COASTSIDE FIRE PROTECTION DISTRICT

ADDENDUM NO. 10
Dated Friday, November 6, 2026

FIRE STATION #44 REPLACEMENT PROJECT

Notice is hereby given to prospective bidders that the Project documents for the subject project are modified as set forth in the following addendum. This addendum must be attached to, and form a part of, the bid submitted by each bidder.

The deadline to submit bids is 2:00 PM on Thursday, November 19, 2026.

THE FOLLOWING CHANGES AND CLARIFICATIONS ARE MADE:

1. **Section 01 3200 "Progress Schedules and Reports**.
   In Section 1.05 change "Milestone" to read "Scheduled Activity Start or Finish Date".

2. **Construction Management Software Platform**.
   The Contractor shall utilize Procore as the designated project management and document control platform for the duration of the project, at no additional cost to the Owner. The Contractor shall be responsible for the administration, monitoring, and management of all project-related documentation, including RFIs, submittals, meeting minutes, daily reports, progress photos, schedules, correspondence, and other relevant project records.

   The Contractor shall ensure that all documentation is properly uploaded, maintained, and kept current, and shall actively monitor and follow up on outstanding items to ensure timely reviews, responses, and coordination among project stakeholders. The use of Procore shall not relieve the Contractor of any contractual obligations or established communication and notification requirements.

BELOW ARE RESPONSES TO QUESTIONS RECEIVED FROM BIDDERS:

(See **attached** spreadsheet of questions and responses)

Attachments to this Addendum No. 10:

(all changes to the Plans and Specifications listed below arising from this addendum are clouded)

1. Revised Bid Form
2. Specification 07 22 19
3. Specification 07 41 13
4. Specification 21 05 17
5. Specification 21 05 53
6. Specification 21 13 13
7. Plan Sheet A8.1
8. Plan Sheet A8.3
9. Plan Sheet A9.1
10. Plan Sheet E0.2
11. Plan Sheet E2.2
12. Plan Sheet SS.003

If there are any questions regarding this addendum, please contact Sean Rose, Contract Project Manager for Coastside Fire District, at sean@srroseengineering.com.

DOCUMENT 00 4113

BID FORM

TO THE COASTSIDE FIRE PROTECTION DISTRICT

THIS BID IS SUBMITTED BY:

_____

(Firm/Company Name)

Re: **Fire Station #44 Replacement Project** at 501 Stetson Street, Moss Beach, CA 94038

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the **COASTSIDE FIRE PROTECTION DISTRICT** in the form included in the Contract Documents, Document 00 5200 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Contract Documents, Document 00 1113 (Notice Inviting Bids), and Document 00 2113 (Instructions to Bidders) including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 60 Days after the day of Bid opening, unless there is a bid protest, then 90 days after the day of bid opening.

3. In submitting this Bid, Bidder represents that Bidder has examined all of the Contract Documents, performed all necessary Pre-Bid investigations, attended the mandatory Pre-Bid Meeting, received the Pre-Bid Meeting minutes (if any), and received the following Addenda:

Addendum Number	**Addendum Date**	**Signature of Bidder**

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items, including lump sums, unit prices and alternates (if any), must be filled in completely. Bid items are described in Section 01 1100 (Summary of Work). Quote in figures only, unless words are specifically requested.

ITEM	DESCRIPTION	EST. QTY.	UNIT	TOTAL
1	Fire Station 44 Replacement	1	LS	
2	Allowance for Permit-Related Fees	1	LS	$50,000
			TOTAL	

Total Bid Price:

_____

(Indicate Bid Price in Words)

5. The undersigned acknowledges that the Apparent Low Bidder will be determined as provided in Documents 00 1113 (Notice to Bidders) and Document 00 2113 (Instruction to Bidders).

6. Subcontractors for work are listed on Document 00 4330 (Subcontractors List), submitted herewith.

7. The undersigned Bidder understands that Owner reserves the right to reject this Bid.

8. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in Paragraph 2 of this Document 00 4113 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00 2113 (Instructions to Bidders) within the times specified therein.

9. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.

10. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Document 00 2113 (Instructions to Bidders), in the amount of ten percent (10%) of the Total Bid Price and made payable to the **COASTSIDE FIRE PROTECTION DISTRICT**.

11. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00 7200 (General Conditions) and to complete all Work within the time specified in Document 00 5200 (Agreement).

12. The undersigned Bidder agrees that, in accordance with Document 00 7200 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00 5200 (Agreement) shall be as set forth in Document 00 5200.

13. The names of all persons interested in the foregoing Bid as principals are:

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all

individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full.

NAME OF BIDDER: _____

licensed in accordance with an act for the registration of Contractors, and with license number:_____ Expiration: _____.

_____
(Place of Incorporation, if Applicable) (Principal)

_____
(Principal)

_____
(Principal)

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

_____
(Signature of Bidder)

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address: _____

_____

_____

Contractor's Representative(s): _____
(Name/Title)

_____
(Name/Title)

_____
(Name/Title)

Officers Authorized to Sign Contracts _____
(Name/Title)

_____
(Name/Title)

_____
(Name/Title)

Telephone Number(s): _____
(Area Code) (Number)

_____
(Area Code) (Number)

Fax Number(s): _____
(Area Code) (Number)

_____
(Area Code) (Number)

Email: _____

Date of Bid: _____

END OF DOCUMENT

1.7 COORDINATION

A. Coordinate work under the provisions of Section 01 30 10.

B. Coordinate the work with Section 07 31 13 for installation of roofing materials.

2. PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Apache Products Company, www.apacheproducts.com.

B. Atlas Roofing Products, www.atlasroofing.com.

C. Rmax Industries, www.rmaxinc.com.

D. Hunter Panels, www.hunterpanels.com.

E. Substitutions: Under provisions of Section 01 25 13.

2.2 MATERIALS

A. Nailable Insulated Sheathing: Foam core with nailable substrate; conforming to the following:

1. Foam Core: ASTM C1289, Type V, closed cell polyisocyanurate.

2. Foam Density: ASTM D1622, 2.0 lb/cu ft.

3. Foam Facing: Factory applied skin of fiberglass on both sides.

4. Board Facing **5/8" CDX one side**

5. Board Thickness: 5 inches.

6. Board Edges: Square.

7. Board Size: Nominal 48 x 96 inch.

8. Thermal Resistance: LLTR, aged R value of 32.

9. Water Absorption of Foam: ASTM C209, less than 1 percent by volume.

10. Ventilating Space: Minimum 1/2 inch thick space between foam core and board facing.

11. Flame/Smoke Properties of Foam: ASTM E84, 25/450.

2.3 ACCESSORIES

A. Insulation Fasteners: Galvanized steel screws, plastic coated, with steel, stress plates, length and type to suit insulation thickness and substrate. Approved for application by Factory Mutual.

3. PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate is ready to receive work.

B. Verify field measurements are as instructed by the manufacturer.

C. Verify that roof curbs, nailers, vents and other penetrating items are properly attached to substrate.

D. Beginning of installation means installer accepts existing substrate conditions.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install sheathing with OSB side up.

C. Install sheathing with long dimension of board parallel to eave with end joints staggered.

D. Locate edges of sheathing over firm bearing.

E. Cut sheathing neatly around penetrations through roof.

F. Lay sheathing in moderate contact with adjacent boards allowing for a nominal 1/8 inch space.

G. Mechanically fasten sheathing in place in compliance with required FM wind storm rating.

3.3 PROTECTION

A. Protect finished installation under provisions of Section 01 61 00.

B. Protect work from damage prior to covering.

C. Install no more sheathing than can be adequately protected in the same day.

END OF SECTION 07 22 19

SECTION 07 41 13 - PREFINISHED METAL ROOFING

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 – GENERAL41 13

1.1 SECTION INCLUDES

A. Furnish all labor, materials, tools, equipment and services for all preformed roofing as indicated.

B. Coordinate with work of other trades.

C. It is the intent of this Section that the Work shall:
   1. conform to all applicable building code requirements and of authorities having jurisdiction;
   2. include, but not limited to:
      a. Preformed, prefinished metal roof panels;
      b. Roof insulation;
      c. Vapor barrier / underlayment;
      d. Substrate board, if shown or required by authorities having jurisdiction;
      e. Structural roof deck;
      f. Flashings;
      g. Gutters, downspouts and splash pans and splash blocks;
      h. Roof jacks;
      i. Roof curbs;
      j. All supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, weathertight, and complete installation.
   3. be performed by a single source contractor.

1.2 RELATED WORK

A. Division 5 Sections as required; generally: structural steel, steel joists, and miscellaneous metals.

B. Section 06 10 00 - Rough Carpentry

C. Section 07 62 00 – Roof Related Sheet Metal

D. Divisions 22, 23 and 26: All Sections of Work relating to or affecting the roofing system, including mechanical, plumbing and electrical items penetrating roofing system.

1.3 REFERENCES

A. American Institute of Steel Construction (AISC)
   1. Manual of Steel Construction

B. American Iron and Steel Institute (AISI)
   1. Cold Formed Steel Design Manual

C. ASTM International (ASTM)
   1. A780, Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
   2. A792, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process

3. C1289, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
4. E108, Standard Test Methods for Fire Tests of Roof Coverings
5. E1514, Standard Specification for Structural Standing Seam Steel Roof Panel Systems
6. E1592, Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
7. E1646, Standard Test Method for Rate of Water Penetration Through Exterior Metal Roof Panel Systems By Uniform Static Air Pressure Difference
8. E1680, Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems
9. E2140 - Standard Test method for water penetration of metal roof panel systems by static water pressure head

D. Underwriters' Laboratories (UL)
1. Tests for Uplift Resistance of Roof Assemblies
2. Tests for Impact Resistance of Roofing Materials

E. Factory Mutual Research Corporation (FM) (FMRC)
1. Class 1-90 Windstorm Rating
2. Class 1-SH (Test 4471) Hail Damage Rating

F. International Conference of Building Officials (ICBO)
1. ICBO Evaluation Services, Inc. Report No. ER-5409

G. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA)
1. Architectural Sheet Metal Manual

H. ASCE-7 Wind uplifts requirements for geographical area.

I. International Building Code

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications:
1. Manufacturer must have a minimum of three (3) years' experience manufacturing roof panels of the type specified for this Project. Panels specified in this Section shall be produced in a factory environment or by Manufacturer's certified and approved on-site roll forming equipment to assure the highest level of quality control. A letter certifying compliance should accompany the product material submittal.

B. Installer's Qualifications:
1. Installer of the system shall be an approved installer, certified and authorized by the Manufacturer as trained and qualified to install the Manufacturer's product. Provide a letter of certification from Manufacturer that installer has a minimum of three (3) year of metal roof panel installation experience preceding the date upon which work is to commence. **(Submit a copy with Proposal Form).**

C. Field Measurements: Prior to fabrication of panels, take field measurements of structure or substrates to receive panel system. Allow for trimming panel units, where final dimensions cannot be established prior to fabrication.

1.5 SYSTEM PERFORMANCE REQUIREMENTS

A. Performance Testing:

1. Roofing system shall be installed in accordance with ASCE 7-16 wind uplift requirements for geographical location.
2. Panel system shall have a Class B Fire Rating in accordance with ASTM E108.
3. Metal roof system must be installed to resist the roof design pressures calculated in accordance with IBC or authorities having jurisdiction. Determine panel bending and clip-to-clip strength by testing in accordance with ASTM E1592. Capacity for gauge, span or loading other than those tested may be determined by interpolating test results by engineer supplying calculations.
4. Metal roof system must meet the air infiltration requirements of ASTM E283 when tested with a 6.24 PSF pressure differential with resulting air infiltration of 0.0071 cfm/sq. ft.
5. Metal roof system must meet the water penetration requirements of ASTM E331 when tested with a 12.00 PSF pressure differential with no uncontrollable water leakage when five (5) gallons per hour of water is sprayed per square foot of roof area.
6. Intended for the slope of the building.
7. Finish or material intended for use within 1000 feet of the ocean.

1.6 SUBMITTALS

A. Product Data:
   1. Manufacturer's specifications and other data needed to prove compliance with specified requirements.
   2. Manufacturer's installation instructions.

B. Shop Drawings: Include layouts of panels, details of edge conditions, joints, corners, custom profiles, supports, anchorages, trim, flashing, closures and special details. Distinguish between factory and field assembly work.

C. Calculations:
   1. All calculations shall be sealed by a professional engineer licensed in the State of California.
   2. Engineering calculations defining cladding loads on all roof areas based on specified building codes, allowable clip loads and required number of fasteners to secure the panel clips to the designated substructure.
   3. Uplift loads on clip fasteners with full recognition of prying forces and eccentric clip loading.
   4. Calculate holding strength of fasteners in accordance with submitted test data provided by fastener Manufacturer based on length of embedment and properties of materials.

D. Samples:
   1. Color charts or samples from Manufacturer’s full line of standard and custom Kynar 500® or Hylar 5000® finishes for Architect’s selection.
   2. One (1) foot long sample of coated panel, including clips and fasteners.

E. Certifications:
   1. Manufacturer's certification that fasteners, clips, backup plates, closures, roof panels and finishes meet specification requirements and wind uplift requirements.
   2. Manufacturer’s certification that Installer meets requirements to install roof system and is qualified to obtain required warranties and has been certified for 3-years prior to proposal due date
   3. Letter of certification from Manufacturer that installer is in compliance and meets specified requirements.

4. Letter of certification from Manufacturer that panels have been produced in a factory environment or with certified / approved fixed-base roll forming and leveler equipment.
5. Certified test results by a recognized testing laboratory or Manufacturer's laboratory (witnessed by a professional engineer) in accordance with specified performance test methods for each panel system.
6. Manufacturer's certification that materials are in compliance with the specifications, including but not limited to finish and panel material.
7. Manufacturer's affidavit that materials used in Project contain no asbestos.

F. Testing Reports: Showing metal panels have been tested in accordance with specified performance testing requirements.

G. Warranty: Manufacturer's warranty as specified.

1.7 INSTALLATION CONFERENCE

A. Refer to Section 01 31 13 – Project Coordination.

1.8 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver metal roof system to job site properly packaged to provide protection against transportation damage.

B. Handling: Exercise extreme care in unloading, storing and erecting metal roof system to prevent bending, warping, twisting and surface damage.

C. Storage:
1. Store all materials and accessories above ground on well skidded platforms.
2. Store under waterproof covering.
3. Provide proper ventilation of metal roof system to prevent condensation build-up between each panel or trim / flashing component.

1.9 WARRANTY

A. Warrant the work specified herein against becoming unserviceable or causing an objectionable appearance resulting from either defective or non-conforming materials or workmanship. Warranty shall be a "Weather tightness" Warranty. Field Reports are required throughout Project and are to be supplied by a Manufacturer's Approved Technical Inspector. Manufacturer's personnel which are not Quality Control Technicians are not acceptable for inspection.
1. Roof Panels and Finish:
   a. Durability of the roof panels due to rupture, structural failure or perforation shall be warranted for a period of 20 years by the Manufacturer.
   b. The exterior color finish for painted roof panels shall be warranted by the Manufacturer for 20 years against chalking, blistering, peeling, cracking, flaking, checking and chipping.
2. Weathertightness:
   a. The entire roof system including all roof panels, flashings, curbs, interior gutters, etc. shall be warranted by the Manufacturer against leaks for a period of 20 years.
   b. The warranty shall be issued to the Owner by the Manufacturer at time of entire Project Substantial Completion.
   c. The warranty shall guarantee the entire roof system and associated work against defective materials and workmanship of installation.

d. The roof system shall include roof insulation, flashing, metal work, labor, and material shall be guaranteed against failure of workmanship and materials. Repair of the system by the Manufacturer, including materials and labor, shall be done at no cost to the Owner for duration of warranty period.

3. Roofing Contractor: Jointly with any subcontractors employed by him, shall guarantee the work required and performed under this contract will be free from defects in workmanship and materials, and that the building will be and remain waterproof for a five (5) year warranty period, after the Architect accepts the work as substantially complete. The warranty shall be in approved notarized written form, to obligate the Contractor, and subcontractors, to make good the requirements of the warranty.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

A. Manufacturers listed who produce products equivalent to those specified are approved for use on the Project. Other Manufacturers must have a minimum of ten (10) years' experience manufacturing equivalent products to those specified and comply with requirements of Division 1 regarding substitutions to be considered.
   1. AEP-Span
   2. IMETCO
   3. Garland
   4. Tremco

B. Materials shall be manufactured, specified, or accepted in writing by Roofing Manufacturer issuing the warranty. Proposed materials shall ensure full system warranty from said Manufacturer.

C. Roof panels with lap type side joints or those requiring battens or other non-integral sealing means or exposed structural fasteners will not be acceptable.

D. Roof panels shall be roll formed in the Manufacturer's plant to control quality or by certified / calibrated / approved on-site roll-forming equipment only.

E. Substitute Manufacturers will be approved by written addendum to all bidders. Voluntary alternates will not be considered. Substitutions will not be permitted after the bid date of this project.

F. Roof panels proposed for substitution shall fully comply with specified requirements in performance.

G. Roof panels shall have a 20 year foamable mastic sealant plant-installed sealant for quality control. No solid butyl sealant or extruded rubber will be accepted.

2.2 MATERIALS

A. Metal Roof Panels:
   1. Sheet Material: Aluminum
   2. Texture: Striations.
   3. Manufacturer's stainless steel panel clips spaced according to Structural Engineer's calculations as instructed for wind uplift requirements. Screw placement and spacing for wind uplift rating requirements and design specification

for application, in length necessary to penetrate substrate minimum ¾" as supplied by Metal Roof Panel Manufacturer.

2.3 MISCELLANEOUS MATERIALS

A. Fasteners: All self-tapping / self-drilling fasteners, bolts, nuts, self-locking rivets and other suitable fasteners shall be designed to withstand specified design loads.
1. Use long life fasteners for all exposed fastener applications.
2. Provide stainless steel fasteners with a factory applied coating in a color to match metal roof system application.
3. Provide neoprene washers under heads of exposed fasteners.
4. Locate and space all exposed fasteners in a true vertical and horizontal alignment. Use proper torque settings to obtain controlled uniform compression for a positive seal without rupturing the neoprene washer.
5. Fasteners used to attach metal "Z" purlins shall be size and type recommended by Manufacturer to achieve FM 1-90 requirements.

B. Accessories:
1. General: Provide all components required in accordance with the metal roof system Manufacturer's approved shop drawings for a complete metal roof system to include panels, panel clips, trim / flashing, fascias, ridge, closures, sealants, fillers, and other required items.
2. Water Proof Membrane: High-temperature, self-adhering SBS modified rubberized asphalt roofing underlayment, AEP Span Underlayment HT, as manufactured by AEP Span. Provide continuous membrane over plywood roof sheathing, including at roof penetrations, valleys, eaves, ridges, and transitions. Install in accordance with manufacturer's published installation instructions, including required laps and flashing integration. Provide membrane compatible with aluminum roofing panels and capable of withstanding temperatures associated with metal roofing systems.
3. Not used
4. Prefabricated Roof Curbs and Equipment Supports, Roof Jacks, and Rooftop Walkways: Shall be product of Manufacturer approved by the metal roof system Manufacturer and as specified below. Curbs shall be type recommended by roofing Manufacturer to warranty curb and roofing for 20 years.
5. Closures: All outside closures shall be fabricated from Galvalume® sheet steel of the same gauge, finish and color as the panels. Galvanized base is unacceptable.
6. Tape Seal: Pressure sensitive, 100 percent solids, polyisobutylene compound sealing tape with a release paper backing. Provide permanently elastic, non-sagging, non-toxic, non-staining tape seal approved by the metal roof system Manufacturer.
7. Joint Sealant: One-part elastomeric polyurethane sealant approved by the metal roof system Manufacturer.
8. Splash Pans and Splash Blocks: Shall be as specified in Section 07 62 00, Sheet Metal Flashing, Gutters, Downspouts and Trim.

2.4 PANEL FABRICATION

A. Material shall be in-line tension leveled prior to roll forming panel profile.

B. Roll form panels in continuous lengths, full length of detailed runs.

C. Standard panel length shall be 45 feet, unless approved by the metal roof system Manufacturer.

D. Fabricate trim / flashing and accessories to detailed profiles.

E. Fabricate trim / flashing from same material as panel.

2.5 PREFABRICATED ROOF CURBS AND EQUIPMENT SUPPORTS

A. General: Comply with loading and strength requirements as indicated where units support other work. Coordinate dimensions of curbs and supports with equipment supplier/manufacturer.

B. Fabricate curbs of structural quality 0.080 inch aluminum, factory baked finished after fabrication in coating compatible with and matching roof panel finish, with mitered and continuously welded corner joints. Provide integral base plates and water diverter crickets. Front base plate shall be a minimum of 18 inches from beginning of water diverter. Curbs shall be designed to install under metal roof system on the high side and over the metal roof system on the low side.

C. Curbs shall be of size and design shown on the drawings or required, with minimum height of eight (8) inches above finished metal roof system.

D. Curbs shall be constructed to match slope of roof and provide a level top surface for mounting equipment in a level horizontal position, unless shown otherwise.

E. Curb flanges shall be constructed to match configuration of roof panels.

F. Coordinate work with mechanical installer to ensure matching finish of curbs provided for roof mounted mechanical equipment.

2.6 PREFABRICATED ROOF JACKS

A. Pipe flashings shall be one piece EPDM (ethylene propylene diene monomer) molded rubber boot having a serviceable temperature range of minus 60 degrees F to 270 degrees F and shall be resistant to ozone and ultraviolet rays. Units shall have an aluminum flanged base ring.

B. Provide high temperature rated rubber roof jacks at hot stacks as applicable, including but not limited to boiler flues, heater vents, steam relief, or similar conditions. Rating minimum of 400 degrees F.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspect installed work of other trades and verify that such work is complete to a point where this work may continue.

B. Verify that installation may be made in accordance with approved shop drawings and Manufacturer's instructions. This specifically includes verifying the secondary structurals and/or decking are installed to meet building code requirements. Coordinate with metal roof system Manufacturer to insure that reduced clip spacings at eave, rake, ridge and corner areas are accommodated. Supply calculations, sealed by a professional engineer licensed in the State of Texas, showing required clip spacings.

C. Discrepancies:
1. Bring discrepancies to the attention of the Architect.
2. Do not proceed with installation until discrepancies have been resolved.

3.2 INSTALLATION OF METAL ROOFING

A. Install metal deck to structure to meet ASCE-7 wind uplift requirements.

B. Install metal roof system so that it is weathertight, without waves, warps, buckles, fastening stresses or distortion, allowing for expansion and contraction. Isolate dissimilar metal contact with proper taping and / or coatings.

C. Coordinate Work, with installation of other associated Work, to ensure quality application.

D. Coordinate Work with installation of associated metal flashings and building walls.

E. Coordinate Work to minimize foot traffic and construction activity on installed finished surfaces.

F. Install work in accordance with Manufacturer's recommendations.

G. Install nailable insulated sheathing in conformance with approved shop drawings and Manufacturer's instructions.

H. Not used.

I. Install waterproofing membrane barrier in conformance with approved shop drawings and Manufacturer's instructions. Lap and tape seal all joints in accordance with Manufacturer’s instructions.

J. Install one layer of minimum 18” wide (each roof plane) underlayment / waterproofing membrane in valleys, eaves, rakes, hips and ridges prior to installation of the field underlayment / membrane.

K. Remove protective strippable plastic film covering from metal roof panels, trim, and related items in accordance with Manufacturer's instructions.

L. Install metal roof panels, trim, and related items in accordance with approved samples with approved shop drawings and Manufacturer's instructions.

M. Provide concealed anchors at all panel attachment locations.

N. Install panels plumb, level and straight with seams and ribs parallel, conforming to design as indicated.

O. Install roof jacks in accordance with approved shop drawings and Manufacturer's instructions. Install roof jacks in flat of the roof panel. Coordinate location so roof panel seams are not altered.

P. Install roof curbs in accordance with approved shop drawings and Manufacturer's instructions. Anchor curbs securely in place with provisions for thermal and structural movement. Provide prefinished metal cover around all curbs to match color and finish of metal roof panels.

Q. Install gutters and downspouts in accordance with approved samples with approved shop drawings and Manufacturer's instructions. Gutter design for required gutter and downspout sizes shall be submitted prior to installation.

R. Install downspouts plumb and level, attached to columns or wall with straps located at top and bottom of downspout and maximum ten (10) feet on center.

S. Install splash pans and splash blocks under discharge port of downspouts. Install splash pan over a protection (walkway) pad for downspouts located at roof level.

T. Install gutter screen over installed gutter. Secure screen to spacer with self-tapping screw.

U. Provide expansion joints on ends of gutters spaced maximum 50 feet on center. Install snap-on cover over expansion joint.

3.3 CLEANING AND PROTECTION

A. Remove scraps and debris and leave work area clean.

B. Clean exposed metal surfaces, removing substances which might cause corrosion of metal or deterioration of finishes. Paint areas where finish is damaged on prefinished metal by painting with a compatible paint in color to match undamaged finish.

C. Clean other work damaged or soiled by Work of this Section.

D. Protect finished work from damage.

3.4 INSPECTION

A. Architect and Contractor reserve the right to inspect the work during application. Upon completion of the work, if inspection discloses that roofing is not in accordance with this specification or has been damaged, Contractor agrees to furnish additional materials necessary to make repairs and place work in an acceptable condition at no additional expense to Owner.

END OF SECTION

SECTION 21 05 17 - SLEEVES AND SLEEVE SEALS FOR FIRE-SUPPRESSION PIPING

PART 1 - GENERAL NERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Sleeves.
2. Grout.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 SLEEVES

A. Galvanized-Steel Wall Pipes: ASTM A 53/A 53M, Schedule 40, with plain ends and welded steel collar; zinc coated.

B. Galvanized-Steel-Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, with plain ends.

2.2 SLEEVE-SEAL SYSTEMS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Metraflex Company (The).
2. Pipeline Seal and Insulator, Inc.
3. Proco Products, Inc.

B. Description: Modular sealing-element unit, designed for field assembly, for filling annular space between piping and sleeve.

1. Sealing Elements: EPDM-rubber interlocking links shaped to fit surface of pipe. Include type and number required for pipe material and size of pipe.
2. Pressure Plates: Carbon steel.

C. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements.

2.3 GROUT

A. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.

B. Characteristics: Nonshrink; recommended for interior and exterior applications.

C. Design Mix: 5000-psi, 28-day compressive strength.

D. Packaging: Premixed and factory packaged.

PART 3 - EXECUTION

3.1 SLEEVE INSTALLATION

A. Install sleeves for piping passing through penetrations in floors, partitions, roofs, and walls.

B. For sleeves that will have sleeve-seal system installed, select sleeves of size large enough to provide 1-inch annular clear space between piping and concrete slabs and walls.

1. Sleeves are not required for core-drilled holes.

C. Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed.

1. Cut sleeves to length for mounting flush with both surfaces.

a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level.

2. Using grout, seal the space outside of sleeves in slabs and walls without sleeve-seal system.

D. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Comply with requirements for firestopping specified in Section 078413 "Penetration Firestopping."

3.2 SLEEVE AND SLEEVE-SEAL SCHEDULE

A. Use sleeves and sleeve seals for the following piping-penetration applications:

1. Exterior Concrete Walls above Grade:

a. Piping Smaller Than NPS 6: Galvanized-steel-pipe sleeves.
b. Piping NPS 6 and Larger: Galvanized-steel-pipe sleeves.

2. Exterior Concrete Walls below Grade:

a. Piping Smaller Than NPS 6: Galvanized-steel-pipe sleeves with sleeve-seal system.

1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

b. Piping NPS 6 and Larger: Galvanized-steel-pipe sleeves with sleeve-seal system.

1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

3. Concrete Slabs-on-Grade:

a. Piping Smaller Than NPS 6: Galvanized-steel-pipe sleeves with sleeve-seal system.

1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

b. Piping NPS 6 and Larger: Galvanized-steel-pipe sleeves with sleeve-seal system.

1) Select sleeve size to allow for 1-inch annular clear space between piping and sleeve for installing sleeve-seal system.

4. Concrete Slabs above Grade:

a. Piping Smaller Than NPS 6 : Galvanized-steel-pipe sleeves.
b. Piping NPS 6 and Larger: Galvanized-steel-pipe sleeves.

END OF SECTION 210517

SECTION 21 05 53 - IDENTIFICATION FOR FIRE-SUPPRESSION PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Equipment labels.
2. Warning signs and labels.
3. Pipe labels.
4. Stencils.
5. Valve tags.
6. Warning tags.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For color, letter style, and graphic representation required for each identification material and device.

C. Equipment-Label Schedule: Include a listing of all equipment to be labeled and the proposed content for each label.

D. Valve Schedules: Valve numbering scheme.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For each piping system to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 EQUIPMENT LABELS

A. Metal Labels for Equipment:

1. Material and Thickness: Brass, 0.032 inch thick, with predrilled holes for attachment hardware.
2. Letter Color: Black.
3. Background Color: Red.

4. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
5. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
6. Fasteners: Stainless-steel rivets.
7. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

B. Label Content: Include equipment's Drawing designation or unique equipment number, Drawing numbers where equipment is indicated (plans, details, and schedules), and the Specification Section number and title where equipment is specified.

C. Equipment-Label Schedule: For each item of equipment to be labeled, on 8-1/2-by-11-inch bond paper. Tabulate equipment identification number and identify Drawing numbers where equipment is indicated (plans, details, and schedules) and the Specification Section number and title where equipment is specified. Equipment schedule shall be included in operation and maintenance data.

2.2 PIPE LABELS

A. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service and showing flow direction.

B. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to cover full circumference of pipe and to attach to pipe without fasteners or adhesive.

C. Self-Adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing.

D. Pipe-Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings; pipe size; and an arrow indicating flow direction.

1. Flow-Direction Arrows: Integral with piping-system service lettering to accommodate both directions, or as separate unit on each pipe label to indicate flow direction.
2. Lettering Size: At least 1-1/2 inches high.

E. Pipe-Label Colors:

1. Background Color: Red.
2. Letter Color: White.

2.3 VALVE TAGS

A. Valve Tags: Stamped or engraved with 1/4-inch letters for piping-system abbreviation and 1/2-inch numbers.

1. Tag Material: Brass, 0.032 inch thick, with predrilled holes for attachment hardware.
2. Fasteners: Brass wire-link chain.
3. Valve-Tag Color: Red.
4. Letter Color: White.

B. Valve Schedules: For each piping system, on 8-1/2-by-11-inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or

space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses.

1. Valve-tag schedule shall be included in operation and maintenance data.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulants.

3.2 LABEL INSTALLATION

A. Coordinate installation of identifying devices with completion of covering and painting of surfaces where devices are to be applied.

B. Coordinate installation of identifying devices with locations of access panels and doors.

C. Install or permanently fasten labels on each major item of mechanical equipment.

D. Locate equipment labels where accessible and visible.

E. Piping Color-Coding: Painting of piping is specified in Section 099123 "Interior Painting."

1. Identification Paint: Use for contrasting background.
2. Stencil Paint: Use for pipe marking.

F. Pipe-Label Locations: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:

1. Near each valve and control device.
2. Near each branch connection excluding short takeoffs. Where flow pattern is not obvious, mark each pipe at branch.
3. Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
4. At access doors, manholes, and similar access points that permit view of concealed piping.
5. Near major equipment items and other points of origination and termination.
6. Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.
7. On piping above removable acoustical ceilings. Omit intermediately spaced labels.

3.3 VALVE-TAG INSTALLATION

A. Install tags on valves and control devices in piping systems. List tagged valves in a valve-tag schedule.

B. Valve-Tag Application Schedule: Tag valves according to size, shape, and with captions similar to those indicated in "Valve-Tag Size and Shape" Subparagraph below:

1. Valve-Tag Size and Shape:

    a. Fire-Suppression Standpipe: 1-1/2 inches, round.
    b. Wet-Pipe Sprinkler System: 1-1/2 inches, round.

3.4 WARNING-TAG INSTALLATION

A. Write required message on, and attach warning tags to, equipment and other items where required.

END OF SECTION 210553

SECTION 21 13 13 - WET-PIPE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Pipes, fittings, and specialties.
2. Fire-protection valves.
3. Sprinklers.
4. Alarm devices.
5. Pressure gages.

B. Related Sections:

1. Section 211200 "Fire-Suppression Standpipes" for standpipe piping.

1.3 DEFINITIONS

A. High-Pressure Sprinkler Piping: Wet-pipe sprinkler system piping designed to operate at working pressure higher than standard 175 psig, but not higher than 250 psig.

B. Standard-Pressure Sprinkler Piping: Wet-pipe sprinkler system piping designed to operate at working pressure of 175 psig maximum.

1.4 SYSTEM DESCRIPTIONS

1.5 The Contractor shall modified and extended the existing automatic fire sprinkler system as required to provide protection for the new addition and tenant development in accordance with the requirements of the California Building Code, Chapter 9 and NFPA 13. This specification is intended to establish the required performance and quality of the work necessary to provide for a complete automatic fire sprinkler system above and below ceiling to serve the building. (There shall not be any expose fire sprinkler piping below ceiling inside apparatus bay or outside building.)

1.6 PERFORMANCE REQUIREMENTS

A. Standard-Pressure Piping System Component: Listed for 175-psig minimum working pressure.

B. Sprinkler system design shall be approved by authorities having jurisdiction.

1. Margin of Safety for Available Water Flow and Pressure: 10 percent, including losses through water-service piping, valves, and backflow preventers.
2. Sprinkler Occupancy Hazard Classifications:

    a. Building Service Areas: Ordinary Hazard, Group 1.
    b. Electrical Equipment Rooms: Ordinary Hazard, Group 1.
    c. General Storage Areas: Ordinary Hazard, Group 1.
    d. Mechanical Equipment Rooms: Ordinary Hazard, Group 1.
    e. Office and Public Areas: Light Hazard.

3. Minimum Density for Automatic-Sprinkler Piping Design:

    a. Light-Hazard Occupancy: 0.10 gpm over 1500-sq. ft. area.
    b. Ordinary-Hazard, Group 1 Occupancy: 0.15 gpm over 1500-sq. ft. area.

4. Maximum Protection Area per Sprinkler: Per UL listing.

5. Total Combined Hose-Stream Demand Requirement: According to NFPA 13 unless otherwise indicated:

    a. Light-Hazard Occupancies: 100 gpm for 30 minutes.
    b. Ordinary-Hazard Occupancies: 250 gpm for 60 to 90 minutes.

C. Seismic Performance: Sprinkler piping shall withstand the effects of earthquake motions determined according to NFPA 13 and ASCE/SEI 7.

1.7 SUBMITTALS

A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

B. Shop Drawings: For wet-pipe sprinkler systems. Include plans, elevations, sections, details, and attachments to other work.

1. Wiring Diagrams: For power, signal, and control wiring.

C. Delegated-Design Submittal: For sprinkler systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Approved Sprinkler Piping Drawings: Working plans, prepared according to NFPA 13, that have been approved by authorities having jurisdiction, including hydraulic calculations if applicable.

E. Fire-hydrant flow test report.

F. Operation and Maintenance Data: For sprinkler specialties to include in emergency, operation, and maintenance manuals.

1.8 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer's responsibilities include designing, fabricating, and installing sprinkler systems and providing professional engineering services needed to assume engineering responsibility. Base calculations on results of fire-hydrant flow test.

    a. Engineering Responsibility: Preparation of working plans, calculations, and field test reports by a qualified professional engineer.

B. Welding Qualifications: Qualify procedures and operators according to ASME Boiler and Pressure Vessel Code.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. NFPA Standards: Sprinkler system equipment, specialties, accessories, installation, and testing shall comply with the following:

1. NFPA 13, "Installation of Sprinkler Systems."

1.9 COORDINATION

A. Coordinate layout and installation of sprinklers with other construction that penetrates ceilings, including light fixtures, HVAC equipment, and partition assemblies.

1.10 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Sprinkler Cabinets: Finished, wall-mounted, steel cabinet with hinged cover, and with space for minimum of six spare sprinklers plus sprinkler wrench. Include number of sprinklers required by NFPA 13 and sprinkler wrench. Include separate cabinet with sprinklers and wrench for each type of sprinkler used on Project.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

2.2 STEEL PIPE AND FITTINGS

A. Standard Weight, Galvanized- and Black-Steel Pipe: ASTM A 53/A 53M, Type E, Grade B. Pipe ends may be factory or field formed to match joining method.

B. Schedule 30, Galvanized- and Black-Steel Pipe: ASTM A 135; ASTM A 795/A 795M, Type E; or ASME B36.10M, wrought steel; with wall thickness not less than Schedule 30 and not more than Schedule 40. Pipe ends may be factory or field formed to match joining method.

C. Nonstandard OD, Thinwall Black-Steel Pipe: ASTM A 135 or ASTM A 795/A 795M, thinwall, with plain ends and wall thickness less than Schedule 10.

D. Galvanized- and Black-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M, standard-weight, seamless steel pipe with threaded ends.

E. Galvanized and Uncoated, Steel Couplings: ASTM A 865, threaded.

F. Galvanized and Uncoated, Gray-Iron Threaded Fittings: ASME B16.4, Class 125, standard pattern.

G. Malleable- or Ductile-Iron Unions: UL 860.

H. Cast-Iron Flanges: ASME 16.1, Class 125.

I. Steel Flanges and Flanged Fittings: ASME B16.5, Class 150.

J. Steel Welding Fittings: ASTM A 234/A 234M and ASME B16.9.

K. Grooved-Joint, Steel-Pipe Appurtenances:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Anvil International, Inc.
    b. Tyco Fire & Building Products LP.
    c. Victaulic Company.

2. Pressure Rating: 175 psig minimum.
3. Galvanized and Uncoated, Grooved-End Fittings for Steel Piping: ASTM A 47/A 47M, malleable-iron casting or ASTM A 536, ductile-iron casting; with dimensions matching steel pipe.
4. Grooved-End-Pipe Couplings for Steel Piping: AWWA C606 and UL 213, rigid pattern, unless otherwise indicated, for steel-pipe dimensions. Include ferrous housing sections, EPDM-rubber gasket, and bolts and nuts.

L. Steel Pressure-Seal Fittings: UL 213, FM-approved, 175-psig pressure rating with steel housing, rubber O-rings, and pipe stop; for use with fitting manufacturers' pressure-seal tools.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Victaulic Company.

2.3 PIPING JOINING MATERIALS

A. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, 1/8 inch thick or ASME B16.21, nonmetallic and asbestos free.

1. Class 125, Cast-Iron Flanges and Class 150, Bronze Flat-Face Flanges: Full-face gaskets.
2. Class 250, Cast-Iron Flanges and Class 300, Steel Raised-Face Flanges: Ring-type gaskets.

B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.

C. Brazing Filler Metals: AWS A5.8/A5.8M, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.

D. Welding Filler Metals: Comply with AWS D10.12M/D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

2.4 LISTED FIRE-PROTECTION VALVES

A. General Requirements:

1. Valves shall be UL listed or FM approved.
2. Minimum Pressure Rating for Standard-Pressure Piping: 175 psig.
3. Minimum Pressure Rating for High-Pressure Piping: 250 psig.

B. Ball Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Anvil International, Inc.
    b. Victaulic Company.

2. Standard: UL 1091 except with ball instead of disc.
3. Valves NPS 1-1/2 and Smaller: Bronze body with threaded ends.
4. Valves NPS 2 and NPS 2-1/2: Bronze body with threaded ends or ductile-iron body with grooved ends.
5. Valves NPS 3: Ductile-iron body with grooved ends.

C. Check Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    a. Anvil International, Inc.
    b. NIBCO INC.
    c. Tyco Fire & Building Products LP.
    d. Victaulic Company.

2. Standard: UL 312.
3. Pressure Rating: 250 psig minimum.
4. Type: Swing check.
5. Body Material: Cast iron.
6. End Connections: Flanged or grooved.

D. Indicating-Type Butterfly Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Anvil International, Inc.
    b. Tyco Fire & Building Products LP.
    c. Victaulic Company.

2. Standard: UL 1091.
3. Pressure Rating: 175 psig minimum.
4. Valves NPS 2 and Smaller:

    a. Valve Type: Ball or butterfly.
    b. Body Material: Bronze.
    c. End Connections: Threaded.

5. Valves NPS 2-1/2 and Larger:

    a. Valve Type: Butterfly.
    b. Body Material: Cast or ductile iron.
    c. End Connections: Flanged, grooved, or wafer.

6. Valve Operation: Integral electrical, 115-V ac, prewired, single-circuit, supervisory switch visual indicating device.

2.5 TRIM AND DRAIN VALVES

A. General Requirements:

1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
2. Pressure Rating: 175 psig minimum.

B. Angle Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Fire Protection Products, Inc.
    b. United Brass Works, Inc.

C. Ball Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Anvil International, Inc.
    b. Tyco Fire & Building Products LP.
    c. Victaulic Company.

D. Globe Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Fire Protection Products, Inc.
    b. United Brass Works, Inc.

E. Plug Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Southern Manufacturing Group.

2.6 SPECIALTY VALVES

A. General Requirements:

1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
2. Pressure Rating:
    a. Standard-Pressure Piping Specialty Valves: 175 psig minimum.
    b. High-Pressure Piping Specialty Valves: 250 psig minimum.
3. Body Material: Cast or ductile iron.
4. Size: Same as connected piping.
5. End Connections: Flanged or grooved.

B. Alarm Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    a. Reliable Automatic Sprinkler Co., Inc.
    b. Tyco Fire & Building Products LP.
    c. Victaulic Company.
2. Standard: UL 193.
3. Design: For horizontal or vertical installation.
4. Include trim sets for bypass, drain, electrical sprinkler alarm switch, pressure gages and fill-line attachment with strainer.

2.7 SPRINKLER SPECIALTY PIPE FITTINGS

A. Flow Detection and Test Assemblies:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    a. Reliable Automatic Sprinkler Co., Inc.
    b. Tyco Fire & Building Products LP.
    c. Victaulic Company.
2. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
3. Pressure Rating: 175 psig minimum.
4. Body Material: Cast- or ductile-iron housing with orifice, sight glass, and integral test valve.
5. Size: Same as connected piping.
6. Inlet and Outlet: Threaded.

B. Sprinkler Inspector's Test Fittings:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Tyco Fire & Building Products LP.
    b. Victaulic Company.
    c. Viking Corporation.

2. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
3. Pressure Rating: 175 psig minimum.
4. Body Material: Cast- or ductile-iron housing with sight glass.
5. Size: Same as connected piping.
6. Inlet and Outlet: Threaded.

2.8 SPRINKLERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Reliable Automatic Sprinkler Co., Inc.
2. Tyco Fire & Building Products LP.
3. Victaulic Company.

B. General Requirements:

1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
2. Pressure Rating for Automatic Sprinklers: 175 psig minimum.

C. Automatic Sprinklers with Heat-Responsive Element:

1. Early-Suppression, Fast-Response Applications: UL 1767.
2. Nonresidential Applications: UL 199.
3. Characteristics: Nominal 1/2-inch orifice with Discharge Coefficient K of 5.6, and for "Ordinary" temperature classification rating unless otherwise indicated or required by application.

D. Sprinkler Finishes:

1. Color and finish of all corrosion-resistant sprinklers shall be as approved by Architect.

E. Water-Flow Indicators:

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

    a. Potter Electric Signal Company.

2. Standard: UL 346.
3. Water-Flow Detector: Electrically supervised.
4. Components: Two single-pole, double-throw circuit switches for isolated alarm and auxiliary contacts, 7 A, 125-V ac and 0.25 A, 24-V dc; complete with factory-set, field-adjustable retard element to prevent false signals and tamperproof cover that sends signal if removed.
5. Type: Paddle operated.

6. Pressure Rating: 250 psig.
7. Design Installation: Horizontal or vertical.

F. Valve Supervisory Switches:

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

   a. Potter Electric Signal Company.

2. Standard: UL 346.
3. Type: Electrically supervised.
4. Components: Single-pole, double-throw switch with normally closed contacts.
5. Design: Signals that controlled valve is in other than fully open position.

2.9 Sprinkler Heads:

A. Interior Finished Ceilings and Exterior Soffits:

1. Heads shall be Reliable Model F4FR quick response, concealed, flush-to-ceiling automatic sprinklers. Equivalent products of Viking or Tyco are acceptable. Corrosion-resistant finish shall be installed at exterior areas; finish shall be polyester or Teflon coating with matching escutcheon. Cover plate finish shall be per Architect's specifications. Color shall be factory finish in custom color as selected by the Architect. Up to four (4) different colors will be selected for use in varying amounts at all sprinkler head locations.

2. All areas without Suspended Ceilings, Concealed Areas, Unfinished Ceilings and Storage Areas: Heads shall be Reliable, model F1FR quick response sprinkler upright/pendent with rough brass finish. Equivalent products of Viking or Tyco are acceptable. Where required, escutcheons shall be Sweet and Donaldson #401 with chrome finish at storage, mechanical, and electrical room ceilings.

3. Concealed Areas: Heads shall be Reliable, model F1FR quick response sprinkler upright/pendent with rough brass finish. Equivalent products of Viking or Tyco are acceptable. Where required, escutcheons shall be Sweet and Donaldson #401 with chrome finish at storage, mechanical, and electrical room ceilings.

4. Sidewall Sprinklers: Sidewall sprinklers Reliable Model F1FR quick response sprinkler, and may be installed for interior and exterior applications, subject to prior approval by Architect. Heads shall be Reliable Model F1FR quick response sprinkler horizontal, with bright chrome finish. Equivalent products of Viking or Tyco are acceptable.

5. Temperature Ratings: Heads below finished ceilings, and in all other occupied areas shall have a temperature rating of Ordinary (155-165 degrees). Heads in unventilated, concealed and void spaces shall have a temperature rating of Intermediate (200-212 degrees), unless otherwise required by code.

6. Provide metal cabinet for a reserve supply of sprinkler heads, as required by N.F.P.A. 13. Include suitable head wrenches for each type of sprinkler installed. Stock shall include all types and temperature ratings installed. Locate as directed by Architect.

B. Special Coatings:

1. Wax.
2. Lead.
3. Corrosion-resistant paint.

C. Sprinkler Escutcheons: Materials, types, and finishes for the following sprinkler mounting applications. Escutcheons for concealed, flush, and recessed-type sprinklers are specified with sprinklers.

1. Ceiling Mounting: Chrome-plated steel, two piece, with 1-inch vertical adjustment.
2. Sidewall Mounting: Chrome-plated steel, one piece, flat.

D. Water-Flow Indicators:

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

   a. Potter Electric Signal Company.

2. Standard: UL 346.
3. Water-Flow Detector: Electrically supervised.
4. Components: Two single-pole, double-throw circuit switches for isolated alarm and auxiliary contacts, 7 A, 125-V ac and 0.25 A, 24-V dc; complete with factory-set, field-adjustable retard element to prevent false signals and tamperproof cover that sends signal if removed.
5. Type: Paddle operated.
6. Pressure Rating: 250 psig.
7. Design Installation: Horizontal or vertical.

E. Valve Supervisory Switches:

1. Manufacturers: Subject to compliance with requirements, provide products by the following:

   a. Potter Electric Signal Company.

2. Standard: UL 346.
3. Type: Electrically supervised.
4. Components: Single-pole, double-throw switch with normally closed contacts.
5. Design: Signals that controlled valve is in other than fully open position.

2.10 PRESSURE GAGES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. AMETEK; U.S. Gauge Division.
2. Ashcroft, Inc.
3. Brecco Corporation.
4. WIKA Instrument Corporation.

B. Standard: UL 393.

C. Dial Size: 3-1/2- to 4-1/2-inch diameter.

D. Pressure Gage Range: 0 to 250 psig minimum.

E. Water System Piping Gage: Include "WATER" or "AIR/WATER" label on dial face.

PART 3 - EXECUTION

3.1 PREPARATION

A. Perform fire-hydrant flow test according to NFPA 13 and NFPA 291. Use results for system design calculations required in "Quality Assurance" Article.

B. Report test results promptly and in writing.

3.2 SERVICE-ENTRANCE PIPING

A. Connect sprinkler piping to water-service piping for service entrance to building. Comply with requirements for exterior piping in Section 211100 "Facility Fire-Suppression Water-Service Piping."

B. Install shutoff valve, backflow preventer, pressure gage, drain, and other accessories indicated at connection to water-service piping. Comply with requirements for backflow preventers in Section 211100 "Facility Fire-Suppression Water-Service Piping."

3.3 WATER-SUPPLY CONNECTIONS

A. Connect sprinkler piping to building's interior water-distribution piping. Comply with requirements for interior piping in Section 221116 "Domestic Water Piping."

B. Install shutoff valve, check valve, pressure gage, and drain at connection to water supply.

3.4 PIPING INSTALLATION

A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.

1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.

B. Piping Standard: Comply with requirements for installation of sprinkler piping in NFPA 13.

C. Install seismic restraints on piping. Comply with requirements for seismic-restraint device materials and installation in NFPA 13.

D. Use listed fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.

E. Install unions adjacent to each valve in pipes NPS 2 and smaller.

F. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.

G. Install "Inspector's Test Connections" in sprinkler system piping, complete with shutoff valve, and sized and located according to NFPA 13.

H. Install sprinkler piping with drains for complete system drainage.

I. Install sprinkler control valves, test assemblies, and drain risers adjacent to standpipes when sprinkler piping is connected to standpipes.

J. Install alarm devices in piping systems.

K. Install hangers and supports for sprinkler system piping according to NFPA 13. Comply with requirements for hanger materials in NFPA 13.

L. Install pressure gages on riser or feed main, at each sprinkler test connection, and at top of each standpipe. Include pressure gages with connection not less than NPS 1/4 and with soft metal seated globe valve, arranged for draining pipe between gage and valve. Install gages to permit removal, and install where they will not be subject to freezing.

M. Fill sprinkler system piping with water.

N. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 210517 "Sleeves and Sleeve Seals for Fire-Suppression Piping."

O. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 210517 "Sleeves and Sleeve Seals for Fire-Suppression Piping."

P. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 210518 "Escutcheons for Fire-Suppression Piping."

3.5 JOINT CONSTRUCTION

A. Install couplings, flanges, flanged fittings, unions, nipples, and transition and special fittings that have finish and pressure ratings same as or higher than system's pressure rating for aboveground applications unless otherwise indicated.

B. Install unions adjacent to each valve in pipes NPS 2 and smaller.

C. Install flanges, flange adapters, or couplings for grooved-end piping on valves, apparatus, and equipment having NPS 2-1/2 and larger end connections.

D. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

E. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.

F. Flanged Joints: Select appropriate gasket material in size, type, and thickness suitable for water service. Join flanges with gasket and bolts according to ASME B31.9.

G. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.

H. Twist-Locked Joints: Insert plain end of steel pipe into plain-end-pipe fitting. Rotate retainer lugs one-quarter turn or tighten retainer pin.

I. Steel-Piping, Pressure-Sealed Joints: Join lightwall steel pipe and steel pressure-seal fittings with tools recommended by fitting manufacturer.

J. Welded Joints: Construct joints according to AWS D10.12M/D10.12, using qualified processes and welding operators according to "Quality Assurance" Article.

1. Shop weld pipe joints where welded piping is indicated. Do not use welded joints for galvanized-steel pipe.

K. Steel-Piping, Cut-Grooved Joints: Cut square-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe joints.

L. Steel-Piping, Roll-Grooved Joints: Roll rounded-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe grooved joints.

M. Steel-Piping, Pressure-Sealed Joints: Join Schedule 5 steel pipe and steel pressure-seal fittings with tools recommended by fitting manufacturer.

N. Dissimilar-Material Piping Joints: Make joints using adapters compatible with materials of both piping systems.

3.6 VALVE AND SPECIALTIES INSTALLATION

A. Install listed fire-protection valves, trim and drain valves, specialty valves and trim, controls, and specialties according to NFPA 13 and authorities having jurisdiction.

B. Install listed fire-protection shutoff valves supervised open, located to control sources of water supply except from fire-department connections. Install permanent identification signs indicating portion of system controlled by each valve.

C. Install check valve in each water-supply connection. Install backflow preventers instead of check valves in potable-water-supply sources.

D. Specialty Valves:

1. General Requirements: Install in vertical position for proper direction of flow, in main supply to system.
2. Alarm Valves: Include bypass check valve and retarding chamber drain-line connection.

3.7 SPRINKLER INSTALLATION

A. Install sprinklers in suspended ceilings in center of narrow dimension of acoustical ceiling panels.

3.8 IDENTIFICATION

A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13.

B. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.9 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
3. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.
4. Energize circuits to electrical equipment and devices.
5. Coordinate with fire-alarm tests. Operate as required.

C. Sprinkler piping system will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

3.10 CLEANING

A. Clean dirt and debris from sprinklers.

B. Remove and replace sprinklers with paint other than factory finish.

3.11 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain specialty valves.

3.12 PIPING SCHEDULE

A. Piping between Fire-Department Connections and Check Valves: Galvanized, standard-weight steel pipe with threaded ends; cast-iron threaded fittings; and threaded joints.

B. Sprinkler specialty fittings may be used, downstream of control valves, instead of specified fittings.

C. Standard-pressure, wet-pipe sprinkler system, NPS 1 and smaller, shall be the following:

1. Standard-weight, black-steel pipe with threaded ends; uncoated, gray-iron threaded fittings; and threaded joints.

D. Standard-pressure, wet-pipe sprinkler system, NPS 1-1/4 to NPS 4, shall be one of the following:

1. Standard-weight, black-steel pipe with roll-grooved ends; uncoated, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.
2. Standard-weight, black-steel pipe with plain ends; steel welding fittings; and welded joints.
3. Thinwall Schedule 10, black-steel pipe with roll-grooved ends; uncoated, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.

E. Standard-pressure, wet-pipe sprinkler system, NPS 5 and larger, shall be one of the following:

1. Standard-weight, black-steel pipe with roll-grooved ends; uncoated, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.
2. Standard-weight, black-steel pipe with plain ends; steel welding fittings; and welded joints.
3. Thinwall Schedule 10, black-steel pipe with roll-grooved ends; uncoated, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.
4. Thinwall Schedule 10, black-steel pipe with plain ends; welding fittings; and welded joints.

3.13 SPRINKLER SCHEDULE

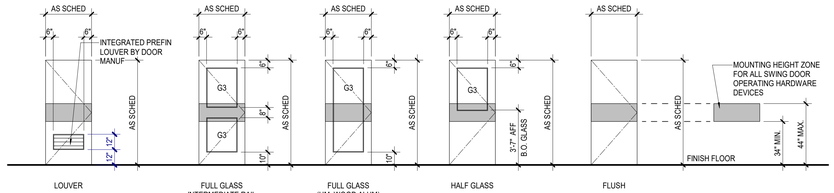
A. Use sprinkler types in subparagraphs below for the following applications:

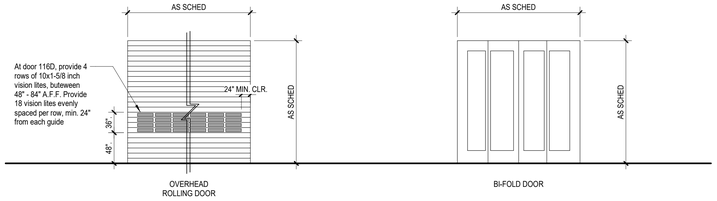
1. Fire Station: Quick response concealed sprinklers.

B. Provide sprinkler types in subparagraphs below with finishes indicated.

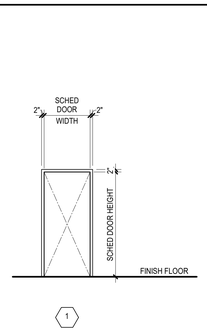
1. Concealed Sprinklers: Color and finish of all corrosion-resistant sprinklers shall be as approved by Architect.

END OF SECTION 211313





DOOR PANEL ELEVATION TYPES
SCALE: 1/4" = 1'-0"



DOOR FRAME ELEVATION TYPES
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE

MARK	DOOR PANEL OPENING PAIR/SING	SIZE W	SIZE H	ELEV.	MATL	DOOR FRAME ELEV.	DOOR FRAME MATL.	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	H.W.	FIRE RATING LABEL	REMARKS
101A	SING	3'-0"	7'-0"	FG	ALUM		ALUM	18 / A8.2	19 / A8.2	15 / A8.2	1.0		CARD READER, PANIC/PUSH
101B	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	10.0		CARD READER
102A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	17.0		
103A	SING	3'-0"	7'-0"	HG	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	15.0		
106A	SING	3'-0"	7'-0"	HG	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	20.0		
106B	SING	3'-0"	7'-0"	FG	ALUM		ALUM	2 / A8.2	19 / A8.2	15 / A8.2	1.0		CARD READER, PANIC/PUSH
106C	SING	6'-0"	7'-0"	ORD	STL		STL	28 / A8.3	25 / A8.3	15 / A8.2	25.0		MANUAL OPERATION
107A	SING	3'-0"	7'-0"	HG	HM	1	HM	2 / A8.2	3& 4 / A8.2	5 / A8.2	2.0		CARD READER, PANIC/PUSH
108A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	17.0		
109A	SING	3'-0"	7'-0"	F	HM	1	HM	2 / A8.2	3& 4 / A8.2	5 / A8.2	3.0		PANIC/PUSH
110A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	3.0		
110B	SING	3'-0"	7'-0"	HG	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	3.0		
111A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	11.0		
112A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	14.0		
113A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	11.0		
114A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	13.0		
115A	SING	3'-0"	7'-0"	FG	ALUM		ALUM	8 / A8.3	9 / A8.3	20 / A8.3	16.0		CARD READER
115B	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	3.0		
116A	SING	3'-0"	7'-0"	F	HM	1	HM	2 / A8.2	3& 4 / A8.2	5 / A8.2	4.0		PANIC/PUSH
116B	SING	3'-0"	7'-0"	HG	HM	1	HM	2 / A8.2	3& 4 / A8.2	5 / A8.2	2.0		CARD READER
116C	PAIR	6'-0"	7'-8"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	6.0		
116D	SING	28'-0"	14'-0"	ORD	STL		STL	28 / A8.3	25 / A8.3	15 / A8.2	25.0		AUTOMATIC
116E	PAIR	14'-0"	14'-0"	BIF	STL		STL	19 / A8.3	19 / A8.3	19 / A8.3	25.0		
116F	PAIR	14'-0"	14'-0"	BIF	STL		STL	19 / A8.3	19 / A8.3	19 / A8.3	25.0		MANUAL OPERATION
117A	SING	6'-0"	7'-0"	ORD	STL		STL	28 / A8.3	25 / A8.3	15 / A8.2	25.0		
118A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	7.0		
119A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	4.0		
120A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	9.0		
121A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	5.0		
122A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	5.0		
124A	SING	3'-0"	7'-0"	F	HM	1	HM	2 / A8.2	3& 4 / A8.2	5 / A8.2	5.0		
201A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	21.0	1 HR	
201B	SING	3'-0"	7'-0"	FG	HM	1	HM	2 / A8.2	4 / A8.2	5 / A8.2	22.0		
203A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	23.0		
204A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	23.0	1 HR	
205A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	17.0		
207A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	23.0		
209A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	21.0	1 HR	
209B	SING	3'-0"	7'-0"	FG	HM	1	HM	2 / A8.2	4 / A8.2	5 / A8.2	22.0		
209C	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	24.0		
210A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	21.0	1 HR	
211A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	21.0	1 HR	
212A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	19.0		
213A	SING	3'-0"	7'-0"	HG	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	20.0		
214A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	17.0		
215A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	12.0		
216A	SING	3'-0"	7'-0"	F	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	11.0		
217A	SING	3'-0"	7'-0"	F	HM	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	12.0		
218A	SING	3'-0"	7'-0"	FG	WS	1	HM	3 / A8.3	4 / A8.3	5 / A8.3	18.0		
221A	SING	3'-0"	7'-0"	FG	ALUM	1	HM	3 / A8.2	4 / A8.2	5 / A8.2	9.0		

DOOR SCHEDULE REMARKS

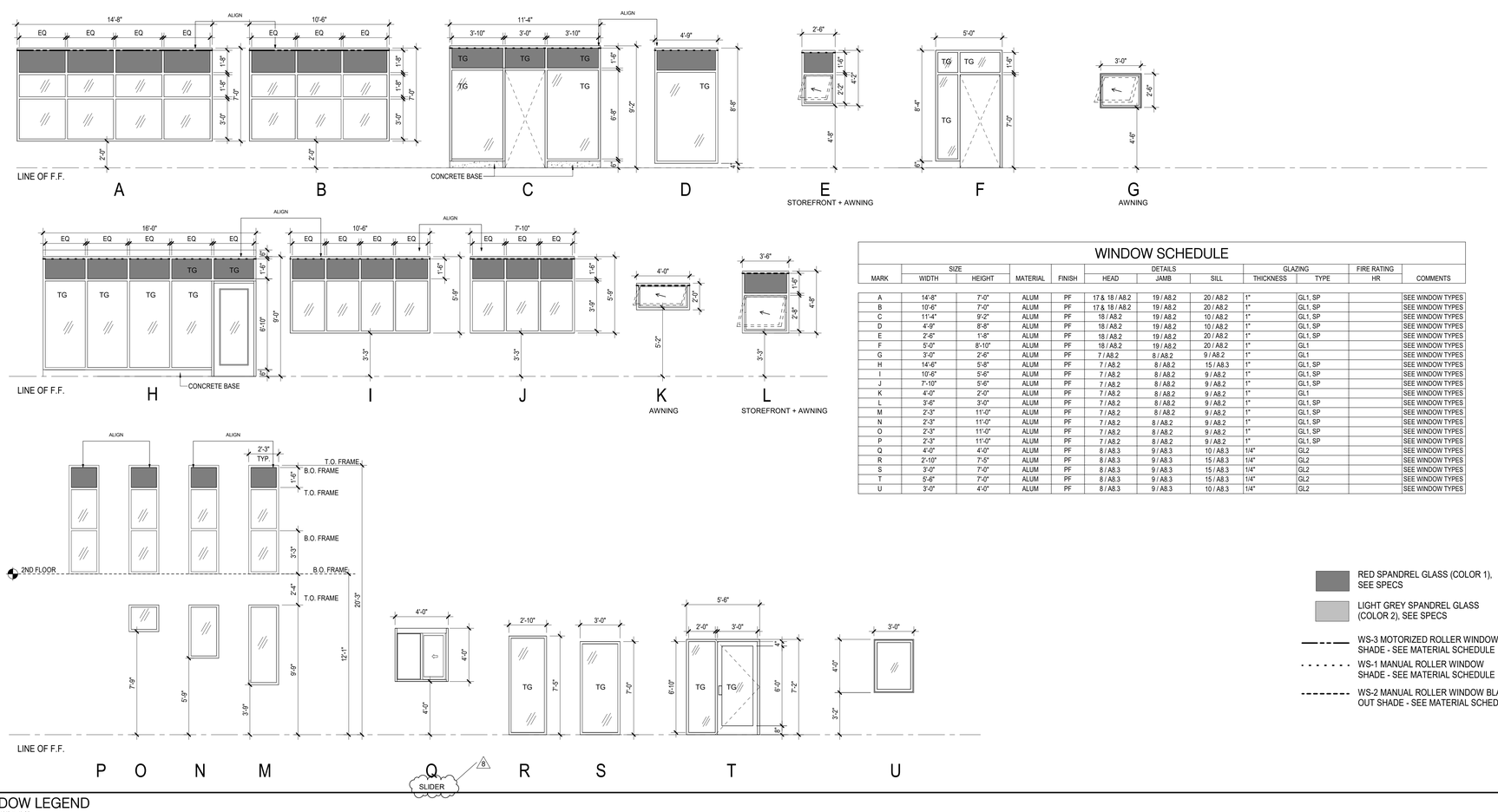
A. PANIC EXIT HARDWARE
B. NOT AN ENTRY DOOR, EXIT ONLY DOOR WITH LOCKING OPERABLE HARDWARE ON SWING-OUT SIDE OF DOOR
C. NO LOCKING HARDWARE
D. ELEC. DOOR OPENER
E. ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER
F. ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON
G. ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY
H. KEYED REMOVABLE CENTER MULLION
I. CENTER ASTRAGAL
J. 180 DEGREE SWING
K. CONT. HINGE
L. WEATHER-STRIP SEAL
M. FIRE SMOKE SEAL
N. SOUND SEAL
O. PEEP HOLE
P. DOOR BUZZER
Q. DOOR CHIME ON OPEN
R. MANUAL HOLD-OPEN
S. MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM
T. MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM
U. INSULATED DOOR
V. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED
W. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMLBY. THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF.
X. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED
Y. MANUAL PUSH-UP OPERATION
Z. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY
AA. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR
BB. ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY
CC. PANIC EXIT PUSH-BUTTON ON ONE SIDE OF DOOR ONLY
DD. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION
EE. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION
FF. FAIL SAFE IN OPEN POSITION
GG. FAIL SAFE IN CLOSED POSITION
HH. MAXIMUM OCCUPANCY SIGNAGE NEAR DOOR
II. SIGNAGE ON DOOR TO READ "NOT AN EXIT"

DOOR GENERAL NOTES

A. THE FLOOR OR LANDING SHALL NOT BE MORE THAN 1/2 INCH LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN ONE UNIT VERTICAL TO 2 UNITS HORIZONTAL.

B. MAXIMUM OPERATING FORCE SHALL BE 5 POUNDS.

C. DOOR HARDWARE SHALL BE OPERABLE WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE.



WINDOW SCHEDULE

MARK	SIZE WIDTH	SIZE HEIGHT	MATERIAL	FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	GLAZING THICKNESS	GLAZING TYPE	FIRE RATING HR	COMMENTS
A	14'-8"	7'-0"	ALUM	PF	17 & 18 / A8.2	19 / A8.2	20 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
B	10'-6"	7'-0"	ALUM	PF	17 & 18 / A8.2	19 / A8.2	20 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
C	11'-4"	9'-2"	ALUM	PF	18 / A8.2	19 / A8.2	10 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
D	4'-9"	8'-8"	ALUM	PF	18 / A8.2	19 / A8.2	10 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
E	2'-6"	1'-8"	ALUM	PF	18 / A8.2	19 / A8.2	20 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
F	5'-0"	8'-10"	ALUM	PF	18 / A8.2	19 / A8.2	20 / A8.2	1"	GL1		SEE WINDOW TYPES
G	3'-0"	2'-6"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1		SEE WINDOW TYPES
H	14'-6"	5'-8"	ALUM	PF	7 / A8.2	8 / A8.2	15 / A8.3	1"	GL1, SP		SEE WINDOW TYPES
I	10'-6"	5'-6"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
J	7'-10"	5'-6"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
K	4'-0"	2'-0"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1		SEE WINDOW TYPES
L	3'-6"	4'-8"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
M	2'-3"	11'-0"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
N	2'-3"	11'-0"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
O	2'-3"	11'-0"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
P	2'-3"	11'-0"	ALUM	PF	7 / A8.2	8 / A8.2	9 / A8.2	1"	GL1, SP		SEE WINDOW TYPES
Q	4'-0"	4'-0"	ALUM	PF	8 / A8.3	9 / A8.3	10 / A8.3	1/4"	GL2		SEE WINDOW TYPES
R	2'-10"	7'-5"	ALUM	PF	8 / A8.3	9 / A8.3	15 / A8.3	1/4"	GL2		SEE WINDOW TYPES
S	3'-0"	7'-0"	ALUM	PF	8 / A8.3	9 / A8.3	15 / A8.3	1/4"	GL2		SEE WINDOW TYPES
T	5'-6"	7'-0"	ALUM	PF	8 / A8.3	9 / A8.3	15 / A8.3	1/4"	GL2		SEE WINDOW TYPES
U	3'-0"	4'-0"	ALUM	PF	8 / A8.3	9 / A8.3	10 / A8.3	1/4"	GL2		SEE WINDOW TYPES

RED SPANDREL GLASS (COLOR 1), SEE SPECS
LIGHT GREY SPANDREL GLASS (COLOR 2), SEE SPECS
WS-3 MOTORIZED ROLLER WINDOW SHADE - SEE MATERIAL SCHEDULE
WS-1 MANUAL ROLLER WINDOW SHADE - SEE MATERIAL SCHEDULE
WS-2 MANUAL ROLLER WINDOW BLACK-OUT SHADE - SEE MATERIAL SCHEDULE

WINDOW SCHED COLUMN REFERENCE GUIDE

1. SYMBOL MARK: ALPHABETICAL DESIGNATION ASSIGNED TO SPECIFIC WINDOW AS SHOWN IN ELEVATION.
2. SIZE: OVERALL WIDTH AND HEIGHT OF WINDOW IN FEET AND INCHES.
3. MATERIAL: INDICATES MATERIAL FROM WHICH FRAME IS CONSTRUCTED, I.E., HM - HOLLOW METAL, WD - WOOD, AL - ALUMINUM, ETC.
4. GLASS: DESIGNATES TYPE OF GLASS TO BE INSTALLED IN WINDOW, I.E., TG - TEMPERED GLASS, LAM - LAMINATED GLASS, WGL - WIRE GLASS, INSUL - INSULATING GLASS, ETC.
5. DETAILS: REFERENCE NUMBERS FOR SECTIONS AS CONDITIONS EXIST AT THE WALL, SILL, OR HEAD OF FRAMES WITH ANY UNUSUAL DETAIL REFERENCED UNDER SEPARATE HEADING 5d.
6. WINDOW FRAME FIRE RATING: DESIGNATES ALPHABETICAL FIRE RESISTANCE RATING CLASSIFICATION LABEL REQUIRED FOR WINDOW FRAME WITH TIME PERIOD REQUIRED IN HOURS.
7. REMARKS: REFERENCES SPECIAL, UNUSUAL OR ABSTRACT CONDITIONS WHICH EXIST AND ARE NOT COVERED IN SCHEDULE ITEMS 1 THRU 6 REFER TO REMARKS REFERENCE SCHEDULE FOR NUMERICAL DESIGNATIONS.

WINDOW NOTES:

1. PROVIDE NAIL FIN ADAPTER FOR ALL ALUMINUM WINDOWS.
2. PROVIDE PENETRATION FLASHINGS AT ALL EXTERIOR OPENINGS.

GLAZING TYPES:

TYPE **GL1**: INSULATED GLASS (EXTERIOR): ONE-INCH SEALED INSULATED UNIT CONSISTING OF AN EXTERIOR LITE OF 1/4" LOW-E TINTED TEMPERED FLOAT GLASS, 1/2" GAS FILLED AIR SPACE, AND 1/4" CLEAR TEMPERED FLOAT GLASS INTERIOR LITE

TYPE **GL2**: CLEAR TEMPERED GLASS: 1/4" CLEAR TEMPERED FLOAT GLASS

TYPE **SP**: CERAMIC COATED SPANDREL GLASS (EXTERIOR); ONE-INCH INSULATING SPANDREL UNIT CONSISTING OF 1/4" CLEAR, 1/2" AIR SPACE AND 1/4" CLEAR WITH SPANDREL COLOR TO BE SELECTED FROM MANUFACTURERS FULL CUSTOM COLOR RANGE.

MATERIAL / FINISH ABBREVIATIONS

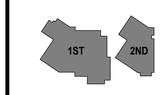
ALUM	=	ALUMINUM
AN	=	ANODIZED
PF	=	PRE-FINISHED FACTORY FINISH
HM	=	HOLLOW METAL
PTD	=	PAINTED
STL	=	STEEL
TG	=	TEMPERED GLAZING
WV	=	WOOD, VENEER
WS	=	WOOD, SOLID CORE
Y	=	YES

WINDOW LEGEND
SCALE: 1/4" = 1'-0"

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ARCHITECT PBK Architects, Inc.
PBK.com
SAN LUIS OBISPO
408 Higuera Street, Ste 100
San Luis Obispo, CA 93401
805-329-3076

FIRE STATION #44
COASTSIDE FIRE PROTECTION DISTRICT
501 STETSON STREET
MOSS BEACH, CA 94038
PLAN CHECK 02 RESPONSE

PLAN CHECK 02 RESPONSE



KEY PLAN
PLAN NORTH
TRUE NORTH

CLIENT
COASTSIDE FIRE PROTECTION DISTRICT
PROJECT NUMBER
230137
DATE 03/13/2026
DRAWN BY: KF/OS CHKED BY: AD

REVISIONS

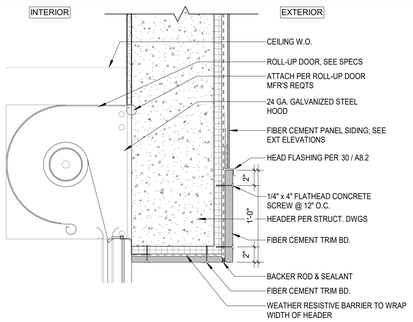
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1	PLANCHECK #1 RESPONSE	12/11/25
6	ADDENDUM 6	10/23/2026
8	ADDENDUM 10	11/6/2026

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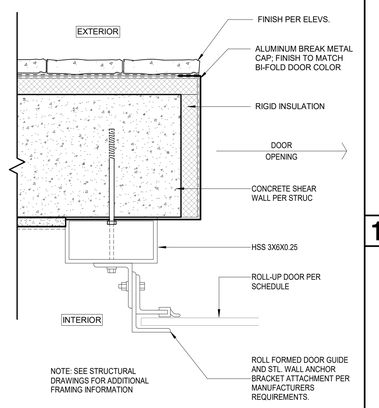
DOOR & WINDOW SCHEDULES

A8.1

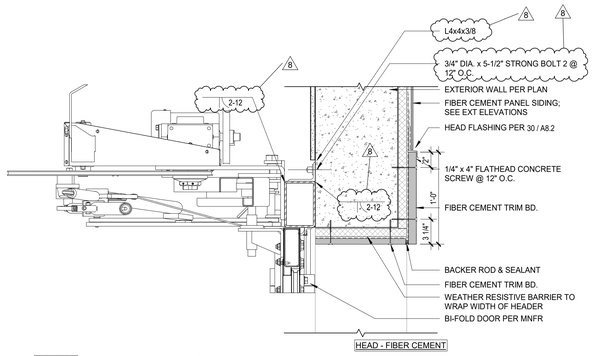
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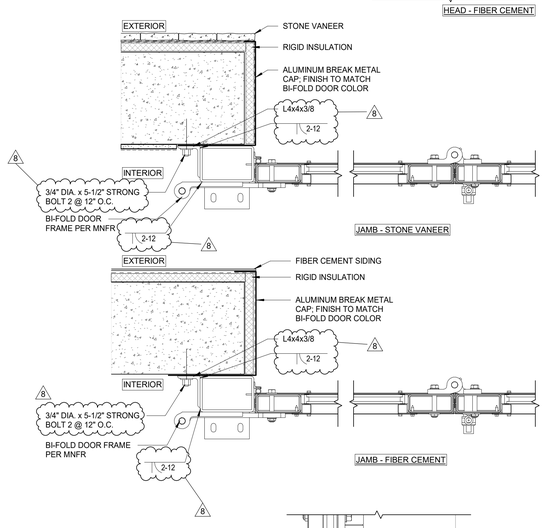


28 ROLL-UP DOOR HEAD - FIBER CEMENT W/ TRIM
SCALE: 1 1/2" = 1'-0"

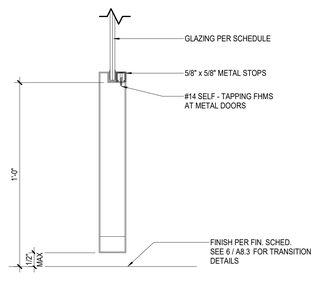


25 ROLL-UP DOOR JAMB
SCALE: 3" = 1'-0"

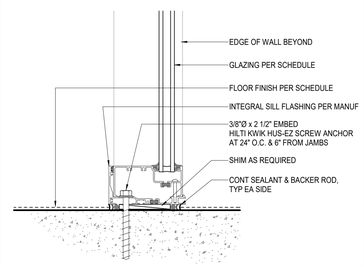




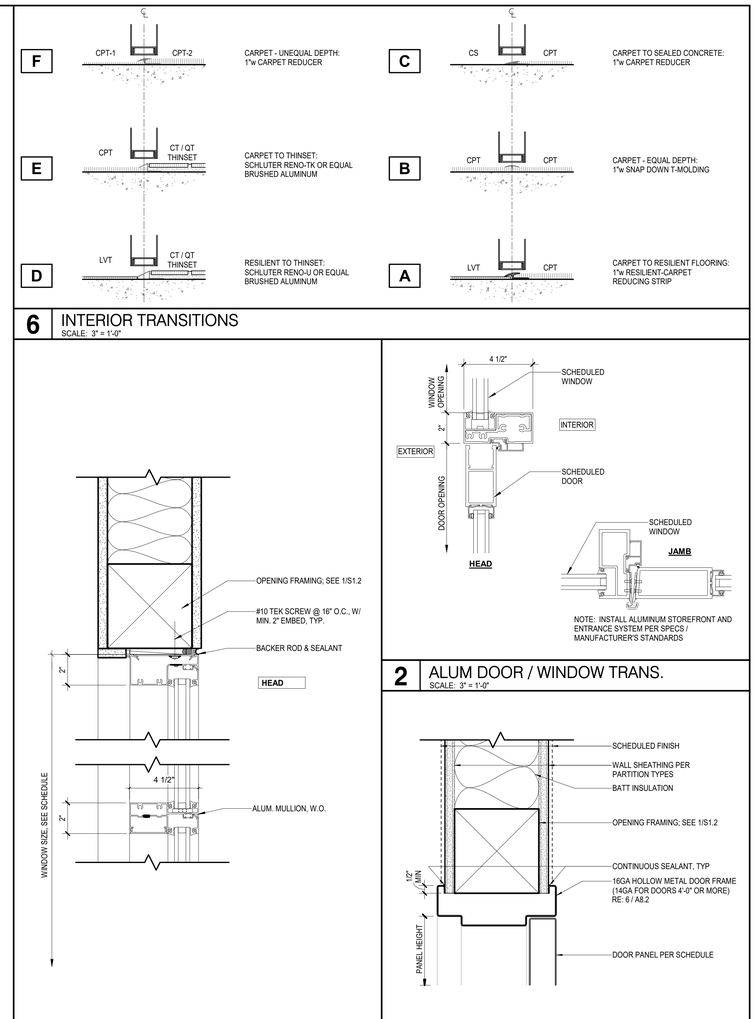
19 BI-FOLDING DOOR
SCALE: 1 1/2" = 1'-0"



20 INTERIOR ALUM DOOR SILL
SCALE: 3" = 1'-0"



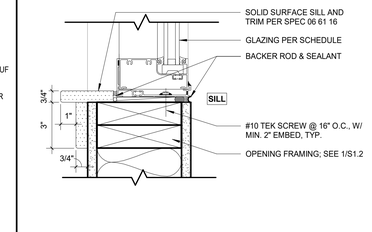
15 ALUM WINDOW SILL
SCALE: 3" = 1'-0"



6 INTERIOR TRANSITIONS
SCALE: 3" = 1'-0"

8 INTERIOR ALUM DR/WDW HEAD
SCALE: 3" = 1'-0"

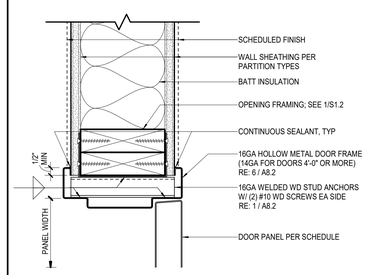
9 INTERIOR ALUM DR/WDW JAMB
SCALE: 3" = 1'-0"



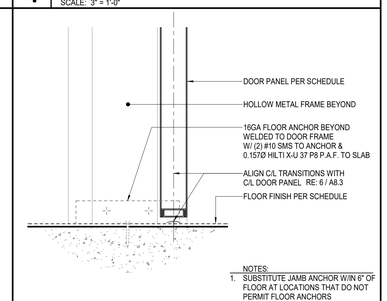
10 INTERIOR ALUM WINDOW SILL
SCALE: 3" = 1'-0"

2 ALUM DOOR / WINDOW TRANS.
SCALE: 3" = 1'-0"

3 INTERIOR HM DOOR HEAD
SCALE: 3" = 1'-0"



4 INTERIOR HM DOOR JAMB
SCALE: 3" = 1'-0"



5 INTERIOR HM DOOR THRESHOLD
SCALE: 3" = 1'-0"

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PBK.com
SAN LUIS OBISPO
408 Higuera Street, Ste 100
San Luis Obispo, CA 93401
805-329-3076

FIRE STATION #44
COASTSIDE FIRE PROTECTION DISTRICT
501 STETSON STREET
MOSS BEACH, CA 94038
PLAN CHECK 02 RESPONSE

PLAN CHECK 02 RESPONSE



KEY PLAN
PLAN NORTH
TRUE NORTH

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REVISIONS

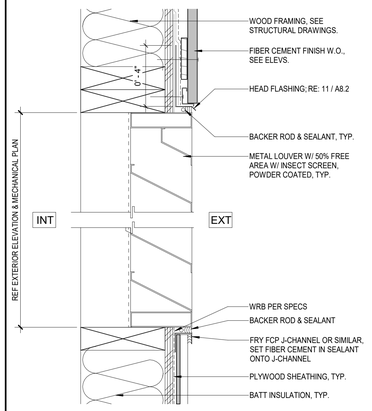
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4	NON-PC REVISION	03/13/26
8	ADDENDUM 10	11/6/2026

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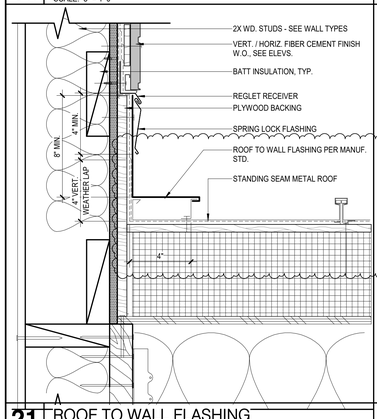
DOOR & WINDOW DETAILS

A8.3

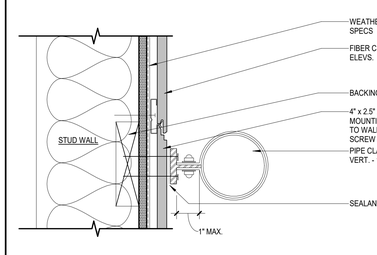
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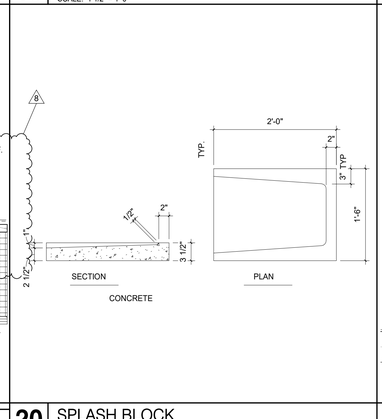
18 WALL LOUVER @ STUD WALL
SCALE: 3" = 1'-0"



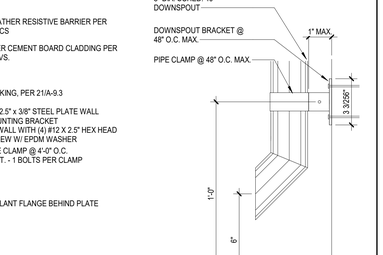
21 ROOF TO WALL FLASHING
SCALE: 3" = 1'-0"



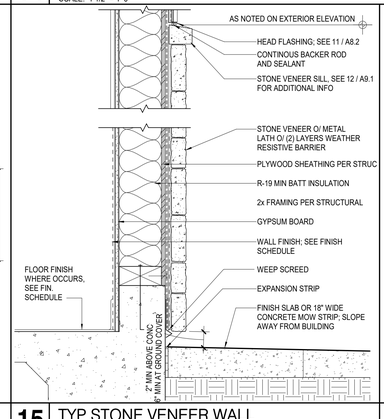
19 PIPE ROOF VENT
SCALE: 1 1/2" = 1'-0"



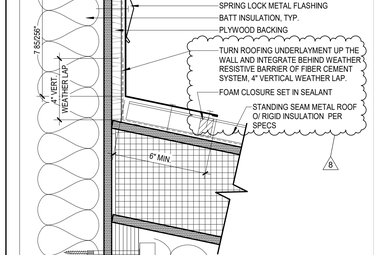
20 SPLASH BLOCK
SCALE: 1" = 1'-0"



14 HIGH EAVE
SCALE: 1 1/2" = 1'-0"

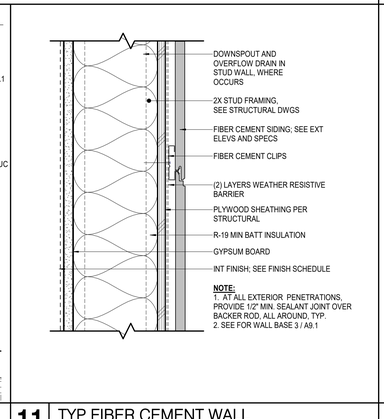


15 TYP STONE VENEER WALL
SCALE: 1 1/2" = 1'-0"

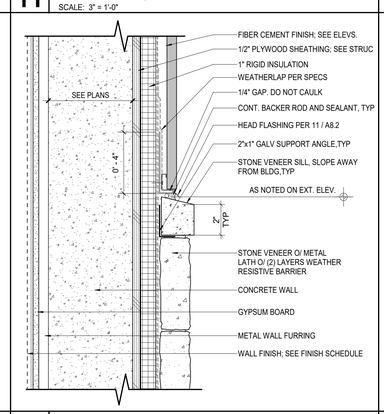


16 SPLASH PAN
SCALE: 1" = 1'-0"

17 HIGH EAVE AT WALL
SCALE: 3" = 1'-0"

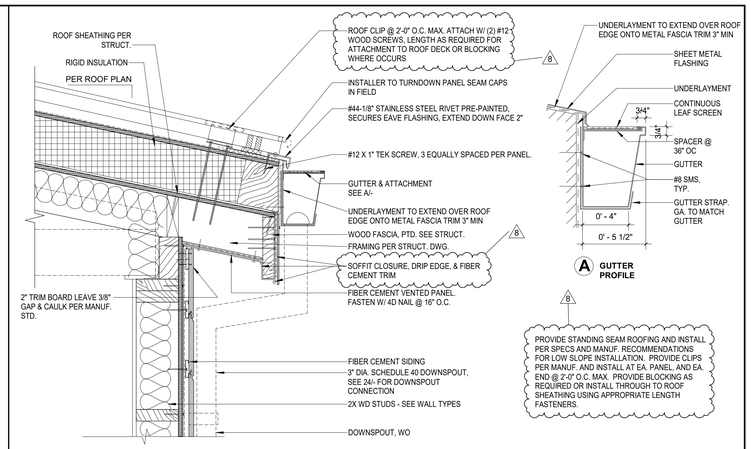


11 TYP FIBER CEMENT WALL
SCALE: 3" = 1'-0"

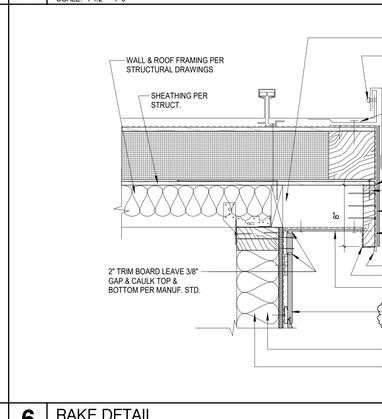


12 STONE VENEER WAINSCT
SCALE: 3" = 1'-0"

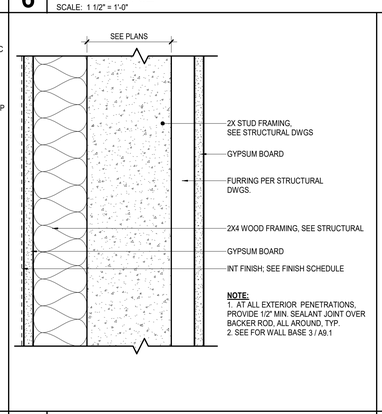
5 LOW EAVE / GUTTER
SCALE: 1 1/2" = 1'-0"



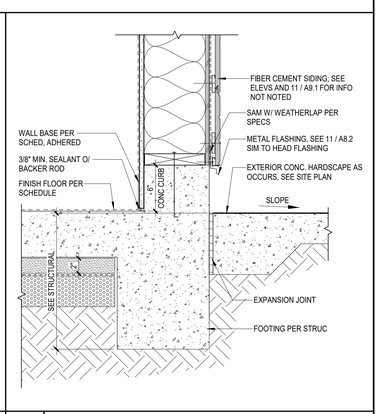
6 RAKE DETAIL
SCALE: 1 1/2" = 1'-0"



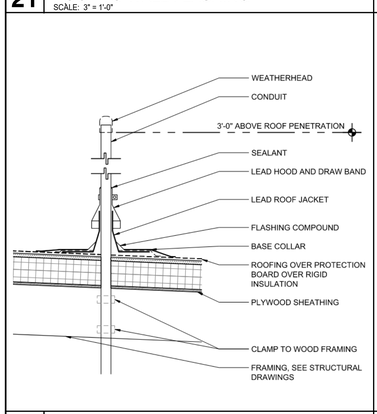
7 APP BAY WALL
SCALE: 3" = 1'-0"



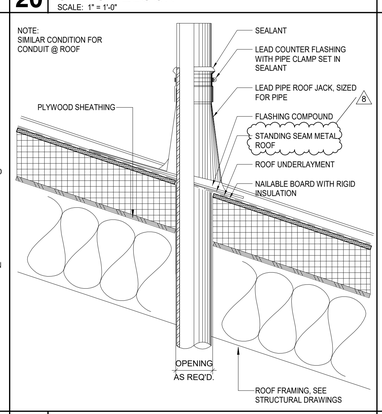
3 FIBER CEMENT WALL BASE
SCALE: 1 1/2" = 1'-0"



22 CONDUIT AT ROOF
SCALE: 1" = 1'-0"

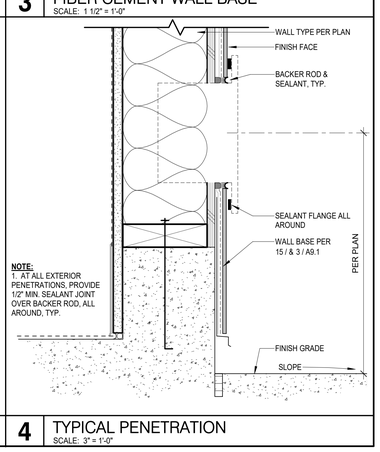


23 PIPE ROOF VENT
SCALE: 1 1/2" = 1'-0"



24 EXTERIOR - DRAIN SUPPORT
SCALE: 3" = 1'-0"

4 TYPICAL PENETRATION
SCALE: 3" = 1'-0"



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PBK.com
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COASTSIDE FIRE PROTECTION DISTRICT

PLAN CHECK 02 RESPONSE

1ST 2ND
KEY PLAN
PLAN NORTH TRUE NORTH

CLIENT
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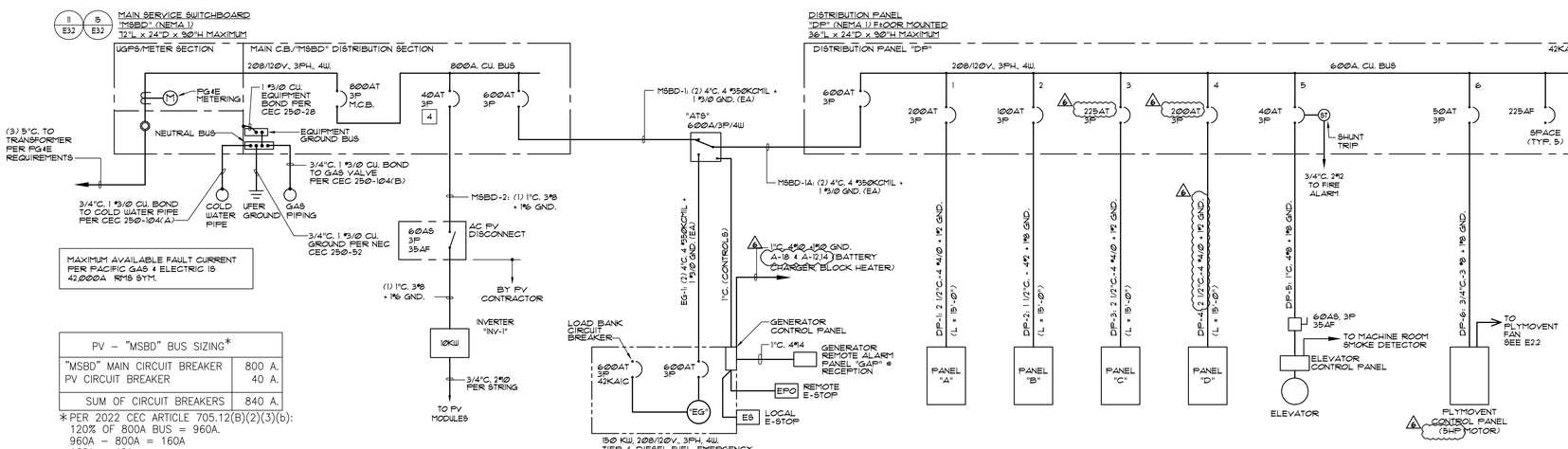
#	DESCRIPTION	DATE
6	ADDENDUM 6	10/23/2026
8	ADDENDUM 10	11/6/2026

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EXTERIOR DETAILS

A9.1

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PV – "MSBD" BUS SIZING*	
"MSBD" MAIN CIRCUIT BREAKER	800 A.
PV CIRCUIT BREAKER	40 A.
SUM OF CIRCUIT BREAKERS	840 A.

*PER 2022 CEC ARTICLE 705.12(B)(2)(3)(b):
120% OF 800A BUS = 960A.
960A – 800A = 160A
160A > 40A.

SINGLE LINE DIAGRAM NOTES

1. THE MAIN CIRCUIT BREAKER SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS THE SERVICE DISCONNECT PER N.E.C. 230.70(B).
2. PER SECTION 250.52(A)(1) METAL UNDERGROUND WATER PIPE - CONNECTION TO THE INTERIOR METAL WATER PIPING SHALL BE MADE WITHIN 5 FEET FROM POINT OF ENTRANCE.
3. PROVIDE AND INSTALL SIGNAGE FOR AVAILABLE FAULT CURRENT PER CEC 110.24. PROVIDE SELF-ADHESIVE VINYL LABEL TO AFFIX TO ELECTRICAL EQUIPMENT TO WARN OF ARC FLASH HAZARDS. THE THE LABEL SHALL BE LOCATED ON THE EQUIPMENT TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT. CONTRACTOR TO PLACE COMPANY NAME AND CONTACT PHONE NUMBER ON SIGN. THIS DETAIL IS FOR REFERENCE ONLY.
4. CONTRACTOR TO ENSURE THAT THE UTILITY (PG&E) SERVICE REPORT SHALL BE AVAILABLE ON SITE AT ALL TIMES FOR BUILDING INSPECTION TO VERIFY.

CONSTRUCTION NOTES

1. ALL EQUIPMENT SHALL BE LISTED BY UL, OR A COUNTY APPROVED THIRD PARTY TESTING FACILITY.
2. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS. PROVIDE ADDITIONAL GROUND RODS, SPACED 6'-0" APART, TO MEET THIS REQUIREMENT. SHEET E3.2, DETAIL #1 FOR ADDITIONAL REQUIREMENTS.
3. GROUND FAULT PROTECTION OF EQUIPMENT SHALL BE PROVIDED FOR SOLIDLY GROUNDED WYE ELECTRIC SERVICES OF MORE THAN 150 VOLTS TO GROUND BUT NOT EXCEEDING 1000 VOLTS PHASE-TO-PHASE FOR EACH SERVICE DISCONNECT RATED 1000 AMPERES OR MORE. GFPD IS REQUIRED TO HAVE PERFORMANCE TESTING AS DESCRIBED IN 230.95(C), 2019 CEC.
4. PV CIRCUIT BREAKER TO BE LOCATED AT THE OPPOSITE END OF THE BUS FROM THE MAIN CIRCUIT BREAKER.

3

⚠WARNING

MAXIMUM AVAILABLE FAULT CURRENT:
42,000 SYMMETRICAL RMS AMPERES
DATE: MM/DD/YYYY

XYZ ELECTRIC 1-800-123-4567

APPLICABLE CODES
ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, AND THE REQUIREMENTS OF THE CALIFORNIA CODE OF REGULATIONS (C.C.R.), TITLE 24, INCLUSIVE OF:
2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R.
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.

PANEL "A" — VOLTAGE: 208/120V-4-WIRE; LOCATION: ELEC. ROOM; MAIN BREAKER: M.L.O.; BUS SIZE COPPER: 200A.; SCA: SERIES; MOUNT: SURFACE; ENTRY: BOTTOM

DESCRIPTION	CKT	BKR	P	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMPS
RMS 104, 103 RECEPTACLES	1	20	1		3			540			
RMS 104, 103 RECEPTACLES	3	20	1		3				540		
LOBBY 101 & RR 102 REC.	5	20	1		5					900	
RMS 104, 103 PLUG LOAD	7	20	1		3			540			
HALLWAY 110 RECEPTACLES	9	20	1		2				360		
HALLWAY 110 RECEPTACLES	11	20	1		3					540	
FITNESS 106 TREADMILL	13	20	1		1			500			
FITNESS 106 BIKE	15	20	1		1				500		
RMS 117, 115 RECEPTACLES	17	20	1		4					720	
RMS 117, 113 RECEPTACLES	19	20	1		3			540			
RMS 117 RECEPTACLES	21	20	1		4				720		
TELECOM BACKBOARD REC.	23	20	1		4					720	
APP. BAY RECEPTACLES	25	20	1		3			540			
APP. BAY RECEPTACLES	27	20	1		3				540		
WH-1	29	20	1		1					180	
FITNESS 106 RECEPTACLES	31	20	1		2			360			
LOW LEVEL NIGHT LIGHTS	33	20	1	9					27		
ELEVATOR SHAFT LTS & REC	35	20	1	2	2					420	
FITNESS 106 SUANA	37	20	1		1			1200			
EM POLE LIGHTS	39	20	1	3					1227		
EM POLE LIGHTS	41	20	1	3						1227	
ELEVATOR CAB LIGHTS	43	20	1	1				64			
ELEVATOR MACH. ROOM	45	20	1		1				180		
ELEVATOR VIDEO	47	20	1			1				500	
SPARE	49	20	1								
SPARE	51	20	1								
SPARE	53	20	1								
SUB TOTAL VOLTIAMPS								4284	4094	5207	
APP. BAY CORD REEL	2	20	1		1			750			
APP. BAY CORD REEL	4	20	1		1				750		
APP. BAY CORD REEL	6	20	1		1					750	
ROOF RECEPTACLE	8	20	1		1			180			
RM 122 GARBAGE DISPOSAL	10	30	1			1			1920		
BLOCKER HEATER	12	20	2			1				1500	
W/CKT. 42	14	—						1500			
TC/AQUA STAT/CP-1	16	20	1			3			150		
GEN. BATTERY CHARGER	18	20	1			1				1200	
RMs 101 - 117 LIGHTS	20	20	1	34				981			
RM 115 GARBAGE DISPOSAL	22	30	1			1			1920		
ROLL-UP DOOR "RUD-1"	24	30	1	1		1				1680	
RM 115 COFFEE MAKER	26	20	1		1			1200			
LIGHTING CONTROL PANEL	28	20	1			1			500		
GATE OPERATOR	30	20	1			1				500	
FUEL DISPENSING SYSTEM	32	20	1			1		360			
SHUNT TRIP	34										
DRINKING FOUNTAIN	36	20	1			1			180		
SLEV MACH RM REC & LITE	38	20	1	1	1			210			
FUEL MASTER PEDESTAL	40	20	1			1			360		
OVERFILL ALARM	42	20	1			2				200	
VEEDER-ROOT PANEL	44	20	1			1		360			
SPARE	46	20	1								
SPARE	48	20	1								
SPARE	50	20	1								
SPARE	52	20	1								
SPARE	54	20	1								
SUB TOTAL VOLTIAMPS								5541	5600	6010	
PANEL SUB TOTAL VOLTIAMPS								9825	9694	11217	
TOTAL LCL/PHASE								245	314	412	
TOTAL VOLTIAMPS								10070	10008	11629	
TOTAL AMPS/PHASE								84	83	97	

CONNECTED: 30736 VA; 25% OF MTR: VA; 25% OF LCL: 1023 VA; CALCULATED: 31759 VA = 88.15 AVERAGE AMPS

PANEL "B" — VOLTAGE: 208/120V-4-WIRE; LOCATION: ELEC. ROOM; MAIN BREAKER: M.L.O.; BUS SIZE COPPER: 100A.; SCA: SERIES; MOUNT: RECESSED; ENTRY: BOTTOM

DESCRIPTION	CKT	BKR	P	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMPS
* RMS 212,206-208,210,211 REC.	1	20	1			4		720			
RMS 212,206-208,210,211 REC.	3	20	1			4			720		
RMS 212,206-208,210,211 REC.	5	20	1			4				720	
WASHER	7	20	1			1		500			
DRYER	9	30	2			1			750		
W/CKT. 9	11	—	—							750	
* RMs 201, 203-205 RECEPT.	13	20	1			4		720			
RMs 201, 203-205 RECEPT.	15	20	1			3			540		
RMs 201, 203-205 RECEPT.	17	20	1			3				540	
RMs 212 & 213 RECEPT.	19	20	1			4		720			
* DAY ROOM WALL RECEPT.	21	20	1			2			360		
DAY ROOM WALL RECEPT.	23	20	1			3				540	
DAY ROOM FLOOR RECEPT.	25	20	1			2		360			
DAY ROOM FLOOR RECEPT.	27	20	1			3			540		
KITCHEN CONV. RECEPT.	29	20	1			4				720	
HOOD	31	20	1			1		180			
RANGE IGNITER	33	20	1			1			180		
FC2-1 - FC2-7, FC3-2	35	20	2				8			942	
W/CKT. 35	37	—	—					942			
RM 218 GARBAGE DISPOSAL	39	30	1				1		1920		
LOW LEVEL NIGHT LIGHTS	41	20	1	15						45	
SUB TOTAL VOLTIAMPS								4142	5010	4257	
RM 218 COFFEE MAKER	2	20	1			1		1200			
RM 218 DISH WASHER	4	20	1			1			1000		
RM 218 REFRIGERATOR	6	20	1			1				1000	
RM 218 FREEZER	8	20	1			1		1000			
SPARE	10	20	1								
SPARE	12	20	1								
SPARE	14	20	1								
SPARE	16	20	1								
SPARE	18	20	1								
SPARE	20	20	1								
SPARE	22	20	1								
SMOKE FIRE DAMPERS	24	20	1				5			125	
KITCHEN & STORAGE LTS	26	20	1	20				513			
APP BAY LIGHTS	28	20	1	22					836		
HALLWAY & DORM LIGHTS	30	20	1	36						638	
SPACE	32	—	—								
SPACE	34	—	—								
SPACE	36	—	—								
SPACE	38	—	—								
PERIMETER WALL LIGHTS	40	20	1	10					240		
BUILDING LTS & BOLLARDS	42	20	1	18						442	
SUB TOTAL VOLTIAMPS								2713	2076	2205	
PANEL SUB TOTAL VOLTIAMPS								6855	7086	6462	
TOTAL LCL/PHASE								128	269	281	
TOTAL VOLTIAMPS								6983	7355	6743	
TOTAL AMPS/PHASE								58	61	56	

CONNECTED: 20403 VA; 25% OF MTR: VA; 25% OF LCL: 878.5 VA; CALCULATED: 21082 VA = 58.52 AVERAGE AMPS

* = INDICATES ARC-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER.

PANEL "C" — VOLTAGE: 208/120V-4-WIRE; LOCATION: ELEC. ROOM; MAIN BREAKER: M.L.O.; BUS SIZE COPPER: 225A; SCA: SERIES; MOUNT: RECESSED; ENTRY: BOTTOM

DESCRIPTION	CKT	BKR	P	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMPS
FC1-1 - FC1-4	1	20	2			4		1321			
W/CKT. 1	3	—	—						1321		
UH-1 & UH-2	5	20	1			2				1512	
EF-1, EF-2, EF-3	7	20	1			3		1404			
HRU-1	9	80	3						7236		
W/CKT. 9	11	—	—							7236	
W/CKT. 9	13	—	—					7236			
HRU-2	15	40	3						3420		
W/CKT. 15	17	—	—							3420	
W/CKT. 15	19	—	—					3420			
HRU-3	21	40	3						3420		
W/CKT. 21	23	—	—							3420	
W/CKT. 21	25	—	—					3420			
FC3-1 / BS-1	27	20	2			2			358		
W/CKT. 27	29	—	—							358	
FC1-7	31	20	2			1		229			
W/CKT. 31	33	—	—						229		
FC2-1 - FC2-4, FC2-6	35	20	2			5				1217	
W/CKT. 35	37	—	—					1217			
FC1-6	39	20	2			1			333		
W/CKT. 39	41	—	—							333	
SUB TOTAL VOLTIAMPS								18247	16317	17496	
SCU-1/SFC-1	2	30	2			1		1560			
W/CKT. 2	4	—	—						1560		
SCU-2/SFC-2	6	30	2			1				1560	
W/CKT. 6	8	—	—					1560			
EF-11	10	15	3			1			936		
W/CKT. 10	12	—	—							936	
W/CKT. 10	14	—	—					936			
EF-1 - EF-5	16	20	1			5			216		
EF-7, EF-8, EF-9, EF-10	18	20	1			4				48	
EF-6, BF-1	20	20	1			2		192			
RM. 115 SHADES	22	20	1			1			100		
RM. 115 SHADES	24	20	1			1				100	
CS-1	26	20	1			3		500			
FC3-2, BS-2	28	20	2			2			250		
W/CKT. 28	30	—	—							250	
SPARE	32	20	1					250			
FC2-5, FC2-7, FC3-2	34	20	2			2			250		
W/CKT. 34	36	—	—							250	
SPARE	38	20	1								
UH-1	40	15	1			1			756		
UH-2	42	15	1			1				756	
SUB TOTAL VOLTIAMPS								4998	4068	3900	
PANEL SUB TOTAL VOLTIAMPS								23245	20385	21396	
TOTAL LCL/PHASE								0	252	252	
TOTAL VOLTIAMPS								23245	20637	21648	
TOTAL AMPS/PHASE								194	172	180	

CONNECTED: 65026 VA; 25% OF MTR: VA; 25% OF LCL: 0 VA; CALCULATED: 65026 VA = 180.49 AVERAGE AMPS

PANEL "D" — VOLTAGE: 208/120V-4-WIRE; LOCATION: ELEC. ROOM; MAIN BREAKER: M.L.O.; BUS SIZE COPPER: 200A.; SCA: SERIES; MOUNT: RECESSED; ENTRY: BOTTOM

DESCRIPTION	CKT	BKR	P	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMPS
PPE DRYER	1	30	3						3000		
W/CKT. 1	3	—	—							3000	
W/CKT. 1	5	—	—								
EXTRACTOR	7	20	2		1			1664			
W/CKT. 7	9	—	—						1664		
SPARE	11	20	1								
SPARE	13	20	1								
SPARE	15	20	1								
SPARE	17	20	1								
SPARE	19	20	1								
SPARE	21	20	1								
SPARE	23	20	1								
SPARE	25	20	1								
SPARE	27	20	1								
SPARE	29	20	1								
SPARE	31	20	1								
SPARE	33	20	1								
SPARE	35	20	1								
SPARE	37	20	1								
SPARE	39	20	1								
SPARE	41	20	1								
SUB TOTAL VOLTIAMPS								4664	4664	3000	
AIR COMPRESSOR	2	50	3			1			3036		
W/CKT. 18	4	—	—							3036	
W/CKT. 18	6	—	—						3036		
RM 119 - 122 RECEPTACLES	8	20	1		3			540			
RM 119 - 122 RECEPTACLES	10	20	1		3				540		
DRYER	12	30	2		1					2500	
W/CKT. 12	14	—	—					2500			
RMs 119 - 125 LIGHTS	16	20	1	16					403		
SHOP 124 PLUGMOLD	18	20	1			1				1920	
BI-FOLD DOOR #1	20	20	3					385			
W/CKT. 20	22	—	—						385		
W/CKT. 20	24	—	—							385	
BI-FOLD DOOR #2	26	20	3					385			
W/CKT. 26	28	—	—						385		
W/CKT. 26	30	—	—							385	
RELAY CABINET "TS-1"	32	20	1				1	180			
RELAY CABINET "RC-1"	34	20	1				1		180		
SPARE	36	20	1								
SPARE	38	20	1								
WASHER	40	20	1				1		1200		
TP-3	42	20	1							360	
SUB TOTAL VOLTIAMPS								7026	6129	8586	
PANEL SUB TOTAL VOLTIAMPS								11690	10793	11586	
TOTAL LCL/PHASE								96	401	186	
TOTAL VOLTIAMPS								11786	11194	11772	
TOTAL AMPS/PHASE								98	93	98	

CONNECTED: 34069 VA; 25% OF MTR: VA; 25% OF LCL: 100.75 VA; CALCULATED: 34170 VA = 94.85 AVERAGE AMPS

○ = INDICATES GROUND FAULT TYPE CIRCUIT BREAKER

MAIN SWITCHBRD "MSBD" — VOLTAGE: 208/120V-4-WIRE; LOCATION: ELEC. ROOM; MAIN BREAKER: 800A.; BUS SIZE COPPER: 800A.; SCA: 42 KAIC; MOUNT: FLOOR; ENTRY: TOP

DESCRIPTION	CKT	CB	P	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMPS
DISTRIBUTION PANEL "DP"	1	600	3			1		57325	54433	57032	
SOLAR	2	40	3			1		10608	10608	10608	
SUB TOTAL VOLTIAMPS								67933	65041	67640	
TOTAL AMPS/PHASE								566	542	564	

CONNECTED: 200613 VA; 25% OF MTR: 0 VA; 25% OF LCL: 0 VA; CALCULATED: 200613 VA = 556.85 AMPS; 556.85 ACTUAL AMPS

SWITCHBOARD "DP" — VOLTAGE: 208/120V-4-WIRE; LOCATION: ELEC. ROOM; MAIN BREAKER: 600A.; BUS SIZE COPPER: 600A.; SCA: 42 KAIC; MOUNT: FLOOR; ENTRY: TOP

DESCRIPTION	CKT	CB	P	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMPS
PANEL "A"	1	200	3				1	10070	10008	11629	
PANEL "B"	2	100	3				1	6983	7355	6743	
PANEL "C"	3	225	3				1	23245	20637	21648	
PANEL "D"	4	200	3				1	11786	11194	11772	
ELEVATOR	5	40	3				1	3140	3140	3140	
PLYMOVENT	6	50	3				1	2100	2100	2100	
SUB TOTAL VOLTIAMPS								57325	54433	57032	
TOTAL AMPS/PHASE								478	454	475	

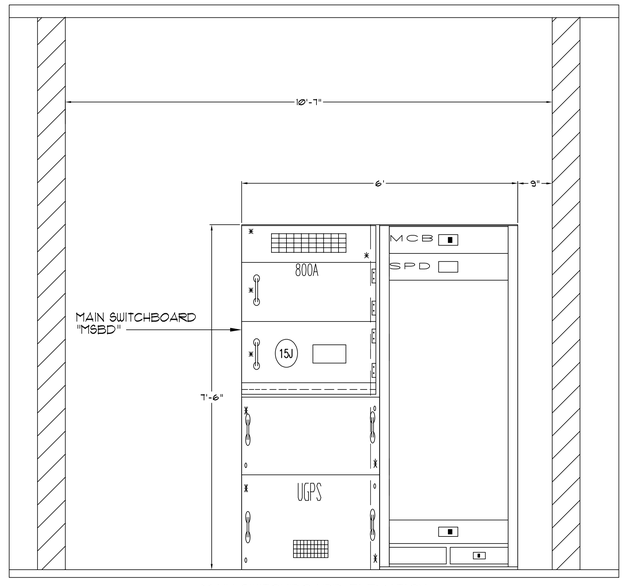
CONNECTED: 168789 VA; 25% OF MTR: 0 VA; 25% OF LCL: 0 VA; CALCULATED: 168789 VA = 468.51 AMPS; 468.51 ACTUAL AMPS

PV POWER SUMMARY

INVERTER	ARRAY #	BUILDING	NUMBER OF MODULES	STC Kw	PTC Kw	AC Kw	
INV-1	1	ROOF	16	8.8	6.6	6.39	
			16	8.8	6.6	6.39	17.8
			TOTAL MODULES	TOTAL STC Kw	TOTAL PTC Kw	TOTAL AC Kw	AC AMPS @ 208V

INVERTER

INVERTER	CONTINUOUS POWER OUTPUT (Kw)	CEC WEIGHTED EFFICIENCY(%)	AC MAXIMUM CONTINUOUS CURRENT (AMPS) AT 208V	MIN. OVERCURRENT PROTECTION PER CEC 690.10(B)	MAXIMUM DC INPUT VOLTAGE	AC INPUT VOLTAGE	MODULES PER STRING	MODULE Vmp	OPERATING VOLTAGE	MODULE Voc	MODULE TEMP. COEFFICIENT	MAXIMUM SYSTEM VOLTAGE
INV-1	10	97	27.8	34.8	600	208	8	41.55	332.4	49.59	0.26%	428.2



MAIN SWITCHBOARD ELEVATION
SCALE: 3/4" = 1'-0"

A&F ENGINEERING GROUP, INC.
9320 BASELINE RD., SUITE C, RANCHO CUCAMONGA, CA 91701
TEL. (909) 941-3008 FAX (909) 941-8251

PBK
ARCHITECT PBK Architects, Inc.
PBK.com
SAN LUIS OBISPO
1327 Archer Street, Suite 110
San Luis Obispo, CA 93401
805-329-3076

Not for permitting or construction

FIRE STATION #44
COASTSIDE FIRE PROTECTION DISTRICT
51 STETSON STREET
MOSS BEACH, CA 94038
100% CD SET

COASTSIDE FIRE PROTECTION DISTRICT
ESTD 2009
BID SET

KEY PLAN
PLAN NORTH
TRUE NORTH

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. SYFFUS
No. E17229
6/30/26
STATE OF CALIFORNIA

CLIENT
COASTSIDE FIRE PROTECTION DISTRICT
PROJECT NUMBER
230137
DATE 2/14/2025
DRAWN BY: LS CHKED BY: RES

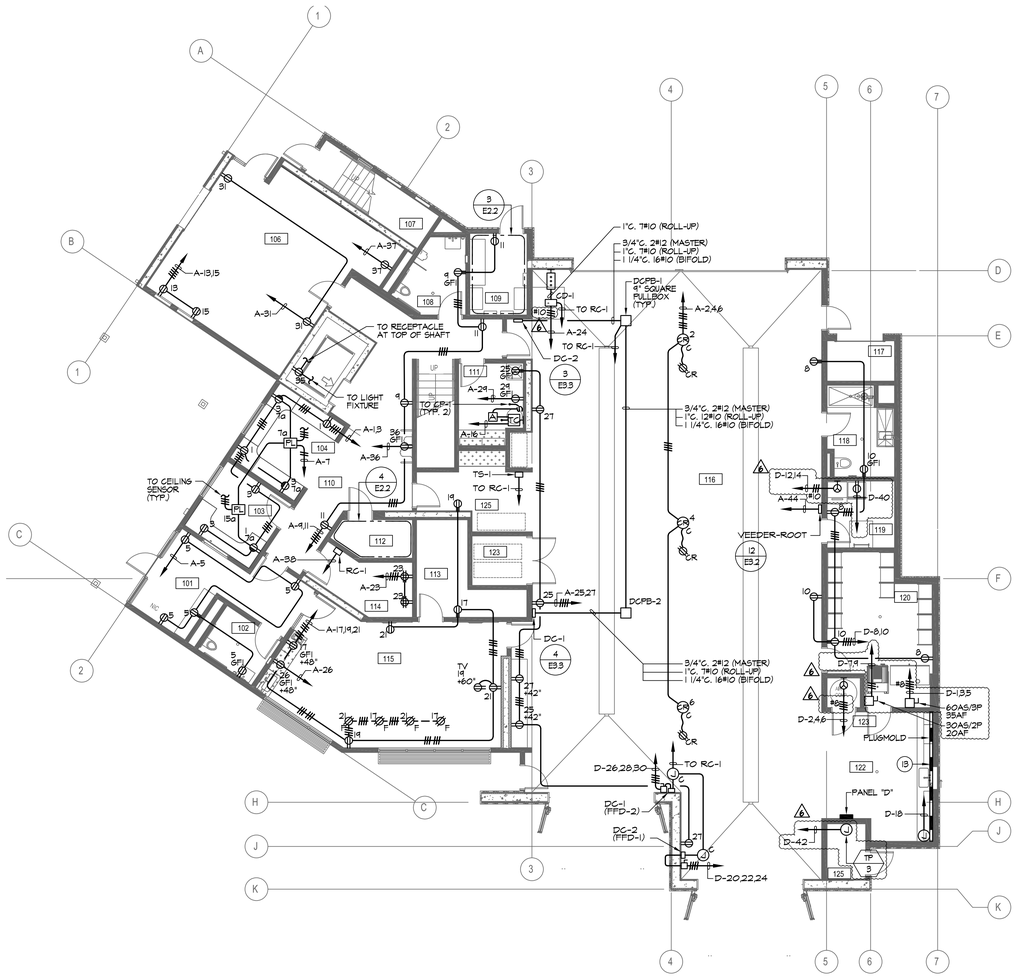
REVISIONS

#	DESCRIPTION	DATE
1	PLAN CHECK #1 RESPONSE	12/05/25
2	PLAN CHECK #2 RESPONSE	03/13/26
3	PLAN CHECK #3 RESPONSE	05/22/26
4	PLAN CHECK #4 RESPONSE	08/25/26
5	ADDENDUM #9	10/23/26
6	ADDENDUM #10	11/06/26

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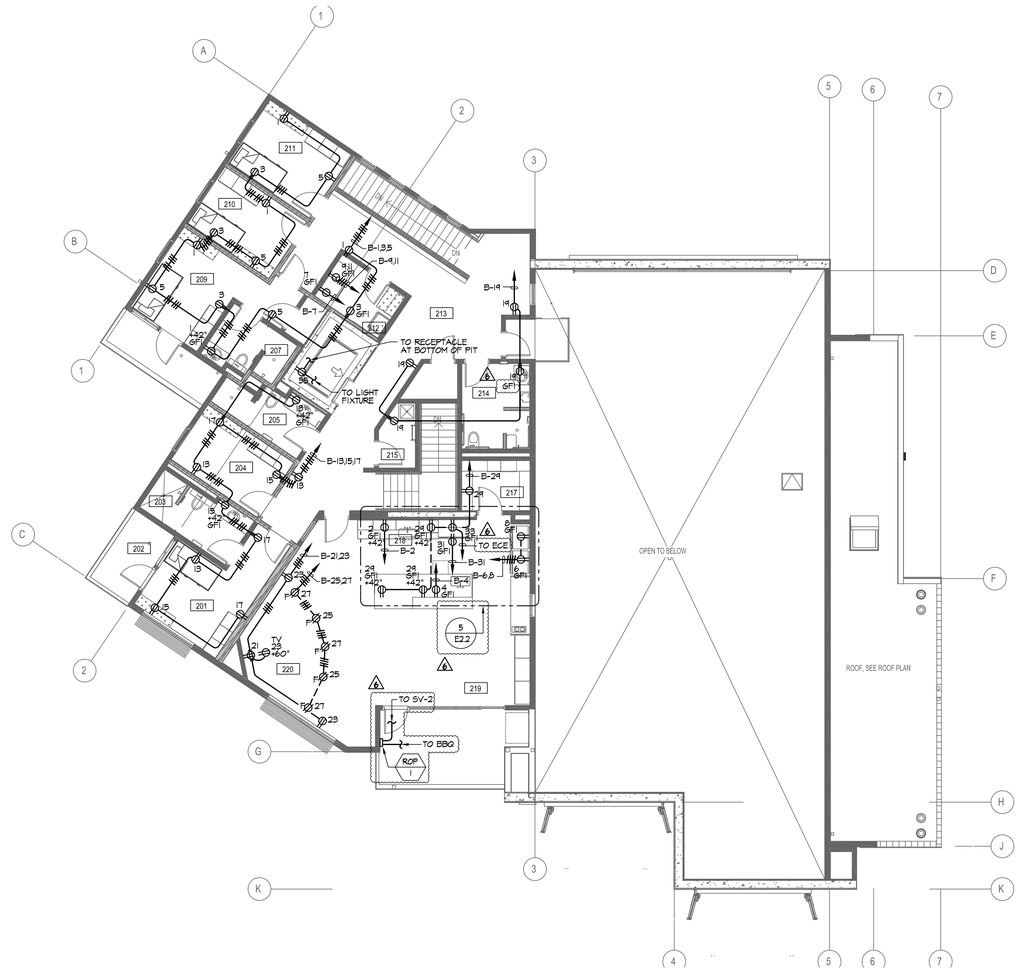
SINGLE LINE DIAGRAM AND PANEL SCHEDULES

E0.2



1 FIRST FLOOR POWER PLAN

SCALE: 1/8" = 1'-0"

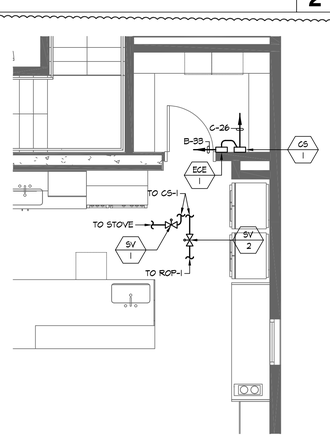


2 SECOND FLOOR POWER PLAN

SCALE: 1/8" = 1'-0"

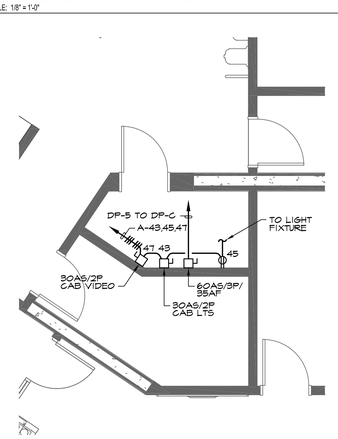
PLAN NOTES:

1. REFER TO GENERAL NOTES, DRAWING E0.1, FOR ADDITIONAL REQUIREMENTS.
2. SEE SINGLE LINE DIAGRAM, DRAWING E0.2 FOR CONDUIT SIZE AND WIRE SIZE AND QUANTITIES REQUIRED FOR ALL ELECTRICAL EQUIPMENT.
3. CONDUIT AND WIRE INDICATED ON THE SINGLE LINE DIAGRAM, WHETHER SHOWN ON THIS DRAWING OR NOT, SHALL BE A PART OF THIS CONTRACT AND THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE REQUIRED ROUTING TO MEET THE INTENT OF THESE PLANS AND SPECIFICATIONS.
4. EXACT LOCATION OF OUTLETS SHOWN ON THESE DRAWINGS SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN AND SHALL BE LOCATED IN SUCH A MANNER TO AVOID INTERFERENCES WITH OTHER OUTLETS AND CASEWORK.
5. EXTERIOR MOUNTED DEVICES / RECEPTACLES SHALL BE PROVIDED COMPLETE WITH LOCKING TYPE WEATHERPROOF COVERS AND BE UL. LISTED FOR WET LOCATIONS WHEN IN USE. COVERS SHALL BE AS MANUFACTURED BY RACO OR APPROVED EQUAL. PLASTIC COVERS NOT ALLOWED.
5. NO OUTLET BEHIND PERMANENTLY INSTALLED CASEWORK WHERE OUTLETS ARE SPECIFICALLY NOTED TO BE INSTALLED IN CABINETS THE OUTLETS SHALL BE FLUSH WITH THE INSTALLED SURFACE OF THE CABINET.
6. NO EXPOSED CONDUIT WILL BE ALLOWED.
7. CONTRACTOR TO PROVIDE LEVITON #TR832-W TYPE RECEPTACLE (20A-125V). CONTRACTOR TO COORDINATE WITH THE ARCHITECT FOR EXACT COLOR TO BE PROVIDED PRIOR TO PURCHASE.
8. RECEPTACLE SHALL BE INSTALLED AT THE TOP OF THE SHAFT PER ELEVATOR CODE REQUIREMENTS.
9. CONTRACTOR TO COORDINATE WITH THE CASEWORK MANUFACTURE AND THE ARCHITECT TO AVOID COVERING UP THE RECEPTACLES FOR THE A/V CABINET. COORDINATION TO BE PERFORMED PRIOR TO ROUGH-IN.
10. CONTRACTOR TO PROVIDE ENGRAVED LABELING AT EACH RECEPTACLE DATA OUTLET, JUNCTION BOX, DISCONNECT SWITCH, ECT. DISPLAYING THE IDF OR PANEL (WITH CIRCUIT) FEEDING THE DATA OUTLET, RECEPTACLE, JUNCTION BOX, DISCONNECT SWITCH, ECT.
11. GENERATOR ALARM PANEL "GAP" TO BE RECESSED MOUNTED.
12. ALL ELECTRICAL PANELS, LIGHTING PANELS, RELAY PANELS, ETC. TO BE RECESSED MOUNTED.
13. ALL RECEPTACLES ON PLUG MOLD TO BE GFCI PROTECTED.



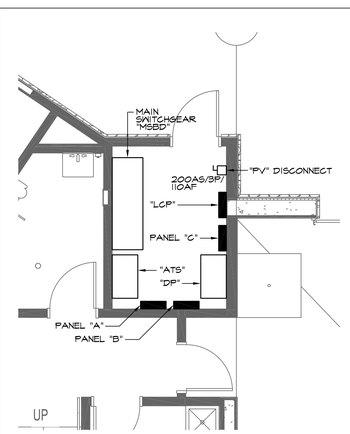
5 KITCHEN - 218

SCALE: 1/4" = 1'-0"



4 ELEVATOR MACHINE ROOM - 112

SCALE: 1/4" = 1'-0"



3 ELECTRICAL ROOM - 109

SCALE: 1/4" = 1'-0"

ROOM #	ROOM NAME	ROOM #	ROOM NAME
101	LOBBY	201	BAT. CHIEF
102	RR 1	202	BALCONY
103	CAPT. OFFICE	203	BC RR
104	OFFICE	204	DORM 1
105	ELEV	205	RR
106	FITNESS	206	ELEV
107	STAIRWAY 1	207	RR 3
108	RR	208	BALCONY
109	ELECT.	209	CAPTAIN
110	HALLWAY	210	DORM 2
111	CUST.	211	DORM 3
112	EL MACH.	212	LAUNDRY
113	STOR	213	HALLWAY
114	TELECOM	214	ACCESSIBLE RR
115	TRAINING CLASSROOM	215	VEST
116	APPARATUS BAY	216	STOR 3
117	YARD ST	217	PANTRY
118	DECON	218	KITCHEN
119	EMS STOR.	219	DINING
120	TURNOUT	220	DAYROOM
121	COMP	221	DECK
122	SHOP	222	SLIDE POLE DECK
123	HOSE DRY STOR		
124	FR		
125	VESTIBULE		
126	STAIRWAY 2		

ROOM LEGEND

Not for permitting or construction

PBK

ARCHITECT PBK Architects, Inc.

PBK.com

SAN LUIS OBISPO
1327 Archer Street, Suite 110
San Luis Obispo, CA 93401
805-329-3076

FIRE STATION #44
COASTSIDE FIRE PROTECTION DISTRICT

501 STETSON STREET
MOSS BEACH, CA 94038

100% CD SET

COASTSIDE FIRE PROTECTION DISTRICT

BID SET

KEY PLAN

PLAN NORTH

TRUE NORTH

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REGISTERED PROFESSIONAL ENGINEER
ROLAND E. SYFELD
No. E17229
6/30/26
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PROJECT NUMBER
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DATE 2/14/2025

DRAWN BY: LS CHKD BY: RES

REVISIONS

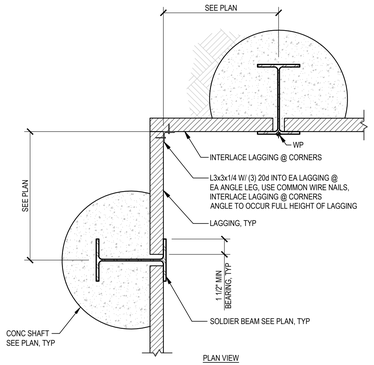
#	DESCRIPTION	DATE
1	PLAN CHECK #1 RESPONSE	12/05/25
2	PLAN CHECK #2 RESPONSE	03/13/26
3	PLAN CHECK #3 RESPONSE	05/22/26
4	PLAN CHECK #4 RESPONSE	08/25/26
5	ADDENDUM #6	10/23/26
6	ADDENDUM #10	11/06/26

POWER PLANS

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E2.2

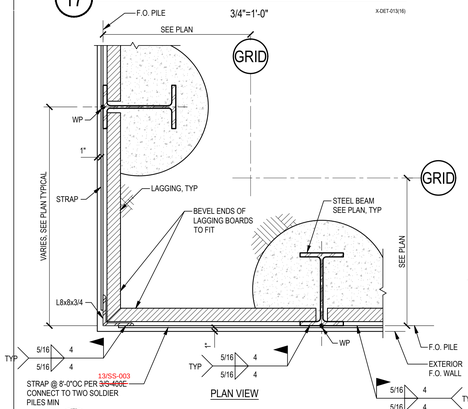
A3.1 - REFLECTED CEILING PLAN



17 ANGLE STRAPPING DETAIL

3/4"=1'-0"

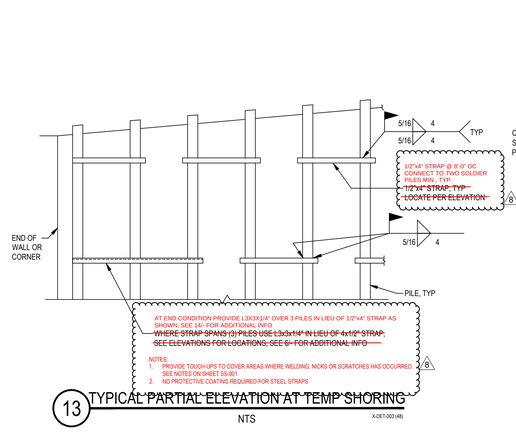
X-DET-013 (18)



18 OUTSIDE CORNER DETAIL

NTS

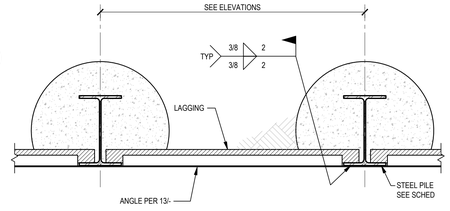
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13 TYPICAL PARTIAL ELEVATION AT TEMP SHORING

NTS

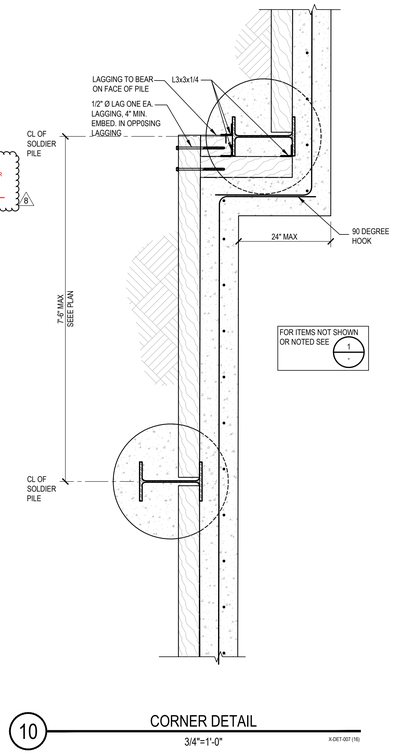
X-DET-003 (18)



14 ANGLE STRAPPING DETAIL

3/4"=1'-0"

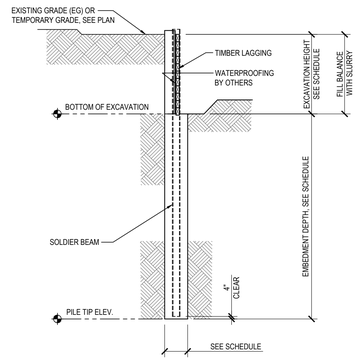
X-DET-012 (18)



10 CORNER DETAIL

3/4"=1'-0"

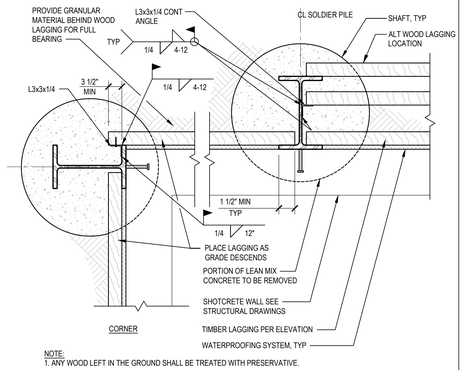
X-DET-007 (18)



5 SECTION AT BULKHEAD

1/8"=1'-0"

X-DET-004 (06)

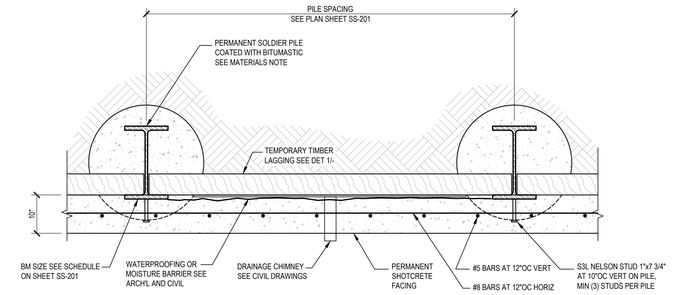


NOTE:
1. ANY WOOD LEFT IN THE GROUND SHALL BE TREATED WITH PRESERVATIVE.

1 WOOD LAGGING

3/4"=1'-0"

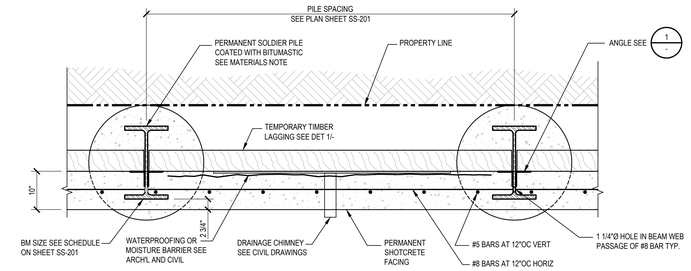
X-DET-001 (18)



6 PERMANENT SHOTCRETE FACING TO SOLDIER PILE TYPICAL

3/4"=1'-0"

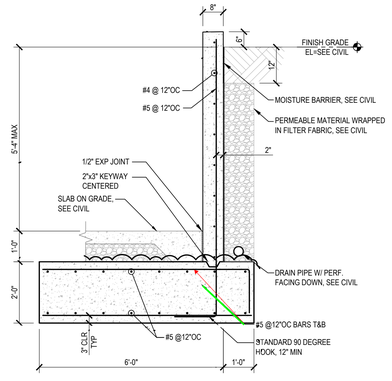
X-DET-017 (18)



7 PERMANENT SHOTCRETE FACING TO SOLDIER PILE AT PROPERTY LINE

3/4"=1'-0"

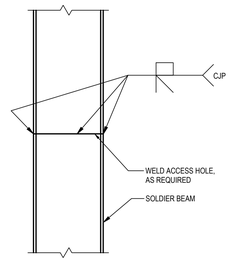
X-DET-017 (18)



8 RETAINING WALL DETAIL

1/2"=1'-0"

X-DET-026 (24)



4 SOLDIER BEAM SPLICE DETAIL

3/4"=1'-0"

X-DET-022 (18)

CHAMFER DETAIL

11 CONTROL JOINT

3/4"=1'-0"

X-DET-018 (18)

WATERSTOP DETAIL

CHAMFER DETAIL

NOTES:
1. WATERSTOPS SHALL BE FLEXIBLE BENTONITE TYPE WATERSTOPS SUCH AS TREMCO SUPERSTOP OR APPROVED EQUIVALENT.
2. JOINT FILLER SHALL BE CLOSED CELL SUPERIOR GRADE POLYETHYLENE OR NON-EXTRUDING PVC, SUCH AS SONNEBORN "VINYLFOAM", SERVICES "RODOFOAM II" BY W.R. GRACE, DECK-O-FOAM BY W.R. MEADOWS OR APPROVED EQUIVALENT.
3. TWO COMPOUND NONSTAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMER GUN-GRADE WITH PRIMER.
4. JOINT NOT REQUIRED IF THE WALL IS STAINED AND SCULPTED.

12 EXPANSION JOINT

NTS

X-DET-019 (18)

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PBK

ARCHITECT — PBK Architects, Inc. — PBK.com

SAN LUIS OBISPO
1327 Archer Street, Suite 110
San Luis Obispo, CA 93401
805-329-3076

miyamoto.

1047 Petal Street, Suite A
Orlando, CA 93730
San Anita, CA 95602

T: (833) 270-6644
miyamotointernational.com

Not for permitting or construction

FIRE STATION #44
COASTSIDE FIRE PROTECTION DISTRICT

501 STEFSON STREET
MOSS BEACH, CA 94038

100% CD SET

COASTSIDE FIRE PROTECTION DISTRICT EST 2005

100% CD SET

KEY PLAN

PLAN NORTH

TRUE NORTH

REGISTERED PROFESSIONAL ENGINEER JEFFREY ALAN CRAWFORD S3856 STRUCTURAL STATE OF CALIFORNIA

CLIENT
COASTSIDE FIRE PROTECTION DISTRICT

PROJECT NUMBER
230137

DATE 3/21/2025

DRAWN BY: KF/OS CHKED BY: AD

REVISIONS

#	DESCRIPTION	DATE
2	PLAN CHECK #2 RESPONSE	3/16/26
8	ADDENDUM 10	11/6/2026

TYPICAL DETAILS

This document is for plan review only

SS-003