND ARE REQUIRED TO WEAR A MASK DURING THE JOB WALK. MASKS ARE NOT REQUIRED FOR FULLY VACCINATED ATTENDEES

4. CONTRACTOR MINIMUM QUALIFICATIONS

Bidder must meet the following minimum qualifications in order to have its response considered:

- **Current and valid A - General Engineering Contractor's License is required for airports and airway excavating, grading, trenching, paving and surfacing work, and cement and concrete works. B, C-12, C-32, or C-61 Specialty License may also apply based on specific parts of the scope of work.**
- **Department of Industrial Relations registration**
- **Minimum 10 years' experience providing the same or similar services**

5. DUE DATE

Bids will be received no later than **11:00 AM on 11/29/2023**. Late submittals will not be accepted. There will be a public opening of the bids on the specified due date and time in the Purchasing Office at the OCFA's Regional Fire Operations and Training Center located at 1 Fire Authority Road, Irvine, CA 92602. If attending the bid opening, please allow time to check in at the Reception Desk.

6. SUBMITTAL INSTRUCTIONS

The Bid Response Forms are available for download on OCFA's online bidding platform, PlanetBids. Bids must be prepared using the response forms included in this IFB document. Bids shall be executed by an authorized signatory. Contractors are to fill in all blank spaces (insert "N/A" where the answer is not applicable). Contractors are to initial all interlineations, annotations, deletions, alterations, erasures and other modifications on the forms. Deviations in the form may result in the bid being deemed non-responsive. **Only paper bids will be accepted for this solicitation.**

Bids may be hand delivered or mailed to Orange County Fire Authority, Purchasing Department, 1 Fire Authority Road, Building C, Irvine, CA 92602 no later than the date and time specified in Section 5 above. One (1) original hard copy and one (1) duplicate hard copy shall be sent to the attention of the Purchasing

Section, within said time limit, in a sealed envelope. The envelope should include the Bidder's Business Name, Solicitation Number, and the Due Date. (Failure to include a duplicate hard copy will not cause an otherwise responsive bid to be deemed non-responsive.)

Any vendor who wishes his or her bid to be considered for award is responsible for ensuring that it is complete and received by the Purchasing Office on or before the due date and time. **Facsimile, electronic or e-mail bids will not be considered.**

7. INQUIRIES

Any questions related to the IFB shall be directed to the Assistant Purchasing Agent, Rothchild Ong. Questions and comments must be submitted via this bid's Q&A module on the PlanetBids website no later than **5:00 P.M. on 11/14/2023**. The inquirer's name, company, address, phone number should be included. Verbal interpretations or clarifications on the part of OCFA will be without legal effect. Only responses submitted in writing via the Q&A module or addendum will be binding.

8. SCHEDULE OF IMPORTANT DATES

Invitation for Bid Issue Date	October 31, 2023
Mandatory Job Walk	November 13, 2023
Final Day to Submit Questions	November 14, 2023
Deadline to Submit Bid Response	November 29, 2023

9. CONTRACTOR RESPONSIBILITIES

9.1 MATERIAL AND LABOR

Contractor shall provide all permits, material, labor, tools and supplies to complete the project as described herein. See Section 5 for detailed information on these requirements and additional components that must be included in Contractor's bid and pricing.

9.2 CSLB LICENSE

Contractor and all subcontractors shall possess a valid A, B, C-12, C-32, or C-61 Specialty License California Contractor's license based on the specified scope of work, as required by California law, at the time of bid submission, pursuant to California Public Contract Code Section 3300 and Business and Professions Code Section 7028.15. The successful contractor and all subcontractors must maintain the license throughout the duration of the project.

9.3 PREVAILING WAGE AND COMPLIANCE MONITORING

Contractor and all subcontractors shall conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hour notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project, including, without limitation, the State labor compliance monitoring and enforcement by the Compliance Monitoring Unit of the Department of Industrial Relations. The successful contractor and all subcontractors must maintain DIR registration throughout the duration of the project.

9.4 STANDARD SPECIFICATIONS

OCFA relies on the standard specifications, CSI and Greenbook applicable in the jurisdiction where the project is located, as modified by the local jurisdiction.

9.5 BUSINESS LICENSE REQUIREMENTS

Contractor and all subcontractors shall conform to the requirements of the city in which the project is located (or the requirements of the County if the project is located within an unincorporated area) and shall maintain active business license(s) as required by the jurisdiction(s) in which the project

is located. The successful contractor and all subcontractors must remain in compliance with these requirements throughout the duration of the project.

9.6 WARRANTY

In addition to any warranties specified in the drawings and any manufacturer's warranty, Contractor shall warrant the workmanship and manufacturing for a minimum of one year.

10. OCFA RESPONSIBILITIES

OCFA will coordinate with training operations to ensure Contractor has access to necessary areas to perform work. OCFA shall be responsible for the registration of the project with the CA DIR subsequent to contract award.

11. DELIVERABLES

11.1 PROJECT COMPONENTS

The proposed project includes the improvement of the airport's Orange County Fire Authority (OCFA) apron as specified and described in Section 4 and generally includes:

- 11.1.1 Addition of taxiway lead-in lighting from the existing apron to Taxiway Bravo/Charlie**
- 11.1.2 Removal of existing helipad apron markings**
- 11.1.3 Addition of (2) helipad markings for S-70 aircraft**
- 11.1.4 Removal/addition of Taxiway edge markings, along taxiway Bravo/Charlie, as needed**
- 11.1.5 Replacement of existing airfield asphalt pavement**

***An encroachment permit from the City of Fullerton Engineering Department will be required when permits are pulled**

11.2 SPECIFICATIONS

11.2.1 MINIMUM SPECIFICATIONS

The purpose of the information provided herein is to establish the minimum requirements for the supplies, materials, and equipment used for this project. It is not the intention of OCFA to exclude suppliers of similar or equal products of the types specified. Provided specifications, brands, and/or manufacturers describe OCFA expectations for the equipment, supplies and materials to be acquired.

11.2.2 EQUIVALENT ALTERNATE ITEMS

11.2.2.1 EQUIPMENT SUBMITTALS

As noted throughout Section 5, deviations from the specifications provided herein are not preferred but, in some instances, may be accepted. OCFA retains the sole right to determine whether proposed deviations to the specified items are acceptable. Any bidder offering items or equipment as equivalent alternatives to those items specified must submit documentation in accordance with the requirements outlined in Section 5 to substantiate that the item is equal no less than ten (10) business days prior to the bid deadline. Failure to do so may result in the bid that includes such alternative(s) being deemed non-responsive. As part of the evaluation of proposed alternate items, OCFA may request additional product information or product samples. Such information or samples must be submitted at no expense to OCFA by an agreed-upon due date for inspection and approval prior to contract award. Failure to comply with the request, or failure of the proposed alternate product to meet the required specifications, may be cause for OCFA to deem the bid that includes such alternative(s) to be non-responsive.

11.2.2.1 ADDITIONAL SUBMITTALS

Contractor shall submit for approval all items and documentation prior to beginning work in accordance with the requirements outlined in Section 5. In addition to the requirements specified in Section 5, any equivalent alternate items offered as a submittal during the course of construction must include documentation to substantiate that the item is equal. As part of the evaluation of proposed alternate items, OCFA may request additional product information or product samples. Such information or samples must be submitted at no expense to OCFA by an agreed-upon due date for inspection and approval prior to installation. Failure to comply with the request, or failure of the proposed alternate product to meet the required specifications, may be cause for OCFA to deem the Contractor to have caused a delay in the project, to be remedied by the assessment of liquidated damages, as described in the Contract Documents (see Section 4).

11.2.3 MATERIALS

Materials shall be pure, unadulterated, first quality and shall be delivered to the project in original unbroken packages bearing the maker's name and brand number. Materials shall comply with all requirements described in Section 5. Materials shall be submitted for approval prior to use. Contractor must furnish additional stock of materials, as specified in Section 5.

OCFA intends to purchase and keep as inventory commonly replaced items for the purpose of expediting future repairs. Should Contractor or subcontractors utilize this inventory to perform repairs, use of these items will not void or otherwise negatively affect the warranty. Contractor or subcontractors must replace the stock at no cost to OCFA.

11.3 PROJECT EXECUTION**11.3.1 WORKMANSHIP**

Contractor shall:

- a. Perform work under conditions best suited to produce the specified deliverables.
- b. Correct all work that does not comply with the intent of the specification and/or does not meet the approval of OCFA.
- c. Protect all adjacent areas and surfaces from damage from work performed (i.e. automobiles, sidewalks, asphalt, concrete, plants, etc.).
- d. Coordinate with the OCFA before using noisy, motorized equipment.
- e. Take all necessary steps to protect the public and all property concerned.

11.3.2 CLEAN-UP

Contractor shall, at completion of work each day, remove all debris and rubbish resulting from this project and leave workspaces in a clean condition subject to OCFA approval.

11.3.3 PROTECTION

Contractor shall protect work of other trades, correct damage by cleaning, repairing or replacing, and repainting, as approved by OCFA.

11.3.4 REPAIR

At completion of work, Contractor shall repair and/or restore damaged work of other trades.

11.3.5 ACCEPTANCE DOCUMENTATION

Upon completion of work, Contractor shall provide the documents specified herein for final review and acceptance by OCFA.

11.3.6 HEALTH AND SAFETY

Contractor shall ensure compliance at all times with the Health and Safety requirements in Section 86 of the Contract Agreement.

11.4 SCHEDULES, TIMELINES, AND MEETINGS

11.4.1 COORDINATION OF WORK

Prior to beginning work, Contractor shall prepare a schedule and submit to OCFA for approval. Contractor shall coordinate the commencement of all work with OCFA so as not to cause inconvenience to the facility. Contractor parking, along with the placement of all trailers, equipment and materials must be coordinated with OCFA in advance.

All work at the location must be coordinated with OCFA in a manner that shall accommodate the requirements of OCFA personnel. Contractor shall post notices in conspicuous places at least three to five days in advance warning occupants what date work will begin. Work, deliveries or efforts which may impede existing circulation roadways shall be scheduled at least seven (7) days in advance.

11.4.2 HOURS OF WORK

Work shall be performed Monday through Friday between the hours of 7:00 AM and 5:00 PM. Overtime and after-hours work is not permitted, unless otherwise coordinated with and approved by the city in which the project is located.

11.4.3 PROJECT TIMELINE

OCFA anticipates that

- Project work will begin **15** days after the agreement and all other required award documents are received and approved by OCFA
- Project will be complete within **60** working days

12. MEETINGS

Meetings between OCFA and Contractor will include, at a minimum, the following:

12.1 PRE-AWARD MEETING

This meeting will aid OCFA in determining responsibility of Contractor and to finalize the specifications and services to be provided.

12.2 PRE-CONSTRUCTION JOB WALKS

These meetings with OCFA, the staff of the city in which the project is located, and others as necessary and/or required by law will be coordinated by the Contractor.

12.3 PROJECT STATUS MEETINGS

Weekly meetings held in person, unless otherwise determined by OCFA.

12.4 ACCEPTANCE

Meetings regarding project acceptance and warranty punch list items.

12.5 ADDITIONAL

Other meetings deemed necessary by OCFA for contract compliance.

SECTION 2: INSTRUCTIONS TO BIDDERS

13.1 AMENDMENT OF INVITATION FOR BID

Notification via email will be sent to vendors listed as "Prospective Bidders" on PlanetBids in the event that a Q&A set or amendment to the IFB is released. The bidder shall acknowledge receipt of an amendment to this Invitation for Bid on the bid submittal. The OCFA reserves the right to revise the bid documents prior to the bid opening date. Revisions, if any, shall be made by written Addenda.

13.1.1 Pursuant to Public Contract Code Section 4104.5, if OCFA issues an Addendum later than seventy-two (72) hours prior to the deadline for submission of bids, and the Addendum requires material changes, additions or deletions to the description of the work to be performed or the content, form or manner of submission of bids, OCFA will extend the deadline for submission of bids by at least seventy-two (72) hours. Otherwise, OCFA may determine, at its sole discretion, whether an Addendum requires that the date set for opening bids be postponed. Announcement of a new date, if any, will be made by Addenda. All bidders will be notified by e-mail when an addendum is posted to PlanetBids.

All Addenda issued before the time bids are due shall form part of the contract documents. It is the bidder's responsibility to be familiar with Addenda issued. OCFA will deem any bid that fails to acknowledge all Addenda to be non-responsive. Bidders must acknowledge the Addenda in writing on the form provided in the bid documents.

13.2 INTERPRETATION OF BID DOCUMENTS

Discrepancies in, and/or omissions from the Specifications or other bid documents or questions as to their meaning shall be immediately brought to the attention of the Purchasing Manager by submission of a written request for interpretation or correction thereof no later than the deadline specified for questions specified in Section 1 of the Notice Inviting Bids. The person submitting the request will be responsible for its prompt delivery.

Any interpretation of the bid documents will be made only by addendum duly issued electronically to each bidder registered on the prospective bidder's list. The OCFA will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the bid documents to any bidder, and no bidder should rely on any such oral interpretation.

14. DISPUTES RELATING TO THIS INVITATION FOR BID

In the event a dispute arises concerning any aspect of this bid, including specifications and/or process, the party bringing the dispute shall submit a written request for resolution to the Purchasing Department prior to the IFB's due date and time.

In the event a dispute arises regarding this IFB's Recommendation for Award or Denial of Award, the party bringing the dispute must do so in accordance with OCFA's **Purchasing Ordinance, Article IX. Legal and Contractual Remedies**, which can be found online under "Doing Business with OCFA" at <https://www.ocfa.org/Uploads/Purchasing/OCFA%20Purchasing%20Ordinance.pdf>.

15. WITHDRAWAL OF BID

15.1 PRIOR TO BID DUE DATE AND TIME

At any time prior to the specified due date specified in IFB Section 1, an Offeror may formally withdraw the bid by a written letter, facsimile or electronic mail from the Offeror or an authorized representative to the OCFA Purchasing Manager, provided such letter, facsimile or electronic mail is actually and timely received by the OCFA Purchasing Manager. **Telephonic or oral withdrawals shall not be considered.**

15.2 AFTER BID DUE DATE AND TIME

In accordance with California Public Contract Code sections 5100-5110, Bidder shall not be relieved of the obligations of its bid unless by consent of OCFA, nor shall any change be made in the bid because of mistake. Bids may be withdrawn for mistake upon mutual written agreement of Bidder and OCFA, or if all of the following conditions apply:

- A mistake is made in the bid; and
- Written notice is provided to OCFA within five (5) working days from the date of the public opening specifying in the notice in detail how the mistake occurred. Telephonic or oral withdrawals will not be considered; and
- The mistake makes the bid materially different than Bidder intended it to be; and
- The mistake was made in filling out the bid and was not due to error in judgment or to carelessness in inspecting the site of the work, or in reading the plans or specifications.

Any bidder who claims a mistake or who forfeits its bid security (Bidder's Bond) shall be prohibited from participating in further bidding on the project on which the mistake was claimed or bid security was forfeited.

16. INDEMNIFICATION

Bidder agrees to protect, defend, indemnify, save and hold harmless the OCFA and its officers, officials, employees and volunteers from any and all claims, liabilities, expenses, or damages of any nature, including attorney fees, for injury to or death of any person (Bidder's employees included), and for injury to any property, including consequential damages of any nature resulting there from, arising out of or in any way connected with the Bidder's submittal.

17. RESERVATIONS (RIGHTS RESERVED TO OCFA)

OCFA reserves the right to reject any or all bids or any part thereof; to rebid the solicitation; to reject non-responsive or non-responsible bids; to reject unbalanced bids; to reject bids where the terms, prices, and/or awards are conditioned upon another event; to reject individual bids for failure to meet any requirement; to award by item, part or portion of an item, group of items, or total; to make multiple awards; to investigate the qualifications of any bidder under consideration; to modify or amend this IFB in writing; to waive minor irregularities, defects, omissions, technicalities or form errors in any bid. Waiver of one irregularity does not constitute waiver of any other irregularity. OCFA may seek clarification of the bid from the bidder at any time, and failure to respond is cause for rejection. OCFA is required to make an award that is in the best interest of the OCFA. All decisions on compliance, evaluation, terms and conditions shall be made solely at the OCFA's discretion and made to favor the OCFA. OCFA may cancel this solicitation at any time.

The OCFA may reject any bid which, in its sole opinion, does not accurately reflect the cost to perform the work as compared to other bids received and/or to project estimates. In addition, because the OCFA may elect to include or exclude any of the bid items and alternate bid items (if applicable) at its sole and absolute discretion, each bidder must ensure that each bid items contain a proportionate share of profit, overhead and other costs or expenses which will be incurred by the bidder. The OCFA may deem any bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items as non-responsive. No contract will be executed unless the bidder is licensed in accordance with the provisions of the State law.

18. INSPECTION OF SITE/MANDATORY MEETING AND JOB WALK

Each prospective bidder is responsible for becoming familiar with the conditions of the project site as well as those relating to the construction and labor of the project, to fully understand the facilities, conditions, difficulties and restrictions which may impact the completion of the project. Attendance by a representative of each prospective contractor at the mandatory meeting as stated in the request for

informal bid is required. **Any bid received by a contractor not represented at the mandatory meeting will be rejected and deemed non-responsive.**

19. CONTRACTOR AND SUBCONTRACTOR LICENSING REQUIREMENTS

Bidder and all listed Subcontractors shall possess valid California Contractor's licenses, as required herein and as appropriate for each specialty subcontracted at the time of bid submission, pursuant to California Public Contract Code Section 3300 and Business and Professions Code Section 7028.15. Licenses must be maintained throughout the duration of the contract resulting from this IFB.

Pursuant to Section 7028.15 of the Business and Professions Code, the OCFA shall consider any bid submitted by a contractor not currently licensed in accordance with California law and pursuant to the requirements found in the bid documents to be nonresponsive, and the OCFA shall reject the bid. The OCFA shall have the right to request evidence of all valid license(s) currently held by the bidder and each of the subcontractors listed in the bid before awarding the contract. In such cases, Bidders shall provide evidence of valid licenses satisfactory to the OCFA within five (5) calendar days. Pursuant to Public Contract Code Section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code Section 2717(b) in order to supply mined material for this contract.

20. SB 854 DEPARTMENT OF INDUSTRIAL RELATIONS REGISTRATION

No contractor or subcontractor may be listed on an offer for a public works project unless registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5, with limited exceptions from this requirement for bid purposes only under California Labor Code Section 1771.1(a). No contractor or subcontractor may be awarded a contract for public work, or engage in the performance of any public works project unless registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5. Pursuant to SB 854, the DIR registration number of each subcontractor must be identified on the bid; **failure to do so may result in the bid being deemed non-responsive.**

The contract resulting from this solicitation is subject to compliance monitoring and enforcement by the California Department of Industrial Relations. OCFA reports all public works contracts to the DIR subsequent to contract execution.

The OCFA will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining bid pricing, and will not under any circumstances be considered as the basis of a claim against the OCFA on the contract resulting from this solicitation.

21. PREVAILING WAGE

This project is a public work in the State of California, funded in whole or in part with public funds. Therefore, the applicable prevailing wage rates will be enforced. The work is subject to the payment of not less than prevailing wages under California Labor Code Section 1770 et seq. Contractor must comply with all related provision of the California Labor Code if awarded the agreement, including but not limited to:

- The provisions of California Labor Code Section 1775 relating to payment of prevailing wages, and
- Section 1777.5 relating to employment of apprentices, and
- Section 1811-1813 relating to the payment of overtime.

Failure to comply with the applicable prevailing wage, overtime, and apprenticeship requirements may result in penalties.

Contractors are hereby notified that the Director of Industrial Relations has ascertained the general prevailing rate of per diem wages and the rates for overtime and holiday work in the locality in which the work is to be performed for each craft, classification or type of worker needed to perform the work under the contract which will be awarded to the successful contractor.

Additional information is available at the Department of Industrial Relations website at:

<http://www.dir.ca.gov/oprl/DPreWageDetermination.htm>.

Contractors are further notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Additional information on the Compliance Monitoring Unit requirements can be found at:

<https://www.dir.ca.gov/Public-Works/PublicWorksEnforcement.html>.

22. DEBARMENT OF CONTRACTORS

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.7 of the Labor Code and Federal "Excluded Parties List System". Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the OCFA. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project. In order to prohibit the procurement of any goods or services ultimately funded by Federal awards from debarred, suspended or otherwise excluded parties, each Contractor will be screened at the time of response to ensure the Contractor, its principal and their named subcontractors are not debarred, suspended or otherwise excluded by the United States Government in compliance with the requirements of 2 Code of Federal Regulations (CFR) 200.12 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.

23. CONTRACT

A response to this IFB is an offer to contract with OCFA based upon the terms, conditions, and specifications contained within this document, all Addenda, and the Construction Services Agreement, attached hereto as Section 4. Submission of a bid confers on the bidder no right to an award or to a subsequent contract. No binding contract will exist between the bidder and the OCFA unless and until the OCFA executes a written contract or purchase order.

24. BID DOCUMENTS & FORMS

Bid submittals are to be prepared using the bid forms which are included in this IFB Document. Bids shall be executed by an authorized signatory. As a condition of bidding and in accordance with the provisions of Section 20101 of the California Public Contract Code, prospective bidders are required to submit all the bid forms listed in the Bidder's Checklist. Failure to do so may result in the rejection of the bid.

25. PREPARATION OF BID

All bids shall incorporate the forms provided in this IFB document. It is permissible to copy these forms as required. Facsimiles or electronic mail bids shall not be considered.

The Bid form and any solicitation amendments must be signed and returned with the bid. The forms submitted shall be signed by a person authorized to submit an offer. Authorized signature on the Bid forms shall constitute an irrevocable offer to provide services specified herein. Offeror shall submit any additional requested documentation, signifying intent to be bound by the terms of the agreement.

- The authorized person signing the bid shall initial all interlineations, annotations, deletions, alterations, erasures and other modifications on the bid.
- Periods of time, stated as days, shall be in calendar days.
- It is the responsibility of all Offerors to examine the entire Request for Bid package and seek clarification of any requirement that may not be clear and to check all responses for accuracy before submitting a bid. Negligence in preparing a bid confers no right of withdrawal after the due date and time.
- OCFA shall not reimburse the cost of developing, presenting, submitting or providing any response to this solicitation.
- Offeror must list any subcontractors to be utilized in the performance of the services specified herein. For each subcontractor, details on respective qualifications must be included.
- Each bidder shall submit its bid in strict conformity with the requirements of the bid documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a bid may render it non-responsive and may cause its rejection. Bidders shall not delete, modify, supplement printed matter on the bid forms.
- **Verbal, telephonic, facsimile, email or other electronic bids or modifications will not be considered.**

26. BID CERTIFICATION

By signature on the Bid Response Forms, Bidder certifies:

- The Bidder has thoroughly examined and become familiar with the requirements of this IFB;
- Clear understanding of the rules as defined in this IFB and compliance with all terms and conditions specified herein;
- The Bidder is an authorized and/or certified retailer and/or installer of the specified items;
- The submission of the bid did not involve collusion or other anti-competitive practices;
- The bid is compliant with all state and federal laws;
- The Bidder will not discriminate against any employee or applicant for employment in violation of Federal or State law;
- The Bidder has not given, offered to give, and does not intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, meal or service to any Director, officer, or employee of OCFA in connection with the submitted offer;
- That the individual signing the submittal is an authorized agent for the Bidder and has the actual authority to legally bind the Bidder to the Contract;
- That its principal and named subcontractors are not debarred, suspended or otherwise excluded by the United States Government, in compliance with the requirements of 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.

27. ACCEPTANCE PERIOD

Unless otherwise specified herein, bids are firm and may be accepted by OCFA at any time within 180 days of bid opening.

28. BID OPENING

All the bids opened by the OCFA will be subject to further evaluation with respect to responsiveness of the bid and for purposes of determining that the bidder is responsible.

29. SUBLETTING AND SUBCONTRACTING.

Pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Public Contract Code), bidders are required to list in their proposal the name, business address, California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render services in or about the construction of the work or improvement, or a subcontractor who specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Plans and

Specifications in excess of 1/2 of 1% of the prime Contractor's total bid or \$10,000, whichever is greater. If a subcontractor's California contractor license number or public works contractor registration number are submitted incorrectly in the bid, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to OCFA within 24 hours after the bid opening.

If the Bidder fails to list a subcontractor for a portion of work or if the Bidder lists more than one subcontractor of the same portion of work in excess of 1/2 of 1% of the total bid or \$10,000, whichever is greater, the Bidder agrees that it is fully qualified to perform that portion of work itself, and that the Bidder shall perform that portion of work itself. If after award of the contract, the Bidder actually subcontracts that portion of work, except as provided in Public Contract Code Section 4107 or 4109, the Bidder shall be subject to the penalties listed in Section 4111 of the Public Contract Code. It is the OCFA's intent for the Subletting and Subcontracting Fair Practices Act to apply to all phases of the work.

29.1 NO INCREASE IN BID COST DUE TO SUBSTITUTION OF SUBCONTRACTOR.

In the event that a subcontractor is substituted in any manner for any reason, any increased cost related to such substitution shall be the sole responsibility of the Contractor. Such substitution shall not cause or result, directly or indirectly, in any increase in the bid price. This subsection shall not be construed to be prior consent to substitution of subcontractors, nor to authorize any substitution that is prohibited by the Subletting and Subcontracting Fair Practices Act.

30. PRICING

Contractors shall provide itemized pricing. No aggregate bids will be considered. The bid must state the amount for which the contractor offers to supply all labor, materials, equipment, tools, transportation, services and applicable taxes to perform all work specified. Bids shall not contain any conditions, limitations or provisions for the work to be done. Alternative bids will not be considered unless requested. The contractor shall set forth for each item of work, in clearly legible figures, a unit item price and a total for each item in the respective spaces provided. In case of a variation between the unit price and the totals shown by the contractor, the unit price will take precedence. In case of discrepancy between the numerical lump sum price and the written lump sum price, the written lump sum price shall prevail.

31. TAXES

No mention shall be made in the proposal of Sales Tax, Use Tax, or any other tax, as all amounts set forth in the bid will be deemed and held to include any such taxes that may be applicable. Bidder acknowledges and agrees that OCFA shall not be responsible for the payment of any increase in any Sales Tax, Use Tax, or any other tax that takes effect after award.

32. COMPLIANCE WITH LAWS

All bids shall comply with current and applicable federal, state, and local laws relative thereto.

33. CRITERIA FOR EVALUATION AND AWARD

The OCFA will award the contract to the lowest responsive, responsible bidder as required by law. The OCFA evaluates three categories of information: responsiveness, responsibility, and price. Bids must meet the following responsiveness and responsibility criteria in order to be considered for award:

- a) RESPONSIVENESS: OCFA will determine whether the bid complies with the instructions for submitting bids including completeness of bid which encompasses the inclusion of all required attachments and submissions. The OCFA will reject any bids that are submitted late. Failure to meet the specifications, project timeline, product availability, or other requirements may result in rejection.

- b) **RESPONSIBILITY:** OCFA will determine whether the bidder is one with whom it can or should do business. Factors that OCFA may evaluate to determine whether a contractor is a “responsible bidder” for purposes of the Public Contract Code include, but are not limited to: excessively high or low priced bids, past performance, references (including those found outside the bid), compliance with applicable laws - including tax laws, business standing, bidder's record of performance and integrity - e.g. has the bidder been delinquent or unfaithful to any contract with OCFA, whether the bidder is qualified legally to contract with the OCFA, financial stability and the perceived ability to perform completely as specified. A bidder must at all times have financial resources sufficient, in the opinion of the OCFA, to ensure performance of the contract and must provide proof upon request. OCFA staff may also use Dun & Bradstreet and/or any generally available industry information to assist in making such determinations. The OCFA reserves the right to inspect and review bidder's facilities, equipment and personnel and those of any identified subcontractors, and by submitting a bid, bidder consents thereto. The OCFA will determine whether any failure to supply information, or the quality of the information, will result in rejection.
- c) **PRICE:** OCFA will then evaluate bids that have met the requirements above for price, quality of product, life cycle cost, maintenance, warranty, etc.

34. GROUNDS FOR DISQUALIFICATION

OCFA may disqualify a submittal for any of the following reasons:

- Contact regarding this procurement is made with any OCFA Director, officer or employee other than those in the Purchasing Department from the time of issuance until the end of the dispute period;
- Evidence of collusion, directly or indirectly, among bidders regarding the amount, terms, or conditions of this solicitation is found;
- Evidence of submitting incorrect information in the response to this solicitation or misrepresenting or failing to disclose material facts during the award process is found;
- Submittal of added terms, conditions, or agreements with the bid document;
- Offering of gifts or souvenirs, even of minimal value, to OCFA Directors, officers or employees;
- The existence of any lawsuit, unresolved contractual claim or dispute between the Bidder and OCFA;
- Evidence of the Bidder's inability to successfully complete the responsibilities and obligations of the bid is found;
- Bidder's default under any OCFA agreement.
- No bidder shall be allowed to make, submit or be interested in more than one bid. No person, firm, corporation, or other entity may submit a sub-proposal to a bidder, or quote prices of materials to a bidder when also submitting as a prime on the same project.

35. PUBLIC RECORD

All bids submitted in response to this IFB shall become the property of OCFA and shall become a matter of public record available for review when required by law, including but not limited to the California Public Records Act.

36. CLAYTON ACT AND CARTWRIGHT ACT

In accordance with Section 7103.5 of the Public Contract Code, in entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the Contractor or subcontractor offers and agrees to assign to OCFA all rights, and interest in and all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

37. INSURANCE

The successful bidder shall procure the insurance in the form and in the amount specified in the Contract Documents, including but not limited to the General Conditions. Failure to do so may result in forfeiture of the bid guarantee. No time extensions or extra payments shall be made to contractor for delays it may encounter in obtaining such coverage.

Contractor shall not commence work under the agreement until he/she has obtained all required insurance, including any and all endorsements, and the insurance has been approved by the OCFA as to form, amount, and carrier, nor shall Contractor allow any subcontractor to commence any work until all insurance required of the subcontractor has been obtained and approved.

38. NOTICE OF INTENT TO AWARD/EXECUTION OF CONTRACT

A notification of OCFA's intent to award contract ("Notice of Intent to Award") will be sent to the successful Offeror(s). Following receipt of the Notice of Intent to Award, and within fourteen (14) calendar days of the notice, the successful Offeror(s) shall complete and/or submit the items listed in Exhibit 4A: Transmittal Page – Bid Award Documents to the Purchasing & Materials Manager or designee.

The successful contractor or any designated subcontractors shall not perform any work on the project prior to attending the pre-construction conference and executing the appropriate certification. In case of failure of the Offeror(s) to execute and return all required documents in a form satisfactory to OCFA and within the time allowed, the OCFA may, at its option, consider that the Offeror(s) has/have abandoned the contract.

39. SUBSTITUTION OF SECURITIES

In conformance with Public Contract Code Section 22300, which is incorporated herein by this reference, the Contractor may substitute securities for any monies retained by the OCFA to ensure performance under the Contract or, in the alternative, may request payment of retention earned directly to an escrow agent.

At the request and expense of the Contractor, the Contractor has the option to deposit securities, which have been approved by the OCFA, with a State or Federally chartered bank as the escrow agent or require the OCFA to deposit 5% of each progress payment with the escrow agent. Said securities will be used as a substitute for retention earnings required to be withheld by the OCFA pursuant to the construction contract. Said securities shall have no obligation to any other construction contract for substitution of securities in lieu of retention. When the Contractor deposits the OCFA approved securities with the escrow agent, the escrow agent shall notify the OCFA within 10 calendar days of the deposit. Said securities shall be evaluated quarterly by the escrow agent to verify the current market value. If the current market value of said securities falls below the required amount, the escrow agent shall notify the Contractor and require additional securities and/or cash to be submitted for OCFA approval, and to be held in the escrow account to meet the Contractor's obligations. The escrow agent shall hold said securities until such time as the escrow agent receives written notification from the OCFA that the Contractor has satisfactorily completed his Contract obligations.

The type of securities deposited and the method of release shall be approved by the OCFA's Office of General Counsel.

If the Contractor chooses not to exercise its rights under Public Contract Code Section 22300, the full five percent (5%) retention will be deducted from all payments. The final retention will be authorized for payment thirty-five (35) days after the date of recordation of the Notice of Completion, if no stop notices have been filed. The OCFA may withhold from release of the final retention amounts authorized under Public Contracts Code Section 7107 and/or 125% of the cumulative amounts identified in all stop notices.

40 AWARD AND EXECUTION OF CONTRACT. If a bid bond is submitted with a 10% of Bid designation for the amount as noted in the OCFA Approved Bid Bond form, a revised Bid Bond with numerical dollar values, both in words and with digits, shall be submitted to the OCFA within three (3) working days of bid opening.

Within seven (7) calendar days after the date of the Notice of Apparent Low Bidder, the Contractor shall execute and return the following documents to the OCFA:

- All required evidence of insurance
- Two (2) Original Signed Contract Agreements

Within fourteen (14) calendar days after the date of the Notice of Award, the Contractor shall execute and return the following documents to the OCFA as applicable to the project:

- | | |
|-----------------------------|-------------------------------------|
| • Faithful Performance Bond | • Water Pollution Control Plan |
| • Material and Labor Bond | • Form W-9 |
| • Construction Schedule | • Encroachment Permit Application |
| • Traffic Control Plan | • Construction Materials Submittals |

FAILURE TO COMPLY WITH ALL OF THE ABOVE WILL RESULT IN ANNULMENT OF THE AWARD AND FORFEITURE OF THE PROPOSAL GUARANTEE AT THE SOLE DISCRETION OF OCFA.

The Contract Agreement shall not be considered binding upon the OCFA until executed by the authorized OCFA officials.

SECTION 3: PROPOSAL DOCUMENTS**BID SUBMITTAL**

To achieve a uniform review process and obtain the maximum degree of comparability, it is required that the Bidder submit the following documents, organized in the manner specified below. All Bidders are expected to provide detailed answers where requested. Additional information, if provided, should be separately identified in the bid. **Failure to submit these documents may result in the bid being deemed non-responsive.**

- ☒ **Transmittal Page One – IFB Response Forms** (*Exhibit 3A*)
- ☒ **Original Bidder's Bond** (*Exhibit 3B*)
- ☒ **Certification of Bid** (*Exhibit 3C*)
- ☒ **Non-Collusion Affidavit** (*Exhibit 3D*)
- ☒ **Contractor's Licensing Statement** (*Exhibit 3E*)
- ☒ **List of Subcontractors** (*Exhibit 3F*)
- ☒ **Designation of Sureties** (*Exhibit 3G*)
- ☒ **Bidder's Certification of Compliance with Insurance Requirements** (*Exhibit 3H*)
- ☒ **Certification of Site Examination** (*Exhibit 3I*)
- ☒ **Bid Sheets** (*Exhibit 3J*)
- ☒ **Project Approach and Schedule** (*Exhibit 3K*)
- ☒ **List of Project References** (*Exhibit 3L*)
- ☒ **Qualifications Questionnaire** (*Exhibit 3M*)
- ☒ **Party and Participant Disclosure Forms** (*Exhibit 3N*)

3A: TRANSMITTAL PAGE**TO: Orange County Fire Authority****FROM:** J&L Constructors Inc.

(Legal Name of Contractor)

PROJECT: FIRE STATION 41 AIRFIELD MODIFICATIONS

The contractor will accept in full payment for the work specified herein the following total lump sum amount, inclusive of all applicable taxes and markup (transferred from Exhibit 3J: Bid Sheets):

BID LUMP SUM:**NUMERICAL:** \$ 790,000**WRITTEN:** Seven hundred and ninety thousand dollars even**ACKNOWLEDGMENT OF ADDENDA:**

No.: <u>1</u>	Dated: <u>1/11/24</u>	No.: <u>3</u>	Dated: <u>1/11/24</u>
No.: <u>2</u>	Dated: <u>1/17/23</u>	No.: <u>4 & 5</u>	Dated: <u>1/11/24</u>
	<u>1/11/24</u>		

BIDDER'S CHECKLIST:

Bidder certifies that the following documents are included in its Bid:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Transmittal Page (Exhibit 3A) | <input checked="" type="checkbox"/> List of Subcontractors (Exhibit 3F) | <input checked="" type="checkbox"/> Project Approach and Schedule (Exhibit 3K) |
| <input checked="" type="checkbox"/> Bidder's Bond (Exhibit 3B) | <input checked="" type="checkbox"/> Designation of Sureties (Exhibit 3G) | <input checked="" type="checkbox"/> List of Project References (Exhibit 3L) |
| <input checked="" type="checkbox"/> Certification of Bid (Exhibit 3C) | <input checked="" type="checkbox"/> Bidder's Certification of Compliance with Insurance Requirements (Exhibit 3H) | <input checked="" type="checkbox"/> Qualifications Questionnaire (Exhibit 3M) |
| <input checked="" type="checkbox"/> Contractor's Licensing Statement (Exhibit 3D) | <input checked="" type="checkbox"/> Certification of Site Examination (Exhibit 3I) | <input checked="" type="checkbox"/> Party and Participant Disclosure Forms (Exhibit 3N) |
| <input checked="" type="checkbox"/> Non-Collusion Affidavit (Exhibit 3E) | <input checked="" type="checkbox"/> Bid Sheets (Exhibit 3J) | |

MINIMUM QUALIFICATIONS:

Bidder Meets the Minimum Qualifications as follows:

CSLB License #: 974212 **Expiration:** 03/31/25

DIR Registration #: 1000056885 **Expiration:** 06/30/26

Number of Years of Experience: 12

SIGNATURE OF CONTRACTOR: **PRINTED NAME:** Bryson Miller **TITLE:** Owner

3B: BIDDER'S BOND

(10% of Agreement Price)

Bidders must use this form, NOT a surety company form

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, J & L Constructors, Inc. as Principal ("Principal"), and The Ohio Casualty Insurance Company as Surety ("Surety"), a corporation organized and existing under and by virtue of the laws of the State of New Hampshire and authorized to do business as a surety in the State of California, are held and bound unto the Orange County Fire Authority ("OCFA") of Orange County, State of California as Obligee, in the sum of Ten Percent of Bid Amount Dollars (\$ 10% of Bid Amount) lawful money of the United States of America, for the payment of which sum well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the OCFA for all work specifically described in the accompanying bid;

NOW, THEREFORE, if the Principal is awarded the Project and, within the time and manner required under the Bid Documents, after the prescribed forms are presented to Principal for signature, enters into a written contract ("Agreement"), in the prescribed form in accordance with the bid, and files two bonds, one guaranteeing faithful performance and the other guaranteeing payment for labor and materials as required by law, and meets all other conditions to the contract between the Principal and the Obligee becoming effective, or if the Principal shall fully reimburse and save harmless the Obligee from any damage sustained by the Obligee through failure of the Principal to enter into the Agreement and to file the required performance and labor and material bonds, and to meet all other conditions to the Agreement between the Principal and the Obligee becoming effective, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. The full payment of the sum stated above shall be due immediately if Principal fails to submit and execute the Agreement award documents as required in the Invitation for Bid Document within the timeline specified therein.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work, or to the specifications.

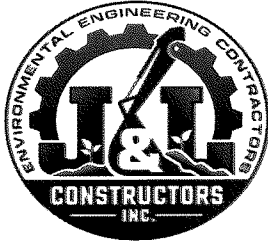
In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorneys' fee to be fixed by the Court.

If the OCFA awards the bid, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (180) days after the date of the bid opening.

[Signature Page Follows]

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 16th day of November, 2024, in accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract:

CONTRACTOR:
(Affix Corporate Seal)



J & L Constructors, Inc.

Principal

By

Bryson Miller Owner

Print Name and Title of Signatory

SURETY:
(Affix Corporate Seal)



The Ohio Casualty Insurance Company

Surety

By Bart Stewart - Attorney-in-Fact

Bart Stewart

Name of California Agent of Surety

755 Neptune Ave. Encinitas, CA 92024

Address of California Agent of Surety

760-230-1182

Telephone Number of California Agent of Surety

Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8206236 - 969556**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Bart Stewart

all of the city of Encinitas state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 3rd day of September, 2021.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By:

David M. Carey
David M. Carey, Assistant Secretary

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 3rd day of September, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By:

Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 11th day of January, 2023.



By:

Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

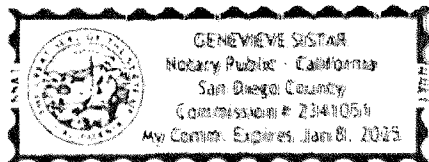
State of California)
County of San Diego)

On November 16, 2023 before me, Genevieve Sistar, Notary Public,
Date January 11th, 2024 Here Insert Name and Title of the Officer
personally appeared Bart Stewart
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature Genevieve Sistar
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

☐ Corporate Officer — Title(s): _____

☐ Partner — ☐ Limited ☐ General

☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator

☐ Other: _____

Signer Is Representing: _____

Signer's Name: _____

☐ Corporate Officer — Title(s): _____

☐ Partner — ☐ Limited ☐ General

☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator

☐ Other: _____

Signer Is Representing: _____

3C: CERTIFICATION OF BID

In responding to IFB RO2614D - FIRE STATION 41 AIRFIELD MODIFICATIONS the undersigned Bidder(s) certifies the following:

1. Bidder agrees to provide all necessary labor, materials, equipment, and services to OCFA per the specifications contained herein and that all furnished labor is able to work in harmony with all other elements of labor employed or to be employed on the work.
2. Bidder further agrees to the terms and conditions specified herein, the following terms and conditions that are a part of this IFB, and the resulting Construction Services Agreement. **If there are any exceptions to or deviations from the terms of the Contract Documents (Section 4), they must be stated in an attachment included with the bid.** Where Bidder wishes to propose alternatives to the OCFA's contractual requirements, these should be thoroughly explained. While exceptions will be considered, OCFA reserves the right to determine that an offer is non-responsive based upon any exceptions taken. OCFA's governing body reserves the right to deny any material exceptions to the contract. If no contractual exceptions are noted, Bidder will be deemed to have accepted the form of the contract requirements set forth in Section 4.
3. The Bidder hereby certifies that the individual signing the submittal is an authorized agent for the Bidder and has the OCFA to legally bind the Bidder to the Contract.
4. The undersigned has reviewed the work outlined in the documents and fully understands the scope of work required, understands the construction and project management function(s) as described, and that each contractor who is awarded a contract shall be in fact the prime contractor, not a subcontractor, to the OCFA, and agrees that its offer, if accepted by the OCFA, will be the basis for the contractor to enter into a contract with the OCFA.
5. The undersigned had notified the OCFA in writing any discrepancies or omission or of any doubt, questions, or ambiguities about the meaning of any of the IFB documents.
6. By submitting this Offer Form and signing below, the liquidated damages clause of the Agreement is hereby acknowledged.
7. It is understood that the OCFA reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of one hundred eighty (180) days.
8. Contractor expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code, §12650 et seq.), the OCFA will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the contractor may be subject to criminal prosecution.
9. Labor Code Section 1735 requires that no discrimination be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status or sex of such persons, except as provided in Government Code Section 12940. Bidder certifies that it does not discriminate in its employment with regard to the factors set forth in Labor Code Section 1735; that it is in compliance with all federal, state and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal employment opportunity in employment.
10. The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager: (1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency; (2) has not been suspended, debarred, voluntarily excluded or determined ineligible by

any Federal agency within the past 3 years; (3) does not have a proposed debarment pending; and (4) has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

To the Orange County Fire Authority:

Contractor hereby certifies to the OCFA that all representations, certifications, and statements made by the contractor, as set forth in this offer form, are true and correct and are made under penalty of perjury. The Undersigned hereby offers and shall furnish the services in compliance with all terms, scope of work, conditions, specifications, and amendments in the Request for Proposal which is incorporated by reference as fully set forth herein. The representations herein are made under penalty of perjury.

LEGAL NAME OF CONTRACTOR: J&L Constructors Inc.**SIGNATURE OF CONTRACTOR:** **PRINTED NAME:** Bryson Miller**TITLE:** Owner**CONTRACTOR ADDRESS:** 80 Huntington Street SPC 706**CITY:** Huntington Beach**STATE:** CA**ZIP CODE:** 92648**IF CONTRACTOR IS A CORPORATION, AFFIX CORPORATE SEAL AND COMPLETE THE FOLLOWING:****NAME OF CORPORATION:** J&L Constructors Inc.**DATE OF INCORPORATION:** 03/31/2016**PRESIDENT:** Bryson Miller**TREASURER:** Vanessa Miller**SECRETARY:** Josiah Miller**MANAGER:** Luke Miller

SUBSCRIBED AND SWORN TO BEFORE ME 24
THIS 11th **DAY OF** JAN 2028

BY Bryson Miller
(Print Name)


(Signature of Notary Public)


(Signature)

(Attach Jurat)

TITLE Owner

(SEAL)

(SEAL)



CALIFORNIA JURAT

GOVERNMENT CODE § 8202

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Riverside

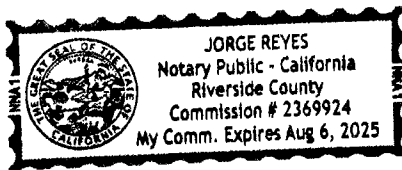
Subscribed and sworn to (or affirmed) before me on
this 30 day of November, 2023, by
Date Month Year

(1) Bryson William Miller

(and (2) [Signature]),
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to
be the person(s) who appeared before me.

Signature [Signature]
Signature of Notary Public



Place Notary Seal and/or Stamp Above

OPTIONAL

Completing this information can deter alteration of the document or
fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

3D: NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
COUNTY OF Orange) SS

In conformance with Public Contract Code Section 7106, the party making the foregoing bid declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 11/2 [date], at Irvine [city], CA CA [state]."

Signed

Owner

Title

Subscribed and sworn to before me
this 11th day of January, 2024.

Signature of Notary Public

(SEAL)



CALIFORNIA JURAT

GOVERNMENT CODE § 8202

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State of California

County of Riverside

Subscribed and sworn to (or affirmed) before me on
this 30th day of November, 2023, by
Date Month Year

(1) Bryson William Miller

(and (2) [Signature]),
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to
be the person(s) who appeared before me.

Signature [Signature]
Signature of Notary Public



Place Notary Seal and/or Stamp Above

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Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

3E: CONTRACTOR'S LICENSING CERTIFICATION

If the contractor is a sole proprietorship or another entity that does business under a fictitious name, the bid shall be in the real name of the respondent with a designation following showing "DBA (the fictitious name)," provided however, that no fictitious name shall be used unless there is a current registration with the Orange County Recorder. If the bid is submitted by a corporation, provide an additional attachment that states the names of the officers who can sign an agreement on behalf of the corporation and whether more than one officer must sign. If the bid is by a partnership or a joint venture, state the names and addresses of all general partners and joint venture parties.

The undersigned certifies that the contractor is licensed in accordance with the laws of the State of California to do the type of work required. Contractor further certifies that it is regularly engaged in the general class and type of work called for in this Request for Informal Bid. The successful contractor and subcontractors are required to hold the State of California Contractor's License(s) and DIR registration as required by SB854. Please complete and/or provide all requested information.

CONTRACTOR'S
LICENSE NO: 974212 **CLASS:** A **EXPIRATION:** 03/31/25

CA DIR REGISTRATION NUMBER: 1000056885 **EXPIRATION:** 06/30/26

CONTRACTOR TELEPHONE: 714-931-9367 **CONTRACTOR FAX:** N/A

BUSINESS ADDRESS: 80 Huntington Street SPC 706, Huntington Beach, CA 92648

LENGTH OF TIME IN BUSINESS: 12 years

LENGTH OF TIME AT CURRENT LOCATION: 12 years

NUMBER OF EMPLOYEES: 10 **NUMBER OF CURRENT CLIENTS:** 2

If the contractor operates as a sole proprietorship:

NAME OF INDIVIDUAL CONTRACTOR: _____

SIGNATURE OF OWNER: _____

BUSINESS ADDRESS: _____

If the contractor operates under a partnership:

NAME OF FIRM: _____

PARTNER NAME: _____ **PARTNER TITLE:** _____

PARTNER ADDRESS: _____

SIGNATURE OF PARTNER: _____

PARTNER NAME: _____ **PARTNER TITLE:** _____

PARTNER ADDRESS: _____

SIGNATURE OF PARTNER: _____

If contractor operates under a corporation:

NAME OF CORPORATION: J&L Constructors Inc.

CORPORATION ORGANIZED UNDER THE LAWS OF THE STATE OF CALIFORNIA:

 **SIGNATURE OF CORPORATION PRESIDENT**

 **SIGNATURE OF THE CORPORATION SECRETARY**

DATE 1/11/24

Management person responsible for direct contact with OCFA:

NAME: Bryson Miller **TITLE:** Owner

TELEPHONE: 714-931-9367 **E-MAIL:** bryson@jandlcon.com

Person responsible for the day-to-day servicing of the account/project.

NAME: Adrian Baharona **TITLE:** Superintendent

TELEPHONE: 714-931-9367 **E-MAIL:** adrian@jandlcon.com

Bryson Miller

SUBSCRIBED AND SWORN TO BEFORE ME

THIS 11th **DAY OF** JAN **20** 24

BY


(Print Name)

(Signature of Notary Public)

(Signature)

(Attach Jurat)

TITLE Owner

(SEAL)

(SEAL)



CALIFORNIA JURAT

GOVERNMENT CODE § 8202

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State of California

County of

Riverside

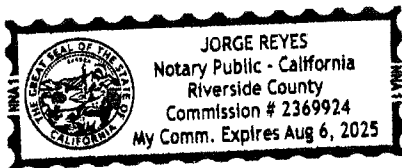
Subscribed and sworn to (or affirmed) before me on
this 30th day of November, 2023, by
Date Month Year

(1) Bryson Williams Miller

(and (2) _____),
Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to
be the person(s) who appeared before me.

Signature _____
Signature of Notary Public



Place Notary Seal and/or Stamp Above

OPTIONAL

Completing this information can deter alteration of the document or
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Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

3F: PROPOSED SUBCONTRACTORS

Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., Bidder must clearly set forth the name and location of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work in an amount in excess of one-half of one percent (0.5%) of bidder's total bid and the kind of work that each will perform. This is to include any subcontractor that will specially fabricate and install a portion of work according to detailed drawings contained in the plans and specifications in the amount greater than one half of one percent (.05%) of the Contractor's total bid.

Furthermore, Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., if bidder fails to list as to any portion of work, or if bidder lists more than one subcontractor to perform the same portion of work (i.e. bidder must indicate what portion of the work each subcontractor will perform), bidder must perform that portion itself or be subjected to penalty under applicable law. If alternate bids are called for and Bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the base bid, Bidder must list subcontractors that will perform work in an amount in excess of one half of one percent (0.5%) of bidder's total bid, including alternates.

In case more than one subcontractor is named for the same kind of work, the Contractor is to state the portion of work that each subcontractor will perform. Bidders or suppliers of materials only do not need to be listed. If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document.

Subcontractor Name	Access General Contracting, Inc.				
Address	357 N. Sheridan St., Suite 100				
DIR Registration No.	1000016718	CSLB No.	992223	Class	A
Phone	951-223-8258	Email	Milton@accessgcinc.com		
Percent of Total Contract	20%				
Specific Scope of Work	Asphalt Paving				
Subcontractor Name					
Address					
DIR Registration No.		CSLB No.		Class	
Phone		Email			
Percent of Total Contract					
Specific Scope of Work					
Subcontractor Name					
Address					
DIR Registration No.		CSLB No.		Class	
Phone		Email			
Percent of Total Contract					
Specific Scope of Work					
Subcontractor Name					
Address					
DIR Registration No.		CSLB No.		Class	
Phone		Email			
Percent of Total Contract					
Specific Scope of Work					
Subcontractor Name					
Address					
DIR Registration No.		CSLB No.		Class	
Phone		Email			
Percent of Total Contract					
Specific Scope of Work					

3G: DESIGNATION OF SURETIES

The following are the names, addresses and phone numbers for all brokers and sureties from whom Bidder intends to procure insurance and bonds.

Name	Stewart Surety & Insurance Services, Inc.
Address	755 Neptune Ave, Encinitas, CA 92024
Phone No.	760-230-1182
Name	
Address	
Phone No.	
Name	
Address	
Phone No.	
Name	
Address	
Phone No.	

**3H: BIDDER'S CERTIFICATION OF COMPLIANCE WITH
INSURANCE REQUIREMENTS FOR PUBLIC WORKS CONSTRUCTION**

BIDDER agrees, acknowledges and is fully aware of the insurance requirements as specified in the INSTRUCTIONS TO BIDDERS FOR RO2614D - FIRE STATION 41 AIRFIELD MODIFICATIONS AND IN THE SPECIAL PROVISIONS FOR RO2614D - FIRE STATION 41 AIRFIELD MODIFICATIONS and accepts all conditions and requirements contained therein.

BIDDER acknowledges that ACORD forms will not be accepted when policy forms or endorsements are required.

BIDDER acknowledges that some insurance companies may be unwilling to issue all of the policy coverage and endorsements required in the conditions and requirements. It is BIDDER's responsibility to ensure that it will be able to provide evidence of all required types and amounts of insurance and all policy endorsements required hereunder.

BIDDER represents and warrants that, prior to signing below, BIDDER has confirmed with BIDDER's insurer(s) or insurance broker(s) that all required evidence of the types and amounts of insurance, and all required endorsements of insurance coverage, will be timely provided to OCFA in accordance with the conditions and requirements. Failure to provide all required evidence of insurance and endorsements when required will constitute a material breach of the agreement.

J&L Constructors Inc.

Bidder

Bryson Miller

By

Date

3I: CERTIFICATION OF SITE EXAMINATION

By signing below, Bidder certifies each of the following:

1. Bidder is fully informed of the conditions relating to the construction of the work and the employment of labor thereon
2. The specifications for the work show conditions as they are believed to exist. The conditions shown do not constitute a representation or warranty express or implied by the OCFA, its officers or agents that such conditions actually exist.
3. Bidder has thoroughly examined the site for the work described herein and attended the mandatory pre-bid inspection of the building(s) and site(s), conducted by the OCFA. Failure to attend the mandatory pre-bid inspection shall be cause for rejection of the bid.
4. Bidder has observed the designated Contractor work areas, material equipment storage areas, access routes, as well as the ability to protect existing surface and subsurface improvements. No claim for allowance of time or money will be allowed for such matters.
5. Bidder is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the work to be performed.
6. Bidder acknowledges that there are certain peculiar and inherent conditions existent in the construction of the work that may create, during the work, unusual or peculiar unsafe conditions hazardous to persons and property and expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the work with respect to such hazards.

To the Orange County Fire Authority:

I certify that I have examined the site and the bid is complete and there will be no requests for additional payment for failure to examine the site thoroughly.

Date of Site Examination: 11/13/23

Company Name: J&L Constructors Inc.

Signature: 

Printed Name / Title of Company Representative: Bryson W Miller / Owner

Date: 12/4/23 1/11/24 

3J: BID SHEETS

Cost Analysis: The bid information is relevant to a determination of whether the pricing offered is fair and reasonable in light of the Scope of Services to be provided. **Failure to submit the information in the format requested may result in the bid being deemed non-responsive.**

Instructions: - Input your information in the blank cells as follows:

- Insert a description for each Line
- Insert the lump sum subtotal for each category
- Add all categories to arrive at the Project Grand Total

Line	Description	
1	All Labor to complete the contract per plan set.	
SUBTOTAL LABOR:		335,000
CATEGORY II: MATERIALS & SUPPLY INFORMATION (Labor & Supply)		
2	All materials per plan	
SUBTOTAL MATERIALS:		135,000
CATEGORY III: EQUIPMENT		
3	All equipment necessary to complete the project per plan	
SUBTOTAL EQUIPMENT:		100,000
CATEGORY IV: OVERHEAD & INDIRECT COSTS		
4	All monies for overhead and indirect costs to see the project to completion per plan.	
SUBTOTAL OVERHEAD:		100,000
PROJECT SUBTOTAL		670,000
CATEGORY V: PROFIT		
5	Provide the percentage of the project subtotal (above) that will be assessed as profit:	17%
SUBTOTAL PROFIT (IN DOLLARS)		115,000
CATEGORY VI: PERMITS/FEES		
6	Provide an estimate of the permits and fees for the project. These fees will be reimbursed at actual cost or may be paid directly to the regulating agency by OCFA.	Enchroachment.....etc...
SUBTOTAL PERMITS/FEES		5,000
PROJECT GRAND TOTAL		790,000

3K: PROJECT APPROACH AND TIMELINE

Failure to provide the information requested below may result in the bid being deemed non-responsive:

1. Submit a Rough Construction Schedule. This will be the basis for the approved Construction Schedule.
2. Submit a Rough Schedule of Values, including mobilization and field office costs, in a format consistent with AIA Document G703 – 1992. This will be the basis for the approved Schedule of Values.
3. Submit a narrative explanation of the proposed Construction Schedule and Schedule of Values. The narrative should include project phases and major project milestones.

#3 Project Construction Schedule and Schedule of Values Narrative.

Precon with staff to discuss daily operations tasks required by co-op use of Fullerton Airport and OCFA routines.

Precon survey and layout.

Mobilize Equipment, trucks and trailers to specified location onsite for daily tasks.

Set up lighted barricades and traffic control. Saw cut and grind perimeter for work area delineation.

Milestone #1 Demo Asphalt and Concrete

Milestone #2 Over X 1' half flop to 90% or better, then repeat for remaining half. Export extra material or Import

Install conduits during the process.

Survey, stake and import base along with concrete forms.

Fabricate and install steel with dowels and pour pads.

Remove forms and grade class 2 base per plan. Final light replacements and any misalaneous items.

Milestone #3 Pave 6 over 6 AC.

Stripe and demobilize.

Our SOV is pretty self explanatory with milestones and payments for items. We will bill every 30 days with our mobilization and pre payment due upon arrival.

We anticipate weather and changes permitting total construction to take approximately 3-4 months.

OCFA

Monthly Payment Estimate Summary

Progress Payment No. 1

Contract: RO2614D Fire Station 41

Contractor: J & L Constructors Inc.

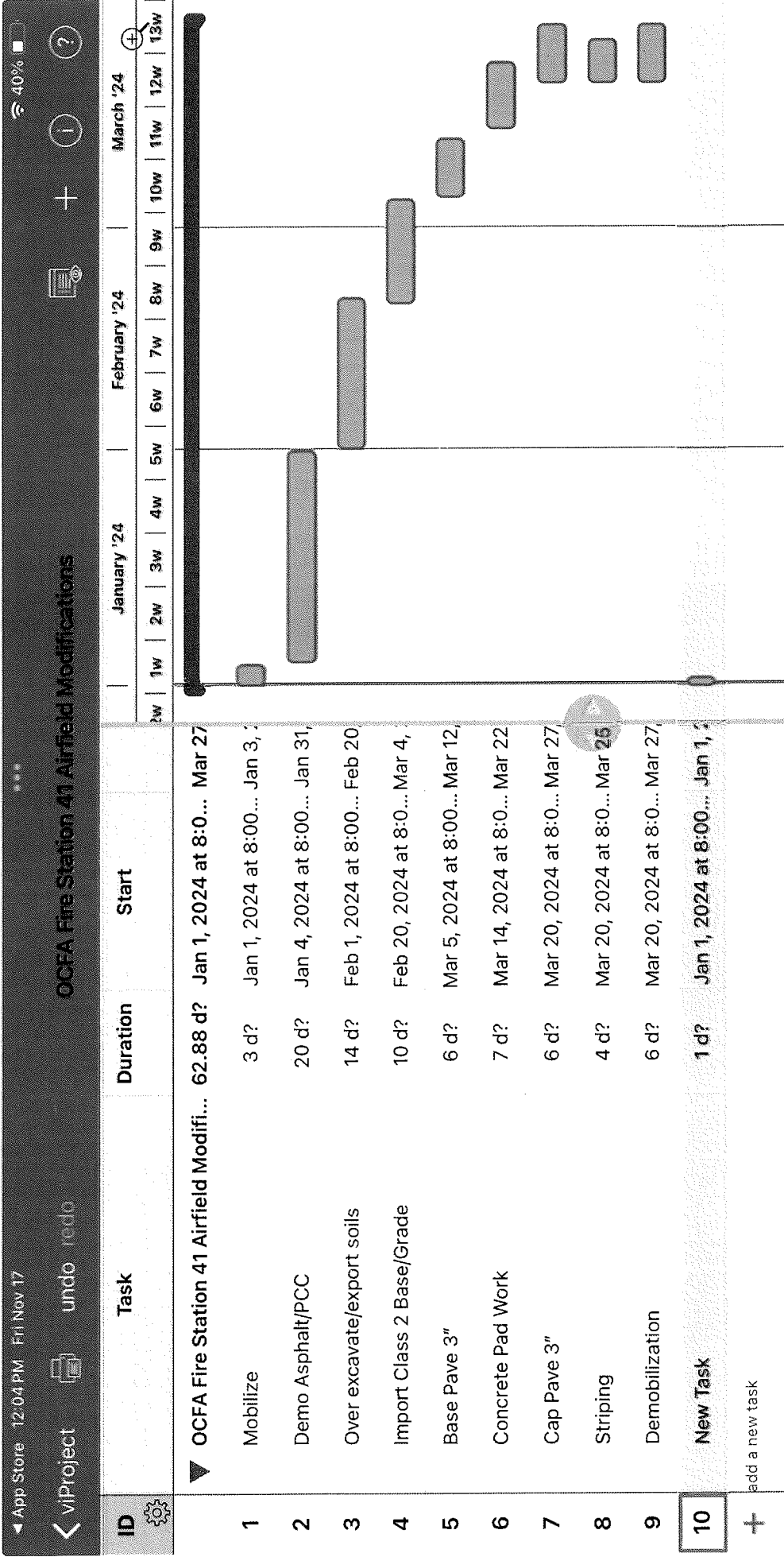
Contract # RO2614D

Period:	1/1/2024	to	1/1/2024	Work Order No.	C2202	1/1/2024
				Previous Total	This Month	Total To Date
Total Earnings for Work and Materials Installed				\$0.00	\$0.00	\$ -
Less: 5% Retainage.....				\$ -	\$ -	\$ -
Net Earnings.....				\$ -	\$ -	\$ -
Less: Previous Payments.....						\$ -
Less: Withholdings.....						\$ -
Less: Liquidated Damages.....						\$ -
Net Payment this Estimate.....						\$ -
% Time Elapsed - As of :		1/1/2024	0.0%	% Work Completed Based on Cost:		0.0%
Contract Completion Data				Contract Budget Data		
Notice to Proceed Date..... 1/1/2024				Original Contract Amount..... \$ 790,000.00		
Original Contract Completion Time..... 60				Change Order Amount..... \$ -		
Approved Time Extensions..... 0				Total Contract Amount..... \$ 790,000.00		
Contract Completion Date..... 3/1/2024						
Certification by Owner's Representatives				Certification of Contractor		
I certify that I have checked and verified this Progress Payment Application and to the best of my knowledge and belief, it is a true and correct statement of work performed and/or material supplied by the contractor; that all work included in this estimate has been inspected by me and that it has been performed and/or supplied in full accordance with requirements of the contract.				According to the best of my knowledge and belief, I certify that all items and amounts shown in this progress payment application are correct: all work has been performed and/or material supplied in full accordance with the requirements of the referenced contract, and/or additions; that the foregoing is a true statement of the contract amount up to and including the last day of the period covered in the progress payment application; that no part of the "balance" due this payment has been received.		
*PLEASE SIGN ON THE LINE ABOVE YOUR TITLE.				In addition, I certify that this payment complies with State of California prevailing wage requirement provided in the contract.		
Inspector		Date				
Construction Manager		Date				
Project Manager		Date				
Engineering Manager		Date				
Director of Engineering and Water Resources		Date				
Assistant General Manager		Date		Contractor		
				Date		

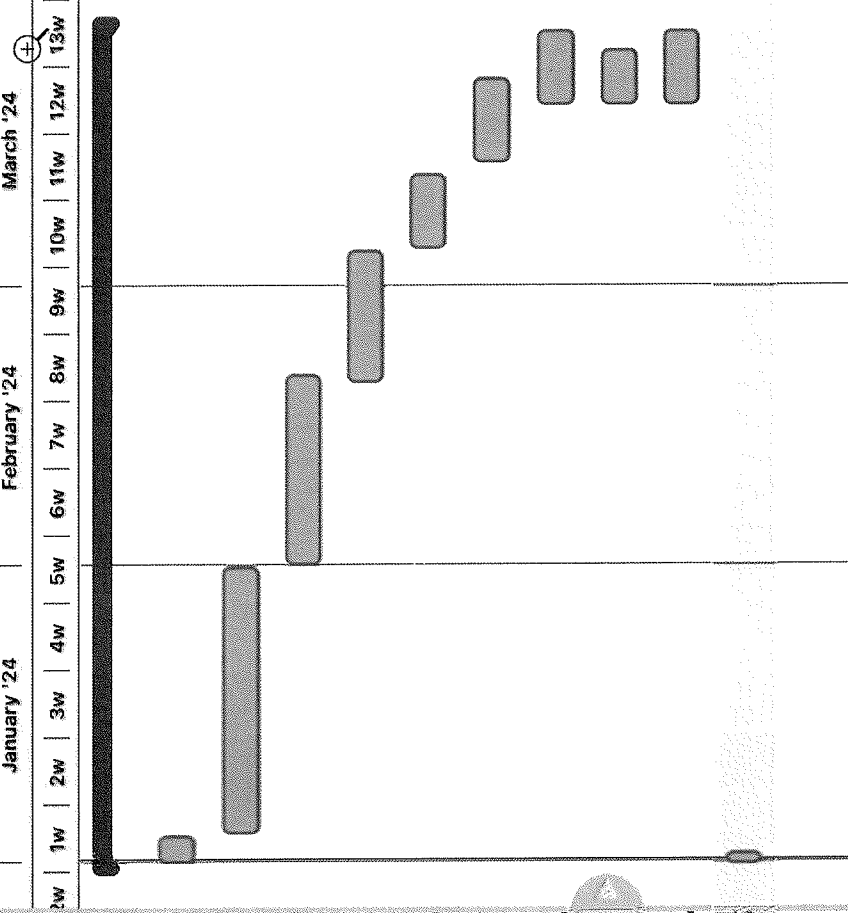
Orange County Fire Authority Fire Station 41 Fical Year 2024 Project (RO2614D) Pay App 1

Owner				Contractor				Period Covered				Progress Payment # 1			
Orange County Fire Authority 1 Fire Authority Lake Elsinore, CA 92531 Contact: Shawnele Morelos Phone: 951-674-3146 Fax: 951-674-7554				J & L Constructors Inc. Contract No. 917 29104 Basewood Lake Elsinore, CA 92530 Phone: 714-931-9367 FAX: n/a				From: January 1, 2024 Through: February 1, 2024							
Item No.	Bid Item Description (Abbreviated from Contract Specifications)	Quantity	Units	Unit Costs	Contract Amount	This Period Progress Payment Request		Previous Progress Payments to Date		Total Payments to Date					
						Quantity % Comp	Cost	Quantity % Comp	Cost	Quantity % Comp	Cost	Retainage	Cost	Retainage	Cost - Ret.
1	Mobilization / Demobilization, Bonds, and Cleanup	1	LS	\$50,000.00	\$50,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1.1	Bonds	1		\$25,000.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
1.2	Mobilization	1		\$10,000.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
1.3	Demobilization	1		\$10,000.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
1.4	Preconstruction Videos/Photos	1		\$2,500.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
1.5	Post Construction Videos/Photos	1		\$2,000.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
1.6	BMP Implementation and Erosion Control/Compliance	1		\$500.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
2	Encroachment Permit, Haul Route Permit, and Traffic Control	1	LS	\$5,000.00	\$5,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2.1	Encroachment Permit			\$0.00		100%	\$0.00	0%	\$0.00	100%	\$0.00				
2.2	Haul Route Permit			\$0.00		100%	\$0.00	0%	\$0.00	100%	\$0.00				
2.3	Traffic Control	1	LS	\$5,000.00		0%	\$0.00	0%	\$0.00	0%	\$0.00				
3	Excavation Safety Measures			\$2,000.00	\$2,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
4	Verification of Subsurface Utility Locations, Potholing and Field Dimensions	1	LS	\$2,000.00	\$2,000.00	100%	\$0.00	100%	\$0.00	100%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
5	Demo Asphalt and PCC/Export Soils	1	EA	\$250,000.00	\$250,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6	Over Excavation	1	EA	\$31,000.00	\$31,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
7	Recompaction	1	EA	\$50,000.00	\$50,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
8	Base Install	1	EA	\$50,000.00	\$50,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9	Concrete Pad Install	1	EA	\$100,000.00	\$100,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10	3" Base Pave	1	EA	\$100,000.00	\$100,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
11	3" Cap Pave	1	EA	\$100,000.00	\$100,000.00	0%	\$0.00	18%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
12	Gutter	1	EA	\$50,000.00	\$50,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
13	Striping	1	EA	\$50,000.00	\$50,000.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Applied					\$790,000.00	#REF!		#REF!		#REF!		\$0.00		\$0.00	
						Total Cost:	#REF!	Total Cost:	#REF!			Total Cost:	#REF!		
						Retainage Total:	#REF!	Retainage Total:	#REF!			Retainage Total:	#REF!		
						Cost - Retainage:	#REF!	Cost - Retainage:	#REF!			Cost - Retainage:	#REF!		

Change Order Summary				
No.	Description	Quantity	Unit	Item Total
				\$0.00
				\$0.00
	Total:			\$0.00



OCFA Fire Station 41 Airfield Modifications





ORANGE COUNTY FIRE AUTHORITY

IFB – RO2614D Addendum 1

FIRE STATION 41 AIRFIELD MODIFICATIONS

November 17, 2023

This addendum is issued to extend the IFB due date and to provide additional information.

Updated IFB Submittal Deadline: No later than 11:00AM, PST., Wednesday, December 6, 2023

The attendance sheet is attached as part of this Addendum.

IMPORTANT: If you have submitted a proposal before this addendum was issued, your proposal will be invalidated. After you have reviewed the addendum, you must resubmit your proposal acknowledging receipt of this addendum through PlanetBids.

Thank you for your interest in doing business with OCFA.

Rothchild Ong | Assistant Purchasing Agent
rothchildong@ocfa.org | (714) 573-6642

A handwritten signature in black ink, appearing to be "Rothchild Ong", written in a cursive style.

1/11/24



ORANGE COUNTY FIRE AUTHORITY

IFB – RO2614D Addendum 2

FIRE STATION 41 AIRFIELD MODIFICATIONS

November 27, 2023

This addendum is issued to extend the online Q&A period, extend the IFB due date, and provide additional technical information.

Updated Q&A Deadline: No later than 5:00PM, PST., Wednesday, November 29, 2023

Updated IFB Submittal Deadline: No later than 11:00AM, PST., Thursday, December 14, 2023

OCFA Apron Improvement Addendum – Plans and Technical Specifications is attached as part of this Addendum.

IMPORTANT: If you have submitted a proposal before this addendum was issued, your proposal will be invalidated. After you have reviewed the addendum, you must resubmit your proposal acknowledging receipt of this addendum through PlanetBids.

Thank you for your interest in doing business with OCFA.

Rothchild Ong | Assistant Purchasing Agent
rothchildong@ocfa.org | (714) 573-6642



1/11/24



ORANGE COUNTY FIRE AUTHORITY

IFB – RO2614D Addendum 3

FIRE STATION 41 AIRFIELD MODIFICATIONS

December 14, 2023

This addendum is issued to extend the IFB due date.

Updated IFB Submittal Deadline: No later than 11:00AM, PST., Thursday, December 28, 2023

IMPORTANT: If you have submitted a proposal before this addendum was issued, your proposal will be invalidated. After you have reviewed the addendum, you must resubmit your proposal acknowledging receipt of this addendum through PlanetBids.

Thank you for your interest in doing business with OCFA.

Rothchild Ong | Assistant Purchasing Agent
rothchildong@ocfa.org | (714) 573-6642

A handwritten signature in black ink, appearing to be "Rothchild Ong", written in a cursive style.

1/11/24



ORANGE COUNTY FIRE AUTHORITY

IFB – RO2614D Addendum 4

FIRE STATION 41 AIRFIELD MODIFICATIONS

December 26, 2023

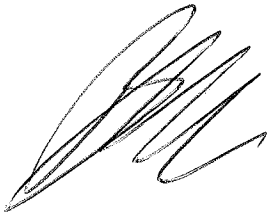
This addendum is issued to extend the IFB due date.

Updated IFB Submittal Deadline: No later than 11:00AM, PST., Thursday, January 11, 2024

IMPORTANT: If you have submitted a proposal before this addendum was issued, your proposal will be invalidated. After you have reviewed the addendum, you must resubmit your proposal acknowledging receipt of this addendum through PlanetBids.

Thank you for your interest in doing business with OCFA.

Rothchild Ong | Assistant Purchasing Agent
rothchildong@ocfa.org | (714) 573-6642



1/11/24



ORANGE COUNTY FIRE AUTHORITY

IFB – RO2614D Addendum 5

FIRE STATION 41 AIRFIELD MODIFICATIONS

December 27, 2023

This addendum is issued to extend the online Q&A Period, extend the IFB due date and provide additional information as requested.

Updated Q&A Deadline: No later than 5:00PM, PST., Thursday, January 4, 2024

Updated IFB Submittal Deadline: No later than 11:00AM, PST., Thursday, January 18, 2024

OCFA Apron Improvement Addendum 5 – Plans and Technical Specifications is attached as part of this Addendum.

IMPORTANT: If you have submitted a proposal before this addendum was issued, your proposal will be invalidated. After you have reviewed the addendum, you must resubmit your proposal acknowledging receipt of this addendum through PlanetBids.

Thank you for your interest in doing business with OCFA.

Rothchild Ong | Assistant Purchasing Agent
rothchildong@ocfa.org | (714) 573-6642

A handwritten signature in black ink, appearing to be "Rothchild Ong", written over a large, faint, stylized "M" or "R" watermark.

1/11/24

SECTION 4: CONTRACT DOCUMENTS

CONTRACT SUBMITTALS (SUCCESSFUL BIDDER ONLY)

Within fourteen calendar days (14) of the issuance of the Notice to Proceed, the successful Bidder must submit the documents below. Failure to do so may result in the contract being deemed abandoned.

- ☒ **Transmittal Page Two – Bid Award Documents** (Exhibit 4A)
- ☐ **Original Performance Bond** (Exhibit 4B)
- ☐ **Original Payment (Labor and Materials) Bond** (Exhibit 4C)
- ☒ **Award Certifications** (Exhibit 4D)
- ☒ **IRS Form W9** (Exhibit 4E)
- ☒ **All required Insurance Certificates and Endorsements**
- ☒ **Signed Contract Agreement** (Exhibit 4F)
- ☒ **General Conditions** (Exhibit 4G)

4A: TRANSMITTAL PAGE TWO – BID AWARD DOCUMENTS**TO: Orange County Fire Authority****FROM: J&L Constructors, Inc.**

(Legal Name of Contractor)

PROJECT: FIRE STATION 41 AIRFIELD MODIFICATIONS

AWARDED CONTRACTOR'S CHECKLIST:

The awarded Contractor is required to provide the following documents:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Transmittal Page (<i>Exhibit 4A</i>) | <input checked="" type="checkbox"/> Award Certifications (<i>Exhibit 4D</i>) | <input checked="" type="checkbox"/> Signed Agreement (<i>Exhibit 4F</i>) |
| <input type="checkbox"/> Performance Bond (<i>Exhibit 4B</i>) | <input checked="" type="checkbox"/> W9 (<i>Exhibit 4E</i>) | |
| <input type="checkbox"/> Payment Bond (<i>Exhibit 4C</i>) | <input checked="" type="checkbox"/> Insurance Certificates | |
-

TO THE OCFA:

Signature below acknowledges that, should the Contractor fail to provide the above documents in a form satisfactory to OCFA within fourteen days of the issuance of the Notice of Award, OCFA may, at its option, consider the Contractor to have abandoned the agreement, upon which the full payment of the sum stated in the Bidder's Bond shall be due immediately.

SIGNATURE OF CONTRACTOR:**PRINTED NAME:**

Bryson Miller**TITLE:**

Owner

4B: FAITHFUL PERFORMANCE BOND

(100% of Agreement Price)

Bidders must use this form, NOT a surety company form

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Orange County Fire Authority, ("OCFA") and J&L Constructors, Inc. ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

IFB RO2614D - FIRE STATION 41 AIRFIELD MODIFICATIONS

("Contract") which Contract dated March 28, 2024, and all of the Bid Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract.

NOW, THEREFORE, the Principal and The Ohio Casualty Insurance Company ("Surety") are held and firmly bound unto the Board of the OCFA in the penal sum of SEVEN HUNDRED NINETY THOUSAND DOLLARS (\$790,000), lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

- Perform all the work required to complete the Project; and
- Pay to the OCFA all damages the OCFA incurs as a result of the Principal's failure to perform all the work required to complete the Project.

The condition of the obligation is such that, if the above bounden Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warranties of materials and workmanship, and shall indemnify and save harmless the OCFA, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the OCFA from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the OCFA's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

[Signature Page Follows]

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 2nd day of February, 2024 in accordance with Article 5, commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract:

CONTRACTOR:

(Affix Corporate Seal)

**J&L Constructors, Inc.****Principal****By**

Bryson Miller Owner

Print Name and Title of Signatory**SURETY:**

(Affix Corporate Seal)

The Ohio Casualty Insurance Company**Surety****By: Bart Stewart, Attorney-in-Fact****Naren Kang****Name of California Agent of Surety****790 The City Drive South, Suite 200, Orange, CA 92868****Address of California Agent of Surety****(925) 433-4495****Telephone Number of California Agent of Surety**

Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.

4C: PAYMENT BOND
Contractor's Labor & Material Bond
(100% of Agreement Price)
Bidders must use this form, NOT a surety company form

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Orange County Fire Authority, ("OCFA") and J&L Constructors, Inc., ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

IFB RO2614D - FIRE STATION 41 AIRFIELD MODIFICATIONS

("Contract") which Contract dated March 28, 2024, and all of the Bid Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to one hundred percent (100%) of the Contract price, to secure the claims to which reference is made in sections 9000 through 9510 and 9550 through 9566 of the Civil Code, and division 2, part 7, of the Labor Code.

NOW, THEREFORE, the Principal and, The Ohio Casualty Insurance Company ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of SEVEN HUNDRED NINETY THOUSAND DOLLARS (\$790,000), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal or any of his or its subcontractors of any tier under Section 13020 of the Unemployment Insurance Code with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under section 9100 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and affect.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of Contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

[Signature Page Follows]

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 2nd day of February, 2024.

CONTRACTOR:

(Affix Corporate Seal)

J&L Constructors, Inc.PrincipalByBryson Miller OwnerPrint Name and Title of Signatory**SURETY:**

(Affix Corporate Seal)

The Ohio Casualty Insurance CompanySuretyBy: Bart Stewart, Attorney-in-FactNaren KangName of California Agent of Surety790 The City Drive South, Suite 200, Orange, CA 92868Address of California Agent of Surety(925) 433-4495Telephone Number of California Agent of Surety

Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: **8206236 - 969556**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Bart Stewart

all of the city of Encinitas state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 3rd day of September, 2021.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By:

David M. Carey
David M. Carey, Assistant Secretary

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 3rd day of September, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By:

Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 2nd day of February, 2024.



By:

Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)

County of San Diego)On February 2, 2024 before me, S. L. Holcomb , Notary Public
Date Here Insert Name and Title of the Officerpersonally appeared Bart Stewart
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature S. L. Holcomb
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

☐ Corporate Officer — Title(s): _____☐ Partner — ☐ Limited ☐ General☐ Individual ☐ Attorney in Fact☐ Trustee ☐ Guardian or Conservator☐ Other: _____

Signer Is Representing: _____

Signer's Name: _____

☐ Corporate Officer — Title(s): _____☐ Partner — ☐ Limited ☐ General☐ Individual ☐ Attorney in Fact☐ Trustee ☐ Guardian or Conservator☐ Other: _____

Signer Is Representing: _____

4D: AWARD CERTIFICATIONS**Prevailing Wage:**

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hour notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project, including, without limitation, the State labor compliance monitoring and enforcement by the Compliance Monitoring Unit of the Department of Industrial Relations, if this Project is subject to a labor compliance.

Workers' Compensation:

In accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract. CA Labor Code section 3700 in relevant part provides that every employer except the State shall secure the payment of compensation in one or more of the following ways: (1) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state; (2) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees. I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of work of this contract.

Date: 2/2/24 J&L Constructors Inc

**Legal Name of
Contractor:**

Signature:



Printed Name: Bryson Miller Owner

Title: Owner

4E: IRS FORM W9

Form W-9 (Rev. October 2018) Department of the Treasury Internal Revenue Service	Request for Taxpayer Identification Number and Certification ▶ Go to www.irs.gov/FormW9 for instructions and the latest information.	Give Form to the requester. Do not send to the IRS.
1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. J&L Constructors Inc		
2 Business name/disregarded entity name, if different from above		
Print or type. See Specific Instructions on page 3.	3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.	
	<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____ Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) ▶ _____ </div> <div> <input type="checkbox"/> C Corporation <input checked="" type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate </div> </div>	
	4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____ <small>(Applies to accounts maintained outside the U.S.)</small>	
	5 Address (number, street, and apt. or suite no.) See instructions. 80 Huntington Street SPC 706	
6 City, state, and ZIP code Huntington Beach, CA 92648		Requester's name and address (optional)
7 List account number(s) here (optional)		
Part I Taxpayer Identification Number (TIN) Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i> , later. Note: If the account is in more than one name, see the instructions for line 1. Also see <i>What Name and Number To Give the Requester</i> for guidelines on whose number to enter.		
Social security number <div style="border: 1px solid black; padding: 2px; display: flex; justify-content: space-around;"> </div>		Employer identification number <div style="border: 1px solid black; padding: 2px; display: flex; justify-content: space-around;"> 8 1 4 9 4 1 8 1 4 </div>
Part II Certification Under penalties of perjury, I certify that: 1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and 2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and 3. I am a U.S. citizen or other U.S. person (defined below); and 4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct. Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.		
Sign Here	Signature of U.S. person ▶ Date ▶ 2/02/2024	
General Instructions Section references are to the Internal Revenue Code unless otherwise noted. Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9 . Purpose of Form An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following. <ul style="list-style-type: none"> • Form 1099-DIV (dividends, including those from stocks or mutual funds) • Form 1099-MISC (various types of income, prizes, awards, or gross proceeds) • Form 1099-B (stock or mutual fund sales and certain other transactions by brokers) • Form 1099-S (proceeds from real estate transactions) • Form 1099-K (merchant card and third party network transactions) • Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition) • Form 1099-C (canceled debt) • Form 1099-A (acquisition or abandonment of secured property) Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN. If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.		



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

2/1/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Western Republic Insurance Services 19900 Beach Blvd Suite F1 Huntington Beach CA 92648	CONTACT NAME: PHONE (A/C, No, Ext): 714.536.0500 FAX (A/C, No): E-MAIL ADDRESS: dustin@wrinsurance.com																					
INSURED J & L Constructors Inc 29104 Basswood Lake Elsinore CA 92530	<table><tr><th colspan="2">INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A:</td><td>BERKLEY ASSURANCE CO</td><td>39462</td></tr><tr><td>INSURER B:</td><td>STATE COMPENSATION INS</td><td>35076</td></tr><tr><td>INSURER C:</td><td></td><td></td></tr><tr><td>INSURER D:</td><td></td><td></td></tr><tr><td>INSURER E:</td><td></td><td></td></tr><tr><td>INSURER F:</td><td></td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE		NAIC #	INSURER A:	BERKLEY ASSURANCE CO	39462	INSURER B:	STATE COMPENSATION INS	35076	INSURER C:			INSURER D:			INSURER E:			INSURER F:		
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COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	Y	VUMA0310930	04/27/2023	04/27/2024	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
	<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
	<input type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Those usual to the insured's operations. Orange County Fire Authority and its officials, officers, employees, agents, representatives, attorneys and volunteers are named as additional insured per the attached CG 20 10 12 19 and CG 20 37 12 19. Waiver of subrogation applies per the attached CG 24 04 12 19 and 10217 (REV.4-2018). Insurance is primary and non-contributory per the attached VCAS2035 11 10.

CERTIFICATE HOLDER**CANCELLATION**

Orange County Fire Authority

1 Fire Authority Road
Irvine, CA 92602

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Dustin Keeney

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
As required by written contract executed and signed by all parties prior to the date of loss but only to the extent permitted by law. The insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.	As designated in written contract with the Named Insured.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

- C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
As required by written contract executed prior to the date of occurrence but only to the extent permitted by law and the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.	As designated in written contract with the Named Insured.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
ELECTRONIC DATA LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART
POLLUTION LIABILITY COVERAGE PART DESIGNATED SITES
POLLUTION LIABILITY LIMITED COVERAGE PART DESIGNATED SITES
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
RAILROAD PROTECTIVE LIABILITY COVERAGE PART
UNDERGROUND STORAGE TANK POLICY DESIGNATED TANKS

SCHEDULE

Name Of Person(s) Or Organization(s):

Any person or organization to whom or to which you are obligated by virtue of a written contract to waive your right of recovery.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – **Conditions**:

We waive any right of recovery against the person(s) or organization(s) shown in the Schedule above because of payments we make under this Coverage Part. Such waiver by us applies only to the extent that the insured has waived its right of recovery against such person(s) or organization(s) prior to loss. This endorsement applies only to the person(s) or organization(s) shown in the Schedule above.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

PRIMARY AND NONCONTRIBUTORY WORDING

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE

With respect to coverage provided to an additional insured via attachment of an Additional Insured endorsement to this policy, such coverage is primary insurance and we will not seek contribution from any other insurance available to that additional insured.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED

ENDORSEMENT AGREEMENT



WAIVER OF SUBROGATION
BLANKET BASIS

9170623-23

RENEWAL

SP

9-56-08-37

PAGE 1 OF 1

HOME OFFICE
SAN FRANCISCO

EFFECTIVE DECEMBER 3, 2023 AT 12.01 A.M.
AND EXPIRING DECEMBER 3, 2024 AT 12.01 A.M.

ALL EFFECTIVE DATES ARE
AT 12:01 AM PACIFIC
STANDARD TIME OR THE
TIME INDICATED AT
PACIFIC STANDARD TIME

J & L CONSTRUCTORS INC.
29104 BASSWOOD
LAKE ELSINORE, CA 92530

WE HAVE THE RIGHT TO RECOVER OUR PAYMENTS FROM ANYONE
LIABLE FOR AN INJURY COVERED BY THIS POLICY. WE WILL
NOT ENFORCE OUR RIGHT AGAINST THE PERSON OR
ORGANIZATION NAMED IN THE SCHEDULE.

THIS AGREEMENT APPLIES ONLY TO THE EXTENT THAT YOU
PERFORM WORK UNDER A WRITTEN CONTRACT THAT REQUIRES YOU
TO OBTAIN THIS AGREEMENT FROM US.

THE ADDITIONAL PREMIUM FOR THIS ENDORSEMENT SHALL BE
2.00% OF THE TOTAL POLICY PREMIUM.

SCHEDULE

<u>PERSON OR ORGANIZATION</u>	<u>JOB DESCRIPTION</u>
ANY PERSON OR ORGANIZATION FOR WHOM THE NAMED INSURED HAS AGREED BY WRITTEN CONTRACT TO FURNISH THIS WAIVER	BLANKET WAIVER OF SUBROGATION

NOTHING IN THIS ENDORSEMENT SHALL BE HELD TO VARY, ALTER, WAIVE OR EXTEND
ANY OF THE TERMS, CONDITIONS, AGREEMENTS, OR LIMITATIONS OF THIS POLICY
OTHER THAN AS ABOVE STATED. NOTHING ELSEWHERE IN THIS POLICY SHALL BE
HELD TO VARY, ALTER, WAIVE OR LIMIT THE TERMS, CONDITIONS, AGREEMENTS OR
LIMITATIONS IN THIS ENDORSEMENT.

COUNTERSIGNED AND ISSUED AT SAN FRANCISCO:

DECEMBER 6, 2023

AUTHORIZED REPRESENTATIVE

PRESIDENT AND CEO

2572

4G: GENERAL CONDITIONS**ORANGE COUNTY FIRE AUTHORITY GENERAL CONDITIONS****51 Definitions**

As used in these General Conditions and in the Project Manual generally, the following terms have the meaning indicated:

Acts of God: An earthquake in excess of a magnitude of 3.5 on the Richter Scale or a tidal wave.

Addendum: A written or graphic instrument issued by Project Manager on behalf of the OCFA prior to the execution of the Contract which sets forth additions, deletions, or other revisions to the Project Manual or clarifications thereof.

Authority: The Orange County Fire Authority, a California Joint Powers Authority.

Board of Directors: The governing body of the Orange County Fire Authority.

Change Order: A written Modification executed by both parties (except in the event of a unilateral Change Order as herein provided) and consisting of additions, deletions or other changes to the Contract. A Change Order may be accompanied by and/or may identify additional or revised Drawings, sketches or other written instructions which become and form a part of the Project Manual by virtue of the executed Change Order. Except as otherwise provided in Subparagraph 1.1.5., a Change in the Work, or a change in the Contract Time or the Contract Sum shall only be approved by written Change Order.

Construction Contract or Contract: The written "Contract Agreement" covering the performance of the Work and the furnishing of labor, materials, tools, and equipment in the construction of the Work. The term "Construction Contract" also includes the Project Manual.

Contract Directive: A written document issued by the Project Manager and consisting of additions, deletions, clarifications, interpretations, or other written instructions issued by the Project Manager with respect to the performance of the Work or the activities of the Contractor on the Job Site or the property of OCFA. A Contract Directive can be a response to a Request for Information; however, all responses to Requests for Information need not be Contract Directives. A Contract Directive may become the subject of a Change Order only if such Directive involves a substantial change in the Work, or a change in the Contract Time or the Contract Amount, approved as a Change Order by the Project Manager.

Contractor's Construction Schedule: The detailed schedules, based on a critical path method ("CPM"), prepared by the Contractor, presenting an orderly and realistic plan for completion of the work required in the Project Manual. The Contractor's Construction Schedule shall also include the completion dates of the Milestones and a final proposal narrative as described in the Project Manual.

Contractor: The person or entity awarded the Contract to perform the work.

Day: All references to days in the Project Manual refer to calendar day unless otherwise specifically indicated.

Design Professional: Officers, employees, and consultants, the architectural and engineering firm, a party to the design-build entity responsible for the overall design of the Project.

Excusable Labor Dispute: Any labor dispute directed against an entire industry, or any labor dispute that is not directed solely against the Project, the Contractor, or any subcontractor or supplier, and which prevents Contractor from obtaining labor or materials necessary for the performance of the Work and that actually delays the performance of the Work; provided, however, that suitable substitute labor or materials are not reasonably obtainable.

Excusable Transportation Delay: Any labor dispute directed at an entire industry, or any labor dispute that is not directed solely against the Project, the Contractor, or any subcontractor or supplier, or other delay not within the reasonable control of the Contractor which prevents the transportation of necessary materials to the Project and actually delays the performance of Work; provided, however, that suitable substitute transportation for such materials is not reasonably available.

Fire Chief: The Fire Chief of the OCFA or the Fire Chief's Designee.

Laws: Each and every Federal, state, and local law, ordinance, code, rule, and regulation, as well as the lawful order or decree of any public or quasi-public authority and each of their respective inspectors or officials, including but not limited to all applicable building codes, bearing on or otherwise applicable to the Project. The term "Laws" also includes any and all conditions of approval of each and every entitlement or permit issued or approved by the Local Jurisdictions.

Local Jurisdictions: Any governmental agency with land use authority over the Project or part of the Project and each regulatory agency or authority with jurisdiction over the project, and their respective inspectors and representatives.

Modification or Contract Modification: (1) a written amendment to this Contract signed by both Parties; (2) a Change Order; or (3) a Contract Directive or other written interpretation or order issued as a response to a Request for Information or otherwise issued by the Project Manager pursuant to the terms of the Project Manual. Contractor acknowledges that the execution on its behalf of any such Modification by any one person with apparent authority shall be binding against the Contractor. A Modification may be made only after execution of the Contract. No Contract Directive or response to a Request for Information shall be construed as a Change Order or other Modification unless it expressly so states.

Non-Conformance Notice: A notice issued by the Project Manager documenting that the work or some portion thereof has not been performed in accordance with the requirements of the Project Manual.

Notice to Proceed: The written notice of the OCFA to the Contractor to commence work under the Contract.

OCFA: The Orange County Fire Authority, a California Joint Powers Authority.

Plans: The drawings, supplemental drawings, or reproductions thereof, the project plans, standard plans, profiles, cross-sections, and all graphic depictions, which show the location, character, dimensions, and details of the work to be performed and contained in the Project Manual.

Project: The Project is the performance, construction, installation, and completion of the entire scope of all work as described in the Contract Documents.

Project Manager: The person or persons designated by the OCFA to serve as the Project Manager of the project.

Project Manual: Defined in Section 41 of the Contract Agreement.

Provide: To furnish, fabricate, complete, deliver, install, and erect including all labor, materials, equipment, apparatus, appurtenances, and expenses, necessary to complete in place, ready for operation or use under the terms of the Project Manual.

Regulatory Agency – A Federal, State or local governmental agency that has regulatory jurisdiction over one or more aspects of the Project. (Examples may include, but are not limited to the Regional Water Quality Control Board, the California Coastal Commission, or the South Coast Air Quality Management Board.)

Related Work: Work performed by the OCFA or by any separate Contractor retained or hired by the OCFA, related to the completion of the Project and which is not required to be performed by the Contractor pursuant to this Contract and the Project Manual.

Requests for Information: A written request from the Contractor or one of the Subcontractors to the Project Manager seeking an interpretation or a clarification of some requirement of the Project Manual. Contractor shall clearly and concisely set forth in writing the issue for which Contractor seeks clarification or interpretation and why a response is needed from the Project Manager. Contractor shall set forth Contractor's interpretation or understanding of the Project Manual's requirements along with reasons why Contractor reached such an understanding. Responses from the Project Manager will not change any requirements of the Project Manual unless so noted in the Request for Information response.

Scheduled Completion Date: The number of days specified in the Construction Schedule for completion of the Project.

Site or Sites: The land on which the Project will be constructed as specifically described in the Project Manual.

Specifications: The directives, provisions, and requirements contained in Project Manual, however such may be labeled or otherwise described.

Subcontractor: A person or organization having a direct contract with the Contractor to perform any of the Work at the Site or to supply any materials, equipment, or supplies to be incorporated in, or utilized in connection with, the Work and as used herein shall include the Subcontractor's authorized representative.

Substantial Completion of the Project: occurs when all of the following are achieved: (1) substantial completion of all Work; and (2) suitable to meet the requirements for the issuance of a certificate of occupancy and receipt of all other required approvals of construction from the Local Jurisdictions; and (3) in strict accordance with the Project Manual; and (4) such that OCFA may fully utilize the Project for the use for which it is intended. Early occupation of the Project by OCFA does not constitute Substantial Completion of the Project if one or more of the four factors above has not yet been achieved. (See Section General Conditions, Section 74.)

Supplemental Agreements: The written agreements covering alterations, amendments, or extensions to the Construction Contract and include contract change orders.

Work: All the work specified, indicated, shown, or contemplated in the Construction Contract to construct the Project, including all alterations, amendments, or extensions thereto made by contract change order or other written orders of the Project Manager, including each activity, labor, task, service, acquisition, purchase, installation, or action of any kind required to be performed under the terms of this Contract and as specified in the Project Manual.

52 The Project Manual

- 52.1 The Project Manual is defined in **Section 41** of the Contract Agreement. The Contractor has examined carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the Contractor has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the proposal, plans, specifications and the Construction Contract. The Contractor warrants and represents that, in executing the Contract and undertaking the Work, it has not relied upon any oral inducement or representation by OCFA, Project Manager, or any of their officers or agents as to the nature of the Work, the Site, the Project conditions or otherwise.
- 52.2 All parts and provisions of the Project Manual are complementary, and what is required by any one shall be as binding as if required by all. If the Project Manual does not specifically allow the Contractor a choice as to quality or cost of items to be furnished, but could be interpreted to permit such choice, subject to confirmation or approval by Project Manager, they shall be construed to require the Contractor to provide the best quality. Words and abbreviations which have well-known technical or trade meanings are used in the Project Manual in accordance with such recognized meanings.
- 52.3 Where conflict exists within or between parts of the Project Manual, or between the Project Manual and either applicable industry standards or applicable codes, ordinances, or other legal requirements, the more stringent requirements shall apply; otherwise, the following order of precedence shall be used: the Construction Contract; the Special Conditions of the Contract for Construction; these General Conditions of the Construction Contract; the balance of the Project Manual, and the Drawings. If the Contractor is required to perform any extra or corrective Work to comply with the preceding sentence, it shall not be entitled to an increase in the Contract Sum or Contract Time, and no claim shall result from such compliance. Subject to confirmation or approval by OCFA, more detailed Drawings take precedence over less detailed scaled Drawings, figured dimensions on the Drawings take precedence over scaled dimensions, and otherwise noted matters on the drawings take highest precedence.
- 52.4 Drawings take precedence over graphic representations. Contractor shall bring or submit to the Project Manager any such conflicts as soon as Contractor or its Subcontractors discover or learn about such apparent conflicts in the form of an RFI.
- 52.5 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings, are not intended to influence the Contractor in its division of the Work among Subcontractors or its establishment of the extent of the Work to be performed by any trade.
- 52.6 The Contractor shall request in writing that Project Manager provide any interpretations or clarifications necessary for the proper execution, coordination or progress of the Work. Such interpretations shall be issued by Project Manager in writing for implementation by the Contractor. The Contractor shall make all such requests for interpretation or clarification in writing.

- 52.7 The Project Manual reflects conditions as they are believed to exist, but it is not intended or to be inferred that the conditions as shown thereon constitute a representation by or on behalf of Authority that such conditions actually exist. The Contractor shall inspect the Site and conduct any tests or surveys it deems necessary or desirable prior to the commencement of the Work and shall accept full responsibility for any loss sustained by it as a result of any variances between the conditions as shown on the Project Manual and the actual conditions revealed during the progress of the Work or otherwise. The Contract Sum shall in no event be increased by reason of any such variance unless otherwise specifically provided herein.
- 52.8 The Contractor shall develop and maintain current "as-built" Plans to be provided to Project Manager in accordance with the Construction Contract and Section 01770 of the Project Manual. Project Manager may inspect and copy such Plans at any time during the course of the Work.
- 52.9 The intent of the plans and specifications is to prescribe the details for the construction and completion of the work which the Contractor undertakes to perform in accordance with the terms of the Construction Contract. Where the plans or specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall provide all labor, materials, tools, equipment, and incidentals, and do all the work involved in executing the contract in a satisfactory and workmanlike manner.

53 Contract Bonds.

Both the Faithful Performance Bond and the Material and Labor Bond shall each be for not less than one hundred percent (100%) of the total Contract amount. The Material and Labor Bond shall remain in force until thirty-five (35) days after the date of recordation of the Notice of Completion. The Faithful Performance Bond will be held for one year after the date of recordation of the Notice of Completion.

Prior to the acceptance of any bond, the OCFA shall verify that the surety is an admitted surety in the State of California. If requested by the OCFA, the Contractor shall provide other information specified in the Code of Civil Procedure Section 995.660 to enable the OCFA to verify the sufficiency of the bond.

Should any bond become insufficient, the Contractor shall correct the insufficiency within ten (10) calendar days after receiving notice from the OCFA. The Contractor shall provide the OCFA with evidence of the correction within ten (10) calendar days of said correction. Should any surety at any time be unsatisfactory to the OCFA, written notice will be given to the Contractor to that effect. No further payments shall be deemed due or will be payable under the Contract until Contractor submits an acceptable bond from a surety accepted by the OCFA. Changes to the work or extensions of time made pursuant to the Contract Agreement shall in no way release the Contractor or the surety from its obligations. Notice of such changes or extensions shall be waived by the surety.

54 OCFA AND OCFA'S REPRESENTATIVES

- 54.1 The work will be under the general direction of the Fire Chief. The Project Manager is the authorized representative of the Fire Chief and has complete charge of the work, and shall exercise full control of the work, so far as it affects the interest of the OCFA.
- 54.2 The provisions in this General Conditions or elsewhere in the Contract Documents regarding approval or direction by the Fire Chief, the OCFA, the Board of Directors, or the Project Manager, or action taken pursuant thereto, are not intended to and shall not relieve the

Contractor of responsibility for the accomplishment of the work, either as regards sufficiency or the time of performance, except as expressly otherwise provided herein.

- 54.3 The Project Manager is the OCFA's exclusive representative and agent to the Contractor with respect to this Project during construction and until the completion of the Project. The OCFA's communications with the Contractor shall be exclusively through the Project Manager.
- 54.4 Project Manager shall at all times have access to the work whenever it is in preparation or progress. The Contractor shall provide safe facilities for such access.
- 54.5 The OCFA shall not be responsible for or have control or charge of the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, and will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.
- 54.6 The OCFA will not be responsible for the failure of the Contractor to plan, schedule, and execute the work in accordance with the approved schedule or the failure of the Contractor to meet the Contract Documents completion dates or the failure of the Contractor to Schedule and coordinate the work of Contractor's own trades and subcontractors or to coordinate with other Separate Contractors.
- 54.7 The OCFA will not be responsible for the acts or omissions of the Contractor, or any subcontractor, or any Contractor's or subcontractor's agents or employees, or any other persons performing any of the work.
- 54.8 The Project Manager has the authority to disapprove or reject work on behalf of the OCFA when, in the Project Manager's opinion, the work does not conform to the Contract Documents. Whenever, in the Project Manager's reasonable opinion, it is considered necessary or advisable to ensure the proper implementation of the intent of the Contract Documents, the Project Manager has the authority to require special inspection or testing of any work in accordance with the provisions of the Contract Documents whether or not such work shall then be fabricated, installed, or completed.
- 54.9 The Project Manager has the authority to require special inspection or testing of the work. However, neither the Project Manager's authority nor any decision made by the Project Manager in good faith whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the OCFA to the Contractor, or any subcontractor, or any of their agents, or employees, or any other person performing any portion of the work.
- 54.10 The Project Manager has the authority and discretion, but not the obligation, to call, schedule, and conduct job meetings to be attended by the Contractor and representatives of Contractor's subcontractors, to discuss such matters as safety, procedures, progress, problems, and scheduling.
- 54.11 The Project Manager will establish procedures to be followed for processing all submittals, Change Orders, Progress payments, other project reports, documentation, and test reports.
- 54.12 The Project Manager will review all requests for changes and shall implement the processing of Change Orders including application for extensions of time.
- 54.13 The Project Manager will review and process all Progress Payment Requests by the Contractor including Final Progress Payment Requests.

- 54.14 Nothing contained in the Project Manual shall create any contractual relationship between Project Manager and the Contractor.
- 54.15 Except as otherwise provided in the Project Manual, and until the Contractor is notified in writing to the contrary, all actions to be taken by, all approvals, notices, consent, directions and instructions to be given by, all notices and other matters to be delivered to, all determinations and decisions to be made by and, in general, all other action to be taken by, or given to, OCFA shall be taken, given and made by, or delivered or given to, Project Manager in the name of and on behalf of OCFA. Only those so designated are authorized to grant on behalf of OCFA any approval, consent or waiver with respect to the Project Manual or the Work, or to otherwise act for OCFA in any capacity whatsoever.
- 54.16 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Project Manual either by the activities or duties of the Project Manager in its administration of the Contract, including, without limitation, by any inspections or tests required, or by approvals or other similar action with regard to shop drawings or submittals (of any type), or by the activities of persons other than the Contractor with respect to the Project. Further, notwithstanding the fact that a dispute, controversy or other question may have arisen between the parties hereto relating to the execution or progress of the Work, the interpretation of the Project Manual, the payment of any monies, the delivery of any materials or any other matter whatsoever, the Contractor shall not be relieved of its obligations to pursue the Work diligently under the Project Manual pending the determination of such dispute, controversy, or other question.
- 54.17 OCFA reserves the right, but assumes no duty, to establish and enforce standards, and to change the same from time to time, for the safety and protection of persons and property, with which the Contractor shall comply, and to review the efficiency of all protective measures taken by the Contractor. The exercise of or failure to exercise any or all of these acts by OCFA shall not relieve the Contractor of its duties and responsibilities under the Project Manual, and OCFA shall not thereby assume, nor be deemed to have assumed, such duties or responsibilities of the Contractor.

55 **CONTRACTOR**

- 55.1 Composition: If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.
- 55.2 Examination of Plans, Specifications, and Site of Project: In addition to the representations and warranties contained in the Contract, the Contractor acknowledges that prior to execution of the Contract it has thoroughly reviewed and inspected the Project Manual, and satisfied itself regarding any error, inconsistency, discrepancy, ambiguity, omission, insufficiency of detail or explanation. OCFA shall not be responsible for any costs, nor liable to the Contractor for any damage, resulting from any such matter that the Contractor reasonably should have discovered. The Contractor shall perform no portion of the Work at any time which is not as provided or specified in the Project Manual or, where required, shop drawings, product data, or samples, for such portions bearing the Design Professional's appropriate action stamp. Work performed in violation of this provision shall be at the Contractor's risk
- 55.3 Contractor Certification: Contractor certifies and agrees that all the terms, conditions, and obligations of the Project Manual, the location and condition of the Site, and the conditions under which the work is to be performed have been thoroughly reviewed and investigated and Contractor enters into this Contract based upon Contractor's review and investigation of all such matters. Contractor certifies and agrees that Contractor is in no way relying upon

any opinions or representations of OCFA or the OCFA's officers, employees, agents, and consultants, including but not limited to, the Project Manager and the Design Professional.

- 55.4 Preparation of Documents: The Contractor shall carefully review and where appropriate or as may be required in the Scope of Work or at the direction of the Project Manager prepare drawings, specifications, and other instructions and shall at once report to Project Manager any error, inconsistency, or omission which Contractor may discover. Except as otherwise specifically provided hereinafter under warranties, the Contractor shall not be an agent for the OCFA.
- 55.5 Superintendence: The Contractor shall maintain on the site, during all construction activity, a competent superintendent and any necessary assistants, all satisfactory to the Project Manager. The superintendent shall not be changed except with the consent of the Project Manager, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ, in which case he/she shall be replaced immediately and in no case more than 24 hours with a superintendent acceptable to the Project Manager. The superintendent shall represent the Contractor and all directions given to the superintendent shall be as binding as if given to the Contractor. The Contractor shall provide Project Manager with complete work history profiles of management staff associated with this Project for Project Manager's review.
- 55.6 Licenses and Certificates: The Contractor represents and warrants that it has all necessary licenses and permits required by the laws of the United States, State of California, County of Orange, and any local jurisdiction, and all other appropriate governmental agencies, and agrees to maintain these licenses and permits in effect for the duration of this Contract. Further, Contractor warrants that its employees, agents, and contractors and subcontractors shall conduct themselves in compliance with all applicable laws and licensure requirements now in effect or as subsequently enacted or modified, as promulgated by any local, state, or federal governmental entities, including, without limitation, compliance with laws applicable to non-discrimination, harassment, and ethical behavior. Contractor shall notify the Project Manager immediately and in writing of its inability to obtain or maintain, irrespective of the pendency of any appeal, any such permits, licenses, approvals, certificates, waivers, and exemptions. Such inability shall be cause for termination of this Contract.
- 55.7 Materials and Equipment: The Contractor shall cause all materials and equipment to be delivered to the Site in accordance with any schedule or schedules therefore established from time to time and approved by Project Manager and, in any event, in a manner which will assure the timely progress and completion of the Work but will not encumber the Site unreasonably. Materials delivered to the Site for incorporation in the Work shall not be removed from the Site without the consent of Project Manager. The Contractor shall give, or shall require its Subcontractors to give, full and accurate quality, performance and delivery status reports, in a form satisfactory to Project Manager, regarding any materials and equipment, or such other data with respect thereto as may be requested by Project Manager, and shall obtain for Project Manager the written assurances of any manufacturer that its material or equipment is designed, and appropriate, for the use intended. The Contractor warrants to OCFA that all materials and equipment furnished under this Contract shall be new unless otherwise specified in the Project Manual and that all Work shall be of good quality, free from faults and defects and in conformance with the Project Manual. All Work not so conforming to these standards may be considered defective. All warranties and guarantees from Subcontractors (including, without limitation, manufacturers) shall be assignable to OCFA regardless of whether it is so stated therein, and the Contractor agrees to assign all such warranties and guarantees to the OCFA.

- 55.8 Completion Schedule: The Contractor shall prepare and submit, for Project Manager's approval, a Construction Schedule for the work which shall provide for expeditious and practicable execution of the work for completion within the Contract Time. This schedule shall be coordinated with the entire Project Construction Schedule to the extent required by the Contract Documents.
- 55.9 Reports by Contractor: Daily reports of the site and construction activities shall be provided to Project Manager. The reports shall follow the OCFA approved format including, but not limited to, information regarding trades at work, manpower, weather conditions, construction progress, and solutions to problems.
- 55.10 Contractor Responsibility: The Contractor shall supervise and direct the Work, using its best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, coordination, scheduling and procedures, for all cleanup and for all safety and weather precautions and programs, in connection with the Work. Contractor shall be solely responsible for the work and the Project as described in the Contract Documents. Contractor shall have complete control over the construction methods, techniques, and procedures, except as may be specifically provided in the Contract Documents. Contractor shall, at its sole cost and expense, perform all labor and services and furnish all material, tools, appliances, and equipment necessary and proper for performing and completing the Work of the Project in strict compliance with the terms and conditions of the Project Manual. Contractor shall provide all labor, materials, and equipment in conformity with the Project Manual and other directions as may be provided by the Project Manager. Contractor shall, at its sole cost and expense, prepare and fully comply with all provisions of the Quality Assurance/Quality Control Program as provided in the Project Manual.
- 55.11 Ongoing Oversight: Contractor shall keep itself continuously informed of the progress of the Work and the Related Work and will attend all meetings related to the Work and the Related Work as specified in the Project Manual and as identified in the Contractor's Construction Schedule. Contractor further agrees to work in a prompt, efficient, expert, and diligent manner and to furnish sufficient manpower to complete the Work in accordance with the Contractor's Construction Schedule. Contractor shall prosecute the Work diligently to completion. Contractor shall be responsible for the coordination and scheduling of all Work and the Related Work.
- 55.12 Ongoing Self-Inspection: Contractor shall, at its sole cost and expense, inspect its work to determine strict conformance to the requirements of the Project Manual. (This obligation of the Contractor is in addition to the Contractor's obligations to make repairs or to remedy deficient or unacceptable work as may be required under this Contract or any other provision of the Project Manual.) If some of the work performed on the Project does not comply with the requirements of the Project Manual, Contractor shall repair or replace such defective work at its sole cost and expense. Contractor shall gain no protection or right of reliance on the Project Manager's or Fire Chief's inspection of the work. If it is determined that the Project Manager or Fire Chief inspected work and failed to call defects or non-conforming items to the attention of Contractor, the OCFA shall not be deemed to have waived the requirements of the Project Manual or accepted the work.
- 55.13 Monitoring and Compliance: The Project Manager shall, at all times, have safe access to the Project site and its related work during its construction, and shall be furnished with every reasonable facility for ascertaining that the materials and the workmanship are in accordance with the requirements and intentions of Contract Documents. All work done and all materials furnished shall be subject to Project Manager inspection. In the event the Project Manager finds or determines that the work or material are not in accordance with

the requirements and the intentions of the Contract Documents, the Project Manager shall issue a Non-Conformance Notice. Upon receipt of a Non-Conformance Notice the Contractor shall provide a written Response to the Non-Conformance Notice within five (5) working days after receipt of the Notice. The Contractor's response shall detail either (a) why Contractor believes that the work was performed in accordance with the Project Manual or (b) what corrective action Contractor intends to take, at its sole cost and expense, to correct the non-conforming work. If Contractor disputes issuance of the Notice, the Project Manager has five- (5) working days in which to respond by either (a) withdrawing the Notice of Non-Conformance or (b) directing the Contractor to correct the work. Such determination of the Project Manager shall be final and conclusive of the matter. If directed to correct the work, Contractor shall do so within five (5) working days after receipt of such direction from the Project Manager, or such other time as may be agreed in writing from the Project Manager.

- 55.14 **Inspectors:** In addition to the Project Manager, inspectors of Local Jurisdictions are authorized to enforce strict compliance with the terms and conditions of the Contract and the Project Manual and to determine the acceptability of materials and workmanship. Inspectors are authorized to reject work or materials if they determine that such work or materials do not conform to the requirements of the Contract and the Project Manual. Whenever an inspector determines that some work installed by the Contractor, or any Subcontractor or supplier at any tier does not conform to the requirements of the Contract, a Notice of Non-Conformance will be issued to record this determination. In the event of a dispute between the Contractor and an inspector concerning non-conforming work, the Contractor shall pursue the issue in accordance with the requirements of Subsection M above this Section 1.03 of this contract, relating to Non-Conforming Work. Inspectors other than the Project Manager are not authorized to issue or direct changes to the requirements of the Contract. In the event that the Contractor believes some direction given by an inspector does constitute a change to the requirements of the Contract, Contractor shall within two (2) days provide written notice to the Project Manager detailing the direction given, by whom, when and under what circumstances, and why the Contractor believes that such direction constitutes a change to the requirements of the Contract. Failure to provide such written notice to the Project Manager within the specified timeframe shall constitute a waiver of claim with respect to the direction received by the Contractor.
- 55.15 **Remedy and Repair of Work:** The inspection of the work or materials shall not relieve the Contractor of any of the Contractor's obligations to fulfill the Construction Contract as prescribed. Work and materials not meeting the requirements shall be made good, and unsuitable work or materials may be rejected, notwithstanding that the work or materials have been previously inspected by the Project Manager or that payment therefor has been included in a progress payment. All work which has been rejected as indicated in a Non-Conformance Notice shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed to the Contractor for the removal, replacement or remedial work. Payment shall not be made on any portion of the work for which a Non-Conformance Notice has been issued and the work not corrected to the satisfaction of the Project Manager.
- 55.16 **Failure to Comply:** Upon failure of the Contractor to comply promptly with any order of the Project Manager made under Paragraphs L, M, N, and O above, the Project Manager, with the approval of the Fire Chief, may cause rejected or unauthorized work to be remedied, removed, or replaced, and to deduct the costs from any moneys due or to become due the Contractor.
- 55.17 **Contractor Liabilities:** The Contractor shall be responsible to OCFA for the acts and omissions of its employees. The Contractor shall be held responsible for all damages

resulting from its employees or its subcontractors or agents from all errors, omissions, or negligence in the performance of the work and completion of the Project.

- 55.18 Deficiencies in Contract Documents: Contractor covenants and agrees that Contractor, its employees, agents, subcontractors, and suppliers have an affirmative duty and obligation to promptly disclose to the Project Manager any deficiency, error, or inconsistency in the Contract Documents and any of the plans and specifications contained therein, so that Project Manager, the OCFA, and the Design Professional can affect any required or necessary modification or clarification thereof in a timely and cost effective manner. In this regard and in furtherance of the Contractor's obligations, the Contractor agrees not to take advantage of errors or omissions in the Project Manual. It is the duty of the Contractor to promptly notify the Project Manager in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified methods and fails to promptly notify the Project Manager in writing of this belief, the Contractor thereby waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the OCFA, or in any subsequent arbitration or settlement conference between the OCFA and the Contractor. The Project Manager, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after the Contractor becomes aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.
- 55.19 Ongoing Duty to Disclose: If the Contractor, either before commencing work or in the course of the work, finds any discrepancy within the Project Manual, or between the Project Manual and the physical conditions at the Site, or finds an error or omission on the Plans, Specifications, or in any survey, the Contractor shall promptly notify the Project Manager in writing of such discrepancy, error, or omission. If the Contractor observes that the Project Manual is at variance with any applicable law, regulation, order, or decree, the Contractor shall promptly notify the Project Manager in writing of such conflict. The Project Manager, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, work done by the Contractor after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.
- 55.20 Duty to Coordinate: The Contractor shall be responsible for coordinating any work carried on at the Site by other parties or by the OCFA, including the Related Work, simultaneously with the Work. The compensation to be paid to Contractor under this Contract includes any costs which the Contractor may incur as a result of coordinating the Work with such other work, including the Related Work. In no case shall the Contractor be entitled to extra compensation from the OCFA for damages suffered as a result of work being carried on at the Site by other parties or the OCFA simultaneously with the construction work for this Project. Nevertheless, if such work results in a delay to the Contractor's work beyond reasonable time allocations afforded to such work and Related Work identified on the Contractor's Construction Schedule as approved by the Project Manager, the Contractor may be eligible for an extension of time as specified in this Contract.
- 55.21 Failure to Pay for Labor or Materials: If Contractor fails to pay for labor or materials when due, OCFA may settle such claims by making demand upon the surety to this Agreement. In the event of the failure or refusal of the surety to satisfy said claims, OCFA may settle any claims directly and deduct the amount of payments from the Contract price and any amounts

due to Contractor. In the event OCFA receives a stop notice from any laborer or material supplier alleging non-payment by Contractor, OCFA shall be entitled to deduct all of its costs and expenses incurred relating thereto, including but not limited to administrative and legal fees.

- 55.22 Compliance with Laws: The Contractor shall, at its cost and expense, comply with all Laws, as any may now exist or be hereafter changed or added. It shall be the responsibility of the Contractor to familiarize itself with all such Laws, and any performance of the Work by or on behalf of the Contractor which is not in compliance with the Laws shall be at the Contractor's sole risk and expense. The Contractor shall notify OCFA prior to execution of the Contract (and, without limiting the continuous duty of the Contractor to advise the OCFA) of any instances where the Contract Documents are, or where the Contractor believes the Contract Documents are, not in compliance with the Laws.
- 55.23 Ongoing Responsibility: Any work or material not specified in the Project Manual but which by fair implication, in the judgment of the Project Manager, should be included therein, shall be accomplished, furnished, or provided by the Contractor as part of the Project Manual.
- 55.24 Taxes, Fees, and Licenses: The Contractor shall pay, or cause to be paid, all import duties and sales, consumer, use, excise, value added and ad valorem taxes required to be paid in connection with the Work or upon materials, tools or equipment brought to the Site or used in the Work. If any of the foregoing taxes are not paid in a timely manner, OCFA may withhold the amount of any such taxes from any amounts owing to the Contractor under the Project Manual, submit the amount so withheld to the appropriate taxing authority on behalf of the Contractor or its Subcontractors or Sub-subcontractors and offset said amount against the Contract Sum. The Contractor shall secure and pay for all governmental fees, permits and licenses which OCFA is not specifically required to provide and pay for under the Project Manual.
- 55.25 Tests: If the Project Manual, or any laws, ordinances, rules, regulations, or any orders or decrees of any public or quasi-public authority having jurisdiction, or common practice in the industry, require or dictate that the Contractor have any portion of the Work inspected, tested or approved, the Contractor shall advise Project Manager in a timely manner (in writing, if practicable) of its readiness and of the date arranged so that Project Manager may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests and approvals except as otherwise specified. Project Manager may require any special inspection, testing or approval of the Work not included under above, or any more stringent inspection, testing or approval thereof, in which event it shall instruct the Contractor to order such inspection, testing or approval, and the Contractor shall advise Project Manager in a timely manner (in writing, if practicable). If such inspection or testing reveals any failure of the Work or the performance thereof to comply with the more stringent of: (a) the requirements of the Project Manual; (b) applicable industry standards; or (c) applicable laws, ordinances, codes, rules, regulations or orders or decrees of any public or quasi-public authority having jurisdiction, or reveals any defect in the Work, the Contractor shall bear the costs of such inspection or testing and all costs to correct the Work to the satisfaction of Project Manager, which, if incurred by OCFA, may be offset by OCFA against any amounts then or thereafter due to the Contractor. If such inspection or testing proves that the Work was performed properly, OCFA shall bear the costs of such inspection or testing. Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by it to the Project Manager.
- 55.26 General: The duties and responsibilities of the Contractor as set forth in this Section 1.03 are in addition to, and not in lieu of, other duties and responsibilities of the Contractor enumerated elsewhere in the Project Manual.

56 - RESPONSIBILITIES OF THE CONTRACTOR

56.1 CONTRACTOR'S EQUIPMENT AND FACILITIES.

56.1.1 General.

56.1.1.1 Conduct of the Work. The Contractor shall behave, at all times, in a courteous, professional manner. While on site, or entering or exiting the site, there shall be no extraneous activity that might cause disruption to the Project site, surrounding areas, or residents. Failure to comply may result in the suspension of work, or removal of contractor's staff from the Project.

56.1.1.2. Noise Levels. A noise level limit of 86 dbA Max at a distance of fifty feet (50') shall apply to all construction equipment on or related to the job whether owned by the Contractor or not. The use of excessively loud warning signals shall be avoided except in those cases required for the protection of personnel. In addition to those requirements, all work shall comply with all applicable noise ordinances at all times.

56.2 COOPERATION AND COLLATERAL WORK.

The Contractor is advised as to the possibility of other construction projects within the proposed construction zone by the OCFA, other governing agencies or private enterprises. In the event of such projects, the Contractor shall coordinate with the applicable parties as to the extent of any time required to complete their work and shall schedule its work and conduct its operations so as to permit access and time as required for the concurrent work. The Contractor shall immediately notify the Engineer in the event of a delay in scheduling caused solely by this concurrent work. Payment for the above, if any, shall be deemed as included in the items of work as shown on the proposal bid sheet and no additional compensation will be allowed.

56.3 PROJECT SITE MAINTENANCE.

56.3.1. Cleanup and Dust Control.

The Contractor shall keep adjacent properties clean and free of rubbish and debris in a timely manner as necessary and/or as directed by the Engineer.

The Contractor shall implement effective handling, storage, usage, and disposal practices to control material pollution and manage waste and nonstormwater at the job site before they come in contact with storm drain systems and receiving waters.

56.3.1.1 Construction Cleaning

The Contractor shall:

- (a) Initiate and maintain a daily program to prevent accumulation of debris on-site and along access roads and haul routes. Maintain areas under Contractor's control free of waste materials, debris, weeds 6" high, and rubbish. Maintain site in a clean and orderly condition.
- (b) Provide suitable covered containers for deposit of debris and rubbish. Dispose of accumulation of extraneous materials, prohibit overloading of trucks to prevent spillages on access and haul routes and provide daily inspection of haul routes to enforce requirements.
- (c) The Contractor shall supply self-loading motorized street sweepers equipped with a

functional water spray system as part of his daily program.

- (d) Schedule at a minimum, weekly collection and disposal of debris. Provide additional collections and disposals of debris whenever the weekly schedule is inadequate to prevent accumulation.

The Contractor shall remove debris from closed or remote spaces prior to closing the space, control cleaning operations to minimize dust and other particulates and immediately remove clay and earth which adhere to the paved surface of the roadway. Remove by hand scraping, washing, sweeping, and/or other method(s) which will leave a clean non-skid surface without impairing, injuring or loosening the surface.

The Contractor is required to control dust throughout the life of the Contract. The control may be required by job conditions or Engineer. In any case, the Contractor shall use water or other effective means to control the dust. No chemical agents may be used without written authorization from the Agency. The Contractor shall be solely responsible for safety problems, accidents or any other complications or claims arising from inadequate dust control.

No separate payment will be made for any work performed or material used to control dust resulting from the Contractor's performance of the work, or by public traffic, either inside or outside the right-of-way. Full compensation for such dust control will be considered as included in the price paid for the various items of work involved.

No separate payment will be made for any work performed or material used in cleaning the Project. Full compensation for such cleaning shall be considered as included in the price paid for the various items of work involved and no additional compensation will be allowed therefore.

57 Subcontracts

57.1 Licensed Subcontractors: The Contractor shall comply with the provisions of the Subletting and Subcontracting Fair Practices Act (the "Act") (Public Contracts Code Section 4100 et seq.). The Contractor shall not terminate the employment of a Subcontractor or Sub-subcontractor engaged in the Work prior to the expiration of that subcontract without complying with the Act. The Contractor shall in all respects select the subcontractors in the manner provided under law. Each subcontractor selected for the work shall be licensed in the State of California in the subcontractor's particular field.

57.2 Transactions: Transactions with subcontractors shall be made through the Contractor. OCFA may assign to the Contractor any contracts or purchase orders entered into between OCFA and any other person or organization in any way related to the Project or the Work, at any time, in which event the Contractor shall assume full responsibility for such person or organization and its portion of the Work as if such person or organization was originally a Subcontractor. Such assignment may occur by Change Order or other Modification to the Contract, and any increase in the Contract Sum shall be governed by Section 01200 of the Project Manual.

57.3 Writing: All subcontracts and sub-subcontracts shall be in writing. Each subcontract and sub-subcontract shall contain a reference to this Contract and shall incorporate the terms and conditions hereof to the full extent applicable to the portion of the Work covered thereby. Each Subcontractor must agree, for the benefit of OCFA, to be bound by, and to require each of its Subcontractors to be bound by, such terms and conditions to the full extent applicable to its portion of the Work.

57.4 Responsibility: The Contractor shall be fully responsible to the OCFA for the acts and omissions of subcontractors and all persons directly or indirectly employed by them as Contractor is for the acts and omissions of Contractor and of persons directly or indirectly employed by

Contractor and shall pay each subcontractor promptly the amount allowed Contractor on account of such subcontractor's work to the extent of such subcontractor's interest therein.

- 57.5 Incompetent or Disorderly Conduct: If any Subcontractor or person employed by the Contractor shall appear to the Project Manager to be incompetent or to act in a disorderly or improper manner, such person shall be discharged immediately on the request of the Project Manager, and that person shall not again be employed on the work.
- 57.6 Mandatory Subcontract Terms: Each subcontract shall provide for its termination by the Contractor if, in Project Manager's opinion, the Subcontractor fails to comply with the requirements of the Project Manual insofar as the same may be applicable to its portion of the Work; and each Subcontractor shall be required to insert a similar provision in each of its sub-subcontracts. In the event of any such failure by a Subcontractor or Sub-subcontractor to comply with the requirements of the Project Manual, such Subcontractor or Sub-subcontractor, as the case may be, shall be removed immediately from the Work and shall not again be employed on the Work. The Contractor shall be responsible for all costs and expenses arising out of, and shall indemnify OCFA on account of, any such failure by a Subcontractor or Sub-subcontractor (specifically including, without limitation, a failure to pay for labor (including applicable fringe benefits) or materials).
- 57.8 Contractual Relations: Nothing contained in this Contract shall create any contractual relationship between OCFA or the Project Manager or the Design Professional on the one hand, and a subcontractor on the other.

58 Drawings And Specifications

- 58.1 Checking: The Contractor, as part of this Contract, shall agree not to take advantage of errors or omissions in the Contract Documents, including any plans and specifications thereto. It is the duty of the Contractor to promptly notify the Project Manager in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified methods and fails to promptly notify the Project Manager in writing of this belief, the Contractor thereby waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the OCFA, or in any subsequent arbitration or settlement conference between the OCFA and the Contractor. The Project Manager, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after the Contractor becomes aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.
- 58.2 Discrepancy in Contract Documents: If the Contractor, either before commencing work or in the course of the work, finds any discrepancy within the Contract Documents, or between the Contract Documents and the physical conditions at the Project site, or finds an error or omission on the plans, specifications, or in any survey, the Contractor shall promptly notify the Project Manager in writing of such discrepancy, error, or omission. If the Contractor observes that the Contract Documents is at variance with any applicable law, regulation, order, or decree, the Contractor shall promptly notify the Project Manager in writing of such conflict. The Project Manager, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, work done by the Contractor after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.

- 58.3 Implication: Any work or material not specified in the Contract Documents but which by fair implication, in the judgment of the Project Manager, should be included therein, shall be accomplished, furnished, or provided by the Contractor as part of the Contract Documents.
- 58.4 Precedence: Figures marked on drawings shall in general be followed in reference to scale measurements. Large scale drawings shall in general govern small scale drawings. Specifications and schedules shall govern over drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors. When measurements are affected by conditions already established, the Contractor shall take measurements notwithstanding the giving of scale or figure dimensions in the drawings. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of discrepancy in the Plans or Specifications, the matter shall be immediately submitted to the Project Manager, without whose decision Contractor shall not adjust said discrepancy save only at Contractor's own risk and expense. The decision of the Project Manager shall be final.
- 58.5 Shop Drawings: The Contractor shall establish, implement, and supervise the submission of shop drawings and other submittals (of any type) in accordance with the Schedule and any Milestones. The Contractor shall note any variances between any such shop drawings or other submittals and the Project Manual for the benefit of OCFA at the time of submission. No approval or other similar action regarding any such submission shall be binding in any way upon OCFA.
- 58.6 Drawings and Specifications at the Site: The Contractor shall keep available at the site for ready reference a complete set of all contract drawings, details, supplementary drawings and approved shop drawings, a complete copy of the specifications with all addenda, bulletins, amendments, and copies of Project correspondence. The Contractor shall maintain on the site a complete "as built" record set of prints. In addition, the Contractor shall keep on the site as required a copy of each manufacturer's current printed recommendations. Contractor shall also submit a copy to the Project Manager.
- 58.7 Deviations: Deviations from the drawings and the dimensions therein given, whether or not error is believed to exist, shall be made only after written authority is obtained from the Project Manager.

59 Divisions Of The Specifications

- 59.1 For convenience, the work as described in the Contract Documents are arranged in several divisions and sections, but such separations shall not be considered as the limits of the work required for any subcontract or trade: the terms and conditions of such limitations are wholly between the Contractor and his subcontractors, and the OCFA will not be responsible for any division of work by subcontractors. The Contractor will be solely responsible for all subcontract arrangements of work regardless of the location of provisions in the specifications.
- 59.2 Schedules of work included in the sections, where listed, are given for convenience only, and shall not be considered as a comprehensive list of items or work necessary to complete the work of any section.
- 59.3 Where devices or items or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many soon devices, items, or parts as are required to properly complete the work.

- 59.4 Each section of the specifications is covered by applicable requirements of the Contract Documents and other related sections as if therein written.

60 Site Conditions

- 60.1 Existing Site Conditions: Information respecting the site of the work given in drawings or specifications has been obtained by OCFA's representatives and is believed to be reasonably correct, but the OCFA does not warrant either the completeness or accuracy of such information, and it is the responsibility of the Contractor to verify all such information.
- 60.2 Changed Conditions: The Contractor shall promptly, and before such conditions are disturbed, notify the Project Manager in writing of:
- 60.2.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or
- 60.2.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents. The Project Manager shall promptly investigate the conditions, and if, as a result, finds that such conditions do so materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for performance an equitable adjustment shall be made and the Contract Documents modified in writing accordingly. Any claim of the Contractor for adjustment hereunder shall not be allowed unless Contractor has given notice as above required.
- 60.3 Public Utility Facilities on Project Site: Pursuant to Government Code, Section 4215, the Contractor shall be compensated for the costs of locating and repairing damage to public utility facilities on the Project site which was not due to failure of Contractor to exercise reasonable care, and removing or relocating main or trunk line utility facilities located on the Project site, if such work is required in the Contract Documents or the Project Manager. Such compensation shall also cover the cost of Contractor's equipment necessarily idled during such work. This provision shall not be deemed to require compensation when the presence of existing service laterals or appurtenances can be inferred from the presence of visible facilities such as buildings, meter and junction boxes, on or adjacent to the construction site. If the Contractor discovers such unidentified utility facilities during construction, Contractor shall immediately notify the Project Manager and the utility in writing.
- 60.4 Space at Site: The Contractor shall be allowed reasonable space at the site of the work as available and access thereto and shall confine Contractor operations to the space assigned. The work shall be done without interference with the ordinary use of the fire station. The Contractor shall cooperate with other Contractors of the OCFA and shall not commit or permit any act which will interfere with the performance of work by any other Contractor or employees of the OCFA whether at the site or not.

61 Conditions Affecting The Work

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve Contractor from responsibility for successfully performing the work without additional expense to the OCFA. The OCFA assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the Contract Documents, unless such understanding or representations by the OCFA are expressly stated in the Contract Documents.

62 OCFA's Property On Site

All fixtures, facilities, equipment, vehicles, furniture, and all other personal property of the OCFA located at the job site which are removed in the course of construction of the Project remain the property of the OCFA unless express provision to the contrary is made in the Contract Documents, and the Contractor shall exercise reasonable care to prevent loss or damage to said property and shall deliver promptly such property to the place designated by the Project Manager.

63 Protection

- 63.1 The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work, all material and supplies, and temporary facilities against loss or damage from whatever cause, shall protect the property of OCFA and third parties from loss or damage from whatever cause, and shall comply with the requirements of OCFA and its insurers and with all applicable laws, codes, rules and regulations with respect to the prevention of loss or damage to property as a result of fire or other hazards.
- 63.2 The Project Manager may, but shall not be required to, make periodic patrols of the Site as a part of its normal security and safety program. In such event, however, the Contractor shall not be relieved of its aforesaid responsibilities and OCFA shall not assume same, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the Contractor by the Contract.
- 63.3 Until final acceptance of the Work by OCFA, the Contractor shall have full and complete charge and care of and, except as otherwise provided in this Subparagraph, shall bear all risk of loss of, and injury or damage to, the Work or any portion thereof (specifically including OCFA-furnished supplies, equipment or other items to be utilized in connection with, or incorporated in, the Work), materials, equipment, and supplies, from any cause whatsoever, subject to the limitations set forth below.
- 63.4 The Contractor shall rebuild, repair, restore, replace, and make good all losses of, and injuries or damages to, the Work or any portion thereof (specifically including OCFA-supplied, equipment or other items to be utilized in connection with, or incorporated in, the Work), material, equipment, and supplies before final acceptance of the Work. Such rebuilding, repair, replacement, or restoration shall be at the Contractor's sole cost and expense.
- 63.5 Contractor shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. Contractor shall comply with the provisions of the Construction Safety Orders issued by the State Division of Occupational Safety & Health. Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted.
- 63.6 The Contractor shall maintain continuously adequate protection of all work from damage and shall protect the OCFA's property from injury or loss arising in connection with the Contract Documents. Contractor shall make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or representatives of the OCFA. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents, and shall maintain reasonable security of the site at all times, if necessary. Contractor shall limit visitors to the site to those necessary for construction and inspections. Visitors for other purposes shall be referred to the Project Manager. Contractor's and subcontractors' employees shall possess means of identification at all times as required by the Project Manager while on the job site.

- 63.7 In an emergency affecting the safety of life or of the work or of adjoining property the Contractor, without special instruction or authorization from the OCFA, is hereby permitted to act at Contractor's discretion to prevent such threatened loss or injury. Contractor shall so act if directed or instructed by the Project Manager. Any dispute as to compensation claimed by the Contractor on account of emergency work shall be determined by agreement as hereinafter set forth.
- 63.8 The Project Manager may notify the Contractor of any noncompliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately correct such conditions. Such notices, when delivered to the Contractor or Contractor's representative at the site of the work, shall be deemed sufficient for said purpose. Failure of receipt of such notice from the Project Manager shall not relieve the Contractor of responsibility.
- 63.9 If the Contractor fails or refuses to comply promptly, the Project Manager may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of a claim for extension of time or for excess costs or damages to the Contractor. The Contractor will be responsible for ensuring that his subcontractors comply with the provisions of this Section 63.
- 63.10 Surface or Subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved in writing by OCFA. The proposed location and coordination of temporary channels and conduits conducting accumulated water from the Site shall be submitted to Project Manager for its prior written approval. All such work shall be done at the sole expense of the Contractor, and in accordance with the Federal National Pollutant Discharge Elimination System (NPDES) and the NPDES General Construction Permit which includes the Contractor's Storm Water Pollution Prevention Plan (SWPPP) pursuant thereto.

64 Payments

The OCFA shall make payments upon the contract price in accordance with the Contract Documents.

65 Assignment

The Contract Documents, and any portion thereof, may not be assigned by the Contractor. Claims for monies due or to become due the Contractor from the OCFA under the Contract Documents may be assigned, with the written consent of the Board of Directors, to a bank, trust company, or other financing institution and may thereafter be further assigned or reassigned to any such institution. To effect such assignments, the Contractor, or Contractor's assignee, shall submit a written request to the Board of Directors enclosing a letter from the proposed assignee indicating that it will accept such assignment. Any attempted assignment contrary to provisions of this paragraph shall be void.

66 Other Contracts

The Board of Directors may undertake or award other contracts for additional work or other work, and the Contractor shall fully cooperate with such other contractors and OCFA employees and carefully fit Contractor's own work to such additional work as may be directed by the Project Manager. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by OCFA employees.

67 Warranty / Warranty Work

- 67.1 One-Year Warranty: The Contractor agrees to maintain and guarantees for a period of twelve (12) months from the date of the issuance of the certificate of acceptance of the Project or the issuance of a temporary certificate of occupancy as requested by the Fire Chief in the Fire Chief's sole discretion, whichever event occurs first, (and for such additional or extended periods for portions of the Work as provided in the Project Manual), that the completed work is free from all defects due to faulty materials, equipment or workmanship and that Contractor shall promptly make whatever adjustments or corrections which may be necessary to cure any defects, including repairs or any damage to the Site, Project, Work, or any system installed therein resulting from such defects. .
- 67.2 Warranty Work / Normal Response Time: In the event of failure to comply with the above-mentioned conditions within one (1) week after being notified in writing, the OCFA is hereby authorized to proceed to have the defects remedied and made good at the expense of the Contractor who hereby agrees to pay the cost and charges therefore immediately on demand.
- 67.3 Warranty Work / Emergency Response Time: If in the opinion of the OCFA, defective work creates a dangerous condition, affects the OCFA's essential operations / essential use of the facility, affects the safety or preservation of property or personnel, or requires immediate correction or attention to prevent further loss to the OCFA, the Contractor shall be required to take corrective action within 24 hours after personal or telephonic notice by the OCFA's Property Management Section. If the Contractor cannot be contacted or does not comply with the OCFA's request for correction within 24 hours (or a reasonable time as determined by the OCFA), the OCFA may, notwithstanding the provisions of this Section 67, proceed to make such correction, the cost of which shall be charged against the Contractor.
- 67.4 Failure to Take Corrective Action: Failure by the Contractor to take corrective action as specified above shall constitute a material breach of this agreement and will result in the OCFA taking whatever corrective action it deems necessary including termination of this agreement. All costs resulting from such action by the OCFA will be claimed against Contractor or, if necessary, the Contractor's Performance Bond. The Contractor's Performance Bond shall remain in full force and effect through the warranty period.
- 67.5 Alternative Remedy: In the event that the Contractor fails to make adjustments, repairs, corrections or other work made necessary by such defects, or to properly maintain and service the Project, the OCFA may do so and charge the Contractor the cost incurred. The performance bond shall remain in full force and effect through the guarantee period or, at the option of the Contractor, a warranty bond in the amount of one hundred percent of the Contract price may be substituted for the performance bond. Such warranty bond must be in a form approved by OCFA General Counsel, be issued by a surety authorized by the State Insurance Commissioner to transact business in the State of California as a surety, and must have and maintain, throughout the warranty period, at least an "A-" policyholder's rating, or better, and a financial rating of "Class VII," or better, in accordance with the most current A.M. Best's Rating Guide.
- 67.6 All Inclusive Remedies: The Contractor's obligations under this clause are in addition to the Contractor's other express or implied assurances of this Contract, Project Manual, or state law and in no way diminish any other rights that the OCFA may have against the Contractor for faulty materials, equipment, or work.

68 Extra Work And Changes

68.1 The Contract price as set forth in the Contract and the Contractor's Bid, includes compensation for all work performed by Contractor, unless Contractor obtains a written change order signed by the Project Manager specifying the exact nature of the extra work and the amount of extra compensation to be paid all as more particularly set forth in this Section 1.16. OCFA shall extend the time fixed in the Contract Documents for completion of the Project by the number of days reasonably required for Contractor to perform the extra work only if Contractor is actually delayed in the performance of any item of the Project on the critical path by:

68.1.1 Any act or neglect of OCFA, Project Manager, Design Professional, or any employee, agent, or representative of OCFA; or

68.1.2 Combined action of workers, either those employed on the Project or in any industry essential to the conduct of the Work not caused by or resulting from default, negligence, or collusion on the part of Contractor or its Subcontractors of every tier; or

68.1.3 Unusually severe weather conditions not reasonably anticipatable for that portion of the Site is located, based upon U.S. Weather Bureau climatological reports for the months included plus a report indicating average precipitation, temperature, etc. for the last ten (10) years from the nearest reporting station; or

68.1.4 Excusable Transportation Delays; or

68.1.5 Excusable Labor Disputes; or

68.1.6 Acts of God; or

68.1.7 National Emergency, declared by the President of the United States.

In the event one or more of the specific situations described above occurs, the Scheduled Completion Date may be extended by Change Order for a period not to exceed the length of such delay, provided that Contractor presents a written request to Project Manager, with demonstrated justification, for such time extension within five (5) days of the commencement of such delay. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor as determined by Project Manager. The decision of the Project Manager shall be final.

68.2 The Project Manager may, at any time, by written order, and without notice to the sureties, make changes in the drawings or specifications of the Contract Documents if within the general scope thereof. A change order shall also be any other written order (including direction, instruction, interpretation or determination) from the OCFA which causes any change, provided Contractor gives the OCFA written notice stating the date, circumstances and source of the order and that Contractor regards the order as a change order.

68.3 If any change under this Section 1.16 causes an increase or decrease in Contractor's actual direct cost or the time required to perform any part of the work under this Contract, whether or not changed by any order, the Project Manager shall make an equitable adjustment and modify the Contract in writing. Except for claims based on defective specifications, no claim for any change shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as required below. In the case of defective specifications for which the OCFA is responsible, the equitable adjustment shall include any increased direct cost Contractor reasonably incurred in attempting to comply with those defective specifications.

68.4 No extension of time shall be given unless the delay for which a request is made is included in those items for which an extension to the Scheduled Completion Date is appropriate pursuant to the provisions of this Section 1.16 and the Project Manager finds that such reason for the delay actually adversely affected the ability of the Contractor to complete the Project

by the Scheduled Completion Date or to complete a Milestone. Project Manager's decision will be conclusive on the parties to this Contract.

- 68.5 No claims by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies the Project Manager that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took all available measures to mitigate such damages. The Project Manager's decision will be conclusive on all parties to this Contract.
- 68.6 No extension of the Scheduled Completion Date or the right on the part of Contractor to secure any such extension pursuant to this Section 1.16 shall prejudice any right OCFA may have under the Project Manual, or otherwise, to terminate this Contract.
- 68.7 The Contract Price includes compensation for all work performed by Contractor, unless Contractor obtains a written change order signed by the Project Manager specifying the exact nature of the extra work and the amount of extra compensation to be paid all as more particularly set forth in in this Section 1.16.
- 68.8 Project Manager may extend the Scheduled Completion Date by the number of days reasonably required for Contractor to perform the extra work, but only to the extent such extra work actually adversely affects the Scheduled Completion Date, as determined by Project Manager. The decision of the Project Manager shall be final.
- 68.9 The OCFA or the Fire Chief may order modifications or authorize change orders for any reason. Such modifications shall be reviewed, evaluated, and processed in the manner specified in this Section 1.16.
- 68.10 Project Manager may at any time, without notice to any surety, by written order designated or indicated to be a Class 1 or Class 2 Change Order, make any change in the work within the general scope of the Contract, including, but not limited to, changes in:
- 68.10.1 The Project Manual (including drawings and designs);
 - 68.10.2 The time, method, or manner of performance of the work;
 - 68.10.3 The OCFA-furnished facilities, equipment, materials, services, or site; or
 - 68.10.4 Directing acceleration in the performance of the work.
- 68.11 Except as provided in this Section 68, no order, statement or conduct of the OCFA or its representatives, including, but not limited to the Fire Chief, Project Manager, or the Design Professional, shall be treated as a change under this Section 1.16 or entitle Contractor to an equitable adjustment.
- 68.12 If any change under this Section 68 causes an increase or decrease in Contractor's actual, direct cost or the time required to complete the Project or a Milestone under this Contract and Project Manual, whether or not changed by any order, the Project Manager shall make an equitable adjustment and the OCFA shall modify the Contract in writing. Except for Class 1 claims based on defective provisions of the Project Manual, no claim for any change under Section 1.16 shall be allowed for any costs incurred more than 15 days before the Contractor gives written notice as required in this Section 1.16. In the case of defective specifications for which the OCFA is responsible, the equitable adjustment shall include any increased direct cost Contractor reasonably incurred in attempting to comply with those defective specifications.

- 68.13 If Contractor intends to assert a claim for an equitable adjustment under this Section 1.16, it must, within fifteen (15) days after receipt of a written change order under this Section 1.16 or the furnishing of a written notice hereunder, submit a written statement to the Project Manager setting forth the general nature and monetary extent of such claim. Such claim shall contain the documentation and information as specified herein. The Project Manager may extend the 15-day period so long as the request for the extension is submitted within such 15-day period and only for good and justified cause. Project Manager's decision regarding any request for extension shall be final and binding on all parties.
- 68.14 Claim documentation shall conform to generally accepted accounting principals and all supporting documentation shall be cited by reference, photocopies, or explanation. Supporting documentation may include, but shall not be limited to, general conditions, general requirements, technical specifications, drawings, correspondence, conference notes, shop drawings logs, survey books, inspection reports, delivery schedules, test reports, daily reports, subcontracts, fragmentary schedules or time impact analyses, photographs, technical reports, requests for information, field instructions, and all other related records necessary to support Contractor's claim.
- 68.15 Supporting documentation of damages for each claim shall be cited, photocopied, or explained. Supporting documentation may include, but shall not be limited to, any or all documents related to the preparation and submission of the bid; certified, detailed labor records including labor distribution reports, material and equipment procurement records, construction equipment ownership cost records or rental records, Subcontractor or vendor files and cost records, service cost records, purchase orders, invoices, project as planned and as-built records, general ledger records, variance reports, accounting adjustment records, and any other accounting materials necessary to support Contractor's claim.
- 68.16 Each copy of the claim documentation shall be certified by a responsible office of the Contractor in accordance with the requirements of the Project Manual.
- 68.17 Should Contractor be unable to support any part of the claim and it is determined that such inability is attributable to falsity of such certification or misrepresentation of fact or fraud on the part of Contractor, the Contractor shall be liable to OCFA as provided for under California Government Code Section 12650 et seq.
- 68.18 Disputed work shall be performed as ordered in writing by the Project Manager, so long as the cost of such work is within the OCFA of the Project Manager as described above, so as to minimize the impact on, and delays to, the Work.
- 68.19 Costs which shall not be allowed or paid in Change Orders or claim settlements under this Contract include, but are not limited to, interest cost of any type other than those mandated by statute; claim preparation or filing costs; legal expenses; the costs of preparing or reviewing proposed Change Orders or change order proposals concerning change orders which are not issued by the OCFA; lost revenues; lost profits; lost income or earnings; rescheduling costs; costs of idled equipment when such equipment is not yet at the Site or has not yet been employed on the Work; lost earnings or interest on unpaid retainage; claims consulting costs; the costs of corporate officers or staff visiting the Site or participating in meetings with the OCFA; any compensation due to the fluctuation of foreign currency conversions or exchange rates; loss of other business; or any other cost identified as unallowable cost under the provisions of the Federal Acquisition Regulations.
- 68.20 No claim by Contractor for an equitable adjustment shall be allowed if made after final payment under this Agreement. Contractor hereby agrees to make any and all changes, furnish the materials and perform the work that OCFA or its Project Manager may require without

nullifying this Contract. Contractor shall adhere strictly to the Contract Documents unless a change therefrom is authorized in writing by the Project Manager, subject to the limitations contained herein. Under no condition shall Contractor make any changes to the Project, either in additions or deductions, without the written order of the OCFA or its Project Manager and the OCFA shall not pay for any extra charges made by Contractor that have not been agreed upon in advance in writing by the OCFA. Contractor shall submit immediately to the OCFA written copies of its firm's cost or credit proposal for change in the work. Disputed work shall be performed as ordered in writing by the OCFA or the Project Manager and the proper cost or credit breakdowns therefor shall be submitted without delay by Contractor to the Project Manager.

- 68.21 Project Manager is authorized by the Board of Directors to make, by written order, changes or additions to the work within the scope of the Contract Documents. This authority to approve changes is limited to 10% of the original contract amount. All changes over the amounts specified above shall be subject to the approval of the Board of Directors. Any change or addition of any kind pursuant to any provision of the Contract Documents which exceeds the limits described in this subsection and which have not been approved by the Board of Directors is void and can not be enforced against the OCFA.
- 68.22 Any claim of the Contractor for adjustment under this Section 1.16 or any other provision of the Project Manual must be asserted in writing within 15 days from the date of receipt by the Contractor of the notification of change unless the Board of Directors or Project Manager grants a further period of time before the date of final payment under the Contract Documents. Nothing provided in this Section 68 shall excuse the Contractor from proceeding with the prosecution of the work as changed. Except as otherwise provided in this Contract, no charge for any extra work or material will be allowed.
- 68.23 Labor wage rates shall not exceed the Prevailing Wage Rates supported by payroll records. Equipment rental rates should be based on latest edition of equipment rental rates published by the State of California Department of Transportation; Division of Construction.
- 68.24 Nothing in this Section shall excuse the Contractor from proceeding with the Contract Documents as changed.

69 No Verbal Modifications

No verbal statement of any person whomsoever shall in any manner or degree modify or otherwise affect the terms of the Contract or the Project Manual.

70 Material, Workmanship, And Acceptance

- 70.1 Where materials are specified by reference to standard specifications of the American Society for Testing Materials (A.S.T.M.), Federal Specifications, or others, all applicable provisions of the designated specifications shall be considered as forming a part of the Contract Documents to the same force and effect as if repeated therein.
- 70.2 All work under this Contract Documents shall be performed in a skillful and workmanlike manner. The Project Manager may, in writing, require the Contractor to remove from the work any employee the Project Manager deems incompetent, careless, or otherwise objectionable.
- 70.3 The Contractor shall, without charge, replace any material or correct any workmanship found by the Project Manager not to conform to the contract requirements, unless in the public interest the Project Manager consents to accept such material or workmanship with an

appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

- 70.4 If the Contractor does not promptly replace rejected material or correct rejected workmanship, the OCFA (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with these General Conditions.
- 70.5 Unless otherwise provided in the Contract Documents, acceptance by the OCFA shall be accomplished by recordation of Notice of Completion which shall be made as promptly as practicable after completion and inspection of all work required by the Contract Documents. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud, or as regard the OCFA's rights under any warranty or guarantee. Informal procedures such as "punch lists" are not to be deemed final or conditional acceptance.

71 Termination For Default & Damages For Delay

- 71.1 The Contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party, provided that no termination may be effected unless the other party is given: (1) Not less than ten (10) calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate; and (2) An opportunity for consultation with the terminating party prior to termination.
- 71.2 If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in the Contract Documents or any extension thereof, or fails to complete said work within such time, the Board of Directors may, by written notice to the Contractor, terminate Contractor's right to proceed with the work or such part of the work as to which there has been delay. In such event, the OCFA may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completion the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, Contractor and Contractor's sureties shall be liable for any damage to the OCFA resulting from Contractor's refusal or failure to complete the work within the specified time.
- 71.3 Fixed and agreed liquidated damages are provided in the Contract Documents, these General Conditions, paragraph 1.38 J. If the OCFA so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the OCFA in completing the work.
- 71.4 Fixed and agreed liquidated damages are provided in the Contract Documents, these General Condition, paragraph 1.38 J. If the OCFA does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.
- 71.5 The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if the Contractor is actually delayed in the performance of any item of the Project on the critical path by:
- 71.5.1 Any act or neglect of OCFA, Project Manager, Design Professional, or any employee, agent, or representative of OCFA; or

71.5.2 Combined action of workers, either those employed on the Project or in any industry essential to the conduct of the Work not caused by or resulting from default, negligence, or collusion on the part of Contractor or its Subcontractors of every tier; or

71.5.3 Unusually severe weather conditions not reasonably anticipatable for that portion of the County of Orange where the Project site is located, based upon U.S. Weather Bureau climatological reports for the months included plus a report indicating average precipitation, temperature, etc. for the last ten (10) years from the nearest reporting station; or

71.5.4 Excusable Transportation Delays; or

71.5.5 Excusable Labor Disputes; or

71.5.6 Acts of God; or

71.5.7 National Emergency, declared by the President of the United States.

The Scheduled Completion Date may be extended by Change Order for a period not to exceed the length of such delay, provided that Contractor presents a written request to Project Manager, with demonstrated justification, for such time extension within five (5) days of the commencement of such delay. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor. No extension of time shall be given unless the delay for which a request is made is included in those items for which an extension to the Scheduled Completion Date is appropriate as provided above and the Project Manager finds that such reason for the delay actually adversely affected the ability of the Contractor to complete the Project by the scheduled completion date. Project Manager's decision will be conclusive on the parties to this Contract. No claims by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies the Project Manager that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took all available measures to mitigate such damages. The Project Manager's decision will be conclusive on all parties to this Contract. Project Manager may extend the time indicated for completion of the Project by the number of days reasonably required for Contractor to perform the extra work, but only to the extent such extra work actually adversely affects the Scheduled Completion Date, as determined by Project Manager. The decision of the Project Manager shall be final.

The rights and remedies of the OCFA provided in this Section 71 are in addition to any other rights and remedies provided by law or under the Contract Documents.

72 OCFA's Rights Regarding Work

72.1 If the Work or any portion thereof is defective and/or does not conform to the Project Manual, or if Contractor fails to supply sufficient skilled workers and suitable material, services, or equipment, or if Contractor fails to make prompt payments to Subcontractors or for labor, materials, or equipment, or if Contractor fails to supervise or coordinate the Work, or if grounds exist pursuant to any other provision of the Project Manual, Project Manager may order Contractor to stop the Work, or any portion thereof, until cause for the order to stop has been eliminated. Project Manager's exercise of this right to stop the Work shall not give rise to any duty on the part of the Project Manager to exercise this right for the benefit of Contractor or any other party. This right to stop the Work pursuant to this Section is in addition to and not in limitation of OCFA's rights to terminate this Contract in accordance with the Project Manual.

- 72.2 Project Manager may at any time and without cause suspend the Work or any portion thereof by written notice to Contractor and a Change Order shall be issued extending the Scheduled Completion Date by the number of days of such suspension. For suspensions of the Work which are fourteen (14) days or less, Contractor shall recommence the Work at the direction of Project Manager with the Lump Sum Price remaining unchanged. Provided Contractor is not in default of the terms of the Project Manual, if there is a suspension of Work or suspensions which in the aggregate extend beyond fourteen (14) days, Contractor shall recommence the Work at the direction of Project Manager and Contractor and Project Manager shall, at Contractor's written request and through good faith negotiations, equitably adjust the Scheduled Completion Date and any Milestones, and shall equitably adjust the Lump Sum Price, in an amount to be approved by the Fire Chief or the OCFA, which approval shall not be unreasonably withheld, for each day of such suspension exceeding fourteen (14) days. Adjustments to the Scheduled Completion Date or completion of a Milestone shall only be provided to the extent the suspension of Work actually adversely affects the Scheduled Completion Date or completion of a Milestone, as determined by Project Manager. The decision of the Project Manager shall be final.
- 72.3 In the event the Project Manager determines that the progress of the Work is behind the progress set forth in the Contractor's Construction Schedule, Project Manager may require Contractor to take such actions as the Project Manager deems necessary to expedite the progress of the Work in conformance with the progress set forth in the Contractor's Construction Schedule. Such actions may include without limitation, increasing the number of workers performing the Work, utilizing overtime work, and requiring additional work shifts. Such action by Project Manager to place Contractor back on schedule shall not be the subject of a Change Order increasing the Lump Sum Price, nor shall Contractor receive any additional compensation for these activities.
- 72.4 Contractor shall cooperate with OCFA, Project Manager, Design Professional, and all other persons as OCFA may retain or employ for (by way of illustration only) installation of furniture, decoration, and training, and the like at the Project. Contractor acknowledges that it is critical to OCFA that separate Contractors are allowed to perform and coordinate the installation of furnishings, fixtures, and equipment not covered by this Contract but necessary for the Project. Contractor covenants to use its best efforts to prevent OCFA from suffering delay in completion of the Work as a result of Contractor's failure to cooperate and coordinate its work with Related Work as required by the Project Manual.
- 72.5 To the extent that OCFA timely provides to Contractor information relating to the work of its separate Contractors, the interrelationships between the work of separate Contractors and/or third parties such as OCFA's purchasing agent and any other special consultants shall be indicated on the Contractor's Construction Schedule to allow OCFA to provide for proper phasing.

73 Contract Price; Method of Payment; Retention Of Funds

- 73.1 OCFA agrees to pay and the Contractor agrees to accept as full consideration for the faithful performance of this Contract, subject to any subsequent additions or deductions as provided in approved change orders, the sum as itemized in the Exhibit K: Schedule of Values.
- 73.2 Progress payments shall be made to the Contractor per month for each successive month as the work progresses. The Contractor shall be paid such sum as will bring the total payments received since the commencement of the work up to ninety percent (90%) of the value of the work completed, less all previous payments, provided that the Contractor submits the request for payment prior to the end of the day required to meet the payment schedule. The OCFA

will retain ten percent (10%) of the amount of each such progress estimate and material cost until 30 days after the recordation of the Notice of Completion.

- 73.3 The Contractor shall request payment through the preparation and submission to OCFA of an Invoice in accordance with the Project Manual. It shall show in detail all monies properly payable to the Contractor, approved by the Project Manager, in accordance with the previously approved activities as identified on the Contractor's Construction Schedule, including those items of labor, materials, and equipment used or incorporated in the Work (and, if OCFA has agreed in advance in writing, suitably stored at the Site) through and including the Payment Application Date. The Application for Partial Payment shall have, as attachments waivers of mechanics' and materialmen's liens by the Contractor and its Subcontractors and Sub-subcontractors as of the date of submission of the Application for Partial Payment, which waivers shall conform in all material respects with the then current provisions of Section 3262 of the California Civil Code (or any successor thereto), certifications of payrolls (30 days in arrears), and such other evidence of performance of the Work, the costs thereof and payment therefor as OCFA may deem necessary or desirable.
- 73.4 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Partial Payment shall pass to OCFA, free and clear of all liens, claims, security interests or encumbrances, upon the sooner occurrence of: (a) the delivery of any such materials or equipment to the Site; or (b) the tender of payment of the applicable Application for Partial Payment by OCFA to the Contractor; and that no Work, materials, or equipment covered by an Application for Partial Payment shall have been acquired, whether by the Contractor or by any Subcontractor or Sub-subcontractor, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person. The passage of title to OCFA as provided herein shall not alter or limit the obligations and duties of the Contractor with respect to the Work and the materials or equipment incorporated therein or used in connection therewith as set forth in the Project Manual. In this regard, it is specifically noted that neither the OCFA, nor its Directors, officers, employees, or agents shall be held responsible in any manner for any loss that may happen to the Work or any part thereof during the course of construction; for any loss or damage to any of the materials, equipment, supplies, or other things used or employed in performing the Work; for injury to or death of any person, either workers or the public; or for damage to property, from any cause that might have been prevented by the Contractor, Contractor's workers, employees, Subcontractors, suppliers, or agents.
- 73.5 If the Contractor has submitted an Application for Partial Payment in the manner prescribed in the Project Manual, The Project Manager shall, with reasonable promptness, review, approve the same (or such portions thereof covering amounts it determines to be properly due), or shall state in writing its reasons for withholding its approval (whether of all or a part).
- 73.6 The Project Manager's approval of an Application for Partial Payment shall not constitute a representation by OCFA that the conditions precedent to the Contractor's entitlement to payment have been fulfilled, nor shall approval of an Application for Partial Payment by OCFA be deemed a representation by OCFA: (a) that it has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (b) that it has reviewed the construction means, methods, techniques, sequences, coordination or procedures, or the cleanliness of the Site, or the safety precautions and programs, in connection with the Work; (c) that it has made any examination to ascertain how or for what purposes the Contractor has used the monies previously paid on account of the Contract Sum.
- 73.7 No approval of an Application for Partial Payment, progress payment or any beneficial, partial or entire use or occupancy of the Project by OCFA shall constitute an acceptance of any Work which is not in accordance with the Project Manual; and regardless of approval of an

Application for Partial Payment by OCFA, the Contractor shall remain totally obligated and liable for the performance of the Work in strict compliance with the Project Manual.

73.8 Subject to OCFA's rights to offset or withhold as set forth in these General Conditions, after OCFA has approved an Application for Partial Payment, in whole or in part, it shall make payment of the amount approved to the Contractor as provided in the Project Manual.

73.9 Pursuant to California Public Works Contract Code Section 22300, the Contractor will be entitled to post approved securities with the OCFA or an approved financial institution in order to have the OCFA release funds retained by the OCFA to ensure performance of the Contract. Contractor shall be required to execute an addendum to this Contract together with escrow instructions and any other documents in order to effect this substitution.

74 Right To Occupy - Beneficial Use

74.1 OCFA reserves the right, prior to Substantial Completion of the entire Project, to use a portion or portions of the Work when Project Manager determines that such portion or portions may be safe for such use provided such use will not unreasonably interfere with the Contractor's orderly progress of the Work. Such use ("beneficial use") shall not be construed as an acceptance of any such Work, or a part of the Work, as substantially complete, nor shall it affect the dates and times when payments shall become due from the OCFA to Contractor, nor shall it prejudice OCFA's rights pursuant to the Contract or any bonds guaranteeing the same. Notwithstanding such occupancy or use, Contractor shall continue to provide insurance, security, maintenance, utilities, and protection to the Work, unless otherwise agreed by the parties in writing.

74.2 At the sole discretion of the Fire Chief, any time after beneficial use and prior to issuance of a certificate of occupancy by the Local Jurisdictions, the Fire Chief may request one or more of the local Jurisdictions to issue a temporary certificate of occupancy for a portion or portions of the Project. Upon the issuance of such temporary certificate of occupancy, the OCFA may occupy such portion or portions of the Project, and such portions shall be deemed to be substantially complete.

74.3 Beneficial Occupancy shall not constitute acceptance by OCFA or Project Manager of the completed Work or any portion thereof, shall not relieve the Contractor of its full responsibility for correcting defective Work and repairing the Work, shall not be deemed to be the equivalent of completion of the Work and shall not entitle the Contractor to any increase in the Contract Sum.

74.4 Anything in this Section 74 to the contrary notwithstanding, OCFA may certify any portion of the Work to be occupied or used hereunder to be Substantially Completed and, upon the Contractor's timely completion or correction of the items on the "punch-list" with respect thereto, accept that portion of the Work.

75 Final Completion and Final Payment.

75.1 When all permits for the Work have been approved, accepted, or otherwise signed off as complete by the inspectors of the Local Jurisdictions, Contractor shall certify to the Project Manager in writing within ten (10) days that the Work is complete in accordance with the Project Manual and is ready for occupancy. Project Manager, Design Professional, and Fire Chief will make an investigation and inspection of all phases of the Work. If all contractual obligations have not been met, Project Manager shall furnish Contractor a detailed list of all remaining work (the "Punchlist") and Contractor shall commence correction of all items on the Punchlist. A letter of acceptance shall be issued upon completion of all Work specified on the

Punchlist to the satisfaction of the Project Manager. In no case will the letter of acceptance relieve Contractor of any obligations of Contractor that may be outstanding. Within five (5) business days after issuance of a letter of acceptance, Project Manager and the Design Professional shall issue a certificate of final completion. Upon receipt of the certificate of final completion, Contractor shall submit its final application for payment ("Final Application for Payment") which shall set forth all amounts due and remaining unpaid to Contractor and upon approval thereof by the Project Manager and the Design Professional, OCFA shall pay to Contractor the amount due under such Final Application for Payment as provided herein.

75.2 Before OCFA makes the Final Payment to Contractor, all requirements of the Project Manual shall have been fulfilled, including the following:

- (1) Receipt by Project Manager of a complete list of Subcontractors and principal vendors, including addresses, telephone numbers, and names of individuals to contact who are familiar with the Project, including Contractor;
- (2) Receipt by Project Manager of all operation and maintenance manuals, approved by the Design Professional;
- (3) Receipt by OCFA of all releases and written guarantees from all Subcontractors and material suppliers for the Project in a form and content satisfactory to the Project Manager, which Contractor hereby agrees to obtain for, and deliver to, Project Manager prior to completion of the Project;
- (4) Receipt by Project Manager of all "As-Built" records, approved by Project Manager and the Design Professional as specified in the Project Manual;
- (5) Copies of any other warranties or guarantees received from manufacturers, suppliers, or Subcontractors of Contractor or any Subcontractor; and
- (6) Evidence satisfactory to the Project Manager showing that the Contractor has promptly and satisfactorily settled all claims, if any, for services performed and materials furnished in connection with the Work.
- (7) Receipt by Project Manager of all documentation necessary to demonstrate compliance with the Leadership and Environmental Design program requirements.

75.3 Final Payment shall not become due until Contractor submits to Project Manager: (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which OCFA or OCFA's property might in any way be responsible, have been paid or otherwise satisfied; (2) the consent of the surety to Final Payment; and (3) if reasonably required by the Project Manager, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Project Manager. Project Manager may require affidavits or certificates of payment and/or releases from any Subcontractor, laborer, or material supplier.

75.4 If any Subcontractor or material supplier refuses to furnish a release or waiver required by Project Manager, Contractor may satisfy its obligation with respect to such Subcontractor or material supplier by furnishing a cash bond, assignment of a certificate of deposit, or other liquid security satisfactory to Project Manager to indemnify OCFA against any lien. If any lien remains unsatisfied after all payments are made, Contractor shall refund to OCFA all monies that the OCFA may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

75.5 The acceptance of Final Payment shall constitute a waiver of all claims by Contractor except those previously made in writing and identified by Contractor as unsettled at the time of the Final Application for Payment.

- 75.6 The making of Final Payment shall constitute a waiver of all claims by OCFA except those arising from (1) unsettled claims; (2) faulty or defective Work appearing after Final Completion of the Work; (3) failure of the Work to comply with the requirements of the Project Manual; (4) terms of any special warranties required by the Project Manual; (5) "Punchlist" items not yet completed by the Contractor; (6) discrepancies noted in subsequent audits performed by OCFA or its agents within one (1) year following Final Payment; or (7) any claims identified by Project Manager as unsettled prior to making of Final Payment.
- 75.7 Final Payment shall not relieve Contractor of its warranty and indemnification obligations pursuant to the Project Manual, which shall survive such payment.
- 75.8 Contractor shall keep and present within fifteen (15) days after request by OCFA or its agents, in a form reasonably approved by the Project Manager, a final itemized accounting of all expenditures made in connection with the Work together with appropriate suplf any Subcontractor or Sub-subcontractor refuses to furnish any release, satisfaction or waiver of lien required at any time by OCFA under Paragraphs 9.1., or files a claim of lien against OCFA's property, the Contractor shall, if requested by Project Manager and at the Contractor's expense, furnish and record a Mechanic's Lien Release Bond (separate and apart from any other bond provided by the Contractor hereunder) that is in full compliance with the requirements of the then current provisions of Section 3143 of the California Civil Code. If any Subcontractor or Sub- subcontractor serves a Stop Notice (bonded or otherwise) on OCFA, Contractor shall, if requested by OCFA and at Contractor's expense, furnish a Stop Notice Release Bond (separate and apart from any other bond provided by the Contractor hereunder) that is in full compliance with the then current provisions of Section 3171 of the California Civil Code. The Contractor authorizes OCFA, and shall cause its Subcontractors and Sub-subcontractors to authorize OCFA, to check directly with any suppliers of labor and material with respect to any item chargeable to OCFA's property, to confirm balances due and to obtain sworn statements and waivers of lien, all if OCFA so elects. If any lien remains unsatisfied after all payments are made to the Contractor, the Contractor shall reimburse OCFA on account of all monies that the latter may be compelled to pay in discharging such lien, including all costs and attorneys' fees.

76 Surety Bonds.

Contractor shall, upon entering into performance of this Agreement, furnish a bond in the amount of one hundred percent (100%) of the Contract price bid, to guarantee the faithful performance of the work, and an additional bond in the amount of one hundred percent (100%) of the Contract price bid to guarantee payment of all claims for labor and materials furnished. The bonds required pursuant to this Section shall be issued by a surety authorized by the State Insurance Commissioner to transact business in the State of California as a surety and shall have and maintain throughout the life of the Project, at least an "A-" policyholder's rating, or better, and a financial rating of "Class VII," or better, in accordance with the most current A.M. Best's Rating Guide. This Contract shall not become effective until such bonds are supplied to and approved by the OCFA.

77 Risk And Indemnification

- 77.1 Indemnification: To the fullest extent permitted by law, Contractor shall indemnify, defend (at Contractor's sole cost and expense and with legal counsel approved by OCFA, which approval shall not be unreasonably withheld), protect and hold harmless OCFA and all of OCFA's officers, directors, employees, consultants, agents, successors and assigns (collectively the "Indemnified Parties"), from and against any and all claims (including, without limitation, claims for bodily injury, death or damage to property), demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other

professional, expert or consultants' fees and costs and OCFA's general and administrative expenses) of every kind and nature whatsoever (individually, a "Claim"; collectively, "Claims") which may arise from or in any manner related (directly or indirectly) to any work performed or services provided under this Agreement (including, without limitation, the negligent and/or willful acts, errors and/or omissions of Contractor, its principals, officers, agents, employees, Contractors, suppliers, consultants, subconsultants, subcontractors, anyone employed directly or indirectly by any of them or for whose acts they may be liable or any or all of them) regardless of any active or passive negligence or strict liability of an Indemnified Party. Contractor understands and acknowledges that the indemnification obligation hereunder is intended to constitute a "Type I" indemnity under California law and extends to and includes Claims arising from the active or passive negligence of Indemnified Parties. Notwithstanding the foregoing, nothing herein shall be construed to require Contractor to indemnify the Indemnified Parties from any Claim arising from the sole negligence or willful misconduct of the Indemnified Parties.

- 77.2 Duty to Defend: The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend exists regardless of any ultimate liability of Contractor. Such defense obligation shall arise immediately upon presentation of a Claim by any party and written notice of such Claim being provided to Contractor. Payment to Contractor by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. Contractor's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations or statute of repose. Contractor's liability for indemnification hereunder is in addition to any liability Contractor may have to OCFA for a breach by Contractor of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit Contractor's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the parties hereto. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code Section 1654) that ambiguities are to be construed against the drafting party shall not be employed in the interpretation of this Agreement.

78 Insurance.

78.1 Compliance with Insurance Requirements.

- 78.1.1 As a condition precedent to the effectiveness of this Agreement, and without limiting the indemnity provisions set forth in this Agreement, Contractor shall obtain, maintain, and keep in full force and effect during the term of this Agreement, at its sole cost and expense, and in a form and content satisfactory to OCFA, all insurance required under this section. Contractor shall not commence any work or services under this Agreement unless and until it has provided evidence satisfactory to OCFA that it has secured all insurance required under this section. If Contractor's existing insurance policies do not meet the insurance requirements set forth herein, Contractor agrees to amend, supplement or endorse the policies to do so.
- 78.1.2 The amount of insurance coverage available to pay claims under each policy required hereunder shall be the higher of (a) the minimum limits required below, or (b) the actual limits established in each policy. Thus, by way of example only, if the minimum policy limit is \$2 million per occurrence but insurance actually carried by the Contractor or subcontractor is \$4 million per occurrence, the coverage required to be available for claims

under that policy would be \$4 million. (Nothing herein requires the Contractor to purchase insurance at limits greater than the minimum limits established below.)

78.2 Types of Insurance Required.

Contractor shall obtain and maintain in full force and effect during the term of this Agreement, including any extension thereof, the following policies of insurance:

78.2.1 Commercial General Liability Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Commercial General Liability Insurance (Insurance Services Office form CG 00 01) written on an occurrence basis with limits of at least five million dollars (\$5,000,000.00) per occurrence, five million dollars (\$5,000,000.00) in the general aggregate, and five million dollars (\$5,000,000.00) for completed operations aggregate. Defense costs shall be paid in addition to (and shall not reduce) the limits. The policy shall contain no endorsements or provisions limiting coverage for: (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) any other exclusion contrary to the Agreement.

78.2.2 Automobile Liability Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Automobile Liability Insurance (Insurance Services Office form CA 001) written on a per occurrence basis with limits of at least one million dollars (\$1,000,000.00) combined limit for each occurrence covering bodily injury and property damage. The policy shall specifically include coverage for owned, non-owned, leased, and hired automobiles.

78.2.3 Workers' Compensation Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Workers' Compensation Insurance in at least the minimum statutory amounts, and in compliance with all other statutory requirements, as required by the State of California. Contractor hereby waives, and agrees to obtain endorsements from its workers' compensation insurer waiving, all subrogation rights against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, and to require each of its subcontractors, if any, to waive the same and to obtain endorsements waiving the same subrogation rights under their workers' compensation insurance policies. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Employer's Liability Insurance written on a per occurrence basis with limits of at least one million dollars (\$1,000,000.00) per incident for bodily injury, disease or other covered claim.

78.2.4 Builders Risk (Course of Construction) Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a Builders Risk (Course of Construction) Insurance policy with limits of at least five million dollars (\$5,000,000.00). [Covered causes of loss shall include, or be endorsed to include, earthquake, flooding and other acts of God.] Contractor and each subcontractor agree to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers. The Builders Risk policy shall be endorsed to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers.

78.3 Acceptability of Insurers.

Insurance required by this section 78 shall be issued by a licensed company authorized to transact business in the state by the Department of Insurance for the State of California with a current rating

of A:VII or better (if an admitted carrier), or a current rating of A:X or better (if offered by a non-admitted insurer listed on the State of California List of Approved Surplus Line Insurers (LASLI), by the latest edition of A.M. Best's Key Rating Guide, except that the OCFA will accept workers' compensation insurance from the State Compensation Fund. In the event the OCFA determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the OCFA, the Contractor agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the OCFA. Contractor shall immediately substitute any insurer whose A.M. Best rating drops below the levels specified herein.

78.4 Insurance Endorsements.

Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the OCFA for written approval. Required insurance policies shall contain the following provisions, or Contractor shall provide endorsements issued by the insurance company on forms approved by the OCFA to add the following provisions to the insurance policies:

- 78.4.1 Additional Insured: The OCFA and its officials, officers, employees, agents, representatives, attorneys and volunteers shall be additional insureds with regard to liability and defense of suits and claims arising out of the performance of the Agreement; and
- 78.4.2 Additional Insured Endorsements: Additional insured endorsements shall not: (1) be restricted to "ongoing operations", (2) exclude "contractual liability", (3) restrict coverage to "sole" liability of Contractor, or (4) contain any other exclusions contrary to the Agreement. The coverage shall contain no special limitations on the scope of protection afforded to additional insureds; and
- 78.4.3 Primary and Non-Contributing Insurance: All policies of Commercial General Liability Insurance and Automobile Liability Insurance shall be primary and any other insurance, deductible, or self-insurance maintained by the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, shall not contribute with this primary insurance. Policies shall contain, or be endorsed to contain, such provisions.
- 78.4.4 Waiver of Subrogation: All policies of Commercial General Liability, Automobile Liability Insurance and Worker's Compensation shall contain or be endorsed to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, or shall specifically allow Contractor or others providing insurance evidence in compliance with the requirements set forth in this section to waive their right to recovery prior to a loss. Contractor hereby agrees to waive its own right of recovery against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, and Contractor hereby agrees to obtain similar written express waivers and insurance clauses from each of its subcontractors prior to commencement of work by the subcontractor.
- 78.4.5 Notice: Each policy of insurance required by this section 78 shall be endorsed to state that coverage shall not be suspended, voided, cancelled, or modified, or reduced in coverage or in limits, except after thirty (30) days prior written notice by First Class U.S. Mail, postage-prepaid, has been provided to the OCFA. Notwithstanding the foregoing, if coverage is to be suspended, voided, or cancelled because of Contractor's failure to pay the insurance premium, the notice provided to OCFA shall be by ten (10) days prior written notice. (Note: an endorsement that fails to state that the insurance company will provide the notice required by this subsection (e.g., "will endeavor to" or similar non-

committal phrases) does not comply with the requirements of this subsection. Similarly, Contractor's offer to provide the required notice in lieu of the insurance company doing so will not comply with this subsection. It is the Contractor's obligation to ensure that its insurance company(ies) will provide all policy endorsements required under this Contract.)

78.4.2 For all policies of Commercial General Liability Insurance, Contractor shall provide endorsements for completed operations to effectuate this requirement.

78.5. Deductibles and Self-Insured Retentions.

Any deductible or self-insured retention must be approved in writing by the OCFA in advance and shall protect the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention. Contractor shall be solely responsible for the payment, and if required by the insurer the advancement, of any and all deductible amounts and self-insured retentions.

78.6. Evidence of Coverage.

Within seven (7) calendar days after the date of the Notice of Apparent Low Bidder, Contractor shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required by this section. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the OCFA for written approval. The certificates of insurance and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. (ACORD form Certificates of insurance will not be accepted in lieu of approved endorsements.) At least fifteen (15) days prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the OCFA. If such coverage is cancelled or reduced and not replaced immediately so as to avoid a lapse in the required coverage, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the OCFA evidence of insurance showing that the required insurance has been reinstated or is being provided through another insurance company or companies. Contractor shall promptly furnish, at OCFA's request, copies of actual policies including all declaration pages, endorsements, exclusions and any other policy documents OCFA requires to verify coverage.

78.7 Requirements Not Limiting.

Requirement of specific coverage or minimum limits contained in this section are not intended as a limitation on coverage, limits, or other requirements, or a waiver of any coverage normally provided by any insurance. Nothing in this section shall be construed as limiting in any way the indemnification provision contained in this Agreement, or the extent to which Contractor may be held responsible for payments of damages to persons or property.

78.8 Enforcement of Agreement (Non-Estoppel).

Contractor acknowledges and agrees that actual or alleged failure on the part of the OCFA to inform Contractor of any non-compliance with any of the insurance requirements set forth in this section imposes no additional obligation on the OCFA nor does it waive any rights hereunder.

78.9 Insurance for Subcontractors.

Contractor shall either: (1) include all subcontractors engaged in any work or services for Contractor relating to this Agreement as additional named insureds under the Contractor's insurance policies; or (2) Contractor shall be responsible for causing its subcontractors to procure and maintain the same types and amounts of insurance in compliance with the terms of the insurance requirements set forth in this section (except Builders Risk (Course of Construction) Insurance), including but not limited to adding the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, as additional insureds to their respective policies. All policies of Commercial General Liability Insurance and Automobile Liability Insurance provided by Contractor's subcontractors performing any work or services related to this Agreement shall be endorsed to name the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, as additional insureds. Contractor shall not allow any subcontractor to commence any work or services relating to this Agreement unless and until the Contractor has received confirmation that the subcontractor has secured all required insurance. Upon request of OCFA, Contractor shall deliver to OCFA all certificates of insurance and endorsements required from subcontractors. (Note: Contractor's duty to obtain all required insurance for subcontractors required under this Agreement applies whether or not OCFA requests delivery of evidence of such coverage.)

78.10. Insurance for Large Equipment Suppliers

Suppliers of large equipment that will be installed as part of the Project must have and maintain General Liability Insurance and Automobile Insurance with all endorsements required hereinabove unless the Contractor or Subcontractor that will install the large equipment maintains General Liability Insurance and Automobile Liability Insurance that is endorsed to name the large equipment supplier as an additional named insured and such endorsement is provided to OCFA prior to delivery of the large equipment.

78.11 Other Insurance Requirements.

The following terms and conditions shall apply to the insurance policies required of Contractor pursuant to this Agreement:

- 78.11.1 Contractor shall provide immediate written notice to OCFA if (1) any of the insurance policies required herein are terminated, cancelled or suspended, (2) the limits of any of the insurance coverage types or amounts required herein are reduced by the insurer or depleted by other claims, or (3) the deductible or self-insured retention is increased.
- 78.11.2 All insurance coverage and limits provided by Contractor and available or applicable to this Agreement are intended to apply to each insured, including additional insureds, against whom a claim is made or suit is brought to the full extent of the policies. Nothing contained in this Agreement or any other agreement relating to the OCFA or its operations shall limit the application of such insurance coverage.
- 78.11.3 None of the insurance coverages required herein will be in compliance with the requirements of this section if they include any limiting endorsement which substantially impairs the coverages set forth herein (e.g., elimination of contractual liability or reduction of discovery period), unless the endorsement has first been submitted to the OCFA and approved in writing.
- 78.11.4 Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may delay commencement of the Project. It is

Contractor's obligation to ensure timely compliance with all insurance submittal requirements as provided herein.

78.11.5 Contractor agrees to ensure that subcontractors, if any, and any other parties involved with the Project who are brought onto or involved in the Project by Contractor, have, or are provided by Contractor's insurer, the same minimum insurance coverage required of Contractor. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. Contractor agrees that upon request, all agreements with subcontractors and others engaged in the Project will be submitted to the OCFA for review. Claims for which coverage is required but not provided due to Contractor's failure to comply with this section (e.g., allowing subcontractors to proceed with disallowed limitations on their insurance coverage, or failing to require subcontractors to provide required insurance coverage or endorsements) will result in retention of payments in amounts necessary to cover the anticipated costs associated with defending and paying the claims.

78.11.6 Contractor agrees to provide immediate written notice to OCFA of any claim, demand or loss against Contractor arising out of the work or services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to pay claims, demands or losses arising out of this Agreement.

79. Contractor's Liability; OCFA Not Liable; Claims Resolution

79.1 Contractor's liability. The Contractor shall be responsible for any loss or damage that may occur to:

- The work or any part thereof;
- Any of the materials or other things used or employed in performing the work;
- Any injury to any person or persons, either workers or the public;
- Any damage to property resulting from any cause which might have been prevented by the Contractor, including defects or obstructions at any time before completion of the work and its final acceptance.

79.2. OCFA ordered precautions. If, in the opinion of the Engineer, the precautions taken by Contractor are not safe or adequate at any time during the term of the Contract, the Engineer may order the Contractor to take further precautions, and if the Contractor shall fail to do so, the Engineer may order the work done by others and charge the Contractor for the cost thereof, such cost to be deducted from any moneys due or becoming due the Contractor. Failure of the Engineer to order such additional precautions, however, shall not relieve the Contractor from his full responsibility for public safety.

79.3 OCFA not liable. The OCFA shall not be answerable or accountable in any manner, for any loss or damage that may occur to any of the following from any cause which might have been prevented by the Contractor:

- The work or any part thereof;
- Any of the materials or other things used or employed in performing the work;
- Any injury to any person or persons, either workers or the public;
- Any damage to property.

79.4 Claims Resolution.

79.4.1. From time to time during the period of this contract, the OCFA and/or the Contractor may be served with third-party claims, as a result of alleged conduct by Contractor. The following procedures shall be followed by OCFA and Contractor:

For claims received by Contractor:

(1) Contractor shall provide OCFA on a monthly basis details regarding any claim for damages to persons or property, including, date claim made, date of alleged damages, type of damages, alleged cause of damages and, as claims are resolved, details regarding Contractor's denial or payment of such claim and the reasons for denial or payment.

(2) Contractor shall resolve or deny any claim received within thirty (30) days of receipt. If Contractor is unable to resolve a claim within the thirty (30) days set forth above, it shall, prior to the expiration of the thirty (30) days request and extension in writing from the OCFA.

For claims received by OCFA:

(1) OCFA shall process any claims received pursuant to the California Government Claims Act.

(2) If after investigation of the claim, the OCFA determines the Contractor is liable under this Contract, OCFA shall tender the claim to the Contractor for proper handling and resolution.

79.5. Retention of Claimed Damages by OCFA. The OCFA may retain so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the OCFA until disposition has been made of such suits or claims for damages aforesaid.

80 Termination

80.1 The performance of work under the Contract Documents may be terminated in whole, or from time to time in part, whenever the Board of Directors shall determine that such termination is in the best interest of the OCFA, provided that the Contractor is given (1) Not less than ten (10) calendar days' written notice (delivered by email, followed by overnight delivery with proof of delivery) of intent to terminate; (2) the extent to which performance of work under the Contract Documents is terminated; (3) the date upon which such termination becomes effective; and (4) An opportunity for consultation with the terminating party prior to the effective date of the termination.

80.2 This Contract may be terminated, or the right of the Contractor to complete the Project may be terminated, without liability or damage, when in the OCFA's opinion, the Contractor is not complying with the Contract requirements in good faith, has become insolvent, or has assigned or subcontracted any part of the Work without the OCFA's consent. In the event of such termination, the Contractor will be paid the actual amount due based upon the quantity of work completed at the time of termination, less damages caused to the OCFA by acts of the Contractor causing the termination. The Contractor, in having tendered a bid, shall be deemed to have waived any and all claims for damages because of termination of the Contract or the right of the Contractor to complete the Project for any cause stated in this Section 80.

- 80.3 If termination is effected by the OCFA, an equitable adjustment in the price provided for in this Contract shall be made, but (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and (2) any payment due to the Contractor at the time of termination may be adjusted to cover any additional costs to the OCFA because of the Contractor's default. The equitable adjustment for any termination shall provide for payment to the Contractor for services rendered and expenses incurred in accordance with Section 8 of the California, Department of Transportation Standard Specifications.
- 80.4 After receipt of a Notice of Termination, and except as otherwise directed by the Board of Directors, the Contractor shall:
- (1) Stop work under the Contract Documents on the date and to the extent specified in the Notice of Termination; and
 - (2) Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the Contract Documents as is not terminated; and
 - (3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination; and
 - (4) Assign to the OCFA, all of the right, title and interests of the Contractor under the orders and subcontracts so terminated, in which case the OCFA shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; and
 - (5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, subject to the approval of the Board of Directors; and
 - (6) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and
 - (7) Deliver or otherwise make available to the OCFA all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the Contractor in performing this Contract whether completed or in process; and
 - (8) Take such action as may be necessary, or as the Project Manager may direct, for the protection and preservation of the property related to the Contract Documents which is in the possession of the Contractor and in which the OCFA has, or may acquire, interest.
- 80.5 After receipt of a Notice of Termination, the Contractor shall submit to the Project Manager a verified termination claim. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Board of Directors upon request of the Contractor made in writing within such one-year period or authorized extension thereof.
- 80.6 If any dispute concerning a question of fact arising under the terms of this Contract is not disposed of within a reasonable period of time by Contractor and Project Manager, such matter shall be brought to the attention of the OCFA via written notice of unresolved dispute(s). If agreement cannot be reached after a good faith effort to resolve the dispute, either party may assert its other rights and remedies within this Contract or within a court of competent jurisdiction. The Parties agree that, in the event of a dispute notwithstanding, they will continue without delay to carry out all their responsibilities under this Contract. The Contractor and the OCFA Board of Directors may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this Section 80, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not

terminated. The Contract Documents shall be amended accordingly, and the Contractor shall be paid the agreed amount.

81 Patent Infringement

- 81.1 The Contractor shall report to the Project Manager, promptly and in reasonable detail, each notice or claim of patent infringement based on the performance of the Contract Documents of which the Contractor has knowledge.
- 81.2 In the event of any suit against the OCFA, or any claim against the OCFA made before suit has been instituted, on account of any alleged patent infringement arising out of the performance of the obligations under the Contract Documents, or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall, at Contractor's own expense, furnish to the OCFA, upon request, all evidence and information in possession of the Contractor pertaining to such suit or claim. The Contractor further agrees to indemnify and hold harmless the OCFA against any and all claims or lawsuits based upon such patent infringement, to defend such suits, and to pay any judgment rendered against OCFA, its employees, or the Board of Directors.

82 No Waiver By OCFA

The failure of the OCFA in any one or more instances to insist upon strict performance of any of the terms of the Contract Documents or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion.

83 Disputes

- 83.1 In the event of a dispute between the parties as to performance of the work, the interpretation of the Contract Documents, or payment or nonpayment for work performed, the parties shall attempt to resolve the dispute. Pending resolution of the dispute, the Contractor shall continue the work diligently to completion as directed by Project Manager. If the dispute is not resolved, the Contractor agrees Contractor will neither rescind the Contract Documents nor stop the progress of the work.
- 83.2 With respect to any "claim" as that term is defined in Public Contract Code section 9204, Contractor shall submit such claim in accordance with Section 91 hereinbelow.

84 Attorneys' Fees

If any action at law or in equity is necessary to enforce or interpret the terms of this Contract, each party shall be responsible for their respective costs, including attorneys' fees. The prevailing party shall not be entitled to recover its attorneys' fees or related costs. Nevertheless, if any action is brought against the Contractor or any Subcontractor to enforce a Stop Notice or Notice to Withhold, which names the OCFA as a party to said action, the OCFA shall be entitled to reasonable attorneys' fees, costs and necessary disbursements arising out of the defense of such action by the OCFA. The OCFA shall be entitled to deduct its costs for any Stop Notice filed, whether court action is involved or not.

85 Contractor's Employees' Compensation

- 85.1 General Prevailing Rate: OCFA has been advised by the State of California Director of Industrial Relations of the Director's of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which the work is to be performed for each craft or type of work needed to execute this Contract, and copies of the same are on file in the Office of the Engineer of OCFA. The Contractor agrees that not

less than said prevailing rates shall be paid to workers employed on this public works contract as required by Labor Code Section 1774 of the State of California.

- 85.2 Forfeiture For Violation: Contractor shall, as a penalty to the OCFA, forfeit Fifty Dollars (\$50.00) for each calendar day or portion thereof for each worker paid (either by the Contractor or any subcontractor under it) less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.
- 85.3 Apprentices: Sections 1777.5, 1777.6 and 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices is applicable to this Contract and the contractor shall comply therewith if the prime contract involves Thirty Thousand Dollars [\$30,000.00] or more or twenty (20) working days, or more; or if contracts of specialty contractors not bidding for work through the general or prime contractor are Two Thousand Dollars [\$2,000.00] or more or Five (5) working days or more. Information relative to apprenticeship standards, contributions, wage schedules and other requirements may be obtained from the State Director of Industrial Relations or from the Division of Apprenticeship Standards.
- 85.4 Workday: In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and Contractor shall not require more than eight (8) hours of labor in a day from any person employed by him hereunder except as provided in Section 11.4.2 above. Contractor shall conform to Article 3, Chapter 1, Part 7 (Sections 1810 et seq.) of the Labor Code of the State of California and shall forfeit to the OCFA as a penalty, the sum of twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by Contractor or any Subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one calendar day and forty (40) hours in any one week in violation of said Article. Contractor shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the Project.
- 85.5 Record of Wages; Inspection: The Contractor and each subcontractor performing any portion of the work under the Contract Documents shall keep an accurate record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by Contractor in connection with the work. Said payroll records shall be certified and shall be available for inspection at the principal office of the Contractor on the basis set forth in Labor Code Section 1776. The Contractor shall file a certified copy of said payroll records with the OCFA within ten days after receipt of a written request therefor from Project Manager or otherwise from the OCFA. The Contractor shall inform the OCFA of the location of said payroll records, including the street address, City and State, and shall, within five working days, provide a notice of change of location and address of said payroll records. It shall be the responsibility of the Contractor to ensure the compliance with the provisions of this Section 85 and the provisions of Labor Code Section 1776. In the event of noncompliance with the requirements of this Section or the requirements of Labor Code Section 1776, the Contractor shall have ten days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply. Should noncompliance exist after said ten-day period, the Contractor shall, as a penalty to the OCFA, forfeit Twenty-five Dollars (\$25) for each calendar day, or portion thereof, for each worker to whom the noncompliance pertains until strict compliance is effectuated. The Contractor acknowledges that, without limitation as to other remedies of enforcement available to the OCFA, upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the California Department of Industrial Relations, such penalties shall be withheld from progress payments then due the Contractor.

- 85.6 Pursuant to California Labor Code Section 1771.4, Contractor's services are subject to compliance monitoring and enforcement by the Department of Industrial Relations. Contractor shall post job site notices as prescribed by DIR regulations and furnish the records specified in California Labor Code Section 1776 directly to the Labor Commissioner in the manner prescribed by California Labor Code Section 1771.4(a)(3) and (c)(2).

86 SAFETY & HEALTH

- 86.1 The General Contractor (the Contractor) shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all precautions and follow all procedures for the safety of, and shall provide all protection to prevent injury to, all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of OCFA who may be involved. These precautions shall include, but in no event be limited to the:
- (1) Provisions of Local, State and Federal Regulations.
 - (2) Posting of danger signs and personal notification to all affected persons of the existence of a hazard, of whatever nature.
 - (3) Furnishing and maintaining of necessary traffic control barricades and flagman services.
 - (4) Use or storage of required explosives or other hazardous materials only under the supervision of qualified personnel.
 - (5) Maintenance of adequate quantities of operable fire protection equipment at the Work Site, as required by Local and /or State regulations.
- 86.2 The Contractor shall set forth in writing its site specific safety precautions and programs in connection with the Work, including an Anti-Substance Abuse Program which meets or exceeds any and all applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to the:
- (1) California Occupational Safety and Health Act of 1973, as amended, and rules and regulations now or hereafter in effect pursuant to said Act.
 - (2) California Code of Regulations, Title 8, as amended.
 - (3) The Labor Code of the State of California, as amended.
 - (4) Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act.
 - (5) Code of Federal Regulations, Title 29, as amended.
 - (6) The Drug-Free Workplace Act of 1988.
 - (7) In the event of conflicting requirements, the more stringent shall govern and if requested by OCFA, submit the same to OCFA for review. OCFA may, but shall not be obligated to, make suggestions and recommendations to the Contractor. OCFA shall review and approve the Contractor's Site Specific Program.
- 86.3 All work, whether performed by the Contractor or its Subcontractors, of all tiers or anyone directly or indirectly employed by any of them, and all equipment, machinery, materials, tools and like items incorporated or used in the Work, shall be compliance with and conform to:
- (1) All applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act, and California Code of Regulations, Title 8, as amended; and,

- (2) All codes, rules, regulations and requirements of OCFA and its insurance carriers relating thereto. In the event of conflicting requirements, the more stringent shall govern.
- 86.4 The Contractor shall designate a responsible and qualified member of its organization at the Work Site who has the authority to enforce the Contractor's Safety and Anti-Substance Abuse Programs, to assure compliance with Paragraph 10.1 and to prevent accidents.
- 86.5 The Contractor shall have a safety representative. The Contractor's safety representative will have:
- (1) The authority to stop work when safety problems are identified.
 - (2) The authority to implement corrective actions.
 - (3) Extensive training in safety and loss control practices regarding the Contractor's type of work.
 - (4) Certification in the OSHA Construction Outreach 10/30 Hour Program.
 - (5) Certification in first aid and CPR.
- 86.6 The Contractor shall require its Subcontractors of all tiers to designate a competent and responsible safety representative to assist the Contractor's representative in the performance of his or her duties.
- 86.7 Should the Contractor fail to provide a safe work environment in accordance with the provisions in 10.1.1, OCFA or Project Manager shall have the right, but not the obligation, to suspend Work in the unsafe area, as specified in 10.6. All costs of any nature resulting from the suspension, by whomsoever incurred, shall be paid by the Contractor.
- 86.8 After a Contractor has been awarded the construction contract for the Project, it will be required to attend a pre-construction safety meeting. The purpose of the meeting is to review the Project's Safety Program and requirements. At this time, specific safety concerns related to the Contractor's work will be discussed.
- 86.9 If deemed necessary by the Project Manager or Project Safety Coordinator, or other OCFA representative, a written Job Safety Analysis (JSA) will be required of the Contractor. The JSA will be required for frequency and severity exposures such as steel erection, deep excavations, spray painting, crane handling of large/expensive equipment, etc. This is to ensure that appropriate controls are established prior to work beginning.
- 86.10 Workplace violence (Type III), verbal intimidation or threats to the Project Manager, OCFA or designee will result in immediate removal from the Project. Contractor shall develop and implement a workplace violence policy and procedure.
- 86.11 The Contractor shall provide, or cause to be provided, each worker on the Site the proper safety equipment for the duties being performed by that worker and will not permit any worker on the Site who fails or refuses to use the same. OCFA and/or Project Manager shall have the right, but not the obligation, to order the Contractor to send a worker off the Site for the day or to require the contractor to not allow the worker any further work on OCFA's site for his or her failure to comply with safety practices, with which order the Contractor shall promptly comply.
- 86.12 **Safety Indemnification.** The Contractor shall defend, indemnify, and hold the Project Manager, OCFA, and their respective officers, directors, agents, employees, and assigns harmless from and against any and all liability, public or private, penalties, contractual or otherwise, losses, damages, costs, attorneys' fees, expenses, causes of action, claims or judgments resulting either in whole or in part from any failure of the Contractor, or its

Subcontractors, of all tiers or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with provisions of the Project Manual, including but not limited to all applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, all Cal/OSHA laws and regulations and the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to thereto. The Contractor shall not be relieved of its responsibilities under this Subsection should OCFA act or fail to act pursuant to its rights hereunder, nor shall OCFA thereby assume, nor be deemed to have assumed, any responsibilities otherwise imposed on the Contractor by this Contract, by virtue of providing OCFA's Safety Policies & Procedures, or any other manner whatsoever.

86.12.1 The Contractor shall not raise a defense as to its obligation to indemnify under Subsection 86.12 above any contributing negligence of any of those indemnified hereunder, its being understood and agreed that no such contributing negligence shall relieve the Contractor from its liability to so indemnify nor entitle the Contractor to any contribution, either directly or indirectly, by those indemnified hereunder.

86.12.2 In any and all claims against those indemnified hereunder by any employee of the Contractor or its Subcontractors of all tiers, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Section 86.12 shall not be limited in any way to any limit on the amount or type of damage, compensation or benefits payable by or for the Contractor or its Subcontractors of any tiers under any Worker's Compensation Acts, Disability Benefit Acts or other Employee Benefit Acts.

86.13 In connection with the performance of this contract, OCFA shall have the authority to enter the worksite at any time for the purpose of identifying the existence of conditions, either actual or threatened, that may present a danger or hazard to any or all employees. Contractor agrees that OCFA, in its sole authority and discretion, may order the immediate abatement of any and all conditions that may present an actual or threatened danger or hazard to any and all employees at the worksite. Contractor acknowledges that provisions of Section 6400 of the California Labor Code, which requires that employers shall furnish employment and a place of employment that is safe and healthful for all employees working therein. In the event OCFA identifies the existence of any condition that presents an actual or threatened danger or hazard to any or all employees at the worksite, OCFA is hereby authorized to order the immediate abatement of that actual or threatened condition pursuant to this Section. OCFA may also, at its sole authority and discretion, issue an immediate stop work order to Contractor to ensure that no employee working at the worksite is exposed to a dangerous or hazardous condition. Any stop work order issued by OCFA to Contractor in accordance with the provisions of this Section, shall not give rise to any claim or cause of action for delay damages by Contractor or Contractor's agents or subcontractors against OCFA.

87 Non-Discrimination

87.1 Contractor covenants that, by and for itself, successors, and assigns, including its Subcontractors and suppliers, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry in the performance of this Contract. Contractor shall take steps to ensure that applicants for any job and that employees are treated without regard to their race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry in full compliance with applicable federal, state, and local laws and regulations.

- 87.2 Contractor shall not engage in, nor permit its agents, including its Subcontractors and suppliers, to engage in discrimination in employment of persons or provision of services or supplies, on the grounds of race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry.
- 87.3 Contractor, and Contractor's Subcontractors and suppliers, shall employ fair employment practices with regard to all employees and all applicants for employment and shall act in accordance with all applicable federal, state, and local laws and regulations relating to such fair employment practices. In furtherance of such obligation, Contractor agrees that Contractor, Subcontractors, and suppliers shall not discriminate in employment and/or provision of services under this Contract and all employment practices shall be without regard to a person's race, color, creed, religion, gender, national origin, age, ancestry, physical handicap, medical condition, marital status, all in accordance with applicable federal, state, and local laws or regulations. Fair employment practices shall include, but not be limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other form of compensation and selection for training including apprenticeship.
- 87.4 In the performance of the terms of the Contract Documents, Contractor agrees that Contractor will not engage in nor permit such subcontractors as Contractor may employ to engage in discrimination against any employee or applicant for employment on the basis of race, sex, color, religion, ancestry, national origin, marital status, age or as an otherwise qualified handicapped individual. This prohibition shall pertain to employment, upgrading, demotion, or transfer, recruitment advertising, layoff or termination, rates of pay and other forms of compensation, selection for training, including apprenticeship, and any other action or inaction pertaining to employment matters.

88 Assignment of Antitrust Actions

In accordance with Public Contract Code Section 7103.5, by entering into the Contract Documents or into a subcontract to supply goods, services, or materials pursuant to the Contract Documents, the Contractor, or subcontractor, offers and agrees to assign to the OCFA all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract Documents or the subcontract. This assignment shall be made and become effective at the time the OCFA tenders final payment to the Contractor, without further acknowledgment by the parties. The contractor shall cause to be inserted in any such subcontract stipulations to effectuate this Section 88 and the provision of Public Contract Code Section 7103.5.

89 Time of Commencement; Time Is of the Essence

- 89.1 **Commencement:** Contractor agrees to commence the Project within ten (10) calendar days from the date the OCFA's Board approves this Contract, and Contractor shall diligently prosecute the work to Substantial Completion of the Milestones as identified in the Contractor's Construction Schedule and Substantial Completion of the Project no later than the Scheduled Completion Date, excluding modifications for delays caused or authorized by the OCFA as set forth in Section 71.5.
- 89.2 **Construction Schedule:** Within 30 days of the Award of the Contract, Contractor shall furnish to the Project Manager one reproducible, three prints, and an electronic or digital copy in a format approved by the Project Manager of the Contractor's Construction Schedule. The schedule shall be supported by written statements from each supplier of materials or equipment indicating that all orders have been placed and acknowledged, and setting forth

the dates that each item will be delivered. The schedule shall establish the order of work which minimizes disruption of existing travel lanes. Upon submission by Contractor, and approval by the Project Manager, the Contractor's Construction Schedule shall be attached to Project Manual as an Exhibit and shall be deemed the baseline schedule. The Contractor's Construction Schedule shall identify and specify scheduling for the Work based on the critical path method (or other scheduling method acceptable to the Project Manager) and updating thereof, and shall provide other schedules that would further the efficient completion of the Project, including the Work and the Related Work in the most expeditious and economical manner. The Contractor's Construction Schedule shall depict in detail the sequence and timing of all activities of the Work and Related Work, including, without limitation, commencement and Completion Dates of Milestones and for all other significant portions of the Work and Related Work. The Contractor's Construction Schedule shall be updated at least monthly, except that the Scheduled Completion Date shall not be changed or modified unless otherwise approved by the Project Manager pursuant to the terms of this Contract.

89.3 Progress Reports: Concurrently with its submission of Applications for Payment, Contractor shall provide the Project Manager with a report (1) detailing the actual progress of the Work and Related Work as of the date of such report; (2) stating any discrepancies between the actual progress of the Work and Related Work; (3) identifying the progress anticipated by the Contractor's Construction Schedule as of the date of such reports; and (4) stating a recovery schedule to place the Work and Related Work back on schedule, at no cost to the OCFA. The Contractor's Construction Schedule shall include Milestones for each aspect of the Work and the timing for completion of Related Work that could affect completion of the Work by the date listed in the Contractor's Construction Schedule.

89.4 Acceleration.

89.4.1 The OCFA reserves the right to accelerate the work of the Contract at any time during its performance. In the event the OCFA directs acceleration, such directive will be given to the Contractor in writing. The Contractor shall keep cost and other Project records related to the acceleration directive separately from the normal Project cost records and shall provide a written record of acceleration costs to the OCFA on a daily basis.

89.4.2 In the event the Contractor believes that some action or inaction on the part of the OCFA constitutes an acceleration directive, the Contractor shall immediately notify the OCFA in writing that the Contractor considers the actions or inactions an acceleration directive. The Contractor shall not accelerate their work efforts until the OCFA responds to the written notification. If acceleration is then directed or required by the OCFA, all cost records referred to in the previous paragraph shall be maintained by the Contractor and provided to the OCFA on a daily basis.

89.4.3 In order to recover additional costs due to acceleration, the Contractor must document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will only be overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will only be the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

89.5 TIME IS THE ESSENCE OF THIS CONTRACT: NOTWITHSTANDING OCFA'S APPROVAL OF ANY UPDATED CONTRACTOR'S CONSTRUCTION SCHEDULE, THE SCHEDULED COMPLETION DATE SHALL BE STRICTLY ADHERED TO DURING THE TERM OF THIS

CONTRACT. THE SCHEDULED COMPLETION DATE MAY ONLY BE CHANGED AS PROVIDED IN THE CONSTRUCTION CONTRACT.

- 89.6 **Ongoing Responsibility of Contractor:** As required by the Project Manual, Contractor shall prepare and obtain approval of all shop drawings, submittals, details, and samples, and do all other things necessary and incidental to the prosecution of Contractor's work in conformance with the Project Manual and Contractor's Construction Schedule. Contractor shall coordinate the Work with the Related Work through the Project Manager, in a manner that will facilitate the efficient completion of the Project in accordance with the Project Manual.
- 89.7 **Control of the Site and Order of Work:** Contractor shall have control of the Site and shall have the right to decide the time or order in which the various portions of the work shall be constructed or installed consistent with the Contractor's Construction Schedule and shall establish the priority of the work of Subcontractors of the Work and the Related Work, and, in general, all matters representing the timely and orderly completion of the Project.
- 89.8 **Cooperation:** Notwithstanding the Scheduled Completion Date, Contractor will cooperate with the OCFA and the OCFA's separate Contractors, consultants, and employees and Contractor agrees to provide for and coordinate access to the Project prior to the Scheduled Completion Date.
- 89.9 **Contractor's Risk Of Non-Performance:** IT IS SPECIFICALLY AGREED THAT CONTRACTOR ASSUMES THE RISK OF NONPERFORMANCE, LATE PERFORMANCE, AND NONCOMPLIANCE WITH THE REQUIREMENTS OF THE PROJECT MANUAL BY CONTRACTOR, CONTRACTOR'S SUBCONTRACTORS, SUPPLIERS, AND AGENTS. CONTRACTOR SHALL NOT BE ENTITLED TO AN EXTENSION OF ANY COMPLETION DATE OF THE SCHEDULED COMPLETION DATE FOR THE ABOVE STATED REASONS OR ANY OTHER REASONS, EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THE PROJECT MANUAL.
- 89.10 **Notification of Inability to Comply:** If the Contractor, at any time, ascertains that for any reason it is unable to complete the phases of the Work by the Milestones, or complete the Project by the Scheduled Completion Date, Contractor shall promptly and without delay notify the Project Manager in writing of this fact.
- 89.11 **Liquidated Damages:** The Parties acknowledge and agree that if Contractor fails to achieve Substantial Completion of the Project by the Scheduled Completion Date or fails to achieve Substantial Completion of a Milestone, as such dates may be extended in accordance with the Project Manual, OCFA will suffer, as a result of Contractor's failure, substantial damages which are both extremely difficult and impracticable to ascertain. Therefore the Parties having reasonably endeavored, but failed, to ascertain an amount bearing a reasonable relationship to the actual damage that OCFA will incur if Contractor fails to achieve Substantial Completion of the Project by the Scheduled Completion Date or fails to achieve completion of a Milestone as such dates may be extended in accordance with the Project Manual, agree that in addition to all other damages to which OCFA may be entitled, Contractor agrees to pay to OCFA as liquidated damages, and not as a penalty but as a reasonable estimate of the amount of damages OCFA will suffer, the amount of Five Hundred Dollars (\$500.00) per day for each calendar day occurring after the completion date of a Milestone during which Contractor fails to achieve Substantial Completion for each such Milestone. In addition, the OCFA shall have the right to charge to the Contractor and to deduct from payments for the Work the actual cost to the OCFA of engineering, inspection, superintendence, and other overhead expenses, which are directly chargeable to the Contract and which accrue during the period of such delay. The expenses and damages described above shall be deducted

from any money due the Contractor under this contract. The Contractor and its sureties shall be liable for any excess cost.

- 89.12 **Additional Remedies:** The Parties also acknowledge and agree that OCFA is entitled to any and all legal and equitable remedies OCFA may have that exceed the amount of Liquidated Damages.

90 Audit And Access To Records

- 90.1 Contractor shall maintain all books, records, documents, and other evidence directly pertinent to the performance of the work under this Contract in accordance with generally accepted accounting principles and practices consistently applied. Contractor shall also maintain all financial information and data used by the Contractor in the preparation or support of any cost submission, including the Contractor's original bid required for this Contract, or any Change Order, claim, or other request for any adjustment, and a copy of the cost summary or information submitted to the OCFA. The Project Manager or the Fire Chief shall have access upon twenty-four hours advanced written notice, at all times during normal business hours, to all such books, records, documents, financial information, and all other evidence for the purpose of inspection, audit, and copying. The Contractor shall, at no cost to the OCFA, provide proper facilities for such access, inspection, and copying purposes.
- 90.2 The Parties agree that the provisions of this Section 90 are applicable to Project Manual and all Change Orders, claims, and any other request for adjustment affecting the time or price of this Contract. The Contractor agrees to include the provisions of this Section in all Subcontracts and purchase orders, at any tier, and make this Section 90 applicable to all Change Orders, claims, and other requests for adjustment related to Project performance by Contractor's Subcontractors and suppliers.
- 90.3 Audits conducted under this Section shall be in accordance with generally accepted auditing standards and established procedures and guidelines.
- 90.4 The Contractor agrees to the disclosure of all information and reports resulting from access to records under the provisions of this Section to the OCFA, the Fire Chief, the Project Manager, and any affected or interested state or local agency.
- 90.5 Records under the provisions of this Section shall be maintained and made available during the performance of the Work under this Contract until three years past final payment and until final settlement of all disputes, claims, or litigation, whichever occurs later. In addition, those records which relate to any portion of this Contract to any Change Order, dispute, litigation, settlement of any claim arising out of such performance, or to the cost of items to which an audit exception has been taken, shall be maintained and made available until final payment or final resolution of such dispute, litigation, claim, or exception, whichever occurs later.
- 90.6 These rights to access provisions as provided in this Section apply to all financial records pertaining to this Contract and all Change Orders and claims. In addition, this right to access applies to all records pertaining to all contracts, Change Orders, and any amendments to this Contract: (1) To the extent the records pertain directly to Contract performance; (2) If there is any indication that fraud, gross abuse, or corrupt practices may be involved; or (3) If the Contract is terminated for default or convenience.
- 90.7 Access to records is not limited to the required retention periods. The Fire Chief shall have access to records at any reasonable time for as long as the records are maintained.

91 Resolution Of Construction Claims

- 91.1 California Public Contract Code (PCC) section 9204 as adopted by Assembly Bill 626 prescribes a process to present, confer, and mediate construction claims relating to the OCFA's public works project. Notwithstanding any provisions to the contrary in the Project Manual, this section shall govern all disputes to which section 9204 applies.
- 91.2 For purposes of this Section 91, "Claim" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested for (A) a time extension, including, without limitation for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled, or the amount the payment of which is disputed by the local agency. (PCC 9204(c)(1))
- 91.3 For purposes of this Section 91, "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or another public improvement of any kind.
- 91.4 For any Claim subject to this Section 91, California Public Contract Code section 9204 requires the following:
- 91.4.1 The claim shall be submitted by the Contractor in writing, sent by registered mail or certified mail with return receipt requested and must include the documents necessary to substantiate the claim. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims. However, upon receipt of a claim, the OCFA, and the Contractor may, by mutual agreement, extend the time period provided by statute.
- 91.4.2 For claims of all amounts, the OCFA shall respond within 45 days of receipt of the claim, and provide the claimant a written statement identifying which portion of the claim is disputed and which portion of the claim is undisputed. If the OCFA requires approval from the Board of Directors, and the Board of Directors does not meet within the 45-day period to respond, the OCFA shall have up to three days to issue its response following the Board of Directors meeting.
- 91.4.3 For all portions of a claim determined to be undisputed, the OCFA must process payment to the claimant within 60 days of issuing the OCFA's written determination.
- 91.4.4 If the claimant disputes the OCFA's response, or if the OCFA fails to respond within the time limits provided, the claimant may demand an informal conference to meet and confer for settlement of the issues in dispute. The demand must be sent in writing by registered or certified mail, return receipt requested. Upon receipt of a demand, the OCFA must schedule a meet and confer conference within 30 calendar days for settlement of the disputed claim.
- 91.4.5 Within ten (10) business days following the conclusion of the meet and confer conference, if any portion of the claim remains in dispute, the OCFA shall provide the claimant an addition written statement identifying the portion of the claim that is undisputed and the portion that remains in dispute.

- 91.4.6 For all portions of a claim determined to be undisputed, the OCFA must process payment to the claimant within 60 calendar days of issuing the OCFA's written determination.
- 91.4.7 Any remaining undisputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation in which the parties share the cost evenly. The OCFA and the claimant shall mutually agree on a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree, each party shall select a mediator and those mediators shall jointly select a qualified, neutral third party to mediate the remaining undisputed claim. Each party shall bear the respective costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside of PCC section 9204.
- 91.4.8 Unless otherwise agreed to by the OCFA and the Contractor in writing, the mediation conducted pursuant to this Section 91 shall excuse any further obligation under PCC Section 20104.4 to mediate after litigation has been commenced.
- 91.4.9 Public Contract Code Section 9204 does not preclude the OCFA from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program if mediation under this section does not resolve the parties' dispute.
- 91.4.10 Should the OCFA fail to respond to a claim, or fail to issue written statements as required, the Contractor's claim is deemed denied. A claim denied by reason of the OCFA's failure to respond shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
- 91.4.11 Amounts not paid in a timely manner as required by PCC 9204 shall bear interest at seven percent per annum.

92 Notice Of Third-Party Claims

When required by PCC Section 9201, the OCFA will provide timely notification to Contractor of the receipt of any third-party claim relating to the Agreement. The Contractor agrees to reimburse the OCFA for its reasonable costs incurred in providing such notice.

93 Cleanup

- 93.1 The Contractor shall at all times keep the Site clean and free from accumulation of waste materials or rubbish (including, without limitation, hazardous waste), caused by his performance of the Work, and shall continuously throughout performance of the Work remove and dispose of all such materials from the Site and the Project.
- 93.2 Project Manager may require the Contractor to comply with such standards, means and methods of cleanup, removal or disposal as Project Manager may make known to the Contractor. In event the Contractor fails to keep the Site clean and free from such waste or rubbish, or to comply with such standards, means and methods, OCFA may take such action and offset any and all costs or expenses of whatever nature paid or incurred by OCFA in undertaking such action against any sums then or thereafter due to the Contractor.
- 93.3 The Contractor shall notify OCFA in advance of the generation, importation, storage, transportation or disposal, of any hazardous waste, toxic materials or contaminants of any type in connection with the Project. Contractor shall provide Project Manager with Material

Safety Data Sheets (MSDS's) and the Uniform Hazardous Waste documents. The Contractor will develop and implement a written and effective Spill Control and Containment Plan.

94 Trenches and Excavations

- 94.1 The Contractor shall promptly, and before any of the following conditions are disturbed, notify the Project Manager, in writing, of any:
- (1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class 1, Class II, or Class III disposal site in accordance with the provisions of existing law; or
 - (2) Subsurface of latent physical conditions at the Site differing from those indicated; or
 - (3) Unknown physical conditions at the Site of unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract and Project Manual.
- 94.2 The Project Manager shall promptly investigate the conditions, and if the Project Manager finds that the conditions materially so differ, or do involve hazardous waste, and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order, subject to the provisions of the Project Manual.
- 94.3 In the event that a dispute arises between the Project Manager and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any Scheduled Completion Date provided for in the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes and protests between parties.

95 Uncovering and Correction of Work; OCFA's Right To Carry Out Work

- 95.1 If any portion of the Work should be covered contrary to the instructions or request of Project Manager or the requirements of the Project Manual, the Contractor shall, if required by Project Manager, uncover such portion of the Work for Project Manager's observation and shall replace such Work all at the Contractor's expense.
- 95.2 If any portion of the Work should be covered prior to a specific request for observation or instruction by Project Manager, Project Manager may request to see such Work, and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Project Manual and without defect, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to OCFA. If such Work is found to be defective or not in accordance with the Project Manual, the Contractor shall bear such costs.
- 95.3 Project Manager shall have the authority to reject any portion of the Work which is defective or does not conform to the Project Manual, and the Contractor shall promptly correct all Work so rejected by Project Manager, whether observed before or after the Date of Substantial Completion and whether or not fabricated, installed or completed. In order that such corrective Work shall not interrupt or delay Contractor's Construction Schedule or the completion date of the Project, the Contractor shall perform such Work according to a schedule therefor established by Project Manager (which may provide that the same be performed on overtime, shiftwork, Saturdays, Sundays and/or holidays), utilizing in the performance thereof such manpower as is necessary to complete the corrective Work in accordance with said schedule. The Contractor shall bear all costs of correcting such rejected

Work including, without limitation, compensation for any additional architectural and engineering services made necessary thereby.

- 95.4 If, within one (1) year after the Completion of the Work (as determined by OCFA) or within such longer period of time as may be prescribed by law or by the terms of any applicable warranty or guarantee required by the Project Manual, any of the Work is found to be defective or not in accordance with the Project Manual, the Contractor shall correct it promptly after receipt of written instructions to that effect from OCFA unless OCFA has previously given the Contractor a written acceptance of such condition.
- 95.5 The Contractor shall remove from the Site all Work which is defective or non-conforming and not corrected under the provisions of these General Conditions unless removal is waived in writing by OCFA.
- 95.6 If the Contractor does not remove such uncorrected defective or non-conforming Work within a reasonable time fixed by written instructions to that effect from Project Manager, OCFA may remove it and store the materials and equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten (10) days thereafter, OCFA may, upon ten (10) additional days written notification to the Contractor, sell such materials and equipment at public or private sale and account to the Contractor for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for any additional architectural and engineering services and attorneys' fees made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be offset against any amounts then or thereafter due to the Contractor. If the amounts then or thereafter due to the Contractor are not sufficient to cover such difference, the Contractor shall, upon demand, pay the same to OCFA. The obligations of the Contractor under this Subsection shall be in addition to, and not in limitation of, any obligations imposed on it by law, by any other provision of this Contract or by any warranty or guarantee under this Contract.
- 95.7 If the Contractor fails to correct any defective or non-conforming Work, OCFA may correct it with its own forces or by contract with a third party contractor. In the event of a defect found after final acceptance of the Work by OCFA which the Contractor is obligated to correct pursuant to Project Manual, OCFA may, at its option, after giving the Contractor an opportunity to correct such defect, cause such corrective Work to be performed by others and charge the Contractor with the cost thereof. Such charge shall be due and payable by the Contractor upon demand.
- 95.8 If the Contractor defaults or neglects to carry out the Work in accordance with the Project Manual or fails to perform any provision of this Contract, and such default, neglect or non-performance shall continue for a period of 48 hours after written notification thereof from OCFA (or if such default, neglect or non-performance cannot be reasonably remedied within such 48-hour period, and Contractor does not (in the sole determination of OCFA) undertake in good faith the remedy of the same within said period and thereafter proceed diligently to completion), then OCFA may, without prejudice to any other remedy OCFA may have, make good such deficiencies; provided, however, that in the event of an emergency, as determined by OCFA, no notification shall be required. OCFA shall have the right to take possession of such portion of the Site as will enable it to make good such deficiencies and, in connection therewith, to utilize the materials, equipment, tools, construction equipment and machinery of the Contractor located on the Site. If OCFA makes good any such deficiencies, the costs of correcting the same including, without limitation, compensation for additional architectural and engineering services made necessary by such default, neglect or non-performance, shall be offset against any amounts then or thereafter due to the Contractor. If the amounts then

or thereafter due to the Contractor are not sufficient to cover such costs, then the Contractor shall, upon demand, pay the difference to OCFA.

- 95.9 If OCFA prefers to accept defective or non-conforming Work, it may do so instead of requiring its removal and correction, in which case an appropriate amount shall be offset against any amounts then or thereafter due to the Contractor; or, if the said appropriate amount of offset is determined after final payment (or if there is not then or thereafter due to the Contractor an amount sufficient to cover the offset available to OCFA), the Contractor shall, upon demand, pay the appropriate amount (or the difference after offset, as applicable) to OCFA.

96 Plans, Specifications and Survey

The Contractor shall maintain a control set of Plans, Specifications and survey on the Project site at all times. All final locations determined in the field by survey, and any deviations from the Plans and Specifications, shall be marked in red on this control set to show the as-constructed conditions. Upon completion of all work, the Contractor shall return the control set to the Engineer. Final payment will not be made until this requirement has been met.

97 Permits

OCFA will reimburse the Contractor for the public agency-charged fee for permits, inspections. No profit amount shall be added to such reimbursement.

98 Compliance with Laws; Non-Discrimination

Contractor shall ensure that its officers, employees, agents, contractors, and subcontractors: (1) conduct themselves in compliance with all applicable laws and licensure requirements including, without limitation, compliance with laws applicable to nondiscrimination, harassment, and ethical behavior, throughout the duration of the Contract; and (2) comply with all OCFA, State, and Federal, Local Agency and Regulatory Agency orders regarding affirmative action to ensure equal employment opportunities and fair employment practices. Failure to file any report due under said orders will result in suspension of periodic progress payments. The Contractor shall ensure unlimited access to the job site for all equal employment opportunity compliance officers.

99 Right-Of-Way And Easements

In the event any required easements have not yet been acquired by the OCFA, the Contractor shall conduct its operation so as to confine its work to the limits of the existing right-of-way.

100 Disputed Work

Contractor shall keep all records of disputed work in accordance with the General Conditions. In any case where the Contractor believes extra compensation is due the Contractor for work or materials not clearly covered in the Contract, or not ordered by the OCFA as "extra work", the Contractor shall notify the OCFA in writing of the Contractor's intention to make claim for such extra compensation before the Contractor begins the work on which Contractor bases the claim. All "claims" as that term is defined in Public Contract Code section 9204 shall be submitted and processed in accordance with Section 91 hereinabove. Such notice by the Contractor, and the fact that the OCFA has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. The validity of the claim must be determined by the OCFA. If the OCFA determines that all or a portion of the claim is well founded, the valid portion shall be allowed and paid for as "extra work"; if the OCFA determines that all or a portion of the claim is not well founded, the portion that is not well founded shall be disallowed and not paid, subject to Section 91. Nothing herein limits the authority of the OCFA to consider, approve or disapprove of Change Orders in accordance with the Project Manual.

101 Time of Completion.

Work will be deemed completed on the same date when the Notice of Completion is recorded with the County of Orange.

102 Delivered Materials.

Materials and equipment delivered but not incorporated into the work shall not be included in the estimate for progress payment.

103 Mobilization.

103.1 Mobilization shall consist of preparatory work and operations, including but not limited to those necessary for the movement of personnel, equipment, supplies, and incidentals to the Project site; for the establishment of all offices, buildings and other facilities necessary for the work on this Project; and for all other work and operations which must be performed or cost incurred prior to beginning work on the various contract items on the Project site. Mobilization is deemed to include all aspects of mobilization and de-mobilization work occurring during the life of the Project for any reason.

103.2 Full compensation for mobilization shall be included in the Contract lump sum price bid for Mobilization and shall include full compensation for all costs incurred by the Contractor for doing all the work involved in mobilization as specified herein, and no additional compensation will be allowed. Mobilization shall not exceed 5% of the entire bid, excluding mobilization and as shown in the Proposal Bid Sheet.

104 Facilities For Contract Personnel.**104.1 Extended Field Office Overhead Cost.**

104.1.1 Within fourteen (14) calendar days after receipt of the Notice to Proceed, the Contractor shall submit a written statement to the OCFA detailing its field office overhead costs which are time related. The OCFA will review this first cost submittal and reach a written agreement with the Contractor on a daily field office overhead cost rate which shall be memorialized in a no cost change order. The daily rate agreed to in this change order will be applicable throughout the duration of the Contract. No field office costs will be paid until such an agreement is reached between the OCFA and the Contractor and the change order concerning this daily rate is executed by both parties. Progress payments will be withheld pending receipt of the above-referenced cost submittal and executed change order.

104.1.2 The individual cost components of the daily field office overhead rate shall represent costs which increase as a direct result of any time extension caused solely and exclusively by an act or omission of the OCFA. This listing may include such cost items as on-site project management, supervision, Engineering and clerical salaries; on-site utilities and rent; on-site company vehicles and their operating expenses; and site maintenance and security expenses. Field office overhead costs which are unaffected by increased time shall not be allowable cost in calculating the daily field office overhead rate. These non-time related costs include, but are not limited to, acquisition and installation of stationary equipment; temporary construction facilities; utilities and office furnishings (unless such items are rented or leased); the preparation of the site

including clearing, grubbing, grading, fencing, mobilizations and demobilization costs; and the costs of permits, bonds and insurance coverage for the Project.

104.1.3 The individual wage cost components used to calculate the daily field office rate shall be supported by actual employee payroll records, not salary ranges or estimates. Hourly rates for management, supervisory, engineering, and clerical employees shall be based upon 2080 work hours per year and shall not include allowances for holidays, vacations, or sick time.

104.1.4 When applicable, the daily field office overhead rate shall be multiplied by the number of days the Contract is delayed or extended by change order and shall be added to the agreed upon change order cost. The days of delay shall be those caused solely by the acts or omissions of the OCFA and documented by a time impact analysis prepared and submitted by the Contractor. In the event a deductive change order is issued which reduces time under the Contract, the daily field office overhead rate shall be used to calculate the deductive amount. No allowance for overhead costs and no profit allowance shall be added to the extended field office overhead cost.

105 OCFA Officers And Employees; Non-Discrimination

105.1 No member, officer, member of the OCFA Board of Directors, or employee of the OCFA shall be personally liable to Contractor, or any successor in interest, in the event of any default or breach by OCFA or for any amount which may become due to Contractor or to its successor, or for breach of any obligation of the terms of this Contract.

105.2 Pursuant to the provisions of the OCFA's conflict of interest code, the Political Reform Act as set forth in Government Code Section 81000 et seq., and/or the prohibition against self-dealing in contracts as set forth in Government Code Section 1090 et. seq., the Parties acknowledge that no officer or employee of the OCFA, or any member of the OCFA Board, shall have any personal interest, direct or indirect, in this Contract or any Subcontract under the Contract, nor shall any such officer, employee, or member of the OCFA Board participate in any decision relating to the Contract which effects his or her personal interest or the interest of any corporation, partnership, or association in which he or she is, directly or indirectly, interested. In the furtherance of such acknowledgement, Contractor:

- i. Contractor agrees that no officer, employee, member of the OCFA Board of Directors, agent, or assignee of the OCFA having direct or indirect control of any monies allocated by OCFA to finance this Project, shall serve as an officer, director, employee, or agent of Contractor, or as a officer, director, employee, or agent of any Subcontractor of supplier of Contractor under this Contract; and
- ii. Any conflict or potential conflict of interest of any officer, director, employee, or agent of Contractor or any Subcontractor or supplier of Contractor has been fully disclosed to the OCFA prior to execution of this Contract and such disclosure shall be deemed a part of this Contract.

105.3 Contractor shall not expend any funds for the purpose of influencing or attempting to influence an officer, member, employee, or member of the OCFA Board in the connection with the awarding and the administration of this Contract or any subcontract in furtherance of the Project.

106 Entire Agreement

It is agreed that this Contract (which incorporates the Project Manual) represents the entire agreement. It is further agreed that the Project Manual is incorporated in this Contract by this reference, with the same force and effect as if the same were set forth at length within the Contract, and that Contractor and Contractor's officers, employees, agents, trades, material suppliers, and Subcontractors will be and are bound by any and all of said Project Manual insofar as they relate in any part or in any way, directly or indirectly, to the work covered by this Contract.

107 Written Notices

Any written notice required to be given in any part of the Contract Documents shall be performed by dispatching the same via email directed to the email address of the Contractor as set forth in the Contract Documents, and to the OCFA addressed as follows:

- A. ORANGE COUNTY FIRE AUTHORITY
ATTENTION: SARA KENNEDY, PURCHASING DIVISION MANAGER
1 FIRE AUTHORITY RD.
IRVINE, CA 92602
- B. J&L CONSTRUCTORS, INC.
ATTENTION: BRYSON MILLER, OWNER
80 HUNTINGTON STREET, SPC 706
HUNTINGTON BEACH, CA 92648

108 Miscellaneous Provisions

- 108.1 Assignment: Contractor shall neither delegate its duties or obligations, nor assign its rights with respect to this Contract, either in whole or in part. Any such attempted delegation and/or assignment shall be void and deemed void at such occurrence, if it were to occur.
- 108.2 Computation of Time: When any period of time is referred to in the Project Manual by days, it shall be computed to exclude the first and include the last day of the period, provided, however, that if the last day of the period falls on a Saturday, Sunday, or legal holiday, that day shall be omitted from the computation. "Days" refers to calendar days unless otherwise expressly provided.
- 108.3 Remedies Cumulative: No remedy herein reserved to OCFA is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to any other given in the Project Manual as now or hereafter existing or at law, equity, or by statute.
- 108.4 Nonwaiver: The failure of the OCFA to notify the Contractor of any default under the Project Manual shall not be deemed to be a waiver by OCFA of any continuing default by Contractor of any term, covenant, or condition set forth in this Contract, nor of the OCFA's right to declare a default for any such continuing breach, and the failure of OCFA to insist upon strict performance of any of the terms, covenants, or conditions of the Project Manual, or to exercise any option in the Project Manual in any one or more instances, shall not be construed as a waiver or relinquishment of any such terms, covenants, conditions or options, but the same shall be and remain in full force and effect.
- 108.5 Severability: In case any one or more provisions set forth in the Project Manual shall for any reason be held invalid, illegal, or unenforceable in any respect, any such invalidity,

illegality, or unenforceability shall not affect any other provision of the Project Manual, and the Project Manual and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been incorporated therein so long as the deletion of such provision does not, in the OCFA's judgment, materially alter this Contract.

- 108.6 No Third Party Beneficiaries: The Project Manual and this Contract are not intended and shall not be deemed or construed, to confer any rights, powers, or privileges on any person, firm, partnership, corporation, or other entity not a party to this Contract except as may be expressly provided in the Contract to the contrary.
- 108.7 No Verbal Agreements: No verbal order, objection, claim, or notice by any party to the other shall affect or modify any of the terms or obligations contained in this Contract or the Project Manual, and none of the provisions of the Project Manual shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or Modification in writing and executed in the manner required in this Contract by authorized officers or representatives of the Parties. No evidence shall be introduced in any proceeding of any other waiver or modification.
- 108.8 Counterparts: This Contract may be executed in any number of counterparts, and each of such counterparts for all purposes shall be deemed to be an original, and all of such counterparts should constitute one and the same agreement.
- 108.9 Governing Law/Venue: The Contract, including the Project Manual, shall be governed by the laws of the State of California. Venue for all disputes related to the Project, the Contract Agreement and/or the Project Manual shall be in Orange County, California.
- 108.10 Services Prior to Execution: Notwithstanding the fact that this Contract is executed as of the date first set forth above, the Parties recognize that a portion of the Work required under the Project Manual may have been performed prior to such date, all of which Work shall be governed by the terms and conditions of this Contract and shall be deemed to be a part of the Work. Without limiting the foregoing, all of Contractor's liabilities and obligations to OCFA under the Project Manual shall apply to all Work and services provided by the Contractor for the Work prior hereto, notwithstanding the fact that the Work may have been performed prior to the date hereof pursuant to prior negotiations, representations, agreements, understandings, or otherwise.
- 108.11 Survival of Rights: Any indemnity, warranty, guarantee given by the Contractor to the OCFA under this Contract shall survive the expiration or termination of this Contract and shall be binding upon Contractor until any action under this Contract is barred by the applicable statute of limitations.
- 108.12 Notice: All notices (whether or not designated as such herein) which are required under this Contract to be given between the parties pursuant to this Paragraph shall be in writing and deemed given and, unless otherwise provided herein, effective when delivered personally to an officer of the party to be served (including the Contractor's Project Manager, in the case of the Contractor), when deposited in the United States mail, or in a sealed envelope, with postage thereon prepaid, sent by registered or certified mail, return receipt requested, and addressed to the appropriate party at the address set forth in the Contract or such other address as may be designated by either party hereto by notice to the other, or when transmitted by wire or facsimile to the appropriate party at the aforesaid address (a complimentary confirming letter shall also be mailed to the appropriate party on the same date).

- 108.13 Maintenance of Harmonious Relations: The Contractor is hereby advised that any portion of the Project, or other projects in proximity to the Project may be subject to, and governed by, certain union or trade agreements. It is the policy of OCFA to promote and maintain harmonious relationships in connection with the Project. The Contractor and its Subcontractors and Sub-subcontractors shall follow this policy; and shall utilize only qualified persons or organizations in the performance of the Work. A qualified person or organization is one: which is not likely to promote labor unrest on the Project; which shall abide by all local, state and federal labor and employment relation rules, regulations and laws; whose financial stability is reasonably assured throughout the duration of the Contract; and whose commitments to other projects are not likely to interfere with its ability to perform its portion of the Work efficiently and cost effectively. OCFA reserves the right to disapprove, or to require the removal of, any person or organization who is being considered for, or has received, an award to perform all or a portion of the Work but has failed to demonstrate the willingness or ability to follow this policy.
- 108.14 Union Agreements: Regardless of the expiration of any collective bargaining agreement during the term of this Contract which may affect the Contractor in any of its activities including, without limitation, with respect to the Work or the Project, the Contractor is obligated to man the job and properly and timely perform the Work in a diligent manner. Upon notification of expected or actual labor disputes or job disruption arising out of any such collective bargaining negotiations, the expiration of any union or trade agreement or any other cause, the Contractor and its Subcontractors and Sub-subcontractors shall cooperate with OCFA concerning any legal, practical or contractual actions to be taken by OCFA in response thereto and shall perform any actions requested by OCFA to eliminate, neutralize or mitigate the affects of such actions on the progress of the Work and the impact of such actions on the public access to OCFA's facilities. It is the Contractor's obligation, at the Contractor's own cost and expense, to take all steps available to prevent any persons performing the work from engaging in any disruptive activities such as strikes, picketing, slowdowns, job actions or work stoppages of any nature or ceasing to work due to picketing or other such activities, which steps shall include, without limitation, execution of an appropriate project agreement with appropriate unions prohibiting all such activities on or about the Project. Notwithstanding any such occurrences, the Contractor shall not be relieved of its obligation to man the job and properly and timely perform the Work in a diligent manner.
- 108.15 Immigration Reform Control Act: All Contractors, Subcontractors, and Sub-subcontractors must adhere to the Immigration Reform Control Act of 1986 and shall maintain I-9 forms regarding all employees. It is not OCFA's obligation to insure compliance with this law, however, OCFA reserves the right to inspect and copy the Contractor's records in this regard upon request.
- 108.16 General: The captions of divisions, sections, articles, Paragraphs, Subparagraphs, clauses and the like in the Project Manual are for convenience only and shall in no way define the content or limit the meaning or construction of the wording of the divisions, sections, articles, Paragraphs, Subparagraphs, clauses and the like. The parties agree that the Project Manual shall not be construed more strictly against any party regardless of the identity of their drafter. Unless otherwise specified, Section and Subsection references appearing in these General Conditions are to Section and Subsections of the Contract Agreement.
- 108.17 Evidence of Corporate Existence and Good Standing. A corporation to which an award is made may be required, before the Contract Agreement is executed by the OCFA, to furnish evidence of its corporate existence and good standing, of its right to enter into contracts in

the State of California, and that the officers signing the Contract and bonds for the corporation have the authority to do so. (Ref: California Corporations Code section 7214.)

END OF DOCUMENT

SECTION 5: TECHNICAL SPECIFICATIONS

5A: PROJECT DRAWINGS – AIRFIELD MARKING PAVEMENT UPGRADES



**CONTRACT DRAWINGS
FOR THE CONSTRUCTION OF**

AIRFIELD MARKING PAVEMENT UPGRADES

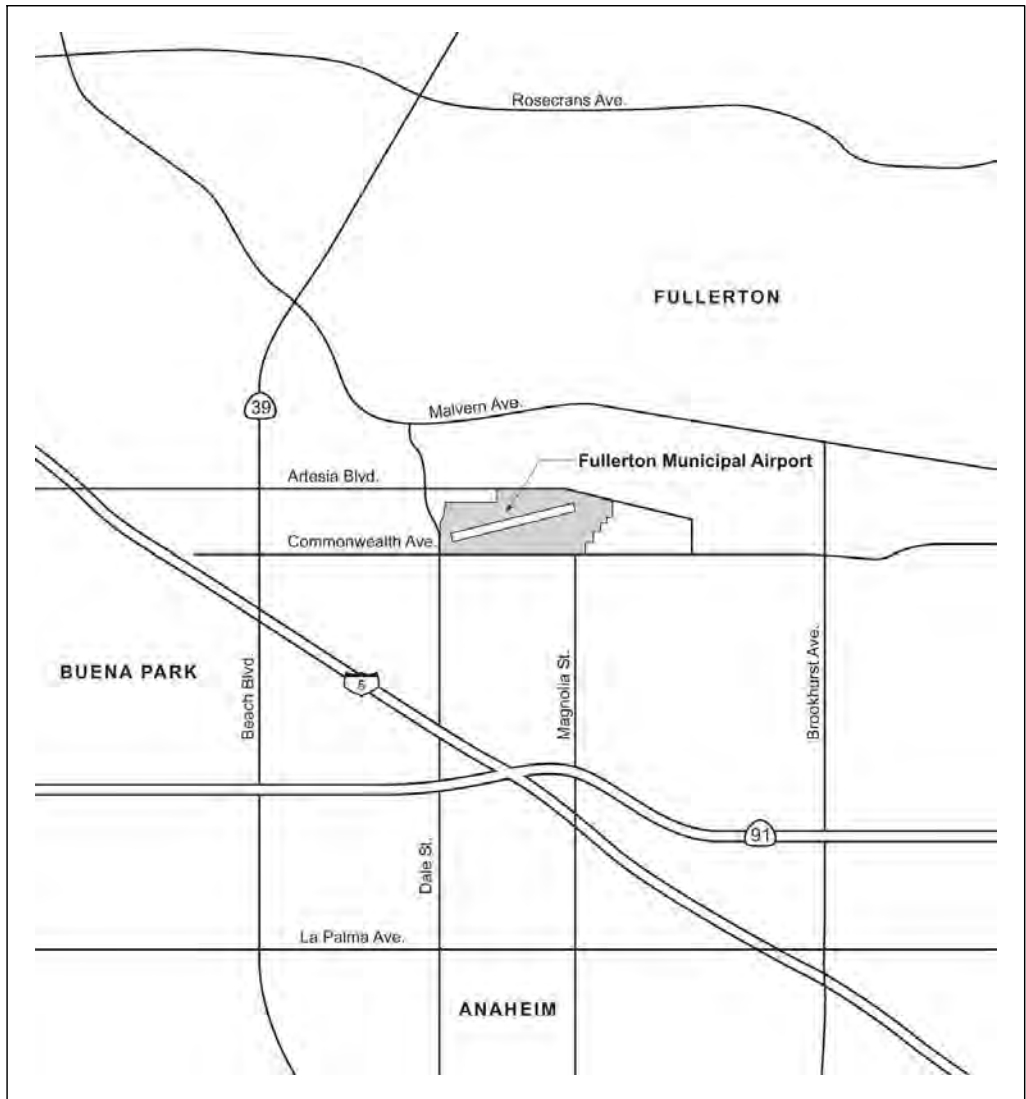
**ORANGE COUNTY
FIRE AUTHORITY
FULLERTON MUNICIPAL AIRPORT
ORANGE COUNTY, CA**

CLIENT PROJECT: TBD

C&S PROJECT: AA9.001.001

JUNE 2023

CITY SUBMISSION

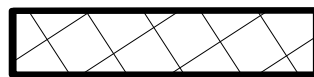
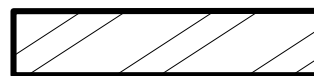
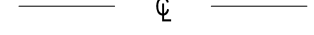

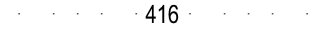

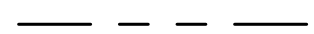














LOCATION MAP


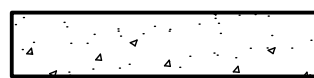




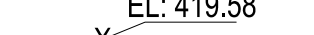
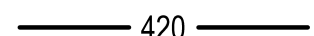
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SHEET NO.	SHEET NAME
GI001	TITLE SHEET
GI002	NOTES, ABBREVIATIONS AND LEGEND
GI100	GENERAL PLAN
CIVIL	
GC101	CONSTRUCTION SAFETY AND PHASING PLAN
CE101	EROSION CONTROL PLAN
VF101	EXISTING CONDITIONS PLAN
CD101	DEMOLITION PLAN
CS101	SITE PLAN
CG101	GRADING PLAN
CG102	SPOT ELEVATION PLAN
CG501	GRADING DETAILS
CM101	MARKING PLAN

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EXISTING

- 
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- 
- EXISTING CONCRETE PAVEMENT TO BE REMOVED
- 
- RUNWAY/TAXIWAY CENTERLINE
- 
- EXISTING WATER VALVE
- 
- EXISTING CONTOUR LINE
- 
- EXISTING SWALE CENTERLINE
- 
- EXISTING AIRPORT PROPERTY LINE
- 
- EXISTING FENCE LINE
- 
- RUNWAY OBJECT FREE AREA
- 
- RUNWAY SAFETY AREA
- 
- EXISTING AIRFIELD GUIDANCE SIGN
- 
- EXISTING RUNWAY OR TAXIWAY EDGE LIGHT
- 
- EXISTING PULLBOX
- 
- EXISTING ELECTRICAL MANHOLE
- 
- EXISTING AIRFIELD LIGHTING CABLE IN CONDUIT
- 
- EXISTING FUEL LINE
- 
- EXISTING SPOT ELEVATION
- 
- INFIELD AREA GRAVEL BAGS
- 
- PAVEMENT MARKINGS TO BE REMOVED

PROPOSED

- 
- PROPOSED ASPHALT PAVEMENT
- 
- PROPOSED CONCRETE PAVEMENT
- 
- BARRICADE LOCATION WORK AREA DESIGNATION
- 
- WORK AREA LIMITS
- 
- FLAG PERSON LOCATION
- 
- PROPOSED SPOT ELEVATION
- 
- PROPOSED CONTOUR LINE
- 
- PROPOSED BASE MOUNTED EDGE LIGHT

BENCHMARK NOTE:
ELEVATIONS FOR THIS SURVEY ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 6, NAD 83 (EPOCH 2011.0), NGS STATION PID AD9427, HAVING AN ELEVATION OF 96.00 FEET (NAVD 88).

BASIS OF BEARINGS:
THIS SURVEY IS ORIENTED TO THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 6, NAD 83 (EPOCH 2011.0) BASED LOCALLY ON NGS STATIONS PID AD9427 AND PID AD9426.

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 80, ATTACHMENT A - CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.
2. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON RECORD DRAWINGS AND/OR CAD FILES FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THOSE UTILIZING THE INFORMATION ON THESE DRAWINGS ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY PURPOSE.
3. EXISTING UTILITIES WERE TAKEN FROM PLANS OF RECORD. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED IN GOOD FAITH SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT ACTUAL LOCATIONS AND MAY NOT BE INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
4. THE ACTUAL LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
5. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES OR CABLES, THE ENGINEER AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
6. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UTILITIES OR CABLES, AS DIRECTED BY THE ENGINEER, IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.
7. ALL AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S STAGING AND CONSTRUCTION OPERATIONS SHALL BE RESTORED EQUAL TO OR BETTER THAN ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
8. DURING THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN WHATEVER TEMPORARY LIGHTING MAY BE NECESSARY TO KEEP THE TAXIWAY IN OPERATING CONDITION WHEN OPEN FOR AIRCRAFT.
9. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.
10. THIS CONTRACT DOES NOT ALLOW FOR PRICE INCREASES DUE TO ESCALATION IN COST OF UNIT BID ITEMS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION WHEN PREPARING UNIT PRICES FOR BID.
11. ALL SPOIL SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE.

12. THE COMBINATION OF SAND/SILT/CLAY SOILS AND HIGH NATURAL MOISTURE CONTENTS CREATE THE POTENTIAL FOR LOSS OF STRENGTH UNDER REPETITIVE LOADINGS OR VIBRATION. THE CONTRACTOR SHOULD TAKE THESE FACTORS INTO CONSIDERATION WHEN SELECTING EQUIPMENT, METHODS AND MEANS FOR CONSTRUCTION OF THIS PROJECT, AS WELL AS HAULING EQUIPMENT THAT WILL OPERATE IN THE AREA THROUGHOUT CONSTRUCTION. ANY DAMAGE TO THE SUBGRADE CONDITION AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION, AS DIRECTED BY THE ENGINEER AND ALL AT THE CONTRACTOR'S EXPENSE.
13. THE COST OF MEASURES AND PRACTICES FOR COMPLIANCE WITH POLLUTION, EROSION, AND SILTATION CONTROL SUCH AS AIR POLLUTION PREVENTION, WATER POLLUTION PREVENTION, TEMPORARY SEEDING, TEMPORARY MULCHING, CONSTRUCTION ROAD STABILIZATION, DUST CONTROL, PROTECTING VEGETATION, AND EROSION AND SILTATION CONTROL PRACTICES DUE TO THE CONTRACTOR'S MEANS AND METHODS, SHALL BE INCLUDED IN ITEM P-156 UNDER AND EROSION AND SILTATION CONTROL PRACTICES DUE TO THE CONTRACTOR'S MEANS AND METHODS, SHALL BE INCLUDED IN ITEM P-156 UNDER PAYMENT FOR "COMPLIANCE WITH POLLUTION, EROSION AND SILTATION CONTROL".
14. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE EXISTING SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION.
15. ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM. COORDINATES REFER NAD 83 HORIZONTAL DATUM.
16. THE TOPOGRAPHIC FEATURES SHOWN HEREON WERE COMPILED FROM FIELD SURVEY PERFORMED BY GGI SURVEYING & MAPPING DATED AUGUST 31,2020.
17. ALL ELECTRICAL WORK SHALL CONFORM TO APPLICABLE LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
18. ABANDONED CABLES MAY EXIST IN THE VICINITY OF THE PROPOSED WORK. IF ENCOUNTERED, CONTRACTOR SHALL VERIFY THAT THEY ARE ABANDONED PRIOR TO REMOVAL. IF THEY ARE NOT ABANDONDED, CABLES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
19. ALL CABLE CONNECTIONS SHALL BE MADE AT LIGHT UNITS OR AT ENDS OF DUCT BANKS UNLESS DIRECTED OTHERWISE.
20. PROVIDE WATERTIGHT TERMINATION FOR ALL BURIED CONDUIT ENDS.
21. CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT MINIMUM TWO DAYS PRIOR TO THE WORK. CALL: "811"

ABAN. - APPROX. - ASPH. - B- BLDG. - BM - C - CONC. - CSP - DIA. - EG - EL/ELEV. - EX - FS - FND. - HP - INV. - LT - LP - MAX. - MIN. - MISC. - NA - OFCA - OFA - O.C. -

ABANDONED APPROXIMATE ASPHALT BASELINE BUILDING BENCH MARK CONCRETE CORRUGATED STEEL PIPE DIAMETER EXISTING GRADE ELEVATION EXISTING FINISH SURFACE FOUNDATION HIGH POINT INVERT LEFT LOW POINT MAXIMUM MINIMUM MISCELLANEOUS NOT APPLICABLE ORANGE COUNTY FIRE AUTHORITY OBJECT FREE AREA ON CENTER

PAVT. - PB - PC - PCC - PI - P - PT - PVC - R - RCP - ROFA - RSA - ROW - RPZ - RT - RW/RWY - SHDR. - STA. - TOFA - TSA - TW/TWY - TYP. - UD -

PAVEMENT PULLBOX POINT OF CURVATURE PORTLAND CEMENT CONCRETE PAVEMENT POINT OF INTERSECTION PROPERTY LINE POINT OF TANGENCY POLYVINYL CHLORIDE PIPE RADIUS REINFORCED CONCRETE PIPE RUNWAY OBJECT FREE AREA RUNWAY SAFETY AREA RIGHT OF WAY RUNWAY PROTECTION ZONE RIGHT RUNWAY SHOULDER STATION TAXIWAY OBJECT FREE AREA TAXIWAY SAFETY AREA TAXIWAY TYPICAL UNDERDRAIN



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CONSTRUCTION



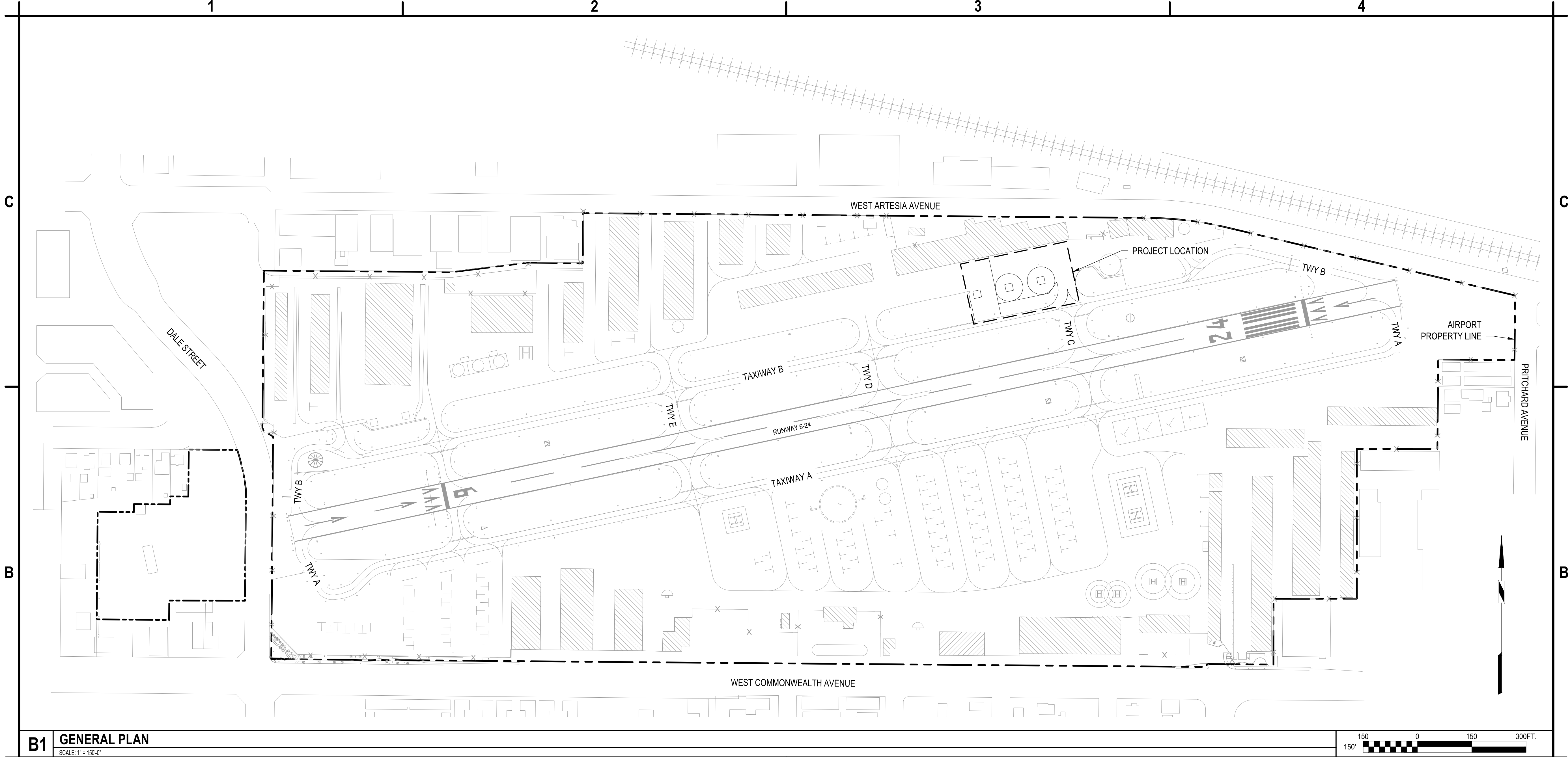
AIRFIELD MARKING
PAVEMENT UPGRADES
ORANGE COUNTY FIRE AUTHORITY
FULLERTON MUNICIPAL AIRPORT

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: AA9.001.001		
DATE: JUNE 2023		
DRAWN BY: STB		
DESIGNED BY: KG		
CHECKED BY: KG		

NOTES,
ABBREVIATIONS
AND LEGEND

GI002

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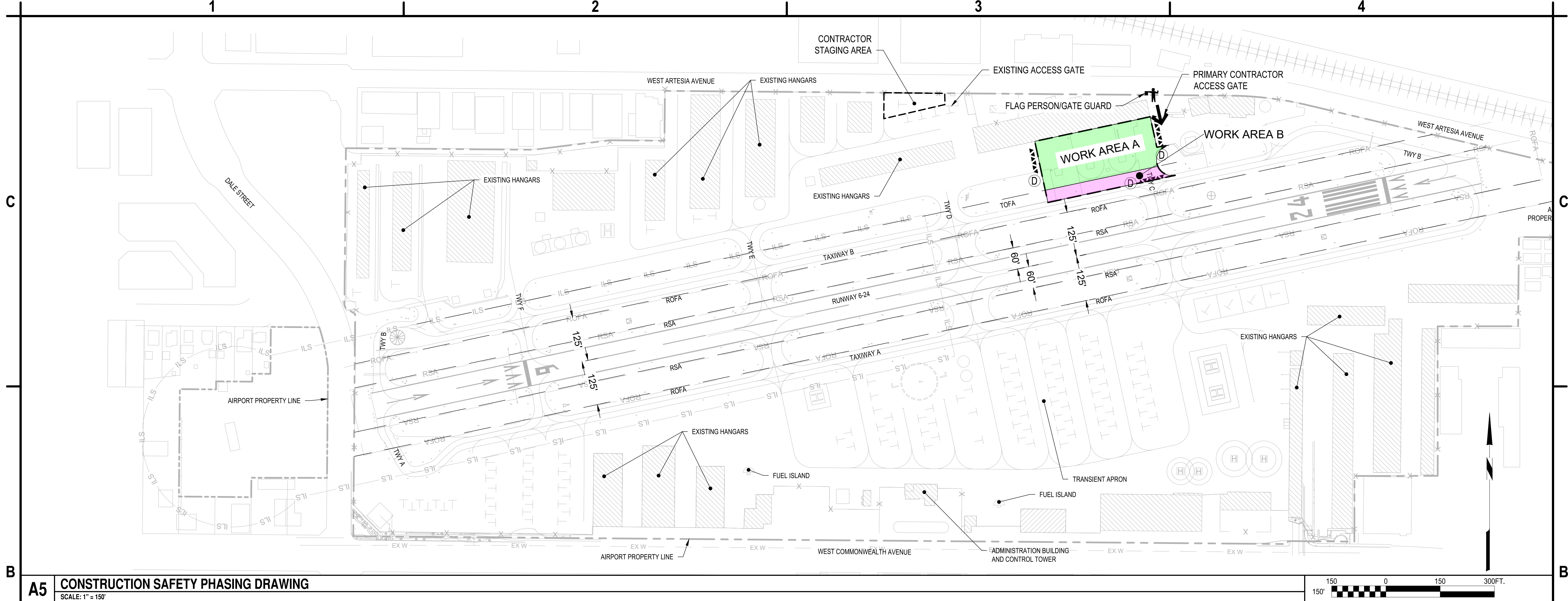
**AIRFIELD MARKING
PAVEMENT UPGRADES**
**ORANGE COUNTY FIRE AUTHORITY
FULLERTON MUNICIPAL AIRPORT**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: AA9.001.001		
DATE: JUNE 2023		
DRAWN BY: STB		
DESIGNED BY: KG		
CHECKED BY: KG		

GENERAL PLAN

GI100

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A5 CONSTRUCTION SAFETY PHASING DRAWING
SCALE: 1" = 150'

- CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF AC150/5370-2, LATEST EDITION, AT ALL TIMES. SPECIAL ATTENTION IS DIRECTED TO SECTION 80 OF THE GENERAL PROVISIONS.
- CONTRACTOR SHALL COORDINATE WITH OWNER 72 HOURS PRIOR TO STARTING WORK IN A WORK AREA.
- BARRICADES SHALL BE PLACED AS NOTED FOR ALL WORK AREAS THAT ARE CLOSED FOR CONSTRUCTION.
- ENSURE ALL NOTAMS PER SECTION 80 HAVE BEEN ISSUED PRIOR TO START OF WORK. COORDINATE WITH OWNER. FOR WORK AREA B, BEING THAT THIS WORK IS WITHIN THE TOFA LIMIT OF TAXIWAY B, PORTIONS OF TAXIWAY B WILL NEED TO BE CLOSED TO AIRPORT TRAFFIC.
- ALL FLAG PERSONS AND CONTRACTOR ESCORT PERSONNEL SHALL PASS AIRPORT SAFETY AND DRIVER TRAINING REQUIREMENTS AND TESTING AS ADMINISTERED BY THE OWNER. SEE SECTION 80 OF THE CONTRACT DOCUMENTS.
- ALL CONSTRUCTION PERSONNEL AND EQUIPMENT OUTSIDE OF THE DESIGNATED HAUL ROUTE OR WORK AREAS SHALL BE IN RADIO CONTACT WITH AIRPORT OPERATIONS OR BE ESCORTED. NO DELIVERY DRIVERS OR EQUIPMENT SHALL ACCESS ACTIVE RUNWAY/TAXIWAY PAVEMENTS UNLESS PROPERLY ESCORTED AS APPROVED BY THE OWNER. CONTRACTOR SHALL PROVIDE ESCORT PERSONNEL, VEHICLES, AND ALL OTHER MATERIALS AND INCLUDE THE COSTS IN THE LUMP SUM PRICE FOR MOBILIZATION.
- CONTRACTOR SHALL ACCESS WORK AREAS FROM THE NORTH SIDE AND AT NO TIME ACCESS TAXIWAY B WITHOUT APPROVAL OF THE OWNER.



INDICATES DAYTIME BARRICADE FOR WORK AREA A AND B (AIRPORT OPEN), SEE DETAIL A3 THIS SHEET.

AT THE START OF EACH DAY'S WORK:

- ENSURE NOTAMS ARE ISSUED, WORK AREA B ONLY (PORTION OF TAXIWAY B CLOSED).
- DISCONNECT THE TAXIWAY CIRCUIT IN THE ELECTRICAL VAULT THAT ARE WITHIN THE WORK ACTIVE WORK AREA, WORK AREA B ONLY
- INSTALL BARRICADES ALONG THE CONTRACTOR'S ACCESS ROUTE AS SHOWN IN THE PROJECT DRAWINGS

PRIOR TO THE END OF EACH DAY'S WORK:

- REMOVE BARRICADES ALONG THE CONTRACTOR'S ACCESS ROUTE.
- REMOVE BARRICADES ACROSS TAXIWAYS WHICH ARE OUTSIDE OF THE ACTIVE WORK AREA.
- RECONNECT THE TAXIWAY CIRCUIT IN THE ELECTRICAL VAULT THAT ARE WITHIN THE WORK ACTIVE WORK AREA., WORK AREA B ONLY
- ENSURE NOTAMS ARE CANCELLED, WORK AREA B ONLY (PORTION OF TAXIWAY B CLOSED).
- SWEEP PAVEMENTS AND CLEANUP ANY DEBRIS.

SEQUENCE OF OPERATIONS:

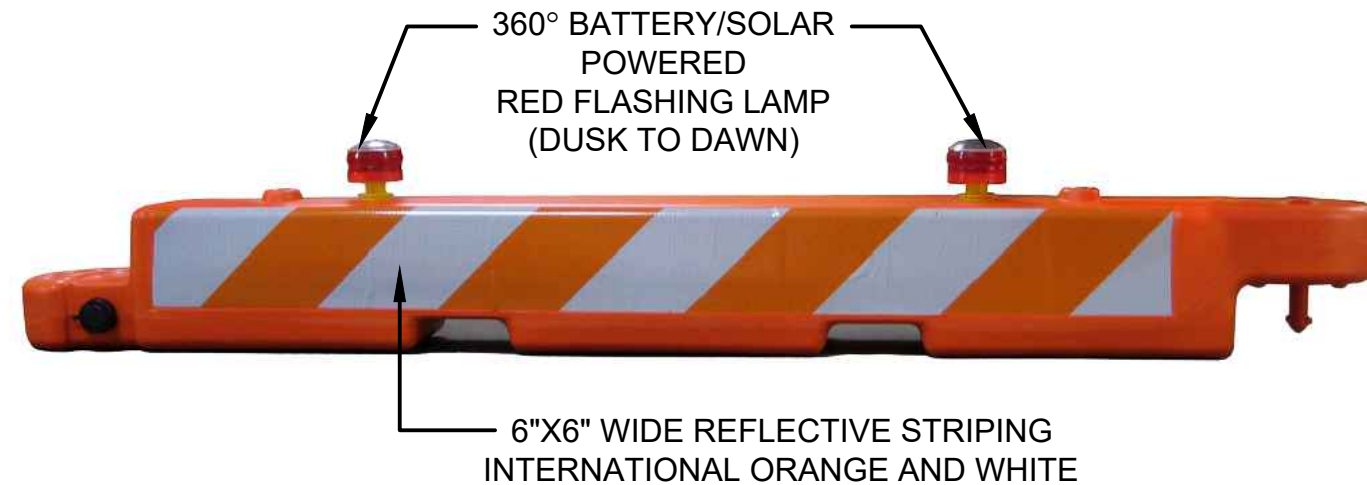
- PROPOSED WORK AREAS CAN BE WORK ON CONCURRENTLY IF THE NOTAM FOR THE CLOSURE OF PORTIONS OF TAXIWAY B IS ACTIVE
- LIMIT PAVEMENT EXCAVATION AREA THAT WHICH CAN BE BACKFILLED AND COMPACTED IN ONE DAY'S WORK.

SEQUENCE OF TASKS:

- REMOVE EXISTING PAVEMENT MARKINGS, AS NECESSARY
- EXCAVATE FOR PAVEMENT SECTION
- PLACE AND COMPACT CRUSHED AGGREGATE BASE COURSE, ITEM CAL-26.
- BACKFILL THE PAVEMENT AREA TO ORIGINAL GRADE WITH ITEM CAL-26, IF PAVING CANNOT BE COMPLETED IN ONE DAY'S WORK
- PAVE ASPHALT/CONCRETE PAVEMENT TO FINISHED GRADE.
- PAINT RUNWAY AND TAXIWAY MARKINGS.

BARRICADE NOTES:

- MAXIMUM SPACING BETWEEN BARRICADES SHALL BE 5 FEET. BARRICADES SHALL BE SET BACK 2 FEET FROM THE LIMITS OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER POSITIONING OF ALL BARRICADES.
- WATER-FILLED TYPE BARRICADES SHALL BE USED
- BARRICADES SHALL HAVE TWO FLASHING LAMPS.



A1 GENERAL NOTES
NOT TO SCALE

A2 PHASING NOTES
NOT TO SCALE

A3 LOW PROFILE SAFETY BARRICADE DETAIL
SCALE: NOT TO SCALE



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NOT FOR
CONSTRUCTION



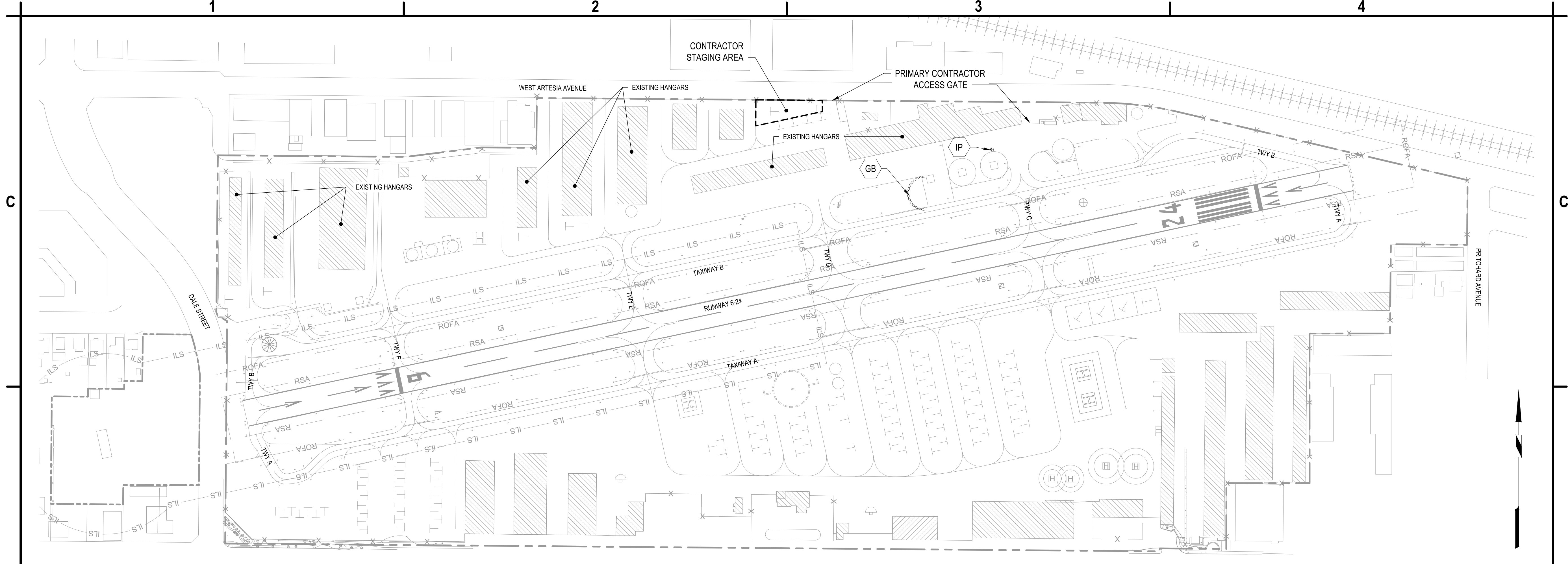
**AIRFIELD MARKING
PAVEMENT UPGRADES**
**ORANGE COUNTY FIRE AUTHORITY
FULLERTON MUNICIPAL AIRPORT**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: AA9.001.001		
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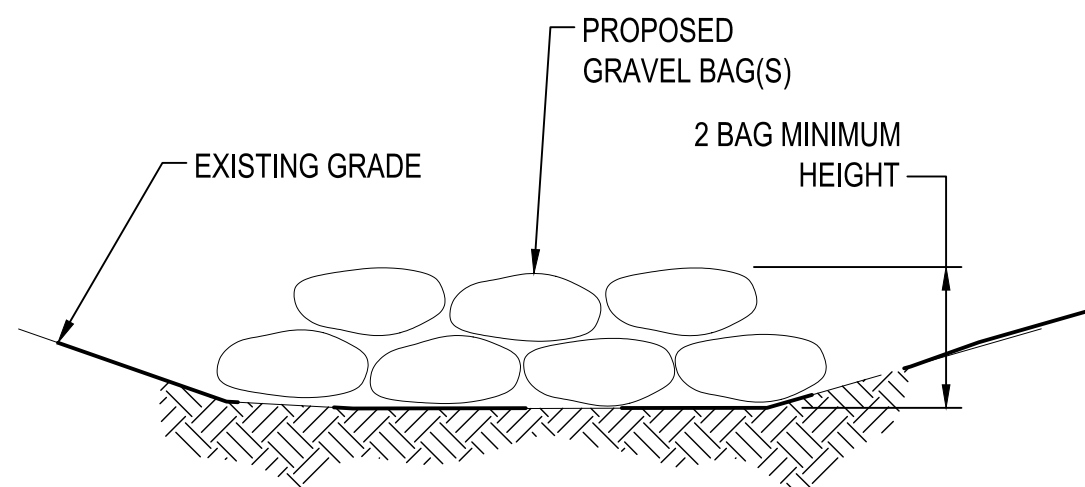
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SAFETY AND
PHASING PLAN**

GC101

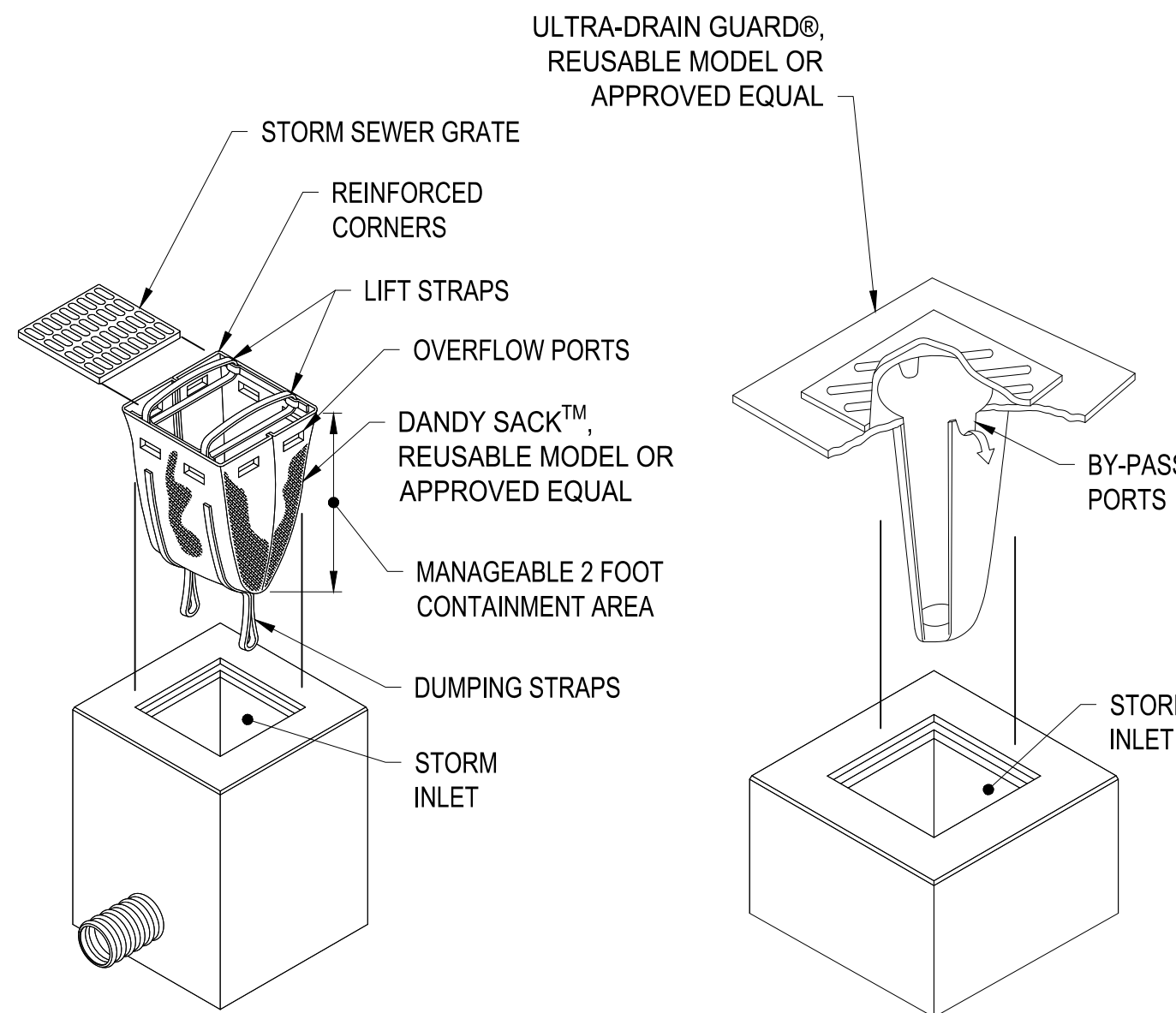
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B1 SOIL EROSION PLAN
SCALE: 1" = 150'



A1 GRAVEL BAG BERM DETAIL **GB**
SCALE: NOT TO SCALE



A2 STORM DRAIN INLET PROTECTION **IP**
SCALE: NOT TO SCALE

CATCH BASIN INSERT INLET PROTECTION NOTES:

1. CONTRACTOR SHALL VERIFY DIMENSIONS OF STRUCTURES WITH MANUFACTURER PRIOR TO ORDERING FOR CORRECT SIZING.
2. THE CATCH BASIN INSERT SHALL BE INSTALLED, MAINTAINED AND REMOVED PER MANUFACTURER RECOMMENDATIONS.
3. THE LOCATIONS SHOWN ON THE PLAN FOR PLACEMENT OF THIS DEVICE MAY VARY FROM WHERE THEY ARE ACTUALLY INSTALLED. THE DEVICES SHALL BE PLACED IN CATCH BASINS DURING CONCRETE SAW CUTTING AND DRILLING OPERATIONS, DURING REMOVAL OF CURING COMPOUND, AND AT ALL OTHER TIMES THAT THERE WILL BE WATER FLOWING INTO THE CATCH BASINS WHICH MAY CONTAIN DUST, DIRT OR OTHER FINE MATERIAL WHICH MAY CAUSE SILTATION DOWNSTREAM OF THE CONSTRUCTION SITE.
4. ALL STORM WATER THAT NEEDS TO BE PUMPED FROM THE SITE SHALL BE PUMPED INTO ONE OF THESE DEVICES. THE FLOW RATE PUMPED INTO THIS DEVICE SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDED TREATMENT FLOW RATE. DURING THE PUMPING PROCESS, THE DEVICE SHALL BE MONITORED IN ORDER TO DETERMINE THAT IT IS TREATING THE WATER. IF THE WATER IS UTILIZING THE OVERFLOW PORT AND IS NOT BEING CLEANED BY THE DEVICE, THE PUMPING SHALL BE STOPPED AND THE DEVICE SHALL BE CLEANED PER MANUFACTURER'S RECOMMENDATIONS AND THEN REINSTALLED.
6. MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR WHEN THE CAPACITY IS REDUCED BY APPROXIMATELY 50 PERCENT OR DIRECTED BY THE ENGINEER.
7. THE MEASUREMENT OF THE CATCH BASIN INSERT INLET PROTECTION FOR INSTANCES OF A PROPOSED / MODIFIED STRUCTURE BEING INSTALLED IN THE SAME LOCATION AS AN EXISTING ONE SHALL BE CONSIDERED AS ONE DEVICE AND ANY ADDITIONAL COSTS SHALL BE CONSIDERED INCIDENTAL.
8. THIS DEVICE SHALL BE PAID FOR UNDER THE UNIT COST PER LUMP SUM UNDER COMPLIANCE WITH POLLUTION, EROSION AND SILTATION CONTROL. THIS COST SHALL INCLUDE ALL THE COSTS FOR MAINTENANCE, INSTALLATION, REPLACEMENT, IF NEEDED, AND ALL LABOR, EQUIPMENT AND TOOLS AND INCIDENTALS TO INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS AND REMOVE.



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CONSTRUCTION



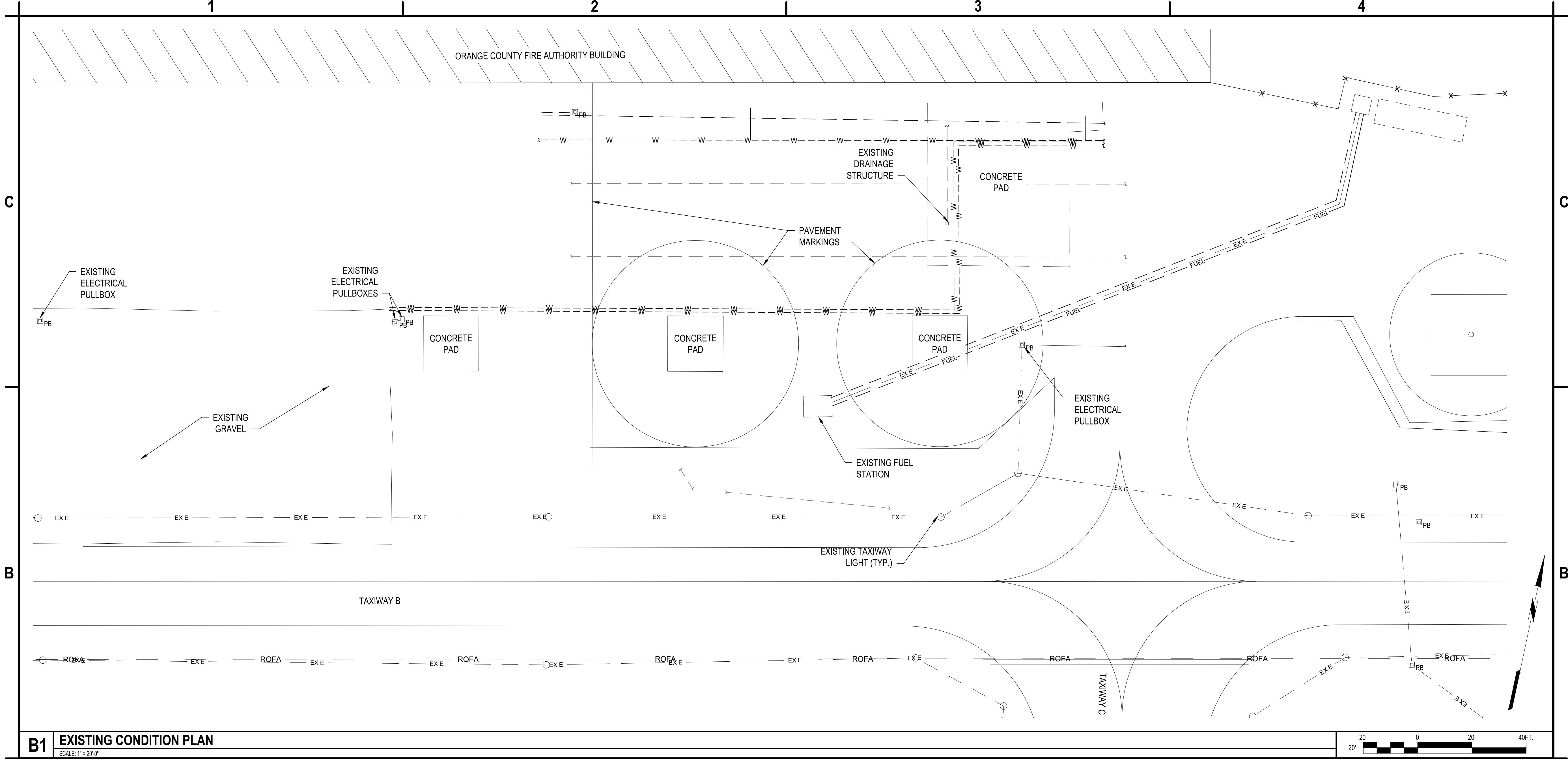
**AIRFIELD MARKING
PAVEMENT UPGRADES**
**ORANGE COUNTY FIRE AUTHORITY
FULLERTON MUNICIPAL AIRPORT**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: AA9.001.001		
DATE: JUNE 2023		
DRAWN BY: STB		
DESIGNED BY: KG		
CHECKED BY: KG		

**EROSION
CONTROL PLAN**

CE101

Dec 27, 2023 - 11:28am
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B1 EXISTING CONDITION PLAN
SCALE: 1" = 20' 4"


A1 NOT USED
SCALE: NOT TO SCALE



PRELIMINARY
NOT FOR
CONSTRUCTION



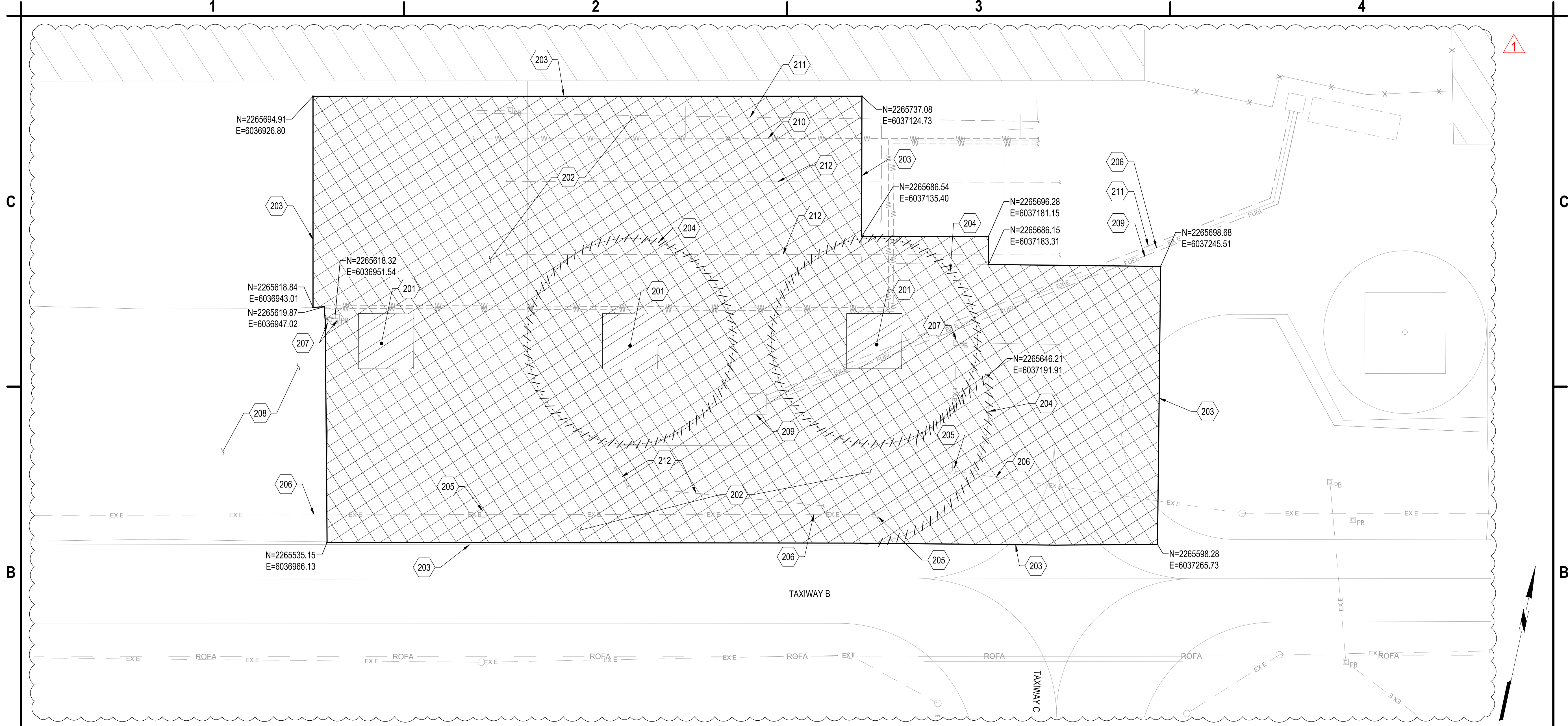
**AIRFIELD MARKING
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	12/21/23	ADDENDUM 1
MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: AA9.001.001		
DATE: JUNE 2023		
DRAWN BY: STB		
DESIGNED BY: KG		
CHECKED BY: KG		

EXISTING
CONDITIONS
PLAN

VF101

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B1 DEMOLITION PLAN
SCALE: 1" = 20'

- 201 CONCRETE PAVEMENT REMOVAL, FULL DEPTH, ITEM P-101
- 202 ASPHALT PAVEMENT REMOVAL, FULL DEPTH, ITEM P-101
- 203 FULL DEPTH SAWCUT IN PAVEMENT, INCIDENTAL TO ITEM P-101
- 204 OBLITERATE YELLOW PAVEMENT MARKINGS
- 205 EXISTING INCANDESCENT EDGE LIGHT TO BE REMOVED
- 206 PROTECT IN PLACE ELECTRICAL CONDUIT
- 207 PROTECT IN PLACE ELECTRICAL PULL BOX
- 208 PROTECT IN PLACE INFIELD GRAVEL PAVEMENT
- 209 PROTECT IN PLACE EXISTING FUEL LINE AND EQUIPMENT
- 210 PROTECT IN PLACE EXISTING WATER MAIN LINE AND EQUIPMENT
- 211 PROTECT IN PLACE EXISTING COMMUNICATION LINE AND EQUIPMENT
- 212 PROTECT IN PLACE EXISTING UNKNOWN UTILITY LINE AND EQUIPMENT

A1 KEYED NOTES
SCALE: NOT TO SCALE

- CONCRETE PAVEMENT REMOVAL
- ASPHALT PAVEMENT REMOVAL
- PAVEMENT MARKING REMOVAL

A2 LEGEND
SCALE: NOT TO SCALE

A3 DEMOLITION NOTES
SCALE: NOT TO SCALE



PRELIMINARY
NOT FOR
CONSTRUCTION



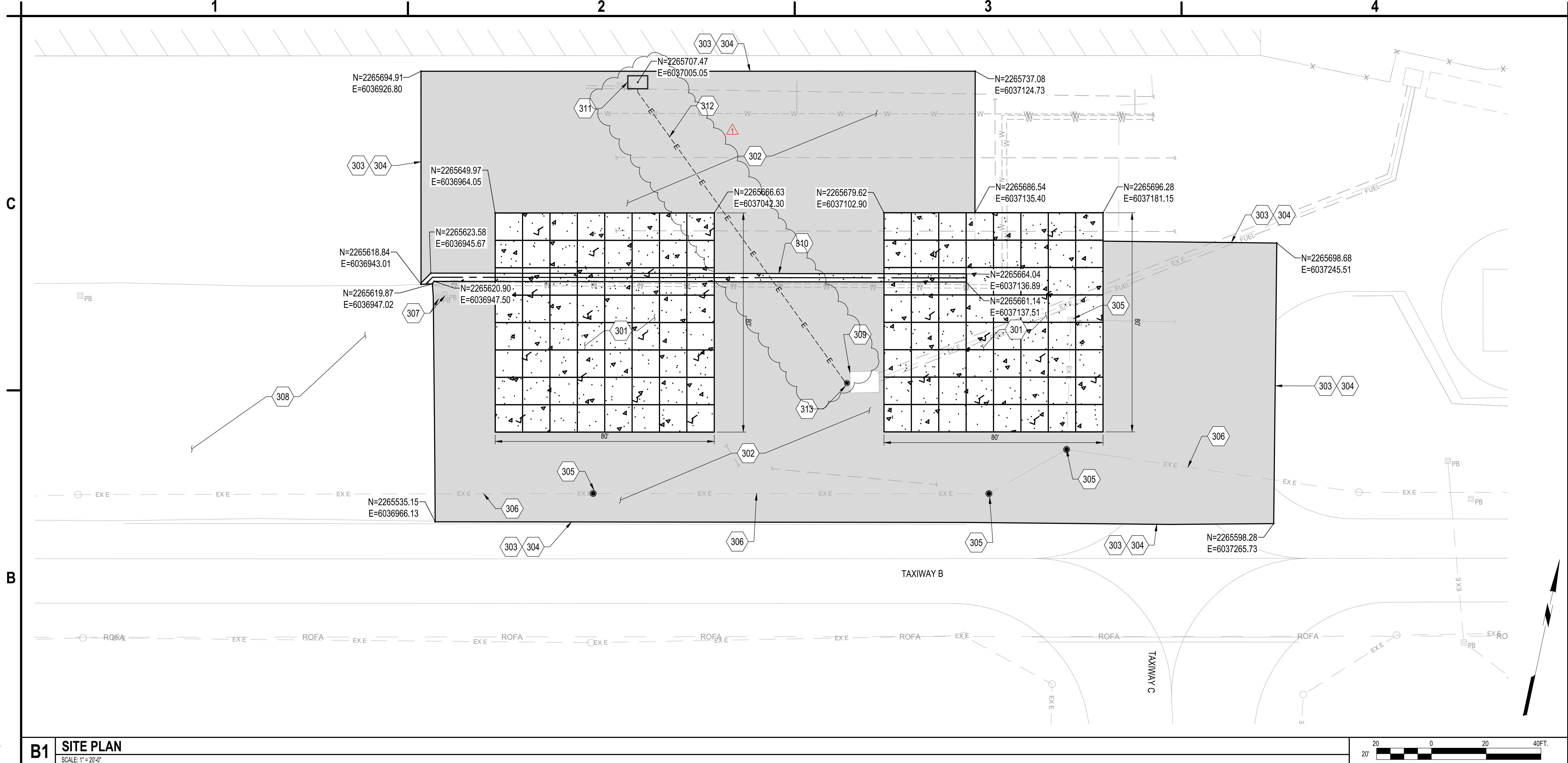
**AIRFIELD MARKING
PAVEMENT UPGRADES**
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FULLERTON MUNICIPAL AIRPORT**

12/21/23 ADDENDUM 1		
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DESIGNED BY: KG		
CHECKED BY: KG		

**DEMOLITION
PLAN**

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Dec 27, 2023 - 11:13am
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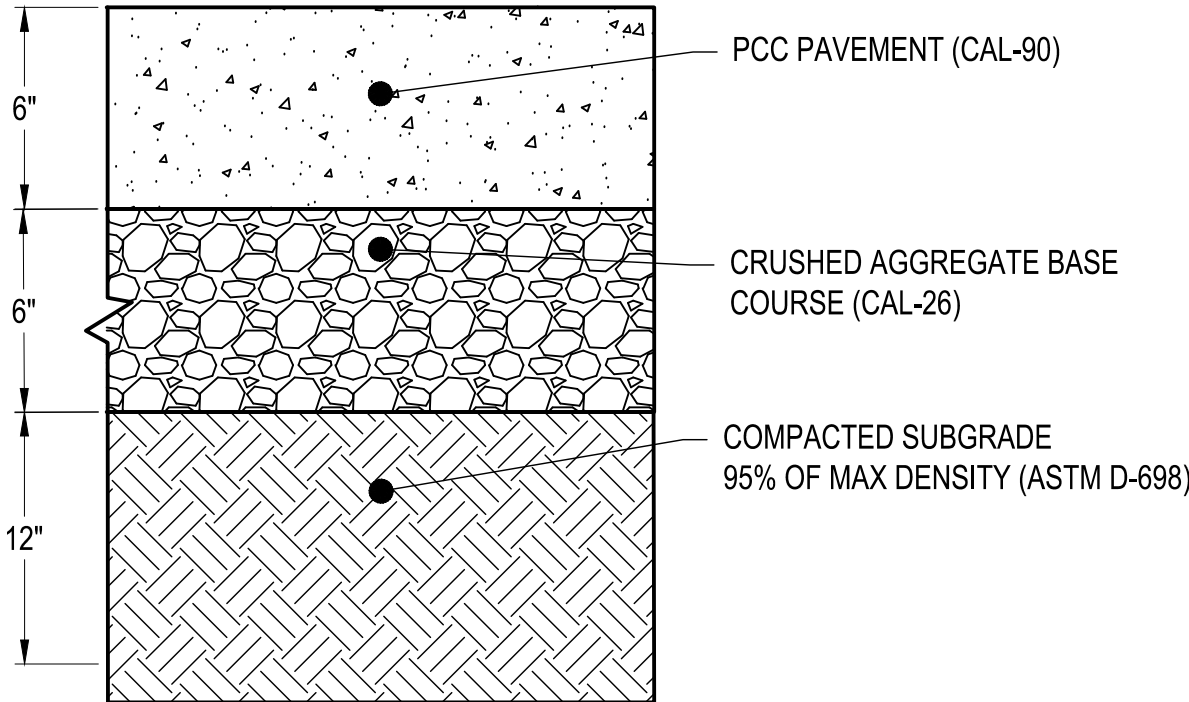


B1 SITE PLAN
SCALE: 1" = 20'-0"

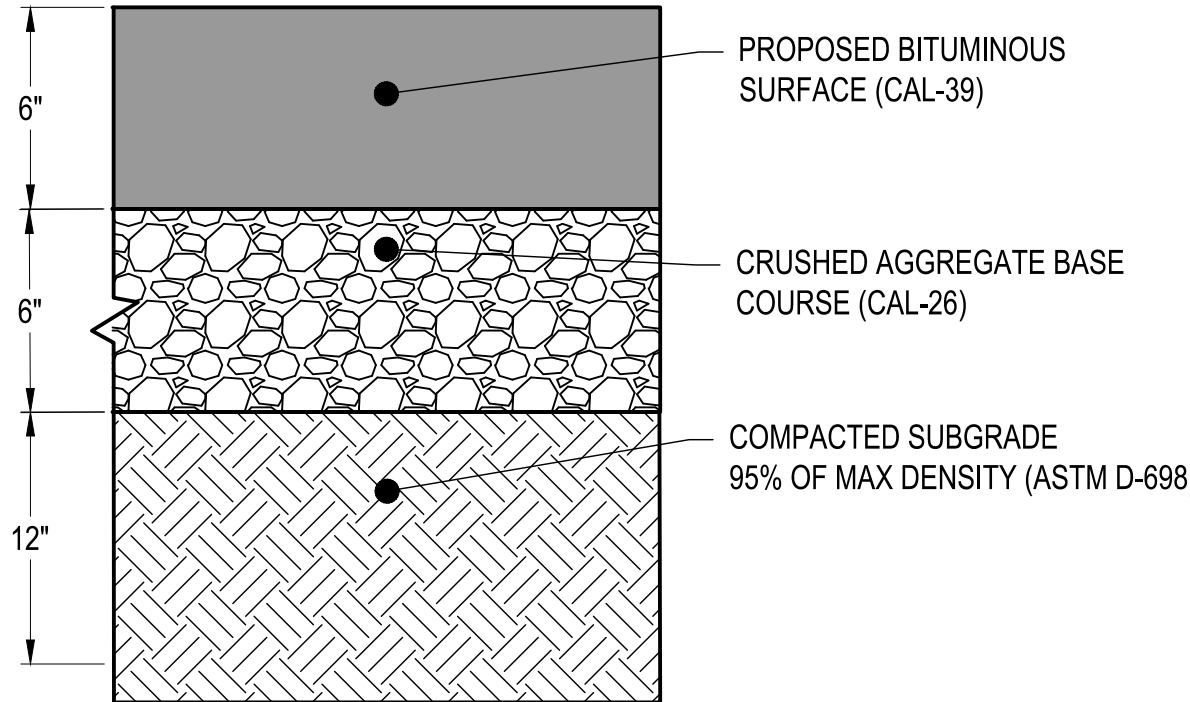


- 301 6" CONCRETE PAVEMENT OVER 6" AGGREGATE BASE, SEE DETAIL A2, THIS SHEET
- 302 6" ASPHALT PAVEMENT OVER 6" AGGREGATE BASE, SEE DETAIL A3, THIS SHEET
- 303 SAWCUT LIMITS
- 304 MEET EXISTING PAVEMENT
- 305 PROPOSED LED TAXIWAY EDGE LIGHT MODIFICATION, SEE DETAIL B3, SHEET CG501
- 306 PROTECT IN PLACE ELECTRICAL CONDUIT
- 307 PROTECT IN PLACE ELECTRICAL PULL BOX
- 308 PROTECT IN PLACE INFIELD GRAVEL PAVEMENT
- 309 EXISTING FUEL EQUIPMENT PAD
- 310 3' VALLEY GUTTER, SEE DETAIL A1, SHEET CG501
- 311 PROPOSED ELECTRICAL PULLBOX, ITEM L-115, SEE DETAIL A3, SHEET CS501
- 312 PROPOSED 3-2" RGS ELECTRICAL CONDUIT DUCTBANK, SEE DETAIL A1, SHEET CS501
- 313 PROPOSED CONDUIT STUB UP TO GPU OUTLET

A1 KEYED NOTES
SCALE: NOT TO SCALE



A2 CONCRETE PAVEMENT SECTION
SCALE: NOT TO SCALE



A3 ASPHALT PAVEMENT DETAIL
SCALE: NOT TO SCALE

LEGEND

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT

NOTE:
PERMITEE/PROJECT OWNER TO PROVIDE GEOTECHNICAL INSPECTION AND TESTING SERVICES FROM A CALIFORNIA LICENSED GEOTECHNICAL ENGINEER. TEST RESULTS, SIGNED AND STAMPED BY A LICENSED GEOTECHNICAL ENGINEER, TO BE SUBMITTED TO THE CITY SHOWING COMPLIANCE WITH PROJECT MATERIALS AND REQUIREMENTS.

A4 LEGEND
SCALE: NOT TO SCALE



PRELIMINARY
NOT FOR
CONSTRUCTION



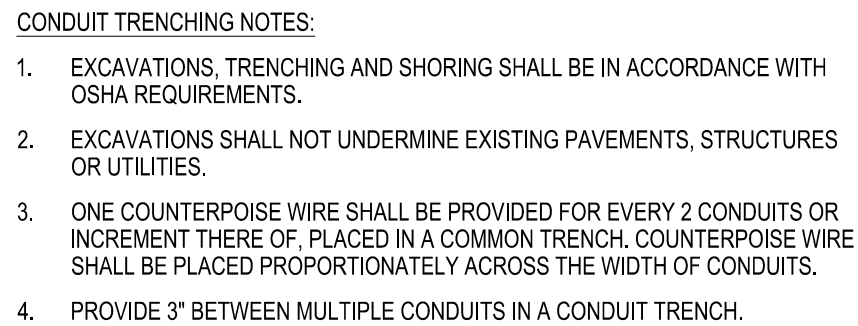
**AIRFIELD MARKING
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**SITE
PLAN**

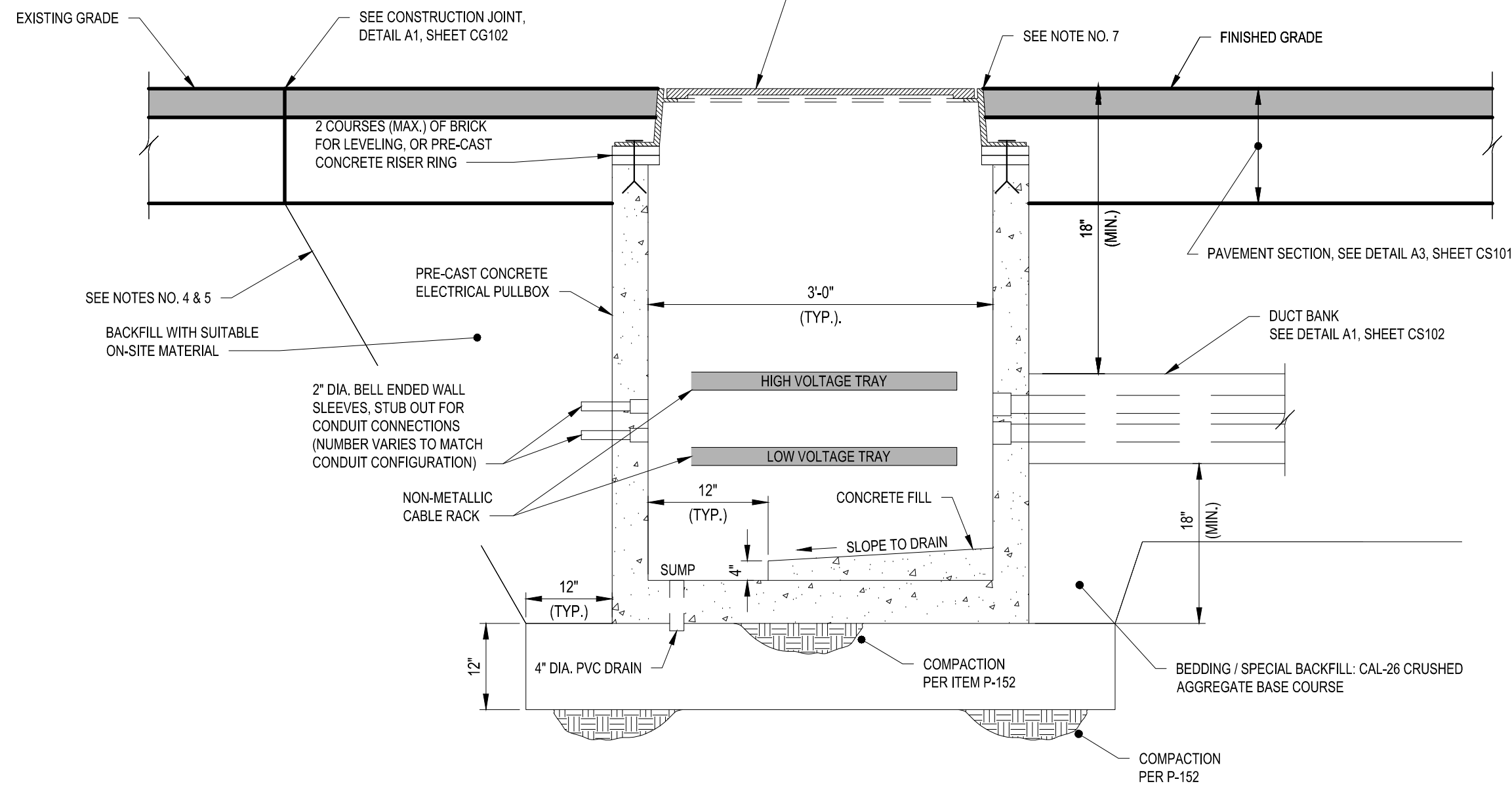
CS101

SCALE: NOT TO SCALE



SCALE: NOT TO SCALE


19. INSTALL PVC PLUGS IN ALL EMPTY SLEEVES AND DRILLS.
20. CONTRACTOR SHALL CORE DRILL WITH A DIAMOND BIT DRILL. IF REQUIRED FOR OPENINGS FOR NEW CONDUIT. CORE OPENINGS AND CONDUIT PENETRATIONS SHALL BE SEALED WATERTIGHT RIGHT TO BACKFILL.
21. PULL BOXES SHALL BE LOCATED AS SHOWN ON THE PLANS. THE PLACEMENT DEPTH OF THE PULL BOX MAY VARY TO ACCOMMODATE THE DUCT BANKS.
22. ALL PULL BOXES SHALL BE PROVIDED WITH A HEAVY DUTY NON-METALLIC CABLE RACK LOWER ARM OF CABLE RACK SHALL BE LOCATED 12" ABOVE THE FLOOR OF THE PULL BOX. PROVIDE TWO 6" ARMS PER CABLE RACK AS MANUFACTURED BY UNDERGROUND DEVICES INC. OR APPROVED EQUAL. BOTTOM SHALL BE A 2" SADDLE AND TOP A 6" ARM MOUNT USING STAINLESS STEEL HARDWARE AS SPECIFIED BY THE MANUFACTURER.
23. A PULLING IRON SHALL BE PROVIDED IN EACH PULL BOX OPPOSITE EACH CONDUIT ENTRANCE AND KNOCKOUT. THE PULLING IRON WILL BE POSITIONED 4" BELOW THE LEVEL OF CONDUIT OR KNOCKOUT.
24. IN THE EVENT ANY PULL BOX COVER IS NOT INSTALLED WHEN BOX IS PLACED, THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO ASSURE SAFETY. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT LIMITED TO BARRICADING THE PULL BOX SITE AND COVERING THE HOLE.
25. ALL PULL BOX STRUCTURES SHALL BE SET SLIGHTLY ABOVE THE FINISHED GRADE FOR THE SURROUNDING AREA, ASPHALT OR SODDING, AS CALLED FOR ON THE PLANS. SHALL BE PLACED FLUSH WITH THE TOP OF CASTINGS AND GENTLY SLOPED AWAY FROM THE STRUCTURE TO PREVENT THE PONDING OR INFILTRATION OF WATER.
26. EACH PULL BOX SHALL INCLUDE A 5/8" DIAMETER BY 4'-0" MIN. LONG GROUND ROD. EACH GROUND ROD SHALL BE INDIVIDUALLY TESTED BY THE CONTRACTOR PRIOR TO CONNECTION TO THE COUNTERPOISE TO ENSURE A NOT-TO-EXCEED EARTH RESISTANCE OF 25 OHMS. ADDITIONAL SECTIONS OF GROUND ROD SHALL BE ADDED TO OR A GROUND GRID INSTALLED TO ACHIEVE THE 25 OHM REQUIREMENT.
27. ALL 1/2-24 CABLES AND 1-202 CONNECTORS SHALL BE RACKED AND TIED ABOVE HORIZONTAL FLOOR. ALL CABLES SHALL BE EASILY ACCESSIBLE TO THE AIRFIELD MAINTENANCE ELECTRICIANS FROM THE EXTERIOR OF THE HANDHOLE.
28. THE MAXIMUM DEPTH OF THE STRUCTURES SHALL BE [5'] MEASURED FROM THE SURFACE TO THE BOTTOM OF THE STRUCTURE.
29. CONNECTIONS OF EXISTING OR PROPOSED CONDUITS OR DUCT BANK TO PULL BOX, INCLUDING CONCRETE, CONDUIT, CASTINGS AND BACKFILL SHALL BE INCIDENTAL TO ITEM 1-115.
30. ALL MATERIALS AND COMPONENTS SHOWN ARE INCIDENTAL TO THE ELECTRICAL PULL BOX. ITEM 1-115.



SCALE: NOT TO SCALE

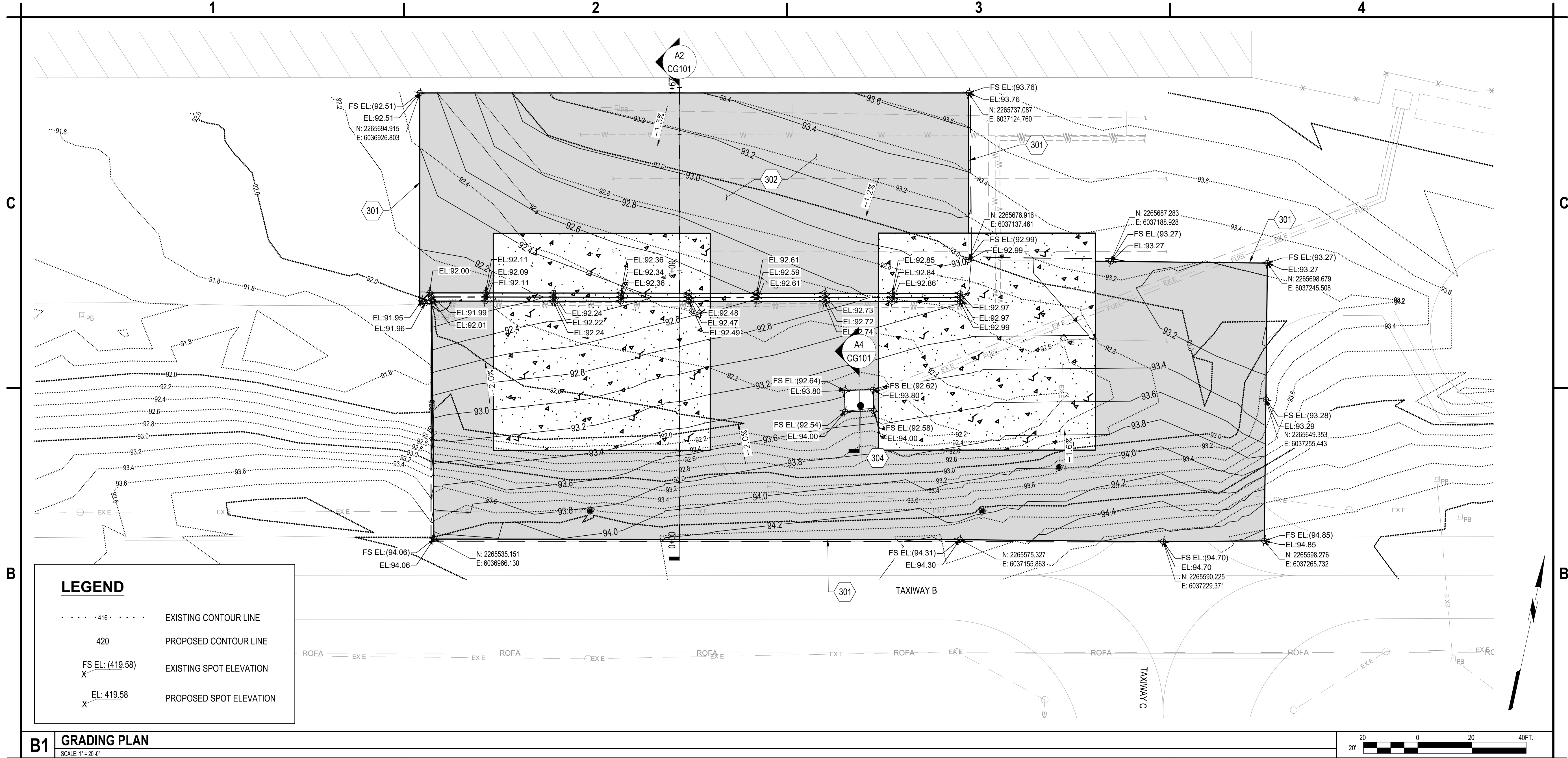


AIRFIELD MARKING PAVEMENT UPGRADES

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DESIGNED BY:		
CHECKED BY:		

CS501

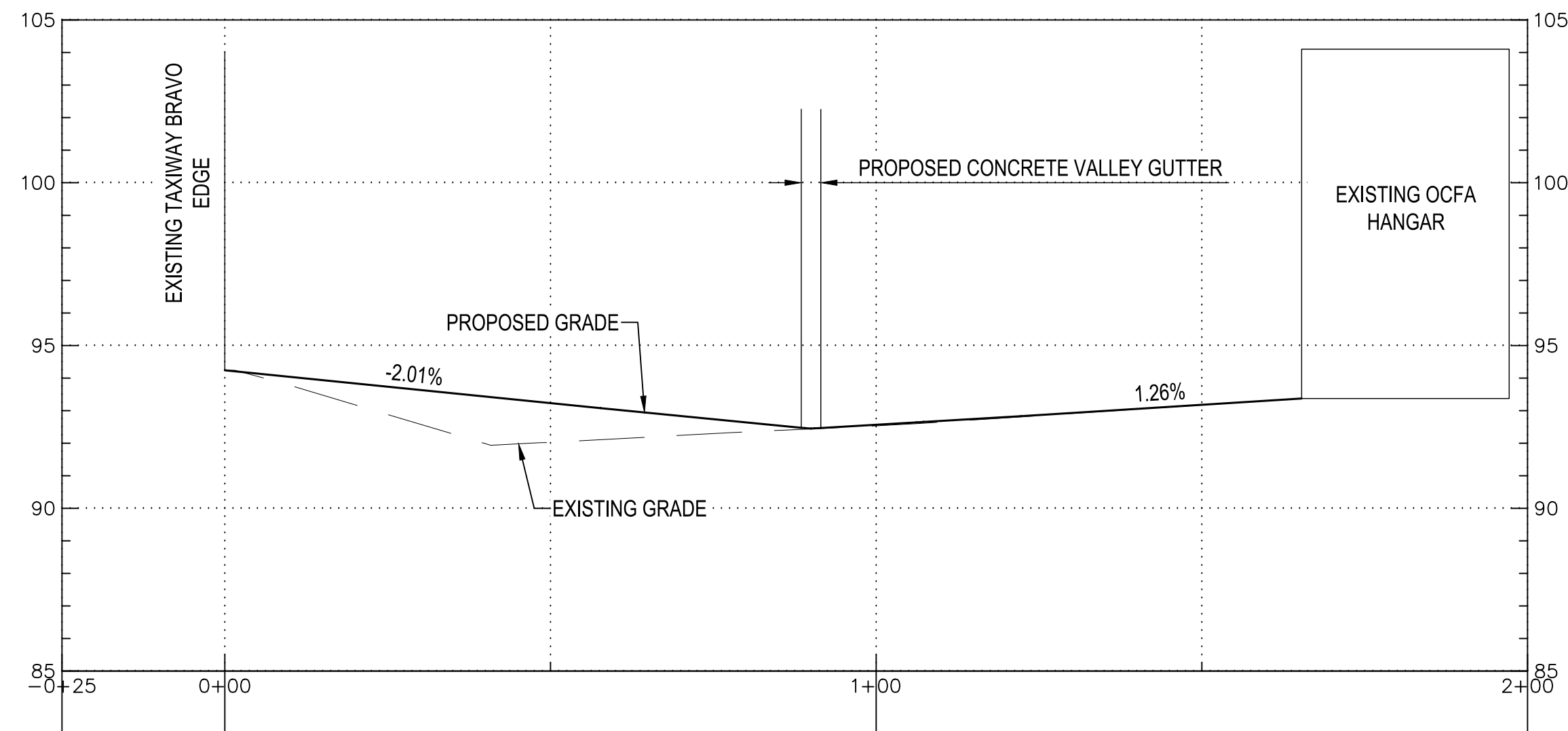
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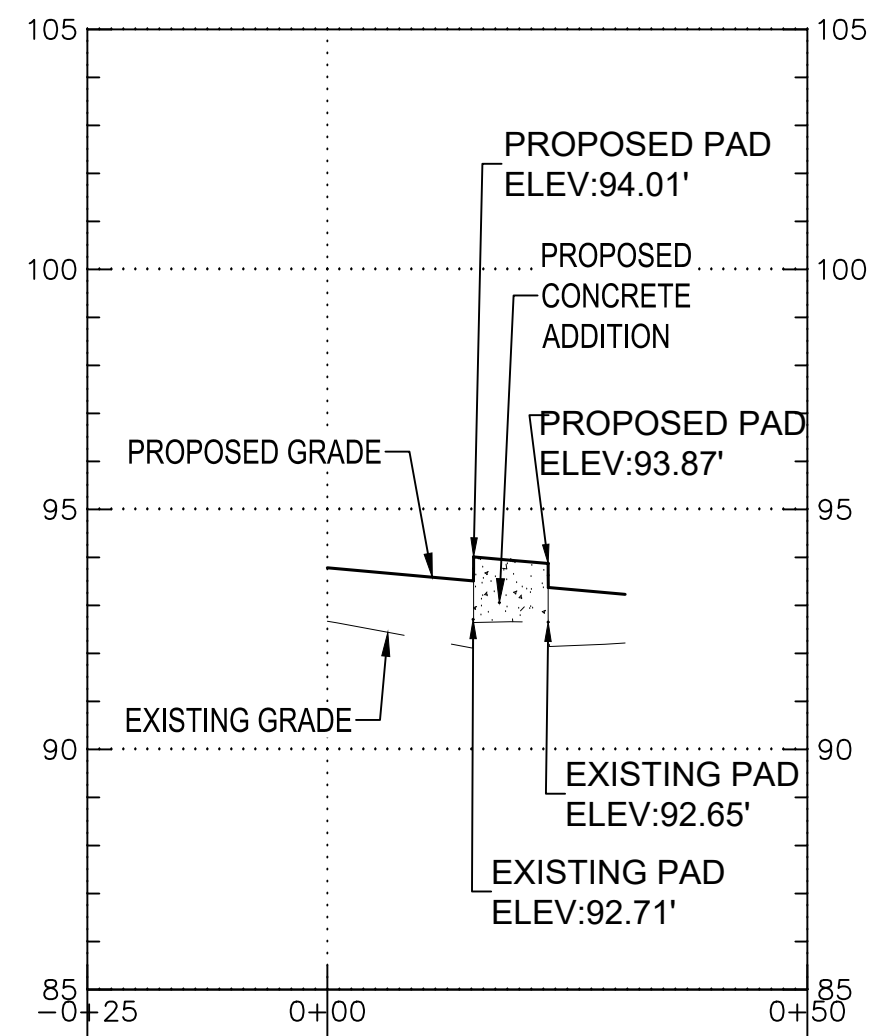
B1 GRADING PLAN
SCALE: 1" = 20'

- 301** MEET EXISTING PAVEMENT, SEE KEYING DETAIL A2, SHEET CG501
- 302** 6" ASPHALT PAVEMENT OVER 6" AGGREGATE BASE, SEE DETAIL A3, SHEET CS101
- 303** SAWCUT LIMITS
- 304** PROPOSED MODIFICATION OF EXISTING CONCRETE PAD. EXISTING FUEL EQUIPMENT (UNDERGROUND PIPING, STEEL ENCLOSURE) TO BE PROTECTED IN PLACE. PROPOSED MODIFICATION INCLUDES THE RAISING OF THE EXISTING CONCRETE STRUCTURE TO NEW SURFACE GRADE ELEVATIONS, SEE DETAIL B1 ON SHEET CG501

A1 KEYED NOTES
SCALE: NOT TO SCALE



A2 SURFACE PROFILE
SCALE: NOT TO SCALE



A4 SURFACE PROFILE
SCALE: NOT TO SCALE



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CONSTRUCTION



**AIRFIELD MARKING
PAVEMENT UPGRADES**

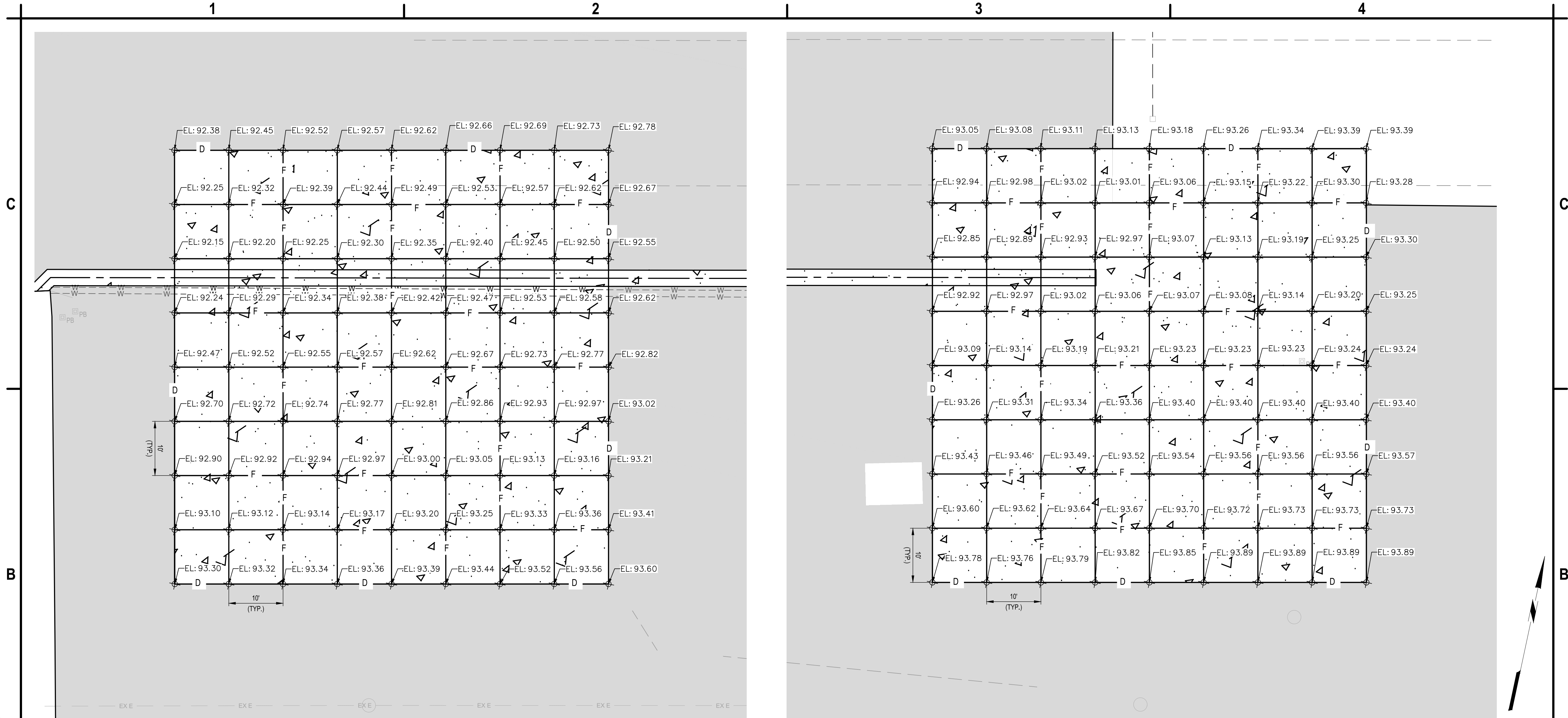
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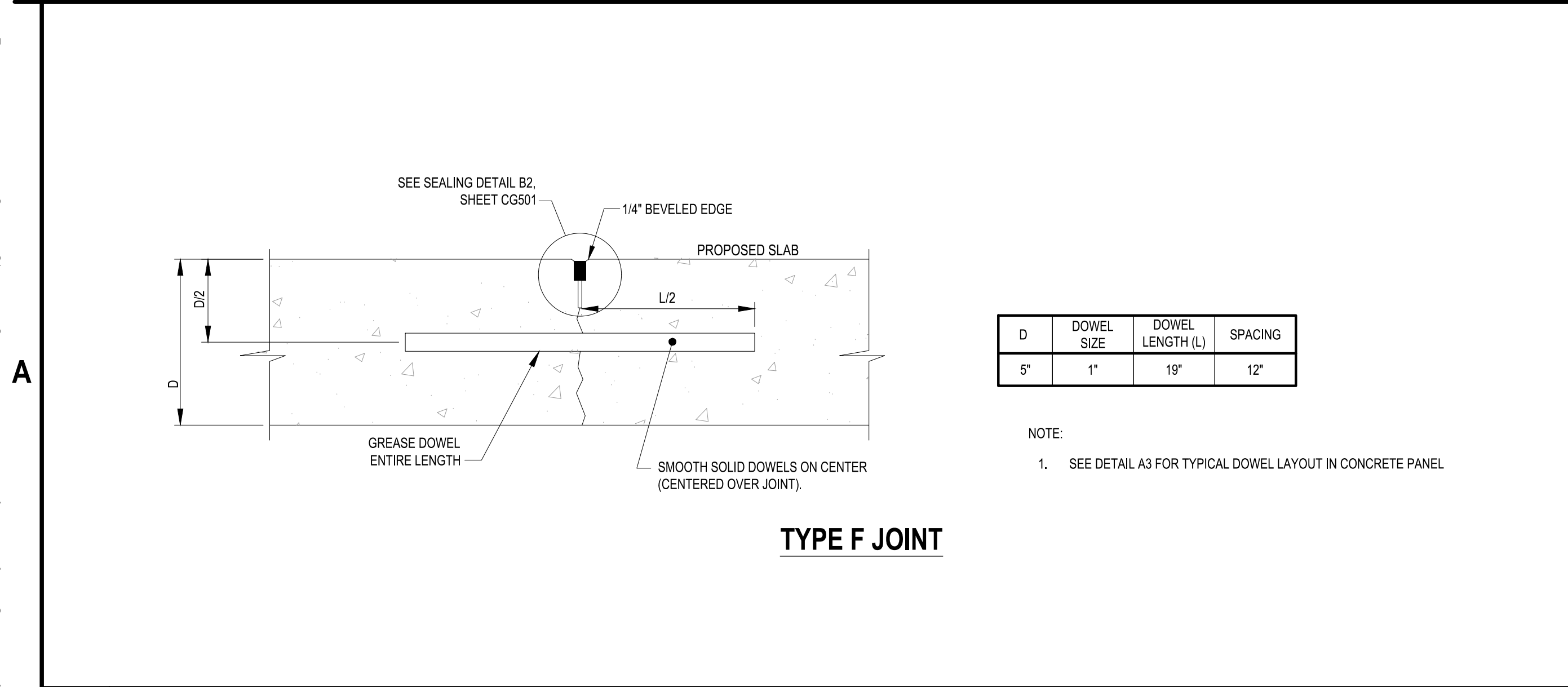
GRADING
PLAN

CG101

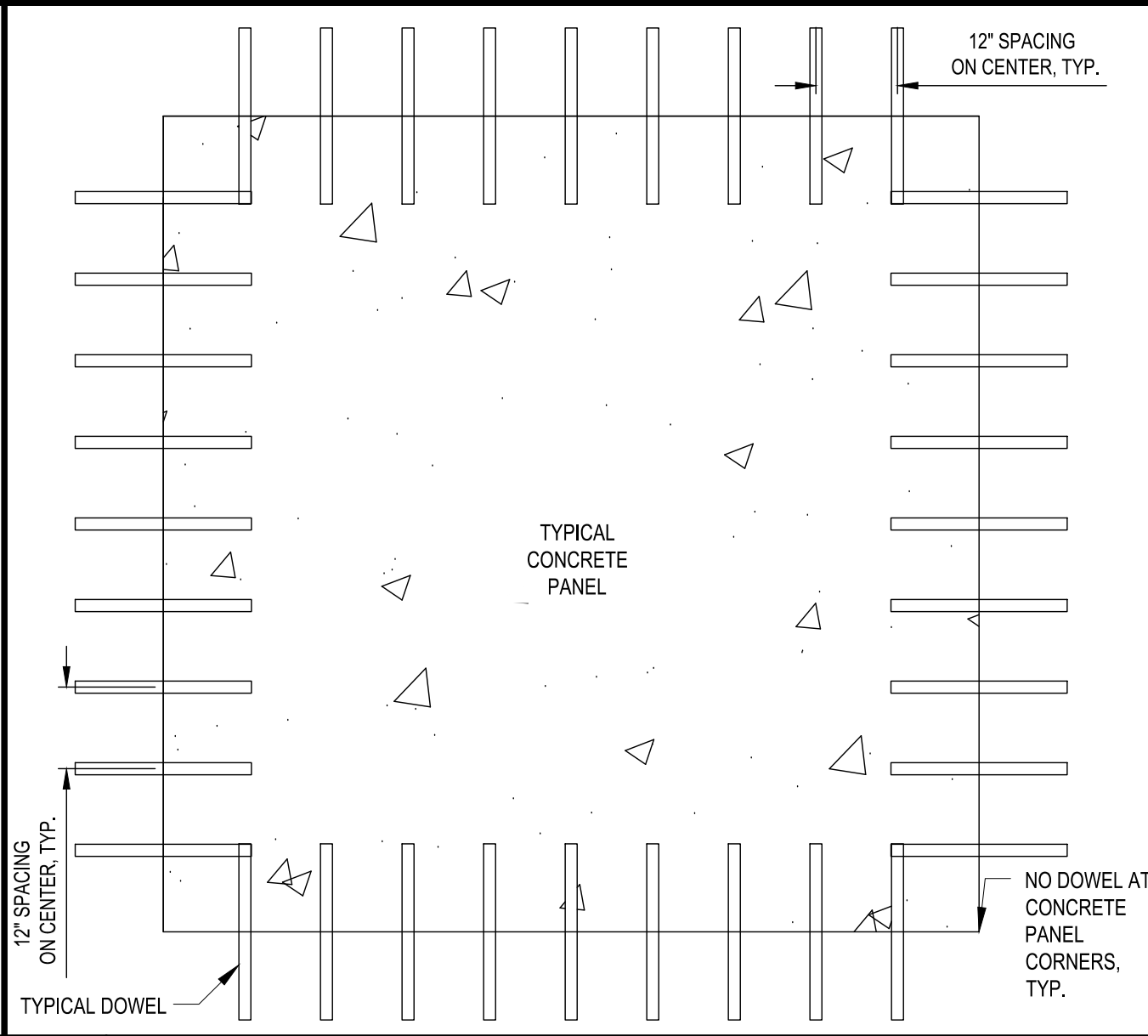
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B1 ELEVATION PLAN
SCALE: 1"=10'



A1 SMOOTH DOWEL CONSTRUCTION JOINT
SCALE: NOT TO SCALE



A3 TYPICAL DOWEL LAYOUT IN A CONCRETE PANEL
SCALE: NOT TO SCALE

LEGEND

JOINT DESIGNATOR

F - TYPE F JOINT SEE DETAIL B3, SHEET CG501

D - TYPE D JOINT, SEE DETAIL C4, SHEET CG501

A4 NOTES
SCALE: NOT TO SCALE



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NOT FOR
CONSTRUCTION



**AIRFIELD MARKING
PAVEMENT UPGRADES**

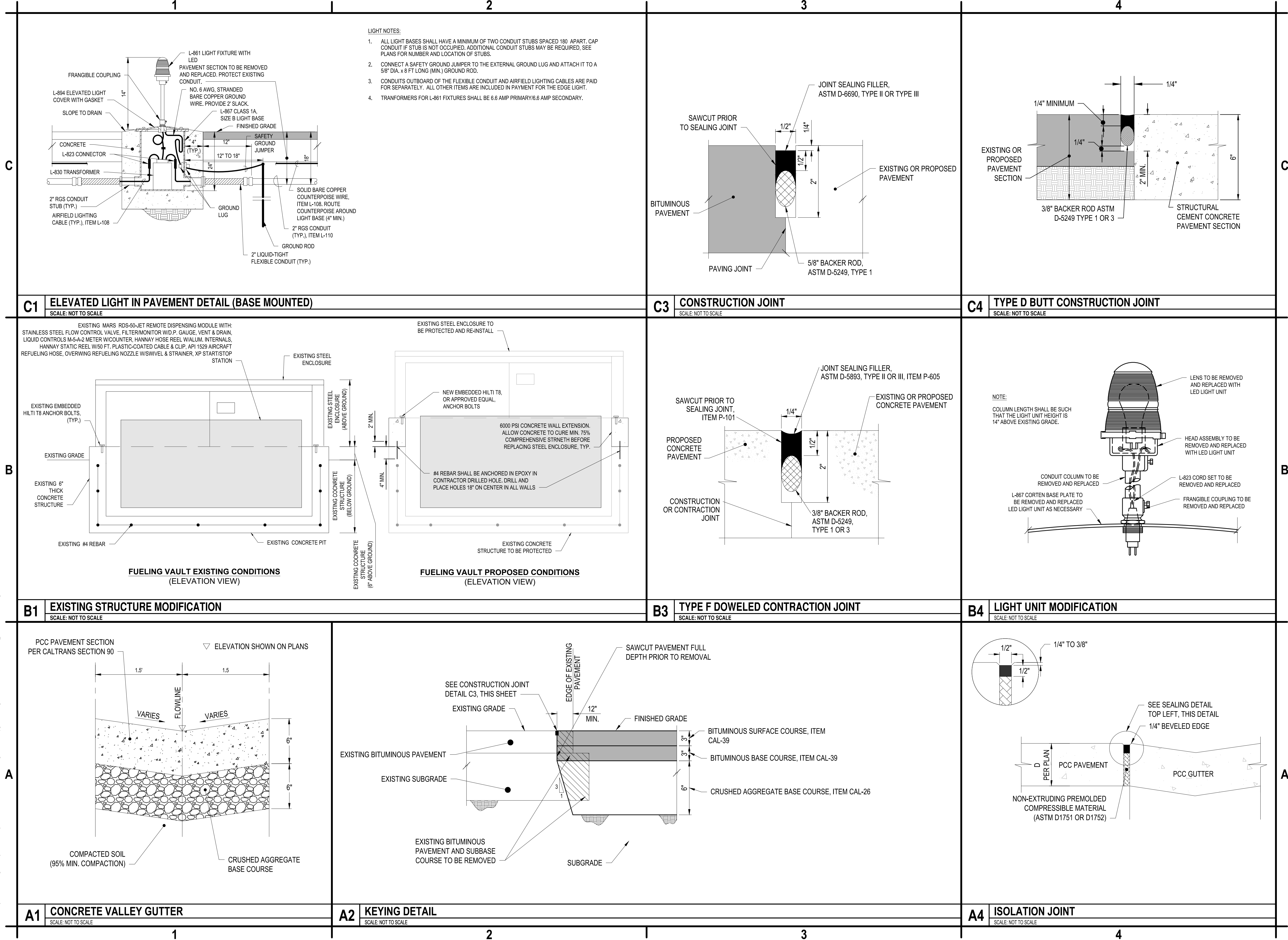
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**SPOT
ELEVATION
PLAN**

CG102

Dec 27, 2023 - 11:40am
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AIRFIELD MARKING
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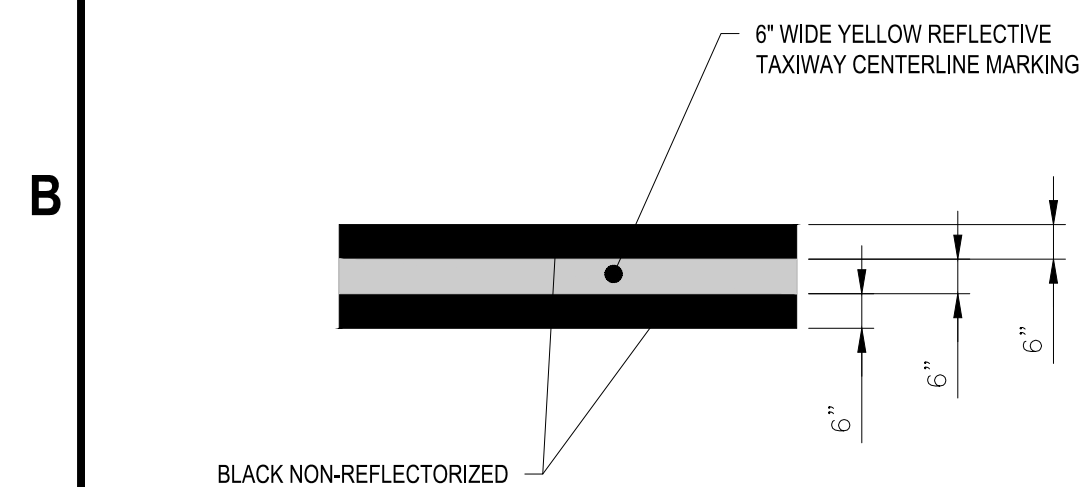
GRADING
DETAILS

CG501



C1	DASHED TAXIWAY EDGE MARKING
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SCALE: NOT TO SCALE



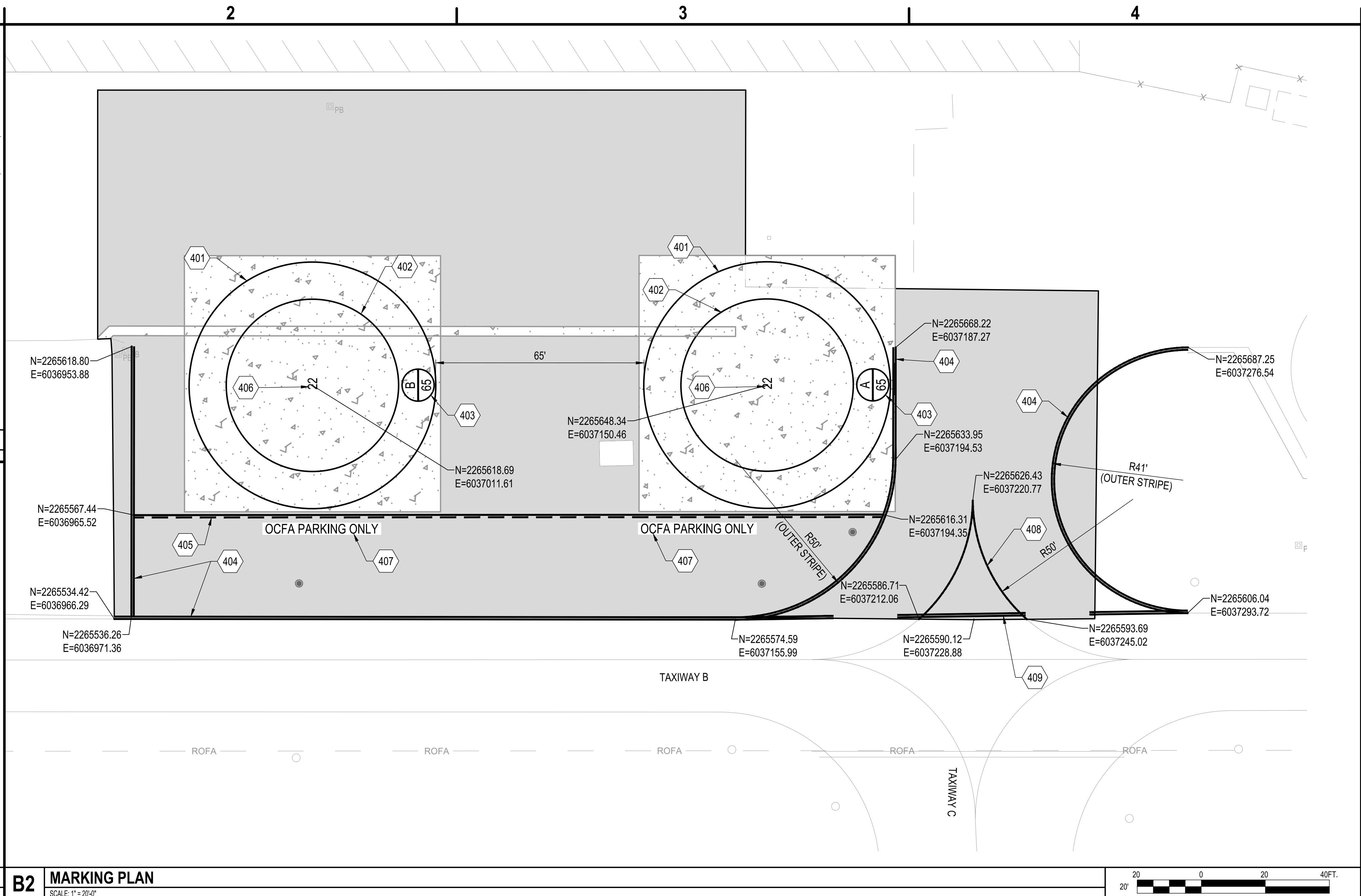
R1	TAXIWAY CENTERLINE MARKING
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SCALE: NOT TO SCALE

- | | |
|-----|--|
| 401 | MAIN ROTOR DIAMETER MARKING, 6 INCH WIDE, YELLOW (77" DIAMETER) |
| 402 | TOUCHDOWN POSITIONING CIRCLE MARKING 6" WIDE, YELLOW (53.8' DIAMETER) |
| 403 | PARKING POSITION MARKING, SEE DETAIL A2, THIS SHEET |
| 404 | CONTINUOUS TAXIWAY EDGE MARKING, YELLOW, SEE DETAIL A3, THIS SHEET |
| 405 | NON MOVEMENT AREA BOUNDARY MARKING, YELLOW, SEE DETAIL A4, THIS SHEET |
| 406 | PARKING POSITION WEIGHT LIMITATION, 3 FOOT HIGH YELLOW MARKING |
| 407 | 'OFCA' LETTERING, 3 FOOT HIGH RED MARKING |
| 408 | 6" WIDE TAXIWAY CENTER LINE MARKING, YELLOW, SEE DETAIL B1, THIS SHEET |
| 409 | DASHED TAXIWAY EDGE MARKING, YELLOW, SEE DETAIL C1, THIS SHEET |

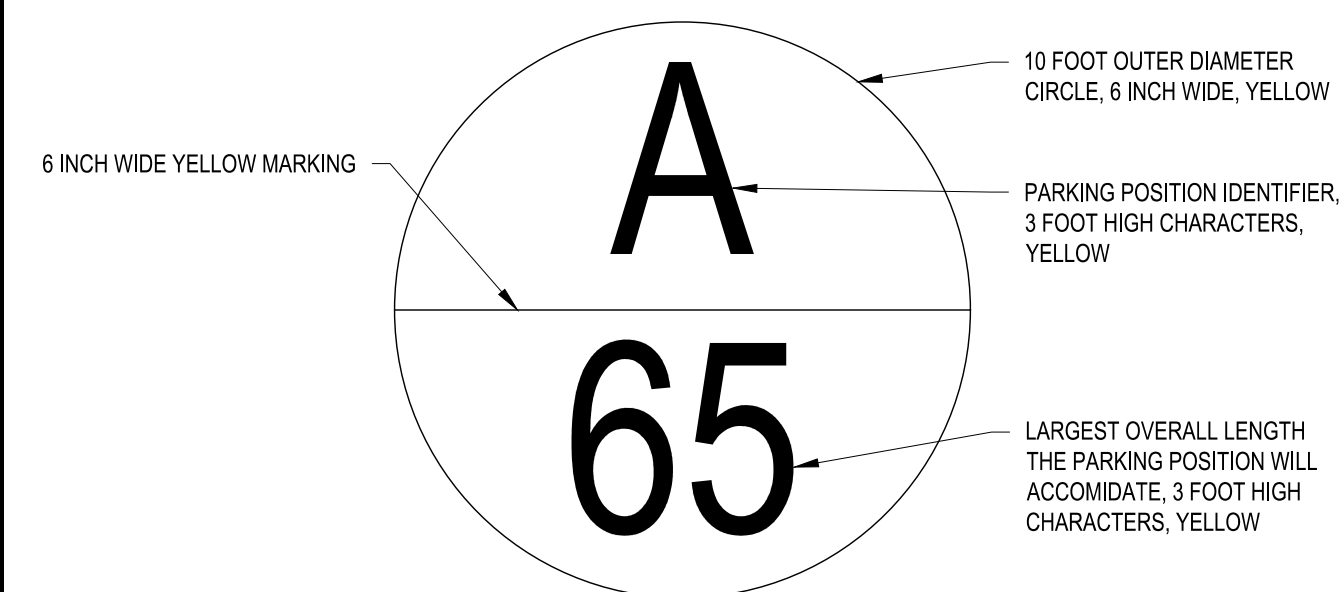
A1	KEYED NOTES
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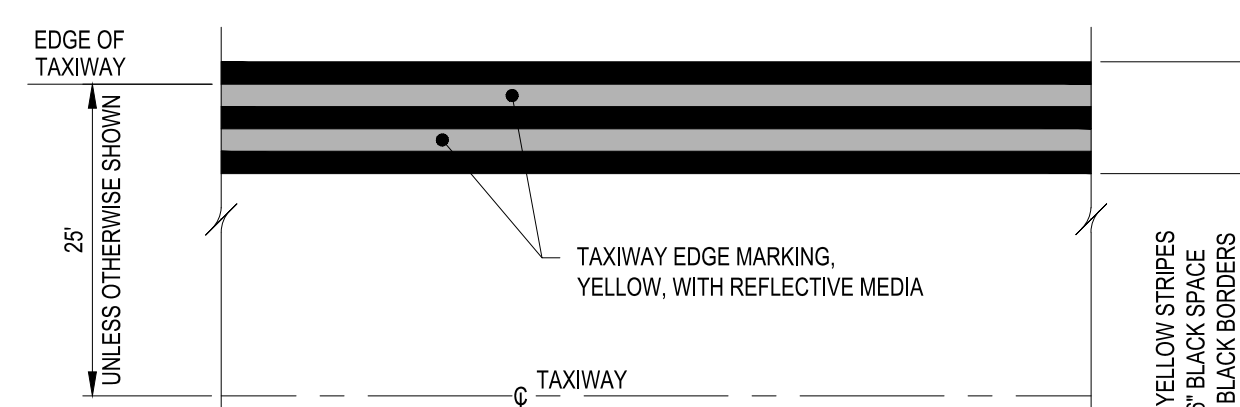
B2	MARKING PLAN
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SCALE: 1" = 20'-0"



A2	PARKING POSITION MARKING DETAIL
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SCALE: NOT TO SCALE

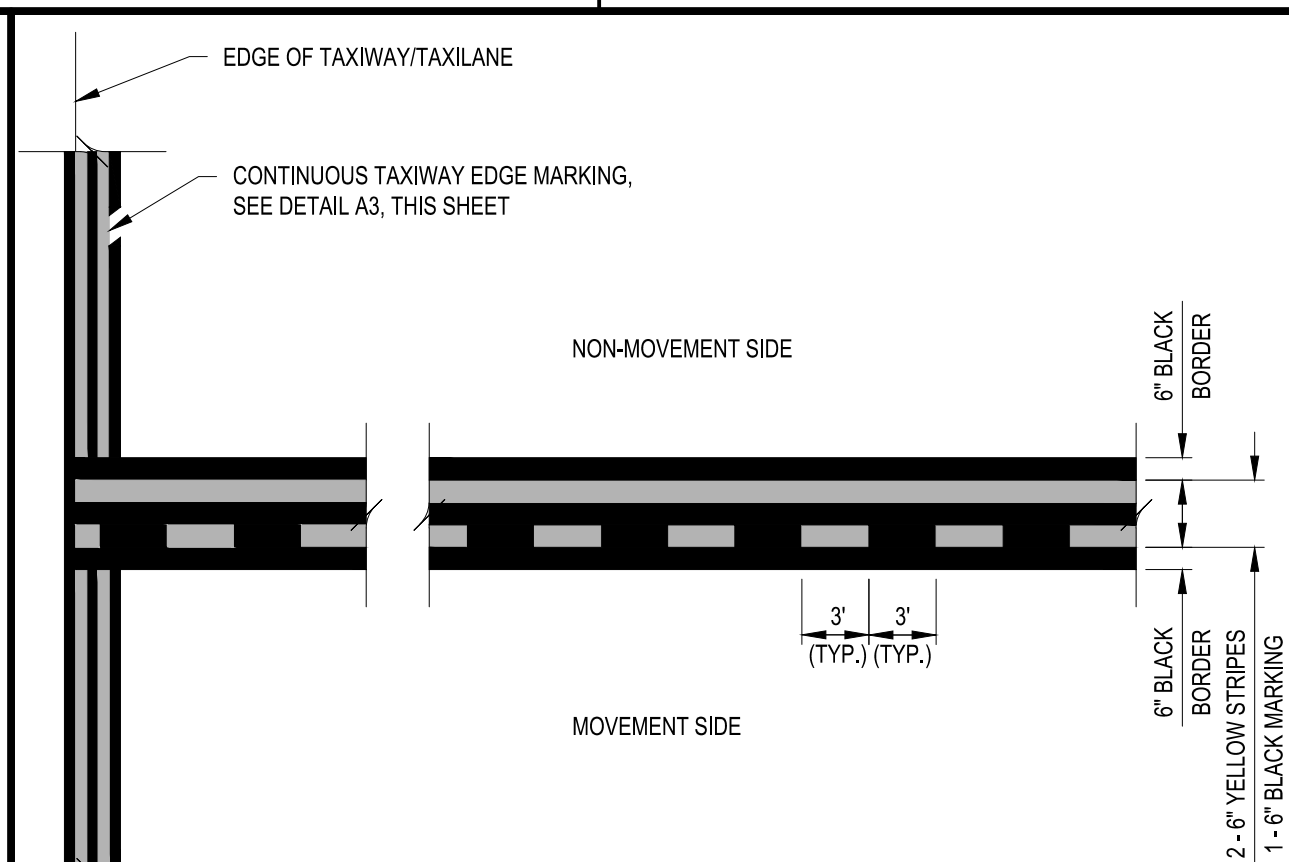


NOTES:

1. THE CONTINUOUS TAXIWAY EDGE MARKING SHALL BE INTERRUPTED FOR RUNWAY HOLDING POSITION MARKINGS, INTERMEDIATE HOLDING POSITION MARKINGS, ILS/MLS HOLDING POSITION MARKINGS, AND NON-MOVEMENT AREA MARKINGS.
2. THE CONTINUOUS TAXIWAY EDGE MARKINGS SHALL ABUT THE BLACK BORDER ASSOCIATED WITH THE ABOVE MENTIONED MARKINGS ON BOTH SIDES.
3. CONTINUOUS TAXIWAY EDGE MARKINGS WILL NOT HAVE AN OUTSIDE BLACK BORDER IF THERE IS NO PAVED SHOULDER.
4. REFLECTIVE MEDIA SHOULD NEVER BE USED IN BLACK PAINT.

A3 CONTINUOUS TAXIWAY EDGE MARKING DETAIL

SCALE: NOT TO SCALE



NOTES:

1. CONTINUOUS TAXIWAY EDGE MARKINGS WILL NOT HAVE AN OUTSIDE BLACK BORDER IF THERE IS NO PAVED SHOULDER.
2. ALL NON-MOVEMENT AREA BOUNDARY MARKINGS SHALL BE PAINTED YELLOW WITH REFLECTIVE MEDIA. REFLECTIVE MEDIA SHOULD NEVER BE USED IN BLACK PAINT.
3. ANY EXISTING MARKINGS ENCOUNTERED OR IN CONFLICT WITH NEW MARKINGS SHALL BE REMOVED AS NEEDED PRIOR TO PAINTING THE NON-MOVEMENT AREA BOUNDARY MARKING.

M	NON-MOVEMENT AREA BOUNDARY MARKING DETAIL
---	---

SCALE: NOT TO SCALE



**AIRFIELD MARKING
PAVEMENT UPGRADES**

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MARKING PLAN

CM101

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Section 40	-	Scope of Work
Section 50	-	Control of Work
Section 60	-	Control of Materials
Section 70	-	Legal Relations and Responsibility to Public
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Section 90	-	Measurement and Payment
Section 100	-	(Section Not Used)
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		Disadvantage Business Enterprise DBE Participation Summary Form
		Equal Employment Opportunity Poster
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C-105	Mobilization
C-106	Safety, Security and Maintenance of Traffic
P-101	Preparation/Removal of Existing Pavement
P-120	Cold Milling
P-152	Excavation, Subgrade and Embankment
P-603	Emulsified Asphalt Tack Coat
P-605	Joint Sealants for Pavements
P-620	Runway and Taxiway Marking
L-110	Airport Underground Electrical Duct Banks and Conduits
L-115	Electrical Manholes and Junction Structures
L-125	Installation of Airport Lighting Systems



CALTRANS STANDARD SPECIFICATIONS

Item Number	Description
CAL-26	Class 2 Aggregate Base Course
CAL-39	Hot Mix Asphalt
CAL-40	Concrete Pavement
CAL-90	Minor Concrete

CONTRACT DRAWINGS – Incorporated by Reference

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GENERAL PROVISIONS

Section 10 Definition of Terms

Whenever the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 Access road. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 Advertisement. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 Airport Improvement Program (AIP). A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

10-05 Air operations area (AOA). For the purpose of these specifications, the term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 Airport. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 ASTM International (ASTM). Formerly known as the American Society for Testing and Materials (ASTM).

10-08 Award. The Owner's notice to the successful bidder of the acceptance of the submitted bid.

10-09 Bidder. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-10 Building area. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-11 Calendar day. Every day shown on the calendar.

10-12 Change order. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, must be within the scope of the contract.

10-13 Contract. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: Advertisement, Contract Form, Proposal,

Performance Bond, Payment Bond, any required insurance certificates, Specifications, Plans, and any addenda issued to bidders.

10-14 Contract item (pay item). A specific unit of work for which a price is provided in the contract.

10-15 Contract time. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 Contractor. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 Contractor's laboratory. The Contractor's quality control organization in accordance with the Contractor Quality Control Program.

10-18 Construction Safety and Phasing Plan (CSPP). The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

10-19 Drainage system. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-20 Engineer. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering observation of the contract work and acting directly or through an authorized representative.

10-21 Equipment. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-22 Extra work. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-23 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his or her duly authorized representative.

10-24 Federal specifications. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-25 Force account. Force account work is planning, engineering, or construction work done by the Sponsor's employees.

10-26 Inspector. An authorized representative of the Engineer assigned to make all necessary observations and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-27 Intention of terms. Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-28 Laboratory. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer. Also referred to as “Engineer’s Laboratory” or “quality assurance laboratory.”

10-29 Lighting. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-30 Major and minor contract items. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

10-31 Materials. Any substance specified for use in the construction of the contract work.

10-32 Notice to Proceed (NTP). A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-33 Owner. The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only.

10-34 Passenger Facility Charge (PFC). Per 14 CFR Part 158 and 49 USC § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.”

10-35 Pavement. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-36 Payment bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-37 Performance bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-38 Plans. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-39 Project. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-40 Proposal. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications. For this contract the term Proposal and Bid shall be interchangeable and mean the same.

10-41 Proposal (Bid) guaranty. The security furnished with a proposal (Bid) to guarantee that the bidder will enter into a contract if his or her proposal (Bid) is accepted by the Owner.

10-42 Runway. The area on the airport prepared for the landing and takeoff of aircraft.

10-43 Specifications. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-44 Sponsor. A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

10-45 Structures. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-46 Subgrade. The soil that forms the pavement foundation.

10-47 Superintendent. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-48 Supplemental agreement. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25%, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-49 Surety. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-50 Taxiway. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-51 Work. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-52 Working day. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). See the Advertisement located in the front of these Contract Documents.

20-02 Qualification of bidders. Each bidder shall furnish the Owner satisfactory evidence of his or her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of:

- a. statements covering the bidder's past experience on similar work,
- b. a list of equipment that would be available for the work, and
- c. a list of key personnel that would be available.
- d. In addition, each bidder shall furnish the Owner satisfactory evidence of his or her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his or her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that he or she is prequalified with the State Highway Division and is on the current "bidder's list" of the state in which the proposed work is located. Such evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.

20-03 Contents of proposal forms. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.
- c. Documented record of Contractor default under previous contracts with the Owner.
- d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from his or her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit his or her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which they propose to do for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall sign the proposal correctly and in ink. If the proposal is made by an individual, his or her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his or her authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Sponsor's invitation for bid. It is the Sponsor's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 49 CFR § 18.36(b)(8). This includes such matters as

Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by fax or email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

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- b.** Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.
 - c.** If the bidder is considered to be in “default” for any reason specified in the subsection 20-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in the subsection 20-09 titled IRREGULAR PROPOSALS of Section 20.
- b. If the bidder is disqualified for any of the reasons specified in the subsection 20-14 titled DISQUALIFICATION OF BIDDERS of Section 20.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within 30 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection 30-07 titled APPROVAL OF CONTRACT of this section.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the subsection 30-01 titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section, within 21 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 21 calendar day period specified in the subsection 30-06 titled EXECUTION OF CONTRACT of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25% limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25% limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

Supplemental agreements shall be approved by the FAA and shall include all applicable Federal contract provisions for procurement and contracting required under AIP. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds.

40-03 Omitted items. The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection 90-04 titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called "Extra Work." Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such Extra Work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, the Engineer may order the Contractor to proceed with Extra Work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as defined in the subsection 10-48 titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection 70-15 titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

b. With respect to his or her own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.

c. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection 40-07 titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the Contractor may at his or her option either:

- a. Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,
- b. Remove such material from the site, upon written approval of the Engineer; or
- c. Use such material for the Contractor's own temporary construction on site; or,
- d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at his or her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his or her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property Owner.

END OF SECTION 40

Section 50 Control of Work

50-01 Authority of the Engineer. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the work. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

The Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his or her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the Engineer will advise the Owner of his or her determination that the affected work be accepted and remain in place. In this event, the Engineer will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on sound engineering judgment and such tests or retests of the affected work as are, in the Engineer's opinion, needed. Changes in the contract price shall be covered by contract change order or supplemental agreement as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority, after consultation with the FAA, to use sound engineering judgment in his or her determinations as to acceptance of work that is not in strict conformity, but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

LIST OF SPECIAL PROVISIONS

Special Provisions (SP) to the Standard Specifications for Public Works Construction, 2012 Edition

Section 200 FAA Special Provisions to the FAA General Provisions

50-04 Cooperation of Contractor. The Contractor will be supplied with five copies each of the plans and specifications. The Contractor shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the Engineer and his or her inspectors and with other contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his or her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his or her authorized representative.

50-05 Cooperation between contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his or her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his or her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the

same project. The Contractor shall join his or her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 Construction layout and stakes. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either their own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or their employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper execution and control of the work contracted for under these specifications.

The Contractor must give copies of survey notes to the Engineer for each area of construction and for each placement of material as specified to allow the Engineer to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Survey(s) and notes shall be provided in the following format(s): five (5) full size copies of signed and sealed surveys, five (5) copies of the notes as well as pdf copies of both. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

Construction Staking and Layout includes but is not limited to:

- a. Clearing and Grubbing perimeter staking
- b. Rough Grade slope stakes at 100-foot (30-m) stations
- c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

- a. Runway – minimum five (5) per station
- b. Taxiways – minimum three (3) per station
- c. Holding apron areas – minimum three (3) per station
- d. Roadways – minimum three (3) per station

Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

- a. Runway – minimum five (5) per station
- b. Taxiways – minimum three (3) per station
- c. Holding apron areas – minimum three (3) per station

Pavement areas:

- a. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.
- b. Between Lifts at 25-foot (7.5-m) stations for the following section locations:
 - a. Runways – each paving lane width
 - b. Taxiways – each paving lane width

-
- c. Holding areas – each paving lane width
 - c. After finish paving operations at 50-foot (15-m) stations:
 - a. All paved areas – Edge of each paving lane prior to next paving lot
 - d. Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.
 - e. Fence lines at 100-foot (30-m) stations minimum.
 - f. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.
 - g. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.
 - h. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).
 - i. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).
 - j. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

50-07 Automatically controlled equipment. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 Authority and duties of inspectors. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors are authorized to notify the Contractor or his or her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing,

and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection 50-02 titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection 70-14 titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been established by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as established by the Engineer, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs incurred by the Owner from any monies due or to become due the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his or her hauling equipment and shall correct such damage at his or her own expense.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and

effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in the subsection 50-12 titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the Engineer may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his or her intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for

such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

a. Listed in advisory circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,

b. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection:

<u>EQUIPMENT NAME</u>	<u>CITED FAA SPECIFICATION</u>
Connectors, Cable	L-823
Underground Electrical Cable for Airport Lighting Circuits	L-824
Lights, Runway & Taxiway Edge, Medium Intensity	L-861

60-02 Samples, tests, and cited specifications. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his or her request. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the Engineer. All

materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the Engineer.

The Contractor shall employ a testing organization to perform all Contractor required Quality Control tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 Certification of compliance. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, the Contractor shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The Engineer or his or her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

- a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom the Engineer has contracted for materials.
- b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
- c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer's field office. An Engineer's field office is not required.

60-06 Storage of materials. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his or her entire expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his or her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work. Refer to Section 7-5 for the City's permit requirements.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows:

<u>Utility</u>	<u>Location (Sheet No.)</u>	<u>Person to Contact</u>	<u>Phone No.</u>
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"Not Applicable"

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal aid participation. For Airport Improvement Program (AIP) contracts, the United States Government has agreed to reimburse the Owner for some portion of the contract costs. Such reimbursement is made from time to time upon the Owner's request to the FAA. In consideration of the United States Government's (FAA's) agreement with the Owner, the Owner has included provisions in this contract pursuant to the requirements of Title 49 of the USC and the Rules and Regulations of the FAA that pertain to the work.

As required by the USC, the contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator, and is further subject to those provisions of the rules and regulations that are cited in the contract, plans, or specifications.

No requirement of the USC, the rules and regulations implementing the USC, or this contract shall be construed as making the Federal Government a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his or her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his or her health or safety.

70-07 Public convenience and safety. The Contractor shall control his or her operations and those of his or her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his or her own operations and those of his or her subcontractors and all suppliers in accordance with the subsection 40-05 titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 Barricades, warning signs, and hazard markings. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area (AOAs) shall be a maximum of 18 inches (0.5 m) high. Unless otherwise specified, barricades shall be spaced not more than 4 feet (1.2 m) apart. Barricades, warning signs, and markings shall be paid for under Technical Specification Item M-100, Maintenance and Protection of Traffic.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices.

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of advisory circular (AC) 150/5340-1, Standards for Airport Markings.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and the Contractor's parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work that requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their removal is directed by the Engineer.

Open-flame type lights shall not be permitted.

70-09 Use of explosives. When the use of explosives is necessary for the execution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his or her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at his

or her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his or her contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his or her surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his or her own estimate of the difficulties involved in arranging the work to permit such beneficial occupancy by the Owner as described in the Construction Safety and Phasing Plan, Appendix A to Section 80.

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his or her expense.

The Contractor shall make his or her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained AC 150/5370-2 (see Special Provisions).

Contractor shall refer to the approved Construction Safety Phasing Plan (CSPP) to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his or her expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in the subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the Owners are indicated as follows:

Utility Service or Facility

Person to Contact

Telephone No.

NONE KNOWN

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or

omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of his or her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided in this subsection and subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his or her surety.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, his or her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his or her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his or her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his or her operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in the subsection 40-04 titled EXTRA WORK of Section 40 and the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

The Contractor shall provide copies of all subcontracts to the Engineer. The Contractor shall perform, with his organization, an amount of work equal to at least 50 percent of the total contract cost.

Should the Contractor elect to assign his or her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

80-02 Notice to proceed. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin. The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-04 Limitation of operations. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection 70-08 titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until the satisfactory conditions are provided. The following AOA cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

See Attachment "A" - Construction Safety and Phasing Plan (CSPP) at the end of this section.

Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary CSPP measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the CSPP measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner or Engineer.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the Engineer.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as the Owner may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the execution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his or her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

- a. CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his or her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his or her weekly statement of contract time charged on the following considerations:

- (1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least six (6) hours with the normal work force employed on such principal items. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.
- (2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.
- (3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.
- (4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection 50-15 titled FINAL ACCEPTANCE of Section 50.
- (5) The Contractor will be allowed one (1) week in which to file a written protest setting forth his or her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time is based on the originally estimated quantities as described in the subsection 20-05 titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time

that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

- b. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

- c. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially complete.

If the Contractor finds it impossible for reasons beyond his or her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of his or her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time or completion date. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum as described in Section 6-9 and the invitation to bid will be deducted from any money due or to become due the Contractor or his or her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

The work of this Contract and time charged shall commence on the date stated in the written Notice to Proceed. The Contract Time shall be as described in Section 6-1.1 and the invitation to bid and means that all of the work of the Contract is complete and in operating order.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason above, the Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the

construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his or her responsibilities for the completed work nor shall it relieve his or her surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored on active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within feet of an active runway at any time.

See Attachment "A"- Construction Safety and Phasing Plan (CSPP) following this section.

END OF SECTION 80

ATTACHMENT “A”

TO

SECTION 80

**CONSTRUCTION SAFETY AND
PHASING PLAN (CSPP)**

FOR THE CONSTRUCTION OF

OCFA APRON IMPROVEMENT PROJECT

AT

**FULLERTON MUNICIPAL AIRPORT
CITY OF FULLERTON, CALIFORNIA**

APRIL, 2023

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FOR DEFINITIONS, see FAA AC 150/5370-2 located at:

www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5370-2

CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

1.0 PURPOSE.

Aviation safety is the primary consideration at airports, especially during construction. The Airport Owner's Construction Safety and Phasing Plan (CSPP) and the Contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard.

The CSPP sets forth benchmarks and requirements for the project to help ensure the highest levels of safety, security and efficiency at the airport at the time of construction. Requirements for this CSPP were developed from FAA Advisory Circular (AC) 150/5370-2 Operational Safety on Airports During Construction, latest edition.

The CSPP is a standalone document, written to correspond with the safety and security requirements set forth in the AC, the airport safety and security requirements, and local codes and requirements. The CSPP is to be used by all personnel involved in the project. The CSPP covers the actions of not only the construction personnel and equipment, but also the action of inspection personnel and airport staff.

This document has been developed in order to minimize interruptions to airport operations, reduce construction costs, and maximize the performance and safety of construction activity. Strict adherence to the provisions of the CSPP by all personnel assigned to or visiting the construction site is mandatory.

The Contractor shall submit a Safety Plan Compliance Document (SPCD) to the Airport Owner describing how the Contractor will comply with the requirements set forth in this CSPP. The SPCD must be submitted to the Airport Owner prior to issuance of Notice to Proceed.

In the event the Contractor's activities are found in non-compliance with the provisions of the CSPP or the SPCD, the Airport Owner's Representative will direct the Contractor, in writing, to immediately cease those operations in violation. In addition, a safety meeting will be conducted for the purpose of reviewing those provisions in the CSPP/SPCD which were violated. The Contractor will not be allowed to resume any construction operations until conclusion of the safety meeting and all corrective actions have been implemented.

2.0 SCOPE OF PROJECT AND CSPP.

The proposed project include the improvement of the airport's Orange County Fire Authority (OCFA) apron and generally includes:

- Addition of taxiway lead-in lighting from the existing apron to Taxiway Bravo/Charlie
- Removal of existing helipad apron markings
- Addition of (2) helipad markings for S-70 aircraft
- Removal/addition of Taxiway edge markings, along taxiway Bravo/Charlie, as needed
- Relacement of existing airfield asphalt pavement

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the Airport Owner must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities and associated costs will be identified. As they are identified, their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project and/or

to airport operations in order to maintain operational safety. This planning effort will ultimately result in a project CSPP. The development of the CSPP takes place through the following five steps:

- a. Identify Affected Areas
- b. Describe Current Operations
- c. Allow for Temporary Changes to Operations
- d. Take Required Measures to Revise Operations
- e. Manage Safety Risk

3.0 PLAN REQUIREMENTS.

3.1 COORDINATION. The following items shall be coordinated as required:

- a. **Pre-construction Meeting.** A preconstruction meeting will be conducted to discuss operational safety, testing, quality control, quality acceptance, security, safety, labor requirements, environmental factors, and other issues. All parties affected by the construction will be asked to attend including, but not limited to, the Airport Owner, ATCT personnel, tenants, contractor, subcontractors and RPR.

At the preconstruction meeting, the Contractor shall submit a plan of operation and schedule of work to the RPR for approval. The Contractor's plan of operation shall indicate, in detail, the amount of construction planned and the number of shifts and/or overtime operations proposed for the project. The schedule of work shall clearly indicate the sequence of work to be performed. The Contractor shall conform, at all times, to the requirements of these provisions and with current safety practices, rules, regulations and security requirements of Airport Owner. The preconstruction meeting will be held prior to issuance of a Notice to Proceed.

- b. **Contractor Progress Meetings.** A minimum of one progress meeting to discuss scheduling and coordination shall be held each week unless otherwise directed by the Airport Owner, throughout the duration of the Contract, between the Airport Owner, Contractor, RPR and any other interested parties at a time and place to be designated by the RPR. These meetings shall include a detailed discussion of construction phasing and safety with regard to the Contractor's compliance with the requirements stipulated in the Contract Documents.

In attendance at these meetings shall be a Contractor's representative with the authority to make decisions concerning the scheduling and coordination of work. Progress meetings shall be facilitated by the RPR. Operational safety shall be a standing agenda item during progress meetings throughout the construction project.

- c. **Scope or Schedule Changes.** Changes in the Scope of Work or Project Schedule shall be governed by Section 40 and Section 80 of the Contract Documents. Any proposed change that results in a deviation from the established CSPP as expressed by the Contract Documents must be submitted to the FAA and Airport Owner for review and approval. FAA review and approval can be expected to take sixty business days.
- d. **FAA ATO Coordination.** Early coordination with Federal Aviation Administration (FAA) Air Traffic Organization (ATO) required for scheduling Technical Operations shutdowns prior to construction. Coordination is critical to restarts of NAVAID services and to the establishment of any special procedures for the movement of aircraft. All relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, should be coordinated with FAA ATO and may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart.

Coordination with FAA ATO will be required to shut down or NOTAM out of service, the following facilities:

- Runway Lead-In Light System (RLLS)
- Runway 24 Runway End Identification Lights (REILS)
- Runway 24 Precision Approach Path Indicator (PAPI) System
- Runway 24 Wind Cone

- e. **Pre-Paving Meeting.** If paving is included in this project, a pre-paving meeting will be held to discuss the status of preliminary submittals, the RPR's inspection of the plant and laboratory, test section requirements, paving plan requirements, and production requirements.
- f. **Payment.** The cost of complying with the requirements of this section, including but not limited to scheduling; providing flag people; maintenance of staging areas; providing, placing, relocating, maintaining and removing temporary barricades; protection of aircraft and vehicular traffic; maintenance of airport lighting circuits; installation, maintenance, and removal of temporary wiring and airfield lighting facilities; cleaning of paved surfaces; restoration of surfaces disturbed as a result of the Contractor's operations; providing, maintaining, and removing warning signs, hazard markings, barricade lights; providing a guard at access gates; and all security requirements shall be included under Technical Specification Item C-106, Safety, Security and Maintenance of Traffic.

3.2 PHASING.

a. Phase Elements (Work Areas)

1. **Work Area Descriptions:** The work of the project has been divided into two (2) areas in order to coordinate construction in a way that will minimize interference with Airport operations. The work areas are as described below:

Work Area "A": Includes all the area associated with construction of the apron from the existing OCFA hangar to Taxiway Bravo Object Free Area.

Work Area "B": Includes all the area associated with the construction of the apron within Taxiway Bravo Object Free Area.

The Contractor shall begin work in Work Area A. The sequence of work shall be Work Area A, then Work Area B. The Contractor shall not work on any two areas concurrently.

Apron excavation shall be limited to the area which can be backfilled and compacted in one day's work.

2. **Construction Safety Requirements**

The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No active runway or taxiway shall be crossed, entered, or obstructed at any time. The Contractor shall plan and coordinate his/her work in such a manner as to insure safety and a minimum of hindrance to airport operations. All Contractor equipment and material stockpiles shall be stored at locations determined during construction or as shown on the Construction Safety Drawings (Appendix 1). No equipment will be allowed to park within the approach area of an active runway at any time.

During the work under this Contract, the Airport Owner will make such arrangements to coordinate aircraft movements and Airport operations as necessary to conform to the construction procedures as outlined below and as shown on the Contract Drawings. The Contractor shall give adequate notice to the RPR, so as

to afford time to coordinate construction with the Airport Owner. No work shall proceed in any area without prior approval.

The Contractor shall always confine construction operations to the Contractor work area and designated haul routes. Contractor personnel, equipment, stored materials, subcontractors and suppliers will not be allowed on any other area within the Air Operations Area and within the Airport boundaries without prior approval of the Airport Owner or RPR.

The RPR will perform a visual site assessment before the Contractor occupies the Contractor work area. The Contractor shall be held responsible for all repairs and cleanup costs incurred as a result of the Contractor's construction operations. Restoration shall be the complete return of all work areas to the original conditions.

All temporary cables shall be placed in conduit and anchored with sand bags or other means approved by the RPR. Temporary cables and conduit in grass areas shall be marked with stakes and flagging. Temporary cables and conduit shall cross paved areas at barricade locations.

Prior to the start of construction operations, the Contractor shall perform the following:

- Coordinate issuing a Notices to Airmen (NOTAM) with the Airport Owner and RPR for closing Runway 6-24 from 9 pm to 7:00 am at least 48 hours in advance of the work.
- Coordinate issuing a NOTAM with the Airport Owner and RPR for non-standard lighting at least 48 hours in advance of the work.
- Coordinate a NOTAM with FAA ATO to place the Runway Lead-in Light System, RW 24 REIL, RW 24 PAPI, and the RW 24 Wind Cone Out of Service from 9 pm to 7:00 am on the days the Contractor is scheduled to work.

At the conclusion of construction operations, the Contractor shall perform the following:

- Test and activate airfield lighting circuits.
- Remove barricades, temporary jumpers and closed runway markings, as indicated on the Construction Safety Drawings.
- Clean all paved surfaces in accordance with Item M-100, Maintenance and Protection of Traffic.
- Coordinate cancellation of the NOTAM with the Airport Owner and RPR for closing Runway 6-24 from 9 pm to 7:00 am.

Work Area "A": Work in area A shall be started first. During work in this area, the Airport will be open. Access to the work area will be via West Artesia Avenue, through an existing OCFA gate.

At the start of each day's work in Area A, the Contractor shall perform the following:

- Install barricades as shown in the contract drawings

Prior to the end of each day's work in Area A, the Contractor shall perform the following:

- Remove work area barricades
- Clean up debris and sweep pavements.

Work Area "B": Work in area B shall begin immediately following completion of Work Area A. During work in this area, the Airport will be open. Access to the work area will be via West Artesia Avenue, through an existing OCFA gate.

Coordinate issuing a NOTAM with the Airport Owner and RPR at least 48 hours in advance for closing portions of Taxiway B between Taxiway D and Taxiway B.

At the start of each day's work in Area B, the Contractor shall perform the following:

- Verify with the Owner that the NOTAM closing portions of Taxiway B is active.
- Install barricades on taxiway D and B object free area.

Prior to the end of each day's work in Area B, the Contractor shall perform the following:

- Coordinate closing the NOTAM with the Airport Owner and RPR.
- Remove barricades
- Clean up debris and sweep pavements.

- b. Construction Safety Drawings.** Drawings specifically indicating operational safety procedures and methods in affected areas (i.e., construction safety drawings) have been developed for each construction phase. Such drawings are included in the CSPP as referenced attachments and are included in the contract drawing package.

3.3 AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY.

Contractor, subcontractor, and supplier employees or any other unauthorized persons shall be restricted from entering an active airport operating area without previous permission from the Airport Owner and the Aircraft Control Tower.

In an emergency situation, the Airport Owner or other designated airport representative may order the Contractor to suspend operations; move personnel, equipment, and materials to a safe location; and stand by until aircraft use is completed.

The Contractor shall cooperate with the airport users through the RPR, in coordination with airport operations, in scheduling the operations to provide adequate clearance for safe aircraft parking, fueling, maintenance, loading or unloading, maneuvering, taxing operations, or other aircraft operations.

a. Identification of Affected Areas

The following is a summary of impacts to the Airport Operations Areas resulting from the proposed construction safety and work phasing requirements:

Table 3.3A Construction Effect on Airport Operations		
Project	Runway Edges Enhancement Project	
Phase	Work Area(s) A. See Section 3.2.a for description) Airport is open	
Operational Requirements	Normal (Existing)	Anticipated (During Construction)
Scope of Work	<p>The proposed project include the improvement of the airport's Orange County Fire Authority (OCFA) apron and generally includes:</p> <ul style="list-style-type: none"> · Addition of taxiway lead-in lighting from the existing apron to Taxiway Bravo/Charlie · Removal of existing helipad apron markings · Addition of (2) helipad markings for S-70 aircraft · Removal/addition of Taxiway edge markings, along taxiway Bravo/Charlie, as needed · Replacement of existing airfield asphalt pavement 	
RW 24 Average Aircraft Operations	Carrier: 1/day	Carrier: 1/day
	GA: 182/Day	GA: 182/Day
	Military: 1/Day	Military: 1/Day
RW 6 Average Aircraft Operations	Carrier: 0/day	Carrier: 0/day
	GA: 5/Day	GA: 5/Day
	Military: 0 /Day	Military: 0 /Day
Runway 6-24 ARC	A/B-I	A/B-I
RW 24 Approach Visibility Minimums	1 Mile	1 Mile
RW 6 Approach Visibility Minimums	Visual	Visual
Runway 24 Approach Procedures	RNAV (GPS) RWY 24	RNAV (GPS) RWY 24
	LOC/DME RWY 24	LOC/DME RWY 24
	VOR-A	VOR-A
Runway 6 Approach Procedures	Visual	Visual
Runway 24 Visual NAVAIDS	RLLS	RLLS
	PAPI	PAPI
	REIL	REIL

Table 3.3A Construction Effect on Airport Operations		
Project	Runway Edges Enhancement Project	
Phase	Work Area(s) A. See Section 3.2.a for description)	
	Airport is open	
Operational Requirements	Normal (Existing)	Anticipated (During Construction)
Runway 6 Visual NAVAIDs	PLASI	PLASI
	REIL	REIL
Taxiway A ADG	I	1
Taxiway B ADG	I	1
Taxiway C ADG	I	1
Taxiway D ADG	I	1
Taxiway E ADG	I	1
Taxiway F ADG	I	1
ATCT (hours open)	07:00 – 21:00 (local)	07:00 – 21:00 (local)
Special Conditions		

Table 3.3A Construction Effect on Airport Operations		
Project	Runway Edges Enhancement Project	
Phase	Work Area(s) B. See Section 3.2.a for description) Airport is open from 7:00 am to 9:00 pm (local)	
Operational Requirements	Normal (Existing)	Anticipated (During Construction)
Scope of Work	<p>The proposed project include the improvement of the airport's Orange County Fire Authority (OCFA) apron and generally includes:</p> <ul style="list-style-type: none"> · Addition of taxiway lead-in lighting from the existing apron to Taxiway Bravo/Charlie · Removal of existing helipad apron markings · Addition of (2) helipad markings for S-70 aircraft · Removal/addition of Taxiway edge markings, along taxiway Bravo/Charlie, as needed · Replacement of existing airfield asphalt pavement · 	
RW 24 Average Aircraft Operations	Carrier: 1/day	Carrier: 1/day
	GA: 182/Day	GA: 182/Day
	Military: 1/Day	Military: 1/Day
RW 6 Average Aircraft Operations	Carrier: 0/day	Carrier: 0/day
	GA: 5/Day	GA: 5/Day
	Military: 0 /Day	Military: 0/Day
Runway 6-24 ARC	A/B-I	A/B-I
RW 24 Approach Visibility Minimums	1 Mile	1 Mile
RW 6 Approach Visibility Minimums	Visual	Visual
Runway 24 Approach Procedures	RNAV (GPS) RWY 24	RNAV (GPS) RWY 24
	LOC/DME RWY 24	LOC/DME RWY 24
	VOR-A	VOR-A
Runway 6 Approach Procedures	Visual	Visual
Runway 24 Visual NAVAIDS	RLLS	RLLS
	PAPI	PAPI
	REIL	REIL

Table 3.3A Construction Effect on Airport Operations		
Project	Runway Edges Enhancement Project	
Phase	Work Area(s) B. See Section 3.2.a for description) Airport is open from 7:00 am to 9:00 pm (local)	
Operational Requirements	Normal (Existing)	Anticipated (During Construction)
Runway 6 Visual NAVAIDs	PLASI	PLASI
	REIL	REIL
Taxiway A ADG	I	1
Taxiway B ADG	I	Closed between Taxiway D and B
Taxiway C ADG	I	I
Taxiway D ADG	I	I
Taxiway E ADG	I	1
Taxiway F ADG	I	1
ATCT (hours open)	07:00 – 21:00 (local)	07:00 – 21:00 (local)

b. Mitigation of effects.

This CSPP has established specific requirements and operational procedures necessary to maintain the safety and efficiency of airport operations during the construction of this project.

All coordination pertaining to airport operations during construction will go through the Airport Owner's Representative and the Airport Operations Manager. Any required NOTAM's to be issued will be sent through the Airport Owner's Representative and issued by Airport Operations.

- 1. Temporary Changes to runway and/or taxiway operations:** Any affected Airport Operations Areas identified in the previous section for reduced access or identified as being closed entirely to aircraft traffic, will be barricaded by the use of low profile, lighted barricades placed as shown in the exhibits provided in Appendix 1. In addition, required NOTAM's shall be issued on the various temporary changes to aircraft access through the affected areas.
- 2. Detours for ARFF and other airport vehicles:** The project work site shall remain open to all ARFF vehicles in emergency situations. The Contractor is required to maintain access in and around the project work area for all ARFF vehicles. Proper routing of this traffic will be effectively communicated to all supervisory personnel involved in the construction project.
- 3. Maintenance of essential utilities:** Special attention shall be given to preventing unscheduled interruption of utility services and facilities. Where required due to construction purposes, the Airport Owner and FAA shall locate all of their underground utilities. It is the Contractor's responsibility to have the locations of cabling and other underground utilities marked prior to beginning excavation. Any locations provided by the Airport Owner or FAA are approximate locations and the Contractor shall verify all locations prior to beginning excavations. When an underground cable or utility is damaged due to the Contractor's negligence the Contractor shall immediately repair the affected cable or utility at his/her own expense. Full coordination between airport staff, field inspectors, and construction personnel will be exercised to ensure that all airport power and control cables are fully protected prior to any excavation.
- 4. Temporary Changes to air traffic control procedures:** Changes to air traffic control procedures have been coordinated with airport ATO. Any additional requests for changes must be made to the Airport Owner, through the RPR, in writing. These requested changes will be reviewed by the RPR, Airport Owner and ATO. If these changes are acceptable to all the aforementioned parties, the RPR will request a modification to the CSPP previously turned into the FAA. The Contractor shall plan on a minimum 90 days for this process to be completed. No deviation to the original CSPP shall be made without final FAA approval.

3.4 NAVIGATION AID (NAVAID) PROTECTION.

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs are not anticipated in this project.

3.5 CONTRACTOR ACCESS.

This section of the CSPP details the areas to which the Contractor must have access, and how Contractor personnel will access those project work areas.

a. Location of stockpiled construction materials.

The Contractor shall store material and equipment and schedule his operations for work to be done so that no unauthorized interference to normal Airport operations will result there from. Construction operations shall not be conducted in a manner to cause interference with Airport Operations. Stockpiled materials and equipment storage are not permitted within the Runway Safety Area/ Taxiway Safety Area (RSA/TSA), Obstacle Free Zone (OFZ) or Object Free Area (OFA) of an operational runway or taxiway. Stockpiled construction materials must be located inside the Contractor staging area as shown on the Construction Safety Drawings (Appendix 1) unless otherwise approved by the RPR.

Stockpiled material shall be constrained in a manner to prevent movement resulting from either aircraft jet blast or wind conditions in excess of ten miles per hour. In addition, stockpiled material shall have silt fence located around the material to prevent Foreign Object Debris (FOD) from moving onto the airfield pavements or polluting watercourses.

Open trenches exceeding 3 inches in depth and 5 inches in width or stockpiled material are not permitted within the limits of safety areas of operational runways or taxiways. Stockpiled material shall not be permitted within the protected areas of the runways, or allowed to penetrate into any of the protected airspace.

Spoil and Disposal Areas: Spoil shall be disposed of offsite by the Contractor unless otherwise shown or specified. The Contractor shall submit the "Spoils Deposition Release Form" for any spoils which are transported from the project site. A copy of the form can be found in Appendix 4. No direct payment will be made for spoiling and disposal operations. The cost of spoiling material on site, or of spoiling material off-site, shall be considered incidental to this Contract and the costs shall be included in the various pay items involved.

b. Vehicle and pedestrian operations. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the Air Operations Area (AOA).

The Airport Owner will coordinate requirements for vehicle operations with the affected airport tenants. Specific vehicle and pedestrian requirements for this project are as follows:

All construction vehicles and personnel shall be restricted to the immediate work areas specified by the contract for this project. These areas include the haul routes into the work area, the designated Contractor staging area and the apron area under construction. Use of alternate haul routes or staging areas by the Contractor shall not be permitted without prior notification and approval by the Airport Owner's Representative.

1. Construction Site Parking:

The Contractor's personal vehicle parking area shall be in the Contractor's staging area, as shown on the Construction Safety Drawings (Appendix 1). Contractor personal vehicles will not be allowed inside the airport fence Air Operations Area (AOA) or secured area.

A staging area, as indicated on the Contract Drawings, will be provided where the Contractor may set up a field office and store equipment and materials. The Contractor shall make his own arrangements for, and bear all costs of required utilities. The Contractor shall use and maintain the site in accordance

with requirements of the Airport Owner. Upon completion of work, the Contractor's staging area shall be removed and the area cleaned and restored to original or better condition.

2. Construction Equipment Parking:

The Contractor's equipment storage area shall be in the Contractor staging area as shown on the Construction Safety Drawings (Appendix 1). The Contractor's equipment and construction vehicles shall be restricted to the construction site or storage areas during construction and parked in the equipment storage area during non-working periods. Maximum allowable equipment height in the staging area shall be 25 feet. Maximum allowable equipment height in the work areas shall be 25 feet.

Contractor must service all construction vehicles within the limits of the project work area or the Contractor's Staging Area. Parked construction vehicles must be outside the OFA and never in the safety area of an active runway or taxiway. Inactive equipment must not be parked on closed taxiways or runways. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees shall also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT, as applicable, to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids.

3. Access and Haul Roads:

The Contractor shall clear, construct and maintain haul routes as required for the prosecution of the work. The haul routes and access points shall only be in the locations approved by the RPR and the Airport Owner or as shown on the Construction Safety Drawings (Appendix 1).

Access or haul routes used by Contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Construction traffic must remain on the designated haul routes, never straying from the approved paths. Haul and access routes shall be clearly delineated with barricades by the Contractor. Signage and marking placement shall be reviewed and approved by the RPR and Airport Owner prior to being put into service. The Contractor shall fully describe the appropriate access routes to all his/her employees, subcontractors and material delivery personnel.

The Contractor shall be responsible for maintaining existing haul routes. At the completion of the project, these areas shall be returned to their original lines and grades and shall be restored to a condition equal to or better than original. All non-paved areas that are disturbed by Contractor's haul roads, staging area, etc., located outside of the seeding limits shown on the plans shall be re-seeded and restored to their original or better condition by the Contractor at no additional cost to the Airport Owner.

The Contractor shall control and coordinate the material (supplies) that are hauled to and from work area. Delivery of equipment and materials to the area of work shall be by way of the access route shown on the Construction Safety Drawings (Appendix 1) or designated by the Airport Owner or RPR.

The Contractor shall maintain all haul routes and work areas in a dust free condition at all times. The Contractor shall control dust from the construction operations by vacuum type sweeping, watering or other methods as approved by the RPR. Contractor shall have equipment (in operating condition) on site, at all times, to control dust. If the Contractor fails to comply with this requirement, construction will be suspended until a plan for controlling the dust is approved by the RPR. Landside haul routes, boulevards and drives shall be kept clean by use of a vacuum sweeper on a daily basis as required. Application of water on dirt or gravel haul routes must be provided as often as necessary. Haul roads in

any airport traffic areas must be especially monitored for dust and debris to prevent any potential Foreign Object Debris (FOD) situations.

Portions of the project area(s) shall be bounded by the low profile barricades identifying Contractor personnel and vehicle area operation limits. The locations of any barricaded project limits, haul routes, Contractor Staging Areas, and associated safety and security details are also provided graphically in the attached exhibits.

4. Marking and Lighting of Vehicles:

When any vehicle or piece of equipment, other than one that has prior approval from the Airport Owner, must operate on an airport, it shall be escorted and properly identified.

The Contractor shall limit access within the airport security fence to authorized vehicles. All authorized vehicles shall have a vehicle dash board placard permit issued by the Airport Owner or an identification sign on both sides of the vehicle containing the Contractor's company name. Private vehicles of the Contractor's personnel must be parked outside the airport security fence and will not be allowed within the airport security fence at any time.

All vehicles operating on the airport and in the general vicinity of the safety area or in aircraft movement areas must be marked with flashing yellow/amber beacons or orange and white flags during daylight hours. During hours of darkness or low visibility they shall be marked with at least flashing yellow/amber beacons.

Beacons and flags must be maintained to standards and in good working and operational condition. Beacons must be located on the uppermost part of the vehicle structure, visible from any direction, and flash 75 +/- 15 flashes per minute. Flags shall be 3' by 3' with alternating 1' by 1' international orange and white squares, and shall be replaced by the Contractor if they become faded, discolored, or ragged as determined by Airport Operations or the Airport Owner's Representative.

5. Description of Proper Vehicle Operations:

The Contractor shall be required to follow guidance on the additional identification and control of construction equipment per the Airport's Security Plan. No Contractor's vehicle or pedestrian crossing of active runways or taxiways will be allowed at any time during the work of this Contract, unless otherwise specified. No deviation from the pedestrian and vehicle routes to and from the Project Areas will be allowed unless specific permission has been granted by the Airport Owner.

The ground movement of aircraft shall have the right-of-way at all times, and the Contractor's vehicles and equipment shall yield to aircraft at all times.

6. Required Escorts:

Anyone who has not passed airfield safety training and is not approved by the Owner shall be escorted by an Owner approved person. At no time will vehicles or personnel enter portions of the secure AOA outside the contract area unless permitted and accompanied by an airport approved escort.

All construction-related activity taking place within any airport defined movement area requires the presence of an authorized airport escort having radio communication with the FAA control tower or UNICOM unless prior approval is obtained from Airport Operations. Flaggers having radio or telephone contact with the Airport may be used with the approval of the on shift Airport Operations Manager.

At no time shall active taxiways or taxilanes be crossed by construction equipment without notification and proper approval/clearance from radio-trained gate guards or Airport Operations.

7. Training Requirements for Vehicle Drivers:

Any employees the Contractor would request to be given permission by Airport Operations to drive on the AOA shall complete airport safety and driver training per the Airport's requirements. These employees then must have an airfield driving experience with Airport Operations and if Airport Operations is satisfied of the employee's competency, that employee may be granted permission from Airport Operations to drive on the AOA. Passing the AOA driver training does not give the Contractor's employees the ability to drive on the AOA.

8. Situational Awareness:

Aircraft traffic will continue to use existing runways, aprons, and taxiways of the Airport during the time that work under a contract is being performed. The Contractor shall, at all time, conduct the work as to create no hindrance, hazard, or obstacle to aircraft using the Airport.

Vehicle drivers must confirm by personnel observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

9. Two-way Radio Communication Procedures:

Two-way radio communications are not required between Contractors and Airport Traffic Control Tower or Airport Aeronautical Advisory Stations (UNICOM/CTAF). Vehicular traffic shall not be allowed in or on an active movement area. Construction personnel may operate in movement areas provided a NOTAM is issued closing the area, and provided that the area is properly marked to prevent incursions.

Even though radio communication is not required, escort vehicle drivers must be aware of their surroundings and take precautions to prevent interference with any airport ground equipment or aircraft movements on the aprons or taxiways.

10. Maintenance of the Secured Area of the Airport.

Airport Owner and contractors must also maintain a high level of security during construction when access points are created in the security fencing to permit construction vehicle access. Gates shall be equipped and/or manned by a gate guard to prevent unauthorized access by vehicles, animals or people. Procedures conforming to Airport security protocols should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. Access shall be made available at all times to all airport emergency vehicles traveling to operations areas within the proximity of the construction work zone.

c. Security.

The Contractor shall be responsible for maintaining security at all access gates used during the project and will be held liable by the Airport Owner for any breach of security. No gate shall be left open. The Contractor shall be required to post a guard at the gate to open and close the gate for personnel and equipment. No gate shall be left open. Guard shall be responsible for ensuring that no unauthorized persons or vehicles enter the secure area.] Airport Owner and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of

construction vehicles or personnel. Temporary gates shall be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit “piggybacking” behind another person or vehicle.

The Contractor and the Surety shall indemnify and save harmless the Airport Owner, RPR and third party or political subdivision from any and all breaches of security and shall indemnify the Airport Owner for any fines, expenses and damages which it may be obliged to pay by reason of any breach of security resulting from the Contractor's actions at any time during the prosecution of the work. Such breaches of security are subject to fines by the Transportation Security Administration of up to ten thousand dollars (\$10,000) per incident.

3.6 WILDLIFE MANAGEMENT.

Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports.

- a. Trash.** Food scraps from construction personnel activity must be collected and disposed of at a proper facility.
- b. Standing water.** Water shall not be allowed to collect and pool for more than any single 24-hour period. Temporary grading may be required to promote drainage during daily operations as well as between work phases.
- c. Tall grass and seeds.** The use of millet seed in turfing and seeding operations shall not be permitted.
- d. Poorly maintained fencing and gates.** The Contractor shall maintain a constant secure perimeter to the airfield, including continuous security perimeter fencing and gates (if applicable).
- e. Disruption of existing wildlife habitat.** Not applicable to this project.

Contractor shall take immediate remedial action to remove wildlife attractants should any occurrence be noted. Contractor shall immediately report to the RPR and Airport Owner should any wildlife congregation be noted, and in particular if mammals enter the airport through the construction gate.

3.7 FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT.

Special care and measures shall be taken to prevent Foreign Object Debris (FOD) damage when working in an airport environment. Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. The Contractor shall be responsible for implementing an approved FOD Management Plan prior to the start of construction activities. The FOD Management Plan will have procedures for prevention, regular cleanup, and containment of construction material and debris. The Contractor will ensure all vehicles related to the construction project using paved surfaces in the AOA shall be free of any debris that could create a FOD hazard. Special attention will be given to the cleaning of cracks and pavement joints. All taxiways, aprons, and runways must remain clean. Waste containers with attached lids shall be required on construction sites.

Special attention should be given to securing lightweight construction material (concrete insulating blankets, tarps, insulation, etc.). Specific securing procedures and/or chainlink enclosures may be required.

Contractors will provide their own equipment for vehicle and equipment washing and clean up.

Immediate access to a power sweeper is required when construction occurs on any pavement area inside the AOA, unless an appropriate alternative has been approved by the Airport Owner's Representative and Airport Operations Manager.

3.8 HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT.

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel, hydraulic fluid, or other chemical fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. To that end, the Contractor is required to develop a spill prevention plan and response procedures for vehicle operations prior to the start of construction activities. This includes maintenance of appropriate MSDS data and appropriate prevention and response equipment on-site.

Fueling Procedures and Spill Recovery Procedures shall be in accordance with California Codes and the National Fire Protection Association standard procedures for spill response, latest edition. If fueling is to take place in the staging area, it must be away from catch basins. Contractor must have spill containment kits on site.

In the event of a fuel spill or the spill of other hazardous materials, the Contractor shall immediately notify the Airport Owner and the RPR, the California Office of Emergency Services, the Environmental Protection Agency, the Airport Owner and the RPR.

Contractor shall abide by the specific requirements contained in the Technical Specifications of this contract.

3.9 NOTIFICATION OF CONSTRUCTION ACTIVITY.

The following is information and procedures for immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport.

- a. Maintenance of a list of Responsible Representatives/ Point of contact.** A list of responsible representatives and points of contact shall be created by the RPR, the Airport and the Contractor prior to the start of construction. This list shall be compiled as part of the project pre-construction meeting agenda. Procedures will be established to contact all parties, including after regular work hours. Updates will be made to the list throughout the project duration by the RPR. Contractor points of contact shall be incorporated into the contractor's SPCD.
- b. Notices to Airman (NOTAM).** Only the Airport Owner may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway or taxiway. The Airport Owner must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The Airport Owner must file and maintain a list of authorized representatives with the FSS. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the Airport Owner.

Any NOTAMs for planned airfield closures for this project must be coordinated through the airport manager and the airports duly appointed construction management representative. Reference Section 3.2 for planned closures for this project, which require issuance of a NOTAM.

- c. Emergency Notification Procedures.** In the event of an aircraft emergency, severe weather conditions, or any issue as determined by the Airport that may affect aircraft operations, the Contractor's personnel and/or

equipment may be required to immediately vacate the area(s) affected. Points of contact for the various parties involved with the project shall be identified and shared at the pre-construction meeting among the various parties. Emergency points of contact shall be incorporated into the contractor's SPCD.

- d. **Coordination with first response personnel.** The Contractor shall coordinate, through the duly appointed airport representative, mutual aid providers and other emergency services if construction requires the following:

- The deactivation and subsequent reactivation of water lines or fire hydrants, or
- The re-routing, blocking and restoration of emergency access routes, or
- The use of hazardous materials on the airfield.

Procedures and methods for addressing any planned or emergency response actions on the airfield concerning this project shall be established and implemented prior to the start of construction.

- e. **Notification to the FAA.**

1. **Part 77.** Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e. cranes, graders, other equipment) on airports. FAA Form 7460-1, Notice of Proposed Construction or Alteration, is used for this purpose and submitted to the appropriated FAA Airports Regional or District Office. A 7460-1 form for this project has been prepared by the Engineer and submitted to the FAA for using equipment with a maximum height of 25 feet. A new 7460-1 form must be submitted to the FAA for review and comment for any equipment that the Contractor will use which is taller than the equipment used in the above 7460-1 submission. The RPR will be responsible for submitting the new 7460-1 form to the FAA. To that end, the Contractor shall identify the equipment in his SPCD, including the maximum height it will extended to during construction, the area(s) in which the equipment will be used, and the duration the equipment will be used.

2. **Part 157.** Part 157 notifications will be required for this project.

3. **NAVAIDS.** For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDS, contact: 866-432-2622.

- i. **Airport owned/FAA maintained.** If construction operations require a shutdown of more than 24 hours, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown.
- ii. **FAA owned.** The Airport Owner must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDS. (Impacts to FAA equipment covered by a Reimbursable Agreement (RA) do not have to be reported by the Airport Owner). Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, through the RPR, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDS. In addition, provide seven days' notice to schedule the actual shutdown.

- f. **Accidents.** The Contractor shall provide at the site such equipment and medical facilities as are necessary to supply first aid service to anyone who may be injured in connection with the work. The Contractor must promptly report in writing to the RPR all accidents whatsoever arising out of, or in connection with, the performance for the work, whether on or adjacent to the site which caused death, personal injury or property damages, giving full details and statements of witnesses. In addition, if death or serious injuries or

serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the RPR and the Airport Owner.

If any claim is made by anyone against the Contractor or any Subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the RPR giving full details of the claims.

3.10 INSPECTION REQUIREMENTS.

- a. Daily (or more frequent) inspections.** Inspections shall be conducted by the Contractor at least daily, but more frequently if necessary, to ensure conformance with the CSPP. A sample checklist is provided in Appendix 2 of this document. In addition to Contractor's required inspections, airport representatives will inspect the construction site to ensure compliance with the CSPP and the SPCD. The Airport Owner's Representative will have full-time RPRs monitoring activity throughout construction. Promptly take all actions necessary to prevent or remedy any unsafe or potentially unsafe conditions as soon as they are discovered.
- b. Final inspections.** A final inspection with the Airport Owner's Representative, Airport and Contractor will take place prior to allowing airport operations.

3.11 UNDERGROUND UTILITIES.

Special attention shall be given to preventing unscheduled interruption of utility services and facilities. Where required due to construction purposes, the FAA shall locate all of their underground cables. The Contractor shall locate and/or arrange for the location of all the underground cables. When an underground cable is damaged due to the Contractor's negligence the Contractor shall immediately repair the cable affected at his/her own expense. Full coordination between airport staff, field inspectors, and construction personnel will be exercised to ensure that all airport power and control cables are fully protected prior to any excavation. Locations of cabling will be marked prior to beginning excavation.

Prior to opening an excavation, effort shall be made to determine whether underground installation: i.e., sewer, water, fuel, electric lines, etc., will be encountered, and if so, where such underground installations are located. When the excavation approaches the approximate locations of such an installation, the exact locations shall be determined by careful hand probing or hand digging, and/or use of a vacuum truck, and when it is uncovered, adequate protection shall be provided for the existing installation. All known owners of underground facilities in the area concerned shall be advised of proposed work at least 48 hours prior to the start of actual excavation.

The information concerning underground utilities was compiled from information and sketches furnished by or obtained from utility companies and the Airport. The Airport Owner and the RPR do not guarantee their accuracy. The Contractor is advised to determine the exact locations from the available sources of information or provide his own means of detection. The only case in which the RPR will consider redesign or relocation of a proposed facility in the project is when an existing utility is located within the construction limits. In this case, the RPR will work with the Airport Owner to determine the appropriate action to resolve the conflict. If such relocation is impossible, the RPR will consider re-design or relocation of the proposed facilities. In both cases, Contractor shall be responsible for all underground utilities and shall not be separately compensated for delays or extra cost.

Note that most utility location services do not include locating FAA and Airport Owner facilities, and most will not locate services within the AOA.

3.12 PENALTIES.

Failure on the part of the Contractor to adhere to prescribed requirements may have consequences that jeopardize the health, safety or lives of customers and employees at the airport. The Airport may issue warnings on the first offense based upon the circumstances of the incident. Individuals involved in non-compliance violations may be prohibited from working at the airport, pending an investigation of the matter.

Penalties for violations related to airport safety and security procedures will be established by the Airport.

Note: Project shutdown or misdemeanor citations may be issued on a first offense. When construction operations are suspended, activity shall not resume until all deficiencies are rectified.

3.13 SPECIAL CONDITIONS.

In the event of an aircraft emergency, the Contractor's personnel and/or equipment may be required to immediately vacate the area. The Contractor will receive notification from airport operations when special conditions require the construction site to be vacated. In any event, extreme care should be exercised should construction personnel identify any ARFF (Airport Rescue and Fire-Fighting) or other emergency or rescue vehicle moving toward the Runway with emergency lights displayed. This will generally mean that an emergency situation is imminent.

Special conditions that could require suspension of the construction work include the following: aircraft in distress, aircraft accident, security breach, VIP operation, vehicle/pedestrian deviation, severe weather, or failing to abide by this Construction Safety and Phasing Plan and/or the Safety Plan Compliance Document.

3.14 RUNWAY AND TAXIWAY VISUAL AIDS.

This topic includes marking, lighting, signs, and visual NAVAIDs. Those areas where aircraft will be operating shall be clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, the Contractor shall inspect and verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs and visual NAVAIDs remain in place and operational.

- a. **General.** Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of materials that would minimize damage to an aircraft in the event of inadvertent contact.

Marking and lighting for a temporary threshold is not required.

Closed runway markings are required. Closed runway markings shall be as shown on the Plans. Barricades, flagging, and flashers are required at the locations and times described in the subsection titled WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS of this Section and shall be supplied by the Contractor. Lighted Closed Runway Markers shall be provided by the Contractor.

- b. **Markings.** Markings must be in compliance with the standards of AC 150/5340-1, Standards for Airport Markings, current edition, and the drawings and technical specifications of this project.

1. Closed Runways and Taxiways.

- (a) Permanently Closed Runways.** For permanently closed runways, the threshold marking, runway designation marking, and touchdown zone markings will be removed, and flat yellow closed runway markings (X's) will be placed at each end and at 1,000-foot (300 m) intervals.
 - (b) Temporarily Closed Runways.** For temporarily closed runways, a lighted X will be placed at each end of the runway directly on or as near as practicable to the runway designation numbers. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, the lighted X will be located farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway will be marked with a flat yellow X.
 - (c) Partially Closed Runways and Displaced Thresholds.** When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings will comply with AC 150/5340-1. An X will not be used on a partially closed runway or a runway with a displaced threshold. Because of the temporary nature of the threshold relocation or displacement due to construction, it will not be necessary to re-adjust the existing runway centerline markings to meet standard spacing for a runway with a visual approach.

 - (1). Partially Closed Runways.** Pavement markings for temporary closed portions of the runway will consist of a runway threshold bar, runway designation, and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing. Markings prior to the moved threshold will be obliterated or covered. Existing touchdown zone markings beyond the moved threshold may remain in place. Aiming point markings will be obliterated.
 - (2). Displaced Thresholds.** Pavement markings for a displaced threshold will consist of a runway threshold bar, runway designation, and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. Markings prior to the displaced threshold will be obliterated. Existing touchdown zone markings beyond the displaced threshold may remain in place. Aiming point markings will be obliterated.
 - (d). Permanently Closed Taxiways.** Permanently closed taxiways will be either be removed, or if pavement will remain, an X will be placed at the entrance to both ends of the closed section. Taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway will be obliterated.
 - (e). Temporarily Closed Taxiways.** . Barricades will be placed outside the safety area of intersecting taxiways. For runway/taxiway intersections, an X will be placed at the entrance to the closed taxiway from the runway. Taxiway centerline markings, including runway leadoff lines and taxiway to taxiway turns, leading to the closed section, will be obliterated if the taxiway will be closed for an extended period. Runway lead-off lines for high speed exits will always be obliterated, regardless of the duration of the closure.
- c. Lighting and visual NAVAIDs.** This paragraph refers to standard runway and taxiway lighting systems. When runway and taxiway lighting fixtures need to be disconnected, disconnect the associated isolation transformers. Alternately, the light fixture may be covered in such a way as to prevent light leakage. Lamp shall not be removed from energized fixtures. Amu above ground temporary wiring shall be secure, identified, and placed in conduit to prevent electrocution and fire ignition sources. At towered airports certificated under Part 139, holding position signs shall be illuminated on open taxiways crossing to closed or inactive runways. If the holding position sign is installed on the runway circuit for the closed runway, a temporary jumper shall be installed to the taxiway circuit to provide power to the holding position sign for nighttime operations.
- (1). Permanently Closed Runways and Taxiways.** For runways and taxiways that have been permanently closed, the associated lighting circuits shall be disconnected.

- (2). **Temporarily Closed Runways and New Runways Not Yet Open to Air Traffic.** A lighted X shall be used, both at night and during the day, placed at each end of the runway on or near the runway designation numbers facing the approach. (Note: the lighted X must be illuminated at all times that it is on a runway.) For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, the lighting circuits shall be disconnected or switches secured to prevent inadvertent activation. Stop bars shall be activated, if available.
- (3). **Partially Closed Runways and Displaced Thresholds.** When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service.
- (a) Partially Closed Runways. Runway edge and threshold lights shall be disconnected on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed).
 - (b) Temporary Displaced Thresholds. Edge lighting in the area of the displacement shall emit red light in the direction of approach and yellow light (white for visual runways) in the opposite direction. If the displacement is 700 feet or less, centerline lights shall be blanked out in the direction of approach or the centerline lights shall be placed out of service. If the displacement is over 700 feet, the centerline lights shall be placed out of service.
 - (c) Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.
 - (d). A temporary threshold on an unlighted runway will be marked by retroreflective, elevated markers. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible.
 - (e). Temporary threshold lights and runway end lights and related visual NAVAIDs will be installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 inch (7.6 cm) above ground. (The standard above ground height for airport lighting fixtures is 14 inches (35 cm)). When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage.
 - (f). Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are for visual flight rules (VFR) aircraft operations.
 - (g). When runway thresholds are temporarily displaced, yellow lenses (caution zone) on runway edge lights shall be reconfigured, as necessary.

- (h). Visual Glide Slope Indicator (VGSI), such as Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI); other airport lights, such as Runway End Identifier Lights (REIL); and approach lights will be relocated to identify the temporary threshold. The VGSI or any equipment that would give misleading indications to pilots as to the new threshold location may be disabled. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway.
- (4). **Temporarily Closed Taxiways.** If possible, the taxiway lighting circuits will be deactivated. When deactivation is not possible (for example other taxiways on the same circuit are to remain open), the closed portion shall be temporarily disconnected and a temporary jumper will be installed to keep the remaining circuit active. An alternative is to cover the light fixtures in the closed area in a way as to prevent light leakage.
- d. **Signs.** Signs must be in conformance with AC 150/5345-44, Specification for Runway and Taxiway Signs and AC 150/5340-18, Standard for Airport Sign Systems, current edition.
 - (1). **Existing Signs.** Runway exit signs are to be covered for closed runway exits. Outbound destination signs are to be covered for closed runways. Any time a sign does not serve its normal function or would provide conflicting information, it must be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed. For long term construction projects, consider relocating signs, especially runway distance remaining signs.
 - (2) **Temporary Signs.** Orange construction signs comprise a message in black on an orange background. Orange construction signs may help pilots be aware of changed conditions. The airport operator may choose to introduce these signs as part of a movement area construction project to increase situational awareness when needed. Locate signs outside the taxiway safety limits and ahead of construction areas so pilots can take timely action. Use temporary signs judiciously, striking a balance between the need for information and the increase in pilot workload. When there is a concern of pilot “information overload,” the applicability of mandatory hold signs must take precedence over orange construction signs recommended during construction. Temporary signs must meet the standards for such signs in Engineering Brief 93, Guidance for the Assembly and Installation of Temporary Orange Construction Signs. Many criteria in AC 150/5345-44, Specification for Runway and Taxiway Signs, are referenced in the Engineering Brief. Permissible sign legends are:
 - 1. CONSTRUCTION AHEAD,
 - 2. CONSTRUCTION ON RAMP, and
 - 3. RWY XX TAKEOFF RUN AVAILABLE XXX FT.

Phasing, supported by drawings and sign schedule, for the installation of orange construction signs must be included in the CSPP or SPCD.

- (3). **Takeoff Run Available (TORA) signs (Recommended):** Where a runway has been shortened for takeoff, install orange TORA signs well before the hold lines, such as on a parallel taxiway prior to a turn to a runway hold position.
- e. **Testing of Airport Lighting Circuits.** See technical specification Item L-108, Underground Power Cable for Airports for testing requirements.

3.15 MARKING AND SIGNS FOR ACCESS ROUTES.

Location of haul routes on the airport site shall be as specified in the project drawing set and as provided graphically in the attached exhibits, reference Appendix 1. It shall be the Contractor's responsibility to coordinate off-site haul routes with the appropriate owner who has jurisdiction over the affected route. The haul routes, to the extent possible, shall be marked and signed in accordance with FAA airfield signage requirements, the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or state highway specifications, as applicable.

3.16 HAZARD MARKING, LIGHTING AND SIGNING.

- a. Purpose.** Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. The CSPP specifies prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting is also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also included are markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.
- b. Equipment.**
 - (1). Barricades.** Low profile barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. Gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 feet (1.2 meters). Provision must be made for ARFF access if necessary. Barricades intended to exclude pedestrians must be continuously linked.
 - (2) Lights.** Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 feet (3 meters). Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.
 - (3) Supplement Barricades with Signs (for example) As Necessary.** Examples are "No Entry" and "No Vehicles."
 - (4). Air Operations Area – General.** Barricades are not permitted in any active safety area or on the runway side of a runway hold line. Within a runway or taxiway object free area, and on aprons, use flashing or steady burning red lights as noted above, highly reflective collapsible barricades marked with diagonal, alternating orange and white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 inch (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway/taxilane safety area, or apron must be no more than 18 inches high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, and other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inch (7.6 cm) above the ground.

(5). Air Operations Area – Runway/Taxiway Intersections. Use highly reflective barricades with lights to close taxiways leading to closed runways. Close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

(6). Air Operations Area – Other. Beyond runway and taxiway object free areas and aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

(7). Maintenance. The contractor is required to maintain the hazard markings, lighting and signing and to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

3.17 WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION. Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. All support equipment, except haul trucks, should be equipped with artificial illumination to safely illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations. Construction lighting units should be identified and generally located on the construction phasing plans in relationship to the ATCT and active runways and taxiways. The Owner and the ATCT shall approve the location of and aiming of lighting equipment before it is used.

3.18 PROTECTION OF AIRFIELD AREAS.

Safety area encroachments, improper ground vehicle operations and unmarked or uncovered holes and trenches in the vicinity of aircraft operation surfaces and construction areas are the three most recurring threats to safety during construction. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces shall be a standing requirement for the duration of construction operations.

- a. Runway Safety Area (RSA).** A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway by aircraft.

Runway	Aircraft Design Group	RSA Distance from		RSA Width	RSA Length from End of Runway
		Centerline RSA	Holdline		
6-24	A-I	60 ft.	125 ft.	120 ft.	240 ft.

No construction may occur within the existing RSA while the runway is open. Any construction between RSA and Holdline must be approved with Airport Operations prior to starting work.

The Airport Owner must coordinate any adjustment of RSA dimensions, to meet the above requirement, with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

Open trenches or excavations are not permitted within the RSA while the runway is open. The Contractor must backfill trenches before the runway is opened. Coverings are not allowed in runway safety areas. There shall be no stockpiled materials or equipment stored within the limits of the RSA.

After the Runway has been closed, Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the Airport Owner, and light them with red lights during hours of restricted visibility or darkness.

Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

- b. Runway Object Free Area (ROFA).** Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

Runway	Aircraft Design Group	ROFA Distance from Centerline	ROFA Width	ROFA Length from End of Runway
6-24	I	120 ft.	240 ft.	250 ft.

- c. Taxiway Safety Area (TSA).** The taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. No construction may occur within the TSA while the taxiway is open for aircraft operations.

Taxiway	Aircraft Design Group	TSA Distance from Centerline	TSA Width
All	I	24.5 ft.	49 ft.

Open trenches or excavations are not permitted within the TSA while the taxiway is open. The Contractor must backfill trenches before the taxiway is opened. Coverings are not allowed in taxiway safety areas.

The Airport Owner must coordinate any adjustment of TSA dimensions, to meet the above requirement, with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

After the Taxiway has been closed, Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the Airport Owner, and light them with red lights during hours of restricted visibility or darkness.

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

- d. Taxiway Object Free Area (TOFA).** Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway/taxilane object free area during normal operations. Thus the restrictions are more stringent. No construction equipment may be parked within the TOFA while the taxiway/taxilane is open for aircraft operations.

Construction activity may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

1. Taxiing speed is limited to 10 mph.

2. Appropriate NOTAMs are issued.
3. Marking and lighting meeting the provisions above are implemented.
4. Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.
5. Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel.

Taxiway	Aircraft Design Group	TOFA Distance from Centerline	TOFA Width
All	I	44.5 ft.	89 ft.

Taxilane	Aircraft Design Group	TLOFA Distance from Centerline	TLOFA Width
All	I	39.5 ft.	79 ft.

- e. **Obstacle Free Zone (OFZ).** Construction personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. The OFZ is a defined volume of airspace centered about and above the runway centerline.
- f. **Runway approach/departure surfaces.** All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the Airport Owner with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

Runway End	Aircraft Approach Category	Airplane Design Group	Minimum Safety Area Behind Threshold	Minimum Unobstructed Approach Slope
24	A	I	240	20:1 to 200 feet behind threshold
6	A	I	240	20:1 to 200 feet behind threshold

3.19 OTHER LIMITATIONS ON CONSTRUCTION.

- a. **Prohibitions.** The following prohibitions are in effect for the duration of this project:
 1. No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

2. No use of open flame welding or torches unless fire safety precautions are provided and the Airport Owner has approved their use.
3. No use of electrical blasting caps or explosives of any kind on or within 1,000 ft (300 m) of the airport property.

b. Restrictions.

1. Construction suspension required during specific airport operations: Not Applicable
2. Areas that cannot be worked on simultaneously: See Section 3.2 above.
3. Day or night construction restrictions: Working hours are from 9:00 pm to 7:00 am (local)
4. Seasonal Construction Restrictions: Not Applicable
5. Temporary signs not approved by the airport operator.
6. Grade changes that could result in unplanned effects on NAVAIDs.

APPENDIX 1

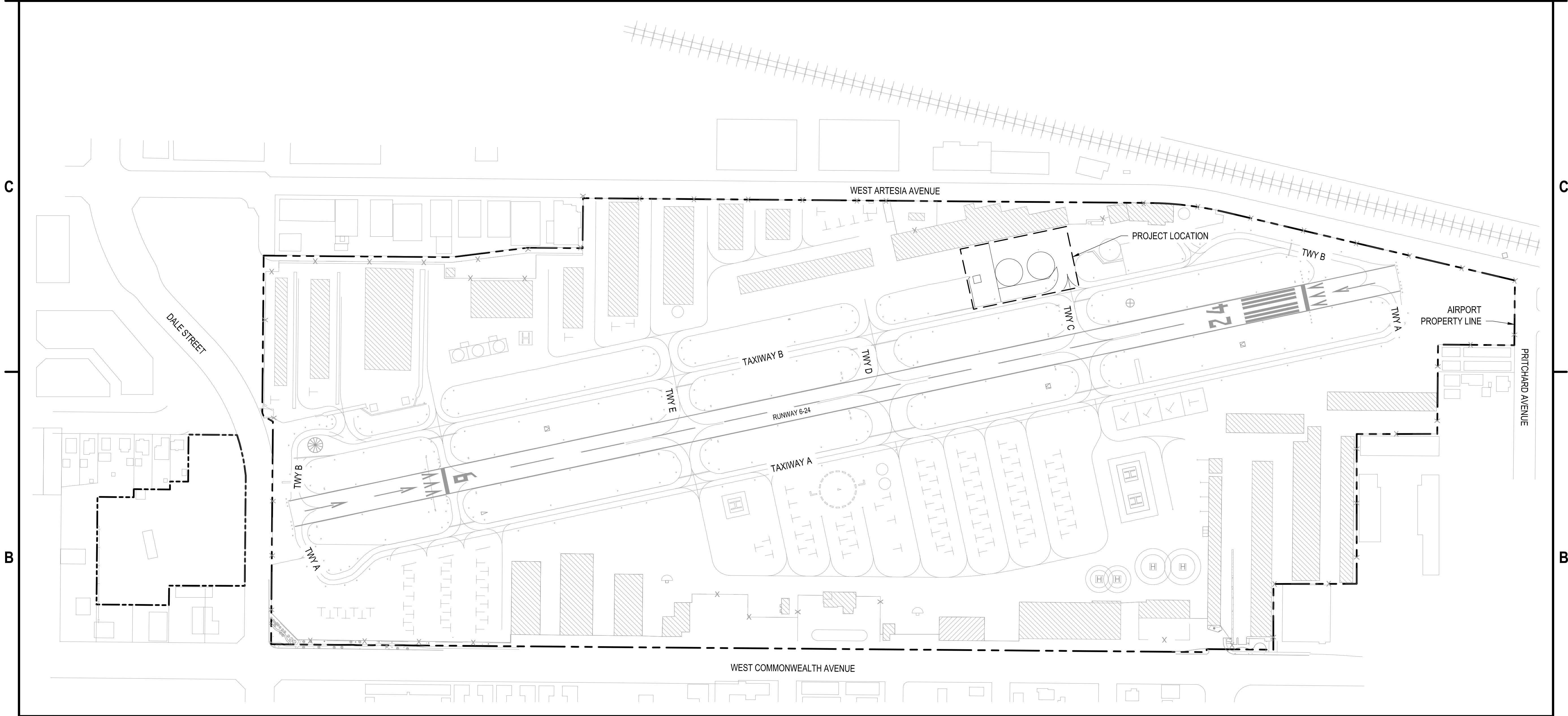
LOCATION MAP

GENERAL PLAN

CONSTRUCTION SAFETY DRAWINGS

CONSTRUCTION SAFETY DETAILS

Apr 18, 2023 - 3:55pm
F:\Project\049 - Orange County Fire Authority\049.001.001 - Full-Airfield Marking Pavement Upgrades\Design\CADD\Sheet Files\AA9001.001_GENERAL_PLAN.dwg



B1 GENERAL PLAN
SCALE: 1" = 150'-0"

A1 NOT USED
SCALE: NOT TO SCALE

A3 NOT USED
SCALE: NOT TO SCALE



PRELIMINARY
NOT FOR
CONSTRUCTION



**AIRFIELD MARKING
PAVEMENT UPGRADES**
**ORANGE COUNTY FIRE AUTHORITY
FULLERTON MUNICIPAL AIRPORT**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: AA9.001.001		
DATE: APRIL 2023		
DRAWN BY: STB		
DESIGNED BY: KG		
CHECKED BY: KG		

GENERAL PLAN

GI-100

APPENDIX 2

CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

Construction Project Daily Safety Inspection Checklist

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety Area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovers holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the Contractor may use to aid in identifying and correcting potentially hazardous conditions.

Potentially Hazardous Conditions

Item	Action Required	or	None
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.			<input type="checkbox"/>
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.			<input type="checkbox"/>
Runway resurfacing projects resulting in lips exceeding 3 inches from pavement edges and ends.			<input type="checkbox"/>
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.			<input type="checkbox"/>
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.			<input type="checkbox"/>
Tall and especially relatively low visibility units (that is, equipment with slim profiles) –cranes, drills, and similar objects—located in critical areas, such as OFZ and approach zones.			<input type="checkbox"/>
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on an apron, open taxiway, or open taxi lane or in related safety, approach, or departure area.			<input type="checkbox"/>

Item	Action Required	or	None
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.			<input type="checkbox"/>
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.			<input type="checkbox"/>
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.			<input type="checkbox"/>
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.			
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.			<input type="checkbox"/>
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.			<input type="checkbox"/>
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.			<input type="checkbox"/>
Lack of radio communications with construction vehicles in airport movement areas.			<input type="checkbox"/>

Item	Action Required	or	None
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.			<input type="checkbox"/>
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.			<input type="checkbox"/>
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.			<input type="checkbox"/>
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).			
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.			<input type="checkbox"/>
Failure to control dust. Consider limiting the amount of area from which the Contractor is allowed to strip turf.			<input type="checkbox"/>
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.			<input type="checkbox"/>
Construction work taking place outside of designated work areas and out of phase.			<input type="checkbox"/>

APPENDIX 3

CONTRACTORS SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

(The SPCD Certification is located in the Proposal Section)

SAFETY PLAN COMPLIANCE DOCUMENT (SPCD)

Project Location: Fullerton Municipal Airport, City of Fullerton, California

Project Name: OCFA Apron Improvement

General Statement:

The Construction Safety and Phasing Plan (CSPP), identified as Attachment “A” to Section 80, has been prepared in accordance with FAA Advisory Circular 150/5370-2G, *Operational Safety on Airports During Construction and the requirements of the Airport Owner*. The CSPP has been submitted to the FAA for review and comment. Any comments from the FAA which were received prior to bid opening have been incorporated into the CSPP.

In the event that the FAA transmits comments which require that the CSPP be revised after bid opening, I understand that I am obligated to abide by the conditions and statements contained in the revised CSPP. I further understand that I will be given the opportunity to evaluate the revised CSPP as it relates to my contract and request appropriate compensation in accordance with the provisions of the contract.

Supplemental Information:

Where the CSPP covers a subject and no additional information is needed, the statement below reads, “No supplemental information required”. Where additional information is required by the Contractor, the information shall be provided in the spaces below.

The section numbers below correspond with the section numbers in the CSPP.

3.1 Coordination

Statement: [Explain how you will distribute information and details of meetings to employees and subcontractors.]

3.2 Phasing

Statement: [List the number of days each Work Area will take. State the time day work will start and finish for each work area.]

3.3 Areas and operations affected by the construction activity

Statement: Information is provided in the CSPP. No supplemental information is required.

3.4 Protection of NAVAIDs

Statement: Information is provided in the CSPP. No supplemental information is required.

3.5 Contractor Access

Security Statement: [Explain how you will maintain integrity of the airport security fence at the access gate, e.g.: Gate guards, closed and locked gates, temporary fencing, etc.]

Training Statement: [List individuals who will receive driver training (for certificated airports and as requested.)]

Communication Statement: [Identify types of radios, if any, you will use to communicate with drivers and personnel. Identify who will be monitoring radios. Identify a contact person and phone number if ATCT cannot reach the contractor's designated person by radio.]

Escort Statement: [Identify who will escort material delivery vehicles.]

3.6 Wildlife Management

Statement: [Identify who will be monitoring wildlife in the construction area. Identify who will be monitoring wildlife at the construction gate.]

3.7 Foreign Object Debris (FOD) Management

Statement: [Identify who will be preparing a FOD Management Plan. (Plan must be approved prior to the start of construction activities.)]

3.8 Hazardous material (HAZMAT) management

Statement: [Identify who will be preparing a Spill Prevention Plan. (Plan must be approved prior to the start of construction activities.)]

3.9 Notification of construction activities. Provide the following:

Key Personnel Statement: [Identify your key personnel points of contact with phone numbers.]

Emergency Contacts Statement: [Identify your emergency contacts with 24 hour phone numbers.]

Equipment Statement: [Part 77: Identify equipment you will be using that is taller than 25 feet, including on-site batch plants. Identify the maximum height it will be extended to during construction for each Work Area and the expected duration. Identify when during the day it will be used.]

3.10 Inspection requirements.

Statement: [Identify the person who will be responsible for daily inspections to ensure conformance with the CSPP. Describe additional inspections you will employ, if any, to ensure conformance.]

3.11 Underground utilities.

Statement: [Discuss proposed methods of identifying and protecting underground utilities.]

3.12 Penalties

Statement: Information is provided in the CSPP. No supplemental information is required.

3.13 Special conditions.

Statement: [Identify who will be responsible for moving equipment and personnel from the work area and vacating the area in the event of a special condition listed in the CSPP.]

3.14 Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs.

Statement: Information is provided in the CSPP. No supplemental information is required.

3.15 Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.

Statement: Information is provided in the CSPP. No supplemental information is required.

3.16 Hazard marking and lighting.

Statement: [Identify who will be responsible for maintaining hazard marking and lighting. Include a 24 hour phone number.]

3.17 Protection of taxiway and runway safety areas. Include object free areas, obstacle free zones, approach/departure surfaces and safety areas as required. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:

Equipment and methods for maintaining Taxiway/Taxilane Safety Area standards.

Statement: Information is provided in the CSPP. No supplemental information is required.

Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.

Statement: Information is provided in the CSPP. No supplemental information is required.

3.18 Other limitations on construction.

Other limitations are identified in the CSPP and do not require an entry in this document.

APPENDIX 4

SPOIL DEPOSITION RELEASE FORM

SPOILS DEPOSITION RELEASE FORM

To: Fullerton Municipal Airport, Public Works Department, Engineering Division,
City Hall, 303 West Commonwealth Avenue, Fullerton, CA 92832 (AIRPORT OWNER), and
C&S Engineers, Inc., 2355 Northside Dr., Suite 350, San Diego, CA 92108 (RPR).
Project: OCFA Apron Improvement

This SPOILS DEPOSITION RELEASE FORM is being forwarded to the above referenced AIRPORT OWNER and RPR to satisfy the Contract Documents governing the above referenced project. Pursuant to the Contract Documents, LANDOWNER has granted permission to CONTRACTOR to deposit spoils at LANDOWNER'S property located at _____
_____ (give specific location).

Further, CONTRACTOR hereby agrees to the greatest extent of the law, to release, indemnify, hold harmless, and defend the AIRPORT OWNER and RPR from any and all damage, liability, or cost (including reasonable attorney's fees and cost of defense) to the extent caused by or arising out of the deposition of the spoils on LANDOWNER'S property.

CONTRACTOR:

LANDOWNER:

Signature

Signature

Written Name & Title

Written Name & Title

Company Name

Company Name

Mailing Address (Street Name and Number)

Mailing Address (Street Name and Number)

City, State, Zip Code

City, State, Zip Code

Daytime Phone Number (Include Area Code)

Daytime Phone Number (Include Area Code)

Date

Date

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the Engineer, or his or her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.

The term "ton" will mean the short ton consisting of 2,000 lb (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts or ASTM D633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kg) or hundredweight (km).

Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales “overweighing” (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1%.

In the event inspection reveals the scales have been underweighing (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of the subsection 70-18 titled NO WAIVER OF LEGAL RIGHTS of Section 70.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his or her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in the subsection 40-03 titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer’s order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with the subsection 40-04 titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection 90-07 titled PAYMENT FOR MATERIALS ON HAND of this section. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 7 days after the Contractor has received a partial payment. The Owner must ensure prompt and full payment of retainage from the prime Contractor to the subcontractor within 7 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section. The balance, % of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his or her option, as provided in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95% of the work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done.

The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities

have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection 90-09 titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.
- b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his or her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of the subsection 50-15 titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection 50-16 titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, and after the Engineer's receipt of the project closeout documentation required in subsection 90-11 Project Closeout, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection 50-16 titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

- a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.
- b. This warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes

possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work.

- c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of:
 - (1) The Contractor's failure to conform to contract requirements; or
 - (2) Any defect of equipment, material, workmanship, or design furnished by the Contractor.
- d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.
- e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.
- f. If the Contractor fails to remedy any failure, defect, or damage within fourteen (14) days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.
- g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall:
 - (1) Obtain all warranties that would be given in normal commercial practice;
 - (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and
 - (3) Enforce all warranties for the benefit of the Owner.
- h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.
- i. The Owner and Engineer shall perform a warranty inspection with the Contractor approximately three (3) months before the end of the one year warranty period.

90-11 Project closeout. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the Engineer approves the Contractor's final submittal. The Contractor shall:

- a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.
- b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.
- c. Complete final cleanup in accordance with subsection 40-08, FINAL CLEANUP.

-
- d. Complete all punch list items identified during the Final Inspection.
 - e. Provide complete release of all claims for labor and material arising out of the Contract.
 - f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.
 - g. When applicable per state requirements, return copies of sales tax completion forms.
 - h. Manufacturer's certifications for all items incorporated in the work.
 - i. All required record drawings, as-built drawings or as-constructed drawings.
 - j. Project Operation and Maintenance (O&M) Manual.
 - k. Security for Construction Warranty.
 - l. Equipment commissioning documentation submitted, if required.
 - m. Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706) from the Prime Contractor.
 - n. Contractor's Affidavit of Release of Liens (AIA Document G706A) from the Prime Contractor.
 - o. Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706) from each subcontractor.
 - p. Contractor's Affidavit of Release of Liens (AIA Document G706A) from each subcontractor.
 - q. Consent of Surety to Final Payment (AIA Document G707) from the Prime Contractor.

END OF SECTION 90

Section 105 Mobilization

105-1 Description. This item shall consist of work and operations, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-1.1 Posted notices. Prior to commencement of construction activities the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-2 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by 90-11, the final 10%.

Please see Technical Specification – Item M-200 Mobilization for in depth description of Mobilization.

END OF SECTION 105

Section 200 FAA Special Provisions to the FAA General Provisions

200-01 Special Provisions to Section 10.

Additions to the end of Section 10-06 Airport.

The name of the Airport where this project is located is Fullerton Municipal Airport

Additions to the end of Section 10-20 Engineer.

The Engineer for this project is the City of Fullerton, 303 W. Commonwealth Avenue, Fullerton, CA 92832

Additions to the end of Section 10-24 Federal Specifications.

They may be obtained from:

DODSSP
Standardization Document Order Desk
700 Robbins Avenue, Bldg. 4D
Philadelphia, PA 19111-5094

Additions to the end of Section 10-33 Owner.

Whenever the words "Owner", "Sponsor", "City", "Airport" or "Party of the first part" are used, the same are understood to mean the City or its representative duly authorized to act.

10-53 Contract Drawings. The Plans.

10-54 Subcontractor. The subcontractor refers any individual, firm, or corporation to whom the contractor, with approval of the Owner, sublets any part of work.

10-55 Time and Materials Work. An item or items of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified and an agreed price cannot be agreed upon. The Contractor shall perform this work and the Owner agrees to pay the Contractor based upon the work performed by the Contractor's employees and subcontractors, and for materials and equipment used in the construction (along with the Contractor's allowed overhead and profit).

10-56 Design Engineer. The individual(s), partnership(s), firm(s), or corporation(s) duly authorized by the Owner to be responsible for design services. The Design Engineer for this project is C&S Engineers, Inc. 2020 Camino Del Rio North ste 1000, San Diego, California 92108.

200-02 Special Provisions to Section 20.

In the first sentence of the first paragraph of 20-02 Qualification of bidders, DELETE, "Each", and INSERT the following, "Within one week of receiving a written request, the".

Additions to the end of Section 20-02 Qualification of bidders.

- e. A list of the categories of work to be performed by the bidder's work force and a list of work to be subcontracted out (See Section 80-01).

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- f. A list of three (3) similar airport construction projects completed in the past five years. The list shall include the project name, completion date, total contract value, value of bidder's portion of the work, engineer and owner contact information (names and phone numbers).
 - g. A list of construction projects in progress and under contract including the project name, percent complete, estimated completion date, total contract value, value of bidder's portion of the work, engineer and owner contact information (names and phone numbers).
 - h. A Schedule of Values showing the following information:
 - 1. For each lump sum bid item: Provide a breakdown of values for major products, assemblies or operations, indicating separate amounts for (a) purchased materials, (b) labor, and (c) construction equipment, which total to the lump sum price bid for each item.
 - 2. For each unit price bid item: Provide a breakdown of values for the unit price allocated to (a) purchased materials, (b) labor, and (c) construction equipment which total to the unit price bid for each item.

The Schedule of Values will be reviewed by the Design Engineer. Any additional detail or justification for cost distribution shall be provided by the apparent low bidder upon request. The Schedule of Values shall serve as a basis for computing progress payments during construction for installed portions of lump sum items, and to assist the Engineer in determining if change order costs are reasonable.

- i. The bidder and all subcontractors shall not be listed as debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs under Executive Order 12549, "Debarment and Suspension".

DELETE, the third paragraph of 20-02 Qualification of bidders that states "Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.", and INSERT the following, "Within one week of receiving a written request, the bidder shall furnish the owner the information above".

Additions to the end of Section 20-03 Contents of proposal forms.

Only original proposals issued by the Owner or Owner's Representative or, purchased at the specified location will be acceptable. Duplicated proposals, or proposals that are available for viewing from the various plan holders' websites which are downloaded and/or printed will be considered irregular.

Additions to the beginning of Section 20-07 Preparation of proposal.

DO NOT REMOVE the Proposal from the Contract Documents. All parts of the Contract Documents must be submitted with the proposal.

In the first sentence of the first paragraph of Section 20-07 Preparation of proposal, after "the Owner", INSERT the following, "and shall be on the plan holders list"

Additions to the end of the second paragraph of Section 20-07 Preparation of proposal.

Prices shall be written in whole dollars and cents. The extended total amount of each item should not be rounded.

In the first sentence of the first paragraph of Section 20-10 Bid guarantee, after “shall be accompanied by a certified check,”, INSERT the following, “bid bond,”

Additions to the end of Section 20-11 Delivery of proposal.

No faxed or emailed proposal will be accepted. The official time shall be kept locally by the Owner.

In the first sentence of 20-14 Disqualification of bidders, Remove the word “shall” and INSERT the word “will”.

20-15 Addenda and interpretation. No interpretation of the meaning of the Contract Documents, Contract Drawings or other portions of the Contract will be made orally. Every request for such interpretation must be in writing and addressed to the City of Fullerton, Public Works Department Engineering Division and to be given consideration must be received at least seven (7) days prior to the date fixed for opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda, which, when issued, will be sent by certified mail with return receipt requested, or by confirmed facsimile to all holders of Contract Documents at the respective addresses furnished for such purposes, not later than twenty-four (24) hours prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addenda or interpretation shall not relieve said Bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract.

20-16 3D digital terrain model files. Some projects were developed using three-dimensional design software. If applicable, after award, the successful bidder will be provided 3D digital terrain model (DTM) files for use with earthwork and paving. The DTM files will be provided for the existing grade, finished grade, and other applicable design surface models. In addition, survey control for the project will be provided in electronic format. The files may be used for survey and stakeout of the project, but may not be manipulated.

The files were developed for the design and depiction of 3D features of existing, proposed, and subgrade surfaces. The DTM files are depicted on the Contract Drawings in the form of contours, profiles, typical sections, spot elevations, tables, and other details. The design cross sections used the DTM files to obtain earthwork quantities using the average end area method. The DTM of the existing surface is the database of points from the design topographic survey. The DTM's of the other surfaces are the database of points for the surfaces used to design the project.

The Owner allows use of the DTM files in the performance of its work and services on the project with the following terms and conditions:

That the Owner does not warrant or guarantee the information and data in the DTM files and any accompanying documentation as a substitute for the sound judgment of the Contractor.

That the Contractor desires to make use of the DTM files in conjunction with the Work to be provided to the Owner for the subject project.

That the Contractor has no rights to the information and data contained in the DTM files or any translated or converted form of these files. The transfer shall not be considered to convey any proprietary interest in the information and data in the DTM files or any translated or converted form of these files or subsequent version thereof.

That the information and data contained in the DTM files or in any translated or converted form of these files shall not be used by the Contractor on any other project.

That the Contractor may not copy, distribute, sell, rent, sublicense or lease the DTM files or any translated or converted form of these files or any accompanying documentation.

That no information or data contained in the DTM files or any translated or converted form of these files shall be transferred in any electronic form without written permission of the Owner.

That after completion of the Work by the Contractor as part of this project, the Contractor shall remove the information and data contained in the DTM files, or any translated or converted form of these files, from all of its electronic data processing systems. No electronic copies of the information and data contained in the DTM files or any translated or converted form of these files shall be retained by the Contractor.

That the Contractor shall take all steps reasonably necessary to protect the DTM files, or any translated or converted form of these files, from theft or use in a manner inconsistent with these terms and conditions.

That the Owner may terminate these terms and conditions at any time and the Contractor shall immediately remove the DTM files, or any translated or converted form of these files, from their electronic data processing systems upon demand of the Owner.

That the Owner retains all rights not expressly granted. Nothing in these terms and conditions constitutes a waiver of the Owner's rights under any federal or state law.

That the Owner excludes any and all implied warranties, including warranties of merchantability and fitness for a particular purpose, and limits the Contractor's remedy to return of the DTM files and documentation to the Owner for replacement.

That the Owner makes no warranty or representation, either express or implied, with respect to the DTM files or accompanying documentation, including their quality, performance, merchantability, or fitness for a particular purpose. The DTM files and documentation are provided "as is" and the Contractor assumes the entire risk as to their quality and performance.

That the Owner shall not be liable for any direct, indirect, special, incidental, or consequential damages arising out of the use of, inability to use, or any defect in the DTM files or any translated or converted form of these files or any accompanying documentation.

That the Contractor shall indemnify and hold harmless the Owner, its officials and employees, and the Design Engineer for any injury to the person or property of third parties arising out of the use of or any defect in the DTM files or any translated or converted form of these files or any accompanying documentation.

That the Contractor shall indemnify and hold harmless the Owner, its officials and employees, and the Design Engineer for any injury arising out of any infringement of the copyright law.

That the warranty and remedies set forth in these terms and conditions are exclusive and in lieu of all others, oral or written, express or implied.

That nothing contained in these terms and conditions shall be construed to represent or warrant that the Contractor has the right to reproduce or copy any or converted form of these files and the Contractor acknowledges that it has no right to reproduce and include copyright or trade secret notices, or patent rights on any copies, in whole or in part, in any form. All copies of each DTM file remain the property of the Owner and any rights involving the copyright law as modified in 17 U.S.C. §101 et. seq. remain with the Owner.

20-17 Designation of Subcontractors

Pursuant to State law, the Bidders must designate the name and location of each subcontractor who will perform work or render services for the Bidder in an amount that exceeds one half of one percent (1/2%) of the Bidder's Total Bid Price, or \$10,000, whichever is greater, as well as the portion of work each such subcontractor will perform on the form provided herein by the City. No additional time will be provided to bidders to submit any of the requested information in the Designation of Subcontractor form.

20-18 Iran Contracting Act Certification

Each bidder shall submit the certification required by the Iran Contracting Act of 2010, Public Contract Code section 2200 et seq., included in the Bid Documents.

200-03 Special Provisions to Section 30.

Additions to the end of the first paragraph of Section 30-01 Consideration of proposals.

Where discrepancies in the unit bid prices occur, and where discrepancies in the product of the quantities and unit bid prices occur, and where discrepancies in the summation of the products occur, the Owner will make the necessary corrections and the corrected values will be used in the Owner's consideration of proposals.

Additions to the end of Section 30-02 Award of contract.

The Owner reserves the right to award only the Base Bid, to award any Alternate Bid (if Alternates are an option), or to award either the Base Bid or the Alternate Bid plus any or all Add-On Bids (if Add-On bids are an option). Where discrepancies occur that affect the bid total(s) as described in the subsection titled CONSIDERATION OF PROPOSALS, the contract amount awarded will reflect the corrected values.

Where alternate bids and/or add-on bids are included in the proposal, the lowest qualified bidder will be determined by comparison of the combination of base bid, or alternate bid, plus add-on bids which are chosen by the Owner to be awarded.

Additions to the end of Section 30-05 Requirements of contract bonds.

The successful bidder shall submit in triplicate, a "Performance Bond" guaranteeing the performance of the work equal to one hundred percent (100%) of the amount of the Contract awarded, and a "Labor and Material Payment Bond" guaranteeing the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work equal to one hundred percent (100%) of the amount of the Contract awarded.

Additions to the end of Section 30-06 Execution of contract.

The Contractor shall also furnish the required insurance certificates in accordance with the subsection titled RESPONSIBILITY FOR DAMAGE CLAIMS of Sections 70 and 200. The successful bidder shall recognize that the proposal included in the contract for execution may differ from the proposal which was submitted with their bid. The proposal included in the contract for execution will include corrections to discrepancies which were discovered during the Owners consideration of proposals, and will contain only the pages from the successful bidder's proposal which cover the bids which were awarded. As a result, the proposal pages in the contract to be executed may contain pages which are not consecutively numbered due to the intentional omission of those proposal pages which cover bids that were not awarded.

49 CFR Part 26 provides that each contract the owner signs with a contractor (and each subcontract the prime contractor signs with a subcontractor) shall include the following assurance:

"The contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of Department of Transportation (DOT) assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate."

200-04 Special Provisions to Section 40.

Additions to the end of Section 40-02 Alteration of work and quantities

However, if the Contractor elects to waive the limitations on work that increase or decrease the originally awarded contract or any major contract item by more than 25 percent, the supplemental agreement shall be subject to the same U.S. Secretary of Labor wage determination as was included in the originally awarded contract.

All supplemental agreements shall require consent of the Contractor's surety and separate performance and payment bonds.

Additions to the end of Section 40-04 Extra work.

Extra work to be performed on the basis of agreed prices where no applicable unit or lump sum prices have been included in the Contract shall be based upon the Contractor's price analysis for the work. The price analysis will be completed as outlined in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

40-09 Debris. The Contractor shall remove all debris and rubbish resulting from his work at frequent intervals, and upon the order of the Engineer. The Contractor shall have a vacuum truck, soft bristle machine, or similar device readily available to clean pavement surfaces upon order of the Engineer. Upon completion, Contractor shall leave

the premises broom-clean and everything in perfect order and repair. Upon neglect or refusal of Contractor to keep the premises clean, the Engineer shall have the authority to have such work performed, and the cost of the same shall be charged to the Contractor in default and collected from any monies which have or may become due on this Contract; and the Engineer shall issue no certificates of payment on the Contract until premises are clean, in good order, and all claims created properly adjusted.

200-05 Special Provisions to Section 50.

Additions to the end of Section 50-03 Coordination of contract, plans, and specifications.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

Additions to the beginning of the third paragraph of Section 50-06 Construction layout and stakes.

Additional construction staking and layout may be required by technical specifications.

Additions to the end of Section 50-16 Claims for adjustment and disputes.

- A. In accordance with Public Contract Code sections 20104 et seq. and other applicable law, public works claims of \$375,000 or less which arise between the Contractor and the Owner shall be resolved under the following the statutory procedure unless the Owner has elected to resolve the dispute pursuant to Public Contract Code section 10240 et seq.
- B. All Claims: All claims shall be submitted in writing and accompanied by substantiating documentation. Claims must be filed on or before the date of final payment unless other notice requirements are provided in the contract. "Claim" means a separate demand by the claimant for (1) a time extension, (2) payment of money or damages arising from work done by or on behalf of the claimant and payment of which is not otherwise expressly provided for or to which the claimant is not otherwise entitled, or (3) an amount the payment of which is disputed by the Owner.
- C. Claims Under \$50,000. The Owner shall respond in writing to the claim within 45 days of receipt of the claim, or, the Owner may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the Owner may have. If additional information is needed thereafter, it shall be provided promptly upon written request by the Owner. The Owner's written response shall be submitted 15 days after receiving the additional documentation, or within the same period of time taken by the claimant to produce the additional information, whichever is greater.
- D. Claims over \$50,000 but less than or equal to \$375,000. The Owner shall respond in writing within 60 Days of receipt, or, may request in writing within 30 Days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims the Owner may have against the claimant. If additional information is needed thereafter, it shall be provided upon request. The Owner's response shall be submitted within 30 Days after receipt of the further documents, or within the same period of time taken by the claimant to produce the additional information or documents,

whichever is greater. The Contractor shall make these records and documents available at all reasonable times, without any direct charge.

- E. The Contractor will submit all claims in the following format.
 - a. Summary of claim merit and price, reference Contract Document provisions pursuant to which the claim is made.
 - b. List of documents relating to claim
 - i. Specifications.
 - ii. Drawings
 - iii. Clarifications (Requests for Information)
 - iv. Schedules
 - v. Other.
 - c. Chronology of events and correspondence.
 - d. Analysis of claim merit.
 - e. Analysis of claim cost.
 - f. Analysis of time impact analysis in CPM format.
 - g. Cover letter and Contractor's certification of the claim, including claims from subcontractors of any tier, in accordance with Government Code sections 12650 et seq.
- F. If the claimant disputes the Owner 's response, or if the Owner fails to respond within the statutory time period(s), the claimant may so notify the Owner within 15 Days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, the Owner shall schedule a meet and confer conference within 30 Days.
- G. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code sections 900 et seq. and Government Code sections 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.
- H. Submission of a claim, properly certified, with all required supporting documentation, and written rejection or denial of all or part of the claim by Owner, is a condition precedent to any action, proceeding, litigation, suit, or demand for arbitration by Contractor.

200-06 Special Provisions to Section 60.

Additions to the end of 60-01 Source of supply and quality requirements.

All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification.

The Contractor shall prepare a project Operations and Maintenance (O&M) Manual for the Owner. The O&M Manual shall consist of approved certification submittals, approved shop and setting drawing submittals, approved catalogue data submittals, and Operations & Maintenance Manuals for equipment installed that have operating procedures and/or maintenance requirements associated with them. The O&M manual shall be neatly bound in a properly sized 3-ring binder and tabbed by specification section. The O&M Manual shall be submitted to the Engineer prior to final payment to facilitate project closeout.

Additions to the end of the second paragraph of Section 60-02 Samples, tests, and cited specifications.

THE COST OF ALL FAILING TESTS SHALL BE BORNE BY THE CONTRACTOR.

Additions to the end of the first paragraph of 60-03 Certification of compliance.

Manufacturer's certificates of compliance shall not relieve the Contractor of the Contractor's responsibility to provide materials in accordance with these specifications and acceptable to the Design Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed, when directed by the Engineer, and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

60-09 Shop and setting drawings and catalogue data. All materials and equipment used in the work shall be submitted to the Engineer for review by the Design Engineer for approval prior to ordering the equipment. All information required for the Design Engineer's review of each particular pay item shall be sent as one submittal. In addition, if the pay item interfaces with other pay items (as in the case of electrical equipment), then the submittals covering the interfacing pay items shall be sent at the same time. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be boldly and clearly made with arrows or circles (highlighting is not acceptable). Drawings and data shall be submitted sufficiently in advance of the work to permit proper review, including time for necessary revisions and re-submittals. The Contractor is solely responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

Shop and setting drawings shall present complete and accurate information relative to all working dimensions, equipment weight assembly and sectional view, all the necessary

details, pertaining to coordinating the work of the Contract, lists of materials and finishes, parts lists and the description thereof, lists of spare parts and tools where such parts or tools are required, no-scale control diagrams for control wiring and control piping, and any other items of information that are required to demonstrate detail compliance with the Plans and Specifications. Each drawing shall be dated and shall show the name of the Project, Contract Number and the name of the manufacturer of the equipment covered by the drawing or drawings. The Engineer will not review any drawings that are not properly identified or that do not contain complete data on the work or that have not been checked, stamped and signed by the Contractor for compliance with the Contract Documents.

The Design Engineer's review of the Contractor's Shop Drawings signifies only that such drawings appear to be in substantial conformity with the Contract Drawings and Contract Documents or with the Engineer's instructions. Such review does not indicate approval of every detail of the drawings nor of the work methods of the Contractor which are indicated thereon. Regardless of the corrections made in or made of such drawings by the Engineer, the Contractor will nevertheless be responsible for the accuracy of such drawings, for their conformity to the Plans and Specifications and for the proper fitting and construction of the work.

No work covered by shop and setting drawings shall be done until the drawings have been reviewed and found acceptable by the Engineer. No payment shall be made on any item for which submittals are not received and found acceptable by the Design Engineer.

60-10 Electrical shop drawings. Drawings for electrical equipment shall show physical dimensions and installation details and shall include elementary and connection diagrams for each control assembly and the interconnection diagrams for all equipment. The drawings shall show clearly the coordination of control work, shall identify the components external to electrical equipment and shall define the contact arrangement and control action of the primary and final control elements.

Where standard electrical control equipment having complex internal wiring is required, such as control panels, generator transfer panels, electric or electronic instruments and similar items, the detail shop wiring diagrams for such equipment will not be required, and, if submitted, will in general not be reviewed. The submittal for each such item of equipment shall, however, include an elementary diagram of the input and output elements which require connections to external equipment, and/or a complete step by step description of the control action of the equipment being submitted. In the event that any questions arise as to the type of information to be presented on the submittal, the supplier shall direct inquiries to the Engineer through the Prime Contractor in advance of the preparation of his/her submittal.

60-11 Substitute items. If in the Design Engineer's sole judgment an item of material or equipment proposed by the Contractor does not qualify as an "or-equal" item, it will be considered a substitute item. The Contractor shall submit sufficient information as provided below to allow the Design Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. The procedure for review by the Design Engineer will include the following and as the Design Engineer may decide is appropriate under the circumstances. Requests for review of substitute items of material or equipment will not be accepted by the Engineer from anyone other than the Contractor. If the Contractor wishes to furnish or use a substitute item of material or equipment, the Contractor shall

first make a written application through the Engineer to the Design Engineer for acceptance thereof, certifying that the substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the substitute will prejudice the Contractor's achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents or Contract Drawings (or in the provisions of any other direct contract with the Owner for work on the Project) to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the work is subject to payment of any license fee or royalty. If the substitute item requires modifications to any existing features or to any proposed work, the application shall also include details of proposed modifications necessary to accommodate the substitute item. Such details shall include scaled layouts, dimensions and other pertinent information to enable the Design Engineer to accurately assess the entire application. If the substitute item and proposed modifications are approved, the Contractor, at no additional cost to the Owner, shall do all work necessary to make such modifications and absorb all costs of any related changes imposed on other Contractor's. All variations of the substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by the Design Engineer in evaluating the substitute. The Design Engineer may require the Contractor to furnish additional data about the substitute.

A. Design Engineer's Evaluation. The Design Engineer will be the sole judge of acceptability. No substitute will be ordered, installed or utilized without the Design Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. The Design Engineer will record time required by the Design Engineer and the Design Engineer's Consultants in evaluating substitutes proposed or submitted by the Contractor and in making changes in the Contract Documents or Contract Drawings (or in the provisions of any other direct contract with Owner for work on the Project) occasioned thereby. The Design Engineer's charges shall be at the same rates the Design Engineer charges for such services to the Owner.

B. Contractor's Expense. All data to be provided by the Contractor in support of any substitute item will be at the Contractor's expense. In order to aid the Engineer in determining the equality of an or substitute item (when compared to the item actually specified), the Contractor shall arrange for the performance of any tests requested by the Design Engineer. The Design Engineer shall determine the nature, extent, tester and degree of supervision of such tests. Certified test results shall be mailed directly to the Design Engineer for all tests requested. All costs of such tests, including engineering costs, shall be borne by the Contractor. The Owner may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substitute. Whether or not the Design Engineer accepts a substitute item so proposed or submitted by the Contractor, the Contractor shall reimburse the Owner for the charges of the Design Engineer and the Design Engineer's Consultants for evaluating each such substitute item. The costs for evaluating substitute items shall be deducted from the Owner's payment to the Contractor.

60-12 Submittal procedure. The following procedure has been established for the submittal and processing of shop and setting drawings, working drawings, and catalogue data. Departures from this procedure may result in delay and misunderstandings.

- A. All information required for the Engineer's review of each particular pay item shall be sent as one submittal to the Engineer with an attached submittal cover sheet. In addition, if the pay item interfaces with other pay items (as in the case of electrical equipment), then the submittals covering the interfacing pay items shall be sent at the same time.
- B. In submitting certifications, drawings, catalog data, and similar items for review, at least five (5) copies shall be submitted. This number includes two copies for return to the Contractor bearing the review stamp, one of which will be incorporated into an O&M Manual prior to contract closeout. If the Contractor desires more than two copies returned, they shall submit the additional copies with the initial transmittals up to a maximum of four copies. One (1) copy of the submitted data will be retained by the Design Engineer, two (2) copies of the submitted data will be retained by the Engineer and the remaining copies of the submitted data will be returned to the Contractor. If the need arises by the Engineer to require additional copies, the Contractor will be informed so that subsequent submittals will include the correct number of copies.

Additional copies of submittals will be required upon Engineer's request, or in cases where the subject matter shown thereon requires coordination of two or more prime Contracts. One copy of each of such submittals received will be transmitted by the Engineer, whenever possible, to each of the other prime Contractors whose work is to be correlated with such submittals. The Engineer will transmit these submittals in order to facilitate each Contractor's coordination of their own work with that of the other Contracts.

- C. For transmitting data for review, two (2) copies of the letter of transmittal shall be sent to the Engineer's office. Form letters may be used.
- D. All correspondence other than simple transmittal of data shall be in triplicate.
- E. Unless otherwise requested, a single copy of the correspondence emanating from the Design Engineer's office will be sent. Additional copies of correspondence up to a maximum of four (4) copies will be provided, if requested.
- F. Submittals will be stamped by the Design Engineer as follows:
 - 1. "Approved", if no change or rejection is made.
 - 2. "Approved as Noted", if minor changes or additions are made, but re-submittal is not considered necessary. All copies will bear the corrective marks.
 - 3. "Revise and Resubmit", if the changes requested are extensive. In this case, re-submittal after correction is necessary and the same number of copies shall be included in the re-submittal as in the first submittal.
 - 4. "Rejected", if it is considered that the data submitted cannot with reasonable revision meet the requirements of the Plans and Specifications.

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5. "Submit Specified Item", if the data submitted is not clear, complete, or for other reasons cannot be examined by the Engineer to establish compliance with the Plans and Specifications.

G. Unless otherwise approved in specific cases, all submittals must be transmitted by the Prime Contractor, not by the Subcontractors or vendors.

Any changes in re-submittals, other than those indicated as requested, must be specifically brought to the attention of the Design Engineer. Changes or additions shall not be made in, or to, any fabricated item, part or material without having a re-review.

200-07 Special Provisions to Section 70.

In the second sentence of the first paragraph of Section 70-01 Laws to be observed, after "indemnify the Owner", INSERT the following, " the Design Engineer, the Engineer," and after "all of his of her officers", INSERT the following, " directors, representatives,".

In the second sentence of the first paragraph of Section 70-03 Patented devices, materials, and processes, after "hold harmless the Owner," INSERT the following, " the Design Engineer, the Engineer," and after "shall indemnify the Owner," INSERT the following, " the Design Engineer, the Engineer"."

Additions to the end of Section 70-06 Sanitary, health, and safety provisions.

The Contractor shall promptly, and before the following conditions are disturbed, notify the Owner, in writing, of any:

1. Material that the contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
2. Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids.
3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

The Owner shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work, shall issue a change order under the procedures described in the contract.

In the event that a dispute arises between the Owner and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights

provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

Additions to the end of Section 70-10 Protection and restoration of property and landscape.

The Contractor shall indemnify the Owner for any and all costs for the repair or replacement of the Owner's property including, but not limited to, buildings and roads, which arise from or in any manner grow out of any act or neglect on or about the Project site by the Contractor and anyone for whom the Contractor is legally liable.

At the beginning of the first sentence of Section 70-11 Responsibility for damage claims, DELETE, "The" and INSERT the following, "In addition to the obligations to defend, indemnify, and save harmless set forth elsewhere in Section 70, the".

In the first sentence of Section 70-11 Responsibility for damage claims, after, "The Contractor shall", INSERT the following, "defend". After, "save harmless the", INSERT the following, "Design Engineer, the". After, "Engineer and the Owner and their", INSERT the following, "respective representatives, directors,". After, "employees from all suits, actions," INSERT the following, "damages, costs, expenses". After, "or claims, of any character", INSERT the following, "(including attorney's fees) and liability (including statutory liability)". After, "neglect, or misconduct of said Contractor", INSERT the following, "or arising out of or related to any negligence of the Contractor or anyone for whom the Contractor is legally liable in performing or safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any and all environmental impairment; or because of any act or omission, neglect, or misconduct of said Contractor or anyone for whom the Contractor is legally liable;".

Additions to the end of the first paragraph of Section 70-11 Responsibility for damage claims.

As a material part of the consideration to be rendered by the Owner, the Contractor hereby waives all claims against the Owner for damages to the goods, wares, and merchandise in, upon, or about the Project, and the Contractor will hold the Owner exempt and harmless from any damage and injury to any such person or to the goods, wares, or merchandise of any such person, arising from the use of the Project site by the Contractor or from failure of the Contractor to keep the Project site in good condition and repair as provided in this Section.

Additions to the end of Section 70-11 Responsibility for damage claims.

Owner shall timely notify the Contractor of the receipt of any third-party claim, relating to the contract. Owner shall be entitled to recover its reasonable costs incurred in providing such notification.

Additions to the end of bullet point d of Section 70-15.1 FAA facilities and cable runs.

The splicing of cables is not an acceptable form of repair for certain projects. If any FAA cables are damaged, the Contractor shall replace the cables in their entirety.

Additions to the end of the first paragraph of Section 70-19 Environmental protection.

The Contractor shall perform all testing, removal of contaminated material, transportation, treatment, remediation, and disposal of contaminated materials which are the result of a spill or release caused by the Contractor, and he shall provide and properly place materials to restore the property to its original condition, all to the Owner's satisfaction and at the Contractor's expense. Refer to the subsection 70-10 titled PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE of this section.

A. Air Pollution

1. No burning of combustible waste shall be permitted.
2. Alternatives to Burning Land Cleared Material.
 - a. All spoil material from clearing and grubbing operations shall be disposed of in accordance with the Technical Specifications, unless otherwise directed.
 - b. Wood may be salvaged for firewood or commercial use or it may be chipped and disposed of for use as mulch.
 - c. Logs, brush, etc. may be removed to an authorized disposal area or disposed of to the general public without charge.
3. Dust Control.
 - a. Common construction operations which may cause excessive dust include:
 - 1) Quarry, drilling and rock crushing.
 - 2) Clearing, grubbing and stripping.
 - 3) Excavation and placement of embankment.
 - 4) Cement and aggregate handling.
 - 5) Cement or lime stabilization.
 - 6) Blasting.
 - 7) Use of haul roads.
 - 8) Sandblasting or grinding.
 - b. Other construction operations which may cause air pollution are:
 - 1) Volatiles escaping from asphalt and cut back materials.
 - 2) Use of herbicides or fertilizers.
 - 3) Smoke from asphalt plants or heater/planers.
 - c. Control of Dust and Other Air Pollutants shall be the responsibility of the Contractor and may include the following control methods:
 - 1) Drilling apparatus equipped with water or chemical dust controlling systems.
 - 2) Exposing the minimum area of land.
 - 3) Applying temporary mulch with or without seeding.
 - 4) Use of water sprinkling trucks.
 - 5) Use of covered haul trucks.
 - 6) Use of stabilizing agents in solution.
 - 7) Use of dust palliative and penetration asphalt on temporary roads.
 - 8) Use of wood chips in traffic or work areas.
 - 9) Use of vacuum equipped sandblasting systems.

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- 10) Use of plastic sheet coverings.
 - 11) Restricting the application rate of herbicides to recommended dosage. Materials should be covered and protected from the elements. Application, equipment and empty containers shall not be rinsed and discharged to a stream, etc. or allowed to enter the groundwater.
 - 12) Use dust control measures at bituminous mixing plants, and quarry operations.
 - 13) Delay operations until climate or wind conditions dissipate or inhibit the potential pollutants in a manner satisfactory to the Engineer.

B. Water Pollution

1. The Contractor shall use suitable precautions to minimize water pollution during the progress of the work. Erosion control devices or methods may consist of berms, dikes, dams, drains, sediment basins, fiber mats, woven plastic filter cloths, gravel, mulches, quick growing grasses, sod, bituminous spray or other control devices.
2. The amount of surface area of erodible earth at any one time shall not exceed the area allowed by permit.
3. Pollutants such as fuels, lubricants, bitumens, raw sewage and other harmful materials shall not be discharged into or near rivers, streams, and impoundments or into natural or man-made channels leading thereto. Wash water or waste from concrete mixing and curing operations should not be allowed to enter streams, etc.

In the event of conflict between these requirements and pollution control laws, rules or regulations or other Federal, State or local agencies, the more restrictive laws, rules, or regulations shall apply.

70-21 Required contract provisions for airport improvement program and for obligated sponsors.

1. Required contract provisions.

Federal laws and regulations require that specific contract provisions be included in certain contracts, requests for proposals, or invitations to bid **whether or not** the contracts are federally-funded. This requirement is established within the grant assurances. Other contract provisions are required to be in federally-funded contracts, including all subcontracts. For purposes of determining requirements for contract provisions, the term **contract** includes subcontracts.

The type and magnitude of a project determines whether a provision is required. Some Federal provisions have dollar thresholds that define when they are applicable. The majority of the Federal provisions may be incorporated within the contract itself. However, certain Federal notices are required to be identified within the Notice-to-Bidders.

1.1. GENERAL REQUIREMENT FOR CONTRACTS.

In general, the sponsor must:

-
- 1) Physically incorporate these contract provisions (not simply by reference) in each contract funded under AIP;
 - 2) Require the contractor (including all subcontractors) to insert these contract provisions in each contract and subcontract, and further require that the clauses be included in all subcontracts;
 - 3) Require the contractor (or subcontractor) to incorporate applicable requirements of these contract provisions by reference for work done under any purchase orders, rental agreements and other agreements for supplies or services;
 - 4) Require that the prime contractor be responsible for compliance with these contract provisions by any subcontractor, lower-tier subcontractor or service provider; and
 - 5) Not modify the provisions. Minor additions covering state or sponsor requirements may be included in a separate supplemental specification, provided they do not conflict with federal laws and regulations and do not change the intent of the required contract provision.

Subject to the applicability criteria noted in the specific contract provisions, these contract provisions apply to all work performed on the contract.

1.2. GENERAL REQUIREMENT FOR REQUESTS FOR BIDS (ADVERTISEMENT) AND NOTICE TO BIDDERS

In general, the sponsor may incorporate certain provisions *by reference* in the Request for Bids (the Advertisement) rather than including the entire text of the provision in the Request or Notice. The provisions that can be incorporated by reference in the Request or Notice are:

- 1) Buy American Preference
- 2) Foreign Trade Restriction
- 3) Davis Bacon
- 4) Affirmative Action
- 5) Governmentwide Debarment and Suspension
- 6) Governmentwide Requirements for Drug-free Workplace

1.3. GENERAL REQUIREMENTS FOR ALL CONTRACTS ENTERED INTO BY OBLIGATED SPONSORS.

Where noted, the sponsor must include certain notifications in contracts or solicitations for proposals regardless of funding source.

1.4. FAILURE TO COMPLY WITH PROVISIONS.

Failure to comply with the terms of these contract provisions may be sufficient grounds to:

- 1) Withhold progress payments or final payment,
- 2) Terminate the contract,
- 3) Seek suspension/debarment, or
- 4) Any other action determined to be appropriate by the sponsor or the FAA.

1.5. REQUIRED CONTRACT PROVISIONS.

The following list summarizes the contract provisions and to what types of contracts the provisions apply:

All Contracts Regardless of Funding Source

-
- a. Civil Rights – General
 - b. Civil Rights – Title VI

All AIP Funded Contracts

- a. Access to Records and Reports
- b. Affirmative Action Plan
- c. Buy American Preferences
- d. Civil Rights – General
- e. Civil Rights - Title VI
- f. Disadvantaged Business Enterprises
- g. Energy Conservation Requirements
- h. Federal Fair Labor Standards Act (Minimum Wage)
- i. Lobbying and Influencing Federal Employees
- j. Occupational Safety and Health Act
- k. Rights to Inventions
- l. Trade Restriction Clause
- m. Veteran's Preference

Additional Provisions for AIP Funded Contracts that are \$2,000 and greater

- a. Copeland Anti-Kickback
- b. Davis Bacon Requirements

Additional Provisions for AIP Funded Contracts that are \$10,000 and greater

- a. Affirmative Action
- b. Equal Employment Opportunity
- c. Nonsegregated Facilities
- d. Termination of Contract

Additional Provisions for AIP Funded Contracts that are \$25,000 and greater

- a. Debarment and Suspension

Additional Provisions for AIP Funded Contracts that are \$100,000 and greater

- a. Breach of Contract
- b. Clean Air and Water Pollution Controls
- c. Contract Work Hours and Safety Standards

2. ACCESS TO RECORDS AND REPORTS.

(Reference: 2 CFR § 200.326, 2 CFR § 200.333)

2.1. APPLICABILITY.

Applies to all AIP-funded projects and must be included in all contracts and subcontracts.

2.2. MANDATORY CONTRACT LANGUAGE.

The mandatory language that must be used on AIP funded project contracts is as follows:

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

3. AFFIRMATIVE ACTION REQUIREMENT. (Reference: 41 CFR part 60-4, Executive Order 11246)

3.1. APPLICABILITY.

Incorporate in all AIP-funded construction contracts and subcontracts that exceed \$10,000. This notice must be placed within the solicitation for proposals. The goals for minority participation are dependent upon the Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA). Refer to Volume 45 of the Federal Register dated 10/3/80. Page 65984 contains a table of all EA and SMSA and their associated minority goals. Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction contractors.

3.2. MANDATORY CONTRACT LANGUAGE.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:
 - A. Timetables
 - B. Goals for minority participation for each trade (Vol. 45 Federal Register pg. 65984 10/3/80) 11.9%
 - C. Goals for female participation in each trade 6.9%

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor is also subject to the goals for both federally funded and non-federally funded construction regardless of the percentage of federal participation in funding.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training shall be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project, for the sole purpose of meeting the contractor's goals, shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs (OFCCP), within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is .

3.3. *AFFIRMATIVE ACTION PLAN.*

The Department of Labor is responsible for administering the Executive Order 11246, which contains requirements for an Affirmative Action Plan. This Plan is similar in content and requirements to the affirmative action plan required in 49 CFR Part 152 subpart e. 49 CFR Part 152 applied to grants issued under the Airport Development Aid Program, which was replaced by the Airport Improvement Program.

4. BREACH OF CONTRACT TERMS. (Reference 2 CFR § 200 Appendix II(A))

4.1. *APPLICABILITY.*

This provision is required in all contracts that exceed the simplified acquisition threshold. This threshold, fixed at 41 USC 403(11), is presently set at \$100,000.

4.2. *MANDATORY CONTRACT LANGUAGE.*

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 2 CFR § 200 Appendix II(A). This provision requires grantees to incorporate administrative, contractual or legal remedies in instances where contractors violate or breach contract terms.

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

5. BUY AMERICAN PREFERENCE.

(Reference: 49 USC § 50101)

5.1. *APPLICABILITY.*

The sponsor must meet the Buy American preference requirements found in 49 USC § 50101 in all AIP-funded projects. The Buy America requirements flow down from the sponsor to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are in compliance. The Buy American preference also applies to professional service agreements if the agreement includes any manufactured product as a deliverable.

5.2. *REQUIREMENTS.*

The Buy-American preference requirements established within 49 USC § 50101 require that all steel and manufactured goods used on AIP projects must be produced in the United States. It also gives the FAA the ability to issue a waiver to the sponsor to use other materials on the AIP funded project. The FAA requires that these waivers be requested in advance of use of the materials on the AIP funded project. The sponsor may request that the FAA issue a waiver from the Buy American preference requirements if the FAA finds that:

- 1) applying the provision is not in the public interest;
- 2) the steel or manufactured goods are not available in sufficient quantity or quality in the United States;
- 3) the cost of components and subcomponents produced in the United States is more than 60 percent of the total components of a facility or equipment, and final assembly has taken place in the United States. Items that have an FAA standard specification item number (such as specific airport lighting equipment) is considered the equipment in this case. For construction of a facility, the application of this subsection is determined after bid opening; or
- 4) applying this provision would increase the cost of the overall project by more than 25 percent.

5.3. *NATIONAL BUY AMERICAN WAIVERS WEBSITE.*

The FAA Office of Airports maintains a list of equipment that has received waivers from the Buy American preference requirements on the http://www.faa.gov/airports/aip/buy_american/ website. Products listed on the Nationwide Buy American Waivers Issued list do not require a project specific Buy American preference requirement waiver from the FAA.

5.4. *MANDATORY CONTRACT LANGUAGE.*

The mandatory language that must be used on AIP funded project contracts is as follows:

NOTE: Certifications are included in the PROPOSAL.

6. CIVIL RIGHTS - GENERAL.

(Reference: 49 USC § 47123)

6.1. *APPLICABILITY.*

The General Civil Rights Provisions found in 49 USC § 47123, derived from the Airport and Airway Improvement Act of 1982, Section 520, apply to all AIP-funded projects. This provision is in addition to the Civil Rights – Title VI provisions.

6.2. *MANDATORY CONTRACT LANGUAGE.*

The mandatory language that must be used on AIP funded project contracts is as follows:

GENERAL CIVIL RIGHTS PROVISIONS

The contractor agrees that it will comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

This provision also obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport through the Airport Improvement Program, except where Federal assistance is to provide, or is in the form of personal property; real property or interest therein; structures or improvements thereon.

In these cases the provision obligates the party or any transferee for the longer of the following periods:

- (a) the period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits; or
- (b) the period during which the airport sponsor or any transferee retains ownership or possession of the property.

7. CIVIL RIGHTS – TITLE VI ASSURANCES.

Appropriate clauses from the Standard DOT Title VI Assurances must be included in all contracts and solicitations. The clauses are as follows:

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- 1) Title VI Solicitation Notice
 - 2) Title VI Clauses for Compliance with Nondiscrimination Requirements.
 - 3) Title VI List Of Pertinent Nondiscrimination Statutes And Authorities

7.1. APPLICABILITY.

The sponsor must insert the **Title VI Solicitation Notice** in:

- 1) All solicitations for bids, requests for proposals work, or material subject to the nondiscrimination acts and regulations made in connection with Airport Improvement Program grants; and
- 2) All proposals for negotiated agreements regardless of funding source

The Sponsor must insert the **Title VI required contract clause** and the **Title VI list of Pertinent Nondiscrimination Statutes and Authorities** in every contract or agreement, unless the sponsor has determined and the FAA has agreed, that the contract or agreement is not subject to the nondiscrimination Acts and the Regulations.

The sponsor must insert the clauses of **Title VI Clauses for Deeds Transferring United States Property**, as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.

The sponsor must include the **Title VI Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, Or Program**, the **Title VI Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program**, and the **Title VI List of Pertinent Nondiscrimination Authorities**, as a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the sponsor with other parties:

- 1) For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
- 2) For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

7.2. MANDATORY CONTRACT LANGUAGE.

7.2.1. Title VI Solicitation Notice

(Source: Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

Title VI Solicitation Notice:

The **(City of Fullerton)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this

invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

- 7.2.2.** Title VI Clauses for Compliance with Nondiscrimination Requirements (Source: Appendix A of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

Compliance with Nondiscrimination Requirements

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the **Title VI List of Pertinent Nondiscrimination Statutes and Authorities**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

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- a. Withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States

7.2.3. Title VI List of Pertinent Nondiscrimination Authorities
(Source: Appendix B of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration))

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-

recipients and contractors, whether such programs or activities are Federally funded or not);

- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

8. CLEAN AIR AND WATER POLLUTION CONTROL.

(Reference: 49 CFR § 18.36(i)(12)) Note, when the DOT adopts 2 CFR 200, this reference will change to 2 CFR § 200 Appendix II(G))

8.1. *APPLICABILITY.*

Incorporate in all professional service agreements, construction contracts and subcontracts that exceed \$100,000. (Note that the 2 CFR 200 will raise this level to \$150,000)

8.2. *MANDATORY CONTRACT LANGUAGE.*

CLEAN AIR AND WATER POLLUTION CONTROL

Contractors and subcontractors agree:

1. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;
2. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection,

monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;

3. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;
4. To include or cause to be included in any construction contract or subcontract which exceeds \$100,000 the aforementioned criteria and requirements.

**9. CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS.
(Reference: 2 CFR § 200 Appendix II (E))**

9.1. *APPLICABILITY.*

Incorporate in all professional service agreements, construction contracts and subcontracts that exceed \$100,000.

9.2. *MANDATORY CONTRACT LANGUAGE.*

CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

1. Overtime Requirements.
No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. Violation; Liability for Unpaid Wages; Liquidated Damages.
In the event of any violation of the clause set forth in paragraph (1) above, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 above, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 above.
3. Withholding for Unpaid Wages and Liquidated Damages.
The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract

or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 above.

4. Subcontractors.

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section.

10. COPELAND “ANTI-KICKBACK” ACT

(Reference: 2 CFR § 200 Appendix II(D), 29 CFR parts 3 & 5)

10.1. *APPLICABILITY.*

Incorporate into all construction contracts and subcontracts that exceed \$2,000 and are financed under the AIP program.

10.2. *MANDATORY CONTRACT LANGUAGE.*

The United States Department of Labor Wage and Hours Division oversees the Copeland “Anti-Kickback” Act requirements. All contracts and subcontracts must meet comply with the Occupational Safety and Health Act of 1970.

(United States Department of Labor Wage and Hours Division can provide information regarding any specific clauses or assurances pertaining to the Copeland “Anti-Kickback” Act requirements required to be inserted in solicitations, contracts or subcontracts.)

TITLE 18, U.S.C.

Sec. 874. Kickbacks from public works employees

Whoever, by force, intimidation, or threat of procuring dismissal from employment, or by any other manner whatsoever induces any person employed in the construction, prosecution, completion or repair of any public building, public work, or building or work financed in whole or in part by loans or grants from the United States, to give up any part of the compensation to which he is entitled under his contract of employment, shall be fined under this title or imprisoned not more than five years, or both.

TITLE 40, U.S.C.

Sec. 3145. Regulations governing contractors and subcontractors

- (a) In General.—The Secretary of Labor shall prescribe reasonable regulations for contractors and subcontractors engaged in constructing, carrying out, completing, or repairing public buildings, public works, or buildings or works that at least partly are financed by a loan or grant from the Federal Government. The regulations shall include a provision that each contractor and subcontractor each week must furnish a statement on the wages paid each employee during the prior week.

(b) Application.—Section 1001 of title 18 applies to the statements.

11. DAVIS-BACON REQUIREMENTS.
(Reference: 2 CFR § 200 Appendix II(D))

11.1. *APPLICABILITY.*

Incorporate into all construction contracts and subcontracts that exceed \$2,000 and are financed under the AIP program.

11.2. *MANDATORY CONTRACT LANGUAGE.*

The mandatory language is as follows:

DAVIS-BACON REQUIREMENTS

1. Minimum Wages

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

- (ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional

classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.
- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2 Withholding.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour

Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
 - (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;
 - (2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them

available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

- (i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every

trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance With Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in

29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

- (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
- (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

12. DEBARMENT AND SUSPENSION (NON-PROCUREMENT).

(Reference: 2 CFR part 180 (Subpart C), 2 CFR part 1200, DOT Order 4200.5 DOT Suspension & Debarment Procedures & Ineligibility)

12.1. *APPLICABILITY.*

The contract agreement that ultimately results from this solicitation is a "covered transaction" as defined by Title 2 CFR Part 180. Bidder must certify at the time they submit their proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction. The bidder with the successful bid further agrees to comply with Title 2 CFR Part 1200 and Title 2 CFR Part 180, Subpart C by administering each lower tier subcontract that exceeds \$25,000 as a "covered transaction".

Incorporate in all contracts and subcontracts that exceed \$25,000.

12.2. *MANDATORY CONTRACT LANGUAGE.*

NOTE: Certifications are included in the PROPOSAL.

13. DISADVANTAGED BUSINESS ENTERPRISE.

(Reference: 49 CFR part 26)

13.1. *APPLICABILITY.*

The Disadvantaged Business Enterprise requirements found in 49 CFR part 26, apply to all AIP-funded projects and must be included in all contracts and subcontracts. This includes both project with contract goals and project relying on race/gender neutral means.

13.2. *MANDATORY CONTRACT LANGUAGE.*

The mandatory language that must be used on AIP funded project contracts is as follows. Other than to insert appropriate Sponsor information into the noted spaces, the Sponsor must not modify these contract clauses:

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 7 days from the receipt of each payment the prime contractor receives from Owner. The prime contractor agrees further to return retainage payments to each subcontractor within 7 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Owner. This clause applies to both DBE and non-DBE subcontractors.

The following language in this section was taken from various sections of 49 CFR Part 26 titled Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs. They are not intended to be all encompassing, nor a comprehensive reiteration of the regulation.

The bidder shall submit the Contractor's DBE Plan to the owner for review and approval. The Contractor's DBE Plan shall consist of the Contractor's DBE Plan Form, a DBE Letter of Intent Form for each DBE firm, a copy of the DBE's Evidence of Certification Status, and documented good faith efforts as described below. **SEE THE CONTRACTORS DBE PLAN FORM AND DBE LETTER OF INTENT FORM TO BE INCLUDED WITH THE BID.**

- A. The Sponsor has established a Disadvantaged Business Enterprise (DBE) program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 CFR Part 26. The Sponsor has received, or will receive, Federal financial assistance from the Department of Transportation, and as a condition of receiving this assistance, the Sponsor has signed an assurance that it will comply with 49 CFR Part 26.

It is the policy of the Sponsor to ensure that DBEs as defined in part 26, have an equal opportunity to receive and participate in DOT-assisted contracts. It is also the policy of the Sponsor:

1. To ensure nondiscrimination in the award and administration of DOT – assisted contracts;
2. To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts;
3. To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
4. To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
5. To help remove barriers to the participation of DBEs in DOT assisted contracts;
6. To assist the development of firms that can compete successfully in the market place outside the DBE Program.

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- B. There is no DBE project goal established for this project. At this time, the City of Fullerton will meet the DBE goal on federally assisted projects through race neutral measures.

This project is subject to Title 49, Code of Federal Regulations part 26 (49 CFR 26) entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." In order to ensure Caltrans achieves its federally mandated statewide overall DBE goal, the Agency encourages the participation of Disadvantaged Business Enterprises (DBEs), as defined in 49 CFR 26 in the performance of contracts financed in whole or in part with Federal Funds. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts. Bidders shall be fully informed in respect to the requirements of the DBE Regulations. The DBE Regulations in their entirety are incorporated herein by this reference.

The City of Fullerton supports the use of race neutral measures to facilitate participation by DBEs and other small businesses, and encourages prime contractors to subcontract portions of their work that they might otherwise perform with their own forces. The City of Fullerton has established overall DBE goals in accordance with 49 CFR Part 26 and the bidder will be required to report all DBE participation.

Caltrans has engaged the services of a contractor to provide supportive services to contractors and subcontractors to assist in obtaining DBE participation on federally funded construction projects. Bidders and potential subcontractors should check the Caltrans website at <http://www.dot.ca.gov/hq/bep> to verify the current availability of this service.

- C. The Sponsor will require the contractor to make good faith efforts to replace a DBE that is terminated or has otherwise failed to complete its work on a contract with another certified DBE, to the extent needed to meet the contract goal. The Sponsor will require the prime contractor to notify the DBE Liaison officer immediately of the DBE's inability or unwillingness to perform and provide reasonable documentation.

In this situation, the Sponsor will require the prime contractor to obtain prior approval of the substitute DBE and to provide copies of new or amended subcontracts, or documentation of good faith efforts.

If the contractor fails or refuses to comply in the time specified, the Sponsor will issue an order stopping all or part of payment/work until satisfactory action has been taken. If the contractor still fails to comply, the contracting officer may issue a termination for default proceeding.

- D. The sponsor will require the contractor to maintain records and documents of payments to DBEs for three years following the performance of the contract. These records will be made available for inspection upon request by any authorized representative of the Sponsor or DOT. This reporting requirement also extends to any certified DBE subcontractor.

The Sponsor will perform interim audits of contract payments to DBEs. The audit will review payments to DBE subcontractors to ensure that the actual amount

paid to DBE subcontractors equals or exceeds the dollar amounts stated in The Contractors DBE Plan.

At completion of work, the contractor will report to the Sponsor the actual amount paid to each DBE firm utilized for this contract. **SEE THE DBE PARTICIPATION SUMMARY FORM FOLLOWING THIS SECTION.**

E. Fostering Small Business Participation (49 CFR Part 26, §26.39).

In accordance with 49 CFR Part 26.39, the Sponsor has created contracting requirements to facilitate competition by small business concerns, taking all reasonable steps to eliminate obstacles to their participation, including unnecessary and unjustified bundling of contract requirements that may preclude small business participation in procurements as prime contractors or subcontractors. For clarification purposes, 49 CFR Part 26.5 states “Small business concern means, with respect to firms seeking to participate as DBEs in DOT-assisted contracts, a small business concern as defined pursuant to section 3 of the Small Business Act and Small Business Administration regulations implementing it (13 CFR part 121) that also does not exceed the cap on average annual gross receipts specified in §26.65(b).”

The Sponsor has determined that the following opportunities are available for the Contractor to utilize small business concerns either through subcontracting construction work items or professional services work items:

- Portable bathroom facilities
- Barricades, warning lights, hazard markings, construction traffic signs
- Trucking of granular materials
- Construction material suppliers
- Electrical material suppliers
- Survey and stakeout
- Equipment rentals
- Temporary construction light unit rentals
- Electrical subcontracts

The Contractor may use some or all of the above opportunities to foster small business participation, and may include opportunities which are not listed.

14. ENERGY CONSERVATION REQUIREMENTS. **(Reference 2 CFR § 200 Appendix II(H))**

14.1. *APPLICABILITY.*

The Energy Conservation Requirements found in 2 CFR § 200 Appendix II(H), apply to all AIP-funded construction and equipment projects and must be included in all contracts and subcontracts.

14.2. *MANDATORY CONTRACT LANGUAGE.*

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 2 CFR § 200 Appendix II(H):

ENERGY CONSERVATION REQUIREMENTS

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).

15. EQUAL OPPORTUNITY CLAUSE AND SPECIFICATIONS. (Reference 41 CFR § 60-1.4, Executive Order 11246)

15.1. *APPLICABILITY.*

Incorporate contract language and specifications into all construction contracts and subcontracts that exceed \$10,000 and are financed under the AIP program.

15.2. *MANDATORY CONTRACT LANGUAGE.*

41 CFR § 60-1.4 provides the mandatory contract language, but allows such necessary changes in language to be made to identify properly the parties and their undertakings. 41 CFR § 60-4.3 provides the mandatory specifications.

EQUAL OPPORTUNITY CLAUSE

During the performance of this contract, the contractor agrees as follows:

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and

accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
 - d. "Minority" includes:
 - (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

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2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
 3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The contractor shall implement the specific affirmative action standards provided in paragraphs 18.7a through 18.7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
 5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.
 6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.
 7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

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- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained

identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (18.7a through 18.7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 18.7a through 18.7p of

these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.
10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 18.7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

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15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
16. Standard Form 100, Employer Information Report, must be filed by:
- A. All private employers who are:
 - (1) subject to Title VII of the Civil Rights Act of 1964 (as amended by the Equal Employment Opportunity Act of 1972) with 100 or more employees EXCLUDING State and local governments, primary and secondary school systems, institutions of higher education, Indian tribes and tax-exempt private membership clubs other than labor organizations; OR
 - (2) SUBJECT TO Title VII who have fewer than 100 employees if the company is owned or affiliated with another company, or there is centralized ownership, control or management (such as central control of personnel policies and labor relations) so that the group legally constitutes a single enterprise, and the entire enterprise employs a total of 100 or more employees.
 - B. All federal contractors (private employers), who:
 - (1) are not exempt as provided for by 41 CFR 60-1.5,
 - (2) have 50 or more employees, and
 - (a) are prime contractors or first-tier subcontractors, and have a contract, subcontract, or purchase order amounting to \$50,000 or more; or
 - (b) serve as a depository of Government funds in any amount, or
 - (c) is a financial institution which is an issuing and paying agent for U.S. Savings Bonds and Notes.
 - C. Standard Form 100 must be filed with the Joint Reporting Committee no later than September 30. Standard Form 100 is normally furnished to employers annually based on a mailing list maintained by the Joint Reporting Committee. In the event a Contractor has not received the form, it may be obtained from the Joint Reporting Committee, Post Office Box 779, Norfolk, Virginia 23501, telephone (757) 461-1213.

16. FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)
(Reference: 29 USC § 201, et seq.)

16.1. APPLICABILITY.

The federal minimum wage provisions are contained in the Fair Labor Standards Act (FLSA) which is administered by the United States Department of Labor Wage and Hour Division. All contracts and subcontracts must meet comply with the FLSA, including the recordkeeping standards of the Act.

16.2. MANDATORY CONTRACT LANGUAGE.

All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Federal Fair Labor Standards Act (29 USC 201)	U.S. Department of Labor – Wage and Hour Division

17. LOBBYING AND INFLUENCING FEDERAL EMPLOYEES.
(Reference: 49 CFR part 20, Appendix A)

17.1. APPLICABILITY.

The Lobbying and Influencing Federal Employees prohibition found in 49 CFR part 20, Appendix A, applies to all AIP-funded projects and must be included in all contracts and subcontracts.

17.2. MANDATORY CONTRACT LANGUAGE.

The mandatory language that must be used on AIP funded project contracts is as follows:

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the bidder or offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

18. NONSEGREGATED FACILITIES REQUIREMENT.
(Reference: 41 CFR § 60-1.8)

18.1. *APPLICABILITY.*

Incorporate in all construction contracts and subcontracts that exceed \$10,000. The notices must be placed within the solicitation for proposals. The actual certification must be incorporated in the contract agreement.

18.2. *MANDATORY CONTRACT LANGUAGE AND NOTICE.*

NOTE: Certifications are included in the PROPOSAL.

19. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970
(Reference 20 CFR part 1910)

19.1. *APPLICABILITY.*

The United States Department of Labor Occupational Safety & Health Administration (OSHA) oversees the workplace health and safety standards wage provisions from the Occupational Safety and Health Act of 1970. All contracts and subcontracts must meet comply with the Occupational Safety and Health Act of 1970.

19.2. *MANDATORY CONTRACT LANGUAGE.*

All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Occupational Safety and Health Act of 1970 (20 CFR Part 1910)	U.S. Department of Labor – Occupational Safety and Health Administration

20. RIGHT TO INVENTIONS.
(Reference 2 CFR § 200 Appendix II(F))

20.1. *APPLICABILITY.*

The requirement for rights to inventions and materials found in 2 CFR § 200 Appendix II(F) applies to all AIP-funded projects and must be included in all contracts and subcontracts.

20.2. *MANDATORY CONTRACT LANGUAGE.*

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 2 CFR § 200 Appendix II(F).

RIGHTS TO INVENTIONS

All rights to inventions and materials generated under this contract are subject to requirements and regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed.

21. TERMINATION OF CONTRACT.
(Reference 2 CFR § 200 Appendix II(B))

21.1. APPLICABILITY.

Incorporate in all contracts and subcontracts that exceed \$10,000.

21.2. MANDATORY CONTRACT LANGUAGE.

TERMINATION OF CONTRACT

- a. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services must be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
- b. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price will be made, but no amount will be allowed for anticipated profit on unperformed services.
- c. If the termination is due to failure to fulfill the contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the contractor is liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
- d. If, after notice of termination for failure to fulfill contract obligations, it is determined that the contractor had not so failed, the termination will be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price will be made as provided in paragraph 2 of this clause.
- e. The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

22. TRADE RESTRICTION
(Reference: 49 CFR part 30)

22.1. APPLICABILITY.

The trade restriction clause applies to all AIP-funded projects and must be included in all contracts and subcontracts.

22.2. MANDATORY CONTRACT LANGUAGE.

The mandatory language is as follows:

TRADE RESTRICTION CLAUSE

The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.

Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

23. TEXTING WHEN DRIVING

(References: Executive Order 13513, and DOT Order 3902.10)

23.1. APPLICABILITY.

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

23.2. MANDATORY CONTRACT LANGUAGE.

By adopting the Applicability Language, the following contract language will meet the intent and requirement for Texting When Driving:

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

The Contractor must promote policies and initiatives for employees and other work personnel that decrease crashes by distracted drivers, including policies to ban text messaging while driving. The Contractor must include these policies in each third party subcontract involved on this project.

24. VETERAN'S PREFERENCE

(Reference: 49 USC § 47112(c))

24.1. APPLICABILITY.

The Veteran's preference clause found in 49 USC § 47112(c) applies to all AIP-funded projects and must be included in all contracts and subcontracts that involve labor

24.2. MANDATORY CONTRACT LANGUAGE.

The regulation does not prescribe mandatory language, however the following clause represents sample language that meets the intent of 49 USC § 47112(c) is as follows:

VETERAN'S PREFERENCE

In the employment of labor (except in executive, administrative, and supervisory positions), preference must be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Title 49 United States Code, Section 47112. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

70-22 CALTRANS standard specifications (section 7 selections) for California state contracts (Appendix A).

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licensor, licensee, lessor, lessee or any other party):

In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

This contract shall be governed by the laws of the State of California except where the Federal supremacy clause requires otherwise.

7-1.01 Laws to be Observed. The Contractor shall keep fully informed of all existing and future State and Federal laws and county and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Contractor shall at all times observe and comply with, and shall cause all the Contractor's agents and employees to observe and comply with all existing and future laws, ordinances, regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority over the work; and shall protect and indemnify the State of California, and all officers and employees thereof connected with the work, including but not limited to the Director and the Engineer, against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree, whether by the Contractor or the Contractor's employees. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or contract for the work in relation to any law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the Engineer in writing.

7-1.01A Labor Code Requirements. Attention is directed to the following requirements of the Labor Code:

7-1.01A(1) Hours of Labor. Eight hours labor constitutes a legal day's work. The Contractor or any subcontractor under the Contractor shall forfeit, as a penalty to the State of California, twenty-five dollars (\$25) for each worker employed in the execution of the contract by the respective Contractor or subcontractor for each calendar day during which that worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the requirements of the Labor Code, and in particular, Section 1810 to Section 1815, thereof, inclusive, except that work performed by employees of Contractors in excess of 8 hours per day, and 40 hours during any one week, shall be permitted upon compensation for all hours worked in excess of 8 hours per day at not less than one and one-half times the basic rate of pay, as provided in Section 1815 thereof.

7-1.01A(2) Prevailing Wage. The Contractor and any subcontractor under the Contractor shall comply with Labor Code Sections 1774 and 1775. Pursuant to Section 1775, the Contractor and any subcontractor under the Contractor shall forfeit to the State or political subdivision on whose behalf the contract is made or awarded a penalty of not more than fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the

prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for any public work done under the contract by the Contractor or by any subcontractor under the Contractor in violation of the requirements of the Labor Code and in particular, Labor Code Sections 1770 to 1780, inclusive. The amount of this forfeiture shall be determined by the Labor Commissioner and shall be based on consideration of the mistake, inadvertence, or neglect of the Contractor or subcontractor in failing to pay the correct rate of prevailing wages, or the previous record of the Contractor or subcontractor in meeting their respective prevailing wage obligations, or the willful failure by the Contractor or subcontractor to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the Contractor or subcontractor had knowledge of the obligations under the Labor Code. In addition to the penalty and pursuant to Labor Code Section 1775, the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor or subcontractor. If a worker employed by a subcontractor on a public works project is not paid the general prevailing per diem wages by the subcontractor, the prime contractor of the project is not liable for the penalties described above unless the prime contractor had knowledge of that failure of the subcontractor to pay the specified prevailing rate of wages to those workers or unless the prime contractor fails to comply with all of the following requirements:

- (1) The contract executed between the contractor and the subcontractor for the performance of work on the public works project shall include a copy of the requirements in Sections 1771, 1775, 1776, 1777.5, 1813 and 1815 of the Labor Code.
- (2) The contractor shall monitor the payment of the specified general prevailing rate of per diem wages by the subcontractor to the employees, by periodic review of the certified payroll records of the subcontractor.
- (3) Upon becoming aware of the subcontractor's failure to pay the specified prevailing rate of wages to the subcontractor's workers, the contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project.
- (4) Prior to making final payment to the subcontractor for work performed on the public works project, the contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the specified general prevailing rate of per diem wages to the subcontractor's employees on the public works project and any amounts due pursuant to Section 1813 of the Labor Code.

Pursuant to Section 1775 of the Labor Code, the Division of Labor Standards Enforcement shall notify the Contractor on a public works project within 15 days of the receipt by the Division of Labor Standards Enforcement of a complaint of the failure of a subcontractor on that public works project to pay workers the general prevailing rate of per diem wages. If the Division of Labor Standards Enforcement determines that employees of a subcontractor were

not paid the general prevailing rate of per diem wages and if the Department did not retain sufficient money under the contract to pay those employees the balance of wages owed under the general prevailing rate of per diem wages, the contractor shall withhold an amount of moneys due the subcontractor sufficient to pay those employees the general prevailing rate of per diem wages if requested by the Division of Labor Standards Enforcement. The Contractor shall pay any money retained from and owed to a subcontractor upon receipt of notification by the Division of Labor Standards Enforcement that the wage complaint has been resolved. If notice of the resolution of the wage complaint has not been received by the Contractor within 180 days of the filing of a valid notice of completion or acceptance of the public works project, whichever occurs later, the Contractor shall pay all moneys retained from the subcontractor to the Department. These moneys shall be retained by the Department pending the final decision of an enforcement action.

Pursuant to the requirements in Section 1773 of the Labor Code, the Department has obtained the general prevailing rate of wages (which rate includes employer payments for health and welfare, pension, vacation, travel time and subsistence pay as provided for in Section 1773.8 of the Labor Code, apprenticeship or other training programs authorized by Section 3093 of the Labor Code, and similar purposes) applicable to the work to be done, for straight time, overtime, Saturday, Sunday and holiday work. The holiday wage rate listed shall be applicable to all holidays recognized in the collective bargaining agreement of the particular craft, classification or type of workmen concerned.

The general prevailing wage rates and any applicable changes to these wage rates are available at the Labor Compliance Office at the offices of the District Director of Transportation for the district in which the work is situated. General prevailing wage rates are also available from the California Department of Industrial Relations' Internet Web Site at:
<http://www.dir.ca.gov>.

The wage rates determined by the Director of Industrial Relations for the project refer to expiration dates. Prevailing wage determinations with a single asterisk after the expiration date are in effect on the date of advertisement for bids and are good for the life of the contract. Prevailing wage determinations with double asterisks after the expiration date indicate that the wage rate to be paid for work performed after this date has been determined. If work is to extend past this date, the new rate shall be paid and incorporated in the contract. The Contractor shall contact the Department of Industrial Relations as indicated in the wage rate determinations to obtain predetermined wage changes.

Pursuant to Section 1773.2 of the Labor Code, general prevailing wage rates shall be posted by the Contractor at a prominent place at the site of the work.

Changes in general prevailing wage determinations which conform to Labor Code Section 1773.6 and Title 8 California Code of Regulations Section 16204 shall apply to the project when issued by the Director of Industrial Relations at least 10 days prior to the date of the Notice to Contractors for the project.

The State will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining the bid, and will not under any circumstances be considered as the basis of a claim against the State on the contract.

7-1.01A(2)(a) Travel and Subsistence Payments. Attention is directed to the requirements in Section 1773.8 of the Labor Code. The Contractor shall make travel and subsistence payments to each workman, needed to execute the work, in conformance with the requirements in Labor Code Section 1773.8.

7-1.01A(3) Payroll Records. Attention is directed to the requirements in Labor Code Section 1776, a portion of which is quoted below. Regulations implementing Labor Code Section 1776 are located in Sections 16016 through 16019 and Sections 16207.10 through 16207.19 of Title 8, California Code of Regulations.

(a) Each contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

(1) The information contained in the payroll record is true and correct.

(2) The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis:

(1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

(2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.

(3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract, the Division of

Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the contractor.

(c) The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.

(d) A contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

(e) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in a manner so as to prevent disclosure of an individual's name, address and social security number. The name and address of the contractor awarded the contract or the subcontractor performing the contract shall not be marked or obliterated.

(f) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

(g) The contractor or subcontractor shall have 10 days in which to comply subsequent to receipt of a written notice requesting the records enumerated in subdivision (a). In the event that the contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

The penalties specified in subdivision (g) of Labor Code Section 1776 for noncompliance with the requirements in Section 1776 may be deducted from any moneys due or which may become due to the Contractor.

A copy of all payrolls shall be submitted weekly to the Engineer. Payrolls shall contain the full name, address and social security number of each employee, the employee's correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. They shall also indicate apprentices and

ratio of apprentices to journeymen. The employee's address and social security number need only appear on the first payroll on which that name appears. The payroll shall be accompanied by a "Statement of Compliance" signed by the employer or the employer's agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those required by the contract. The "Statement of Compliance" shall be on forms furnished by the Department or on any form with identical wording. The Contractor shall be responsible for the submission of copies of payrolls of all subcontractors.

If by the 15th of the month, the Contractor has not submitted satisfactory payrolls for all work performed during the monthly period ending on or before the first of that month, the Department will retain an amount equal to 10 percent of the estimated value of the work performed (exclusive of Mobilization) during the month from the next monthly estimate, except that this retention shall not exceed \$10,000 nor be less than \$1,000. Retentions for failure to submit satisfactory payrolls shall be additional to all other retentions provided for in the contract. The retention for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory payrolls for which the retention was made are submitted.

The Contractor and each subcontractor shall preserve their payroll records for a period of 3 years from the date of completion of the contract.

7-1.01A(4) Labor Nondiscrimination. Attention is directed to Section 1735 of the Labor Code, which reads as follows:

"No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, or sex of such persons, except as provided in Section 12940 of the Government Code, and every contractor for public works violating this section is subject to all the penalties imposed for a violation of this chapter."

Attention is directed to the following "Nondiscrimination Clause" that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations.

"NONDISCRIMINATION CLAUSE"

1. During the performance of this contract, contractor and its subcontractors shall not unlawfully discriminate against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age (over 40) or sex. Contractors and subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination. Contractors and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) and the

applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12990, set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this contract by reference and made a part hereof as if set forth in full. Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

2. This Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

STANDARD CALIFORNIA NONDISCRIMINATION CONSTRUCTION CONTRACT SPECIFICATIONS (GOV. CODE, SECTION 12990).

These specifications are applicable to all state contractors and subcontractors having a construction contract or subcontract of \$5,000, or more.

1. As used in the specifications:

a. "Administrator" means Administrator, Office of Compliance Programs, California Department of Fair Employment and Housing, or any person to whom the Administrator delegates authority;

b. "Minority" includes:

(i) Black (all persons having primary origins in any of the black racial groups of Africa, but not of Hispanic origin);

(ii) Hispanic (all persons of primary culture or origin in Mexico, Puerto Rico, Cuba, Central or South America or other Spanish derived culture or origin regardless of race);

(iii) Asian / Pacific Islander (all persons having primary origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent or the Pacific Islands); and

(iv) American Indian / Alaskan Native (all persons having primary origins in any of the original peoples of North America and who maintain culture identification through tribal affiliation or community recognition).

2. Whenever the contractor or any subcontractor subcontracts a portion of the work, it shall physically include in each subcontract of \$5,000 or more the nondiscrimination clause in this contract directly or through incorporation by reference. Any subcontract for work involving a construction trade shall also include the Standard California Construction Contract Specifications, either directly or through incorporation by reference.

3. The contractor shall implement the specific nondiscrimination standards provided in paragraph 6(a) through (e) of these specifications.

4. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the contractor's obligations under these specifications, Government Code, Section 12990, or the regulations promulgated pursuant thereto.

5. In order for the nonworking training hours of apprentices and trainees to be counted, such apprentices and trainees must be employed by the contractor during the training period, and the contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor or the California Department of Industrial Relations.

6. The contractor shall take specific actions to implement its nondiscrimination program. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor must be able to demonstrate fully its efforts under Steps a. through e. below:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and at all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the contractor's obligations to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Provide written notification within seven days to the director of DFEH when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

c. Disseminate the Contractor's equal employment opportunity policy by providing notice of the policy to unions and training, recruitment and outreach programs and requesting their cooperation in assisting the Contractor to meet its obligations; and by posting the company policy on bulletin boards accessible to all employees at each location where construction work is performed.

d. Ensure all personnel making management and employment decisions regarding hiring, assignment, layoff, termination, conditions of work, training, rates of pay or other employment

decisions, including all supervisory personnel, superintendents, general foremen, on-site foremen, etc., are aware of the Contractor's equal employment opportunity policy and obligations, and discharge their responsibilities accordingly.

e. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the equal employment opportunity policy and the Contractor's obligations under these specifications are being carried out.

7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling their equal employment opportunity obligations. The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's.

8. The Contractor is required to provide equal employment opportunity for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Fair Employment and Housing Act (Gov. Code, Section 12990 et seq.) if a particular group is employed in a substantially disparate manner.

9. Establishment and implementation of a bona fide affirmative action plan pursuant to Section 8104 (b) of this Chapter shall create a rebuttal presumption that a contractor is in compliance with the requirements of Section 12990 of the Government Code and its implementing regulations.

10. The Contractor shall not use the nondiscrimination standards to discriminate against any person because of race, color, religion, sex, national origin, ancestry, physical handicap, medical condition, marital status or age over 40.

11. The Contractor shall not enter into any subcontract with any person or firm decertified from state contracts pursuant to Government Code Section 12990.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the nondiscrimination clause, including suspension, termination and cancellation of existing

subcontracts as may be imposed or ordered pursuant to Government Code Section 12990 and its implementing regulations by the awarding agency. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Government Code Section 12990.

13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company equal employment opportunity policy is being carried out, to submit reports relating to the provisions hereof as may be required by OCP and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status, (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in any easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records. NOTE: Authority cited: Sections 12935(a) and 12990(d), Government Code. References: Section 12990, Government Code."

7-1.01A(5) Apprentices. Attention is directed to Sections 1777.5, 1777.6 and 1777.7 of the California Labor Code and Title 8, California Code of Regulations Section 200 et seq. To ensure compliance and complete understanding of the law regarding apprentices, and specifically the required ratio thereunder, each contractor or subcontractor should, where some question exists, contact the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, CA 94102, or one of its branch offices prior to commencement of work on the public works contract. Responsibility for compliance with this section lies with the Contractor.

It is State policy to encourage the employment and training of apprentices on public works contracts as may be permitted under local apprenticeship standards.

7-1.01A(6) Workers' Compensation. Pursuant to the requirements in Section 1860 of the Labor Code, the Contractor will be required to secure the payment of workers' compensation to the Contractor's employees in conformance with the requirements in Section 3700 of the Labor Code.

Prior to the commencement of work, the Contractor shall sign and file with the Engineer a certification in the following form:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract."

This certification is included in the contract, and signature and return of the contract shall constitute signing and filing of the certificate.

7-1.01A(7) Suits to Recover Penalties and Forfeitures. Attention is directed to Sections 1730 to 1733, inclusive, of the Labor Code concerning suits to recover amounts withheld from payment for failure to comply with requirements of the Labor Code or contract provisions based on those laws.

Those sections provide that a suit on the contract for alleged breach thereof in not making the payment is the exclusive remedy of the Contractor or the Contractor's assignees with reference to amounts withheld for those penalties or forfeitures; and that the suit must be commenced and actual notice thereof received by the awarding authority prior to 90 days after completion of the contract and the formal acceptance of the job.

Submission of a claim under Section 50-16, "Claims for Adjustment and Disputes," for the amounts withheld from payment for those penalties and forfeitures is not a prerequisite for those suits, and these claims will not be considered.

7-1.01B Fair Labor Standards Act. The attention of bidders is invited to the fact that the State of California, Department of Transportation, has been advised by the Wage and Hour Division, U.S. Department of Labor, that contractors engaged in highway construction work are required to meet the provisions of the Fair Labor Standards Act of 1938 and as amended (52 Stat. 1060).

7-1.01C Contractor's Licensing Laws. Attention is directed to the provisions of Chapter 9 of Division 3 of the Business and Professions Code concerning the licensing of contractors.

All bidders and contractors shall be licensed in accordance with the laws of this State and any bidder or contractor not so licensed is subject to the penalties imposed by those laws.

Attention is also directed to the requirements in Public Contract Code Section 10164. In all projects where Federal funds are involved, the Contractor shall be properly licensed at the time the contract is awarded.

7-1.01D Vehicle Code. Pursuant to the authority contained in Vehicle Code Section 591, the Department has determined that within those areas that are within the limits of the project and are open to public traffic, the Contractor shall comply with all the requirements set forth in Divisions 11, 12, 13, 14 and 15 of the Vehicle Code.

Attention is directed to the statement in Vehicle Code Section 591 that this section shall not relieve the Contractor or any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of the Contractor's equipment and the protection of the public from injury and damage from the Contractor's equipment.

7-1.01E Trench Safety. Attention is directed to the requirements in Section 6705 of the Labor Code concerning trench excavation safety plans.

7-1.01F Air Pollution Control. The Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances and statutes, specified in Section 11017 of the Government Code.

Unless otherwise provided in the special provisions, material to be disposed of shall not be burned, either inside or outside the highway right of way.

7-1.01G Water Pollution. The Contractor shall exercise every reasonable precaution to protect streams, lakes, reservoirs, bays, and coastal waters from pollution with fuels, oils, bitumens, calcium chloride and other harmful materials and shall conduct and schedule operations so as to avoid or minimize muddying and silting of streams, lakes, reservoirs, bays and coastal waters. Care shall be exercised to preserve roadside vegetation beyond the limits of construction.

Water pollution control work is intended to provide prevention, control and abatement of water pollution to streams, waterways and other bodies of water, and shall consist of constructing those facilities which may be shown on the plans, specified herein or in the special provisions, or directed by the Engineer.

In order to provide effective and continuous control of water pollution it may be necessary for the Contractor to perform the contract work in small or multiple units, on an out of phase schedule, and with modified construction procedures. The Contractor shall provide temporary water pollution control measures, including but not limited to, dikes, basins, ditches, and applying straw and seed, which become necessary as a result of the Contractor's operations. The Contractor shall coordinate water pollution control work with all other work done on the contract.

Before starting any work on the project, the Contractor shall submit, for acceptance by the Engineer, a program to control water pollution effectively during construction of the project. The program shall show the schedule for the erosion control work included in the contract and for all water pollution control measures which the Contractor proposes to take in connection with construction of the project to minimize the effects of the operations upon adjacent streams and other bodies of water. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the Engineer, until the program has been accepted.

If the measures being taken by the Contractor are inadequate to control water pollution effectively, the Engineer may direct the Contractor to revise the operations and the water pollution control program. The directions will be in writing and will specify the items of work for which the Contractor's water pollution control measures are inadequate. No further work shall be performed on those items until the water pollution control measures are adequate and, if also required, a revised water pollution control program has been accepted.

The Engineer will notify the Contractor of the acceptance or rejection of any submitted or revised water pollution control program in not more than 5 working days.

The State will not be liable to the Contractor for failure to accept all or any portion of an originally submitted or revised water pollution control program, nor for any delays to the work due to the Contractor's failure to submit an acceptable water pollution control program.

The Contractor may request the Engineer to waive the requirement for submission of a written program for control of water pollution when the nature of the Contractor's operation is such that erosion is not likely to occur. Waiver of this requirement will not relieve the Contractor from responsibility for compliance with the other provisions of this section. Waiver of the requirement for a written program for control of water pollution will not preclude requiring submittal of a written program at a later time if the Engineer deems it necessary because of the effect of the Contractor's operations.

Unless otherwise approved by the Engineer in writing, the Contractor shall not expose a total area of erodible earth material, which may cause water pollution, exceeding 750,000 square feet for each separate location, operation or spread of equipment before either temporary or permanent erosion control measures are accomplished.

Where erosion which will cause water pollution is probable due to the nature of the material or the season of the year, the Contractor's operations shall be so scheduled that permanent erosion control features will be installed concurrently with or immediately following grading operations.

Nothing in the terms of the contract nor in the provisions in this Section 7-1.01G shall relieve the Contractor of the responsibility for compliance with Sections 5650 and 12015 of the Fish and Game Code, or other applicable statutes relating to prevention or abatement of water pollution.

When borrow material is obtained from other than commercially operated sources, erosion of the borrow site during and after completion of the work shall not result in water pollution. The material source shall be finished, where practicable, so that water will not collect or stand therein.

The requirements of this section shall apply to all work performed under the contract and to all non-commercially operated borrow or disposal sites used for the project.

The Contractor shall also conform to the following provisions:

1. Where working areas encroach on live streams, barriers adequate to prevent the flow of muddy water into streams shall be constructed and maintained between working areas and streams, and during construction of the barriers, muddying of streams shall be held to a minimum.
2. Removal of material from beneath a flowing stream shall not be commenced until adequate means, such as a bypass channel, are provided to carry the stream free from mud or silt around the removal operations.
3. Should the Contractor's operations require transportation of materials across live streams, the operations shall be conducted without muddying the stream. Mechanized equipment shall not be operated in the stream channels

of the live streams except as may be necessary to construct crossings or barriers and fills at channel changes.

4. Water containing mud or silt from aggregate washing or other operations shall be treated by filtration, or retention in a settling pond, or ponds, adequate to prevent muddy water from entering live streams.

5. Oily or greasy substances originating from the Contractor's operations shall not be allowed to enter or be placed where they will later enter a live stream.

6. Portland cement or fresh portland cement concrete shall not be allowed to enter flowing water of streams.

7. When operations are completed, the flow of streams shall be returned as nearly as possible to a meandering thread without creating possible future bank erosion, and settling pond sites shall be graded so they will drain and will blend in with the surrounding terrain.

8. Material derived from roadway work shall not be deposited in a live stream channel where it could be washed away by high stream flows.

9. Where there is possible migration of anadromous fish in streams affected by construction on the project, the Contractor shall conduct work operations so as to allow free passage of the migratory fish.

Compliance with the provisions in this section shall in no way relieve the Contractor from the responsibility to comply with the other provisions of the contract, in particular the responsibility for damage and for preservation of property.

Full compensation for conforming to the provisions in this section shall be considered as included in the prices paid for the various items of work and no additional compensation will be allowed therefor.

7-1.01H Use of Pesticides. The Contractor shall comply with all rules and regulations of the Department of Food and Agriculture, the Department of Health, the Department of Industrial Relations and all other agencies which govern the use of pesticides required in the performance of the work on the contract.

Pesticides shall include but shall not be limited to herbicides, insecticides, fungicides, rodenticides, germicides, nematocides, bactericides, inhibitors, fumigants, defoliants, desiccants, soil sterilants and repellents.

Any substance or mixture of substances intended for preventing, repelling, mitigating, or destroying weeds, insects, diseases, rodents, or nematodes and any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant shall be considered a pesticide.

7-1.01I Sound Control Requirements. The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without the muffler.

7-1.01J Assignment of Antitrust Actions. The Contractor's attention is directed to the following requirements in Public Contract Code 7103.5 and Government Code Sections 4553 and 4554, which shall be applicable to the Contractor and the Contractor's subcontractors:

"In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.

"If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

"Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action."

7-1.02 Load limitations. Unless expressly permitted in the special provisions, construction equipment or vehicles of any kind which, laden or unladen, exceed the maximum weight limitations set forth in Division 15 of the Vehicle Code, shall not be operated over completed or existing treated bases, surfacing, pavement or structures in any areas within the limits of the project, whether or not the area is subject to weight limitations under Section 7-1.01D, "Vehicle Code," except as hereinafter provided in this Section 7-1.02.

After application of the curing seal, no traffic or Contractor's equipment will be permitted on cement treated base or lean concrete base for a period of 72 hours. After 72 hours, traffic and equipment operated on the base shall be limited to that used in paving operations and placing additional layers of cement treated base. No traffic or Contractor's equipment will be permitted on treated permeable base except for that equipment required to place the permeable base and the subsequent layer of pavement. Trucks used to haul treated base, Portland

cement concrete, or asphalt concrete shall enter onto the base to dump at the nearest practical entry point ahead of spreading equipment. Empty haul trucks shall exit from the base at the nearest practical exit point. Entry and exit points shall not be more than 1,000 feet ahead of spreading equipment except in locations where specifications prohibit operation of trucks outside the area occupied by the base or where steep slopes or other conditions preclude safe operation of hauling equipment. In those locations, entry and exit points shall be established at the nearest point ahead of spreading equipment permitted by specifications and allowing safe operation of hauling equipment. Damage to curing seal or base shall be repaired promptly by the Contractor, at the Contractor's expense, as directed by the Engineer.

Within the limits of the project and subject to the control of the Engineer, and provided that the Contractor, at the Contractor's expense, shall provide such protective measures as are deemed necessary by the Engineer and shall repair any damage caused by the operations, the Contractor will be permitted to:

(1) Make transverse crossings of those portions of an existing public road or street that are within the highway right of way, with construction equipment which exceeds the size or weight limitations set forth in Division 15 of the Vehicle Code.

(2) Make transverse crossings of treated bases, surfacing or pavement which are under construction or which have been completed, with construction equipment which exceeds the size or weight limitations set forth in Division 15 of the Vehicle Code.

(3) Cross bridge structures that are not open to public traffic and which are designed for HS20-44 Live Loading (culverts and pipes excluded), with construction equipment which exceeds the size or weight limitations set forth in Division 15 of the Vehicle Code, but not exceeding the load limitations hereinafter specified, provided that the Contractor furnishes to the Engineer the dimensions and maximum axle loadings of equipment proposed for use on bridge structures:

(a) The maximum loading on bridge structures due to pneumatic-tired truck and trailer combinations shall not exceed (1) 28,000 pounds for single axles, (2) 48,000 pounds for tandem axles, nor (3) 60,000 pounds total gross load for single vehicles or 110,000 pounds total gross load for truck and trailer or semi-trailer combinations.

(b) The loading on bridge structures due to 2 and 3 axle pneumatic-tired earthmovers shall not exceed that shown in the following table.

Allowable Construction Loading On Bridges For 2 and 3 Axle Earthmovers	
Spacing of Bridge Girders (center to center in feet)	Maximum Axle Loading (in pounds)

4	28,000
5	29,000
6	30,000
7	32,000
8	34,000
9	37,000
10 and over	40,000

Minimum axle spacing:
For 3-axle earthmovers
Axles 1 to 2 = 8 feet
Axles 2 to 3 = 20 feet
For 2-axle earthmovers
Axles 1 to 2 = 20 feet

(4) Move equipment within the limits of the project over completed or existing base, surfacing, pavement and structures, whether or not open to the public, in accordance with the limitations and conditions in the "Permit Policy" of the Department of Transportation.

Within the limits of the project and subject to the condition that the Contractor shall repair, at the Contractor's expense, any damage caused thereby, the Contractor will be permitted to cross culverts and pipes with construction equipment which exceeds the size or weight limitations set forth in Division 15 of the Vehicle Code in accordance with the conditions set forth on the plans. If the conditions are not set forth on the plans, the provisions in the first paragraph in this Section 7-1.02 will apply.

Should the Contractor desire to increase the load carrying capacity of a structure or structures which are to be constructed as a part of the contract, in order to facilitate the Contractor's own operations, the Contractor may request the Engineer to consider redesigning the structure or structures. Proposals by the Contractor to increase the load carrying capacity of structures above 130,000 pounds per single axle or pair of axles less than 8 feet apart, or above 330,000 pounds total gross vehicle weight, will not be approved. The request shall include a description of the structure or structures involved and a detailed description of the overloads to be carried, the date the revised plans would be required, and a statement that the Contractor agrees to pay all costs involved in the strengthening of the structure or structures, including the cost of revised plans, and further that the Contractor agrees that no extension of time will be allowed by reason of any delay to the work which may be due to the alteration of the structure or structures. If the Engineer determines that strengthening the structure or structures will be permitted, the Engineer will inform the Contractor of the estimated cost of the alterations, including engineering, and the date that revised plans could be furnished. If the cost and date are satisfactory to the

Contractor, the Engineer will prepare a change order providing for the agreed upon alterations.

7-1.03 PAYMENT OF TAXES. The contract prices paid for the work shall include full compensation for all taxes which the Contractor is required to pay, whether imposed by Federal, State or local government, including, without being limited to, Federal excise tax. No tax exemption certificate nor any document designed to exempt the Contractor from payment of any tax will be furnished to the Contractor by the Department, as to any tax on labor, services, materials, transportation, or any other items furnished pursuant to the contract.

7-1.04 PERMITS AND LICENSES. The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incident to the due and lawful prosecution of the work.

The Environmental Quality Act (Public Resources Code, Sections 21000 to 21176, inclusive) may be applicable to permits, licenses and other authorizations which the Contractor must obtain from local agencies in connection with performing the work of the contract. The Contractor shall comply with the provisions of those statutes in obtaining the permits, licenses and other authorizations and they shall be obtained in sufficient time to prevent delays to the work.

In the event that the Department has obtained permits, licenses or other authorizations, applicable to the work, in conformance with the requirements in the Environmental Quality Act, the Contractor shall comply with the provisions of those permits, licenses and other authorizations.

7-1.05 PATENTS. The Contractor shall assume all costs arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work, and agrees to indemnify and save harmless the State of California, the Director, the Engineer, and their duly authorized representatives, from all suits at law, or actions of every nature for, or on account of the use of any patented materials, equipment, devices or processes.

7-1.06 SAFETY AND HEALTH PROVISIONS. The Contractor shall conform to all applicable occupational safety and health standards, rules, regulations and orders established by the State of California. Working areas utilized by the Contractor to perform work during the hours of darkness, shall be lighted to conform to the minimum illumination intensities established by California Division of Occupational Safety and Health Construction Safety Orders.

All lighting fixtures shall be mounted and directed in a manner precluding glare to approaching traffic.

Full compensation for conforming to the provisions in this section shall be considered as included in the contract prices paid for the various items of work involved and no separate payment will be made therefor.

7-1.07 (BLANK)

7-1.08 PUBLIC CONVENIENCE. This Section 7-1.08 defines the Contractor's responsibility with regard to convenience of the public and public traffic in connection with the Contractor's operations.

Attention is directed to Section 7-1.09, "Public Safety," for provisions relating to the Contractor's responsibility for the safety of the public. The provisions in Section 7-1.09 are in addition to the provisions in this Section 7-1.08, and the Contractor will not be relieved of the responsibilities as set forth in Section 7-1.09 by reason of conformance with any of the provisions in this Section 7-1.08.

The Contractor shall so conduct operations as to offer the least possible obstruction and inconvenience to the public and shall have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public.

Unless otherwise provided in the special provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible. Where possible, public traffic shall be routed on new or existing paved surfaces.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor at the Contractor's expense.

Existing traffic signals and highway lighting shall be kept in operation for the benefit of the traveling public during progress of the work, and other forces will continue routine maintenance of existing systems.

Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners.

Convenient access to driveways, houses, and buildings along the line of the work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition. When the abutting property owner's access across the right of way line is to be eliminated, or to be replaced under the contract by other access facilities, the existing access shall not be closed until the replacement access facilities are usable.

Roadway excavation and the construction of embankments shall be conducted in such a manner as to provide a reasonably smooth and even surface satisfactory for use by public traffic at all times; sufficient fill at culverts and bridges to permit traffic to cross shall be placed in advance of other grading operations; and if ordered by the Engineer roadway cuts shall be excavated in lifts and embankments constructed part width at a time, construction being alternated from one side to the other and traffic routed over the side opposite the one under construction. Culvert installation or culvert construction shall be conducted on but one-half the width of the traveled way at a time, and that portion of the traveled way being used by public traffic shall be kept open and unobstructed until the opposite side of the traveled way is ready for use by traffic.

Upon completion of rough grading at the grading plane, or placing any subsequent layer thereon, the surface of the roadbed shall be brought to a smooth, even condition free of humps and depressions, satisfactory for the use of public traffic.

After the surface of the roadbed has been brought to a smooth and even condition for the passage of public traffic as above provided, any work ordered by the Engineer for the accommodation of public traffic prior to commencing subgrade operations will be paid for as extra work as provided in the provision set forth in this Contract. After subgrade preparation for a specified layer of material has been completed, the Contractor shall, at the Contractor's expense, repair any damage to the roadbed or completed subgrade, including damage caused by the Contractor's operations or use by public traffic.

While subgrade and paving operations are underway, public traffic shall be permitted to use the shoulders and, if half-width paving methods are used, shall also be permitted to use the side of the roadbed opposite the one under construction. When sufficient width is available, a passageway wide enough to accommodate at least 2 lanes of traffic shall be kept open at locations where subgrade and paving operations are in active progress. Any shaping of shoulders or reshaping of subgrade necessary for the accommodation of public traffic thereon during subgrade preparation and paving operations will be paid for as extra work as provided in the provisions set forth in this Contract.

When ordered by the Engineer, the Contractor shall furnish a pilot car and driver and flaggers for the purpose of expediting the passage of public traffic through the work under one-way controls, and the cost thereof will be paid for as extra work as provided in the provisions set forth in this Contract. At locations where traffic is being routed through construction under one-way controls and when ordered by the Engineer, the movement of the Contractor's equipment from one portion of the work to another shall be governed in accordance with the one-way controls.

Water or dust palliative shall be applied if ordered by the Engineer for the alleviation or prevention of dust nuisance as provided in the provisions set forth in this Contract.

In order to expedite the passage of public traffic through or around the work and where ordered by the Engineer, the Contractor shall install signs, lights, flares, temporary railing (Type K), barricades and other facilities for the sole convenience and direction of public traffic. Also where directed by the Engineer, the Contractor shall furnish competent flaggers whose sole duties shall consist of directing the movement of public traffic through or around the work. The cost of furnishing and installing the signs, lights, flares, temporary railing (Type K), barricades, and other facilities, not to be paid for as separate contract items, will be paid for as extra work as provided in the provisions set forth in this Contract.

The cost of furnishing flaggers for the sole convenience and direction of public traffic will be paid for as provided in the provisions set forth in this Contract.

The Contractor will be required to pay the cost of replacing or repairing all facilities installed under extra work for the convenience or direction or warning of public traffic that are lost while in the Contractor's custody, or are damaged by reason of the Contractor's operations to such an extent as to require replacement or repair, and deductions from any moneys due or to become due the Contractor will be made to cover the cost.

Whenever a section of surfacing, pavement or the deck of a structure has been completed, the Contractor shall open it to use by public traffic if the Engineer so orders or may open it to use by public traffic if the Engineer so consents. In either

case the Contractor will not be allowed any compensation due to any delay, hindrance or inconvenience to the Contractor's operations caused by public traffic, but will thereupon be relieved of responsibility for damage to completed permanent facilities caused by public traffic, within the limits of that use. The Contractor will not be relieved of any other responsibility under the contract nor will the Contractor be relieved of cleanup and finishing operations.

Except as otherwise provided in this Section 7-1.08 or in the special provisions, full compensation for conforming to the provisions in this Section 7-1.08 shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor.

7-1.09 PUBLIC SAFETY. It is the Contractor's responsibility to provide for the safety of traffic and the public during construction.

Attention is directed to Section 7-1.12, "Idemnification and Insurance."

Attention is directed to Section 7-1.08, "Public Convenience," for provisions relating to the Contractor's responsibility for providing for the convenience of the public in connection with the Contractor's operations.

Whenever the Contractor's operations create a condition hazardous to traffic or to the public, the Contractor shall, at the Contractor's expense and without cost to the State, furnish, erect and maintain those fences, temporary railing (Type K), barricades, lights, signs and other devices and take such other protective measures that are necessary to prevent accidents or damage or injury to the public.

The Contractor shall also furnish such flaggers as are necessary to give adequate warning to traffic or to the public of any dangerous conditions to be encountered, and payment therefor will be made as provided in the provisions set forth in this Contract.

Signs, lights, flags, and other warning and safety devices and their use shall conform to the requirements set forth in Part 6 of the MUTCD and of the MUTCD California Supplement. Signs or other protective devices furnished and erected by the Contractor, at the Contractor's expense, as above provided, shall not obscure the visibility of, nor conflict in intent, meaning and function of either existing signs, lights and traffic control devices or any construction area signs and traffic control devices for which furnishing of, or payment for, is provided elsewhere in the specifications. Signs furnished and erected by the Contractor, at the Contractor's expense, shall be approved by the Engineer as to size, wording and location.

The installation of general roadway illumination shall not relieve the Contractor of the responsibility for furnishing and maintaining any of the protective facilities herein before specified.

Construction equipment shall enter and leave the highway via existing ramps and crossovers and shall move in the direction of public traffic. All movements of workmen and construction equipment on or across lanes open to public traffic shall be performed in a manner that will not endanger public traffic.

The Contractor's trucks or other mobile equipment which leave a freeway lane, that is open to public traffic, to enter the construction area, shall slow down gradually in

advance of the location of the turnoff to give following public traffic an opportunity to slow down.

When leaving a work area and entering a roadway carrying public traffic, the Contractor's equipment, whether empty or loaded, shall in all cases yield to public traffic.

No material or equipment shall be stored where it will interfere with the free and safe passage of public traffic, and at the end of each day's work and at other times when construction operations are suspended for any reason, the Contractor shall remove all equipment and other obstructions from that portion of the roadway open for use by public traffic.

Temporary facilities which the Contractor uses to perform the work shall not be installed or placed where they will interfere with the free and safe passage of public traffic.

Temporary facilities which could be a hazard to public safety if improperly designed shall comply with design requirements specified in the contract for those facilities or, if none are specified, with standard design criteria or codes appropriate for the facility involved. Working drawings and design calculations for the temporary facilities shall be prepared and signed by an engineer who is registered as a Civil Engineer in the State of California and shall be submitted to the Engineer for approval pursuant to the provisions set forth in this Contract. The submittals shall designate thereon the standard design criteria or codes used. Installation of the temporary facilities shall not start until the Engineer has reviewed and approved the drawings.

Should the Contractor appear to be neglectful or negligent in furnishing warning devices and taking protective measures as above provided, the Engineer may direct attention to the existence of a hazard and the necessary warning devices shall be furnished and installed and protective measures taken by the Contractor at the Contractor's expense. Should the Engineer point out the inadequacy of warning devices and protective measures, that action on the part of the Engineer shall not relieve the Contractor from responsibility for public safety or abrogate the obligation to furnish and pay for these devices and measures.

Provision for the payment for signs, lights, flares, temporary railing (Type K), barricades, and other facilities by extra work as provided in Section 7-1.08, "Public Convenience," or by contract item as provided in the provisions set forth in this Contract shall in nowise relieve the Contractor from the responsibility as provided in this Section 7-1.09.

Except as otherwise provided in this Section 7-1.09 or in the special provisions, full compensation for conforming to all of the provisions in this Section 7-1.09 shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

7-1.10 USE OF EXPLOSIVES. When explosives are used, the Contractor shall exercise the utmost care not to endanger life or property.

In advance of doing any blasting work within 200 feet of any railroad's tracks or structures, the Contractor shall notify the railroad of the location, date, time and approximate duration of the blasting operations.

7-1.11 PRESERVATION OF PROPERTY. Due care shall be exercised to avoid injury to existing highway improvements or facilities, utility facilities, adjacent property, and roadside trees, shrubs and other plants that are not to be removed.

Roadside trees, shrubs and other plants that are not to be removed, and pole lines, fences, signs, markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and water lines, all highway facilities and any other improvements or facilities within or adjacent to the highway shall be protected from injury or damage, and if ordered by the Engineer, the Contractor shall provide and install suitable safeguards, approved by the Engineer, to protect the objects from injury or damage. If the objects are injured or damaged by reason of the Contractor's operations, the objects shall be replaced or restored at the Contractor's expense. The facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the work, or as good as required by the specifications accompanying the contract, if any of the objects are a part of the work being performed under the contract. The Engineer may make or cause to be made those temporary repairs that are necessary to restore to service any damaged highway facility. The cost of the repairs shall be borne by the Contractor and may be deducted from any moneys due or to become due to the Contractor under the contract.

It shall be the Contractor's responsibility, pursuant to the provisions set forth in this Contract, to ascertain the location of those underground improvements or facilities which may be subject to damage by reason of the Contractor's operations.

Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified in this Section 7-1.11, shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefore.

7-2.01 Contractor recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code of the State of California. By entering into the contract Contractor acknowledges that to the best of its knowledge Contractor is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the Employment Development Department.

70-23 California State Department of Industrial Relations (DIR) requirements:

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

70-24 Contractor's State License Board Notice. Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

70-25 Required workplace posters. Contractor shall provide and post on the project site any and all notification posters for public works projects, as required by the State of California and Federal Government. All penalties or fines shall be the responsibility of the Contractor.

**DISADVANTAGED BUSINESS ENTERPRISE
DBE PARTICIPATION SUMMARY**
(Submit one form for each DBE Firm.)

Contractor Name: _____

Address: _____

City: _____ State: _____ Zip: _____

DBE Firm DBE Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

DBE Contact Person Name: _____ Phone: _____

DBE Certification Agency: _____ **Expiration Date:** _____

Each DBE Firm shall submit evidence (such as a photocopy) of their certification status.

**DBE
Commitments/Awards
-Breakdown By
Ethnicity & Gender**

- | | |
|--|--|
| <input type="checkbox"/> Black American | <input type="checkbox"/> Asian-Pacific American |
| <input type="checkbox"/> Hispanic American | <input type="checkbox"/> Non-Minority Women |
| <input type="checkbox"/> Native American | <input type="checkbox"/> Other (i.e. not of any group listed here) |
| <input type="checkbox"/> Subcont. American | <input type="checkbox"/> Asian |

Classification:

- | | |
|---|--|
| <input type="checkbox"/> Prime Contractor | <input type="checkbox"/> Supplier |
| <input type="checkbox"/> Manufacturer | <input type="checkbox"/> Joint Venture |
| <input type="checkbox"/> Subcontractor | |

Work items performed by DBE	Description	Quantity	Amount Paid to DBE

The Contractor utilized the above-named DBE Firm for the work items described above.
The actual participation is as follows:

Total amount paid to DBE Firm: \$ _____ Percent of Contractor's total contract: _____ %

Affirmation: _____

By: _____

(Signature) (Title)

In accordance with 49 CFR Part 26, §26.39, the following detailed list shall be completed by the Contractor for construction work items and professional services work items to be performed by all subcontractors and suppliers which will be involved in the work that qualify as a Small Business, whether registered as such, or not. The firms listed do not have to be certified DBE firms. This form shall be filled out and submitted to the Sponsor prior to the start of construction.

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City, State, Zip			
Telephone			
Is the Firm DBE?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Small Business Participation Plan

(cont'd)

Name			
Address			
City, State, Zip			
Telephone			
Is the Firm DBE?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Name			
Address			
City, State, Zip			
Telephone			
Is the Firm DBE?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Name			
Address			
City, State, Zip			
Telephone			
Is the Firm DBE?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Name			
Address			
City, State, Zip			
Telephone			
Is the Firm DBE?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

(The Contractor may duplicate this form as necessary if additional space is required.)

By: _____ (Contractor's Signature) _____ (Title)

_____ (Contractor's Printed Name) _____ (Date)

Equal Employment Opportunity is THE LAW

Private Employers, State and Local Governments, Educational Institutions, Employment Agencies and Labor Organizations

Applicants to and employees of most private employers, state and local governments, educational institutions, Employment agencies, and labor organizations are protected under Federal law from discrimination on the following bases.

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Title VII of the Civil Rights Act of 1964, as amended, protects applicants and employees from discrimination in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, on the basis of race, color, religion, sex (including pregnancy), or national origin. Religious discrimination includes failing to reasonably accommodate an employee's religious practices where the accommodation does not impose undue hardship.

In addition to sex discrimination prohibited by Title VII of the Civil Rights Act, as amended, the Equal Pay Act of 1963, as amended, prohibits sex discrimination in payment of wages to women and men performing substantially equal work jobs that require equal skill, effort, and responsibility, under similar working conditions, in the same establishment.

DISABILITIES

Title I and Title V of the Americans with Disabilities Act of 1990, as amended, protect qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who's is an applicant or employee, barring undue hardship.

AGE

The Age Discrimination in Employment Act of 1967, as amended, protects applicants and employees 40 years of age or older from discrimination based on age in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment.

SEX (WAGES)

GENETICS

Title II of the Genetic Information Nondiscrimination Act of 2008 protects applicants and employees from discrimination based on genetic information in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. GINA also restricts employers' acquisition of genetic information and strictly limits disclosure of genetic information. Genetic information includes information about genetic tests of applicants, employees, or their family members; the manifestation of diseases or disorders in family members (family medical history); and requests for or receipt of genetic services by applicants, employees, or their family members.

RETALIATION

All of these Federal laws prohibit covered entities from retaliating against a person who files a charge of discrimination, participates in a discrimination proceeding, or otherwise opposes an unlawful employment practice.

WHAT TO DO IF YOU BELIEVE DISCRIMINATION HAS OCCURRED

There are strict time limits for filing charges of employment discrimination. To preserve the ability of EEOC to act on your behalf and to protect your right to file a private lawsuit, should you ultimately need to, you should contact EEOC promptly when discrimination is suspected:

The U.S. Equal Employment Opportunity Commission (EEOC), 1-800-669-4000 (toll-free) or 1-800-669-6820 (toll-free TTY number for individuals with hearing impairments). EEOC field office information is available at www.eeoc.gov or in most telephone directories in the U.S. Government or Federal Government section. Additional information about EEOC, including information about charge filing, is available at www.eeoc.gov.

Employers Holding Federal Contracts or Subcontracts

Applicants to and employees of companies with a Federal government contract or subcontract, are protected under Federal law from discrimination on the following bases.

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Executive Order 11246, as amended, prohibits job discrimination on the basis of race, color, religion, sex or national origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment.

INDIVIDUALS WITH DISABILITIES

Section 503 of the Rehabilitation Act of 1973, as amended, protects qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified employee, barring undue hardship. Section 503 also requires that Federal contractors take affirmative action to employ and advance in employment qualified individuals with disabilities at all levels of employment, including the executive level.

DISABLED, RECENTLY SEPARATED, OTHER PROTECTED, AND ARMED FORCES SERVICE MEDAL VETERANS

The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. 4212, prohibits job discrimination and requires affirmative action to employ and advance in employment disabled veterans, recently separated veterans (within

three years of discharge or release from active duty), other protected veterans (veterans who served during a war or in a campaign or expedition for which a campaign badge has been authorized), and Armed Forces service medal veterans (veterans who, while on active duty, participated in a U.S. military operation for which an Armed Forces service medal was awarded).

RETALIATION

Retaliation is prohibited against a person who files a complaint of discrimination, participates in an OFCCP proceeding, or otherwise opposes discrimination under these Federal laws.

Any person who believes a contractor has violated its nondiscrimination or affirmative action obligations under the authorities above should contact immediately:

The Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210, 1-800-397-6251 (toll-free) or (202) 693-1337 (TTY). OFCCP may also be contacted by e-mail at OFCCP-Public@dol.gov, or by calling an OFCCP regional or district office, listed in most telephone directories under U.S. Government, Department of Labor.

Programs or Activities Receiving Federal Financial Assistance

RACE, COLOR, NATIONAL ORIGIN, SEX

In addition to the protections of Title VII of the Civil Rights Act of 1964, as amended, Title VI of the Civil Rights Act of 1964, as amended,

prohibits discrimination on the basis of race, color or national origin in programs or activities receiving Federal financial assistance. Employment discrimination is covered by Title VI if the primary objective of the financial assistance is provision of employment, or where employment discrimination causes or may cause discrimination in providing services under such programs. Title IX of the Education Amendments of 1972 prohibits employment discrimination on the basis of sex in educational programs or activities which receive Federal financial assistance.

EEOC 9/02 and OFCCP 8/08 Versions Useable with 11/09 Supplement

INDIVIDUALS WITH DISABILITIES

Section 504 of the Rehabilitation Act of 1973, as amended, prohibits employment discrimination on the basis of disability in any program or activity which receives Federal financial assistance. Discrimination is prohibited in all aspects of employment against persons with disabilities who, with or without reasonable accommodation, can perform the essential functions of the job.

If you believe you have been discriminated against in a program of any institution which receives Federal financial assistance, you should immediately contact the Federal agency providing such assistance.

EEOC-P/E-1 (Revised 11/09)

FEDERAL WAGE RATES

STATE WAGE RATES

00-08 Special Provisions to Section 80.

Additions after the end of the first paragraph of Section 80-01 Subletting of contract.

All Subcontractors shall be approved by the Owner prior to being utilized on the project. The Subcontractor shall submit a Subcontractor Approval Request to the Engineer fourteen (14) days prior to beginning work on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

In the first sentence of Section 80-02 Notice to proceed, after “The notice to proceed”, INSERT the following, “will be issued by the Owner”.

In the second sentence of Section 80-02 Notice to proceed, DELETE, “Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the”.

Additions after the end of the last paragraph of Section 80-02 Notice to proceed.

The Owner shall issue a separate notice to proceed with on-site construction after the Contractor has completed the necessary items to begin the work. The time specified on the notice to proceed with on-site construction shall be included within the overall total contract time specified. The Contractor shall consider all necessary lead time items prior to beginning and during advancement of the work.

DELETE the first sentence of Section 80-03 Execution and progress, and INSERT the following, “Unless otherwise specified, the Contractor shall submit his/her coordinated construction schedule showing all work activities for the Engineer’s approval at least 10 days prior to the start of work.”.

Additions after the end of the first paragraph of Section 80-03 Execution and progress.

The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified in the contract. As a minimum, it shall provide information on the sequence of work activities, milestone dates, and activity duration.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

In the second sentence of the second paragraph of Section 80-03 Execution and progress, after “notify the Engineer at least”, DELETE, “24 hours”, and INSERT the following, “3 days”.

In the first sentence of the third paragraph of Section 80-03 Execution and progress, after “shall not commence any actual construction”, INSERT the following, “activities”.

Additions to the end of the first paragraph of Section 80-04.1 Operational safety on airport during construction.

The Safety Plan Compliance Document (SPCD) can be found in Appendix 3 of the CSPP.

Additions to the end of the fourth paragraph of Section 80-04.1 Operational safety on airport during construction.

If the requested changes are acceptable to all the aforementioned parties, the Engineer will request a modification to the CSPP from the FAA. The Contractor shall plan on a minimum of 90 days for this process to be completed. No deviation to the original CSPP shall be made without FAA approval.

In Section 80-07 Determination and extension of contract time, DELETE a. (1) in its entirety and INSERT the following

- (1) No time shall be charged for days on which the Contractor is unable to proceed with work on the items under construction at the time with the normal work force employed on such items. Such days on which the Contractor chooses to engage in work which require the presence of an inspector will be charged against contract time. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

In Section 80-07 Determination and extension of contract time, DELETE a. (2) in its entirety and INSERT the following

- (2) The Engineer will begin charges against the contract time on the date stated in the notice to proceed.

Additions after the second sentence of the first paragraph of 80-11 Work area, storage area and sequence of operations.

During the work of this Contract, the Owner will make such arrangements to coordinate aircraft movements and Airport operations as necessary to conform to the construction procedures outlined in the Construction Safety and Phasing Plan, and as shown on the Contract Drawings. The Contractor shall give adequate notice to the Engineer, so as to afford time to coordinate construction with the Owner.

In the fourth sentence of the first paragraph of Section 80-11 Work area, storage area and sequence of operations, after “material stockpiles shall be stored”, INSERT, “at locations determined during construction such that they do not interfere with”, and after “an active runway”, INSERT, “or taxiway”.

200-09 Special Provisions to Section 90.

Additions after the end of the first paragraph of Section 90-05 Payment for extra work.

- 1. Agreed Price/Time and Materials Work.** All agreed price and time and materials work shall be approved by the Owner and the FAA prior to proceeding with the work. The Engineer and Contractor shall be responsible for tracking the number of employees, number of hours and classification of each employee, numbers of hours that equipment is utilized and materials utilized for the extra work that is paid utilizing time and materials work.
 - a. Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
 - b. Comparison of Record.** The Contractor and the Engineer shall compare records of the cost of agreed price/time and materials work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.
 - c. Statement.** No payment will be made for work performed on a agreed price/time and materials basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such agreed price/time and materials work detailed as follows:
 - (1)** Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
 - (2)** Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - (a)** Contractor Owned Equipment Trucks and Plant.- Contractor shall be reimbursed for its ownership costs and for its operating costs for self owned equipment at the rates listed in the Rental Rate Blue Book published by Dataquest, Inc. applied in the following manner as modified by the “Rate Adjustment Table”:

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- (i) Ownership Costs -- It is mutually understood that the rates for ownership costs reimburse the Contractor for all non-operating costs of owning the equipment, truck or plant including depreciation on the original purchase, insurance, applicable taxes, interest on investment, storage, overhead, repairs, moving the equipment onto and away from the project or work site, and profit. Reimbursement will be made for the hours of actual use as described below.
 - (ii) Less than 8 hours of actual use, the product of the actual number of hours used or fraction thereof multiplied by the hourly rate, or the daily rate, whichever is less.
 - (iii) Between 8 hours and 40 hours of actual use, the product of the actual number of hours used divided by 8 multiplied by the daily rate, or the weekly rate, whichever is less.
 - (iv) Between 40 and 176 hours of actual use, the product of the actual number of hours used divided by 40 multiplied by the weekly rate, or the monthly rate, whichever is less.
 - (v) Over 176 hours of actual use, the product of the actual number of hours used divided by 176 multiplied by the monthly rate.
 - (vi) Operating Costs -- The rate for operating costs includes fuel, lubricants, other operating expendables, and preventative and field maintenance. Operating cost does not include the operator's wages. The Contractor shall be reimbursed the product of the number of hours of actual use multiplied by the Estimated Operating Cost/Hour.
 - (vii) The rates used shall be those in effect at the time the agreed price/time and materials work is done as reflected in the then current publication of the Rental Rate Blue Book. When agreed price/time and materials type analysis are used to establish agreed prices in accordance with paragraph A above, the rates used shall be those in effect when the agreed price is developed by the Contractor.
 - (viii) In the event that a rate is not established in the Rental Rate Blue Book for a particular piece of equipment, truck or plant, the Engineer shall establish rates for ownership costs and operating costs for that piece of equipment, truck or plant that is consistent with its cost and expected life.

(b) Rented Equipment, Trucks and Plant –

- (i) In the event that the Contractor does not own a specific type of equipment and must obtain it by rental, it shall be paid the actual rental rate for the equipment for the time that the equipment is used to accomplish the work or is required by the Engineer to be

present, not to exceed the adjusted rental rate in the Rental Rate Blue Book, plus the reasonable cost of moving the equipment onto and away from the project site.

- (ii) The Contractor shall also be reimbursed for the operating cost of the equipment unless reflected in the rental price. Such operating cost shall be determined in the same manner as specified for Contractor Owned Equipment above.
 - (iii) In the event that area practice dictates the rental of equipment with an operator or fully fueled and maintained equipment, truck or plants, payment will be made on the basis of an invoice for the rental of the equipment with an operator, fully fueled and/or maintained equipment, trucks or plants including all costs incidental to its use, including costs of moving to and from the site, provided the rate is substantiated by area practice.
- (c) Maximum Amount Payable -- The maximum amount of reimbursement for the ownership costs of Contractor owned or the rental cost of rented equipment, trucks or plant is limited to the original purchase price of the equipment, truck or plant for any agreed price/time and materials work as listed in the Green Guide for Construction Equipment published by the Dataquest, Inc. In the specific event when the ownership or rental reimbursement is limited by the original purchase price, the Contractor shall, nevertheless, be reimbursed for the operating Cost/Hour for each hour of actual use.

(3) Quantities of materials, prices, and extensions.

(4) Transportation of materials.

(5) Overhead and Profit. If any of the work is performed by a subcontractor, the Contractor shall be paid the actual and reasonable cost of such subcontracted work computed as outlined in a through d above, or on such other basis as may be approved by the Owner. Subcontractor profit and overhead shall be paid as outlined in this section, plus an additional allowance of five percent (5%) of materials and direct labor to cover the Contractor's profit, superintendence, administration, insurance and other overhead. For the purposes of computing overhead and profit, only one level or tier of subcontractors will be allowed.

Overhead shall be defined to include, but not be limited to:

- premium on bonds;
- premium on insurance required by workman's compensation insurance, public liability and property damage insurance, unemployment insurance, social security tax, and other payroll taxes and such reasonable charges that are paid by the Contractor pursuant to written agreement with his/her employee;
- all salary and expenses of executive officers, supervising officers or supervising employees;
- all clerical or stenographic employees;

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- all charges for minor equipment, such as small tools, including shovels, picks, axes, saws, bars, sledges, lanterns, jacks, cables, pails, wrenches, etc. and other miscellaneous supplies and services;
 - all drafting room accessories such as paper, tracing cloth, blueprinting, etc.

Overhead and profit cost shall be computed at 20 percent of the following:

- Total Direct Labor Cost (actual hours worked multiplied by the basic hourly wage rate) plus supplemental benefits payments, payroll taxes, insurance payments and other labor related fringe benefit payments as defined in 'a' above, but not including the overtime additive payments. Overhead and profit shall not be paid on the premium portion of overtime.
- Total Cost of Materials as defined in c and d above.

Additions to the end of the first paragraph of Section 90-06 Partial payments.

No partial payments will be made for work items lacking approved submittals, or lacking acceptable manufacturer's material certifications.

Additions to the end of the second paragraph of Section 90-06 Partial payments.

Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Airport Sponsor. This clause applies to both DBE and non-DBE subcontractors.

Contractors shall include in their subcontracts language providing that Contractors and subcontractors will use appropriate alternative dispute resolution mechanisms to resolve payment disputes.

The Contractor will not be reimbursed for work performed by subcontractors unless and until the Contractor ensures that the subcontractors are promptly paid for the work they have performed.

In Section 90-06 Partial Payments, DELETE the last sentence of the fourth paragraph in its entirety, which reads "Should the Contractor exercise his/her option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted."

In Section 90-08 Payment of Withhold Funds, DELETE the last sentence of the fourth paragraph in its entirety and INSERT the following:

If the Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, at the request and expense of the Contractor, the Contractor may substitute securities for the amount so retained in accordance with California Public Contract Code section 22300.

90-13 Security for construction warranty. The Contractor shall upon final acceptance of the work, furnish a bond to the Owner in a penal sum equal to five percent (5%) of the amount of the Contract price, executed by a surety company authorized by the Department of Insurance of the State of California to execute such a bond in this State, and which bond shall be approved as to form and manner of execution by the Owner's attorney. This bond shall be conditioned for the faithful performance by the said Contractor of the conditions and stipulations of the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section, thereof relating to maintenance and repair, for a period of one (1) year from the date of the final acceptance of the work. In default of the filing of such bond, a sum of money equal to said five percent (5%) may be retained out of any monies due to the Contractor and be held for one (1) year, or until the bond above described is filed.

For Contractors who have elected to set up an escrow account, they may elect to maintain the escrow account for a period of one (1) year from the date of final acceptance of the work in lieu of providing a bond for security of guarantee as described above.

200-10 Special Provisions to Section 100. (Section Not Used)

200-11 Special Provisions to Section 105.

**DELETE, Section 105-2 Basis of measurement and payment in its entirety, and
INSERT the following.**

The amount bid shall be payable to the Contractor with the first progress estimate made for other contract work. Unless provided for elsewhere, the cost of required insurance and bonds and/or any initiation of the contract work may be included in this work.

200-12 Special Provisions to Section 110. No Supplemental information for this section.

END OF SECTION 200

TECHNICAL SPECIFICATIONS

Item C-100 Contractor Quality Control Program (CQCP)

100-1 General. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

- a.** Provide qualified personnel to develop and implement the CQCP.
- b.** Provide for the production of acceptable quality materials.
- c.** Provide sufficient information to assure that the specification requirements can be met.
- d.** Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

- a.** Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.
- b.** Discussion of the QA program.
- c.** Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.
- d.** Establish regular meetings to discuss control of materials, methods and testing.
- e.** Establishment of the overall QC culture.

100-2 Description of program.

a. General description. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. Contractor Quality Control Program (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 10 calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-3 CQCP organization. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The

organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time on-site employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

- (1) Professional Engineer with one (1) year of airport paving experience.
- (2) Engineer-in-training with two (2) years of airport paving experience.
- (3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.
- (4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC technicians. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

- (1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.
- (2) Performance of all QC tests as required by the technical specifications and paragraph 100-8.
- (3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

100-4 Project progress schedule. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

100-5 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal
- e. Scheduled date of submittal

100-6 Inspection requirements. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

100-7 Contractor QC testing facility.

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:

- 8.1.3 Equipment Calibration and Checks;
- 8.1.9 Equipment Calibration, Standardization, and Check Records;
- 8.1.12 Test Methods and Procedures

b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, *Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation*:

- 7 Test Methods and Procedures
- 8 Facilities, Equipment, and Supplemental Procedures

100-8 QC testing plan. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (e.g., P-401)
- b. Item description (e.g., Hot Mix Asphalt Pavements)
- c. Test type (e.g., gradation, grade, asphalt content)
- d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)
- e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)
- f. Responsibility (e.g., plant technician)
- g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 Documentation. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

- (1) Technical specification item number and description
- (2) Compliance with approved submittals
- (3) Proper storage of materials and equipment
- (4) Proper operation of all equipment

- (5) Adherence to plans and technical specifications
- (6) Summary of any necessary corrective actions
- (7) Safety inspection.
- (8) Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location
- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 Corrective action requirements. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 Inspection and/or observations by the RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

100-12 Noncompliance.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

(1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or

(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement and payment. Not Used.

BASIS OF PAYMENT

100-14 Not Used.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

END OF ITEM C-100

Item C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

DESCRIPTION

102-1. This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods. Control measures shall also be in accordance with the Storm Water Pollution Prevention Plan (SWPPP), to be provided by the Contractor.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, *Operational Safety on Airports During Construction*. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

102-2.1 Grass. Not Used.

102-2.2 Mulches. Not Used.

102-2.3 Fertilizer. Not Used.

102-2.4 Slope drains. Not Used.

102-2.5 Silt fence. Not Used.

156-2.6 Gravel bags. Bags shall be of the materials and characteristics as specified on the Contract Drawings. Bags shall comply with all requirements as specified in Type SE-6 of the California Stormwater BMP Handbook, Construction Sites, published by the California Stormwater Quality Association (January 2011)

102-2.7 Other. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

CONSTRUCTION REQUIREMENTS

102-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR.

102-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

102-3.4 Installation, maintenance and removal of silt fence. Not Used.

METHOD OF MEASUREMENT

102-4.1 Temporary and permanent erosion and pollution control work required will be performed as scheduled or directed by the RPR. Completed and accepted work will be measured, including installation of gravel bags and stabilized construction entrance, as follows:

- a. Compliance with Pollution, Erosion and Siltation Control

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

BASIS OF PAYMENT

102-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 will be paid for under:

Item C-102-5.1 Compliance with Pollution, Erosion and Siltation Control – per lump sum

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 *Payment for Extra Work*.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5200-33 *Hazardous Wildlife Attractants on or Near Airports*

AC 150/5370-2 *Operational Safety on Airports During Construction*

ASTM International (ASTM)

ASTM D6461 *Standard Specification for Silt Fence Materials*

United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM C-102

Item C-106 Safety, Security and Maintenance of Traffic

DESCRIPTION

106-1.1 General. This work shall consist of maintaining aircraft and vehicular traffic and protecting the public from damage to person and property within the limits of and for the duration of the Contract, and as specified in the Construction Safety and Phasing Plan, Appendix A to Section 70.

Contractor is responsible for maintenance and repair of these items, regardless of cause of damage, until the project is accepted.

The following items are specifically included without limiting the generality implied by these Specifications and the Contract Drawings. Contractor is responsible for maintenance and repair of these items, regardless of cause of damage, until the project is accepted.

- Restoration of all surfaces disturbed as a result of the Contractor's Operations which are not otherwise paid for.
- Installation, maintenance, repair and removal of temporary access roads and maintenance and repair of existing access roads, including dust control measures.
- Installation, maintenance, repair and removal of temporary security fencing and gates.
- Installation, maintenance, repair and removal of temporary barricades, barricade lights, barricade flags, warning signs and hazard markings.
- Installation, maintenance, repair and removal of temporary lights and lighting circuits. Temporary above ground lighting cables shall be delineated with stakes and flagging in turf areas and barricades in paved areas.
- Installation, maintenance, repair and removal of temporary NAVAIDS.
- Installation, maintenance, repair and removal of temporary lighted closed runway markers.
- Installation, maintenance, repair and removal of temporary closed runway markers.
- Installation, maintenance, repair and removal of temporary closed taxiway markers.-
Testing and maintenance of existing and new lighting circuitry.
- Cleaning and maintenance of all paved areas.
- Security requirements, including driver training.

The Owner will be responsible for moving parked aircraft which interfere with the work of this Contract. Contractor shall give the Owner adequate notice of the intended work schedule to allow the Owner time to accommodate the schedule.

The Owner will be responsible for issuing notification to patrons of the parking lot for upcoming work based on the Contractor's schedule. Contractor shall be responsible for moving parked vehicles which interfere with the work of this Contract. Vehicles shall be moved to a location designated by the Owner during construction. Damage to vehicles caused by the Contractor's operations shall be repaired by the Contractor at no expense to the Owner or vehicle owner.

METHOD OF MEASUREMENT

106-2.1 Measurement for payment of safety, security and maintenance of traffic will be made on a lump sum basis. Measurements for partial payment may be made at the discretion of the RPR as the work progresses based on contract time or percent of work completed.

BASIS OF PAYMENT

106-3.1 The lump sum price bid for safety, security and maintenance of traffic shall include all equipment, materials, labor and incidentals necessary to adequately and safely maintain and protect traffic.

In the event the contract completion date is extended, no additional payment will be made for safety, security and maintenance of traffic.

Partial payments of the lump sum price bid may be made for this item at the discretion of the RPR as the work progresses based on contract time or work completed, less any deductions for unsatisfactory safety, security and maintenance of traffic.

No payment will be made under safety, security and maintenance of traffic for each calendar day during which there are substantial deficiencies in compliance with the Specification requirements of any subsection of this Section as determined by the RPR.

The amount of such calendar day non-payment will be determined by dividing the lump sum amount bid for safety, security and maintenance of traffic by the number of calendar days between the date the Contractor commences work and the date of completion as designated in this proposal, without regard to any extension of time.

If the Contractor fails to maintain and protect traffic adequately and safely for a period of 24 hours, the Owner shall correct the adverse conditions by any means it deems appropriate and shall deduct the cost of the corrective work from any monies due the Contractor. The cost of this work shall be in addition to the liquidated damages and non-payment for safety, security and maintenance of traffic listed above.

However, where major nonconformance with the requirements of this Specification is noted by the RPR and prompt Contractor compliance is deemed not to be obtainable, all contract work may be stopped by direct order of the RPR regardless of whether corrections are made by the Owner as stated in the paragraph above.

Payment will be made under:

C-106-3.1 Safety, Security and Maintenance of Traffic - per lump sum

END OF ITEM C-106

Item C-105 Mobilization

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Engineer/RPR field office and equipment. An Engineer/RPR field office is not required.

105-4.1 Field Office.

The field office will be provided by the Owner.

METHOD OF MEASUREMENT

105-5 .1 Measurement for payment of mobilization will be made on a lump sum basis. Measurement for partial payment of mobilization will be made based percentage of work completed in accordance with the schedule shown in Section 6.1.

BASIS OF PAYMENT

105-6.1 Payment for mobilization will be made on a lump sum basis. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation*, the final 10%.

Payment will be made under:

Item C-105-6.1 Mobilization – per lump sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

Item P-101 Preparation/Removal of Existing Pavements

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2.1 Equipment. All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

101-2.2 Bituminous concrete pavement. Materials for bituminous concrete pavement shall be in accordance with Item P-403, Asphalt Mix Pavement.

101-2.3 Emulsified asphalt. The emulsified asphalt shall conform to the requirements of ASTM D 977 or ASTM D 2397.

101-2.4 Herbicide. Herbicide shall be a commercially produced product made specifically for killing plants and their root systems. Herbicides shall be packaged in standard sealed containers marked with the name of the material, the name of the manufacturer, the net quantity contained therein and shall be in accordance with the provisions of the Federal and State Rules and Regulations in effect at the time of delivery.

101-2.5 Tack coat. Tack coat shall be in accordance with Item P-603, Emulsified Asphalt Tack Coat.

101-2.6 Surface treatment. Surface treatment shall be in accordance with Item P-608, Emulsified Asphalt Seal Coat.

Construction

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement. This paragraph covers removal of existing pavement for the following purposes: reducing the limits of existing pavement; removal of existing pavement necessary to abut new pavement to existing, and; removal of existing pavement which is being reconstructed. For pavement removal associated with pavement repairs, see paragraph 101-3.4.

a. Concrete pavement removal.

Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, and remove the pavement. Where required, Contractor shall install new dowels as shown on the plans and per the specifications. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the

airport site, or used in embankment, it shall be reduced to a maximum size of 24 inches in any direction. The material incorporated into embankments shall be placed as described in Item P-152, Excavation, Subgrade and Embankment. If the material cannot be incorporated into embankments, it shall be disposed of in accordance with paragraph 101-3.11. Every effort should be made by the Contactor to recycle or re-use the material in other projects. Concrete slabs that are damaged by under breaking shall be removed and replaced as directed by the RPR. Sawcutting and removal of PCC pavement shall be included in the cost of PCC pavement removal.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlying material that is to remain in place, shall be recompact and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal.

Asphalt pavement to be removed shall be saw cut to the full depth of the asphalt pavement around the perimeter of the area to be removed if there will be no new pavement installed abutting the cut, or if new Portland cement concrete pavement will be installed abutting the cut. If there will be new asphalt pavement installed adjacent to the cut, the pavement shall be cut to the depth of the new adjacent layer/lift such that the joint for each layer/lift of pavement replacement is offset 1 foot from the joint in the preceding layer/lift. If the material is to be wasted on the airport site or incorporated into embankment, it shall be broken to a maximum size of 24 inches.. The material incorporated into embankments shall be placed as described in Item P-152, Excavation, Subgrade and Embankment. If the material cannot be incorporated into embankments, it shall be disposed of in accordance with paragraph 101-3.11. Every effort should be made by the Contactor to recycle or re-use the material in other projects.

c. Repair or removal of Base, Subbase, and/or Subgrade.

All failed granular material including base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense. The quantity of granular material excavated shall be included and paid for as Unclassified Excavation in Item P-152, Excavation, Subgrade and Embankment.

101-3.2 Preparation of joints and cracks. Preparation of joints and cracks are necessary in areas being that are being overlaid or surface treated, in area that are being milled and in areas which are not being overlaid, surface treated or milled. In areas being milled, preparation shall occur after milling operations.

Existing vegetation within the limits of work shall be treated with an herbicide. The herbicide shall be applied to the vegetation prior to other preparation of joint and crack operations. Application of herbicide shall be in accordance with the manufacturer's printed instructions and the provisions of Federal and State regulations in effect at the time of work. Preparation of joint and crack operations shall not proceed until the herbicide manufacturer's instructions indicate that the treated vegetation may be removed.

a. Preparation of Joints in Rigid and Flexible Pavement.

(1) Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm)

from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry. Allow sufficient time to dry out joints prior to sealing.

(2) Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Clean joints by sandblasting, or other method approved by the RPR, on each joint face with nozzle held at an angle and not more than three inches (75 mm) from face. Following sandblasting, clean joints with air free of oil and water. Joint surfaces will be surface-dry prior to installation of sealant.

b. Preparation of Cracks in Rigid and Flexible Pavement.

(1) Preparation of Crack. Widen crack which are greater than 1/4 inch wide and less than 1 inch wide with router or random crack saw by removing a minimum of 1/16 inch (2 mm) from each side of crack. Routing or sawing shall be accomplished with a commercial router or random crack saw that can produce a vertical sided groove with minimal edge spalling. The groove width and depth shall be as shown on the Contract Drawings. A joint or crack that is routed or sawed should have a constant width from beginning to end. The widest portion of the joint or crack to be routed or sawed shall determine the routing width for the particular joint or crack.

Routed joints and cracks shall be cleaned in accordance with the requirements of Item P-605. Routed joints and cracks shall be kept clean until the sealing operations are completed.

Routed joints and cracks shall be sealed with a joint sealer in accordance with the requirements of Item P-605. Sealing shall not proceed until the routed joints and cracks are accepted by the RPR. To insure that space will be available for expansion of the asphalt, the joint or crack shall not be filled completely to the surface. Joint sealing shall not be performed when the ambient air temperature is below 40 degrees F, when the pavement temperature is below 50 degrees F, or when the pavement is wet.

Sealant which has been damaged, sunk below the surface, or has not bonded properly to the joint or crack shall be removed. The joint or crack shall be re-cleaned and re-sealed in accordance with the specifications at the Contractor's expense. Immediately before sealing, joints will be blown out with a hot air lance combined with oil and water-free compressed air.

(2) Removal of Existing Sealant. Existing sealants will be removed by routing random crack saw. Following routing sawing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

Remove all vegetation, joint and crack sealer, and debris from joints and cracks to a minimum depth of 1 inch (25 mm). Remove all joint sealant, vegetation and debris from all joints to the full depth of the joint. For surface treatment projects, fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment to be used. Underfill joints and cracks with the crack sealant a minimum of 1/8 inch (3 mm), not to exceed 1/4 inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface. For overlay projects, cracks greater than 1/4 inch wide and joints shall be filled with a mixture of emulsified asphalt and aggregate.

Wider cracks (over 1 inch wide (25 mm)), and cracks with adjacent soft or sunken spots, shall be repaired or replaced in accordance with paragraph 101-3.4, unless otherwise directed by the RPR.

For cracks and joints which are to be filled with a mixture of emulsified asphalt and aggregate, the aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 µm)	40-60
No. 50 (300 µm)	25-42
No. 100 (150 µm)	15-30
No. 200 (75 µm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of Foreign Substances/contaminates prior to overlay, seal-coat or remarking. Section not used.

101-3.4 Concrete and asphaltic concrete pavement repair. Pavement repair operations shall not proceed until the herbicide manufacturer's instructions indicate that vegetation may be removed.

a. Repair of PCC spalls with asphalt in areas to be overlaid.

The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 4 inches (100 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until

the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Full depth repair of PCC pavement.

(1) Determination of Full Depth Repair Areas: Areas to be repaired shall be determined by the RPR and saw cut by the contractor. The minimum full depth repair area shall be three feet in width and shall extend across the entire breadth of the slab. The entire slab shall be replaced when more than 25% of the slab would have to be repaired. The saw cut for removal shall be parallel with existing joints.

(2) Preparation of Full Depth Repair Areas: If the limits of a patch are within five feet of a joint, the area to be patched shall be extended to include the joint. The existing concrete to be removed shall be freed from the pavement to remain unless jackhammers are used for the complete removal. This shall be accomplished by line drilling or sawing through the complete depth of the slab one foot inside the perimeter of the final removal limits or outside the load transfer devices, whichever is greater. If line drilling is used, the distance between holes shall not exceed the diameter of the hole. The pavement between the perimeter of the pavement removal and the saw cut or line-drilled holes shall be removed with a jackhammer. Where the perimeter of the removal limits is not located on the joint, the perimeter shall be saw cut 2 inches in depth or 1/4 the slab thickness, whichever is less. Saw cuts shall not extend beyond the limits of removal, nor shall they extend beyond any joint or crack which is to remain. Corners shall be hand dressed to provide neat, vertical faces. Again, the concrete shall be line drilled or saw cut the full depth of the pavement 6 inches inside the removal limits. The pavement inside the saw cut or line shall be broken by methods suitable to the Contractor; however, if the material is to be wasted on the airport site, it shall be reduced to a maximum size designated by the airport owner. The Contractor's removal operation shall not cause damage to adjacent concrete pavement, underground utilities, or drainage structures under the pavement. Any damage shall be repaired by the Contractor at no expense to the airport owner.

After the old concrete has been removed, dowels and tie bars shall be installed if required. Approved quick setting non-shrink mortar or epoxy shall be used to grout the bars into the existing slabs. Any subbase or subgrade material that is disturbed below the desired level of cleanout must be removed and the patch area compacted to the satisfaction of the RPR. No new subbase material will be allowed in the patch area. The contractor shall fill in any area that was disturbed with concrete when the patch is placed.

If the subbase is unsuitable, the Contractor shall excavate the unsuitable materials to the dimensions designated by the RPR. Replace with suitable on-site material compacted in layers not to exceed four inches.

(3) Concrete Placement: Forms shall be used to provide straight and neat lines at joints and pavement edges. All exposed concrete faces shall be cleaned by sand blasting and allowed to dry thoroughly.

All surfaces in contact with new concrete shall be wetted down sufficiently to prevent drying of the new concrete.

(A) Placement temperatures for concrete shall be limited to 40 degrees F to 90 degrees F unless approved by the RPR.

(B) Finishing and Texturing: The concrete shall be adequately consolidated, finished and textured to a broom finish in accordance with the requirements of Item P-610, Structural Portland Cement Concrete.

(C) Curing and Protection: Curing shall be in accordance with the requirements of Item P-610, Structural Portland Cement Concrete. Concrete patches shall be protected from rain until the concrete material has set. Insulating blankets may be required during the curing period if ambient temperatures fall below 50 degrees F.

(D) Joints: Contraction joints shall be saw cut after the concrete has cured and sealed in accordance with the Contract Drawings. Construction joints, contraction joints and isolation joints shall be formed as shown on the plans.

c. Partial depth repair of PCC pavement.

(1) Determination of Partial Depth Patch Areas: The Contractor shall repair all spalled concrete as shown on the Contract Drawings or as directed by the RPR. The exact areas to be patched will be determined by the RPR using a rod, hammer or other device to determine defective or delaminated areas. The extent of the repair area will be marked by the RPR to no less than 4 inches outside the area of de-lamination.

(2) Preparation of Partial Depth Patch Areas: Partial depth patches shall be constructed at locations shown on the Contract Drawings or as directed by the RPR. A saw cut shall be made around the perimeter of the patch area to provide a vertical face at the edge and sufficient depth to provide integrity to the patch. The saw cut shall have a minimum depth of 2 inches. Near vertical edges resulting from the use of milling or grinding machines will be considered acceptable. Saw cuts shall not extend outside of the patch area, nor shall they extend beyond any joint or crack which is to remain. Interior corners shall be hand dressed to provide neat, vertical faces.

Concrete within the patch area shall be broken out to a minimum depth of two inches with pneumatic tools and until sound and clean concrete is exposed. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. If the depth of the repair exceeds five inches, the entire area should be removed and replaced according to the paragraph below pertaining to full depth repair of PCC pavement. Repairs at corners may extend to the full depth of pavement. The maximum size pneumatic hammer shall be 30 pounds. It is the intent of this specification that proper size tools be used which will not fracture the concrete below that needed to reach sound and clean concrete, nor will it cause damage or stress to adjacent pavement to remain in place.

The exposed faces of the concrete shall be sandblasted free of loose particles, oil, dust, traces of AC pavement and other contaminants before patching. All sandblasting residue shall be removed prior to placement of the bonding agent.

(3) Placing Patch Material: Materials for patching of PCC pavement shall conform to the requirements of Item P-610. The patch mixture shall be placed and consolidated to eliminate essentially all voids at the interface of the patch and existing concrete. If a partial depth repair area abuts a working joint or crack which penetrates the full depth of the slab, an insert or other bond-breaking medium shall be used to maintain working joints or cracks. It is the intent of this requirement to prevent contact between the patch and any adjacent slab which could cause a compression or other type failure in the patch. Therefore, the new joint should be formed to the same width as the existing joint.

A sand-cement grout shall be used for bonding the patch. The bonding grout shall be composed of one part Portland cement to one part sand by volume with sufficient water to produce a mortar with thick, cream consistency. Water cement contact time shall not exceed 90 minutes.

The grout shall be scrubbed evenly over the surface of the patch. Excess grout shall not be permitted to collect in pockets. The concrete patch material shall be placed before the bonding grout dries. Dried or hardened grout shall be removed by sandblasting and replaced at no cost to the Owner. The patch mixture shall be placed and consolidated to eliminate all voids at the interface between the patch and adjacent concrete. All patches shall be even with the cross-section of the existing pavement.

The patch shall be textured to a broom finish or to conform to that of the existing pavement surface. Curing procedures shall conform to the requirements of Item P-610, Structural Portland Cement Concrete.

Curing shall be in accordance with the requirements of Item P-610. Concrete patches shall be protected from rain until the concrete material has set. Insulating blankets may be required during the curing period if ambient temperatures fall below 50 degrees F.

The patch shall be protected from all traffic for a minimum of 7 days.

Measurement for partial depth PCC pavement repair which is less than 2.0 square feet shall be measured as 2.0 square feet

Areas adjacent to joints less than 6 inches in length and 2 inches or less in width shall not be patched under this specification but shall be filled with the joint sealant material as specified in Item P-605, Joint Sealing Filler.

d. Asphalt pavement repair. Pavement repair shall be performed full depth or partial depth as designated on the plans. Additional pavement repair not shown where joints or cracks that are 1 1/2 inch wide or greater, are spalled, or where the surface is depressed adjacent to the joints and cracks shall also be repaired when so directed by the RPR.

(1) Full depth repair of AC pavement. The failed areas shall be removed as specified in paragraph 101-3.1b, and as shown on the plans. All failed material including surface, base course, subbase course, and subgrade shall be removed as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications.

Full depth repair areas shall be removed by conventional excavating equipment or by milling. The method chosen by the Contractor shall not damage the existing pavement to remain.

Any excessive area that is removed due to the Contractor's choice of equipment, or replacement of damaged areas of existing pavement that are to remain, shall not be included in the measurement for payment. The Contractor shall repair the excess areas at no additional cost to the Owner. Prior to removal, Contractor shall saw cut vertical faces along all sides of the pavement repair area to a minimum depth of 2 inches. Removal of repair area may warrant using a deeper saw cut to avoid damage to remaining existing pavement.

Contractor shall compact the subgrade soil remaining in place in accordance with Item P-152.. Placement and compaction of subbase and base courses shall be in accordance with their respective technical specification, P-154, P-208, P-209, etc.. The repair area shall be filled with bituminous concrete (Hot Mix Asphalt (HMA)) meeting the requirements of the technical specification as shown on the details. A bituminous tack coat shall be applied to the vertical faces of the repair area in accordance with Item P-603 prior to filling. The repair area shall be filled with bituminous concrete from the bottom in successive lifts not exceeding the thickness specified in the technical specification for HMA. The final lift shall be placed to a height above the surface elevation of the pavement such that when the asphalt is compacted, the compacted mix shall be even with, or slightly above, the existing pavement. The bituminous concrete shall be compacted with a vibratory steel-wheel roller to the satisfaction of the RPR. The roller shall

have a minimum unsprung weight of 10 Tons. On the final lift, the loose asphalt shall be “pinched-in” from the edges of the repair area. On pavements which will receive a HMA overlay, excess asphalt which is greater than 1/8 inch above the surface, and asphalt which is placed on top of existing pavement adjacent to the repair area, shall be removed by milling to obtain a repair area with a surface that is flush with the adjacent pavement surface. On pavements which will not receive a bituminous overlay, excess asphalt which is greater than 1/8 inch above the surface, and asphalt which is placed on top of existing pavement adjacent to the repair area shall be removed by diamond grinding in accordance with paragraph 101-3.4.d(3). Removal of existing pavement by excavation or milling, the application of tack coat, placement of bituminous concrete and milling/diamond grinding will be considered a necessary part of the work and its costs shall be considered by the Contractor and included in the contract price for the pay items of work involved.

(2) Partial depth repair of AC pavement. Partial depth repair areas shall be removed by milling. The milling equipment shall be a self-powered machine operating a rotary cutter or revolving cutting tool and shall be capable of milling to the depth shown on the plans.

Any excessive area that is milled due to the Contractor choice of equipment, or replacement of damaged areas of existing pavement that are to remain shall not be included in the measurement for payment. The Contractor shall repair the excess areas at no additional cost to the Owner. Prior to removal, Contractor shall saw cut vertical faces along all sides of the pavement repair area to a minimum depth of 2 inches.

Existing pavement and the milled surface shall be cleaned upon completion of removal operations. The milled surface and vertical faces of the saw cuts shall be cleaned of all loose and latent material that would cause a poor bond between existing and new pavements.

The repair area shall be filled with bituminous concrete (Hot Mix Asphalt (HMA)) meeting the requirements of the technical specification as shown on the details. A bituminous tack coat shall be applied to the milled surface and vertical faces of the repair area in accordance with Item P-603 prior to filling. The repair area shall be filled with bituminous concrete from the bottom in successive lifts not exceeding the thickness specified in the technical specification for HMA. The final lift shall be placed to a height above the surface elevation of the pavement such that when the asphalt is compacted, the compacted mix shall be even with, or slightly above, the existing pavement. The bituminous concrete shall be compacted with a vibratory steel-wheel roller to the satisfaction of the RPR. The roller shall have a minimum unsprung weight of 10 Tons. On the final lift, the loose asphalt shall be “pinched-in” from the edges of the repair area. On pavements which will receive a HMA overlay, excess asphalt which is greater than 1/8 inch above the surface, and asphalt which is placed on top of existing pavement adjacent to the repair area, shall be removed by milling to obtain a repair area with a surface that is flush with the adjacent pavement surface. On pavements which will not receive a bituminous overlay, excess asphalt which is greater than 1/8 inch above the surface, and asphalt which is placed on top of existing pavement adjacent to the repair area shall be removed by diamond grinding in accordance with paragraph 101-3.4.d(3). Removal of existing pavement by excavation or milling, the application of tack coat, placement of bituminous concrete and milling/diamond grinding will be considered a necessary part of the work and its costs shall be considered by the Contractor and included in the contract price for the pay items of work involved.

(3) Diamond grinding. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm)

wide with a sufficient number of blades to create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that cause ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment of seal coat per Item P-608 to all areas that have been subject to grinding. No measurement for diamond grinding or application of seal coat will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items of work involved.

101-3.5 Cold milling.

Milling operations shall not proceed until the herbicide manufacturer's instructions indicate that vegetation may be removed.

Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed of in accordance with paragraph 101-3.11. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

The milling machine shall have a minimum width of 7 feet (2 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to either windrow the millings or cuttings, or remove the millings or cuttings from the pavement and load them into a truck.

Prior to disturbing original grade, Contractor shall verify the accuracy of existing elevations by verifying spot elevations at the same locations where original field survey data was obtained in accordance with Section 50, Construction Layout and Stakes.

Milled longitudinal or transverse vertical faces exceeding 1-1/2 inches in height that would be exposed to traffic shall be sloped or tapered by constructing temporary asphalt ramps, unless otherwise approved by the RPR. The maximum grade for temporary ramps shall not exceed 5 percent. The temporary ramp shall be removed prior to placement of tack coat or pavement courses. No payment will be made for placement or removal of temporary ramps.

a. Patching. Patching shall be performed in accordance with paragraph 101-3.4.

b. Profile milling. Profile milling of existing asphalt or concrete pavement shall be performed on areas indicated by the plans and details. The slope or grade of the milled surface shall be at the same slope as finished grade. The Contractor shall establish a starting reference by survey and utilize a stringline method for grade control. Adjacent passes of the milling equipment may take their reference from preceding passes using a short ski or shoe.

c. Milling to depth. Milling existing asphalt or concrete pavement shall be performed to the depths indicated on the plans. Separate measurement for payment will be made for the each different depth of milling indicated on the plans.

d. Milling to remove delaminated pavement. In areas where the milled surface leaves a thin layer of pavement which is delaminated, or has the potential to become delaminated, the RPR will order the contractor to mill the surface to remove the delaminated layer. Prior to removing the delaminated pavement, the limits of milling shall be boxed out to rectangular shapes. The outer limits shall be saw cut to a depth of 1 ½ inches to avoid further delamination due to the milling process. The Contractor shall mill the boxed out area to a depth of 1 ½ inches. The location of the limits of the delaminated pavement to be milled will be determined by the RPR.

e. Crack repair after milling. Cracks in the existing pavement after milling operations shall be prepared in accordance with Section 101-3.2.b.

f. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. The Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming.

101-3.6. Section not used.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Section not used.

101-3.9 Section not used.

101-3.10 Removal of Pipe, Structures and other Buried Items.

a. Removal of Existing Pipe Material.

Not used.

b. Removal of Inlets/Manholes.

Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and disposed of in accordance with paragraph 101-3.11. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment, unless otherwise noted on the plans. Backfill must be compacted in accordance with Item P-152, Excavation, Embankment and Subgrade.

101-3.11 Spoil. Spoil material generated from cold milling operations shall be disposed of off airport property. Every effort should be made by the Contractor to recycle or re-use the material in other projects.

Excess suitable material which cannot be incorporated in the work in accordance with Item P-152, Excavation, Subgrade and Embankment, and all other material shall be disposed of off airport property at a location selected by the contractor.

Prior to placing spoil off airport property, Contractor shall submit a "Spoil Deposition and Release" to the RPR. A sample form is contained in Attachment A to Section 70-08 of these Specifications and shall be acceptable to the RPR prior to removing material from the work area.

No direct payment will be made for spoiling operations. The cost of spoiling material off-site shall be considered incidental to this Contract and the costs shall be included in the various pay

items involved.

METHOD OF MEASUREMENT

101-4.5 Method. The unit of measure for removal shall be by the square yard.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P-101-5.1	Existing Concrete Pavement Removal – per square yard
Item P-101-5.2	Existing Asphalt Pavement Removal – per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.
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ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
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END OF ITEM P-101

Item P-152 Excavation, Subgrade, and Embankment

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature, excluding stabilized layers of pavement (e.g. asphalt, concrete).

b. Borrow excavation. Borrow excavation shall consist of approved material required for the construction of embankments or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas designated by the Engineer within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport boundaries.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed of in accordance with paragraph 152-2.15. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used for embankment construction outside of runway and taxiway safety areas, and outside of future paved areas, when approved by the RPR, provided the material is not needed for topsoil. Material excavated which is classified as unsuitable shall be paid for as Unclassified Excavation.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in accordance with paragraph 152-2.15. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Digital terrain model (DTM) files of the existing surfaces, finished surfaces and other various surfaces were used to develop the design plans.

Volumetric quantities were calculated by comparing DTM files of the applicable design surfaces and generating Triangle Volume Reports. Electronic copies of DTM files and a paper copy of the original topographic map will be issued to the successful bidder.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least two weeks before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas approved by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes **as** shown on the plans. All unsuitable material shall be disposed of in accordance with paragraph 152-2.15.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed of in accordance with paragraph 152-2.15. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard for unclassified excavation. The excavated area shall be backfilled with Item P-209 Crushed Aggregate Base Course and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation.

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor, as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of in accordance with paragraph 152-2.15. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas are not required.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 12 inches (300 mm) of subgrade shall be compacted to not less than 100 % of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within $\pm 2\%$ of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The RPR will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the RPR for every 3,000 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR. In no case shall less than 2 density tests be taken per lift.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 100% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

The in-place field density shall be determined in accordance with ASTM D1556, or ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The RPR shall perform all density tests. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compact and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin

in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 12 inches (300 mm) of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall be disposed of in accordance with paragraph 152-2.15.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet (60 cm) in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.9 Proof rolling. 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to [80/100/150 psi in the presence of the RPR. Apply a minimum of 75% coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 100 percent of the maximum dry density as determined by ASTM D698. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within $\pm 2\%$ of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the $\frac{3}{4}$ inch (19.0 mm) sieve, follow the methods in ASTM D698 and the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 3,000 S.Y. of subgrade. In no case shall less than 2 density tests be taken. All quality assurance testing shall be done by the RPR.

The in-place field density shall be determined in accordance with ASTM D1556, or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to

determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

- a. Smoothness.** The finished surface shall not vary more than $\pm 1/2$ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the

centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

- b. Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to be placed, grade shall not vary more than 0.10 feet (30 mm) from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-2.14 Topsoil. Not Used.

152-2.15 Spoil.

All excess material from excavation, subgrade and embankment operations shall be disposed of off airport property.

Prior to placing spoil off airport property, Contractor shall submit a "Spoil Deposition and Release" to the RPR. A sample form is contained in Attachment A to Section 70-08 of these Specifications and shall be acceptable to the RPR prior to removing material from the work area.

No direct payment will be made for spoiling operations. The cost of spoiling material off-site shall be considered incidental to this Contract and the costs shall be included in the various pay items involved.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard shall be computed by comparison of digital terrain model (DTM) surfaces used for the computation of neat line design quantities. The surfaces shall be the original ground line established by field cross-sections and the final theoretical surface

Prior to determination of final quantities, the Engineer will field verify that the Contractor has met grading tolerances by means of field cross sections. Field cross sections will be taken randomly at intervals not exceeding 500 feet, however, a minimum of three sections will be taken for each baseline or centerline.

If the final grades are in tolerance and acceptable to the Engineer and Owner, then no adjustments will be made to the neat line quantities.

If the final grades are not in tolerance, but the deviation is acceptable to the Engineer and Owner, then adjustments will be made to the neat line quantities based on a final topographic survey or final cross sections.

If the final grades are not in tolerance and are not acceptable to the Engineer and Owner, then the Contractor shall regrade the areas that are out of tolerance. Upon completion of regrading operations, Engineer will field verify that the Contractor has met grading tolerances as stated above.

The quantity of unclassified to be paid for shall be the number of cubic yards measured in its original position. Measurement shall not include the quantity of materials excavated without

authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

BASIS OF PAYMENT

152-4.1 Unclassified excavation payment shall be made at the contract unit price per cubic yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-152-4.1	Unclassified Excavation - per cubic yard
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
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ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2700 kN-m/m ³))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software
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Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils
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END OF ITEM P-152

Item P-603 Emulsified Asphalt Tack Coat

DESCRIPTION

603-1.1 This item shall consist of preparing and treating an asphalt or concrete surface with asphalt material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 Asphalt materials. The asphalt material shall be an emulsified asphalt as specified in ASTM D3628, as an asphalt application for tack coat appropriate to local conditions. The emulsified asphalt shall not be diluted. The Contractor shall provide a copy of the manufacturer's Certificate of Analysis (COA) for the asphalt material to the Resident Project Representative (RPR) before the asphalt material is applied for review and acceptance. The furnishing of COA for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's COA may be subject to verification by testing the material delivered for use on the project.

CONSTRUCTION METHODS

603-3.1 Weather limitations. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F (10°C) or above; the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the RPR.

603-3.2 Equipment. The Contractor shall provide equipment for heating and applying the emulsified asphalt material. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spray bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute).

The equipment will be tested under pressure for leaks and to ensure proper set-up before use to verify truck set-up (via a test-shot area), including but not limited to, nozzle tip size appropriate for application, spray-bar height and pressure and pump speed, evidence of triple-overlap spray pattern, lack of leaks, and any other factors relevant to ensure the truck is in good working order before use.

The distributor truck shall be equipped with a minimum 12-foot (3.7-m) spreader spray bar with individual nozzle control with computer-controlled application rates. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper.

The distributor truck shall be equipped to effectively heat and mix the material to the required temperature prior to application as required. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Do not overheat or over mix the material.

The distributor shall be equipped with a hand sprayer.

Asphalt distributors must be calibrated annually in accordance with ASTM D2995. The Contractor must furnish a current calibration certification for the asphalt distributor truck from any State or other agency as approved by the RPR.

A power broom and/or power blower suitable for cleaning the surfaces to which the asphalt tack coat is to be applied shall be provided.

603-3.3 Application of emulsified asphalt material. The emulsified asphalt shall not be diluted. Immediately before applying the emulsified asphalt tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

The emulsified asphalt material shall be uniformly applied with an asphalt distributor at the rates appropriate for the conditions and surface specified in the table below. The type of asphalt material and application rate shall be approved by the RPR prior to application.

Emulsified Asphalt

Surface Type	Residual Rate, gal/SY (L/square meter)	Emulsion Application Bar Rate, gal/SY (L/square meter)
New asphalt	0.02-0.05 (0.09-0.23)	0.03-0.07 (0.13-0.32)
Existing asphalt	0.04-0.07 (0.18-0.32)	0.06-0.11 (0.27-0.50)
Milled Surface	0.04-0.08 (0.18-0.36)	.0.06-0.12 (0.27-0.54)
Concrete	0.03-0.05 (0.13-0.23)	0.05-0.08 (0.23-0.36)

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the RPR. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed. When the tack coat has been disturbed by the Contractor, tack coat shall be reapplied at the Contractor's expense.

603-3.4 Freight and waybills The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the RPR certified waybills and certified delivery tickets for all emulsified asphalt materials used in the construction of the pavement covered by the contract. Do not remove emulsified asphalt material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

METHOD OF MEASUREMENT

603-4.1 The emulsified asphalt material for tack coat shall be measured by the square yard. The emulsified asphalt material will be measured by the area treated and used in the accepted work.

BASIS OF PAYMENT

603.5-1 Payment shall be made at the contract unit price per square yard of emulsified asphalt material. This price shall be full compensation for furnishing all materials, for all preparation,

delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-5.1 Emulsified Asphalt Tack Coat - per square yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables
ASTM D2995	Standard Practice for Estimating Application Rate and Residual Application Rate of Bituminous Distributors
ASTM D3628	Standard Practice for Selection and Use of Emulsified Asphalts

**TABLE IV-3 TEMPERATURE-VOLUME
CORRECTIONS FOR EMULSIFIED ASPHALTS**

°C	°F	*M	°C	°F	*M	°C	°F	*M	°C	°F	*M	°C	°F	*M
10. 0	50	1.0025 0	20. 0	68	0.9980 0	30. 0	86	0.9935 0	40. 0	104	0.9890 0	50. 0	122	0.9845 0
10. 6	51	1.0022 5	20. 6	69	0.9977 5	30. 6	87	0.9932 5	40. 6	105	0.9887 5	50. 6	123	0.9842 5
11. 1	52	1.0020 0	21. 1	70	0.9975 0	31. 1	88	0.9930 0	41. 1	106	0.9885 0	51. 1	124	0.9840 0
11. 7	53	1.0017 5	21. 7	71	0.9972 5	31. 7	89	0.9927 5	41. 7	107	0.9882 5	51. 7	125	0.9837 5
12. 2	54	1.0015 0	22. 2	72	0.9970 0	32. 2	90	0.9925 0	42. 2	108	0.9880 0	52. 2	126	0.9835 0
12. 8	55	1.0012 5	22. 8	73	0.9967 5	32. 8	91	0.9922 5	42. 8	109	0.9877 5	52. 8	127	0.9832 5
13. 3	56	1.0010 0	23. 3	74	0.9965 0	33. 3	92	0.9920 0	43. 3	110	0.9875 0	53. 3	128	0.9830 0
13. 9	57	1.0007 5	23. 9	75	0.9962 5	33. 9	93	0.9917 5	43. 9	111	0.9872 5	53. 9	129	0.9827 5
14. 4	58	1.0005 0	24. 4	76	0.9960 0	34. 4	94	0.9915 0	44. 4	112	0.9870 0	54. 4	130	0.9825 0
15. 0	59	1.0002 5	25. 0	77	0.9957 5	35. 0	95	0.9912 5	45. 0	113	0.9867 5	55. 0	131	0.9822 5
15. 6	60	1.0000 0	25. 6	78	0.9955 0	35. 6	96	0.9910 0	45. 6	114	0.9865 0	55. 6	132	0.9820 0

**TABLE IV-3 TEMPERATURE-VOLUME
CORRECTIONS FOR EMULSIFIED ASPHALTS**

°C	°F	*M	°C	°F	*M	°C	°F	*M	°C	°F	*M	°C	°F	*M
16. 1	61	0.9997 5	26. 1	79	0.9952 5	36. 1	97	0.9907 5	46. 1	115	0.9862 5	56. 1	133	0.9817 5
16. 7	62	0.9995 0	26. 7	80	0.9950 0	36. 7	98	0.9905 0	46. 7	116	0.9860 0	56. 7	134	0.9815 0
17. 2	63	0.9992 5	27. 2	81	0.9947 5	37. 2	99	0.9902 5	47. 2	117	0.9857 5	57. 2	135	0.9812 5
17. 8	64	0.9990 0	27. 8	82	0.9945 0	37. 8	100	0.9900 0	47. 8	118	0.9855 0	57. 8	136	0.9810 0
18. 3	65	0.9987 5	28. 3	83	0.9942 5	38. 3	101	0.9897 5	48. 3	119	0.9852 5	58. 3	137	0.9807 5
18. 9	66	0.9985 0	28. 9	84	0.9940 0	38. 9	102	0.9895 0	48. 9	120	0.9850 0	58. 9	138	0.9805 0
19. 4	67	0.9982 5	29. 4	85	0.9937 5	39. 4	103	0.9892 5	49. 4	121	0.9847 5	59. 4	139	0.9802 5
60. 0	140	0.9800 0	68. 3	155	0.9762 5	76. 7	170	0.9725 0						
60. 6	141	0.9797 5	68. 9	156	0.9760 0	77. 2	171	0.9722 5						
61. 1	142	0.9795 0	69. 4	157	0.9757 5	77. 8	172	0.9720 0						
61. 7	143	0.9792 5	70. 0	158	0.9755 0	78. 3	173	0.9717 5						

**TABLE IV-3 TEMPERATURE-VOLUME
CORRECTIONS FOR EMULSIFIED ASPHALTS**

°C	°F	*M	°C	°F	*M	°C	°F	*M	°C	°F	*M	°C	°F	*M
62. 2	144	0.9790 0	70. 6	159	0.9752 5	78. 9	174	0.9715 0						
62. 8	145	0.9787 5	71. 1	160	0.9750 0	79. 4	175	0.9712 5						
63. 3	146	0.9785 0	71. 7	161	0.9747 5	80. 0	176	0.9710 0						
63. 9	147	0.9782 5	72. 2	162	0.9745 0	80. 6	177	0.9707 5						
64. 4	148	0.9780 0	72. 8	163	0.9742 5	81. 1	178	0.9705 0						
65. 0	149	0.9777 5	73. 3	164	0.9740 0	81. 7	179	0.9702 5						
65. 6	150	0.9775 0	73. 9	165	0.9737 5	82. 2	180	0.9700 0						
66. 1	151	0.9772 5	74. 4	166	0.9735 0	82. 8	181	0.9697 5						
66. 7	152	0.9770 0	75. 0	167	0.9732 5	83. 3	182	0.9695 0						
67. 2	153	0.9767 5	75. 6	168	0.9730 0	83. 9	183	0.9692 5						
67. 8	154	0.9765 0	76. 1	169	0.9727 5	84. 4	184	0.9690 0						

°C = Observed Temperature in Degrees Celsius.

°F = Temperature in Degrees Fahrenheit.

*M = Multiplier for correcting volumes to the basis of 15.6 °C (60°F).

END ITEM P-603

Item P-605 Joint Sealants for Pavements

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of the following types as indicated on the Contract Drawings:

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements
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Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be $25\% \pm 5\%$ larger in diameter than the nominal width of the joint. Type 1 backer rods shall be used for hot-applied sealants. Type 1 or Type 3 backer rods shall be used for cold-applied sealants.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

When used with P-606, such as light can installation, P-605 shall not be applied until the P-606 has fully cured.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, 30 days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by tractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint

face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/4 inch (6 mm) \pm 1/16 inch (2 mm) below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

Backer rod and bond-breaking tape shall be compatible with the sealant.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing material shall be measured by the linear foot of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for joint sealing material shall be made at the contract unit price per linear foot. The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-5.1 Joint Sealing Filler per linear foot

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789 Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)

ASTM D5249 Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt

Advisory Circulars (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids

END ITEM P-605

Item L-110 Airport Underground Electrical Duct Banks and Conduits

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits and removal of existing duct banks. It shall also include all trenching, backfilling, removal, and restoration of any paved or turfed areas which are not otherwise disturbed; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

Restoration within grading limits will not be necessary as the establishment of paved or turf surfaces are included in the various pay items of the proposed work of this contact.

EQUIPMENT AND MATERIALS

110-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be neatly bound in a properly sized 3-ring binder, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mils of asphaltum sealer. PVC coated rigid galvanized steel conduit shall have a 0.04-inch thick factory applied PVC coating meeting NEMA Standard No. RN1. Fittings shall have the same coating. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

110-2.3 Plastic conduit and fittings. Not Used.

110-2.4 Split conduit. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 Conduit spacers. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

110-2.7 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 Flowable backfill. Flowable material used to back fill conduit and duct bank trenches shall conform to the requirements of Item P-153, Controlled Low Strength Material.

110-2.9 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), orange (telephone/fiber optic cabling) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item. The legend shall read "CAUTION: BURIED ELECTRIC LINE BELOW", or similar language which includes the words "CAUTION" and "ELECTRIC".

110-2.10 Bedding. Bedding shall meet the requirements of ASTM C 33, fine aggregate for concrete. Gradation shall be in accordance with the table below:

Percentage By Weight	
<u>Sieve Designations</u>	<u>Passing Sieves</u>
3/8 Inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85

No. 30	25-60
No. 50	5-30
No. 100	0-10

110-2.11 Flexible conduit. Flexible conduit shall be liquid-tight non-metallic conforming to the requirements of NEC 356 and UL 1660. Fittings shall conform to UL 514B. Where connected to rigid steel or PVC conduit, the flexible conduit shall have the same inside diameter.

110-2.12 Reinforcing steel. Reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A 615, Grade 60. Reinforcing steel shall be hot dipped galvanized in accordance with ASTM A-123, or epoxy coated.

110-2.13 Concrete bonding agent. Concrete bonding agent shall conform to the requirements of ASTM C 881. Concrete bonding agent shall be Type V, Grade 2 and un-pigmented. Concrete bonding agent shall be Class A, B, or C, depending on the temperature of the concrete surface to which the agent will be applied.

110-2.14 Backfill. Backfill shall be suitable on-site material obtained from the trench excavation, unless otherwise shown on the Contract Drawings.

110-2.15 Counterpoise wire. Counterpoise wire shall meet the requirements of Item L-108, Underground Cable for Airports.

110-2.16 Ground rods. Ground Rods shall meet the requirements of Item L-108, Underground Cable for Airports.

110-2.17 Concrete grouting material. This material shall have a maximum initial setting time of one hour. Compressive strength shall be a minimum of 2,000 psi after one day and 5,000 psi after 28 days. The material shall be able to withstand 25 cycles of freeze-thaw (10% NaCl) with a maximum loss of 4%. The material may exhibit expansion at no more than 0.40% and shrinkage of no more than 0.05% such that no cracks are produced. The bond strength shall be a minimum of 200 psi after 5 days air cure without the use of a special bonding agent. The material shall exhibit no appreciable heat of hydration.

110-2.18 Separation Geotextile. Not Used.

CONSTRUCTION METHODS

110-3.1 General. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses, if required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches (50 mm) inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches (75 mm) per 100 feet (30 m). On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches (0.5 m) below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches (0.5 m) below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch (6 mm) smaller than the bore of the conduit shall be

pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor's expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 1,000 pound test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet (1.5 m).

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

Existing material, regardless of its nature, shall be removed to a depth of at least 3 inches (75 mm) below the required conduit or duct bank depth and it shall be replaced with bedding. Flowable backfill may alternatively be used. The cost of excavation, regardless of the type of material encountered, shall be included in the various pay items involved.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR. If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer's recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one

conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet (60 cm).

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion protection shall be per federal, state, and local requirements and shall be incidental to Item L-110.

Excavation for conduits and duct banks that are placed in embankment fill shall not be made until the embankment has been completed to a height above the top of the conduit and duct bank as shown on the plans.

The Contractor shall do such trench bracing, sheeting or shoring necessary to protect the excavation as required for safety and conformance to governing laws. Contractor shall brace, sheet or shore the trenches in areas such that existing pavements and utilities are not undermined. The bracing, sheeting or shoring shall not be removed in one operation, but shall be done in successive stages as determined by the Engineer to prevent overloading of the conduit or duct bank during backfilling operations. The cost of the bracing, sheeting or shoring and the removal of same shall be considered as a subsidiary obligation of the Contractor and included in the contract price for the pay items of work involved.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

- a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred

- b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any cable is damaged during the course of construction, the Contractor shall be responsible for the immediate and complete repair.

110-3.2 Duct banks. Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches (0.5 m) below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches (0.5 m) below finished grade where installed in unpaved areas.

Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet (1 m) beyond the edges of the pavement or 3 feet (1 m) beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Duct banks shall be

constructed in accordance with the details shown on the Plans. Conduits within the duct bank shall be spaced not less than 3 inches (75 mm) apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 4 ½ inches thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot (1.5-m) intervals. To relieve stresses on joints between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and tied to the duct bank reinforcement at the time the duct bank is installed.

All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches (75 to 150 mm) wide tape, 8 inches (200 mm) minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch (75-mm) wide tape only for single conduit runs. Utilize the 6-inch (150-mm) wide tape for multiple conduits and duct banks. Install one warning tape above each counterpoise wire installed.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

Where duct banks are being extended, or where the duct bank is structurally tied to existing concrete, Contractor shall apply a concrete bonding agent to the surface of existing concrete prior to pouring fresh concrete.

Counterpoise wire and ground rods shall be installed in accordance with Item L-108, Underground Cable for Airports.

110-3.3 Conduits without concrete encasement. Trenches for single-conduit lines shall be not less than 6 inches (150 mm) nor more than 12 inches (300 mm) wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 3 inches (75 mm) thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch (6.3 mm) sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches (0.5 m) below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches (60 cm) below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

Counterpoise wire and ground rods shall be installed in accordance with Item L-108, Underground Cable for Airports.

Install a plastic, detectable, color as noted, 3 to 6 inches (75 to 150 mm) wide tape, above all underground conduit or duct lines not installed under pavement, at the depth shown on the plans. One warning tape shall be installed above each counterpoise wire installed.

110-3.4 Markers. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet (60 cm) square and 4 - 6 inches (100 - 150 mm) thick extending approximately one inch (25 mm) above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet (61 m) along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word "DUCT" or "CONDUIT" on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches (100 mm) high and 3 inches (75 mm) wide with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 Backfilling for conduits. For conduits, sand, soft earth, or other fine fill (loose measurement), as shown on the Plans, shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches (100 mm) in diameter.

Flowable backfill may alternatively be used, provided flowable fill is used as bedding below the conduit. Flowable fill shall not be used above the bottom of subgrade beneath paved areas.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 Backfilling for duct banks. After the concrete has cured, the remaining trench shall be backfilled and compacted in accordance with the details shown on the Plans. Where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet (76 m) of duct bank or one work period's construction, whichever is less.

Flowable backfill may alternatively be used. Flowable fill shall not be used above the bottom of subgrade beneath paved areas.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 Restoration. Suitable material excavated for conduit or duct bank installation may be deposited in embankment or shoulders areas. Excess suitable material and unsuitable material shall be disposed of off airport property or as ordered by the Engineer. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. Where conduits or duct banks are installed or removed outside of the general grading limits, or in areas that would not otherwise be disturbed, restoration shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items of work involved. Where conduits or duct banks are installed or removed within the general grading limits, restoration of the area will not be necessary as payment for establishment of turf or pavement will be included in the various pay items of work involved. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 Ownership of removed cable. All cable removed shall become the property of the Contractor and shall be disposed of in a manner which is in accordance with all Federal, State and Local regulations. In no case, shall any removed cables be left within the airport limits. Contractor shall make every effort to recycle the used cable at an approved recycling center. When the Contractor chooses to dispose of cable off the airport property, the Contractor shall obtain and file with the RPR permission in writing from the property owner for the use of private property for this purpose.

Prior to placing spoil off airport property, Contractor shall submit a "Spoil Deposition and Release" to the RPR. A sample form is contained in Attachment A to Section 70-08 of these Specifications and shall be acceptable to the RPR prior to removing material from the work area.

No direct payment will be made for spoiling operations. The cost of spoiling material off-site shall be considered incidental to this Contract and the costs shall be included in the various pay items involved.

110-3.9 Conduit and duct bank removal.

Where existing conduits and duct banks are to be removed in the same trench as proposed conduits and duct banks, the Contractor shall consider such removal as an incidental part of construction and include

the costs thereof in the various pay items involved. Where existing conduits and duct banks are to be removed outside of proposed trenching limits, they shall be paid for separately. The cost of such removal shall include excavation, conduit and duct bank removal, disposal, and backfill. Restoration shall be as specified below in the section titled "Restoration". Backfill shall be with suitable on-site material unless otherwise shown or specified. Backfill under paved areas shall be as shown on the plans. Conduit and duct banks shall be removed as shown on the plans and as directed by the Engineer. When conduit and duct banks are removed and disconnected from existing structures, the openings in the structure shall be closed watertight with brick and mortar. When conduits and duct banks are to be replaced, any structure modifications required to accept the proposed conduit and duct bank shall be done with all connections grouted watertight.

Where conduits or duct banks are installed or removed outside of the general grading limits, or in areas that would not otherwise be disturbed, restoration shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items of work involved.

Where conduits or duct banks are installed or removed within the general grading limits, restoration of the area will not be necessary as payment for establishment of turf or pavement will be included in the various pay items of work involved.

110-3.10 Grouting conduits in pavement. Conduit trenches in pavement to receive concrete grout material shall be thoroughly cleaned to the satisfaction of the Engineer prior to placement of grout material. Trench sides shall be saw cut to a vertical face with no surface spalling. Grout material shall be placed to the depths shown on the Contract Drawings. Grouting conduits in pavement shall be considered necessary and incidental to the work of this item and the costs shall be included in the various pay items involved.

METHOD OF MEASUREMENT

110-4.1 Underground conduits and duct banks shall be measured by the linear feet of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration, and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

BASIS OF PAYMENT

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

Item L-110-5.1	Non-Encased Electrical Duct Bank, 3 Way - 2 Inch - per linear foot
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circular (AC)

- | | |
|----------------|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program |

ASTM International (ASTM)

- | | |
|-----------|--|
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
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National Fire Protection Association (NFPA)

- | | |
|---------|--------------------------------|
| NFPA-70 | National Electrical Code (NEC) |
|---------|--------------------------------|

Underwriters Laboratories (UL)

- | | |
|------------------|---|
| UL Standard 6 | Electrical Rigid Metal Conduit - Steel |
| UL Standard 514B | Conduit, Tubing, and Cable Fittings |
| UL Standard 514C | Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers |
| UL Standard 1242 | Electrical Intermediate Metal Conduit Steel |
| UL Standard 651 | Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings |
| UL Standard 651A | Type EB and A Rigid PVC Conduit and HDPE Conduit |

END OF ITEM L-110

Item L-115 Electrical Manholes and Junction Structures

DESCRIPTION

115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS

115-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be neatly bound in a properly sized 3-ring binder, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

115-2.2 Cast-in-place concrete structures. Not Used.

115-2.3 Precast concrete structures. Provide precast concrete structures where shown on the plans. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program and shall be manufactured in accordance with and conforming to ASTM C913 and ASTM C478. Precast structures shall have bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand AASHTO HS-25 (min.) loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans. Precast structures with multiple sections shall have bitumastic sealer placed between all joints to make them watertight.

Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand **30,000** lb aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 Junction boxes. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch (9-mm) thickness for L-867 and 3/4-inch (19-mm) thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 Mortar. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

115-2.7 Frames and covers. The frames shall conform to one of the following requirements:

- a. ASTM A48 Gray iron castings
- b. ASTM A47 Malleable iron castings
- c. ASTM A27 Steel castings
- d. ASTM A283, Grade D Structural steel for grates and frames
- e. ASTM A536 Ductile iron castings
- f. ASTM A897 Austempered ductile iron castings

Castings shall withstand a maximum tire pressure of 250 psi and maximum wheel load of 100,000 lbs., or AASHTO-25 loads, as shown on the plans.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word "ELECTRIC" or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

115-2.8 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.

115-2.9 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 Bedding/special backfill. Bedding or special backfill shall be as shown on the plans.

115-2.11 Flowable backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 Cable trays. Cable trays shall be of aluminum ladder type, 6-inch wide and 4 inches deep, unless otherwise shown. Cable trays shall be located as shown on the plans.

115-2.13 Plastic conduit. Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

115-2.14 Conduit terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 Pulling-in irons. Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch (12 mm) diameter with an ultimate strength of 270,000 psi (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 Ground rods. Ground rods shall be copper-clad steel. The ground rods shall be of the length and diameter specified on the plans, but in no case be less than 8 feet (2.4 m) long and 5/8 inch (16 mm) in diameter.

115-2.17 Separation Geotextile. Not Used.

115-2.18 Junction can plazas. Not Used.

CONSTRUCTION METHODS

115-3.1 Unclassified excavation. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The bracing, sheeting or shoring shall not be removed in one operation, but shall be done in successive stages of backfill to prevent overloading of the pipe during backfilling operations. The cost of bracing, sheeting and shoring, and its removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

Soil below the bedding shall be compacted to 95% maximum density for non-cohesive soils and 90% maximum density for cohesive soils in accordance with ASTM D 698.

115-3.2 Concrete structures. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 Precast unit installations. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 Placement and treatment of castings, frames and fittings. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 Installation of ladders. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 Removal of sheeting and bracing. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 Backfilling. After a structure has been completed, the area around it shall be backfilled with suitable on-site material in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction. For backfill with suitable on-site material, the material shall be compacted to the density requirements of embankment as specified in Item P-152. For backfill with select material, compaction shall be in accordance with the referenced specification. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of cast in place concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 Connection of duct banks. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed. The size and spacing of the reinforcing bars shall match those in the concrete encased duct bank, but in no case shall they be less than No. 4 bars spaced at 6 inches maximum on center.

115-3.9 Grounding. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches (150 mm) above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch (100 mm) diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with Portland cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through

bottom slab and installing the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot (30 cm) above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtailed shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 Cleanup and repair. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. Surplus dirt may be incorporated into embankments on the project site provided it is suitable material. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. Where no other work or soil disturbance is required, restoration shall be considered incidental to the respective Item L-115 pay item.

Electrical manholes and junction structures in areas of existing special surface treatment, such as aprons, taxiways, runways, shoulders, roads, sidewalks, or similar stabilized surfaces shall be restored using materials comparable to original materials, and at depths matching existing layers. Payment for restoration shall be considered a subsidiary and incidental part of the completion of this item and as such, the Contractor shall include all costs associated with restoration in the various pay items involved.

Electrical manholes and junction structures in proposed turf areas shall be restored in accordance with the topsoil, seeding and mulching specifications of this contract. Topsoil, seeding and mulching will be paid for at the contract unit price for the pay items involved. All other work associated with restoration shall be considered a subsidiary and incidental part of the completion of this item and as such, the Contractor shall include the costs associated with restoration in the various pay items involved.

Electrical manholes and junction structures in areas of proposed pavement such as aprons, taxiways, runways, shoulders, roads, sidewalks, or other similar stabilized surfaces shall be restored using the materials specified or as shown on the plans. Payment for restoration up to the bottom of the proposed pavement section shall be considered a subsidiary and incidental part of the completion of this item and as such, the Contractor shall include all costs associated with restoration in the various pay items involved.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Following restoration of all excavations near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 Inspection. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected by the Contractor without additional compensation. The earth

resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 Manhole elevation adjustments. The Contractor shall adjust the tops of existing manholes and junction structures in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each manhole and junction structures to the new elevations. The existing top elevation of each manhole and junction structures to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades. The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation. Adjustments shall be as shown on the plans. Precast concrete sections or grade rings shall be in accordance with paragraph 115-2.3.

Where shown on the plans, the Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

115-3.14 Duct extension to existing ducts. Not Used.

115-3.15 Removal of existing structures. Existing structures shall be removed at the locations shown on the plans and as directed by the Engineer. Where existing structures are to be removed in the same location as proposed structures, the Contractor shall consider such removal including excavation, removal, backfilling and disposal of existing structures as an incidental part of construction and include the costs thereof in the various pay items involved. Where existing structures are to be removed outside the limits of proposed structures, they shall be paid for separately. The cost of such removal shall include excavation, removal, backfilling and disposal of existing structures. Restoration shall be as specified above in the section titled "Restoration". Backfill shall be with suitable on-site material unless otherwise shown or specified. Backfill under paved areas shall be as shown on the plans.

115-3.16 Junction can plazas. Not used.

METHOD OF MEASUREMENT

115-4.1 Electrical manholes, junction structures, junction can plazas, modification of existing structures, and removal of existing structures shall be measured by each unit completed in place and accepted, or removed. The following items shall be included in the price of each unit: All required excavation and dewatering; sheeting and bracing; all required backfilling with on-site materials; restoration of all surfaces and finished grading and turfing; all required connections; temporary cables and connections; and ground rod testing

115-4.2 Manhole elevation adjustments shall be measured by the completed unit installed, in place, completed, and accepted. Separate measurement shall not be made for the various types and sizes.

BASIS OF PAYMENT

115-5.1 The accepted quantity of electrical manholes, junction structures, junction can plazas, modification of existing structures, and removal of existing structures will be paid for at the Contract unit price per each, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

115-5.2 Payment shall be made at the contract unit price for manhole elevation adjustments. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary, including but not limited to, spacers, concrete, rebar, dewatering, excavating, backfill, topsoil, sodding and pavement restoration, where required, to complete this item as shown in the plans and to the satisfaction of the RPR.

Payment will be made under:

Item L-115-5.1	Electrical Junction Structure, 3-Foot by 3-Foot, Precast Pull Box – per each
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REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/IEEE STD 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System
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Advisory Circular (AC)

AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-53	Airport Lighting Equipment Certification Program

Commercial Item Description (CID)

A-A 59544	Cable and Wire, Electrical (Power, Fixed Installation)
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ASTM International (ASTM)

ASTM A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products

ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A897	Standard Specification for Austempered Ductile Iron Castings
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C206	Standard Specification for Finishing Hydrated Lime
FAA Engineering Brief (EB)	
EB #83	In Pavement Light Fixture Bolts
Mil Spec	
MIL-P-21035	Paint High Zinc Dust Content, Galvanizing Repair
National Fire Protection Association (NFPA)	
NFPA-70	National Electrical Code (NEC)

END OF ITEM L-115

Item L-125 Installation of Airport Lighting Systems

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2.1 General.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not perform as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

b. Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be submitted in a neatly bound, properly sized 3-ring binder, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR's opinion, does not meet the system design and the standards and codes, specified herein.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner. All LED

light fixtures, with the exception of obstruction lighting (AC 150/5345-43) must be warranted by the manufacturer for a minimum of 4 years after date of installation inclusive of all electronics.

125-2.2 Conduit/Duct. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 Cable and Counterpoise. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 Tape. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 Cable Connections. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 Retroreflective Markers. Not required.

125-2.7 Runway and Taxiway Lights. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

Lights

Type	Class	Mode	Style	Options	Base	Filter	Transformer	Notes
L-850C	2	1	2	N/A	L-868 B	W/W	L-830	Bidirectional Bulb Type: LED
L-850C	2	1	2	N/A	L-868 B	W/Y	L-830	Bidirectional Bulb Type: LED
L-850C	2	1	2	N/A	L-868 B	W/R	L-830	Bidirectional Bulb Type: LED
L-850C	2	1	2	N/A	L-868 B	Y/R	L-830	Bidirectional Bulb Type: LED
L-850C	2	1	2	N/A	L-868 B	Y/G	L-830	Bidirectional Bulb Type: LED
L-861T	2	1	N/A	4-Base Plate	L-868 B	B	L-830	Omni-directional Height = 14" Bulb Type: LED

125-2.8 Runway and Taxiway Signs. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.

Signs

Type	Size	Style	Class	Mode	Notes
				2	
L-858Y	123			2	See Plans for Legends
L-858B	45			2	See Plans for Legends

125-2.9 Runway End Identifier Light (REIL). Not Used.

125-2.10 Precision Approach Path Indicator (PAPI). Not required.

125-2.11 Circuit Selector Cabinet. The circuit selector cabinet shall meet the requirements of AC 150/5345-5, Type L-847, one, two, three or four circuit control as indicated, Class A, indoorB, outdoor, Rating 1, for 6.6 amperes or 2, for 20 amperes.

125-2.12 Light Base and Transformer Housings. Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-867 for non-load bearing locations or L-868 for load bearing locations, Class 1A, Size B shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

125-2.13 Isolation Transformers. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

125-2.14 Power adapter. Power adapters for approach lighting aids shall operate on an input of 2.8 to 6.6 amps, 60 Hz with an output of 120/240 VAC ± 3 percent over entire input range. Maximum power output shall be 670 VA. Adapter shall be of water tight construction for direct earth burial.

125-2.15 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

125-2.16 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A 615, Grade 60.

125-2.17 Anchor bolts and concrete anchor studs. Anchor bolts and concrete anchor studs shall be sized in accordance with the equipment manufacturer's requirements. Anchor bolts and studs less than 3/4 inch in diameter shall be stainless steel.

125-2.18 Water tight termination. Water tight terminations for conduits, ducts, nipples, equipment and bases shall be mechanical compression type and shall be sized for the application and number of conductors.

125-2.19 Landscape fabric. Not Used.

125-2.20 Crushed stone. Crushed Stone shall meet the requirements of Item D-713, Crushed Stone.

125-2.21 Bedding. Bedding shall meet the requirements of ASTM C 33, fine aggregate for concrete. gradation shall be in accordance with the table below:

Percentage By Weight	
<u>Sieve Designations</u> <u>Passing Sieves</u>	
3/8 Inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	5-30
No. 100	0-10

125-2.22 Identification tags. Identification tags shall be a 2 inch diameter disk of non-corrosive copper based metal with numbers permanently stamped or engraved on the surface.

125-2.23 Padlock. The Contractor shall furnish and install corrosion resistant padlocks on each outdoor equipment enclosure. Padlocks shall meet the requirements of Master Lock Marine Brass Padlock #48D-Mar, or approved equal, unless otherwise required by the Owner. Contractor shall coordinate with the Owner prior to ordering padlocks. Padlocks shall be keyed the same unless otherwise specified on the contract drawings. Contractor shall provide at least two keys for each padlock unless otherwise specified on the contract drawings. All keys shall be turned over to the RPR at the completion of the project.

INSTALLATION

125-3.1 Installation. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

Equipment installation shall be as shown on the plans.

125-3.1.1 Excerpts from AC 150/5340-30J, Appendix E

E.1 Electrical Notes.

E.1.1 General.

1. The electrical installation, at a minimum, must meet the NEC and local regulations.
2. The contractor must ascertain that all lighting system components furnished (including FAA approved equipment) are compatible in all respects with each other and the remainder of the new/existing system. Any non-compatible components furnished by the contractor must be replaced at no additional cost to the airport sponsor with a similar unit that is approved by the RPR and compatible with the remainder of the airport lighting system.
3. In case the contractor elects to furnish and install airport lighting equipment requiring additional wiring, transformers, adapters, mountings, etc., to those shown on the drawings and/or listed in the specifications, any cost for these items must be incidental to the equipment cost.
4. The contractor-installed equipment (including FAA approved) must not generate any EMI in the existing and/or new communications, weather, air navigation, and ATC equipment. Any equipment generating such interference must be replaced by the contractor at no additional cost with equipment meeting the applicable specifications.
5. When a specific type, style, class, etc., of FAA approved equipment is specified only that type, style, class, etc., will be acceptable, though equipment of other types, style, class, etc., may be FAA approved.
6. Any and all instructions from the RPR to the contractor regarding changes in, or deviations from, the plans and specifications must be in writing with copies sent to the airport sponsor and the FAA field office (Airports District Office (ADO)/Airports Field

Office (AFO)). The contractor must not accept any verbal instructions from the RPR regarding any changes from the plans and specifications.

7. A minimum of three copies of instruction books must be supplied with each type of equipment. For more sophisticated types of equipment, such as regulators, PAPI, REIL, etc., the instruction book must contain the following:
 - a. A detailed description of the overall equipment and its individual components.
 - b. Theory of operation including the function of each component.
 - c. Installation instructions.
 - d. Start-up instructions.
 - e. Preventative maintenance requirements.
 - f. Chart for troubleshooting.
 - g. Complete power and control detailed wiring diagram(s), showing each conductor/connection/component; "black" boxes are not acceptable. The diagram or the narrative must show voltages/currents/wave shapes at strategic locations to be used when checking and/or troubleshooting the equipment. When the equipment has several brightness steps, these parameters must be indicated for all the different modes.
 - h. Parts list will include all major and minor components, such as resistors, diodes, etc. It must include a complete nomenclature of each component and, if applicable, the name of its manufacturer and the catalog number.
 - i. Safety instructions.

E.1.2 Power and Control.

1. Stencil all electrical equipment to identify function, circuit voltage and phase. Where the equipment contains fuses, also stencil the fuse or fuse link ampere rating. Where the equipment does not have sufficient stenciling area, the stenciling must be done on the wall next to the unit. The letters must be one inch (25 mm) high and painted in white or black paint to provide the highest contrast with the background. Engraved plastic nameplates may also be used with one inch (25 mm) white (black background) or black (white background) characters. All markings must be of sufficient durability to withstand the environment.
2. Color code all phase wiring by the use of colored wire insulation and/or colored tape. Where tape is used, the wire insulation must be black. Black and red must be used for single-phase, three wire systems and black, red and blue must be used for three-phase systems. Neutral conductors, size No. 6 AWG or smaller, must be identified by a continuous white or natural outer finish. Conductors larger than No. 6 AWG must be identified either by a continuous white or natural gray outer finish along its entire length or by the use of white tape at its terminations and inside accessible wireways.
3. All branch circuit conductors connected to a particular phase must be identified with the same color. The color coding must extend to the point of utilization.
4. In control wiring, the same color must be used throughout the system for the same function, such as 10%, 30%, 100% brightness control, etc.
5. All power and control circuit conductors must be copper; aluminum must not be accepted. This includes wire, cable, busses, terminals, switch/panel components, etc.

6. Low voltage (600 V) and high voltage (5000 V) conductors must be installed in separate wireways.
7. Neatly lace wiring in distribution panels, wireways, switches and pull/junction boxes.
8. The minimum size of pull/junction boxes, regardless of the quantity and the size of the conductors shown, must be as follows:
 - a. In straight pulls, the length of the box must not be less than eight times the trade diameter of the larger conduit. The total area (including the conduit cross-sectional area) of a box end must be at least three times greater than the total trade cross-sectional area of the conduits terminating at the end.
 - b. In angle or u-pulls, the distance between each conduit entry inside the box and the opposite wall of the box must not be less than six times the trade diameter of the largest conduit. This distance must be increased for additional entries by the amount of the sum of the diameters of all other conduit entries on the same wall of the box. The distance between conduit entries enclosing the same conductor must of not be less than six times the trade diameter of the largest conduit.
9. A run of conduit between terminations at equipment enclosures, square ducts and pull/junction boxes, must not contain more than the equivalent of four quarter bends (360 degrees total), including bends located immediately at the terminations. Cast, conduit type outlets must not be treated as pull/junction boxes.
10. Equipment cabinets must not be used as pull/junction boxes. Only wiring terminating at the equipment must be brought into these enclosures.
11. Splices and junction points must be permitted only in junction boxes, ducts equipped with removable covers, and at easily accessible locations.
12. Circuit breakers in power distribution panel(s) must be thermal-magnetic, molded case, permanent trip with 100-ampere, minimum, frame.
13. Dual lugs must be used where two wires, size No. 6 or larger, are to be connected to the same terminal.
14. All wall mounted equipment enclosures must be mounted on wooden mounting boards.
15. Wooden equipment mounting boards must be plywood, exterior type, 3/4 inch (19 mm) minimum thickness, both sides painted with one coat of primer and two coats of gray, oil-based paint.
16. Rigid steel conduit must be used throughout the installation unless otherwise specified. The minimum trade size must be 3/4 inch (19 mm).
17. All rigid conduit must be terminated at CCRs with a section (10 inch (254 mm) minimum) of flexible conduit.
18. Unless otherwise shown all exposed conduits must be run parallel to, or at right angles with, the lines of the structure.
19. All steel conduits, fittings, nuts, bolts, etc., must be galvanized.
20. Use conduit bushings at each conduit termination. Where No. 4 AWG or larger ungrounded wire is installed, use insulated bushings.
21. Use double lock nuts at each conduit termination. Use weather tight hubs in damp and wet locations. Sealing locknuts must not be used.

22. Wrap all primary and secondary power transformer connections with sufficient layers of insulating tape and cover with insulating varnish for full value of cable insulation voltage.
23. Unless otherwise noted, all indoor single conductor control wiring must be No. 12 AWG.
24. Both ends of each control conductor must be terminated at a terminal block. The terminal block must be of proper rating and size for the function intended and must be located in equipment enclosures or special terminal cabinets.
25. All control conductor terminators must be of the open-eye connector/screw type. Soldered, closed-eyed terminators, or terminators without connectors are not acceptable.
26. In terminal block cabinets, the minimum spacing between parallel terminal blocks must be 6 inches (152 mm). The minimum spacing between terminal block sides/ends and cabinet sides/bottom/top must be 5 inches (127 mm). The minimum spacing will be increased as required by the number of conductors. Additional spacing must be provided at conductor entrances.
27. Both ends of all control conductors must be identified as to the circuit, terminal, block, and terminal number. Only stick-on labels must be used.
28. A separate and continuous neutral conductor must be installed and connected for each breaker circuit in the power panel(s) from the neutral bar to each power/control circuit.
29. The following must apply to relay/contactors panel/enclosures:
 - a. All components must be mounted in dust proof enclosures with vertically hinged covers.
 - b. The enclosures must have ample space for the circuit components, terminal blocks, and incoming internal wiring.
 - c. All incoming/outgoing wiring must be terminated at terminal blocks.
 - d. Each terminal on terminal blocks and on circuit components must be clearly identified.
 - e. All control conductor terminations must be of the open-eye connector/screw type. Soldered, closed-eye connectors, or terminations without connectors are not acceptable.
 - f. When the enclosure cover is opened, all circuit components, wiring, and terminals must be exposed and accessible without any removal of any panels, covers, etc., except those covering high voltage components.
 - g. Access to, or removal of, a circuit component or terminal block will not require the removal of any other circuit component or terminal block.
 - h. Each circuit component must be clearly identified indicating its corresponding number shown on the drawing and its function.
 - i. A complete wiring diagram (not a block or schematic diagram) must be mounted on the inside of the cover. The diagram must represent each conductor by a separate line.
 - j. The diagram must identify each circuit component and the number and color of each internal conductor and terminal.
 - k. All wiring must be neatly trained and laced.

I. Minimum wire size must be No. 12 AWG.

E.1.3 Field Lighting.

1. Unless otherwise stated, all underground field power multiple and series circuit conductors (whether direct earth burial (DEB) or in duct/conduit) must be FAA approved Type L-824. Insulation voltage and size must be as specified.
2. No components of the primary circuit such as cable, connectors and transformers must be brought above ground at edge lights, signs, REIL, etc.
3. There must be no exposed power/control cables between the point where they leave the underground (DEB or L-867 bases) and where they enter the equipment (such as taxiway signs, PAPI, REIL, etc.). Enclosures. These cables must be enclosed in rigid conduit or in flexible water-tight conduit with frangible coupling(s) at the grade or the housing cover, as shown in applicable details.
4. The joints of the L-823 primary connectors must be wrapped with one layer of rubber or synthetic rubber tape and one layer of plastic tape, one half lapped, extending at least 1-1/2 inches (38 mm) on each side of the joint, as shown in Figure E-9.
5. The cable entrance into the field attached L-823 connectors must be enclosed by heat-shrinkable tubing with continuous internal adhesive as shown in Figure E-9.
6. The ID of the primary L-823 field attached connectors must match the cable OD to provide a watertight cable entrance. The entrance must be encapsulated in heat shrinkable tubing with continuous factory applied internal adhesive, as shown in Figure E-9.
7. L-823 type 11, two-conductor secondary connector must be class "A" (factory molded).
8. There must be no splices in the secondary cable(s) within the stems of a runway/taxiway edge/threshold lighting fixtures and the wireways leading to taxiway signs and PAPI/REIL equipment.
9. Electrical insulating grease must be applied within the L-823, secondary, two conductor connectors to prevent water entrance. The connectors must not be taped.
10. DEB isolation transformers must be buried at a depth of 10 inches (254 mm) on a line crossing the light and perpendicular to the runway/taxiway centerline at a location 12 inches (305 mm) from the light opposite from the runway/taxiway.
11. DEB primary connectors must be buried at a depth of 10 inches (254 mm) near the isolation transformer. They must be orientated parallel with the runway/taxiway centerline. There must be no bends in the primary cable 6 inches (152 mm), minimum, from the entrance into the field-attached primary connection.
12. A slack of 3 ft. (0.9 m), minimum, must be provided in the primary cable at each transformer/connector termination. At stake-mounted lights, the slack must be loosely coiled immediately below the isolation transformer.
13. Direction of primary cables must be identified by color coding as follows when facing light with back facing pavement: cable to the left is coded red and cable to the right is coded blue, this applies to the stake-mounted lights and base-mounted lights where the base has only one entrance.
14. L-867 bases must be size B, 24" (610 mm) deep Class 1 unless otherwise noted.

15. Base-mounted frangible couplings must not have weep holes to the outside. Plugged holes are not acceptable. The coupling must have a 1/4" (6 mm) diameter minimum or equivalent opening for drainage from the space around the secondary connector into the L-867 base.
16. The elevation of the frangible coupling groove must not exceed 1-1/2" (38 mm) above the edge of the cover for base-mounted couplings or the top of the stake for stake-mounted couplings.
17. Where the frangible coupling is not an integral part of the light fixture stem or mounting leg, a bead of silicone rubber seal must be applied completely around the light stem or wireway at the frangible coupling to provide a watertight seal.
18. Tops of the stakes supporting light fixtures must be flush with the surrounding grade.
19. Plastic lighting fixture components, such as lamp heads, stems, frangible couplings, base covers, brackets, stakes, are not acceptable. L-867 plastic transformer housings are acceptable. A metal threaded fitting must be set in flange during casting process. Base cover bolts must be fabricated from 18-8 stainless steel.
20. The tolerance for the height of runway/taxiway edge lights must be ± 1 inch (25 mm). For stake-mounted lights, the specified lighting fixture height must be measured between the top of the stake and the top of the lens. For base-mounted lights, the specified lighting fixture height must be measured between the top of the base flange and the top of the lens, and includes the base cover, the frangible coupling, the stem, the lamp housing and the lens.
21. The tolerance for the lateral spacing (light lane to runway/taxiway centerline) of runway/taxiway edge lights must be ± 1 inch (25.4 mm). This also applies at intersections to lateral spacing between lights of a runway/taxiway and the intersecting runway/taxiway.
22. L-867 bases may be precast. Entrances into L-867 bases must be plugged from the inside with duct seal.
23. Galvanized/painted equipment/component surfaces must not be damaged by drilling, filing, etc. – this includes drain holes in metal transformer housings.
24. Edge light numbering tags must be facing the pavement.
25. Cable/splice/duct markers must be pre-cast concrete of the size shown. Letters/numbers/arrows for the legend to be impressed into the tops of the markers must be pre-assembled and secured in the mold before the concrete is poured. Legends inscribed by hand in wet concrete are not acceptable.
26. All underground cable runs must be identified by cable markers at 200 ft (61 m) maximum spacing with an additional marker at each change of direction of the cable run. Cable markers must be installed above the cable.
27. Locations of all DEB underground cable splice/connections, except those at isolation transformers, must be identified by splice markers. Splice markers must be placed above the splice/connections.
28. The cable and splice markers must identify the circuits to which the cables belong. For example: RWY 4-22, PAPI-4, PAPI-22.
29. Locations of ends of all underground ducts must be identified by duct markers.

30. The preferred mounting method of runway and taxiway signs is by the use of single row of legs. However, two rows will be acceptable.
31. Reference Figure E-13 and Figure E-14 for an example of a lighted sign installation.
 - a. Power to the sign must be provided through breakaway cable connectors installed within the frangible point portion of the sign's mounting legs.
 - b. There must be no above ground electrical connection between signs in a sign array.
32. Stencil horizontal and vertical aiming angles on each REIL flash head or equipment enclosure. The numerals must be black and one inch (25 mm) minimum height.
33. Stencil vertical aiming angles on the outside of each PAPI lamp housing. The numerals must be black and one inch (25 mm) minimum height.
34. All power and control cables in man/hand holes must be tagged. Use embossed stainless steel strips or tags attached at both ends to the cable by the use of UV resistant plastic straps. A minimum of two tags must be provided on each cable in a man/hand hole - one at the cable entrance, and one at the cable exit.
35. Apply a corrosion inhibiting, anti-seize compound to all screws, nuts and frangible coupling threads. If coated bolts are used per EB #83, do not apply anti-seize compound.
36. There must be no splices between the isolation transformers. L-823 connectors are allowed at transformer connections only, unless shown otherwise.
37. DEB splices in home runs must be of the cast type, unless shown otherwise.
38. Where a parallel, constant voltage PAPI system is provided, the "T" splices must be of the cast type.
39. Concrete used for slabs, footing, backfill around transformer housings, markers, etc., must be 3000 PSI, min., air-entrained.

E.1.4 Equipment Grounding.

1. Ground all non-current-carrying metal parts of electrical equipment by using conductors sized and routed per NEC Handbook, Article 250.
2. All ground connections to ground rods, busses, panels, etc., must be made with pressure type solderless lugs and ground clamps. Soldered or bolt and washer type connections are not acceptable. Clean all metal surfaces before making ground connections. Exothermic welds are the preferred method of connection to a ground rod
3. Tops of ground rods must be 6 inches (152 mm) below grade.
4. The resistance to ground of the vault grounding system with the commercial power line neutral disconnected must not exceed 10 ohms.
5. The resistance to ground of the counterpoise system, or at isolation locations, such as airport beacon must not exceed 10 ohms.

125-3.2 Testing. The Contractor shall furnish all necessary equipment and appliances for testing the airport electrical systems and underground cable circuits before and after installation. The Contractor shall perform all tests in the presence of the RPR. The Contractor shall demonstrate the electrical characteristics to the satisfaction of the RPR. All costs for testing are incidental to the respective item being tested. For phased projects, the tests must be completed

by phase and results meeting the specifications below must be maintained by the Contractor throughout the entire project as well as during the ensuing warranty period.

Earth resistance testing methods shall be submitted to the RPR for approval. Earth resistance testing results shall be recorded on an approved form and testing shall be performed in the presence of the RPR. All such testing shall be at the sole expense of the Contractor.

Should the counterpoise or ground grid conductors be damaged or suspected of being damaged by construction activities the Contractor shall test the conductors for continuity with a low resistance ohmmeter. The conductors shall be isolated such that no parallel path exists and tested for continuity. The RPR shall approve of the test method selected. All such testing shall be at the sole expense of the Contractor.

The test equipment for insulation resistance shall be an insulation resistance tester (1,000V megger) with a digital readout. The instrument shall provide a 500 volt test for insulation resistance with a meter range of 0 to 500 megohms.

After installation, the Contractor shall test and demonstrate to the satisfaction of the RPR the following:

- a. That all affected lighting power and control circuits (existing and new) are continuous and free from short circuits.
- b. That all affected circuits (existing and new) are free from unspecified grounds.
- c. That the insulation resistance to ground of all new non-grounded series circuits or cable segments is not less than 50 megohms.
- d. That the insulation resistance to ground of all non-grounded conductors of new multiple circuits or circuit segments is not less than 50 megohms.
- e. That all affected circuits (existing and new) are properly connected in accordance with applicable wiring diagrams.
- f. That all affected circuits (existing and new) are operable. All circuits shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.
- g. That the impedance to ground of each ground rod does not exceed 25 ohms prior to establishing connections to other ground electrodes. The fall-of-potential ground impedance test shall be used, as described by ANSI/IEEE Standard 81, to verify this requirement.

Two copies of tabulated results of all cable tests performed shall be supplied by the Contractor to the RPR. Where connecting new cable to existing cable, ground resistance tests shall be performed on the new cable prior to connection to the existing circuit

There are no approved "repair" procedures for items that have failed testing other than complete replacement.

125-3.3 Shipping and Storage. Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer's recommendations.

125-3.4 Placing lights, signs and approach lighting aids. Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light beams parallel to the runway or taxiway centerline, unless otherwise required, and facing in the required direction. Light bases in pavement shall be installed such that the light base is level and the top of the base plate or light unit is even with the downhill slope of the pavement. Surplus sealant or flexible embedding material shall be removed. Sealant which leaks into the light base shall be removed before it sets. The holding device shall remain in place until sealant has reached its initial set.

The airport lights, signs or approach lighting aids shall be installed at the approximate location indicated in the Contract Drawings. The exact location shall be as directed by the RPR. The lights, signs or shall be installed in accordance with the Contract Drawings and the manufacturer's recommendations.

Contractor shall attach a light unit identification tag to each light unit, sign, wind cone, navigational system and other fixture connected to the circuit where indicated on the Contract Drawings. ID tags shall be securely attached with a set screw or non-corrosive wire band. The light unit ID tags shall be sequentially numbered and attached to the fixtures in the order in which the lights are connected to the circuit. Light unit identification tags shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items of work involved.

Contractor's surveyor shall be on-site during installation of approach lighting aids to verify elevations, alignment and sighting angles of approach lighting aids prior to energizing the equipment. Any deviations shall be corrected by the Contractor and verified by the surveyor before the equipment is put to service.

Contractor shall have experience installing approach lighting aids, or the manufacturer's representative shall be onsite during installation. Experience shall be documented by the Contractor by providing the RPR with a list of three previous installations of the equipment being installed.

Tolerances for Precision Approach Path Indicators (PAPI) systems shall be as follows:

- A. The lateral distance between light units shall be +/- 1 foot of the distance specified, as measured from center of light unit to center of light unit.
- B. The beam centers of all light units must be within 0.08 foot of the elevation specified.
- C. The front face of each light unit in a bar must be located within 6 inches of a line perpendicular to the runway centerline at the location specified.

For temporary approach lighting aid system installations, Contractor shall provide precast concrete pads large enough to encompass the support legs. Concrete pads shall be set level on previously prepared beds of sand.

Tolerances for temporary approach lighting aid systems shall be as follows:

- A. The lateral distance between light units shall be +/- 1 foot of the distance specified, as measured from center of light unit to center of light unit.
- B. The beam centers of all light units must be within 0.08 foot of the elevation specified.
- C. The front face of each light unit in a bar must be located within 6 inches of a line perpendicular to the runway centerline at the location specified.

D. Installations shall be in accordance with the manufacturer's recommendations.

125-3.5 Excavation. All excavation shall be considered unclassified excavation. Unclassified excavation shall consist of the excavation of all material, regardless of its nature and the disposal of all such material as directed by the RPR.

- A. The Contractor shall do all excavation for airport lights, signs and navigational system installations to the lines and grades or elevations shown on the Contract Drawings or as directed by the RPR. The excavation shall be of sufficient size to permit the placing of the airport lights, signs or navigational system.
- B. Boulders, logs or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation and excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.
- C. The Contractor shall do all bracing, sheeting or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting or shoring shall be included in the unit price bid for the structure. All trench bracing, sheeting and shoring shall be in accordance with the Sheeting and Bracing section of the General Provisions.
- D. Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner which will not disturb or mar finished masonry. The cost of removal shall be included in the unit bid for that item.

125-3.6 Backfilling. Backfilling around structures shall not be commenced until directed by the RPR. Prior to backfilling, all conduits and openings shall be sealed water tight. Backfill shall be placed evenly and simultaneously on all sides of structures in 6-inch lifts. All structures shall be backfilled to the lines and grades shown on the Contract Drawings, or as required for proper operation of the airport lights, signs or navigation system and as directed by the RPR. Contractor shall use previously excavated material if it is suitable for backfill, or if additional material is required for backfill, the Contractor shall provide suitable backfill. All materials used for backfill shall be approved in advance by the RPR. No direct payment will be made for backfill material or its placement.

125-3.7 Removal of lights, signs and approach lighting aids. Where existing lights, signs and approach lighting aids are to be removed in the same location as proposed fixtures, the Contractor shall consider such removal as an incidental part of construction and include the costs thereof in the various pay items of work involved. Where existing lights, signs and approach lighting aids are to be removed at locations where a new fixture is not being placed, removal shall be paid for separately. The cost of such removal shall include excavation, removal of fixture and foundation, backfilling, disposal of existing fixture, and restoration. Lights, signs and approach lighting aids shall be removed from the locations shown on the Contract Drawings, unless otherwise directed by the RPR.

125-3.8 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. Suitable material may be deposited in embankment or shoulders areas. Unsuitable material shall be disposed of off airport property or as ordered by the RPR.

Areas disturbed by the Contractor's operation shall be restored to their original condition. Restoration of surfaces shall be performed in accordance with the details of the Contract Drawings.

Where airport lights, signs or approach lighting aids are installed or removed outside of the general grading limits, or in areas that would not otherwise be disturbed, restoration shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items for airport lights, signs or approach lighting aids installed or removed.

Where airport lights, signs or approach lighting aids are installed or removed within the general grading limits, restoration of the area will not be necessary as payment for establishment of turf or pavement will be included in the various pay items of work involved.

The Contractor shall be responsible for maintaining all disturbed surfaces and restorations until final acceptance.

125-3.9 Installation of cables and conduits. Excavation for trenches, backfilling, furnishing and installation of cables and conduits shall be performed in accordance with Items L-108, Underground Cable for Airports and L-110, Airport Underground Electrical Duct Banks and Conduits.

125-3.10 Installation of retroreflective markers. Retroreflective markers shall be installed in accordance with the details shown on the plans. Contractor shall provide and install a soil anchor for mounting markers in turf areas, or a surface mounted base for mounting to pavements. Surface mounted bases shall be secured to the pavement surface with epoxy in accordance with the manufacturer's recommendation.

125-3.11 Spoil material. The following equipment has been identified to be salvaged by the owner: edge light assemblies (light unit, conduit post, transformer, light base cover), centerline light assemblies (light unit, transformer), touchdown zone light assemblies (light unit, transformer), threshold light assemblies (light unit, conduit post, transformer, light base cover), guidance sign assemblies (sign, legs, floor flanges). Contractor shall separate useable equipment from unusable equipment. The equipment to be salvaged shall be stockpiled at a location designated by the owner in proper working condition. All other materials shall be spoiled off airport property at a proper disposal site.

125-3.12 Brightness adjustments for internally lighted guidance signs. Upon completion of the sign installation, the contractor shall make necessary brightness adjustment for each sign unit. The contractor shall make the required adjustments in accordance with the manufacturer's printed instructions.

125-3.13 Aiming, flight check and notification for approach lighting aids. Not Used.

125-3.14 Survey report. For approach lighting aids (VGSI, PAPI, PLASI, etc.), the Contractor shall furnish to the RPR, two original Survey Reports. These survey reports must contain the northing and easting of the front center of each light unit, the elevation of the foundation of each unit, the elevation of the center of the light beam of each unit, the northing and easting of permanent aiming points, and the elevation of permanent aiming points.

The Survey Reports shall be signed and sealed by a Licensed Surveyor licensed in the State in which the project is located, and shall bear the following certification:

"The undersigned hereby certifies that this Survey Report shows the accurate as-built location of the approach lighting aids listed."

125-3.15 Record drawings. For facilities which are buried under pavement, the Contractor shall furnish to the RPR, an accurate location survey for the purpose of locating buried facilities

in the future, indicating the as-built locations of all buried Touchdown Zone Light cans, Centerline Light cans, junction cans, Rigid Steel Conduit ends and angle points, and Duct Bank ends. Record Drawings shall clearly indicate or show the relationship of these fixtures to a permanent survey baseline. Record Drawings shall show location of proposed pavement edges in relation to the lighting systems. Survey Plan must be submitted and approved by the RPR prior to commencement of paving operations and prior to acceptance of these work items.

Record Drawings shall be signed and sealed by a Licensed Surveyor licensed in the State in which the project is located, and shall bear the following certification:

"The undersigned hereby certifies that this Plan shows the accurate as-built location of TDZ light cans, Centerline light cans, junction cans, Rigid Steel conduit ends and angle points and Duct Bank ends."

METHOD OF MEASUREMENT

125-4.1 Taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, or removed, and accepted by the RPR.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light installed by the Contractor, or removed, and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item L 125-5.1 Medium Intensity Taxiway Edge Light, Base Mounted - per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5340-18	Standards for Airport Sign Systems
AC 150/5340-26	Maintenance of Airport Visual Aid Facilities
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-5	Circuit Selector Switch
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-28	Precision Approach Path Indicator (PAPI) Systems

AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5345-44	Specification for Runway and Taxiway Signs
AC 150/5345-46	Specification for Runway and Taxiway Light Fixtures
AC 150/5345-47	Specification for Series to Series Isolation Transformers for Airport Lighting Systems
AC 150/5345-51	Specification for Discharge-Type Flashing Light Equipment
AC 150/5345-53	Airport Lighting Equipment Certification Program
Engineering Brief (EB)	
EB No. 67	Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures

END OF ITEM L-125

CALTRANS SPECIFICATIONS

ITEM CAL-26 - CALTRANS CLASS 2 AGGREGATE BASE COURSE

DESCRIPTION

CAL-26-1.1 This item shall consist of a base course composed of crushed coarse aggregate bonded with either soil or fine aggregate or both. It shall be constructed on a prepared underlying course in accordance with these specifications and shall conform to the dimensions and typical cross section shown on the plans. This specification section is intended to conform to Section 26, Aggregate Bases of the State of California Department of Transportation (Caltrans) Standard Specifications (2010)

MATERIALS

CAL-26-2.1 CLASS 2 AGGREGATE BASE. Aggregate for Class 2 aggregate base must be free from organic matter and other deleterious substances, and shall be of such nature that it can be compacted readily under watering and rolling to form a firm, stable base. Aggregate shall consist of any combination of the following materials: broken stone, crushed gravel, natural rough surface gravel, sand, processed reclaimed asphalt concrete, Portland cement concrete, lean concrete base, and cement treated base. The amount of reclaimed material shall not exceed 50 percent of the total volume of the aggregate used.

When tested under California Test 202, aggregate shall conform to the grading and quality requirements shown in the following tables. At the option of the Contractor, the grading for either the 1½-inch maximum or ¾-inch maximum shall be used (unless called for otherwise on the plans), except that once a grading is selected the grading shall not be changed without the Authority Representative's written approval.

Aggregate Grading

Sieve sizes	Percentage passing			
	1-1/2 inch maximum		3/4 inch maximum	
	Operating range	Contract compliance	Operating range	Contract compliance
2"	100	100	--	--
1-1/2"	90–100	87–100	--	--
1"	--	--	100	100
3/4"	50–85	45–90	90–100	87–100
No. 4	25–45	20–50	35–60	30–65
No. 30	10–25	6–29	10–30	5–35
No. 200	2–9	0–12	2–9	0–12

Aggregate must comply with the quality requirements shown in the following table:

Aggregate Quality

Property	California Test	Operating range	Contract compliance
Resistance (R-value) (min)	301	--	78
Sand equivalent (min)	217	25	22
Durability index (min)	229	--	35

The aggregate shall not be treated with lime, cement or other chemical material before the Durability Index test is performed. Untreated reclaimed asphalt concrete and portland cement concrete will not be considered to be treated with lime, cement or other chemical material for purposes of performing the Durability Index test.

If the results of either or both the aggregate grading and Sand Equivalent tests do not meet the requirements specified for "Operating Range" but meet the "Contract Compliance" requirements, placement of the aggregate base may be continued for the remainder of that day. However, another day's work may not be started until tests, or other information, indicate to the satisfaction of the Authority Representative that the next material to be used in the work will comply with the requirements specified for "Operating Range."

If the results of either or both the aggregate grading and Sand Equivalent tests do not meet the requirements specified for "Contract Compliance," the aggregate base which is represented by these tests shall be removed.

No single aggregate grading or Sand Equivalent test shall represent more than 500 cubic yards or one day's production, whichever is smaller.

CONSTRUCTION METHODS

CAL-26-3.1 SUBGRADE. Immediately prior to spreading aggregate base material, the subgrade shall conform to the compaction and elevation tolerance as specified in Item P-152, and shall be free of loose or extraneous material.

When aggregate subbase is not specified and aggregate base is paid for by the cubic yard, areas of the grading plane which are lower than the grade established by the Contractor's surveyor may be filled with aggregate base.

CAL-26-3.2 ADDING WATER. At the time aggregate base is spread it shall have moisture content sufficient to obtain the required compaction. The moisture shall be uniformly distributed throughout the material.

Water for compacting embankment material, subbase, base and surfacing material and for settling dust shall be applied by means of pressure-type distributors or pipe lines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water. Equipment used for the application of water shall be equipped with a positive means of shut-off.

Unless otherwise permitted by the Authority Representative or unless all the water is applied by means of pipe lines, at least one mobile unit with a minimum capacity of 1,000 gallons shall be available for applying water on the project at all times.

CAL-26-3.3 SPREADING. Aggregate bases shall be delivered to the roadbed as uniform mixtures. The mixture shall be deposited and spread to the required compacted thickness within the tolerances specified in paragraph CAL-26-3.4, by means which will maintain the uniformity of

the mixture and avoid segregation. Each layer shall be free from pockets of coarse or fine material.

When the subgrade for aggregate base consists of cohesionless sand, and written permission is granted by the Authority Representative, a portion of the aggregate base may be dumped in piles upon the subgrade and spread ahead from the dumped material in sufficient quantity to stabilize the subgrade.

Where the required thickness is 0.50-foot or less, the base material may be spread and compacted in one layer. Where the required thickness is more than 0.50-foot, the base material shall be spread and compacted in 2 or more layers of approximately equal thickness, and the maximum compacted thickness of any one layer shall not exceed 0.50-foot.

Aggregate bases, placed at locations which are inaccessible to the spreading equipment, may be spread in one or more layers by any means to obtain the specified results.

CAL-26-3.4 COMPACTING. Aggregate bases after compaction, shall be watered in conformance with the provisions in paragraph CAL-26-3.2.

The relative compaction of each layer of compacted base material shall be not less than 95 percent as determined by ASTM D 1557 or California Test 231.

The surface of the finished aggregate base at any point shall not vary more than 0.05-foot above or below the grade established by the Engineer. The finished surface shall not vary more than 3/8 inch when tested with a 16-foot straightedge applied parallel with or at right angles to the centerline. Any deviation in excess of this amount shall be corrected by the Contractor.

The completed thickness of the base course shall be within 1/2 inch of the design thickness. Four determinations of thickness, measurements shall be made for each lot of material placed. The lot size shall be consistent with that specified in Section cal-26-3.5. Each lot shall be divided into four equal sublots. One test shall be made for each subplot. Sampling locations will be determined by the Authority Representative on a random basis in accordance with procedures contained in ASTM D 3665. Where the thickness is deficient by more than 1/2 inch, the Contractor shall correct such areas by excavating to the required depth and replacing with new material.

Base which does not conform to the above requirements shall be reshaped or reworked, watered and thoroughly recompacted to conform to the specified requirements.

CAL-26-3.5 ACCEPTANCE SAMPLING AND TESTING FOR DENSITY. Aggregate base course shall be accepted for density on a lot basis for each lift. A lot will consist of not more than 2,000 square yards. Separate production areas shall NOT be combined into the same lot.

Each lot shall be divided into two equal sublots. One test shall be made for each subplot. Sampling locations will be determined by the Authority Representative on a random basis in accordance with statistical procedures contained in ASTM D 3665.

Each lot will be accepted for density when the field density is at least 95 percent of the maximum density of laboratory specimens prepared from samples of the material delivered to the jobsite. The specimens shall be compacted and tested in accordance with ASTM D 1557. The in-place field density shall be determined in accordance with ASTM D 1556 or ASTM D 2167. If the specified density is not attained, the entire lot shall be reworked or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached.

In lieu of the core method of field density determination, acceptance testing may be accomplished using a nuclear gage in accordance with ASTM D 2922 and ASTM D 3017. The gage should be field calibrated in accordance with paragraph 4 of ASTM D 2922. Calibration tests shall be

conducted on the first lot of material placed that meets the density requirements. If a nuclear gage is used for density determination, two random readings shall be made for each subplot.

The use of ASTM D 2922 results in a wet unit weight, and when using this method, ASTM D 3017 shall be used to determine the moisture content of the material. Calibration and Standardization shall be conducted in accordance with ASTM standards.

CAL-26-3.6 MAINTENANCE. The base course shall be maintained in a condition that will meet all specification requirements until the placement of the bituminous or Portland cement pavements and the work is accepted. Equipment used in the construction of an adjoining section may be routed over completed portions of the base course, provided no damage to the base material occurs. The equipment must then be routed over the full width of the base course to avoid rutting or uneven compaction.

The Contractor shall remove all survey and grade hubs from the base courses prior to placing any bituminous surface course.

CONTRACTOR QUALITY CONTROL

209-4.1 GENERAL. The Contractor shall develop a Quality Control program and shall perform all quality control tests and inspections necessary to control the production and construction process applicable to this specification. The program shall address all elements that affect the quality of the crushed aggregate base course, including but not limited to:

- a. **Gradation.** The aggregate base course shall be sampled and tested for gradation per paragraph CAL-26-2.1.
- b. **Material Density and Moisture Content.** Testing for material density and moisture content shall be per paragraph CAL-26-3.5.
- c. **Thickness.** Thickness testing shall be per paragraph CAL-26-3.3.
- d. **Foreign Object Debris.** Quality Control inspections shall be provided for ensuring that there is not any foreign object debris on Runways, Taxiways, aprons, vehicle service roads or other areas, at least 15 minutes prior to opening the section to traffic. Foreign object debris shall be removed by vacuum sweeping.

METHOD OF MEASUREMENT

CAL-26-4.1 Caltrans Class 2 Aggregate Base shall be measured by the number of cubic yards actually placed by the Contractor and accepted as complying with the Plans and specifications as determined by the Authority Representative from field measurement.

BASIS OF PAYMENT

Payment shall be made at the contract unit price per cubic yard, for each of the following bid items that are included in the Contract:

CAL-26-5.1 The contract price paid per cubic yard for Caltrans Class 2 Aggregate Base shall include full compensation for furnishing all labor, materials, tools, equipment and necessary incidentals, for all of the work for this item in-place as shown on the drawings and specified in the specifications.

Payment will be made under:

Item CAL-26-5.1 4-Inch Class II Aggregate Base Course – Caltrans Section 26

END OF ITEM CAL-26

ITEM CAL-39 - CALTRANS HOT MIX ASPHALT

GENERAL

This specification is based on the California Department of Transportation (Caltrans, 2010) Asphalt Concrete (39 Hot Asphalt) and is to be used where specified except that SDCRAA general conditions and requirements govern over the language in this specification.

This specification includes furnishing and mixing aggregate and asphalt binder at a central mixing plant, spreading and compacting the mixture, as specified in these Specifications and as shown on the Construction Drawings. California Department of Transportation (Caltrans) Asphalt Concrete (39 Hot Asphalt) is to be used for asphalt pavements in non-aircraft movement areas on the airport and as an asphalt treated base under Portland cement concrete pavements (in aircraft movement areas) and shall meet the requirements for Type A or B Asphalt Concrete as specified in Section 39, Asphalt Concrete of the Standard Specifications published by the Caltrans (2010 English and metric versions).

Type A asphalt concrete shall be used for paving of the load-bearing (structural) pavements and for Portland cement concrete pavement base. Caltrans Type B asphalt concrete shall be used for all other paving projects. Neither Type A or B shall be used for paving runways, taxiways, and aircraft parking aprons (with the exception of Type A for Portland cement concrete pavement base). The FAA standard specifications shall be used (P-401) for these types of projects at San Diego International Airport.

Each course shall be constructed to the depth, typical cross section, and elevation required by the Plans and shall be rolled, finished, and approved before the placement of the next course.

The intent of this specification is to reference and use Caltrans' Hot Mix Asphalt 39 as developed and published by Caltrans with the following exceptions. The Hot Mix Asphalt (HMA) types are restricted to Type "A" or Type "B". Types OGFC, HMA-O, RHMA-O, RHMA-O-HB, and RHMA-G have been deleted and shall not be used at San Diego International Airport.

The "Standard" HMA construction process shall be used. The "Method" and the "QC/QA" process have been deleted from this specification. The use of Asphalt Rubber Binder, Asphalt Modifier, and Crumb Rubber Modifier has also been deleted.

39-1.01A Summary

Section 39-1 includes general specifications for producing and placing HMA by mixing aggregate and asphalt binder at a mixing plant; as well as spreading and compacting the HMA mixture.

HMA includes one or more of the following types:

1. Type A
2. Type B
3. OGFC, including HMA-O, RHMA-O, and RHMA-O-HB – Not Applicable
4. RHMA-G– Not Applicable

The HMA construction process includes one or more of the following:

1. Standard
2. Method - Not Applicable
3. QC/QA - Not Applicable

39-1.01B Definitions

Coarse Aggregate: Aggregate retained on a no. 4 sieve.

Fine Aggregate: Aggregate passing the no. 4 sieve.

Supplemental Fine Aggregate: Aggregate passing the no. 30 sieve, including hydrated lime, portland cement, and fines from dust collectors.

MATERIALS

39-1.02A Geosynthetic Pavement Interlayer– Not Applicable

39-1.02B Tack Coat

Tack coat must comply with the specifications for asphaltic emulsion or asphalts. Choose the type and grade.

Notify the Authority Representative if you dilute asphaltic emulsion with water. The weight ratio of added water to asphaltic emulsion must not exceed 1 to 1.

Measure added water either by weight or volume in compliance with section 9-1.02 or you may use water meters from water districts, cities, or counties. If you measure water by volume, apply a conversion factor to determine the correct weight.

With each dilution, submit:

1. Weight ratio of water to bituminous material in the original asphaltic emulsion
2. Weight of asphaltic emulsion before diluting
3. Weight of added water
4. Final dilution weight ratio of water to asphaltic emulsion

39-1.02C Asphalt Binder

Asphalt binder in HMA must comply with the specifications for asphalts or section 39-1.02D.

Asphalt binder for geosynthetic pavement interlayer must comply with the specifications for asphalts. Choose from Grades PG 64-10, PG 64-16, or PG 70-10.

39-1.02D Asphalt Rubber Binder– Not Applicable

39-1.02E Aggregate

Aggregate must be clean and free from deleterious substances.

The specified aggregate gradation must be determined before the addition of asphalt binder and includes supplemental fine aggregate. The Authority Representative tests for aggregate grading

under California Test 202, modified by California Test 105 if there is a difference in specific gravity of 0.2 or more between the coarse and fine parts of different aggregate blends.

Choose sieve size TV within each TV limit presented in the aggregate gradation tables.

The proposed aggregate gradation must be within the TV limits for the specified sieve sizes shown in the following tables:

Aggregate Gradation (Percentage Passing)

HMA Types A and B

3/4-inch HMA Types A and B

Sieve Sizes	TV Limits	Allowable Tolerance
1"	100	--
3/4"	90–100	TV \pm 5
1/2"	70–90	TV \pm 6
No. 4	45–55	TV \pm 7
No. 8	32–40	TV \pm 5
No. 30	12–21	TV \pm 4
No. 200	2.0–7.0	TV \pm 2

1/2-inch HMA Types A and B

Sieve Sizes	TV Limits	Allowable Tolerance
3/4"	100	—
1/2"	95–99	TV \pm 6
3/8"	75–95	TV \pm 6
No. 4	55–66	TV \pm 7
No. 8	38–49	TV \pm 5
No. 30	15–27	TV \pm 4
No. 200	2.0–8.0	TV \pm 2

Before the addition of asphalt binder and lime treatment, aggregate must have the values for the quality characteristics shown in the following table:

Aggregate Quality

Quality Characteristic	Test Method	HMA Type
------------------------	-------------	----------

		A	B
Percent of crushed particles	California		
Coarse aggregate (% min.)	Test 205		
One fractured face		90	25
Two fractured faces		75	--
Fine aggregate (% min)			
(Passing no. 4 sieve			
and retained on no. 8 sieve.)			
One fractured face		70	20
Los Angeles Rattler (% max.)	California		
Loss at 100 rev.	Test 211	12	--
Loss at 500 rev.		45	50
Sand equivalent (min.) ^a	California	47	42
	Test 217		
Fine aggregate angularity	California	45	45
(% min.) ^b	Test 234		
Flat and elongated particles	California	10	10
(% max. by weight @ 5:1)	Test 235		

^a Reported value must be the average of 3 tests from a single sample.

^b The Authority Representative waives this specification if HMA contains less than 10 percent of non-manufactured sand by weight of total aggregate. Manufactured sand is fine aggregate produced by crushing rock or gravel.

39-1.02F Reclaimed Asphalt Pavement

You may produce HMA Type A or B, using RAP. HMA produced using RAP must comply with the specifications for HMA, except aggregate quality specifications do not apply to RAP. You may substitute RAP aggregate for a part of the virgin aggregate in HMA in a quantity not exceeding 15.0 percent of the aggregate blend. Do not use RAP in OGFC and RHMA-G.

Assign the substitution rate of RAP aggregate for virgin aggregate with the JMF submittal. The JMF must include the percent of RAP used. If you change your assigned RAP aggregate substitution rate by more than 5 percent (within the 15.0 percent limit), submit a new JMF.

Process RAP from asphalt concrete. You may process and stockpile RAP during the entire project. Prevent material contamination and segregation. Store RAP in stockpiles on smooth surfaces free of debris and organic material. Processed RAP stockpiles must be only homogeneous RAP.

HOT MIX ASPHALT MIX DESIGN REQUIREMENTS

39-1.03A General

The mix design process consists of performing California Test 367 and laboratory procedures on combinations of aggregate gradations and asphalt binder contents to determine the OBC and HMA mixture qualities. The results become the proposed JMF.

Use the *Contractor Hot Mix Asphalt Design Data* form to record aggregate quality and mix design data. Use the *Contractor Job Mix Formula Proposal* form to present the JMF.

Laboratories testing aggregate qualities and preparing the mix design and JMF must be qualified under the Department's Independent Assurance Program. Take samples under California Test 125.

The Authority Representative reviews the aggregate qualities, mix design, and JMF and verifies and authorizes the JMF.

You may change the JMF during production. Do not use the changed JMF until it is authorized by the Authority Representative. Except if adjusting the JMF as specified in section 39-1.03E, perform a new mix design and submit a new JMF submittal if you change any of the following:

1. Target asphalt binder percentage
2. Asphalt binder supplier
3. Asphalt rubber binder supplier
4. Component materials used in asphalt rubber binder or percentage of any component materials
5. Combined aggregate gradation
6. Aggregate sources
7. Substitution rate for RAP aggregate of more than 5 percent
8. Any material in the JMF

39-1.03B Hot Mix Asphalt Mix Design

Perform a mix design that produces HMA with the values for the quality characteristics shown in the following table:

HMA Mix Design Requirements

Quality Characteristic	Test Method	HMA Type	
		A	B
Air void content (%)	California Test 367	4.0	4.0
Voids in mineral aggregate (% min.)	California Test 367	17.0	17.0
No. 4 grading		15.0	15.0
3/8" grading		14.0	14.0
1/2" grading		13.0	13.0
3/4" grading			
Voids filled with asphalt (%)	California Test 367	76.0–80.0	76.0–80.0
No. 4 grading		73.0–76.0	73.0–76.0
3/8" grading		65.0–75.0	65.0–75.0
1/2" grading		65.0–75.0	65.0–75.0
3/4" grading			
Dust proportion	California Test 367	0.9–2.0	0.9–2.0
No. 4 and 3/8" gradings		0.6–1.3	0.6–1.3
1/2" and 3/4" gradings			
Stabilometer value (min.) ^b	California Test 366	30	30
No. 4 and 3/8" gradings		37	35
1/2" and 3/4" gradings			

^a Voids in mineral aggregate for RHMA-G must be within this range.

^b California Test 304, Part 2.13.

^c Report this value in the JMF submittal.

Report the average of 3 tests. If the range of stability for the 3 briquettes is more than 8 points, prepare new briquettes and test again. The average air void content may vary from the specified air void content by ± 0.5 percent.

39-1.03C Job Mix Formula Submittal

Each JMF submittal must consist of:

1. Proposed JMF on a *Contractor Job Mix Formula Proposal* form
2. Mix design records on a *Contractor Hot Mix Asphalt Design Data* form dated within six months of submittal
3. JMF verification on a *Caltrans Hot Mix Asphalt Verification* form, if applicable
4. JMF renewal on a *Caltrans Production Start-Up Evaluation* form, if applicable
5. MSDS for the following:
 - a. Asphalt binder
 - b. Base asphalt binder used in asphalt rubber binder
 - c. CRM and asphalt modifier used in asphalt rubber binder
 - d. Blended asphalt rubber binder mixture
 - e. Supplemental fine aggregate except fines from dust collectors
 - f. Antistrip additives

If the Authority Representative requests, sample the following materials in the presence of the Authority Representative and place in labeled containers weighing no more than 50 lb. each:

1. Coarse, fine, and supplemental fine aggregate from stockpiles, cold feed belts, or hot bins. Samples must be at least 120 lb. for each coarse aggregate, 80 lb. for each fine aggregate, and 10 lb. for each type of supplemental fines. The Authority Representative combines these aggregate samples to comply with the JMF TVs submitted on a *Contractor Job Mix Formula Proposal* form.
2. RAP from stockpiles or RAP system. Samples must be at least 60 lb..
3. Asphalt binder from the binder supplier. Samples must be in two 1-quart cylindrical-shaped cans with open top and friction lids.
4. Asphalt rubber binder with the components blended in the proportions to be used. Samples must be in four 1-quart cylindrical-shaped cans with open top and friction lids.

Notify the Authority Representative at least 2 business days before sampling materials. For aggregate and RAP, split the samples into at least 4 parts. Submit 3 parts to the Authority Representative and use 1 part for your testing.

39-1.03D Job Mix Formula Review

The Authority Representative reviews each mix design and proposed JMF within 5 business days from the complete JMF submittal. The review consists of reviewing the mix design procedures and comparing the proposed JMF with the specifications. The Authority Representative may verify aggregate quality characteristics during this review period.

Any JMF which has been previously used and approved by CALTRANS may be used for this project as long as the Authority Representative reviews and approves the JMF.

39-1.03E Job Mix Formula Verification – When requested, the Contractor shall furnish sufficient samples of asphalt binder, each aggregate fraction and any additives to the Authority Representative for JMF verification.

39-1.03F Job Mix Formula Renewal – Not Applicable.

39-1.03G Job Mix Formula Acceptance

You may start HMA production if:

1. Authority Representative's review of the JMF shows compliance with the specifications
2. Authority Representative has verified the JMF within 12 months before HMA production
3. Authority Representative authorizes the verified JMF

CONTRACTOR QUALITY CONTROL

39-1.04A General

Establish, maintain, and change a quality control system to ensure materials and work comply with the specifications. Submit quality control test results within 3 days of a request, except if the QC/QA construction process is specified.

You must identify the HMA sampling location in your QC plan. During production, take samples under California Test 125, except if you request and if authorized, sample HMA from any of the following locations:

1. Plant
2. Truck
3. Windrow
4. Paver hopper
5. Mat behind the paver

39-1.04B Prepaving Conference

Contractor shall hold a prepaving conference with the Authority Representative at a mutually agreed time and place. Discuss methods of performing the production and paving work.

39-1.04C Asphalt Rubber Binder – Not Applicable

39-1.04D Aggregate

Determine the aggregate moisture content and RAP moisture content in continuous mixing plants at least twice a day during production and adjust the plant controller. Determine the RAP moisture content in batch mixing plants at least twice a day during production and adjust the plant controller.

39-1.04E Reclaimed Asphalt Pavement

Perform RAP quality control testing each day.

Sample RAP once daily and determine the RAP aggregate gradation under California Test 367, appendix B, and submit the results with the combined aggregate gradation.

39-1.04F Density Cores

To determine density for Standard and QC/QA construction process projects, take 4- or 6-inch diameter density cores at least once every 5 business days. Take 1 density core for every 250 tons of HMA from random locations the Authority Representative designates. Take density cores in the Authority Representative's presence and backfill and compact holes with authorized material. Before submitting a density core, mark it with the density core's location and place it in a protective container.

If a density core is damaged, replace it with a density core taken within 1 foot longitudinally from the original density core.

39-1.04G Briquettes

Prepare 3 briquettes for each stability and air void content determination. Report the average of 3 tests. Prepare new briquettes and test again when the range of stability for the 3 briquettes is more than 8 points.

You may use the same briquettes used for stability testing to determine bulk specific gravity under California Test 308. If you use these briquettes and tests using bulk specific gravity fail, you may prepare 3 new briquettes and determine a new bulk specific gravity.

ACCEPTANCE CRITERIA

39-1.05 HMA acceptance is specified in the sections for each HMA construction process.

The Authority Representative samples materials for testing under California Test 125 and the applicable test method, except samples may be taken:

1. At the plant from a truck or an automatic sampling device
2. From the mat behind the paver

Sampling must be independent of Contractor quality control, statistically based, and random.

If you request, the Authority Representative splits samples and provides you with a part.

HMA acceptance is based on:

1. Authorized JMF
2. Accepted QC plan for Standard and QC/QA construction process projects
3. Compliance with the HMA acceptance tables
4. Lot acceptance for QC/QA construction process projects
5. Visual inspection

The Authority Representative prepares 3 briquettes for each stability and air void content determination. The average of 3 tests is reported. If the range of stability for the 3 briquettes is more than 8 points, new briquettes are prepared and tested.

The Authority Representative may use the briquettes used for stability testing to determine bulk specific gravity under California Test 308. If the Authority Representative uses the same briquettes and the tests using that bulk specific gravity fail, the Authority Representative prepares 3 new briquettes and determines a new bulk specific gravity.

DISPUTE RESOLUTION

39-1.06 Work with the Authority Representative to avoid potential conflicts and to resolve disputes regarding test result discrepancies. Notify the Authority Representative within 5 days of receiving a test result if you dispute the test result.

If you or the Authority Representative dispute each other's test results, submit quality control test results and copies of paperwork including worksheets used to determine the disputed test results. An independent third party performs referee testing. Before the independent third party participates in a dispute resolution, the party must be accredited under the Department's Independent Assurance Program. The independent third party must be independent of the project. By mutual agreement, the independent third party is chosen from:

1. Authority Representative laboratory
2. Laboratory not currently employed by you or your HMA producer

If split quality control or acceptance samples are not available, the independent third party uses any available material representing the disputed HMA for evaluation.

PRODUCTION START-UP EVALUATION

39-1.07 The Authority Representative evaluates HMA production and placement at production start-up.

Within the first 750 tons produced on the 1st day of HMA production, in the Authority Representative's presence and from the same production run, take samples of:

1. Aggregate
2. Asphalt binder
3. RAP
4. HMA

Sample aggregate from cold feed belts or hot bins. Take RAP samples from the RAP system. Sample HMA under California Test 125, except if you request and if authorized, you may sample HMA from any of the following locations:

1. Plant
2. Truck
3. Windrow
4. Paver hopper
5. Mat behind the paver

For aggregate, RAP, and HMA, split the samples into at least 4 parts and label their containers. Submit 3 split parts and keep 1 part.

For Standard and QC/QA construction process projects, you and the Department must test the split samples and report test results within 3 business days of sampling. If you proceed before receipt of the test results, the Authority Representative may consider the HMA placed to be represented by these test results.

For Standard and QC/QA construction process projects, take 4- or 6-inch diameter density cores within the first 750 tons on the 1st day of HMA production. For each density core, the Department reports the bulk specific gravity determined under California Test 308, Method A, in addition to the percent of maximum theoretical density. You may test for in-place density at the density core locations and include them in your production tests for percent of maximum theoretical density.

PRODUCTION

39-1.08A General

Produce HMA in a batch mixing plant or a continuous mixing plant. Proportion aggregate by hot or cold feed control.

HMA plants must be Department qualified. Before production, the HMA plant must have current qualification under the Department's Materials Plant Quality Program.

During production, you may adjust:

1. Hot or cold feed proportion controls for virgin aggregate and RAP
2. Set point for asphalt binder content

39-1.08B Mixing

Mix HMA ingredients into a homogeneous mixture of coated aggregates.

Asphalt binder must be from 275 to 375 degrees F when mixed with aggregate.

Asphalt rubber binder must be from 350 to 425 degrees F when mixed with aggregate.

When mixed with asphalt binder, aggregate must not be more than 325 degrees F, except aggregate for OGFC must be not more than 275 degrees F. These aggregate temperature specifications do not apply if you use RAP.

HMA with or without RAP must not be more than 325 degrees F.

39-1.08C Asphalt Rubber Binder – Not Applicable

SUBGRADE, TACK COAT, AND GEOSYNTHETIC PAVEMENT INTERLAYER

39-1.09A General

Prepare subgrade or apply tack coat to surfaces receiving HMA. If specified, place geosynthetic pavement interlayer over a coat of asphalt binder.

39-1.09B Subgrade

Subgrade to receive HMA must comply with the compaction and elevation tolerance specifications in the sections for the material involved. Subgrade must be free of loose and extraneous material. If HMA is paved on existing base or pavement, remove loose paving particles, dirt, and other extraneous material by any means including flushing and sweeping.

39-1.09C Tack Coat

Apply tack coat:

1. To existing pavement, including planed surfaces
2. Between HMA layers
3. To vertical surfaces of:
 - a. Curbs
 - b. Gutters
 - c. Construction joints

Before placing HMA, apply tack coat in 1 application. The application rate must be the minimum residual rate specified for the underlying surface conditions shown in the following tables:

Tack Coat Application Rates for HMA Type A and Type B

HMA Overlay Over:	Minimum Residual Rates (gal/sq. yd.)		
	CSS1/CSS1h, SS1/SS1h and QS1h/CQS1h Asphaltic Emulsion	CRS1/CRS2, RS1/RS2 and QS1/CQS1 Asphaltic Emulsion	Asphalt Binder and PMRS2/PMCRS2 and PMRS2h/PMCRS2h Asphaltic Emulsion
New HMA (between layers)	0.02	0.03	0.02
PCC and existing HMA (AC) surfaces	0.03	0.04	0.03

Planed PCC and HMA (AC) surfaces	0.05	0.06	0.04
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If you dilute asphaltic emulsion, mix until homogeneous before application.

For vertical surfaces, apply a residual tack coat rate that will thoroughly coat the vertical face without running off.

If you request and if authorized, you may:

1. Change tack coat rates
2. Omit tack coat between layers of new HMA during the same work shift if:
 - a. No dust, dirt, or extraneous material is present
 - b. Surface is at least 140 degrees F

Immediately in advance of placing HMA, apply additional tack coat to damaged areas or where loose or extraneous material is removed.

Close areas receiving tack coat to traffic. Do not track tack coat onto pavement surfaces beyond the job site.

Asphalt binder tack coat must be from 285 to 350 degrees F when applied.

39-1.09D Geosynthetic Pavement Interlayer – Not Applicable

SPREADING AND COMPACTING EQUIPMENT

39-1.10 Paving equipment for spreading must be:

1. Self-propelled
2. Mechanical
3. Equipped with a screed or strike-off assembly that can distribute HMA the full width of a traffic lane
4. Equipped with a full-width compacting device
5. Equipped with automatic screed controls and sensing devices that control the thickness, longitudinal grade, and transverse screed slope

Install and maintain grade and slope references.

The screed must produce a uniform HMA surface texture without tearing, shoving, or gouging.

The paver must not leave marks such as ridges and indentations, unless you can eliminate them by rolling.

Rollers must be equipped with a system that prevents HMA from sticking to the wheels. You may use a parting agent that does not damage the HMA or impede the bonding of layers.

In areas inaccessible to spreading and compacting equipment:

1. Spread the HMA by any means to obtain the specified lines, grades, and cross sections.

2. Use a pneumatic tamper, plate compactor, or equivalent to achieve thorough compaction.

TRANSPORTING, SPREADING, AND COMPACTING

39-1.11 Do not pave HMA on wet pavement or a frozen surface.

You may deposit HMA in a windrow and load it in the paver if:

1. Paver is equipped with a hopper that automatically feeds the screed
2. Loading equipment can pick up the windrowed material and deposit it in the paver hopper without damaging base material
3. Activities for deposit, pickup, loading, and paving are continuous
4. HMA temperature in the windrow does not fall below 260 degrees F

You may pave HMA in 1 or more layers on areas less than 5 feet wide and outside the traveled way, including shoulders. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture.

HMA handled, spread, or windrowed must not stain the finished surface of any improvement, including pavement.

Do not use petroleum products such as kerosene or diesel fuel to release HMA from trucks, spreaders, or compactors.

HMA must be free of:

1. Segregation
2. Coarse or fine aggregate pockets
3. Hardened lumps

Longitudinal joints in the top layer must match specified lane edges. Alternate the longitudinal joint offsets in the lower layers at least 0.5 foot from each side of the specified lane edges. You may request other longitudinal joint placement patterns.

Until the adjoining through lane's top layer has been paved, do not pave the top layer of:

1. Shoulders
2. Tapers
3. Transitions
4. Road connections
5. Driveways
6. Curve widening's
7. Chain control lanes
8. Turnouts
9. Turn pockets

If the number of lanes changes, pave each through lane's top layer before paving a tapering lane's top layer. Simultaneous to paving a through lane's top layer, you may pave an adjoining area's top layer, including shoulders. Do not operate spreading equipment on any area's top layer until completing final compaction.

If leveling with HMA is specified, fill and level irregularities and ruts with HMA before spreading HMA over the base, existing surfaces, or bridge decks. You may use mechanical equipment other than a paver for these areas. The equipment must produce uniform smoothness and texture. HMA used to change an existing surface's cross slope or profile is not paid for as HMA (leveling).

If placing HMA against the edge of existing pavement, sawcut or grind the pavement straight and vertical along the joint and remove extraneous material.

Rolling must leave the completed surface compacted and smooth without tearing, cracking, or shoving. Complete finish rolling activities before the pavement surface temperature is:

1. Below 150 degrees F for HMA with unmodified binder
2. Below 140 degrees F for HMA with modified binder

If a vibratory roller is used as a finish roller, turn the vibrator off.

For Standard and QC/QA construction processes, if 3/4-inch aggregate grading is specified, you may use 1/2-inch aggregate grading if the total layer thickness is from 0.125 to 0.20 foot thick.

Spread and compact HMA under sections 39-3.03 and 39-3.04 if any of the following applies:

1. Specified paved thickness is less than 0.15 foot.
2. Specified paved thickness is less than 0.20 foot and 3/4-inch aggregate grading is specified and used.
3. You spread and compact at:
 - a. Asphalt concrete surfacing replacement areas
 - b. Leveling courses
 - c. Areas for which the Authority Representative determines conventional compaction and compaction measurement methods are impeded

Do not allow traffic on new HMA pavement until its mid-depth temperature is below 160 degrees F.

If you request and if authorized, you may cool HMA Type A and Type B with water when rolling activities are complete. Apply water under section 17-3.

SMOOTHNESS

39-1.12A General

Determine HMA smoothness with a straightedge.

If concrete pavement is placed on HMA:

1. Cold plane the HMA finished surface to within specified tolerances if it is higher than the grade ordered.
2. Remove and replace HMA if the finished surface is lower than 0.05 foot below the grade ordered.

39-1.12B Straightedge

The top layer of HMA pavement must not vary from the lower edge of a 12-foot straightedge:

1. More than 0.01 foot when the straightedge is laid parallel with the centerline
2. More than 0.02 foot when the straightedge is laid perpendicular to the centerline and extends from edge to edge of a traffic lane
3. More than 0.02 foot when the straightedge is laid within 24 feet of a pavement conform

39-1.12C Profilograph (NOT USED)

39-1.12D Smoothness Correction

If the top layer of HMA Type A or Type B pavement does not comply with the smoothness specifications, grind the pavement to within specified tolerances, remove and replace it, or place an overlay of HMA. Do not start corrective work until your choice of methods is authorized.

Corrected HMA pavement areas must be uniform rectangles with edges:

1. Parallel to the nearest HMA pavement edge or lane line
2. Perpendicular to the pavement centerline

Measure the corrected HMA pavement surface with a profilograph and a 12-foot straightedge and correct the pavement to within specified tolerances. If a must-grind area or straightedged pavement cannot be corrected to within specified tolerances, remove and replace the pavement.

On areas ground apply fog seal coat under section 37-2.

39-1.13 HOT MIX ASPHALT ON BRIDGE DECKS – Not Applicable

MISCELLANEOUS AREAS AND DIKES

39-1.14 As approved by the Authority Representative the following specifications in section 39 do not apply to miscellaneous areas and dikes:

1. HMA construction process
2. HMA mix design requirements
3. Contractor quality control
4. Production start-up evaluation

Miscellaneous areas are outside the traveled way and include:

1. Median areas not including inside shoulders
2. Island areas
3. Sidewalks
4. Gutters
5. Gutter flares
6. Ditches
7. Overside drains
8. Aprons at the ends of drainage structures

Spread miscellaneous areas in 1 layer and compact to the specified lines and grades.

For miscellaneous areas and dikes:

1. Do not submit a JMF.
2. Choose the 3/8-inch or 1/2-inch HMA Type A and Type B aggregate gradations.
3. Minimum asphalt binder content must be 6.8 percent for 3/8-inch aggregate and 6.0 percent for 1/2-inch aggregate. If you request and if authorized, you may reduce the minimum asphalt binder content.
4. Choose asphalt binder Grade PG 70-10 or the same grade specified for HMA.

MINOR HOT MIX ASPHALT

39-1.15A GENERAL

39-1.15A(1) Summary

The following specifications in section 39 do not apply to minor HMA:

1. HMA construction process
2. HMA mix design requirements
3. Contractor quality control

4. Production start-up evaluation

39-1.15A(2) Definitions

Reserved

39-1.15A(3) Submittals

Reserved

39-1.15A(4) Quality Control and Assurance

Reserved

39-1.15B MATERIALS

The minimum asphalt binder content must be 6.8 percent for 3/8-inch aggregate gradation and 6.0 percent for 1/2-inch aggregate gradation.

Choose asphalt binder Grade PG 64-10, PG 64-16, or PG 70-10.

If you request and if authorized, you may reduce the minimum asphalt binder content.

Choose the 3/8-inch or 1/2-inch HMA Type A or Type B aggregate gradation.

39-1.15C CONSTRUCTION

Produce HMA at a central mixing plant.

Choose any method and equipment to spread and compact.

The surface must be:

1. Textured uniformly
2. Compacted firmly
3. Without depressions, humps, and irregularities

Smoothness specifications do not apply.

39-1.16 RUMBLE STRIPS – Not Applicable

39-1.17 DATA CORES – Not Applicable

39-1.18 HOT MIX ASPHALT AGGREGATE LIME TREATMENT—DRY LIME METHOD – Not Applicable

39-1.19 HOT MIX ASPHALT AGGREGATE LIME TREATMENT—SLURRY METHOD – Not Applicable

39-1.20 LIQUID ANTISTrip TREATMENT – Not Applicable

39-1.21 REPLACE ASPHALT CONCRETE SURFACING – Not Applicable

39-1.22 LIQUID ASPHALT PRIME COAT – Not Applicable

39-1.23 HOT MIX ASPHALT TYPE C – Not Applicable

39-1.24 BONDED WEARING COURSE—GAP GRADED – Not Applicable

- 39-1.25 RUBBERIZED BONDED WEARING COURSE—GAP GRADED**– Not Applicable
- 39-1.26 RUBBERIZED BONDED WEARING COURSE—OPEN GRADED** – Not Applicable
- 39-1.27 BONDED WEARING COURSE—OPEN GRADED** – Not Applicable
- 39-1.28 ROADSIDE PAVING** – Not Applicable
- 39-1.29 SOIL TREATMENT** – Not Applicable
- 39-1.30 – 39-1.40 RESERVED** – Not Applicable

STANDARD CONSTRUCTION PROCESS

39-2.01 GENERAL

Section 39-2 includes specifications for HMA produced and constructed under the Standard construction process.

CONTRACTOR QUALITY CONTROL

39-2.02A Quality Control Plan

Establish, implement, and maintain a QC plan for HMA. The QC plan must describe the organization and procedures you will use to:

1. Control the quality characteristics
2. Determine when corrective actions are needed (action limits)
3. Implement corrective actions

When you submit the proposed JMF, submit the proposed QC plan. You and the Authority Representative must discuss the QC plan during the prepaving conference.

The QC plan must address the elements affecting HMA quality including:

1. Aggregate
2. Asphalt binder
3. Additives
4. Production
5. Paving

The Authority Representative reviews each QC plan within 5 business days from the submittal. Do not produce HMA until the Authority Representative authorizes the QC plan.

39-2.02B Quality Control Testing

Perform sampling and testing at the specified frequency for the quality characteristics shown in the following table:

Quality Control Tests

Tests	Test Method	Minimum Sampling and Testing Frequency	HMA Type	
			A	B
Aggregate gradation ^a	California Test 202	1 per 750 tons and any remaining part	JMF \pm Tolerance ^b	JMF \pm Tolerance ^b
Sand equivalent (min) ^c	California Test 217		47	42
Asphalt binder content (%)	California Test 379 or 382		JMF \pm 0.45	JMF \pm 0.45
HMA moisture content (% max)	California Test 226 or 370	1 per 2,500 tons but not less than 1 per paving day	1.0	1.0
Percent of maximum theoretical density (%) ^{d, e}	QC plan	2 per business day (min.)	91–97	91–97
Stabilometer value (min) ^{c, f}	California Test 366	One per 4,000 tons or 2 per 5 business days, whichever is greater	30	30
No. 4 and 3/8" gradings			37	35
1/2" and 3/4" gradings				
Air void content (%) ^{c, g}	California Test 367		4 \pm 2	4 \pm 2
Aggregate moisture content at continuous mixing plants and RAP moisture content at continuous mixing plants and batch mixing plants ^h	California Test 226 or 370	2 per day during production	--	--
Percent of crushed particles coarse aggregate (% min)	California Test 205	As designated in the QC plan. At least once per project	90	25
One fractured face				
Two fractured faces			75	--
Fine aggregate (% min) (Passing no. 4 sieve and				

retained on no. 8 sieve.) One fractured face			70	20
Los Angeles Rattler (% , max) Loss at 100 rev. Loss at 500 rev.	California Test 211		12 45	-- 50
Flat and elongated particles (% , max by weight @ 5:1)	California Test 235		Report only	Report only
Fine aggregate angularity (% , min)	California Test 234		45	45
Voids filled with asphalt (%) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		76.0–80.0 73.0–76.0 65.0–75.0 65.0–75.0	76.0–80.0 73.0–76.0 65.0–75.0 65.0–75.0
Voids in mineral aggregate (% min) ⁱ No. 4 grading 3/8" grading 1/2" grading 3/4" grading	California Test 367		17.0 15.0 14.0 13.0	17.0 15.0 14.0 13.0
Dust proportion ⁱ No. 4 and 3/8" gradings 1/2" and 3/4" gradings	California Test 367		0.9–2.0 0.6–1.3	0.9–2.0 0.6–1.3
Smoothness	Section 39-1.12	--	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀
Asphalt rubber binder viscosity @ 350 °F, centipoises	Section 39-1.02D	Section 39-1.04C	--	--
Asphalt modifier	Section 39-1.02D	Section 39-1.04C	--	--

CRM	Section 39-1.02D	Section 39-1.04C	--	--
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- ^a Determine combined aggregate gradation containing RAP under California Test 367.
- ^b The tolerances must comply with the allowable tolerances in section 39-1.02E.
- ^c Report the average of 3 tests from a single split sample.
- ^d Required for HMA Type A and Type B if the specified paved thickness is at least 0.15 foot.
- ^e Determine maximum theoretical density (California Test 309) at the frequency specified for Test Maximum Density under California Test 375, Part 5.D.
- ^f California Test 304, Part 2.13.
- ^g Determine the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.
- ^h For adjusting the plant controller at the HMA plant.
- ⁱ Report only if the adjustment for the asphalt binder content TV is less than or equal to ± 0.3 percent from OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form.

For any single quality characteristic except smoothness, if 2 consecutive quality control test results do not comply with the action limits or specifications:

1. Stop production.
2. Notify the Authority Representative.
3. Take corrective action.
4. Demonstrate compliance with the specifications before resuming production and placement.

ACCEPTANCE CRITERIA

39-2.03A Testing

The Authority Representative samples for acceptance testing and tests for the quality characteristics shown in the following table:

HMA Acceptance—Standard Construction Process

Quality Characteristic				Test Method	HMA Type	
					A	B
Aggregate gradation ^a				California Test 202	JMF ± tolerance _c	JMF ± tolerance ^c
Sieve	3/4"	1/2"	3/8"			
1/2"	X ^b					
3/8"		X				
No. 4			X			
No. 8	X	X	X			
No. 200	X	X	X			
Sand equivalent (min) ^d				California Test 217	47	42
Asphalt binder content (%)				California Test 379 or 382	JMF ± 0.45	JMF ± 0.45
HMA moisture content (% , max)				California Test 226 or 370	1.0	1.0
Percent of maximum theoretical density (%) ^{e, f}				California Test 375	91–97	91–97
Stabilometer value (min) ^{d,g} No. 4 and 3/8" gradings 1/2" and 3/4" gradings				California Test 366	30 37	30 35
Air void content (%) ^{d, h}				California Test 367	4 ± 2	4 ± 2
Percent of crushed particles Coarse aggregate (% , min) One fractured face Two fractured faces Fine aggregate (% , min) (Passing no. 4 sieve and retained on no. 8 sieve.) One fractured face				California Test 205	90 75 70	25 -- 20
Los Angeles Rattler (% , max) Loss at 100 rev. Loss at 500 rev.				California Test 211	12 45	-- 50

Fine aggregate angularity (% , min)	California Test 234	45	45
Flat and elongated particles (% , max by weight @ 5:1)	California Test 235	Report only	Report only
Voids filled with asphalt (%) ⁱ			
No. 4 grading		76.0–80.0	76.0–80.0
3/8" grading	California Test 367	73.0–76.0	73.0–76.0
1/2" grading		65.0–75.0	65.0–75.0
3/4" grading		65.0–75.0	65.0–75.0
Voids in mineral aggregate (% min) ⁱ			
No. 4 grading		17.0	17.0
3/8" grading	California Test 367	15.0	15.0
1/2" grading		14.0	14.0
3/4" grading		13.0	13.0
Dust proportion ⁱ			
No. 4 and 3/8" gradings	California Test 367	0.9–2.0	0.9–2.0
1/2" and 3/4" gradings		0.6–1.3	0.6–1.3
Smoothness	Section 39-1.12	12-foot straight-edge, must grind, and PI ₀	12-foot straight-edge, must grind, and PI ₀
Asphalt binder	Various	Section 92	Section 92
Asphalt rubber binder	Various	--	--
Asphalt modifier	Various	--	--
CRM	Various	--	--

^a The Authority Representative determines combined aggregate gradations containing RAP under California Test 367.

^b "X" denotes the sieves the Authority Representative tests for the specified aggregate gradation.

^c The tolerances must comply with the allowable tolerances in section 39-1.02E.

^d The Authority Representative reports the average of 3 tests from a single split sample.

^e The Authority Representative determines percent of maximum theoretical density if the specified paved thickness is at least 0.15 foot under California Test 375, except the Authority Representative uses:

1. California Test 308, Method A, to determine in-place density of each density core instead of using the nuclear gauge in Part 4, "Determining In-Place Density By The Nuclear Density Device."
2. California Test 309 to determine maximum theoretical density instead of calculating test maximum density in Part 5, "Determining Test Maximum Density."

^f The Authority Representative determines maximum theoretical density (California Test 309) at the frequency specified for Test Maximum Density under California Test 375, Part 5.D.

^g California Test 304, Part 2.13.

^h The Authority Representative determines the bulk specific gravity of each lab-compacted briquette under California Test 308, Method A, and theoretical maximum specific gravity under California Test 309.

ⁱ Report only if the adjustment for the asphalt binder content TV is less than or equal to ± 0.3 percent from the OBC value submitted on a *Contractor Hot Mix Asphalt Design Data* form.

No single test result may represent more than 750 tons or 1 day's production, whichever is less.

For any single quality characteristic except smoothness, if 2 consecutive acceptance test results do not comply with the specifications:

1. Stop production.
2. Take corrective action.
3. Take samples and split each sample into 4 parts in the Authority Representative's presence. Test 1 part for compliance with the specifications and submit 3 parts to the Authority Representative. The Authority Representative tests 1 part for compliance with the specifications and reserves and stores 2 parts.
4. Demonstrate compliance with the specifications before resuming production and placement.

The Authority Representative tests the density core you take from each 250 tons of HMA production. The Authority Representative determines the percent of maximum theoretical density for each density core by determining the density core's density and dividing by the maximum theoretical density.

If the specified total paved thickness is at least 0.15 foot and any layer is less than 0.15 foot, the Authority Representative determines the percent of maximum theoretical density from density cores taken from the final layer measured the full depth of the total paved HMA thickness.

The acceptable relative compaction shall be 95% percent of maximum theoretical density

TRANSPORTING, SPREADING, AND COMPACTING

39-2.04 Determine the number of rollers needed to obtain the specified density and surface finish.

39-3 METHOD CONSTRUCTION PROCESS – Not Applicable

39-4 QUALITY CONTROL/QUALITY ASSURANCE CONSTRUCTION PROCESS

MEASUREMENT

39-5 Caltrans HMA - Type A actually placed by the Contractor and accepted as complying with the Plans and specifications will be measured by the number of tons actually placed as verified from certified weight tickets. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage.

PAYMENT

Payment shall be made at the contract unit price per cubic yard, for each of the following bid items that are included in the Contract:

39-6 The weight of each HMA mixture designated in the Bid Item List must be the combined mixture weight. The contract unit price paid per ton for Caltrans HMA – Type A complete in place, including testing, job mix formula preparation and approval process, prime coats, tack coats, and asphalt cold joint adhesive; and shall include full compensation for furnishing all labor, materials, tools, equipment and necessary incidentals for all of the work for this item in-place as shown on the drawings and specified in the specifications.

Payment will be made under:

ITEM 39-6 8-Inch Hot Mix Asphalt Type A – Caltrans Section 39 – per Ton

Recorded Batch Weights

If recorded batch weights are printed automatically, the bid item for HMA is measured by using the printed batch weights, provided:

1. Total aggregate and supplemental fine aggregate weight per batch is printed. If supplemental fine aggregate is weighed cumulatively with the aggregate, the total aggregate batch weight must include the supplemental fine aggregate weight.
2. Total asphalt binder weight per batch is printed.
3. Each truckload's zero tolerance weight is printed before weighing the 1st batch and after weighing the last batch.
4. Time, date, mix number, load number, and truck identification is correlated with a load slip.

5. Copy of the recorded batch weights is certified by a licensed weighmaster and submitted to the Authority Representative.

Dispute Resolution

If the dispute resolution independent third party determines the Authority Representative's test results are correct, the Authority Representative deducts the independent third party's testing costs from payments. If the independent third party determines your test results are correct, the Authority Representative approves payment for the independent third party's testing costs.

END OF ITEM CAL-39

ITEM CAL-40 – CALTRANS CONCRETE PAVEMENT

40-1 GENERAL

40-1.01A Summary

Section 40-1 includes general specifications for constructing concrete pavement.

40-1.01B Definitions

1. **Action limit:** Test results at which corrective actions must be made while production continues.
2. **Full-depth crack:** Crack other than a working crack that runs from one edge of a slab to the opposite or adjacent side of the slab.
3. **Raveling:** Progressive disintegration of the concrete pavement surface resulting in dislodged aggregate.
4. **Suspension limit:** Test results at which production must be suspended while corrections are made.
5. **Working crack:** Crack that extends through the full depth of a slab and is parallel to and within 0.5 foot of a planned contraction joint.

40-1.01C Definitions

40-1.01C(1) General

At least 15 days before delivery to the job site, submit the manufacturer's instructions for storage and installation of:

1. Splice couplers for threaded tie bars
2. Joint filler

Submit calibration documentation and operational guidelines for frequency measuring devices for concrete vibrators as an informational submittal.

Submit updated QC charts each paving day as an informational submittal.

If repair or replacement of noncompliant concrete is required, submit a repair or replacement plan.

40-1.01C(2) Certificate of Compliance

Submit a certificate of compliance for:

1. Tie bars
2. Splice couplers for threaded tie bars
3. Dowel bars
4. Tie bar baskets
5. Dowel bar baskets
6. Joint filler
7. Epoxy-powder coating

40-1.01C(3) Quality Control Plan

Submit a concrete pavement QC plan. Allow 30 days for review.

40-1.01C(4) Mix Design

At least 15 days before testing for mix proportions, submit a copy of the AASHTO accreditation for the laboratory determining the mix proportions as an informational submittal.

At least 15 days before starting field qualification, submit the proposed concrete mix proportions, the corresponding mix identifications, and laboratory test reports, including measurements of the modulus of rupture, for each trial mixture at 10, 21, 28, and 42 days.

40-1.01C(5) Just-In-Time Training

Reserved

40-1.01C(6) Concrete Field Qualification

Submit field qualification data and test reports, including:

1. Mixing date
2. Mixing equipment and procedures used
3. Batch volume in cubic yards
4. Type and source of ingredients used
5. Penetration of the concrete
6. Air content of the plastic concrete
7. Age and strength at the time of concrete beam testing

The minimum batch size for field qualification is 5 cu yd.

Field qualification test reports must be certified with a signature by an official in responsible charge of the laboratory performing the tests.

40-1.01C(7) Test Strips

Not Used

40-1.01C(8) Cores

Submit the name of the laboratory that will test the cores for air content.

Submit each core in an individual plastic bag marked with a description of the location from which the core was taken.

40-1.01C(9) Coefficient of Thermal Expansion

Submit 4 test specimens fabricated from a single sample of concrete for testing the coefficient of thermal expansion under AASHTO T 336 for field qualification and during production.

Submit your coefficient of thermal expansion test data at:

<http://169.237.179.13/cte/>

40-1.01C(10) – 40-1.01C(15) Reserved

40-1.01D Quality Assurance

40-1.01D(1) General

If the pavement quantity is at least 2,000 cu yd, provide a QC manager.

Core pavement as described for thickness, bar placement, and air content.

Provide material and labor to assist the Engineer in fabricating test beams for the Department's modulus of rupture testing.

Allow at least 25 days for the Department to schedule testing for the coefficient of friction. Notify the Engineer when a lane or lanes are scheduled to be opened to traffic and when the pavement is ready for testing, which is the latter of:

1. 7 days after paving
2. When the pavement has attained a modulus of rupture of at least 550 psi

The Department tests for the coefficient of friction within 7 days of receiving notification that the pavement is ready for testing.

40-1.01D(2) Just-In-Time Training

Reserved

40-1.01D(3) Quality Control Plan

The QC plan must describe the organization and procedures used to:

1. Control the production process
2. Determine whether a change to the production process is needed
3. Implement a change

The QC plan must include action and suspension limits and the details of the corrective action to be taken if any process is outside of those limits. The suspension limits must not exceed the specified acceptance criteria.

The QC plan must address the elements affecting concrete pavement quality, including:

- | | |
|------------------------------|---|
| 1. Mix proportions | 9. Contraction and construction joints |
| 2. Aggregate gradation | 10. Bar reinforcement placement and alignment |
| 3. Materials quality | 11. Dowel bar placement, alignment, and anchorage |
| 4. Stockpile management | 12. Tie bar placement |
| 5. Line and grade control | 13. Modulus of rupture |
| 6. Proportioning | 14. Finishing and curing |
| 7. Mixing and transportation | 15. Protecting pavement |
| 8. Placing and consolidation | |

40-1.01D(4) Qualifications

Testing laboratories and their test equipment must be qualified under the Department's Independent Assurance Program.

Use a laboratory that complies with ASTM C1077 to determine the mix proportions for concrete pavement. The laboratory must have a current AASHTO accreditation for:

1. AASHTO T 97 or ASTM C78
2. ASTM C192/C192M

Use an ACI-certified concrete laboratory technician, Grade I, to perform field qualification tests and calculations.

40-1.01D(5) Mix Design

Make trial mixtures no more than 24 months before field qualification.

Using your trial mixtures, determine the minimum cementitious materials content. Use your value for minimum cementitious material content for MC in equation 1 and equation 2 of section 90-1.02B(3).

To determine the minimum content of cementitious materials or the maximum ratio of water to cementitious materials, use modulus of rupture values of at least 570 psi for 28 days age and at least 650 psi for 42 days age.

If you change an aggregate supply source or the mix proportions, produce a trial batch and field qualify the new concrete.

40-1.01D(6) Test Strips

Not Used

40-1.01D(7) Quality Control

40-1.01D(7)(a) General

During paving, test the concrete pavement under the test methods and at the frequencies shown in the following table:

Concrete Pavement Test Methods and Testing Frequencies

Quality characteristic	Test method	Minimum testing frequency
Cleanness value	California Test 227	2 per day
Sand equivalent	California Test 217	
Aggregate gradation	California Test 202	
Air content (air entrainment specified)	California Test 504	1 per hour
Air content (air entrainment not specified)	California Test 504	1 per 4 hours
Density	California Test 518	
Penetration	California Test 533	
Aggregate moisture meter calibration ^a	California Test 223 or 226	1 per day

^a Check the calibration of the plant moisture meter by comparing moisture meter readings with California Test 223 or California Test 226 test results.

Maintain control charts to identify potential problems and assignable causes. Post a copy of each control chart at a location determined by the Engineer.

Control charts for individual measurements of quality characteristics must use the target values in the mix proportions as indicators of central tendency.

Develop linear control charts for:

1. Cleanness value
2. Sand equivalent
3. Fine and coarse aggregate gradation
4. Air content
5. Penetration

Control charts must include:

1. Contract number
2. Mix proportions
3. Test number
4. Each test parameter
5. Action and suspension limits
6. Specification limits
7. QC test results

For control charts for fine and coarse aggregate gradation, record the running average of the previous 4 consecutive gradation tests for each sieve and superimpose the specification limits.

For control charts for air content, the action limit is ± 1.0 percent of the specified value. If no value is specified, the action limit is ± 1.0 percent of the value used for your authorized mix design.

As a minimum, a process requires corrective action if any of the following occurs:

1. 2 consecutive running averages of 4 tests for fine or coarse aggregate gradation are outside the specification limits
2. 1 point falls outside the suspension limit line for individual penetration or air content measurements
3. 2 points in a row fall outside the action limit line for individual penetration or air content measurements

Stop production for processes requiring corrective action.

Before placing concrete pavement each day and at intervals not to exceed 4 hours during production, use a tachometer to test and record the vibration frequency of the concrete vibrators.

40-1.01D(7)(b) Concrete Field Qualification

Before paving, your mix design must be field qualified.

For field qualification, the modulus of rupture at an age of 28 days or earlier must be at least:

1. 550 psi for each single beam
2. 570 psi for the average of 5 beams

40-1.01D(7)(c) – 40-1.01D(7)(h) Reserved

40-1.01D(8) Department Acceptance

40-1.01D(8)(a) General

The Department tests the concrete pavement under the test methods and at the frequencies shown in the following table:

Concrete Pavement Test Methods and Testing Frequencies

Quality characteristic	Test method		Minimum testing frequency ^a
	CRCP	JPCP	
Air content ^b	California Test 504		1 day's paving
Modulus of rupture at 28 days	California Test 523		1,000 cu yd
Dowel bar placement		Measurement	700 sq yd
Tie bar placement		Measurement	4,000 sq yd
Coefficient of friction	California Test 342		1 day's paving
Thickness	California Test 531		1,200 sq yd

^a A single test represents no more than the frequency specified.

^b Tested only if air entrainment is specified.

40-1.01D(8)(b) Verification Testing

40-1.01D(8)(a)(i) General

Reserved

40-1.01D(8)(a)(ii) Air Content

If air-entraining admixtures are specified, the Engineer uses a t-test to compare your QC test results with the Department's test results. The t-value for test data is determined using the following equation:

$$t = \frac{|\bar{X}_c - \bar{X}_v|}{S_p \sqrt{\frac{1}{n_c} + \frac{1}{n_v}}} \quad \text{and} \quad S_p^2 = \frac{S_c^2 (n_c - 1) + S_v^2 (n_v - 1)}{n_c + n_v - 2}$$

where:

n_c = number of your QC tests (minimum of 6 required)

n_v = number of Department's tests (minimum of 2 required)

\bar{X}_c = mean of your QC tests

\bar{X}_v = mean of the Department's tests

S_p = pooled standard deviation

S_c = standard deviation of your QC tests

S_v = standard deviation of the Department's tests

Your QC test results are compared with the Department's test results at a level of significance of $\alpha = 0.01$. The t-value is compared to t_{crit} for the degrees of freedom shown in the following table:

Degrees of Freedom ($n_c + n_v - 2$)	t_{crit} (for $\alpha = 0.01$)
1	63.657
2	9.925
3	5.841
4	4.604
5	4.032
6	3.707
7	3.499
8	3.355
9	3.250
10	3.169

If the calculated t-value is less than or equal to t_{crit} , your QC test results are verified. If the calculated t-value is greater than t_{crit} , your QC test results are not verified.

If your QC test results are not verified, core at least 3 specimens from the concrete pavement under section 40-1.03M. The Engineer selects the core locations. The authorized laboratory must test these specimens for air content under ASTM C457. The Engineer compares these test results with your QC test results using the t-test method. If your QC test results are verified based on this comparison, the Engineer uses the QC test results for acceptance of concrete pavement for air content. If your QC test results are not verified based on this comparison, the Engineer uses the air content of core specimens determined by the authorized laboratory under ASTM C457 for acceptance.

40-1.01D(8)(c) Verification Testing

40-1.01D(8)(c)(i) General

The Department accepts concrete pavement based on compliance with the requirements shown in the following table:

Concrete Pavement Requirements for Acceptance

Quality characteristic	Test method		Requirement
	CRCP	JPCP	
Air content	California Test 504		± 1.5 % of the specified value _a
Modulus of rupture at 28 days (min, psi)	California Test 523		570 ^b
Bar reinforcement depth tolerance at joints (min)	Field measurement		1/2 inch below the saw cut depth
Dowel bar placement tolerances ^c : Horizontal offset (inch)	--	Field measurement	± 1 ± 2

Longitudinal translation (inch) Horizontal skew (max, inch) Vertical skew (max, inch) Vertical depth			$\frac{5}{8}$ $\frac{5}{8}$ The minimum distance measured from the concrete pavement surface to any point along the top of the dowel bar must be: DB + $\frac{1}{2}$ inch where: DB = $\frac{1}{3}$ of the pavement thickness or the saw cut depth in inches, whichever is greater The maximum distance below the depth shown must be $\frac{5}{8}$ inch.
Tie bar placement tolerances ^c : Horizontal and vertical skew (max, inches) Longitudinal translation (inches) Horizontal offset (embedment, inches) Vertical depth		Field measurement	$5 \frac{1}{4}$ ± 2 ± 2 1. At least $\frac{1}{2}$ inch below the bottom of the saw cut 2. At least 2 inches from any point along the bar to the pavement surface or bottom
Coefficient of friction (min): Concrete pavement Ramp termini	California Test 342		0.30 0.35
Pavement smoothness	California Test 387, AASHTO R 57, and AASHTO R 56		1. No area of localized roughness with an International Roughness Index greater than 120 in/mi 2. Mean Roughness Index of 60 in/mi or less within a 0.1 mile section
Thickness tolerances ^d (max, foot)	California Test 531		0.01 foot deficient of the thickness shown

^a If no value is specified, the air content must be within ± 1.5 % of the value used for your authorized mix design.

^b Average of the individual test results of 2 test beams.

^c Placement tolerance is measured relative to the completed joint.

^d See section 40-1.01D(8)(c)(iv) for additional thickness requirements.

40-1.01D(8)(c)(ii) Dowel and Tie Bar Placement

Core each day's paving within 2 business days. The Engineer identifies the joint and dowel or tie bar to be tested. Each dowel or tie bar test consists of 2 cores, 1 on each end of the bar to expose both ends for measurement. If the initial cores show that dowel or tie bars are within alignment tolerances and the Engineer orders more coring, the additional cores are change order work.

If the coring indicates the dowel or tie bars are not placed within the specified tolerances or if unconsolidated concrete is around the dowel or tie bars, perform additional coring as ordered to determine the limits of unacceptable work. The Engineer determines the limits for removal and replacement.

40-1.01D(8)(c)(iii) Placement Smoothness

Not Used

40-1.01D(8)(c)(iv) Thickness

Drill cores for the Department's acceptance testing for thickness under section 40-1.03M. Drill the cores in the primary area, which is the area placed in 1 day for each thickness. Core at the locations determined by the Engineer and in the Engineer's presence.

If grinding is required, do not core until grinding has been completed.

The core specimen diameter must be 4 inches. To identify the limits of concrete pavement deficient in thickness by more than 0.05 foot, you may divide primary areas into secondary areas. The Engineer measures cores under California Test 531 to the nearest 0.01 foot.

You may request additional thickness measurements to determine the average thickness variation. The Engineer determines the locations with random sampling methods.

If each thickness measurement in a primary area is deficient by less than 0.05 foot, the Engineer calculates the average thickness deficiency in that primary area. The Engineer uses 0.02 foot for a thickness difference more than 0.02 foot over the specified thickness.

The thickness of the concrete pavement must not be deficient by more than 0.05 foot. For each thickness measurement in a primary area deficient by more than 0.05 foot, the Engineer determines a secondary area where the thickness deficiency is more than 0.05 foot. The Engineer determines this secondary area by measuring the thickness of each concrete pavement slab adjacent to the measurement found to be more than 0.05 foot deficient. The Engineer continues to measure the thickness until an area that is bound by slabs with a thickness deficient by 0.05 foot or less is determined.

Slabs without bar reinforcement are defined by the areas bound by longitudinal and transverse joints and concrete pavement edges. Slabs with bar reinforcement are defined by the areas bound by longitudinal joints and concrete pavement edges and 15-foot lengths. The thickness measurements for a secondary area in a slab determine that entire slab thickness.

The Engineer measures the remaining primary area thickness after removing the secondary areas from consideration for determining the average thickness deficiency.

The minimum thickness is not reduced for specifications that may affect concrete pavement thickness such as allowable tolerances for subgrade construction.

The Engineer determines the areas of noncompliant pavement, thickness deficiencies, and limits where removal is required.

Pavement with an average thickness deficiency less than 0.01 foot is acceptable. If the thickness deficiency is 0.01 foot or more and less than 0.05 foot, you may request authorization to leave the pavement in place and accept a payment adjustment. If the deficiency is more than 0.05 foot, you must remove and replace the pavement.

40-1.01D(8)(c)(v) – 40-1.01D(8)(c)(viii) Reserved

40-1.02 MATERIALS

40-1.02A General

Tack coat must comply with section 39.

40-1.02B Concrete

40-1.02B(1) General

Concrete placed for tapered edges after the pavement has been placed may be minor concrete.

40-1.02B(2) Cementitious Material

Concrete must contain from 505 pounds to 675 pounds of cementitious material per cubic yard. The specifications for reducing cementitious material content in section 90-1.02E(2) do not apply.

40-1.02B(3) Aggregate

The specifications for a reduction in the operating range and contract compliance for cleanness value and sand equivalent specified in section 90-1.02C(2) and section 90-1.02C(3) for aggregate do not apply.

For the combined aggregate gradation, the difference between the percent passing the 3/8-inch sieve and the percent passing the no. 8 sieve must not be less than 16 percent of the total aggregate.

40-1.02B(4) Air Entrainment

The specifications for air-entraining admixtures in the 2nd paragraph of section 90-1.02I(2)(a) do not apply.

The air content must be within ± 1.5 percent of the specified value. If no value is specified, the air content must be within ± 1.5 percent of the value used for your authorized mix design.

For a project in the low or south mountain climate region, add an air-entraining admixture to the concrete at the rate required to produce an air content of 4 percent in the freshly mixed concrete.

40-1.02B(5) – 40-1.02B(8) Reserved

40-1.02C Reinforcement, Bars, and Baskets

40-1.02C(1) General

Reserved

40-1.02C(2) Bar Reinforcement

Bar reinforcement must be deformed bars complying with section 52.

40-1.02C(3) Dowel Bars

For a project not shown to be in a high desert or any mountain climate region, dowel bars must be plain bars complying with section 52 and must be one of the following:

1. Epoxy-coated bars. Bars must comply with ASTM A615/A615M, Grade 40 or 60. The epoxy coating must comply with either section 52-2.02B or 52-2.03B.
2. Stainless-steel bars. Bars must be descaled, solid stainless-steel bars under ASTM A955/A955M, UNS Designation S31603 or S31803.

3. Low carbon, chromium-steel bars under ASTM A1035/A1035M.

Fabricate, sample, and handle epoxy-coated dowel bars under ASTM D3963/D3963M and section 52-2.03C except each sample must be 18 inches long.

40-1.02C(4) Tie Bars

Tie bars must be deformed bars.

Tie bars must be one of the following:

1. Epoxy-coated bar reinforcement. Bars must comply with section 52-2.02B or 52-2.03B except bars must comply with ASTM A706/A706M; ASTM A996/A996M; or ASTM A615/A615M, Grade 40 or 60.
2. Stainless-steel bars. Bars must be descaled, solid stainless-steel bars under ASTM A955/A955M, UNS Designation S31603 or S31803.
3. Low carbon, chromium-steel bars under ASTM A1035/A1035M.

Do not bend tie bars.

40-1.02C(5) Dowel and Tie Bar Baskets

For dowel and tie bar baskets, wire must comply with ASTM A1064/A1064M and be welded under ASTM A185/A185M, section 7.4. Assemblies must be either U-frame or A-frame shaped assemblies.

Wire intersections must be resistance welded.

For a project not shown to be in the high desert or any mountain climate region, baskets may be epoxy-coated. The epoxy coating must comply with section 52-2.02B or 52-2.03B.

For a project shown to be in the high desert or any mountain climate region, the wire for dowel bar and tie bar baskets must be one of the following:

1. Epoxy-coated wire complying with section 52-2.03B.
2. Stainless-steel wire. Wire must be descaled solid stainless-steel. Wire must comply with (1) the chemical requirements in ASTM A276/A276M, UNS Designation S31603 or S31803, and (2) the tension requirements in ASTM A1022/A1022M.

Handle epoxy-coated tie bar and dowel bar baskets under ASTM D3963/D3963M and either section 52-2.02 or 52-2.03.

Fasteners must be driven fasteners as specified in ASTM F1667. Fasteners on LCB or asphalt concrete must have a minimum shank diameter of 3/16 inch and a minimum shank length of 2-1/2 inches. For ATPB or CTPB, the shank diameter must be at least 3/16 inch and the shank length must be at least 5 inches.

Fasteners, clips, and washers must have a minimum 0.2-mil-thick zinc coating applied by either electroplating or galvanizing.

40-1.02D Dowel bar Lubricant

Dowel bar lubricant must be curing compound no. 3 or paraffin based. Paraffin-based lubricant must be Bradley Coatings Group BCG 6116 or Valvoline Tectyl 506 or an authorized equal and must be factory-applied.

40-1.02E Joint Filler

Joint filler for an isolation joint must be a preformed, bituminous-type, expansion joint filler for concrete complying with ASTM D994.

40-1.02F Nonshrink Hydraulic-cement Grout

Nonshrink hydraulic-cement grout must comply with ASTM C1107/C1107M. You may use clean, uniform, rounded aggregate filler to extend the grout. Aggregate filler must not exceed 60 percent of the grout mass or the maximum described in the manufacturer's instructions, whichever is less. The moisture content of the aggregate filler must not exceed 0.5 percent when tested under California Test 223 or California Test 226. When tested under California Test 202, aggregate filler must comply with the gradation requirements shown in the following table:

Aggregate Filler Gradation

Sieve size	Percentage passing
1/2 – inch	100
3/8 – inch	85 – 100
No. 4	10 – 30
No. 8	0 – 10
No. 16	0 – 5

40-1.02G – 40-1.02N Reserved

40-1.03 CONSTRUCTION

40-1.03A General

Proportion aggregate and bulk cementitious material by weight using an authorized automatic proportioning device.

For widenings and lane reconstruction, construct only the portion of the pavement where the work will be completed during the same closure. If you do not complete the construction during the same closure, construct temporary roadway pavement under section 41-1.02E.

40-1.03B Joints

40-1.03B(1) General

Do not bend tie bars or reinforcement in existing concrete pavement joints.

For contraction joints and isolation joints, saw cut a groove with a power-driven saw equipped with a diamond blade. After cutting, immediately wash slurry from the joint with water below 100 psi gauge pressure.

Keep joints free from foreign material, including soil, gravel, concrete, and asphalt. To keep foreign material out of the joint, you may use filler material. The filler material must not react adversely with the concrete or damage the pavement. After sawing and washing, install the material such that it keeps moisture in the adjacent concrete during the 72 hours after paving. If you install filler material, the specifications for spraying the sawed joint with additional curing compound in section 40-1.03I do not apply. If you use absorptive filler material, moisten the filler immediately before or after installation.

40-1.03B(2) Construction Joints

Construction joints must be vertical.

Before placing fresh concrete against hardened concrete, existing concrete pavement, or structures, apply curing compound no. 1 or 2 to the vertical surface and allow it to dry.

At joints between concrete pavement and asphalt concrete pavement, apply a tack coat between the two pavements.

Use a metal or wooden bulkhead to form transverse construction joints. If dowel bars are described, the bulkhead must allow dowel bar installation.

40-1.03B(3) Contraction Joints

Saw contraction joints before cracking occurs and after the concrete is hard enough to saw without spalling, raveling, or tearing.

Except for longitudinal joints parallel to a curving centerline, saw the contraction joints such that they are no more than 0.1 foot from either side of a 12-foot straight line.

Cut transverse contraction joints within 0.5 foot of the spacing described. Adjust spacing if needed such that slabs are at least 10 feet long.

For widenings, do not match transverse contraction joints with existing joint spacing or skew unless described.

Cut transverse contraction joints straight across the full width of the concrete pavement between isolation joints and edges of pavement. In areas of converging and diverging pavements, space transverse contraction joints such that the joint is continuous across the maximum pavement width. Longitudinal contraction joints must be parallel with the concrete pavement centerline except where lanes converge or diverge.

40-1.03B(4) Isolation Joints

Before placing concrete at isolation joints, saw cut the existing concrete face to make a clean, flat, vertical surface and secure the joint filler. Make the saw cut the same depth as the depth of the new pavement.

40-1.03C Bar Reinforcement

Place bar reinforcement under section 52.

Bar reinforcement must be more than 1/2 inch below the saw cut depth at concrete pavement joints.

40-1.03D Dowel Bar Placement

Dowel bar placement must comply with the tolerances shown in the following table:

Dowel Bar Placement	
Dimension	Tolerance
Horizontal offset (inch)	± 1
Longitudinal translation (inch)	± 2
Horizontal skew (max, inch)	5/8
Vertical skew (max, inch)	5/8
Vertical depth	<p>The minimum distance measured from the concrete pavement surface to any point along the top of the dowel bar must be:</p> <p style="text-align: center;">DB + 1/2 inch</p> <p>where:</p> <p style="text-align: center;">DB = 1/3 of the pavement thickness or the saw cut depth in inches, whichever is greater</p> <p>The maximum distance below the depth shown must be 5/8 inch.</p>

NOTE: Tolerances are measured relative to the completed joint.

If you are using curing compound as a lubricant, apply the curing compound to the dowels:

1. In 2 separate applications. Apply the last application no more than 8 hours before placing the dowels.
2. Such that each dowel is completely lubricated before placement.
3. At a rate of 1 gallon per 150 square feet.

Install dowel bars using one of the following methods:

1. Drill and bond the bars under section 41-10.
2. Mechanically insert the bars. Eliminate evidence of the insertion by reworking the concrete over the dowels.
3. Use dowel bar baskets to hold the dowels at the specified depth and alignment before concrete placement. Anchor the baskets with at least 1 fastener per foot of basket section and at least 200 feet in advance of the pavement placement activity. You may request not to perform advance anchoring due to construction limitations or restricted access. After anchoring the baskets and before placing the concrete, cut and remove the temporary spacer wires and demonstrate the dowel bars do not move from their specified depth and alignment during concrete placement.

If installation of dowel bars is noncompliant, stop paving, demonstrate your correction, and obtain verbal authorization.

40-1.03E Tie Bar Placement

Tie bar placement must comply with the tolerances shown in the following table:

Tie Bar Placement

Dimension	Tolerance
Horizontal and vertical skew (max, inch)	5 1/4
Longitudinal translation (inch)	±2
Horizontal offset (embedment, inch)	±2
Vertical depth	1. At least 1/2 inch below the bottom of the saw cut 2. At least 2 inches from any point along the bar to the pavement surface or bottom

NOTE: Tolerances are measured relative to the completed joint.

Install tie bars at longitudinal joints using one of the following methods:

1. Drill and bond the bars under section 41-10.
2. Mechanically insert the bars into plastic slip formed concrete before finishing. Ensure there is full contact between the inserted bar and the concrete. Eliminate evidence of the insertion by reworking the concrete over the tie bars.
3. Use threaded couplers to splice the tie bars. The couplers must be fabricated from deformed bar reinforcement and free of external welding or machining.
4. Use tie bar baskets to hold the tie bars at the specified depth and alignment before concrete placement. Use fasteners to anchor tie bar baskets. Anchor the baskets at least 200 feet in advance of the pavement placement activity. You may request not to perform advanced anchoring due to construction limitations or restricted access. After anchoring the baskets and before placing the concrete, demonstrate the tie bars do not move from their specified depth and alignment during concrete placement.

If installation of tie bars is noncompliant, stop paving, demonstrate your correction, and obtain verbal authorization.

40-1.03F Placing Concrete

40-1.03F(1) General

Immediately before placing concrete, the surface to receive the concrete must be:

1. Within the compaction and elevation tolerances
2. Free of loose and extraneous material
3. Uniformly moist but free of standing or flowing water

Place concrete pavement with stationary side forms or slip form paving equipment.

Place consecutive concrete loads within 30 minutes of each other. Construct a transverse construction joint if the concrete placement is interrupted by more than 30 minutes. The transverse construction joint must be at the same longitudinal location as the contraction joint in

the adjacent lane location, or you must remove the concrete pavement to the preceding transverse joint.

Place the concrete pavement in full-lane widths separated by construction joints or monolithically with contraction joints.

Do not retemper concrete.

If the surface width is constructed as shown, you may construct the pavement sides on a batter not flatter than 6:1 (vertical:horizontal).

40-1.03F(2) Paving Adjacent to Existing Concrete Pavement

Wherever pavement is placed adjacent to existing concrete pavement:

1. Grind the adjacent pavement before placing the new pavement.
2. Use paving equipment with padded crawler tracks or rubber-tired wheels with enough offset to prevent damage.
3. Match the pavement grade with the elevation of the existing concrete pavement after grinding.

40-1.03F(3) Concrete Pavement Transition Panel

For concrete pavement placed in a transition panel, texture the surface with a drag strip of burlap, broom, or spring steel tine device that produces scoring in the finished surface. Scoring must be either parallel or transverse to the centerline. Texture at the time that produces the coarsest texture.

40-1.03F(4) Concrete Pavement Transition Panel

Stationary side forms must be straight and without defects, including warps, bends, and indentations. Side forms must be metal except at end closures and transverse construction joints where other materials may be used.

You may build up side forms by attaching a section to the top or bottom. If they are attached to the top of metal forms, the attached section must be metal.

The side form base width must be at least 80 percent of the shown concrete pavement thickness.

Side forms, including interlocking connections with adjoining forms, must be rigid enough to prevent springing from (1) subgrading and paving equipment and (2) concrete pressure.

Construct the subgrade to the final grade before placing the side forms. The forms must bear fully on the foundation throughout their length and base width. Place the forms to the grade and alignment of the finished concrete pavement edge. Support the forms during concrete placement, compaction, and finishing.

After completing the subgrade and immediately before placing the concrete, true up the side forms and set to the line and grade for a distance that avoids delays due to form adjustment.

Clean and oil the forms before each use.

Side forms must remain in place for at least 1 day after placing the concrete and until the pavement edge no longer requires protection from the forms.

Spread, screed, shape, and consolidate concrete with 1 or more machines. The machines must uniformly distribute and consolidate the concrete. The machines must operate to place the concrete to the shown cross section with minimal hand work.

Consolidate the concrete without segregation. If you use concrete vibrators:

1. Vibration rate must be at least 3,500 cycles per minute for surface vibrators and 5,000 cycles per minute for internal vibrators. Use a calibrated device to measure the frequency of vibration.
2. Amplitude of vibration must cause perceptible concrete surface movement at least 1 foot from the vibrating element.
3. Vibrators must not rest on side forms or new concrete pavement.
4. Power to vibrators must automatically cease if forward or backward motion of the paving machine is stopped.
5. High-frequency internal vibrators must be used within 15 minutes of depositing concrete on the subgrade to uniformly consolidate the concrete across the paving width, including the area adjacent to the forms.
6. Mass of concrete must not be shifted with the vibrators.

40-1.03F(5) Slip form Construction

If you use slip form construction, spread, screed, shape, and consolidate the concrete to the shown cross section with slip form machines and minimal hand work. Slip form paving machines must be equipped with traveling side forms and must not segregate the concrete.

Do not deviate from the pavement alignment by more than 0.1 foot.

Slip form paving machines must use high-frequency internal vibrators to consolidate concrete. You may mount the vibrators with their axes parallel or normal to the pavement alignment. If vibrators are mounted with their axes parallel to the pavement alignment, space the vibrators no more than 2.5 feet center-to-center. If vibrators are mounted with their axes normal to the pavement alignment, space vibrators with a maximum 0.5-foot lateral clearance between individual vibrators.

Each vibrator must have a vibration rate from 5,000 to 8,000 cycles per minute. The amplitude of vibration must cause perceptible concrete surface movement at least 1 foot from the vibrating element. Use a calibrated tachometer to measure the frequency of vibration.

40-1.03G Edge Treatment

If required, regrade the area for the preparation of tapered edge treatment.

Sections 40-1.03H(2) and 40-1.03H(3) do not apply to tapered edges.

For tapered edges placed after the concrete pavement is complete, install connecting bar reinforcement under section 52.

You may construct the tapered edges by saw cutting or grinding.

The angle of the tapered edge slope must not deviate by more than ± 5 degrees from the angle shown measured from the plane of the adjacent finished pavement surface.

40-1.03H Finishing

40-1.03H(1) General

Reserved

40-1.03H(2) Preliminary Finishing

40-1.03H(2)(a) General

Preliminary finishing must produce a smooth and true-to-grade finish.

Do not apply water to the pavement surface before float finishing.

40-1.03H(2)(b) Stationary Side Form Finishing

If you use stationary side-form construction, apply a preliminary finish to the pavement by machine-float or hand method.

For the machine-float method:

1. Use self-propelled machine floats.
2. Determine the number of machine floats required to perform the work at a rate equal to the pavement placement. If the time from paving to machine-float finishing exceeds 30 minutes, stop pavement placement. When machine floats are in proper position, you may resume pavement placement.
3. Run machine floats on side forms or adjacent pavement lanes. If running on adjacent pavement, protect the adjacent pavement surface under section 40-1.03J. Floats must be hardwood, steel, or steel-shod wood and equipped with devices that adjust the underside to a true flat surface.

For the hand method, finish the pavement smooth and true to grade with manually operated floats or powered finishing machines.

40-1.03H(2)(c) Slip form Finishing

For slip form construction, the slip form paver must give the pavement a preliminary finish. You may supplement the slip form paver with machine floats.

Before the pavement hardens, correct the slump of the pavement edge in excess of 0.02 foot except for the edge rounding.

40-1.03H(3) Final Finishing

After completing preliminary finishing, round the edges of the initial paving widths to a 0.04-foot radius. Round the transverse and longitudinal construction joints to a 0.02-foot radius.

Texture the pavement before curing it. Perform the initial texturing with a burlap drag or broom device that produces striations parallel to the centerline.

Initial and final texturing must produce a coefficient of friction of at least 0.30.

40-1.03I Curing

Cure the concrete pavement exposed area using the waterproof membrane method or curing compound method with curing compound no. 1 or 2. If you remove the side forms within 72 hours of the start of curing, also cure the pavement edges.

Apply curing compound with mechanical sprayers. Reapply curing compound to saw cuts and disturbed areas.

40-1.03J Protecting Concrete Pavement

Maintain the concrete pavement surface temperature at not less than 40 degrees F for the initial 72 hours.

Protect the surface from activities that cause damage and reduce the texture or coefficient of friction. Prevent soil, gravel, petroleum products, concrete, or asphalt mixes from being deposited on the pavement surface.

Construct crossings for traffic convenience. You may use RSC for crossings if authorized. Do not open crossings until the Department determines that the pavement modulus of rupture is at least 550 psi under California Test 523 or California Test 524.

Do not allow traffic on concrete pavement or use equipment on it (1) for 10 days after paving and (2) before the concrete has attained a modulus of rupture of 550 psi based on the Department's testing unless:

1. Equipment is for sawing contraction joints
2. One side of the paving equipment tracks may be on the concrete pavement after a modulus of rupture of 350 psi has been attained if:
 - 2.1 Unit pressure exerted on the pavement by the paver does not exceed 20 psi
 - 2.2 You change the paving equipment tracks to prevent damage, or the paving equipment tracks travel on protective material, such as planks
 - 2.3 No part of the track is closer than 1 foot to the concrete pavement edge
 - 2.4 Authorized

If visible cracking or other damage occurs to the concrete pavement, stop operating the paving equipment on the pavement and repair the damage.

40-1.03K Early Use of Concrete Pavement

To request early use of concrete pavement:

1. Furnish molds and machines for the modulus of rupture testing
2. Sample the concrete
3. Fabricate beam specimens
4. Test the beams for the modulus of rupture under California Test 523

The pavement must have a modulus of rupture of at least 350 psi. Protect the pavement under section 40-1.03J.

40-1.03L Reserved

40-1.03M Drilling Cores

Drill concrete pavement cores under ASTM C42/C42M. Use diamond-impregnated drill bits.

Clean, dry, and fill core holes with nonshrink, hydraulic-cement grout or concrete. Coat hole walls with epoxy adhesive for bonding new concrete to old concrete. Finish the fill to match the adjacent surface elevation and texture.

40-1.03N Correcting Noncompliant Pavement Work

40-1.03N(1) General

Correct noncompliant pavement as follows:

1. Replace the pavement
2. Repair spalls, ravels, and working cracks
3. Correct the smoothness and coefficient of friction
4. Treat partial-depth cracks
5. Replace damaged joint seals under section 41-5

In addition to removing pavement for other noncompliance, remove and replace JPCP slabs that have either of the following:

1. 1 or more full-depth cracks
2. Combined raveled areas more than 5 percent of the total slab area or a single raveled area more than 4 sq ft

Replace JPCP for 3 feet on both sides of a joint with a rejected dowel bar.

40-1.03N(2) Spall and Ravel Repair

Repair spalled or raveled areas that are:

1. Deeper than 0.05 foot
2. Wider than 0.10 foot
3. Longer than 0.30 foot

Repair spalls or ravels under section 41-4 and complete the repairs before opening a lane or lanes to traffic.

40-1.03N(3) Crack Repair

Treat partial-depth cracks in JPCP under section 41-3.

If the joints are sealed, repair working cracks by routing and sealing. Use a router mounted on wheels with a vertical shaft and a routing spindle that casters as it moves along the crack. Form a reservoir 3/4 inch deep by 3/8 inch wide in the crack. The equipment must not cause raveling or spalling.

Treat the contraction joint adjacent to the working crack by either of the following methods:

1. Applying epoxy resin under ASTM C881/C881M, Type IV, Grade 2
2. Pressure injecting epoxy resin under ASTM C881/C881M, Type IV, Grade 1

40-1.030 Smoothness and Friction Correction

Correct pavement that is noncompliant for:

1. Smoothness by grinding under section 42-3
2. Coefficient of friction by grooving or grinding under section 42

Do not start corrective work until:

1. Pavement has cured 10 days
2. Pavement has at least a 550 psi modulus of rupture
3. Corrective method is authorized

Correct the entire lane width. Start and end grinding at lines perpendicular to the roadway centerline. The corrected area must have a uniform texture and appearance.

If corrections are made within areas where testing with an inertial profiler is required, retest the entire lane length with an inertial profiler.

If corrections are made within areas where testing with a 12-foot straightedge is required, retest the corrected area with a straightedge.

Allow 25 days for the Department's coefficient of friction retesting.

40-1.03P – 40-1.03U Reserved

40-1.04 PAYMENT

Not Used

40-2 CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

40-2.01A Summary

Section 40-2 includes specifications for constructing continuously reinforced concrete pavement.

Constructing continuously reinforced concrete pavement includes terminal joints, expansion joints, wide flange beam terminals and pavement anchors.

40-2.01B Definitions

Reserved

40-2.01C Submittals

For field qualification, submit the test data for the coefficient of thermal expansion of the concrete.

If you request to use plastic chairs to support the transverse bars, submit a sample of the plastic chair, including:

1. Manufacturer's instructions for the applicable use and load capacity
2. Chair spacing
3. Your calculation for the load on a chair for the area of bar reinforcement it supports

During production, submit the test data for the coefficient of thermal expansion as an informational submittal.

40-2.01D Quality Assurance

For field qualification, test the coefficient of thermal expansion of the concrete under AASHTO T 336. The coefficient of thermal expansion must not exceed 6.0 microstrain/degree F.

During the evaluation of the test strip, the Engineer visually checks the reinforcement and dowel and tie bar placement.

During production, test the coefficient of thermal expansion of the concrete at a frequency of 1 test for each 5,000 cu yd of paving but not less than 1 test for a project with less than 5,000 cu yd of concrete.

40-2.02 MATERIALS

40-2.02A General

Class 1 permeable material, filter fabric, and slotted plastic-pipe cross drain for pavement anchors must comply with section 68.

40-2.02B Transverse Bar Assembly

Transverse bar assemblies may be used to support longitudinal bars instead of transverse bars and other support devices.

40-2.02C Wide Flange Beam

Wide flange beams and studs must be either rolled structural steel shapes complying with ASTM A36/A36M or structural steel complying with ASTM A572/A572M.

Polyethylene foam board for wide flange beams must be commercial quality.

Inorganic zinc primer must comply with AASHTO M 300, Type I or II.

40-2.02D Joints

Joint seals shall be as shown and specified on the plans.

40-2.03 CONSTRUCTION

40-2.03A General

Reserved

40-2.03B Bar Reinforcement

Place bar reinforcement under section 52-1.03D and as shown on the plans.

For a transverse bar in a curve with a radius under 2,500 feet, place the reinforcement in a single continuous straight line across the lanes and aligned with the radius point as shown.

Lap splice bar reinforcement under section 52-6. For low carbon, chromium-steel bar reinforcement, the length of lap splice must be at least 30 inches.

40-2.03C Construction Joints

Transverse construction joints must be perpendicular to the lane line. Construct the joints to allow for lap splices of the longitudinal bar.

Clean joint surfaces before placing concrete against the surfaces. Remove laitance, curing compound, and other foreign materials.

40-2.03D Wide-Flange Beams

All welding must comply with AWS D1.1. Weld stud ends with an electric arc welder completely fusing the studs to the wide flange beam.

Replace studs dislodged in shipping or that can be dislodged with a hammer.

Clean surface of wide flange beam to receive prime coat under section 59-2.01C(3)(b)(ii). The thickness of the prime coat must be 6 mils.

40-2.03E Correcting Noncompliant Pavement Work

40-2.03E(1) General

The specifications for repairing cracks in section 40-1.03N do not apply to CRCP. Do not apply high-molecular-weight methacrylate to cracks in CRCP.

CRCP that develops raveling areas of 6 by 6 inches or greater requires partial depth repair. CRCP that develops one or more full-depth transverse cracks with faulting greater than 0.25 inch or one or more full-depth longitudinal cracks with faulting greater than 0.50 inch requires full-depth repair.

40-2.03E(2) Partial Depth Repair

Partial depth repair must comply with section 41-4 except:

1. Determine a rectangular boundary which extends 6 inches beyond the damaged area. The depth of the saw cut must be between 2 inches from the surface to 1/2 inch above the longitudinal bars.
2. Provide additional reinforcement if each length of the repair boundaries is equal to or greater than 3 feet.

40-2.03E(3) Full-Depth Repair

40-2.03E(3)(a) General

Remove the full-depth of CRCP except for the portion of reinforcement to remain in place. Provide continuity of the reinforcement. For low carbon, chromium-steel bar reinforcement, the length of lap splice must be at least 30 inches. Splicing must comply with section 52-6. Do not damage the base, concrete, and reinforcement to remain in place. Place concrete in the area where you removed CRCP.

40-2.03E(3)(b) Transverse Cracks

Make initial full-depth transverse saw cuts normal to the lane line a distance of 3 feet on each side of the transverse crack.

40-2.03E(3)(c) Longitudinal Cracks

Remove the cracked area normal to the lane line for the full width of the lane a distance of 1 foot beyond each end of the crack. You may propose alternate limits with your repair plan.

40-2.03F Reserved

40-2.04 PAYMENT

Reserved

40-3 RESERVED

40-4 JOINTED PLAIN CONCRETE PAVEMENT

40-4.01 GENERAL

40-4.01A Summary

Section 40-4 includes specifications for constructing jointed plain concrete pavement.

40-4.01B Definitions

Reserved

40-4.01C Submittals

At least 24 hours before each paving shift, submit the following information as an informational submittals:

1. Early age stress and strength predictions
2. Schedule of sawing and curing activities
3. Contingency plan if cracking occurs

Submit the test data for the coefficient of thermal expansion of the concrete as an informational submittal.

40-4.01D Quality Assurance

The QC plan must include a procedure for identifying the locations of transverse contraction joints relative to the dowel bars longitudinal centers and a procedure for consolidating concrete around the dowel bars.

Develop and implement a system for predicting stresses and strength during the initial 72 hours after paving. The system must include:

1. Subscription to a weather service to obtain forecasts for wind speed, ambient temperatures, humidity, and cloud cover
2. Portable weather station with an anemometer, temperature, and humidity sensors to be located at the paving site
3. Early-age concrete pavement stress and strength prediction plan
4. Methods for analyzing, monitoring, updating, and reporting predictions

Test for coefficient of thermal expansion of the concrete under AASHTO T 336. Test at field qualification and at a frequency of 1 test for each 5,000 cu yd of paving but not less than 1 test for a project with less than 5,000 cu yd of concrete.

40-4.02 MATERIALS

Not Used

40-4.03 CONSTRUCTION

40-4.03A General

Transverse contraction joints on a curve must be on a single straight line through the radius point of the curve. If transverse joints do not align in a curve, drill a full-depth 2-inch-diameter hole under

ASTM C42/C42M where the joint meets the adjacent slab. Fill the hole with joint filler. If joints are not sealed, do not allow joint filler to penetrate the joint.

40-4.03B Correcting Noncompliant Pavement Work

To replace the JPCP, saw cut and remove it full depth. Saw cut full slabs at the longitudinal and transverse joints. Saw cut partial slabs at the joints and at locations determined by the Engineer. The saw cut must be vertical.

After lifting the slab, paint the cut ends of dowels and tie bars.

Construct transverse and longitudinal construction joints between the new slab and the existing concrete. If slabs are constrained at both longitudinal edges by the existing pavement, use dowel bars instead of tie bars. For longitudinal joints, offset dowel bar holes from original tie bars by 3 inches. For transverse joints, offset dowel bar holes from the original dowel bar by 3 inches.

Drill and bond bars to the existing concrete under section 41-10. Clean loose material and contaminants from the faces of joints and the underlying base. Coat the faces with a double application of pigmented curing compound under section 28-2.03F. For partial slab replacements, place preformed sponge-rubber expansion joint filler at new transverse joints under ASTM D1752. Place concrete in the area where you removed JPCP.

40-4.03C – 40-4.03G Reserved

40-4.04 PAYMENT

Not Used

40-3 – 40-15 RESERVED

END OF ITEM CAL-40

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ITEM CAL-90 – CALTRANS MINOR CONCRETE

90-2 MINOR CONCRETE

90-2.01 GENERAL

90-2.01A SUMMARY

Section 90-2 includes specifications for furnishing and protecting minor concrete.

90-2.01B DEFINITIONS

Reserved

90-2.01C SUBMITTALS

If required by the following table, submit compressive strength test results with the mix design that verify the minimum required compressive strength:

SCM	Test submittal required
Fly ash used alone	If portland cement content < 350 lb/cu yd
GGBFS used alone	If portland cement content < 250 lb/cu yd
Natural pozzolan used alone	If portland cement content < 350 lb/cu yd
More than 1 SCM	Always

NOTE: Compressive strength tests must be performed by an ACI-certified technician.

Submit the concrete mix design before using the concrete in the work and before changing the mix proportions.

Submit a proposed combined aggregate gradation. After authorization of the gradation, the aggregate furnished for minor concrete must comply with that gradation.

If requested, submit periodic test reports of the aggregate gradation furnished.

The Engineer may waive the specifications for gradation if the Engineer determines that furnishing a gradation is not necessary for the type or quantity of concrete work to be constructed.

Before placing minor concrete from a source not previously used on the Contract, submit a certificate of compliance stating that the minor concrete to be furnished complies with the Contract requirements, including the specified minimum cementitious material content.

Submit a weighmaster certificate as an informational submittal with each load of ready-mixed concrete at the concrete discharge location. The weighmaster certificate must show the date and time the load left the batching plant and, if hauled in a truck mixer or agitator, the time the mixing cycle started.

90-2.01D QUALITY ASSURANCE

Section 90-1.01D(5) and the specifications for uniformity in section 90-1.02A do not apply to minor concrete.

The Engineer may perform tests and inspect the facilities, materials, and methods for producing the minor concrete to ensure that it is of suitable quality for use in the work.

The Engineer verifies compliance with the specified cementitious material content by testing under California Test 518 for cement content. For testing purposes, SCM is considered to be cement. Adjust the batch proportions as necessary to produce concrete having the specified cementitious material content.

90-2.02 MATERIALS

90-2.02A GENERAL

Reserved

90-2.02B CEMENTITIOUS MATERIAL

Minor concrete must contain at least **550 pounds** of cementitious material per cubic yard.

You may use rice hull ash as an SCM. Rice hull ash must comply with AASHTO M 321 and the requirements for the quality characteristics shown in the following tables:

Chemical quality characteristic	Requirement (percent)
Silicon dioxide (SiO ₂) ^a (min)	90
Loss on ignition (max)	5.0
Total alkalis as Na ₂ O equivalent (max)	3.0

^aSiO₂ in crystalline form must not exceed 1.0 percent.

Physical quality characteristic	Requirement
Particle size distribution	
Less than 45 microns (min, %)	95
Less than 10 microns (min, %)	50
Strength activity index with portland cement ^a	
7 days (min, % of control)	95
28 days (min, % of control)	110

Expansion at 16 days when testing project materials under ASTM C1567 ^b (max, %)	0.10
Surface area when testing by nitrogen adsorption under ASTM D5604 (min, m ² /g)	40.0

^aWhen tested under AASHTO M 307 for strength activity testing of silica fume.

^bIn the test mix, Type II or V portland cement must be replaced with at least 12 percent rice hull ash by weight.

For the purpose of calculating the equations for the cementitious material specifications, consider rice hull ash to be represented by the variable UF.

90-2.02C AGGREGATE

Sections 90-1.01C(2) and 90-1.02C do not apply to minor concrete.

The aggregate must be clean and free from deleterious coatings, clay balls, roots, and other extraneous material.

The maximum aggregate size must not be larger than 1-1/2 inches or smaller than 3/4 inch.

You may use crushed concrete and reclaimed aggregate if they comply with the specifications for aggregate.

90-2.02D WATER

Section 90-1.02D does not apply to minor concrete.

Water used for washing, mixing, and curing must be free from oil, salts, and other impurities that would discolor or etch the surface or have an adverse affect on the concrete quality.

90-2.02E PRODUCTION

Sections 90-1.02F, 90-1.02G(1), 90-1.02G(2), 90-1.02G(3), and 90-1.02G(4) do not apply to minor concrete.

Store, proportion, mix, transport, and discharge the cementitious material, water, aggregate, and admixtures in compliance with recognized standards of good practice that result in thoroughly and uniformly mixed concrete suitable for the intended use. Recognized standards of good practice are outlined in various industry publications, such as those issued by ACI, AASHTO, or the Department.

Use a quantity of water that produces concrete with a consistency that complies with section 90-1.02G(6). Do not add water during hauling or after arrival at the delivery point unless allowed by the Engineer.

Discharge ready-mixed concrete from the transport vehicle while the concrete is still plastic and before stiffening occurs. Take whatever action is necessary to eliminate quick stiffening, except do not add water.

Conditions contributing to quick stiffening are:

1. Elapsed time of 1.5 hours in agitating hauling equipment or 1 hour in nonagitating hauling equipment
2. More than 250 revolutions of the drum or blades after introduction of the cementitious material to the aggregates
3. Concrete temperature over 90 degrees F

The mixing time in a stationary mixer must be at least 50 seconds and no more than 5 minutes.

The minimum required revolutions at mixing speed for transit-mixed concrete must be at least that recommended by the mixer manufacturer and must be increased as needed to produce thoroughly and uniformly mixed concrete.

If you add a high-range water-reducing admixture to the concrete at the job site, the total revolutions must not exceed 300.

90-2.03 CONSTRUCTION

Maintain a concrete temperature of at least 40 degrees F for 72 hours after placing.

90-2.04 PAYMENT

Not Used



Orange County Fire Authority
AGENDA STAFF REPORT

Board of Directors Meeting
February 22, 2024

Agenda Item No. 3A
Discussion Calendar

**Prefunding of CIP Projects Policy -
B&FC Review Process and Recommendation for Board Consideration**

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Summary

This agenda item is submitted to the Board of Directors to present the Budget and Finance Committee (B&FC) review process and recommendations for the prefunding of the Capital Improvement Program (CIP) Projects.

Prior Board/Committee Action(s)

At the February 23, 2023, meeting of the Board of Directors, the Board directed staff to work with the B&FC to consider prefunding of capital improvement projects, with a recommendation to direct staff to return the item to the Board of Directors for future discussion.

At the July 12, 2023, meeting of the B&FC, the Committee approved the review process that was utilized to educate and inform our policymakers regarding OCFA's current CIP policies and funding mechanism, best practices, and to develop options and recommendations for the prefunding of future CIP Projects.

At the September 13, 2023, meeting of the B&FC, the Committee received and filed an overview of OCFA's CIP.

At the October 17, 2023, meeting of the B&FC, the Committee received and filed the overview of OCFA Operating and CIP Funding Mechanism.

At the November 8, 2023, meeting of the B&FC, the Committee received and filed the overview of OCFA Review of CIP Sample Policies and Best Practices.

At the January 10, 2024, meeting of the B&FC, the Committee received and filed the overview of OCFA Prefunding CIP Options by a vote of 8-0 (Director Gabbard absent). Furthermore, the Committee also provided comments on the options to be considered in the drafting of policy recommendations for its February Committee meeting. The Committee's comments concluded with their desire to prefund the replacement of helicopters with the use of available funds once the snowball plan has met its funding target goals for pension (85%) and retiree medical (100%) liabilities.

At the February 14, 2024, meeting of the B&FC, the Committee reviewed the proposed agenda item and recommended staff place the proposed draft policy language changes to the Fiscal Stability Budget Policy on the Board of Directors agenda for consideration at its February 22, 2024, meeting by a vote of 6-0 (Director Nguyen absent).

RECOMMENDED ACTION(S)

Review and approve the proposed draft policy language changes to the Financial Stability Budget Policy as recommended by the B&FC, to formalize the prefunding of CIP regional assets, specifically for the future replacement of helicopters.

Impact to Cities/County

Not Applicable.

Fiscal Impact

Future budgets will transition funding to the Helicopter Replacement Prefunding fund once the Snowball funding targets for pension and retiree medical liabilities have been met (estimated to take place starting in FY27/28).

Background

During the January 18, 2023, Board of Directors Meeting, Director Tettemer requested that an item be agenized at the following meeting to seek interest from the Board for the development of a policy to prefund the CIP. At the February 23, 2023, Board of Directors Meeting, Director Tettemer introduced the item titled, “Establish a Policy to Prefund Capital Improvement Program Projects.” The Board provided the following comments and guidelines as part of their discussion. The policy should:

- Help smooth out Capital Budgets
- Help to avoid borrowing and minimize interest charges
- Guide long-term planning and not restrict future Boards
- Include specific CIP projects (not to include all CIP projects)
- Ensure Board flexibility in decision-making (memorializing the policy via the JPA may hurt the organization during economic downturns)
- Create a reserve for CIP Project funds

Following Board discussion, on motion by Director Tettemer and second by Director Shawver, and following a roll call vote, the OCFA Board approved 24-0 (Director Bourne absent) to direct staff to work with the B&FC to consider prefunding of capital improvement projects, with a recommendation to direct staff to return the item to the Board of Directors for future discussion.

Review Process: Prefunding of CIP Projects Policy

The OCFA’s B&FC was utilized to conduct the Review Process, with delivery of its findings and recommendations to the Board of Directors upon completion. To facilitate the review, staff developed the review process to educate and inform our policymakers regarding OCFA’s current CIP policies and funding mechanism, review sample policies and best practices, and to develop options and recommendations for Board consideration regarding the prefunding of future CIP Projects. The B&FC approved the review process at its July 12, 2023, meeting. The review process was sequenced in a manner to facilitate a thorough education followed by the review of policy options, and recommendations. The review process and work plan included:

1. *Overview of OCFA's Capital Improvement Program*

Staff presented an overview of OCFA's Capital Improvement Program including a review of the 5-year CIP as approved by the Board and a summary of formal policies that help guide the development of the CIP. The overview helped educate the Committee members by defining the various expenditure categories included in the CIP (i.e., small equipment purchases, equipment replacement, infrastructure improvements, and new construction), and review how projects are prioritized and funded.

2. *Review of OCFA Operating and CIP Funding Mechanism*

Staff presented an overview of the JPA Agreement funding provisions to educate the Committee on the differences between Structural Fire Fund (SFF) and Cash Contract City (CCC) funding structure. The presentation included a review of the Board approved 5-year Financial Forecast and review how the Operating budget provides funding to the CIP. Furthermore, staff provided a summary of current financial policies that provide the framework to ensure financial stability.

3. *Review of CIP Sample Policies and Best Practices*

The Committee reviewed the results of a CIP policy survey conducted on OCFA partner cities/County and other surrounding agencies (36 in total). Additionally, staff presented best practices gathered from government/finance professional organizations such as the Government Finance Officers Association (GFOA) and California Society of Municipal Financial Officers (CSMFO). The survey results and best practices guided the development of options to consider for the prefunding of the CIP.

4. *Prefunding CIP Options*

Building on the work completed during the prior review segments, staff provided options for the Committee to discuss and consider for the development of a CIP prefunding policy.

The B&FC discussed options and considered four options:

1. Prefunding all CIP projects
This option could be tailored to prefund all CIP projects for the upcoming two or three years vs. trying to prefund the entire 5-year CIP
2. Prefunding only large equipment/apparatus, building upgrades and facility constructions projects regardless of dollar value
3. Prefunding large scale capital purchases and construction based on a certain dollar threshold (e.g., greater than \$5M)
4. Consider prefunding only future helicopter purchases

The B&FC selected option four; consider prefunding only future helicopter purchases. The committee also recommended to prefund future helicopter purchases with available funds once the snowball plan met its funding targets for OCFA's pension & retiree medical liabilities.

5. *Development of Recommendations for Board Consideration*

Staff presented draft policy language changes to the Financial Stability Budget Policy based on the Committee's comments provided during its January B&FC meeting. The Committee reviewed the item and recommended that the draft policy changes be forwarded to the Board for their consideration at its February 22, 2024 meeting.

The above work-plan was completed within the timeline as approved by the B&FC.

Attachment

Draft Changes to the Financial Stability Budget Policy

FINANCIAL STABILITY BUDGET POLICY

1. PURPOSE

- 1.1. To guide OCFA budget actions toward maintaining long-term financial stability and to establish contingency fund levels and annual funding targets for the Authority's General Fund and Capital Improvement Program (CIP) Funds.
- 1.2. To establish CIP fund balances that accumulate and deplete in harmony with the needs and timing of capital projects identified in the five-year CIP.
- 1.3. To facilitate accelerated payment of OCFA's unfunded liabilities for improved fiscal health. As per the predefined goal of 85% pension liability and 100% Retiree Medical liability funded level.
- 1.4. To facilitate prefunding the future replacement of OCFA's helicopters for improved fiscal health, for reasons including but not limited to:
 - Stabilizing capital budgets
 - Avoiding borrowing and minimizing interest charges
 - Guiding long-term planning

2. ADOPTION AND REVIEW

- 2.1. This policy was originally adopted by the Board of Directors on May 23, 2002, and was implemented with the Fiscal Year 2002/03 Budget Update.
- 2.2. This policy shall be reviewed periodically for recommended revisions in order to maintain the policy in a manner that reflects the ongoing financial goals of the Authority.
- 2.3. Policy revisions shall be reviewed by the Budget and Finance Committee and approved by the Board of Directors.

3. POLICY

- 3.1. The Five-Year Financial Forecast shall be used as a budget tool that's updated annually in conjunction with the budget for projected revenues and expenditures. The

Five-Year Forecast will include all OCFA budgetary funds to provide a picture of the Authority's overall fiscal health.

3.1.1 The Five-Year Forecast will also be updated whenever a significant financial event occurs or is anticipated to occur mid-year in order to assess the severity of the impact.

3.1.2 The Five-Year Forecast shall also be evaluated before undertaking any significant financial commitment to ensure the Authority's fiscal health is maintained.

~~3.1.2~~3.1.3 It should be noted that data included in the first two years of the forecast is the most predictable and reliable.

~~3.1.3~~3.1.4 Data contained in the outer years of the forecast is less reliable due to uncertainties regarding items such as future property tax growth, benefit costs, and capital needs. Although less reliable, the information is a useful indicator of trends and the potential need for early corrective intervention.

3.2. The proposed operating budget (General Fund) submitted by Authority staff shall be a balanced budget.

3.3. The Authority shall also strive to achieve a projected operating budget that's balanced for all years included in the Five-Year Financial Forecast.

3.4. The Authority shall maintain a contingency reserve in the General Fund set at 10% of operating expenditures for unplanned emergencies.

3.4.1 The 10% contingency reserve will be calculated and established at budget adoption. Once established, it will remain fixed through the duration of the fiscal year.

~~3.4.1~~3.4.2 Operating expenditures exclude grant-funded expenditures, accelerated payments toward unfunded liabilities, expenditures approved as a one-time expenditure in the given fiscal year, and operating transfers out of the General Fund.

3.5. In the first fiscal year following the achievement of both 85% funding level of the pension liability and 100% funding level of the Retiree Medical liability, the Authority shall (1) create a new CIP fund called "Fund 134 - Helicopter Replacement Prefunding" and (2) on an annual basis going forward, budget an expenditure in Fund 121 and corresponding revenue in the new Fund 134 for the annual replacement value of OCFA's four helicopters. Calculate each helicopter's annual replacement value by

dividing the current replacement cost (e.g. \$29M per Firehawk purchased in 2023 growing at an annual inflation factor of 3% per year), by its estimated useful life. This will establish a reserve fund that can transfer accumulated funds to Fund 133 as needed to pay for Helicopter purchases.

~~3.5.3.6~~ Funds available for transfer out of the General Fund after funding annual expenses (net general fund revenue, or “surplus”) shall be allocated as follows:

3.6.1 Net General Fund, or surplus general fund revenue, shall be calculated for transfer each year as part of the March mid-year budget adjustments, except in the following circumstance:

3.6.1.1 If needed, operating transfers of surplus general fund revenue shall be made to the CIP fund(s) at the beginning of the fiscal year sufficient to prevent the CIP fund(s) from experiencing a negative fund balance during the fiscal year.

~~3.5.1.1.3.6.1.2.~~ The operating transfers of surplus general fund revenue made at the onset of the fiscal year shall be reconciled with the calculation outlined in ~~3.65.2~~ at the Mid-year Budget Adjustment.

~~3.5.23.6.2~~ In March of each year, after funding any incremental increase required to maintain the 10% General Fund contingency reserve, 50% of the remaining surplus shall be transferred to the CIP and 50% shall be allocated as accelerated payment of OCFA’s unfunded liabilities (first toward pension liability until achieving an 85% funding level, second toward Retiree Medical until reaching a 100% funding level), except in the following circumstances:

~~3.5.2.1.3.6.2.1.~~ If the 50% allocation to the CIP, when combined with CIP fund balance and other CIP revenues, is insufficient to fund that year’s CIP expenses, then a sufficient percentage of the surplus (up to 100%) may be transferred to the CIP to fund that year’s CIP expenses. Any remainder shall be allocated as an accelerated payment of OCFA’s unfunded liabilities.

~~3.5.2.2.3.6.2.2.~~ If the 50% allocation to the CIP, when combined with CIP fund balance and other CIP revenues, exceeds the cost of projects in OCFA’s five-year CIP (including projects identified as deferred) then the amount transferred to the CIP shall be reduced below 50% to only fund the incremental increase needed for funding of the five-year CIP. Any remainder shall be allocated as an accelerated payment of OCFA’s unfunded liabilities.

~~3.6.3.7.~~ The Authority shall review reserve fund levels annually for the CIP funds and establish annual funding targets as follows:

~~3.6.1~~3.7.1 CIP funds will include:

- Fund 12110 – General Fund CIP
- Fund 123 – Fire Stations and Facilities
- Fund 124 – Communications & Information Systems
- Fund 133 – Fire Apparatus
- Fund 134 – Helicopter Replacement Prefunding

3.7.2 The amount of revenue available for transfer from the General Fund to the CIP shall be allocated based on the existing reserve balance in each CIP fund and based on the future needs identified in the five-year CIP, and conformed with Section ~~3.65.2~~ above.

Priority #1: Each CIP fund shall be allocated sufficient funds to meet planned expenditures included in the upcoming fiscal year. Sufficient funds can be a combination of existing fund balance plus new revenues and operating transfers in from the General Fund.

Priority #2: After meeting the needs for the upcoming fiscal year in each CIP fund, any additional funding shall be allocated based on planned expenditures included in the second fiscal year of the five-year CIP. This process shall be repeated for future years to the extent that funding is available.

Ultimate Funding Target: Although this status may or may not be achieved, a fully funded five-year CIP would be our ultimate goal and would allow OCFA to rest assured that all projects identified within our planning horizon have funds earmarked for those projects.

~~3.7.3.8.~~ The Authority will analyze the feasibility of paying its annual retirement contributions to the Orange County Employees Retirement System (OCERS) early each year, to take advantage of the discount offered by OCERS.

~~3.7.1~~3.8.1 OCERS reviews and sets the early payment discount rate each year. The employer is given the full discount set by OCERS if payment is made in January, a full year in advance, and one-half the discount if payment is made six months in advance in July.