



Ann M. Stillman  
Director

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April 3, 2024

**COUNTY OF SAN MATEO**  
**HALF MOON BAY AIRPORT**  
**ELECTRICAL VAULT AND GENERATOR PROJECT**

**COUNTY PROJECT NO. AH035**  
**PROJECT FILE NO. E5079**

**FEDERAL AVIATION ADMINISTRATION (FAA)**  
**AIP PROJECT NO. 3-06-0097-020-2022**

**ADDENDUM NO. 3**

TO ALL PLAN HOLDERS:

The following **Addendum No. 3** to the above referenced project, dated February 23, 2024, shall be included in the project plans and specifications.

1. Section "Item F-162 Chain-Link Fence," of the FAA Technical Specifications Section has been revised. Pages TS F-162-1 through TS F-162-6 of the FAA Technical Specifications Section shall be replaced in the Project Specifications.

**Replace pages TS F-162-1 through TS F-162-6 of the FAA Technical Specifications Section with pages TS F-162-1 (rev) through TS F-162-6 (rev).**

2. Section "Item L-102 Utility Coordination," of the FAA Technical Specifications Section has been revised. Page TS L-102-1 of the FAA Technical Specifications Section shall be replaced in the Project Specifications.

**Replace page TS L-102-1 of the FAA Technical Specifications Section with page TS L-102-1 (rev).**



To All Plan Holders

**Half Moon Bay Airport Electrical Vault and Generator Project**

Addendum No. 3

April 3, 2024

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3. Section "Item L-114 Packaged Engine Generator System," of the FAA Technical Specifications Section has been revised. Page TS L-114-2 of the FAA Technical Specifications Section shall be replaced in the Project Specifications.

**Replace page TS L-114-2 of the FAA Technical Specifications Section with page TS L-114-2 (rev).**

4. Sheets GI001 – GI002, GC101, CG501, EL601, S001 – S003, S101 – S102, S201, S501 – S502, S510, and S520 of the Plans shall be replaced in the Project Plans.

**Replace Plan Sheets GI001 – GI002 with Sheets GI001 (rev) – GI002 (rev).**

**Replace Plan Sheet GC101 with Sheet GC101 (rev).**

**Replace Plan Sheet CG501 with Sheet GC501 (rev).**

**Replace Plan Sheet EL601 with Sheet EL601 (rev).**

**Replace Plan Sheets S001 – S003 with Sheets S001 (rev) – S003 (rev).**

**Replace Plan Sheets S101 – S102 with Sheets S101 (rev) – S102 (rev).**

**Replace Plan Sheet S201 with Sheet S201 (rev).**

**Replace Plan Sheets S501 – S502 with Sheets S501 (rev) – S502 (rev).**

**Replace Plan Sheet S510 with Sheet S510 (rev).**

**Replace Plan Sheet S520 with Sheet S520 (rev).**

***Please sign the attached "Receipt of Addendum No. 3" form and submit no later than 2:30 PM, Wednesday, April 10, 2024. The Receipt of Addendum can be emailed to Atkins De Guzman attention email at [adeguzman@smcgov.org](mailto:adeguzman@smcgov.org), with carbon copies to [enacpil@smcgov.org](mailto:enacpil@smcgov.org) and [alum@smcgov.org](mailto:alum@smcgov.org).***

All plan holders should check the project webpage for the latest updates on Request for Information and Addendums. The project webpage address is:

<https://www.smcgov.org/publicworks/half-moon-bay-airport-electrical-vault-and-generator-project>

To All Plan Holders  
**Half Moon Bay Airport Electrical Vault and Generator Project**  
Addendum No. 3  
April 3, 2024

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If you have any questions or require additional information, please contact Edward Nacpil, Anthony Lum, or Atkins De Guzman of our office at (650) 363-4100. They can also be reached by e-mail at:

[enacpil@smcgov.org](mailto:enacpil@smcgov.org)  
[alum@smcgov.org](mailto:alum@smcgov.org)  
[adeguzman@smcgov.org](mailto:adeguzman@smcgov.org)

Very truly yours,



Ann M. Stillman  
Director of Public Works

AMS:KL:CC:ADG:EN

F:\Users\design\C3D\E5079000\_HMB Airport Electrical Vault and Generator Project\14 Bid Process (in progress)\4\_Addendums (forthcoming)\20240402 Addendum 3\Addendum No.3.docx

Encl.- "Receipt of Addendum No. 3" Form (1 page)

Revised Pages TS F-162-1 (rev) through TS F-162-6 (rev) of the "Item F-162 Chain-Link Fence" Section (6 pages)

Revised Page TS L-102-1 (rev) of the "Item L-102 Utility Coordination" Section (1 page)

Revised Page TS L-114-2 (rev) of the "Item L-114 Packaged Engine Generator System" Section (1 page)

Revised Sheets GI001 (rev) – GI002 (rev), GC101 (rev), CG501 (rev), EL601 (rev), S001 (rev) – S003 (rev), S101 (rev) – S102 (rev), S201 (rev), S501 (rev) – S502 (rev), S510 (rev), and S520 (rev) of the Project Plans (15 pages)

cc: Gretchen Kelly, Airport Manager  
Michael Byrne, Assistant Airport Manager  
Krzysztof Lisaj, P.E., Deputy Director, Engineering and Resource Protection  
Carter Choi, P.E., Principal Civil Engineer (WOC), Engineering and Construction  
Anthony Lum, P.E., Senior Civil Engineer, Project Development and Design  
Atkins De Guzman, Senior Civil Engineer (WOC), Project Development and Design  
Edward Nacpil, Associate Engineer, Project Development and Design



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**COUNTY OF SAN MATEO**  
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**ELECTRICAL VAULT AND GENERATOR PROJECT**

**COUNTY PROJECT NO. AH035**  
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**FEDERAL AVIATION ADMINISTRATION (FAA)**  
**AIP PROJECT NO. 3-06-0097-020-2022**

**RECEIPT OF ADDENDUM NO. 3**

I, \_\_\_\_\_, an  
authorized representative for \_\_\_\_\_,  
have received **Addendum No. 3** for the Half Moon Bay Airport Electrical Vault and  
Generator Project from an authorized representative of the County of San Mateo, which  
is to be included in the Specifications for the above referenced project.

Please sign and submit this form ***no later than 2:30 P.M., Wednesday, April 10,***  
**2024.**

“Contractor”

\_\_\_\_\_  
(Print)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)



## Item F-162 Chain-Link Fence

### DESCRIPTION

**162-1.1** This item shall consist of furnishing and erecting a chain-link fence in accordance with these specifications, the details shown on the plans, and in conformity with the lines and grades shown on the plans or established by the RPR.

### MATERIALS

**162-2.1 Fabric.** The fabric shall be woven with a 9-gauge polyvinyl chloride (PVC) – coated steel wire in a 2-inch (50 mm) mesh and shall meet the requirements of ASTM F668, Class 2b. The color of the PVC coating shall be black.

Metallic-coated fabric shall have a clear acrylic coating applied to the selvage area after weaving.

Top and bottom selvages shall be twisted and barbed.

**162-2.2 Barbed wire.** NOT USED.

**162-2.3 Posts, rails, and braces.** Line posts, rails, and braces shall be PVC coated steel conforming to the requirements of ASTM F1043 or ASTM F1083 as follows:

- Galvanized tubular steel pipe shall conform to the requirements of Group IA, (Schedule 40) coatings conforming to Type A, or Group IC (High Strength Pipe), External coating Type B, and internal coating Type B or D.
- Vinyl or polyester coated steel shall conform to the requirements of ASTM F1043, Paragraph 7.3, Optional Supplemental Color Coating.

**The color of the PVC coating for the posts, rails, and braces shall be as specified above in paragraph 162-2.1.**

Posts, rails, and braces, with the exception of galvanized steel conforming to ASTM F1043 or ASTM F1083, Group 1A, Type A, or aluminum alloy, shall demonstrate the ability to withstand testing in salt spray in accordance with ASTM B117 as follows:

- External: 1,000 hours with a maximum of 5% red rust.
- Internal: 650 hours with a maximum of 5% red rust.

The dimensions of the posts, rails, and braces shall be in accordance with Tables I through VI of Federal Specification RR-F-191/3, as shown below.

#### GALVANIZED STEEL PIPE

<u>Fabric Height</u>	<u>Up to 6'</u>	<u>Over 6' up to 8'</u>	<u>Over 8'</u>
Terminal Post	2.375 x 0.130	2.875 x 0.160	2.875 x 0.160
Line Post	1.900 x 0.120	2.375 x 0.130	2.875 x 0.160
Top Rails & Braces	1.660 x 0.111	1.660 x 0.111	1.660 x 0.111

<u>Gate Leaf Widths</u>	<u>Up to 6'</u>	<u>Over 6' up to 13'</u>	<u>Over 13' up to 18'</u>	<u>Over 18' up to 23'</u>
Gate Post	2.875 x 0.160	4.00 x 0.226	6.625 x 0.280	8.625 x 0.322

Post dimensions are expressed in inches OD by minimum wall thickness in inches.

~~**162-2.4 Gates.** Gate frames shall consist of polymer-coated steel pipe and shall conform to the specifications for the same material under paragraph 162-2.3. The fabric shall be of the same type material as used in the fence. The color of the PVC coating for the pipe and the fabric shall be as specified above in paragraph 162-2.1.~~

**162-2.4 Gates.**

**a. Swing gates.** Gate frames shall consist of PVC coated galvanized steel pipe and shall conform to the specifications for the same material under paragraph 162-2.3. The fabric shall be of the same type material as used in the fence. The color of the PVC coating for the pipe and the fabric shall be as specified above in paragraph 162-2.1.

**b. Cantilever gates.** NOT USED.

**162-2.5 Wire ties and tension wires.** Wire ties for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall be 7-gauge marcelled steel wire with the same coating as the fabric type and shall conform to ASTM A824.

All material shall conform to Federal Specification RR-F-191/4.

**162-2.6 Miscellaneous fittings and hardware.** Miscellaneous steel fittings and hardware for use with zinc-coated steel fabric shall be of commercial grade steel or better quality, wrought or cast as appropriate to the article, and sufficient in strength to provide a balanced design when used in conjunction with fabric posts, and wires of the quality specified herein. All steel fittings and hardware shall be protected with a zinc coating applied in conformance with ASTM A153. Barbed wire support arms shall withstand a load of 250 pounds (113 kg) applied vertically to the outermost end of the arm.

**162-2.7 Concrete.** Concrete shall conform to the requirements of Item P-610, Structural Portland Cement Concrete. Concrete shall have a minimum 28-day compressive strength of 4000 psi (2670 kPa).

**162-2.8 Marking.** Each roll of fabric shall carry a tag showing the kind of base metal (steel, aluminum, or aluminum alloy number), kind of coating, the gauge of the wire, the length of fencing in the roll, and the name of the manufacturer. Posts, wire, and other fittings shall be identified as to manufacturer, kind of base metal (steel, aluminum, or aluminum alloy number), and kind of coating.

**162-2.9 Yoke assemblies.** NOT USED.

**162-2.10 Pad locks.** The Contractor shall furnish and install one corrosion resistant padlock on each swing gate. Padlocks shall meet the requirements of a Master Lock, Marine Brass Padlock, No. 4BD-MAR, or approved equal. All padlocks shall be keyed the same and the Contractor shall provide 10 keys to the Owner.

**162-2.11 Mortise locks.** NOT USED.

**162-2.12 Drive anchors.** NOT USED.

**162-2.13 Signs.** Any signs removed from the existing fence shall be reinstalled in the approximate location they were in before removal.

## CONSTRUCTION METHODS

**162-3.1 General.** The fence shall be constructed in accordance with the details on the plans and as specified here using new materials. All work shall be performed in a workmanlike manner satisfactory to the RPR. The Contractor shall layout the fence line based on the plans. The Contractor shall span the opening below the fence with barbed wire at all locations where it is not practical to conform the fence to the general contour of the ground surface because of natural or manmade features such as drainage ditches. The new fence shall be permanently tied to the terminals of existing fences as shown on the plans. The Contractor shall stake down the woven wire fence at several points between posts as shown on the plans.

The Contractor shall arrange the work so that construction of the new fence will immediately follow the removal of existing fences. The length of unfenced section at any time shall not exceed 300 feet (90 m). The work shall progress in this manner and at the close of the working day the newly constructed fence shall be tied to the existing fence.

**162-3.2 Clearing fence line.** Clearing shall consist of the removal of all stumps, brush, rocks, trees, or other obstructions that will interfere with proper construction of the fence to the dimensions shown on the plans. Stumps within the cleared area of the fence shall be grubbed or excavated. The bottom of the fence shall be placed a uniform distance above ground, as specified in the plans. When shown on the plans or as directed by the RPR, the existing fences which interfere with the new fence location shall be removed by the Contractor as a part of the construction work unless such removal is listed as a separate item in the bid schedule. All holes remaining after post and stump removal shall be refilled with suitable soil, gravel, or other suitable material and compacted with tampers.

The cost of removing and disposing of the material shall not constitute a pay item and shall be considered incidental to fence construction.

**162-3.3 Installing posts.** All posts shall be set in concrete at the required dimension and depth and at the spacing shown on the plans, unless otherwise specified.

The concrete shall be thoroughly compacted around the posts by tamping or vibrating and shall have a smooth finish slightly higher than the ground and sloped to drain away from the posts. All posts shall be set plumb and to the required grade and alignment. No materials shall be installed on the posts, nor shall the posts be disturbed in any manner within seven (7) days after the individual post footing is completed.

Should rock be encountered at a depth less than the planned footing depth, a hole 2 inches (50 mm) larger than the greatest dimension of the posts shall be drilled to a depth of 12 inches (300 mm). After the posts are set, the remainder of the drilled hole shall be filled with grout, composed of one part Portland cement and two parts mortar sand. Any remaining space above the rock shall be filled with concrete in the manner described above.

In lieu of drilling, the rock may be excavated to the required footing depth. No extra compensation shall be made for rock excavation.

Terminal posts shall be installed at fence ends, corners, angle points, and at intervals not exceeding 500 feet along straight sections of fence. Gate posts shall be installed on each side of each gate and at other locations recommended by the gate manufacturer. All other posts shall be line posts.

Where shown on the plans, posts which are to be installed within wetland areas, or other soft, yielding soils as determined by the Engineer during construction, shall be installed by driving the post in the ground and securing them with drive anchors.

**162-3.4 Installing top rails. NOT USED.**

**162-3.5 Installing braces.** Horizontal brace rails, with diagonal truss rods and turnbuckles, shall be installed at all terminal posts. Horizontal brace rails, with diagonal truss rods and turnbuckles, shall also be installed at all gate posts (both sides of the gate where possible).

**162-3.6 Installing fabric.** The wire fabric shall be firmly attached to the posts and braced as shown on the plans. All wire shall be stretched taut and shall be installed to the required elevations. The fence shall generally follow the contour of the ground, with the bottom of the fence fabric no less than one inch (25 mm) or more than 4 inches (100 mm) from the ground surface. Grading shall be performed where necessary to provide a neat appearance.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform to the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches (150 mm) or less.

Contractor shall install bottom tension wire within 6 inches of the bottom of the fabric and shall be at a consistent height throughout the length of fence.

**162-3.7 Electrical grounds.** Electrical grounds shall be constructed where a power line passes over the fence and at 500 feet (150 m) intervals. The ground shall be installed directly below the point of crossing. The ground shall be accomplished with a copper clad rod 8 feet (2.4 m) long and a minimum of 5/8 inches (16 mm) in diameter driven vertically until the top is 6 inches (150 mm) below the ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. Installation of ground rods shall not constitute a pay item and shall be considered incidental to fence construction. The Contractor shall comply with FAA-STD-019, Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment, paragraph 4.2.3.8, Lightning Protection for Fences and Gates, when fencing is adjacent to FAA facilities.

**162-3.8 Cleaning up.** After installation of fence is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. Suitable material may be deposited in embankment or shoulders areas. Unsuitable material shall be disposed off airport property.

Areas disturbed by the Contractor's operation shall be restored to their original condition. Restoration of surfaces shall be performed in accordance with the details of the Contract Drawings.

Where fence is installed or removed outside of the general grading limits, or in areas that would not otherwise be disturbed, restoration shall be considered necessary and incidental to the work of this item and the costs shall be included in the associated pay items for fence installation or fence removal.

Where fence is installed or removed within the general grading limits, restoration of the area will not be necessary as payment for establishment of turf or pavement will be included in the various pay items of work involved.

The Contractor shall be responsible for maintaining all disturbed surfaces and restorations until final acceptance.

The Contractor shall remove from the vicinity of the completed work all tools, buildings, equipment, etc., used during construction.

**162-3.9 Installing tension wires.** The bottom tension wire shall be installed within 6 inches of the bottom of the fabric and shall be at a consistent height throughout the length of fence.

**162-3.10 Installing signs.** Signs shall be installed on the fence and on gates at the locations shown and in accordance with the details shown on the Contract Drawings. The final location of signs on the gates shall be determined by the Owner during construction. The mounting system for signs on gates shall be such that signs do not interfere with operation of the gate.



No separate measurement for payment shall be made for providing and installing signs. Providing and installing signs shall be considered incidental to the work involved and the costs shall be included in the various pay items involved.

**162-3.11 Removal of existing fence.** Existing fence locations and quantities shall be field verified by the Contractor and approved by the Engineer prior to removal. Fence removal shall include removal of the entire fence regardless of its size, including fabric, posts, foundations, gates and all appurtenances. Holes left after fence removal shall be restored to a condition equal to or better than the surrounding area. No separate measurement for payment shall be made for restoration after fence removal. Restoration after fence removal shall be considered incidental to the work involved and the costs shall be included in the various pay items involved.

**162-3.12 Spoil material.** All materials shall be spoiled off airport property at a proper disposal site.

### METHOD OF MEASUREMENT

**162-4.1** Chain-link fence will be measured for payment by the linear foot. Measurement will be along the top of the fence from center to center of end posts, excluding the length occupied by gate openings.

**162-4.2** Gates will be measured as complete units.

**162-4.3** Removal of chain link fence and gates will be measured for payment by the linear foot. Measurement will be along the top of existing fence from center to center of end posts prior to removal and will include the openings occupied by gates, if gates are present.

### BASIS OF PAYMENT

**162-5.1** Payment for chain-link fence will be made at the contract unit price per linear foot for each type and size of fence installed.

**162-5.2** Payment for vehicle or pedestrian gates will be made at the contract unit price for each type and size of gate.

**162-5.3** Payment will be made at the contract unit price per linear foot for removal of existing chain link fence and gates.

The price shall be full compensation for furnishing all materials, and for all preparation, erection, and installation of these materials, and for all labor equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item F-162-5.1	6' Chain-Link Fence - per linear foot
Item F-162-5.2	16 Foot Double Swing Gate - per each
Item F-162-5.3	Removal of Existing Fence - per linear foot

### REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A121	Standard Specification for Metallic-Coated Carbon Steel Barbed Wire
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ASTM A153	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A392	Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A491	Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric
ASTM A824	Standard Specification for Metallic-Coated Steel Marcellled Tension Wire for Use with Chain Link Fence
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM F668	Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and other Organic Polymer Coated Steel Chain-Link Fence Fabric
ASTM F1043	Standard Specification for Strength and Protective Coatings on Steel Industrial Fence Framework
ASTM F1083	Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F1183	Standard Specification for Aluminum Alloy Chain Link Fence Fabric
ASTM F1345	Standard Specification for Zinc 5% Aluminum-Mischmetal Alloy Coated Steel Chain-Link Fence Fabric
ASTM G152	Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G153	Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
ASTM G155	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials

Federal Specifications (FED SPEC)

FED SPEC RR-F-191/3 Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)

FED SPEC RR-F-191/4 Fencing, Wire and Post, Metal (Chain-Link Fence Accessories)

FAA Standard

FAA-STD-019 Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment

FAA Orders

5300.38 AIP Handbook

**END OF ITEM F-162**

## Item L-102 Utility Coordination

### DESCRIPTION

**102-1.1** This item shall include the relocation and installation of the electrical service necessary for the Project including permits, inspections, cable and trenching, transformers, switches, junction boxes, conduit, gas lines and utility poles and removals and all incidentals as required by the utility companies including payment of all utility fees.

This item shall also include the coordination performed by the Contractor for the relocation of the utilities with the utility companies.

### INSTALLATION OF EQUIPMENT

**102-2.1 Electric utility work.** The Contractor shall coordinate electric utility work with PG&E to have associated pull boxes, transformers, power poles, conduits, cable and appurtenances installed, and existing electrical manholes, transformers, power poles, conduits, cable and appurtenances removed. The Contractor shall engage in an agreement with PG&E and reach out directly to the PG&E representative, **Katie Townsend at (650) 232-9664**. The cost of all work shall be paid for by the Contractor under this Contract.

**102-2.4 Utility allowance.** A construction allowance for each utility relocation is shown below:

<u>Utility</u>	<u>Allowance</u>
PG&E Electric	\$50,000

These costs have been included with this work as the utility companies have not been able to determine exact costs at this time. Costs will only be paid for upon receipt of invoices submitted from the utility company after work is performed.

These allowances cover only the utilities listed above.

**102-2.5 Utility coordination.** The Contractor shall coordinate electric utility work with the PG&E to perform the work indicated on the plans. All anticipated expenses of coordinating the work with the utility companies shall be included.

### METHOD OF MEASUREMENT

**102-3.1** The utility allowance cost for each utility shall be measured on a lump sum basis. The lump sum amount will be based upon receipt of invoices submitted from the utility company after work is performed.

**102-3.2** The utility coordination shall be measured on a lump sum basis.

### BASIS OF PAYMENT

**102-4.1** Payment will be made at the lump sum cost based upon invoices received for each utility allowance. The unit cost for each utility allowance will be adjusted based upon the total of invoices received for each pay item.

- 
- A. Engine generator system to provide source of standby power.
  - B. System Capability: 50 KW, 120/240 volts, single phase.

#### 114-2.2 Manufacturers.

- A. CATERPILLAR C4.4 In-line 4, 4-cycle diesel Engine Generator Set or approved equivalent.

#### 114-2.3 Engine.

- A. Type: Water-cooled, V-type, four stroke cycle, compression ignition Diesel internal combustion engine.
- C. Fuel System: Appropriate for use of Diesel fuel.
- D. Engine Speed: 1800 rpm.
- E. Governor: Isochronous type to maintain engine speed within 0.5 percent, steady state, and 5 percent, no load to full load, with recovery to steady state within 2 seconds following sudden load changes.
- F. Safety Devices: Engine shutdown on high water temperature, low oil pressure, overspeed, and engine overcrank. Limits as selected by manufacturer.
- G. Engine Starting: DC starting system with positive engagement, number and voltage of starter motors in accordance with manufacturer's instructions. Include remote starting control circuit, with MANUAL-OFF-REMOTE selector switch on engine-generator control panel.
- H. Engine Jacket Heater: Thermal circulation type water heater with integral thermostatic control, sized to maintain engine jacket water at 90 degrees F (32 degrees C), and suitable for operation at 240 volts AC. Engine shall have two equally sized heaters with isolation valves to permit removal without draining engine.
- I. Radiator: Radiator using glycol coolant, with blower type fan, sized to maintain safe engine temperature in ambient temperature of 110 degrees F (43 degrees C). Radiator Air Flow Restriction: 0.5 inches of water (9.34 mm of mercury), maximum. Provide isolation valves to permit removal without draining engine.
- J. Engine Accessories: Fuel filter lube oil filter, intake air filter, lube oil cooler, fuel transfer pump, fuel priming pump, gear-driven water pump. Include fuel pressure gage, water temperature gage, and lube of oil pressure gage on engine-generator control panel.
- K. Mounting: Provide unit with suitable spring-type vibration isolators and mount per manufacturer's recommendation.

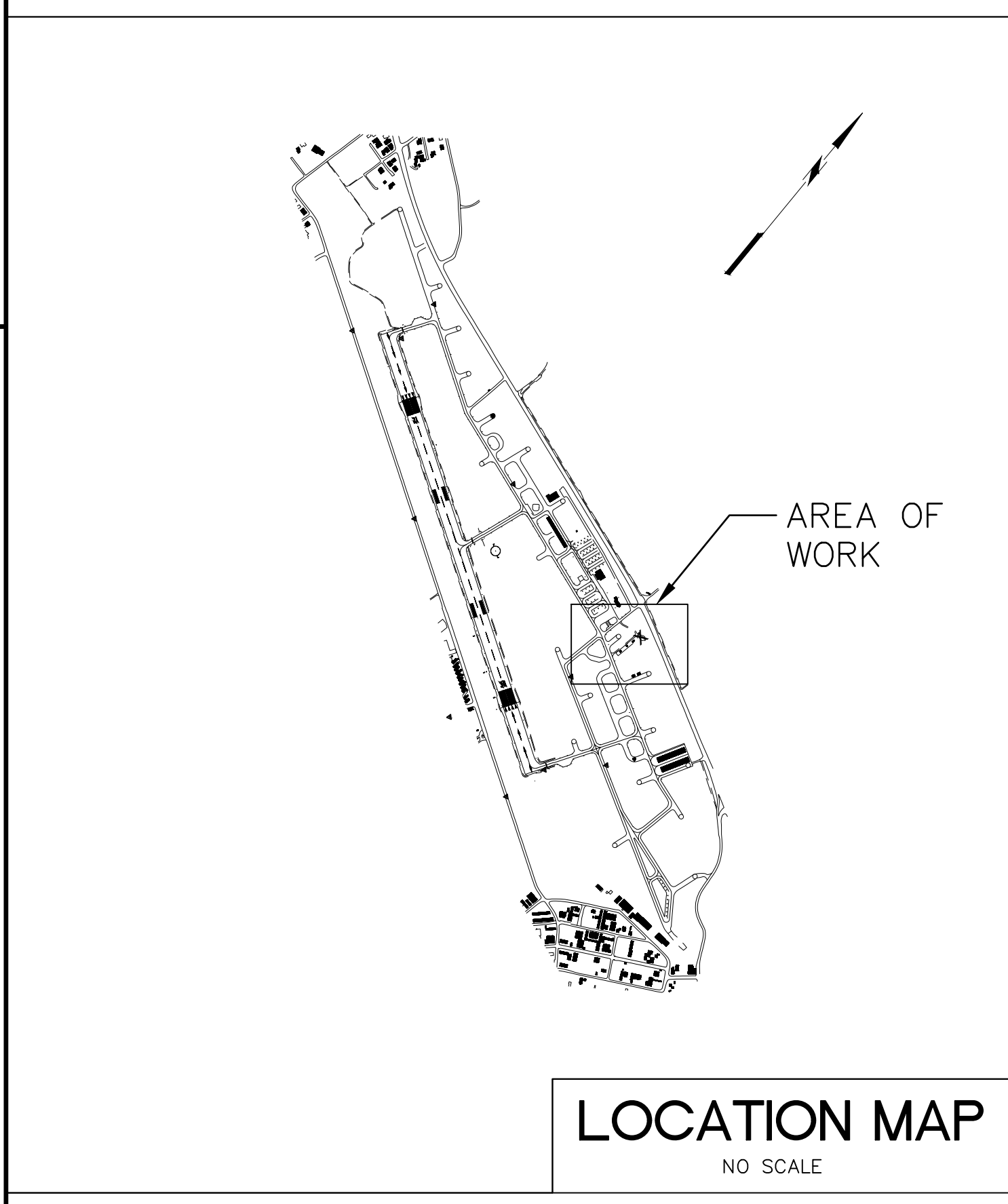
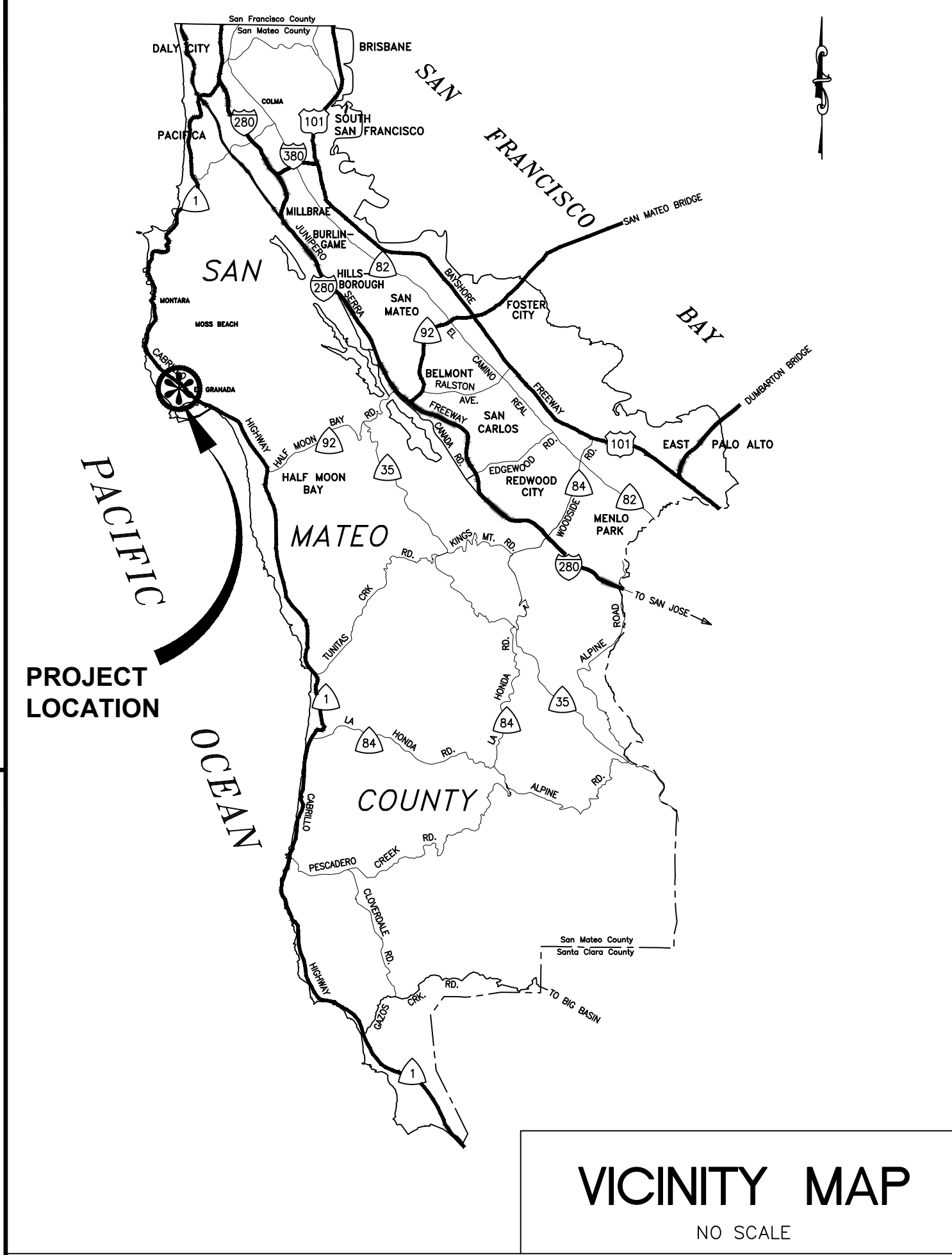
#### 114-2.4 Generator.

- A. Generator: ANSI/NEMA MG 1; single phase, re-connectible brushless synchronous generator with brushless exciter.
- B. Rating: 50 KW, 62.5 kVA at 0.8 power factor, 120/240 volts, single phase, 60 Hz at 1800 rpm.
- C. Insulation: ANSI/NEMA MG 1, Class F.
- D. Temperature Rise: 130 degrees C standby.
- E. Enclosure: NEMA-3R, stainless steel.
- F. Voltage Regulation: Include generator-mounted volts per Hertz exciter-regulator to match engine and generator characteristics, with voltage regulation +/- one percent from no load to full load. Include manual controls to adjust voltage drop +/-5 percent voltage level, and voltage gain.

# COUNTY OF SAN MATEO CALIFORNIA

## HALF MOON BAY AIRPORT ELECTRICAL VAULT AND EMERGENCY GENERATOR PROJECT

APPROVED: \_\_\_\_\_  
DATE: 04/03/2024  
*Ann Mader Stillman*  
ANN MADER STILLMAN,  
DIRECTOR OF PUBLIC WORKS  
R. C. E. # 47882 / EXPIRES 12-31-2025



TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2018 AND ADOPTED BY SAN MATEO COUNTY, FEBRUARY 11, 2020, BY RESOLUTION NO. 077227

### ABBREVIATIONS:

A	AMPERES, AMPERAGE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
BFG	BELOW FINISHED GRADE
C	CONDUIT
CC	COMMON CONTROL
CCR	CONSTANT CURRENT REGULATOR
CT	CURRENT TRANSFORMER
ET	EXISTING
EMT	ELECTRIC METALLIC TUBING
GF	GROUND FAULT INTERRUPTER TYPE
G, GND	GROUND
HOA	HAND OFF AUTO
HV	HIGH VOLTAGE
IL	INTENSITY LEVEL
JB	JUNCTION BOX
KA	KILOAMP
KCMIL	1000 CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMP
KW	KILOWATT
KWHD	KILOWATT-HOUR DEMAND METER
LV	LOW VOLTAGE
LS	LEVEL SELECTION
MCB	MAIN CIRCUIT BREAKER
N	NEUTRAL
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NO	NORMALLY OPEN
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PAPI	PRECISION APPROACH PATH INDICATOR
PB	PULL BOX
PH	PHASE
RGS	RIGID GALVANIZED STEEL CONDUIT
RW	RUNWAY
SCO	SERIES CIRCUIT CUTOUT
TW	TAXIWAY
TYP	TYPICAL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
UNON	UNLESS OTHERWISE NOTED
V	VOLTS, VOLTAGE
W	WATTS, WATTAGE, WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER

### SYMBOLS

	GFI	NEMA 5-20R GROUND FAULT CIRCUIT INTERRUPTER TYPE, MOUNT 48" AFF UNLESS OTHERWISE NOTED
	WP	NEMA 5-20R DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER TYPE, WITH WEATHERPROOF COVER, MOUNT AT 42" AFF UNLESS OTHERWISE NOTED
		NEMA 5-20R QUAD RECEPTACLE, MOUNT AT 42" AFF UNLESS OTHERWISE NOTED
		SINGLE POLE TOGGLE SWITCH
		DISCONNECT SWITCH (TICKS INDICATE NUMBER OF POLES)
		CIRCUIT BREAKER (TICKS INDICATE NUMBER OF POLES)
		CONTACTS (NORMALLY OPEN)
		CONTACTS (NORMALLY CLOSED)
		FUSE
		GROUND
		CONTACTOR ("M" DENOTES MOTOR CONTACTOR)
		PHOTO CELL FOR EXTERIOR LIGHTING CONTROL
		GENERATOR
		ELECTRICAL METER
		JUNCTION BOX
		CONNECTION POINT OR CABLE SPLICE
		TRANSFORMER
		FUSED DISCONNECT SWITCH
		NON FUSED DISCONNECT SWITCH
		SURFACE MOUNTED PANEL
		WALL MOUNTED LUMINAIRE, LETTER DENOTES TYPE.
		1'x4" LUMINAIRE, LETTER DENOTES TYPE.
		METER
		SURVEY CONTROL POINT
		CONTRACTOR'S STAGING AREA
		WORK AREA
		CONTRACTOR'S ACCESS/HAUL ROUTE
		PROPOSED ELECTRICAL SHED
		PROPOSED GENERATOR PAD
		EXISTING FENCING TO BE REMOVED
		PROPOSED FENCING
		EXISTING UNDERGROUND ELECTRICAL CONDUIT
		PROPOSED UNDERGROUND ELECTRICAL CONDUIT ON SITE PLANS, INDICATES FUTURE WIRING ON CONTROLS DIAGRAMS.
		PROPOSED 16' WIDE VEHICLE GATE

### NOTES:

- ALL ELECTRICAL WORK SHALL CONFORM TO ALL STATE, LOCAL, AND NATIONAL ELECTRICAL CODES.
- ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
- ITEMS OF SPECIFIC MANUFACTURERS OR APPROVED EQUAL SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR MANUFACTURER'S REPRESENTATIVE'S DIRECTIONS.
- THE CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND DIMENSIONS SHOWN ON DRAWINGS.
- ALL CONDUIT AND WIRING SCHEDULES SHALL BE VERIFIED BEFORE INSTALLATION.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL EQUIPMENT WITH OTHER CONTRACTORS.
- ALL AREAS DISTURBED BY WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL AS DETERMINED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE RACEWAYS, WIRING, AND CONNECTIONS FOR ALL CONTROL CIRCUITS AND INTERLOCK.
- ALL ELECTRICAL CONDUIT AND CONDUCTORS DISCONNECTED AND NOT TO BE REUSED SHALL BE REMOVED.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS BEFORE STARTING WORK. IF ONLY A PORTION OF AN EXISTING CIRCUIT IS BEING REMOVED FOR DEMOLITION, CONTINUITY SHALL BE MAINTAINED TO THE REST OF THE REMAINING CIRCUIT.
- ALL BRANCH CIRCUIT CONDUCTORS SHALL BE #12AWG UNLESS OTHERWISE SHOWN.
- ALL BRANCH CIRCUITS SHALL CONSIST OF 2 CONDUCTORS PLUS GROUND, UNLESS OTHERWISE SHOWN.
- CLEAN, PRIME, AND PAINT ALL EXISTING TO REMAIN WIREWAYS, ENCLOSURES, AND PULLBOXES.
- DEFINITIONS:
  - A. "PROVIDE": TO SUPPLY AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED
  - B. "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES
  - C. "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES
  - D. "WORK": LABOR, MATERIAL, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
  - E. "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.
  - F. "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILING, IN TRENCHES, IN CRAWL SPACES OR IN ENCLOSURES.
  - G. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
  - H. "EQUIVALENT": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.
- CONSTRUCTION SEQUENCING: BECAUSE SEQUENCING OF NEW VAULT INSTALLATION, PG&E'S EXTENSION OF UPGRADED SERVICE, AND OVERTURNS OF EXISTING LOADS TO NEW PANELBOARD ARE ESSENTIAL TO MINIMIZING DISRUPTION TO AIRPORT, CONTRACTOR SHALL PROVIDE DETAILED SEQUENCE OF CONSTRUCTION FOR APPROVAL PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTACT PG&E REPRESENTATIVE LISTED IN SPECIFICATIONS L-102 UPON AWARD OF CONTRACT TO BEGIN COORDINATION OF NEW ELECTRICAL SERVICE.
- GOVERNING CODES: 2020 NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE 2022 CALIFORNIA ELECTRICAL CODE (CEC), 2022 CALIFORNIA BUILDING CODE (CBC), SAN MATEO COUNTY CODE OR ORDINANCES AND FEDERAL AVIATION ADMINISTRATION (FAA) ADVISORY CIRCULARS: 150/5345-10H, 150/5345-13B, 150/5345-7F, 150/5345-45C and 150/5300-13B.

### DEFERRED SUBMITTALS:

- PRE-ENGINEERED METAL BUILDING
- HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
- VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS

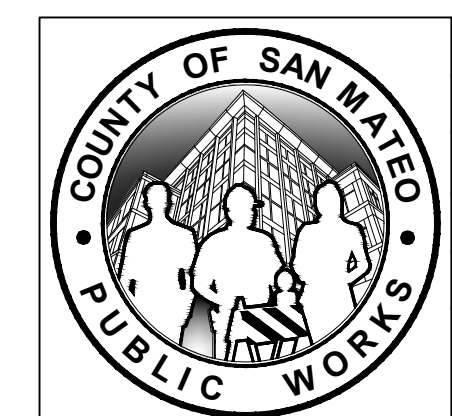
### SHEET INDEX:

GI001	TITLE SHEET
GI002	GENERAL NOTES & CONSTRUCTION BMP'S PLAN
GI100	GENERAL PLAN & SURVEY CONTROL POINTS
GC101	CONSTRUCTION SAFETY AND PHASING PLAN
CD101	DEMOLITION PLAN
CG201	GRADING PLAN
CG202	IMPROVEMENT PLAN
CC501	FENCING DETAILS
EL101	ELECTRICAL PLAN - DEMOLITION
EL102	ELECTRICAL PLAN - NEW
EL103	ENLARGED ELECTRICAL VAULT PLAN
EL501	ELECTRICAL DETAILS
EL502	ELECTRICAL DETAILS
EL503	ELECTRICAL DETAILS
EL504	CONTROLS WIRING DETAIL
EL505	TITLE 24 FORMS
EL601	SINGLE LINE DIAGRAM AND PANEL SCHEDULE
S001	GENERAL STRUCTURAL NOTES 1/2
S002	GENERAL STRUCTURAL NOTES 2/2
S003	CBC SPECIAL INSPECTIONS
S004	(STEEL) AISC 360 SPECIAL INSPECTIONS
S101	FOUNDATION PLAN
S102	ROOF FRAMING PLAN
S201	FRAME ELEVATIONS
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S501	TYPICAL DETAILS 1/2
S502	TYPICAL DETAILS 2/2
S510	FOUNDATION DETAILS AND SCHEDULES
S520	FRAMING DETAILS
S530	ANCHORAGE DETAILS
S601	CERTIFICATES OF COMPLIANCE

C&S Engineers, Inc.  
7801 Folsom Boulevard, Suite 210  
Sacramento, California 95826  
Phone: 916-364-1470  
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APPROVED DATE: 2-23-2024  
  
RICHARD D. GRAHAM  
C&S ENGINEERS, INC.  
R.C.E. # C72089 EXPIRES 6-30-2024



DESIGNED BY: <b>BTP</b>	3/29/2024	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	SCALE: <b>NOT TO SCALE</b>
CHECKED BY: <b>MDV</b>				DATE: <b>FEBRUARY 2024</b>
DRAWN BY: <b>KMW</b>				FILE NO.: <b>E5079</b>
REVISION	DATE			FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES
				0 1 2 3 4
				GI001 (REV) SHEET 1 OF 32

FILENAME: F:\PROJECT\116 - SAN MATEO COUNTY\116.003.007 - HAF GENERATOR & VAULT (DESIGN)\DESIGN\CADD\SHEET FILES\16003007\_G-001.DWG (GI001)

**GENERAL CONSTRUCTION NOTES**

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 70-08, ATTACHMENT A - CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.
2. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON RECORD DRAWINGS AND/OR CAD FILES FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THOSE UTILIZING THE INFORMATION ON THESE DRAWINGS ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY PURPOSE.
3. EXISTING UTILITIES WERE TAKEN FROM PLANS OF RECORD. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED IN GOOD FAITH SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT ACTUAL LOCATIONS AND MAY NOT BE INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
4. THE ACTUAL LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
5. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES OR CABLES, THE ENGINEER AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
6. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UTILITIES OR CABLES, AS DIRECTED BY THE ENGINEER, IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.
7. ALL AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S STAGING AND CONSTRUCTION OPERATIONS SHALL BE RESTORED EQUAL TO OR BETTER THAN ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
8. DURING THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN WHATEVER TEMPORARY LIGHTING MAY BE NECESSARY TO KEEP THE TAXIWAY IN OPERATING CONDITION WHEN OPEN FOR AIRCRAFT.
9. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.
10. THE CONTRACTOR SHALL RECONSTRUCT AND MAINTAIN EXISTING ACCESS ROADS AS REQUIRED FOR ACCESS TO THE WORK AREAS.
11. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN PROPOSED GRAVEL ACCESS ROADS AT THE APPROXIMATE LOCATION SHOWN.
12. PROPOSED ACCESS ROADS SHALL BE REMOVED UPON COMPLETION OF WORK AND THE AREA RESTORED TO ORIGINAL CONDITION.
13. ALL OF THE CONTRACTOR'S OPERATIONS SHALL REMAIN ON AIRPORT PROPERTY AT ALL TIMES. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED ON ADJACENT PROPERTY.
14. TO THE EXTENT THAT WETLAND AREAS ARE KNOWN, THEY HAVE BEEN DEPICTED ON THE CONTRACT DRAWINGS.
15. IN CASE OF EXISTING WETLAND AREAS, NO EXCAVATION, VEHICLES OR OTHER SOIL DISTURBANCE WILL BE ALLOWED. ANY CLEARING REQUIRED WILL BE PERFORMED WITH HANDHELD TOOLS AND REMOVED BY HAND. NO GRUBBING WILL BE ALLOWED.
16. THIS CONTRACT DOES NOT ALLOW FOR PRICE INCREASES DUE TO ESCALATION IN COST OF UNIT BID ITEMS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION WHEN PREPARING UNIT PRICES FOR BID.
17. THE COST OF ALL FAILING TESTS PERFORMED BY THE OWNER OR ON THE OWNER'S BEHALF SHALL BE BORNE BY THE CONTRACTOR.
18. THE OWNER RESERVES THE RIGHT TO SALVAGE FENCE MATERIALS. THE MATERIAL TO BE SALVAGED IS IDENTIFIED IN THE SPECIFICATION. SALVAGED MATERIAL SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER IN GOOD CONDITION. ALL OTHER FENCE MATERIAL SHALL BE SPOILED OFF AIRPORT PROPERTY AT A PROPER DISPOSAL SITE SELECTED BY THE CONTRACTOR.

**GRADING AND EXCAVATION NOTES**

19. SELECTIVE GRADING SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER.
20. ALL SPOIL SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE.
21. EXISTING WETLANDS LOCATED ADJACENT TO THE GRADING AREA SHALL NOT BE DISTURBED DURING CONSTRUCTION. PRIOR TO CONSTRUCTION, THE WETLAND BOUNDARIES SHALL BE CLEARLY MARKED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL KEEP ALL MATERIALS AND EQUIPMENT FROM ENTERING EXISTING WETLANDS. ANY IMPACTS TO WETLANDS OUTSIDE THE DESIGNATED GRADING AREA SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY AND MITIGATED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AND ALL AT THE CONTRACTOR'S EXPENSE.

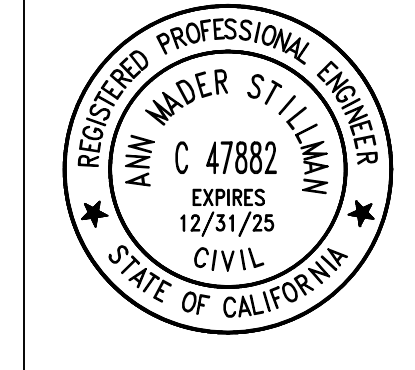
**SURVEY NOTES**

22. FOR TYPICAL SECTIONS, THE CONTOUR INTERVAL EQUALS 1 FOOT. FOR TRANSITIONAL AREAS TO KEYWAYS, THE CONTOUR INTERVAL EQUALS 0.1 FOOT.
23. ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM. COORDINATES REFER NAD 83 HORIZONTAL DATUM.
24. THE TOPOGRAPHIC FEATURES SHOWN HEREON WERE COMPILED FROM AERIAL PHOTOGRAPHY PERFORMED BY R.E.Y. ENGINEERS DATED OCTOBER 12, 2022.

**ELECTRICAL AND SIGNAGE NOTES**

25. ALL ELECTRICAL WORK SHALL CONFORM TO APPLICABLE LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
26. THE ELECTRICAL CHARACTERISTICS OF PROPOSED EQUIPMENT SHALL BE VERIFIED TO BE COMPATIBLE WITH EXISTING EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
27. ABANDONED CABLES MAY EXIST IN THE VICINITY OF THE PROPOSED WORK. IF ENCOUNTERED, CONTRACTOR SHALL VERIFY THAT THEY ARE ABANDONED PRIOR TO REMOVAL. IF THEY ARE NOT

- ABANDONED, CABLES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
28. ITEMS OF SPECIFIC MANUFACTURE SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND OR MANUFACTURER'S REPRESENTATIVE DIRECTIONS.
  29. ALL GROUND CONNECTIONS SHALL BE MADE USING EXOTHERMIC CONNECTIONS.
  30. GROUND RODS SHALL BE INSTALLED AT 500-FT INTERVALS ALONG COUNTERPOISE WIRE.
  31. ALL CABLE CONNECTIONS SHALL BE MADE AT LIGHT UNITS OR AT ENDS OF DUCT BANKS UNLESS DIRECTED OTHERWISE.
  32. THE OWNER RESERVES THE RIGHT TO SALVAGE LIGHTING EQUIPMENT. THE EQUIPMENT TO BE SALVAGED IS IDENTIFIED IN THE SPECIFICATION. SALVAGED EQUIPMENT SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER IN PROPER WORKING CONDITION. ALL OTHER LIGHTING EQUIPMENT SHALL BE SPOILED OFF AIRPORT PROPERTY AT A PROPER DISPOSAL SITE SELECTED BY THE CONTRACTOR.
  33. PROVIDE WATERTIGHT TERMINATION FOR ALL BURIED CONDUIT ENDS.



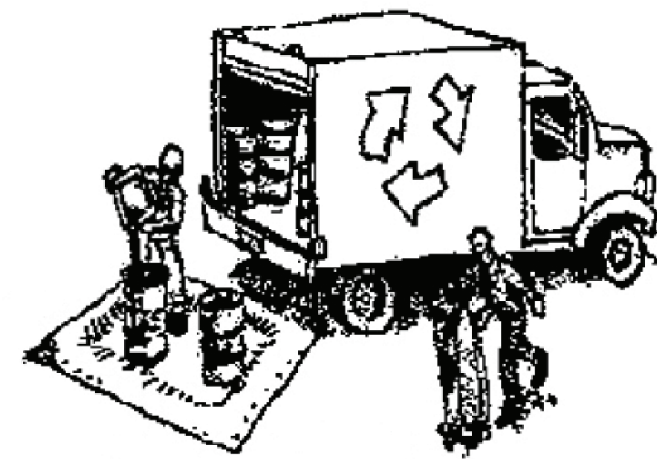
APPROVED:  
 DATE: 04/03/2024  
 ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025



# Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

## Materials & Waste Management



- Non-Hazardous Materials**
- Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
  - Use (but don't overuse) reclaimed water for dust control.

- Hazardous Materials**
- Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
  - Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
  - Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
  - Arrange for appropriate disposal of all hazardous wastes.

- Waste Management**
- Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
  - Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
  - Clean or replace portable toilets, and inspect them frequently for leaks and spills.
  - Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
  - Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

- Construction Entrances and Perimeter**
- Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
  - Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

## Equipment Management & Spill Control



- Maintenance and Parking**
- Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
  - Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
  - If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
  - If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
  - Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

- Spill Prevention and Control**
- Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
  - Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
  - Clean up spills or leaks immediately and dispose of cleanup materials properly.
  - Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
  - Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
  - Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
  - Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

## Earthmoving



- Schedule grading and excavation work during dry weather.
- Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

- Contaminated Soils**
- If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
    - Unusual soil conditions, discoloration, or odor.
    - Abandoned underground tanks.
    - Abandoned wells
    - Buried barrels, debris, or trash.

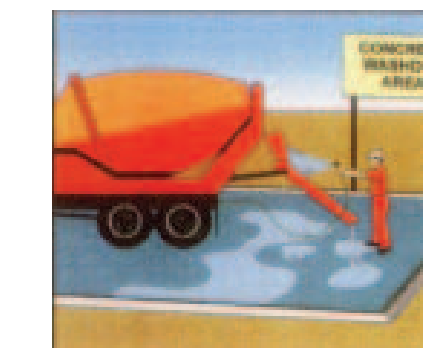
## Paving/Asphalt Work



- Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- Do not use water to wash down fresh asphalt concrete pavement.

- Sawcutting & Asphalt/Concrete Removal**
- Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
  - Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
  - If sawcut slurry enters a catch basin, clean it up immediately.

## Concrete, Grout & Mortar Application



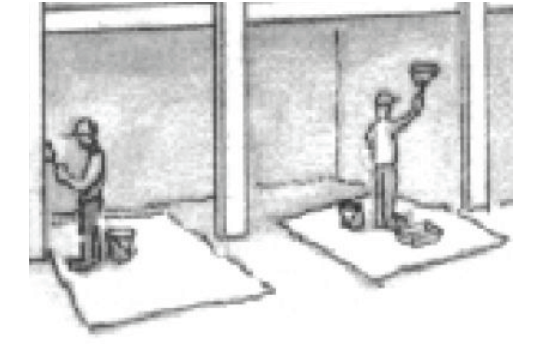
- Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

## Landscaping



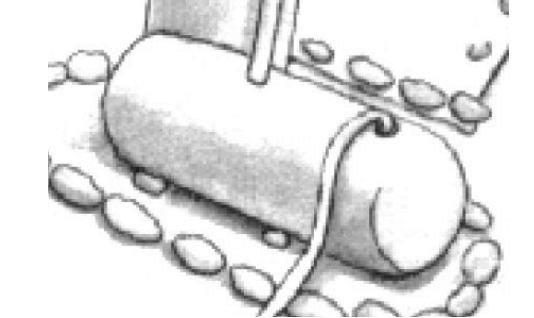
- Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- Stack bagged material on pallets and under cover.
- Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

## Painting & Paint Removal



- Painting Cleanup and Removal**
- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
  - For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
  - For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
  - Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
  - Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

## Dewatering



- Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- Divert run-on water from offsite away from all disturbed areas.
- When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

**Storm drain polluters may be liable for fines of up to \$10,000 per day!**

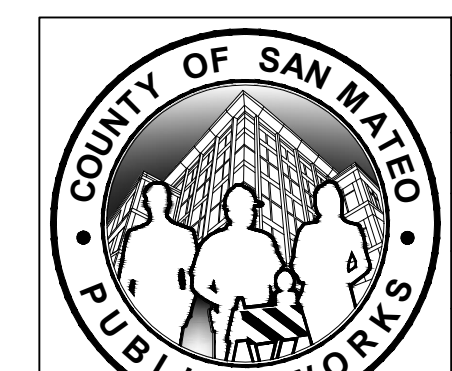
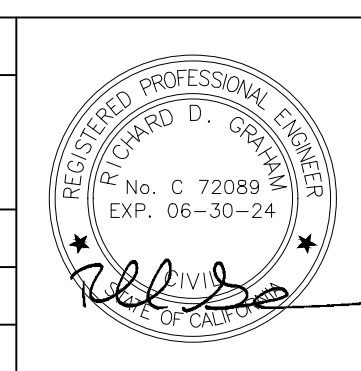
**A1 GENERAL NOTES**  
SCALE: NOT TO SCALE

**A2 CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP's)**  
SCALE: NOT TO SCALE

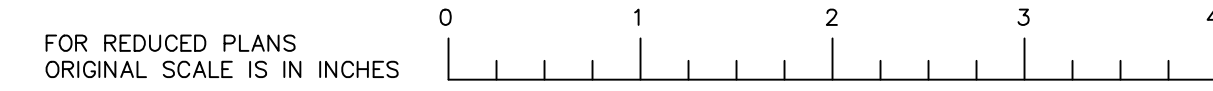
C&S Engineers, Inc.  
 7801 Folsom Boulevard, Suite 210  
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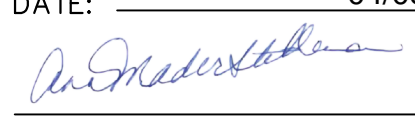
APPROVED DATE: 2-23-2024
RICHARD D. GRAHAM
C&S ENGINEERS, INC.
R.C.E. # C72089 EXPIRES 6-30-2024



DESIGNED BY: FKN	GENERAL NOTES & CONSTRUCTION BMP'S PLAN	SCALE: NOT TO SCALE
CHECKED BY: MDV	ELECTRICAL VAULT AND EMERGENCY GENERATOR	DATE: FEBRUARY 2024
DRAWN BY: AA	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	FILE NO. E5079
3/29/2024	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	G1002 (REV) SHEET 2 OF 32



FILENAME: F:\PROJECT\116 - SAN MATEO COUNTY\116.003.007 - HAF GENERATOR & VAULT (DESIGN)\DESIGN\CADD\SHEET FILES\116003007\_G1-SERIES.DWG (G1002)

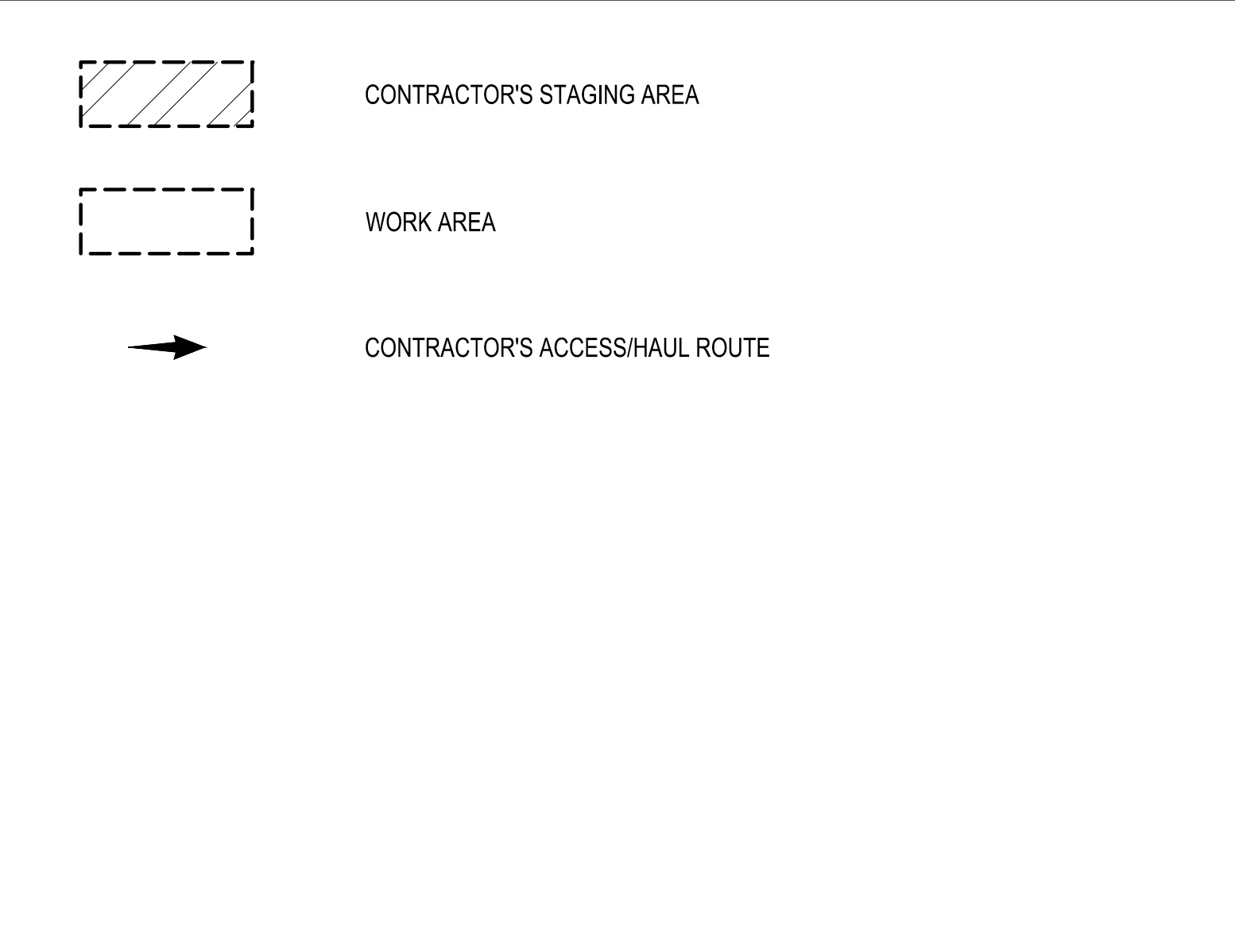
APPROVED: \_\_\_\_\_  
 DATE: 04/03/2024  
  
 ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025



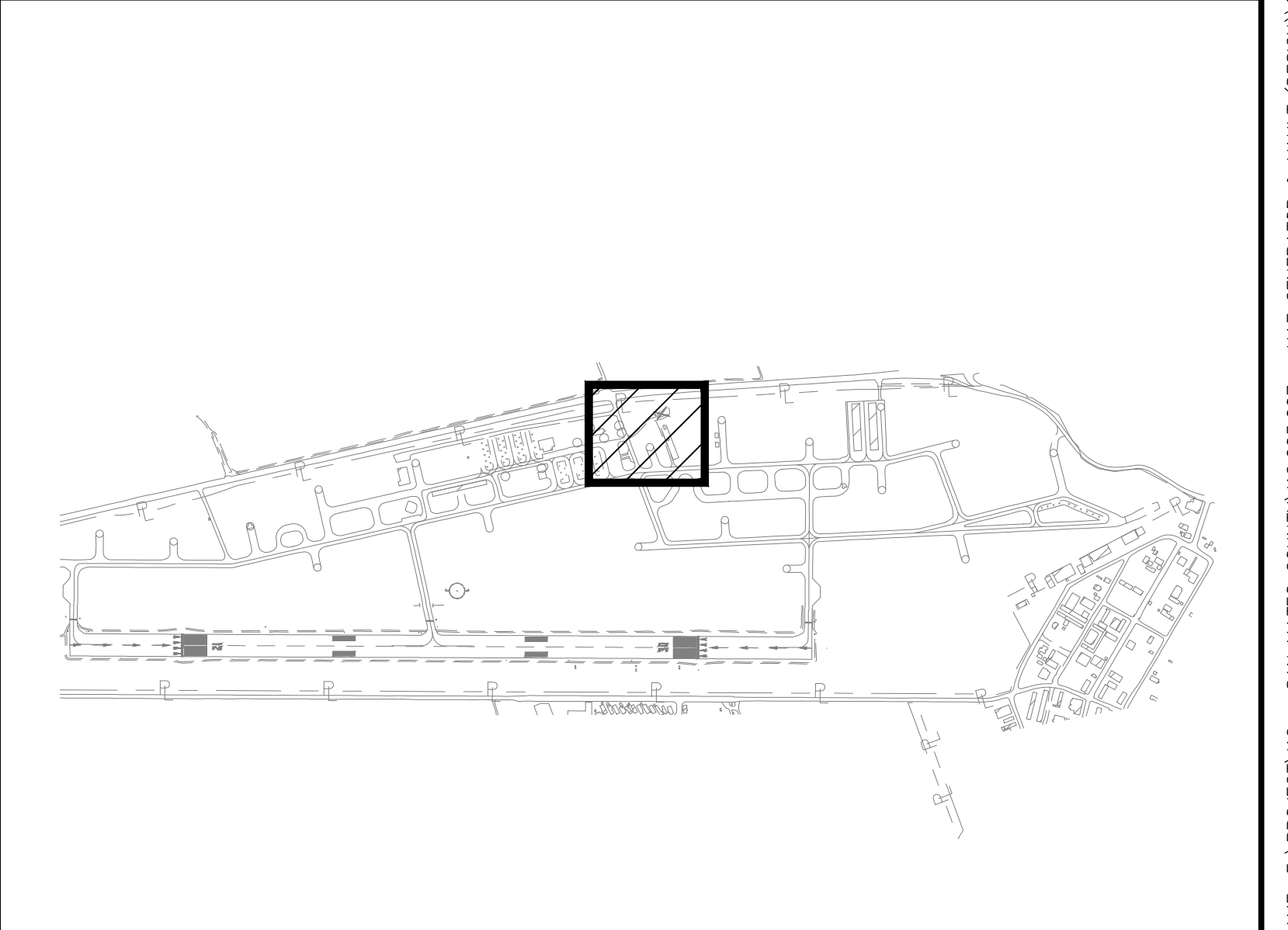
**B1 CONSTRUCTION SAFETY AND PHASING PLAN**  
 SCALE: 1" = 50'



- 101. EXISTING DIRT ROAD.
- 102. PROPOSED WORK LIMIT.
- 103. CONTRACTOR STAGING AREA.
- 104. ENTRANCE AIRPORT GATE.



- A3 GENERAL NOTES**  
 SCALE: NOT TO SCALE
1. THE WORK AREA ENTRANCE WILL BE THE EXISTING NORTH ACCESS GATE VIA CABRILLO HIGHWAY ON THE NORTH-WEST THE ACCESS GATE OF THE AIRPORT, AND IT MUST BE MANNED BY A FLAG PERSON TO MAINTAIN THE SECURITY OF THE AIRPORT AT ALL TIMES WHEN THE GATE IS OPENED OR UNLOCKED.
  2. THE STAGING AREA WILL BE LOCATED AT THE NORTH-WEST NEAR THE ACCESS GATE.
  3. ANY DAMAGE TO EXISTING ROADS, FACILITIES, LANDSCAPE, UTILITIES, AND OTHER ITEMS IN PUBLIC PROPERTY CAUSED BY THE CONTRACTOR OPERATORS, SHALL BE REPAIRED IMMEDIATELY AT CONTRACTOR'S EXPENSE.



**A1 KEY NOTES**  
 SCALE: NOT TO SCALE

**A2 LEGEND**  
 SCALE: NOT TO SCALE

**A3 GENERAL NOTES**  
 SCALE: NOT TO SCALE

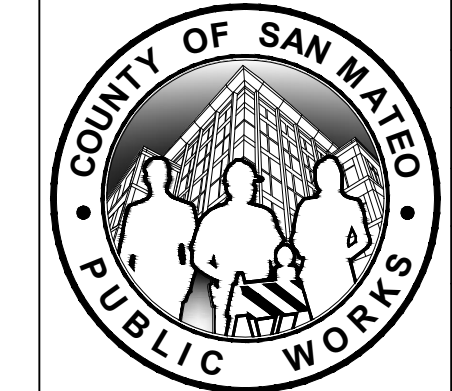
**A4 KEY MAP**  
 SCALE: NOT TO SCALE

C&S Engineers, Inc.  
 7801 Folsom Boulevard, Suite 210  
 Sacramento, California 95826  
 Phone: 916-364-1470  
 www.cscos.com

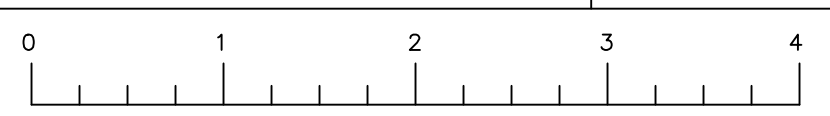


APPROVED DATE: 2-23-2024

RICHARD D. GRAHAM  
 C&S ENGINEERS, INC.  
 R.C.E. # C72089 EXPIRES 6-30-2024



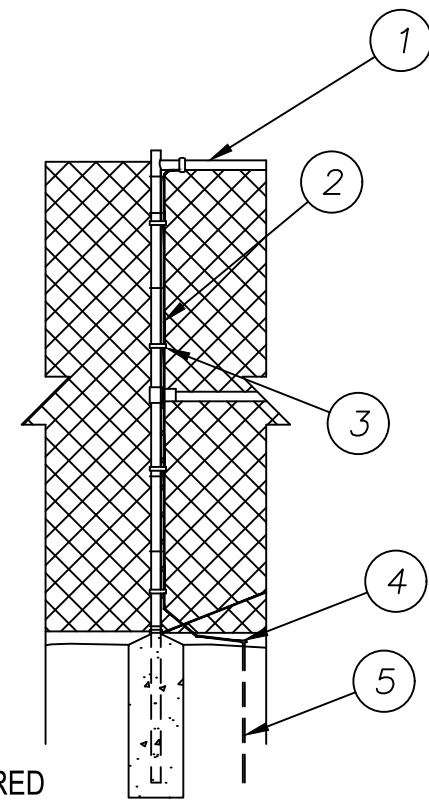
DESIGNED BY: E.A.	CONSTRUCTION SAFETY AND PHASING PLAN	SCALE: 1" = 50'
CHECKED BY: M.D.V.	ELECTRICAL VAULT AND EMERGENCY GENERATOR	DATE: FEBRUARY 2024
DRAWN BY: E.A.		FILE NO. E5079
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO
		555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
		FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



FILENAME: F:\PROJECT\116 - SAN MATEO COUNTY\116.003.007 - HAF GENERATOR & VAULT (DESIGN)\DESIGN\CADD\SHEET FILES\16003007\_GC-SERIES.DWG (CG101)

**GROUNDING NOTES**  
FENCING SHALL BE GROUNDED AS FOLLOWS:

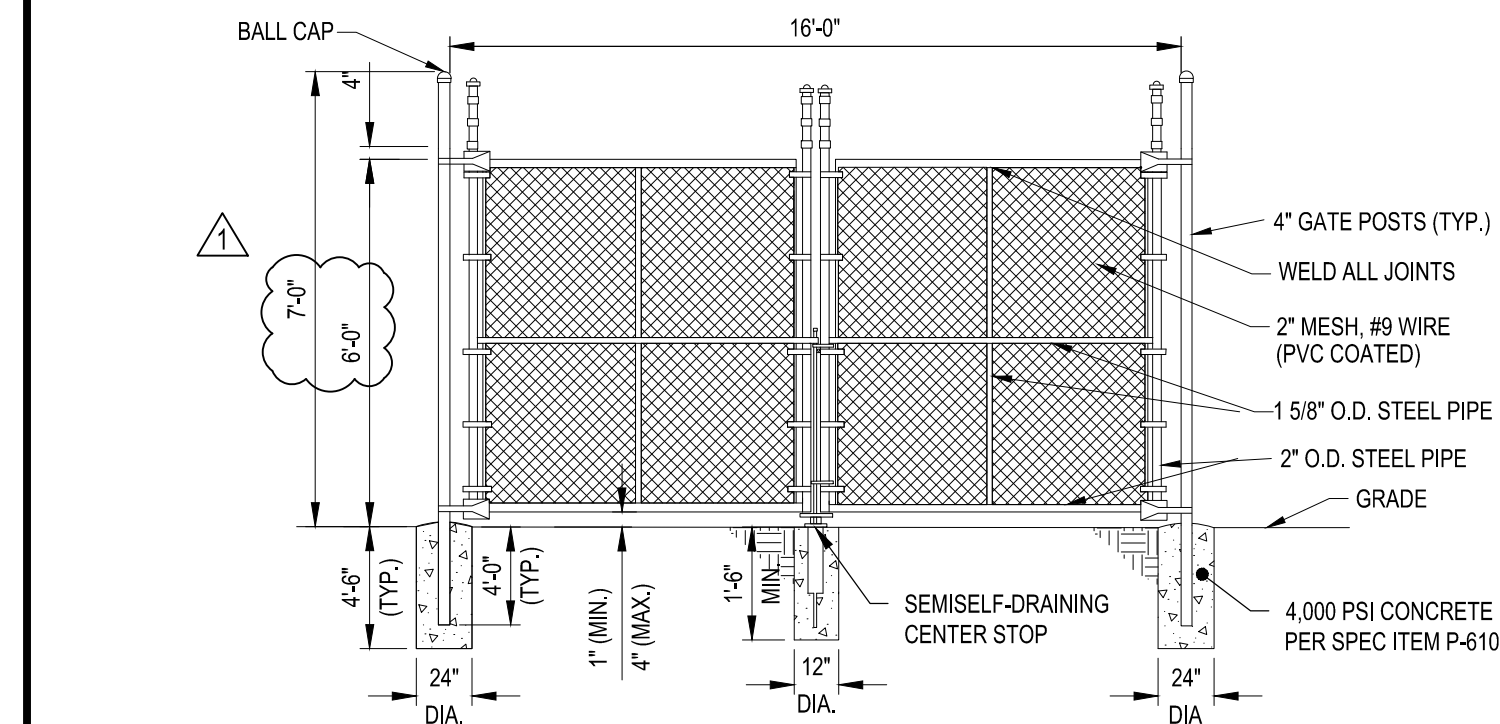
- A. ON EACH SIDE OF EVERY GATE
- B. AT POINTS APPROXIMATELY 150' ON EACH SIDE OF HIGH TENSION LINE CROSSINGS (AS DIRECTED BY ENGINEER)
- C. AT 150' INTERVALS ALONG FENCE WHEN HIGH TENSION LINES ARE WITHIN 100' AND RUN PARALLEL TO THE FENCE LINE
- D. EVERY 1000' OF LENGTH WHEN FENCES ARE LOCATED IN ISOLATED PLACES
- E. EVERY 500' WHEN IN CLOSE PROXIMITY (100' OR LESS) TO PUBLIC ROADS, HIGHWAYS AND BUILDINGS



- KEY NOTES**
- 1 FENCE TOP HORIZONTAL RAIL
  - 2 # 1/0 BARE COPPER (TYPICAL FENCE GROUNDING)
  - 3 BURNDY OR APPROVED EQUAL TYPE 'GAR' CLAMPS (4 REQUIRED PER GROUNDING)
  - 4 BURNDY OR APPROVED EQUAL TYPE 'GH' CLAMP
  - 5 3/4" X 10'-0" COPPER CLAD STEEL ROD

**C1 LINE POST FENCE GROUNDING DETAIL**  
SCALE: NOT TO SCALE

**C2 NOT USED**  
SCALE: NOT TO SCALE



**NOTES:**

- 1. MALLEABLE IRON FORK TYPE LATCH WITH DROP BAR AND PROVISION FOR PADLOCK FURNISHED WITH GATE BY CONTRACTOR.
- 2. THE CONTRACTOR SHALL RESTORE EXISTING GRADE TO ORIGINAL OR BETTER CONDITION AFTER INSTALLING THE GATE. RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
- 3. GATES SHALL HAVE A HYDRAULIC CLOSE SYSTEM SIMILAR TO LOCKEY USE HYDRAULIC GATE CLOSER TB950 OR APPROVED EQUAL.
- 4. CONTRACTOR SHALL PROVIDE PADLOCKS AND KEYS.
- 5. ALL APPARATUSES SHALL BE HEAVY DUTY.

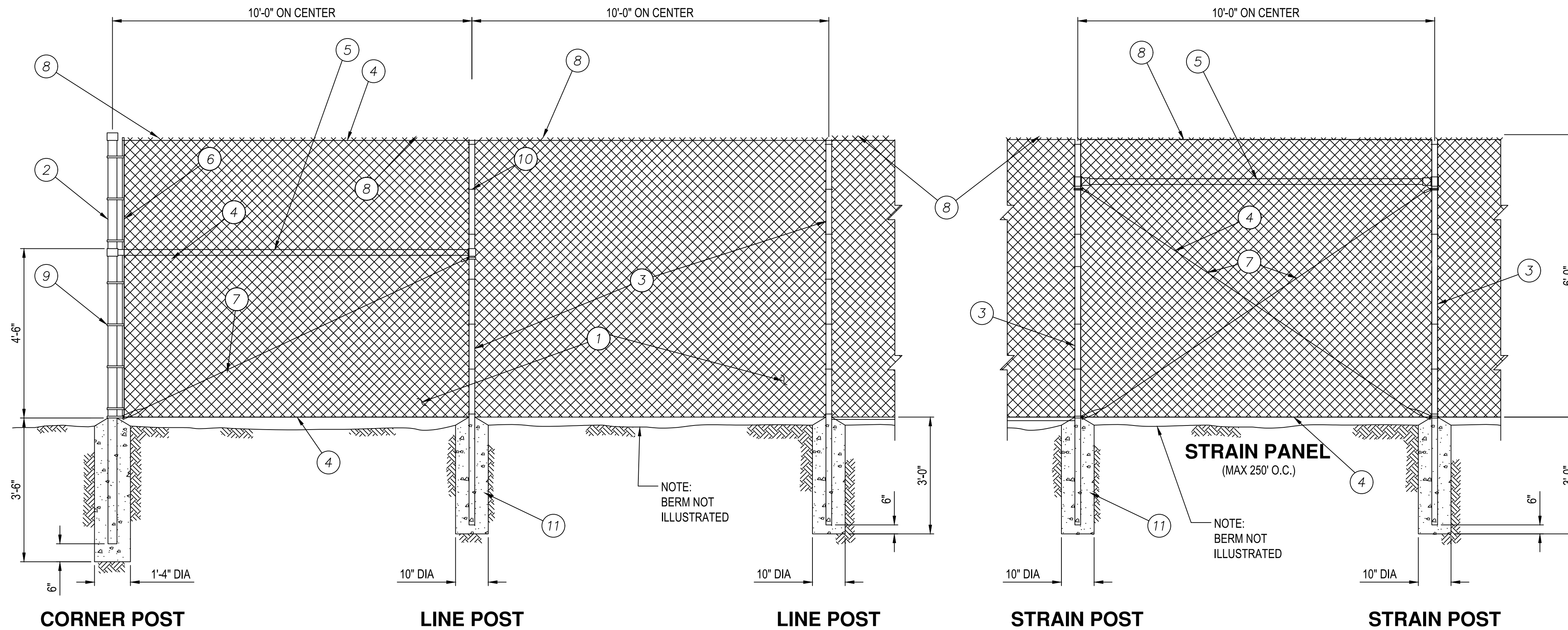
**C3 16' WIDE DOUBLE SWING VEHICLE GATE**  
SCALE: NOT TO SCALE

APPROVED: \_\_\_\_\_  
DATE: 04/03/2024

ANN MADER STILLMAN,  
DIRECTOR OF PUBLIC WORKS  
R. C. E. # 47882 / EXPIRES 12-31-2025

- GENERAL NOTES:**
- 1. ALL CONCRETE SHALL BE FC 4000 P.S.I. (28 DAYS), PER SPEC ITEM P-610.
  - 2. FITTINGS NOT SPECIFICALLY DETAILED SHALL BE HEAVY DUTY DESIGN.
  - 3. FENCE FABRIC SHALL BE GALVANIZED (GBW). POSTS, RAILS, AND BRACES SHALL BE ZINC COATED. SEE THE SPECIFICATIONS.
  - 4. USE MID HORIZONTAL BRACE AT ALL CORNERS, ANGLE POINTS, STRAIN PANELS, AND EACH SIDE OF GATE LOCATIONS ONLY.

- KEY NOTES:**
- 1 CHAIN LINK FABRIC - 9 GA. X 2" MESH. (PVC COATED)
  - 2 GALVANIZED CORNER POST - 2.875" O.D. SCHEDULE 40 OR SS-40 PIPE.
  - 3 GALVANIZED LINE POSTS AND STRAIN POSTS - 1.90" SCHEDULE 40 OR SS-40 PIPE.
  - 4 TENSION WIRE - 7 GA. COIL SPRING FASTENED TO FABRIC WITH 12 GA. HOG RINGS @ 18" O.C.
  - 5 MID HORIZONTAL BRACE - 1.67" O.D. SCHEDULE 40 OR SS-40 PIPE.
  - 6 STRETCHER BAR - 3/16" X 3/4".
  - 7 3/8" DIA GALVANIZED TENSION ROD WITH TENSION BAR AT CORNER AND GATE POSTS.
  - 8 TIE WIRE AT 24" O.C.
  - 9 FABRIC BANDS AT 14" O.C.
  - 10 FABRIC TIES OR CLIPS AT 15" O.C.
  - 11 CONCRETE POST FOOTING TO BE ROUND AT THE TOP FOR DRAINAGE AND ALLOWED TO CURE FOR 7 DAYS BEFORE ANY STRESS IS PLACED UPON THE FENCE POSTS.



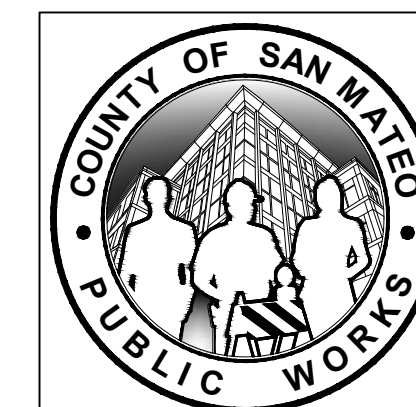
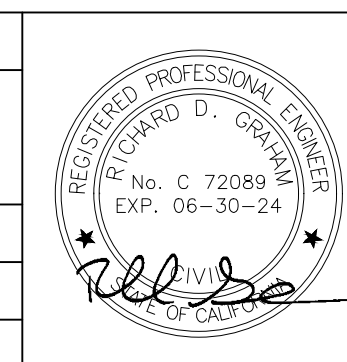
**A1 TYPICAL FENCE DETAILS**  
SCALE: NOT TO SCALE

C&S Engineers, Inc.  
7801 Folsom Boulevard, Suite 210  
Sacramento, California 95826  
Phone: 916-364-1470  
www.cscos.com



APPROVED DATE: 2-23-2024

RICHARD D. GRAHAM  
C&S ENGINEERS, INC.  
R.C.E. # C72089 EXPIRES 6-30-2024



DESIGNED BY: EA	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	SCALE: NOT TO SCALE
CHECKED BY: MDV			DATE: FEBRUARY 2024
DRAWN BY: EA			FILE NO. E5079
REVISION	DATE		
	3/22/2024		

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

CG501 (REV) SHEET 8 OF 32

FILENAME: F:\PROJECT\116 - SAN MATEO COUNTY\116.003.007 - HAF GENERATOR & VAULT (DESIGN)\DESIGN\CADD\SHEET FILES\16003007\_C0102.DWG (CG501)

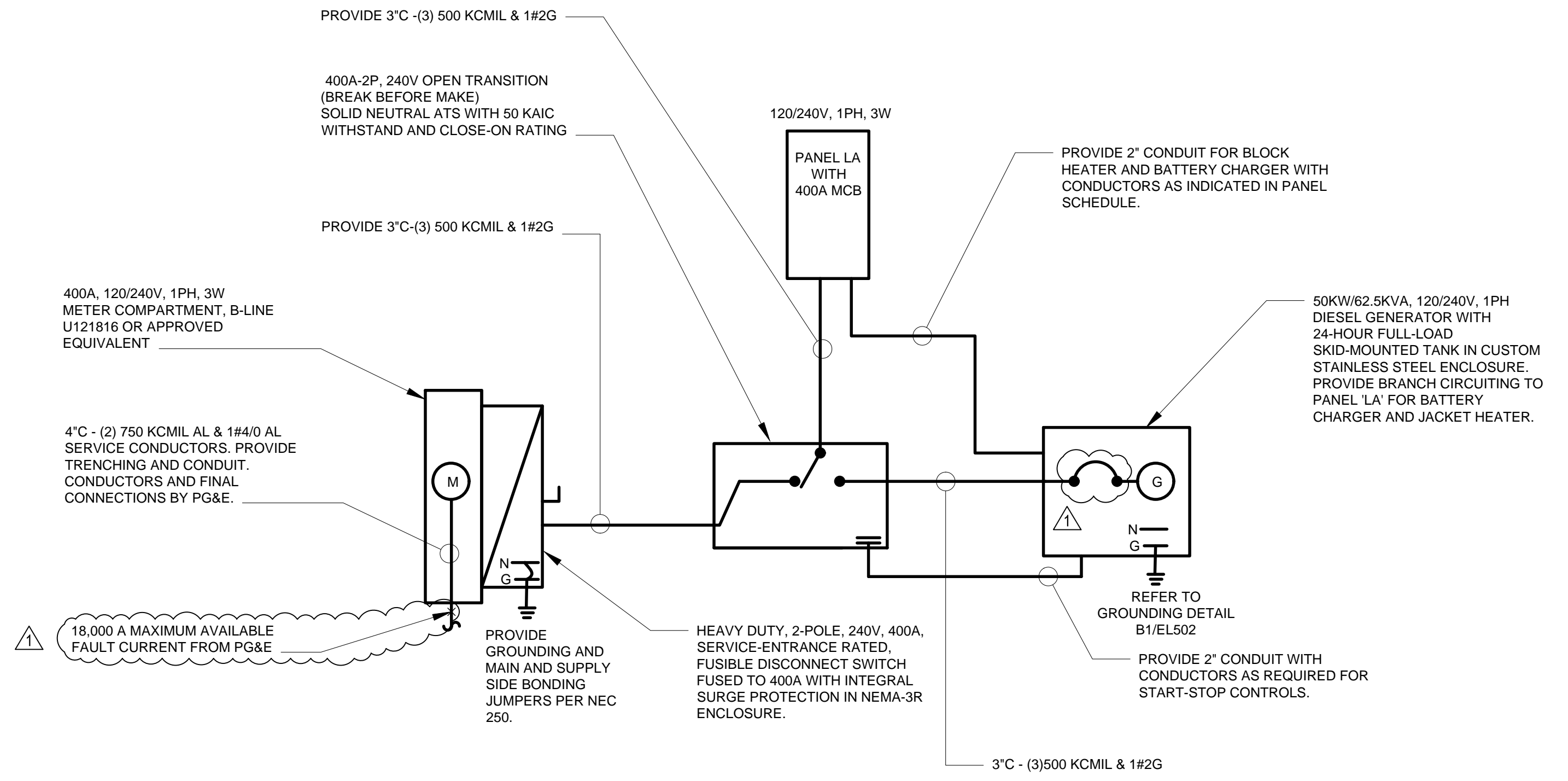




APPROVED: \_\_\_\_\_  
 DATE: 04/03/2024  
 ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025

TYPE: NEW, SURFACE-MOUNTED, NEMA-1										BUS: 400		AMP
SERVICE: 240/120V, 1 PH, 3W										MAIN: 400	AMP	
POLES: 42										NEUTRAL: FULL		
										AIC: 42 KAIC		
**	ØA	ØB	DESCRIPTION	WIRE	CB	CKT	CB	WIRE	DESCRIPTION	ØA	ØB	**
2	0.72		CONVENIENCE RECEPTACLES	2#12, 1#12G	20A-1P	1	2	20A-1P	2#12, 1#12G	0.6		
1		0.16	INDOOR/OUTDOOR LTG	2#12, 1#12G	20A-1P	3	4	20A-1P	2#12, 1#12G		0.138	1
1	2.5		WIND CONE (5 KVA XFMR)	2#8, 1#8G	30A-2P	5	6	30A-2P				
		2.5	-	-	-	7	8	-				
1	2.5		AWOS (5 KVA XFMR)	2#8, 1#8G	30A-2P	9	10	20A-1P				
		2.5	-	-	-	11	12	30A-2P				
1	0.83		PAPI 12 (2 KVA XFMR)	2#8, 1#8G	15A-2P	13	14	-				
		0.83	-	-	-	15	16	50A-2P				
1	0.83		PAPI 30 (2 KVA XFMR)	2#8, 1#8G	15A-2P	17	18	-				
		0.83	-	-	-	19	20	30A-2P				
			SPARE	-	20A-1P	21	22	-				
			SPARE	-	20A-1P	23	24	30A-2P				
			SPARE	-	20A-1P	25	26	-				
			SPARE	-	20A-1P	27	28	50A-2P				
			SPARE	-	20A-1P	29	30	-				
			SPARE	-	20A-1P	31	32	80A-2P				
			SPARE	-	20A-1P	33	34	-				
			SPARE	-	20A-1P	35	36	30A-2P				
	3.75		7.5 KW CCR RUNWAY	2#6, 1#10G	50A-2P	35	36	30A-2P	2#10, 1#10G			
		3.75	-	-	-	37	38	-				
	7.5		15 KW CCR TAXIWAY	2#2, 1#8G	100A-2P	39	40	40A-2P	2#8, 1#8G			
		7.5	-	-	-	41	42	-				
**	DEMAND FACTORS AS NOTED									ØA	ØB	
1	LTG & CONTINUOUS LOAD					LOAD SUMMARY						
						NON-CONTINUOUS LOAD				2.5	2.5	
2	RECEPTACLE LOAD					LIGHTING & CONTINUOUS LOAD				20.3	19.9	
						RECEPTACLE LOAD				0.7	0.0	
						TOTAL KVA				41.0	22.4	
						TOTAL CONNECTED LOAD =				63.4475	KVA	
						CURRENT AT 240, 1PH =				264.4	A	

- GENERAL NOTES:
- PROVIDE 400A FEED-THRU LUGS TO BACK-FEED EXISTING PANELBOARD PRIOR TO FINAL DEMOLITION.
  - CONFIRM CIRCUITING REQUIREMENTS FOR BATTERY CHARGER AND JACKET HEATER PRIOR TO ORDERING PANELBOARD.
  - PROVIDE PANELBOARD WITH INTEGRAL TVSS.



**SINGLE LINE NOTES**

- COORDINATE NEW SERVICE INSTALLATION WITH PG&E.
- ALL CONDUCTORS ARE COPPER, UON.

**A1 ELECTRICAL PANEL SCHEDULE**  
 SCALE: NOT TO SCALE

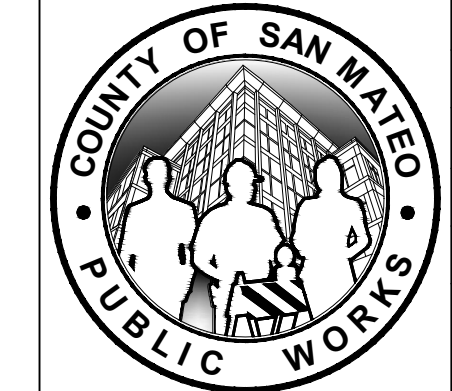
**A3 ELECTRICAL SINGLE LINE DIAGRAM**  
 SCALE: NOT TO SCALE

C&S Engineers, Inc.  
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 Phone: 916-364-1470  
 www.cscos.com



APPROVED DATE: 2-23-2024

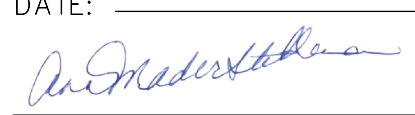
BARTON T. PETERS  
 C&S ENGINEERS, INC.  
 R.C.E. # 18924 EXPIRES 12-31-2025



DESIGNED BY: FKN	SINGLE LINE DIAGRAM AND PANEL SCHEDULE		SCALE: NOT TO SCALE
CHECKED BY: BP	ELECTRICAL VAULT AND EMERGENCY GENERATOR		DATE: FEBRUARY 2024
DRAWN BY: AA			FILE NO. E5079
3/28/2024	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063	EL601 (REV) SHEET 17 OF 32
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES	0 1 2 3 4		

FILENAME: F:\PROJECT\116 - SAN MATEO COUNTY\116.003.007 - HAF GENERATOR & VAULT (DESIGN)\DESIGN\CADD\SHEET FILES\116003007\_EL-601.DWG (EL601)


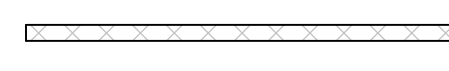
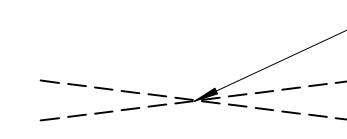
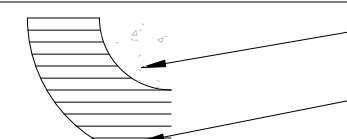

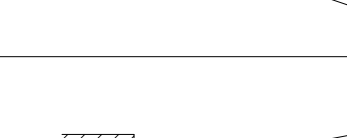

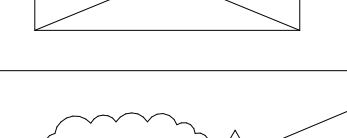
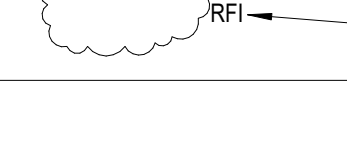


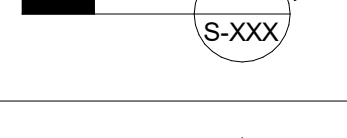
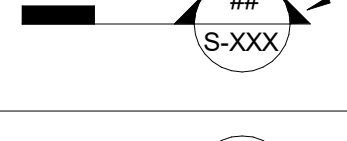




APPROVED: \_\_\_\_\_  
 DATE: 04/03/2024  
  
 ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025

### ABBREVIATIONS

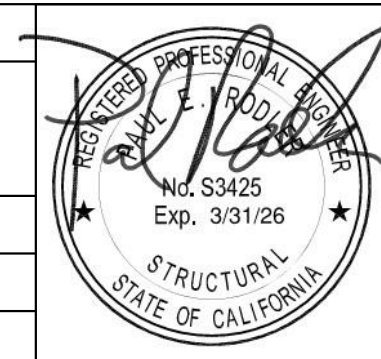
AB	ANCHOR BOLT(S)	L	LEDGER
AB-2	AGGREGATE BASE TYPE 2	LBS	POUNDS
ACI	AMERICAN CONCRETE INSTITUTE	Ldh	REBAR DEVELOPMENT LENGTH
ADDL	ADDITIONAL	Levt	REBAR STRAIGHT EXTENSION
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	L90	REBAR 90 DEGREE HOOK LENGTH
AFF	ABOVE FINISH FLOOR	L135	REBAR 135 DEGREE HOOK LENGTH
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	L180	REBAR 180 DEGREE HOOK LENGTH
ALT	ALTERNATE	LL	LIVE LOAD
ALUM	ALUMINUM	LLH	LONG LEG HORIZONTAL
ARCH	ARCHITECT OR ARCHITECTURAL DOCUMENTS	LLV	LONG LEG VERTICAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LSH	LONG SIDE HORIZONTAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LSV	LONG SIDE VERTICAL
ATS	AUTOMATIC TRANSFER SWITCH	LP	LOW POINT
AWIS	AMERICAN WELDING SOCIETY	LWC	LIGHT WEIGHT CONCRETE
AVG	AVERAGE	MATL	MATERIAL
BP	BASE PLATE	MAX	MAXIMUM
B/CONC	BOTTOM OF CONCRETE	MCJ	MASONRY CONTROL JOINT
B/FTG	BOTTOM OF FOOTING	MECH	MECHANICAL
B/DECK	BOTTOM OF DECK	MEZZ	MEZZANINE
BLDG	BUILDING	MFR	MANUFACTURER
BMAT	BOTTOM OF MAT	MID	MIDDLE
BPE	BOTTOM OF PILE ELEVATION	MIN	MINIMUM
B/SLAB	BOTTOM OF SLAB	MISC	MISCELLANEOUS
B/STL	BOTTOM OF STEEL	MEP	MECHANICAL, ELECTRICAL AND PROCESS
CB	CONCRETE BEAM	MTL	METAL
CC	CONCRETE COLUMN	MO	MASONRY OPENING
CCR	CONSTANT CURRENT REGULATOR	NAAMM	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
CALCS	CALCULATIONS	NF	NEAR FACE
CIP	CAST IN PLACE	NIC	NOT IN CONTRACT
CJ	CONTROL JOINT OR CONSTRUCTION JOINT	NO	NUMBER
CJP	COMPLETE JOINT PENETRATION	NS	NEAR SIDE
CLR	CLEAR	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	O.C.	ON CENTER
COL	COLUMN	O.C.E.W.	ON CENTER, EACH WAY
CONC	CONCRETE	OPP	OPPOSITE
CONT	CONTINUOUS	PCI	PRESTRESSED CONCRETE INSTITUTE
CL	CENTERLINE	PC	PILE/PIER CAP
D	COMPOSITE STEEL DECK / STEEL ROOF DECK / FORM DECK	PCF	POUNDS PER CUBIC FOOT
Db	DIAMETER OF REBAR	PL	PLATE
DBL	DOUBLE	PLF	POUNDS PER LINEAR FOOT
DEPR	DEPRESSION	PSI	POUNDS PER SQUARE INCH
DEG	DEGREE	PT, P/T	POST-TENSIONED
DTL	DETAIL	PSF	POUNDS PER SQUARE FOOT
DIA	DIAMETER	QTY	QUANTITY
DIAg	DIAGONAL	RO	ROOF OPENING
DM	DIMENSION	RAD	RADIUS
DL	DEAD LOAD	REINF	REINFORCED OR REINFORCING
DN	DOWN	SDI	STEEL DECK INSTITUTE
DP	DRILLED PIER	SL	SNOW LOAD
E	MODULUS OF ELASTICITY	SIM	SIMILAR
EA	EACH	SJ	STEEL JOIST INSTITUTE
EF	EACH FACE	SMS	SHEET METAL SCREW
EFEW	EACH FACE, EACH WAY	SOG	SLAB ON GRADE
EJ	EXPANSION JOINT	SPEC	SPECIFICATION
ELEC	ELECTRICAL	SQ	SQUARE
EL	ELEVATION	SS	STAINLESS STEEL
EMB	EMBEDMENT	STD	STANDARD
EOS	EDGE OF SLAB	STIFF	STIFFENER
EQ	EQUAL	STL	STEEL
EQUIP	EQUIPMENT	SW	SHEARWALL
EW	EACH WAY	T/BTM CHORD	TOP OF BOTTOM CHORD
EXIST	EXISTING	T&B	TOP AND BOTTOM
EXP	EXPANSION	T/CAP	TOP OF CAP
EXT	EXTERIOR	T/CONC	TOP OF CONCRETE
FDN	FOUNDATION	T/CURB	TOP OF CURB
FF	FINISH FLOOR	T/DECK	TOP OF DECK
FIN	FINISH	T/FTG	TOP OF FOOTING
FD	FLOOR DRAIN	T/GRADE	TOP OF GRADE
FLG	FLANGE	T/GRATING	TOP OF GRATING
FLR	FLOOR	TL	TOTAL LOAD
FRMG	FRAMING	T/MAT	TOP OF MAT
F.S.	FOUNDATION STEP	T/PC	TOP OF PILE CAP
FT	FOOT (FEET)	T/PIER	TOP OF PIER ELEVATION
FTG	FOOTING	T/SLAB	TOP OF SLAB
FY	YIELD STRESS STEEL	TS	TOP OF STEEL
G	GRATING	T/WALL	TOP OF WALL ELEVATION
GA	GAGE OR GAUGE	TYP	TYPICAL
GALV	GALVANIZED	UL	UNDERWRITERS LABORATORIES
GB	GRADE BEAM	UT	UNLESS NOTED OTHERWISE ULTRASONIC TESTING
HSA	HEADED STUD ANCHOR	VERT	VERTICAL
HORIZ	HORIZONTAL	WP	WORK POINT
H.P.	HIGH POINT	WWR	WELDED WIRE REINFORCEMENT
HS	HIGH STRENGTH	WF	WALL FOOTING
HT	HEIGHT	W	WALL
I (IN4)	MOMENT OF INERTIA	X-STRONG	EXTRA STRONG
IBC	INTERNATIONAL BUILDING CODE	XX-STRONG	DOUBLE EXTRA STRONG
ICC	INTERNATIONAL CODE COUNCIL	#	NUMBER
ID	INSIDE DIAMETER		
IN	INCH		
INFO	INFORMATION		
INT	INTERIOR		
JT	JOINT		
K	KIP = 1000 LBS		
KSI	KIPS PER SQUARE INCH		
KW	KILO WATT		

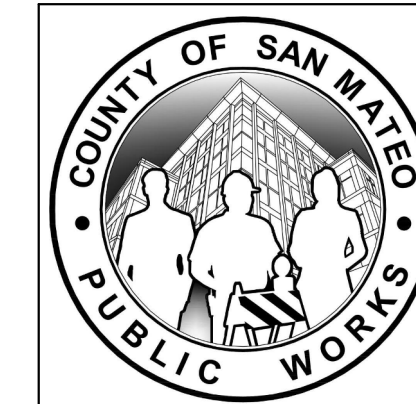
### LEGEND

	CONCRETE WALL FOR THICKNESS AND REINFORCING SEE WALL SCHEDULE.
	MASONRY WALL FOR THICKNESS AND REINFORCING SEE WALL SCHEDULE.
	INDICATES PEMB BRACING, SEE ELEVATIONS
	INDICATES STEEL DECK MARK - REFER TO PLAN NOTES
	INDICATES DIRECTION OF PRINCIPAL CONCRETE FLOOR OVER COMPOSITE DECK OR ROOF DECKING FLUTE DIRECTION
	WELDED WIRE REINFORCEMENT 6X6-W2.1XW2.1 WIRE SIZE WIRE SPACING IN INCHES
	INDICATES ELEVATION DIFFERENCE
	INDICATES LIMITS OF OPENING
	ONLY LATEST REVISION IS "CLOSED" LETTERS OR NUMBERS INDICATE ADDENDA/BULLETINS
	POPULATE FIELD IF THE RFI NUMBER NEEDS TO BE SHOWN
	KEYED NOTE SYMBOL
	INDICATES WORK, DATUM OR CONTROL POINT
	INDICATES DETAIL CALLOUT
	INDICATES FULL HEIGHT SECTION CALLOUT
	INDICATES ELEVATION CALLOUT

C&S Engineers, Inc.  
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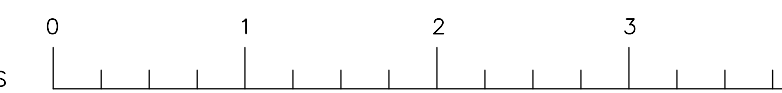


APPROVED DATE: 04/01/2024	
PAUL E. RODLER C&S ENGINEERS, INC. S.E. # 3425 / EXPIRES 3/31/2026	



DESIGNED BY: J.L.	GENERAL STRUCTURAL NOTES 2/2	SCALE: NOT TO SCALE
CHECKED BY: B.K.S.	ELECTRICAL VAULT AND EMERGENCY GENERATOR	DATE: AUGUST 4, 2023
DRAWN BY: C.A.V.	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	FILE NO.: E5079
REVISION	DATE	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
		S002 (REV) SHEET 19 OF 32

FOR REDUCED PLANS  
 ORIGINAL SCALE IS IN INCHES



**CBC 1704A.2 SPECIAL INSPECTIONS AND TESTS:**

THE OWNER OR THE OWNER'S AUTHORIZED AGENT, OTHER THAN THE CONTRACTOR, SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PROVIDE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION ON THE TYPES OF WORK SPECIFIED IN SECTIONS NOTED BELOW AND IDENTIFY THE APPROVED AGENCIES TO THE BUILDING OFFICIAL.

**CBC 1704A.2.1 SPECIAL INSPECTOR QUALIFICATIONS:**

PRIOR TO THE START OF THE CONSTRUCTION, THE APPROVED AGENCIES SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING THE COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION. EXPERIENCE OR TRAINING SHALL BE CONSIDERED RELEVANT WHERE THE DOCUMENTED EXPERIENCE OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION OR TESTING ACTIVITIES FOR PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUALITIES. THESE QUALIFICATIONS ARE IN ADDITION TO QUALIFICATIONS SPECIFIED IN OTHER SECTIONS OF THIS CODE.

**1704.2.4 REPORT REQUIREMENT:**

APPROVED AGENCIES SHALL KEEP RECORDS OF SPECIAL INSPECTIONS AND TESTS, AND APPROVED AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TESTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS, SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL.

**CBC 1704.2.5 SPECIAL INSPECTION OF FABRICATED ITEMS:**

WHERE FABRICATION OF STRUCTURAL LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION.

**1704.2.5.1 FABRICATOR APPROVAL:**

SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED ON REVIEW OF THE FABRICATOR'S WRITTEN FABRICATION PROCEDURES AND QUALITY CONTROL MANUALS THAT PROVIDE A BASIS FOR CONTROL OF MATERIALS AND WORKMANSHIP, WITH PERIODIC AUDITING OF FABRICATION AND QUALITY CONTROL PRACTICES BY AN APPROVED AGENCY OR THE BUILDING OFFICIAL. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE OWNER OR THE OWNER'S AUTHORIZED AGENT FOR SUBMITTAL TO THE BUILDING OFFICIAL AS SPECIFIED IN SECTION 1704.5 STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

SEE PROJECT SPECIFICATIONS AND REFERENCED STANDARDS FOR FREQUENCY OF TESTING.


AT THE CONCLUSION OF CONSTRUCTION, A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF PREVIOUSLY NOTED DISCREPANCIES SHALL BE SUBMITTED.

THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

THE FOLLOWING TYPES OF WORK SHALL BE INSPECTED BY A SPECIAL INSPECTOR IN ACCORDANCE WITH CHAPTER 17 OF THE CALIFORNIA BUILDING CODE.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION (CBC - TABLE 1705.3)						
VERIFICATION AND INSPECTION TASK	REFERENCE STANDARD	CBC REFERENCE	CONTINUOUS	PERIODIC	REQUIRED	NOT REQUIRED
1. INSPECTION OF REINFORCING STEEL, AND VERIFY PLACEMENT.	ACI 318: Ch 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4		X	●	○
1A. INSPECTION OF PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	ACI 318: Ch 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4		X	○	●
2. REINFORCING BAR WELDING:	AWS D1.4, ACI 318: 26.4	--			○	●
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	--	--		X	○	●
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND	--	--		X	●	○
c. INSPECT ALL OTHER WELDS	--	--	X		●	○
3. INSPECT ANCHORS CAST IN CONCRETE.	ACI 318: 17.8.2	--		X	●	○
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	--	--			○	○
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	ACI 318: 17.8.2.4	--	X		●	○
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	ACI 318: 17.8.2	--		X	○	●
5. VERIFYING USE OF REQUIRED DESIGN MIX.	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3		X	●	○
6. PRIOR TO CONCRETE PLACEMENT, FABRICATION SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	ASTM C172, ASTM C31, ACI 318: 26.4.5, 26.12	1908.10	X		●	○
7. INSPECT CONCRETE AND/OR SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8	X		●	○
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	ACI 318: 26.4.7-26.4.9	1908.9		X	●	○
9. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	--	--			○	○
a. APPLICATION OF PRESTRESSING FORCES; AND	ACI 318: 26.9.2.1	--	X		○	●
b. GROUTING OF BONDED PRESTRESSING TENDONS.	ACI 318: 26.9.2.3	--	X		○	●
10. INSPECTION ERECTION OF PRECAST CONCRETE MEMBERS.	ACI 318: CH 26.8	--		X	○	●
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	ACI 318: 26.10.2	--		X	○	●
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBERS BEING FORMED.	ACI 318: 26.10.1(B)	--		X	●	○

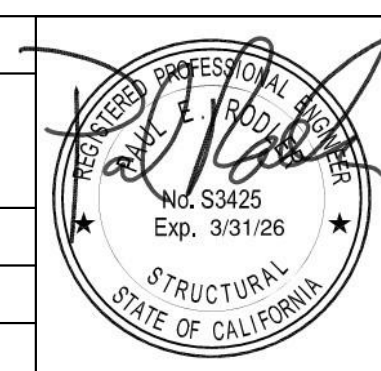
A. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH CHAPTER 17.8.2 IN ACI 318 OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

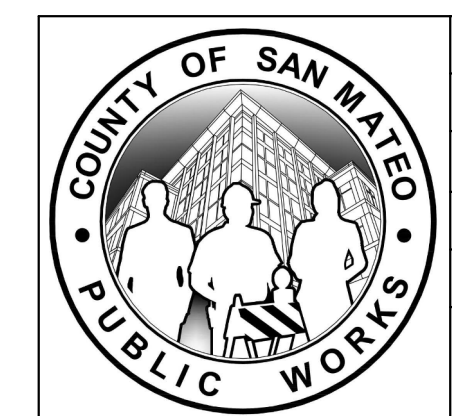
APPROVED:  DATE: 04/03/2024  
 ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS (CBC - TABLE 1705.6)				
VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC	REQUIRED	NOT REQUIRED
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		X	●	○
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		X	●	○
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.		X	●	○
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X		●	○
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		X	●	○

C&S Engineers, Inc.  
7801 Folsom Boulevard, Suite 210  
Sacramento, California 95826  
Phone: 916-364-1470  
www.cscos.com



APPROVED DATE: 04/01/2024	
PAUL E. RODLER	
C&S ENGINEERS, INC.	
S.E. # 3425 / EXPIRES 3/31/2026	



DESIGNED BY: J.L.	CBC SPECIAL INSPECTIONS ELECTRICAL VAULT AND EMERGENCY GENERATOR	SCALE: NOT TO SCALE
CHECKED BY: B.K.S.		DATE: AUGUST 4, 2023
DRAWN BY: C.A.V.	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
REVISION	DATE	FILE NO.: E5079
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES		S003 (REV) SHEET 20 OF 32



APPROVED: \_\_\_\_\_  
 DATE: 04/03/2024  
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 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025

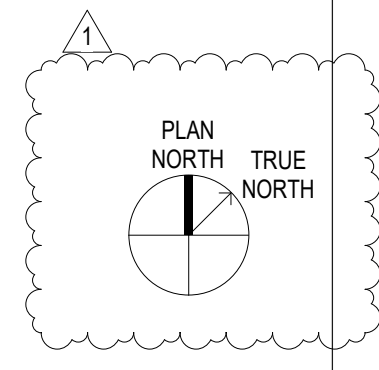
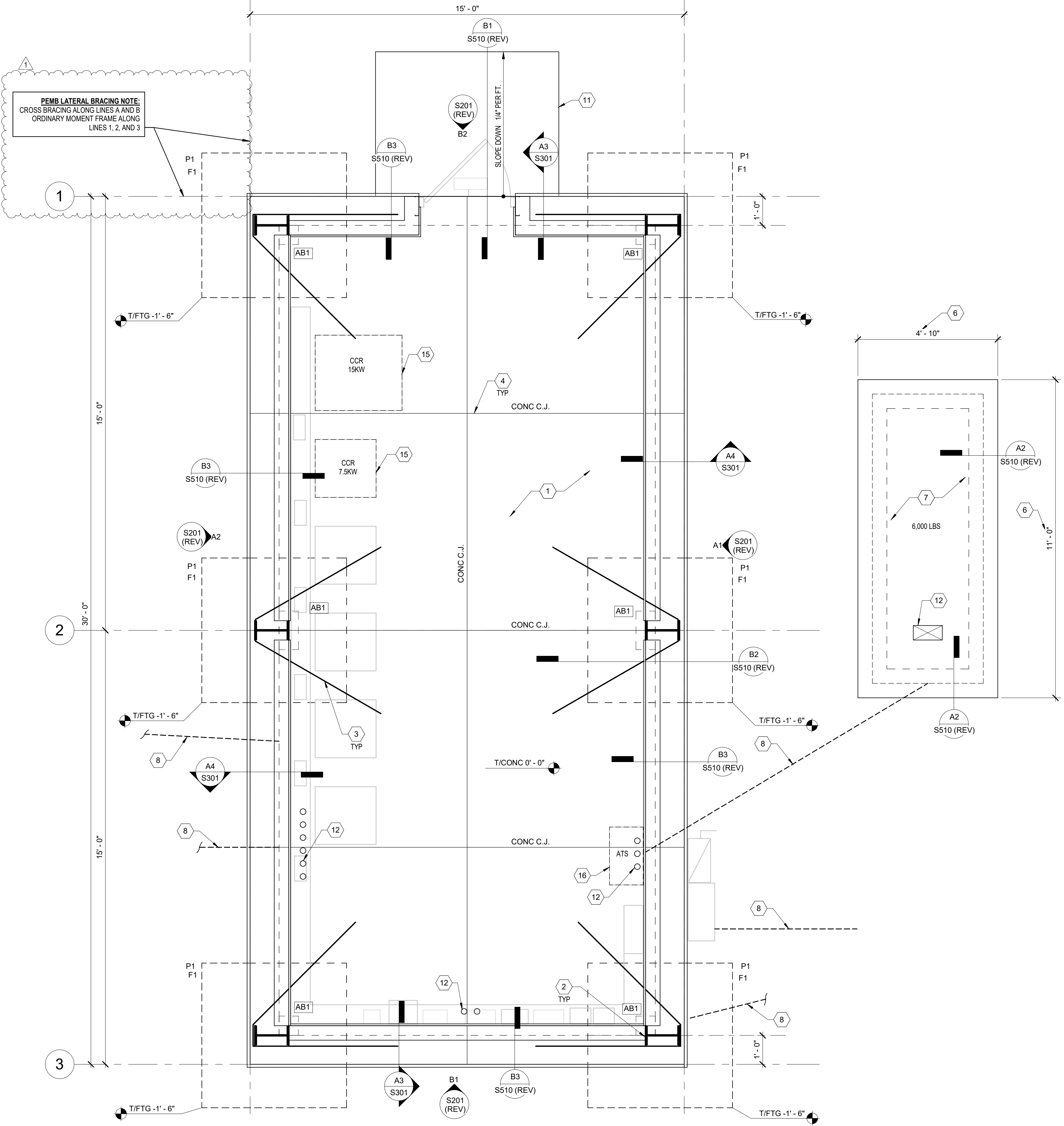
**SHEET NOTES:**

- A. TOP OF STRUCTURAL REFERENCE ELEVATION = 0'-0" WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR FIRST FLOOR. VERIFY ALL ELEVATIONS WITH RESPECT TO REFERENCE DATUM ELEVATIONS WITH CIVIL DRAWINGS.
- B. REFER TO SHEETS S001, S002, S003 AND S004 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, LEGEND AND SPECIAL INSPECTIONS.
- C. NOT USED
- D. ALL OPENINGS THROUGH FLOORS, WALLS OR ROOF ARE NOT SHOWN ON PLANS. COORDINATE ALL OPENING LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE ADDITIONAL FRAMING REQUIREMENTS OR REINFORCING WITH TYPICAL DETAILS.
- E. REFER TO SHEET S201 FOR FRAMING ELEVATIONS.
- F. REFER TO SHEET S301 FOR FRAMING SECTIONS.
- G. REFER TO S500 SERIES SHEETS FOR TYPICAL DETAILS.
- H. REFER TO S510 SERIES SHEETS FOR FOUNDATION DETAILS.
- I. NOT USED
- J. REFER TO S520 SERIES SHEETS FOR FRAMING DETAILS.
- K. AB DENOTES ANCHOR BOLTS. SEE SCHEDULE ON SHEET S510 FOR SIZE AND EMBEDMENT. REFER TO PEMB DRAWINGS FOR EXACT LOCATIONS.
- L. F DENOTES ISOLATED SPREAD FOOTING. SEE SCHEDULE ON SHEET S510 FOR SIZE AND REINFORCING. FOOTING SHALL BE CENTERED UNDER COLUMN U.N.O.
- M. P DENOTES CONCRETE PIER. SEE DETAIL A3/S301 FOR SIZE AND REINFORCING.
- N. REFER TO PEMB MANUFACTURER DRAWINGS FOR FRAMES, GIRTS, FRAMING FOR ROOF AND WALL OPENING, WALL PANELS AND VERTICAL BRACING. IF BRACE LOCATIONS DIFFER FROM WHAT IS SHOWN ON PLANS, CONTACT STRUCTURAL ENGINEER OF RECORD.

**# KEYED NOTES:**

- 1. 6" THICK CONCRETE SLAB ON GRADE WITH #4 AT 12" O.C. EACH WAY OVER 4" AB-2.
- 2. PRE-ENGINEERED METAL BUILDING (PEMB) COLUMN, CENTER CONCRETE PIER AND ISOLATED SPREAD FOOTING. LOCATIONS OF COLUMNS TO BE AS NOTED ON THE PLAN AND AS COORDINATED WITH FINAL PEMB DESIGN.
- 3. HAIRPIN REINFORCING BARS. REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
- 4. CONCRETE C.J. - REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
- 6. APPROXIMATE DIMENSIONS OF GENERATOR PAD - COORDINATE FINAL SIZE AND LOCATION WITH CIVIL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
- 7. 6" THICK CONCRETE GENERATOR PAD ON GRADE WITH #5 AT 12" O.C. EACH WAY OVER 4" A.B.C. REFER TO SOILS REPORT FOR SUBBASE REQUIREMENTS.
- 8. ELECTRICAL CONDUITS, REFER TO ELECTRICAL DRAWINGS.
- 11. 5" CONCRETE SLAB OVER SUBGRADE WITH #3 AT 18" O.C. EACH WAY PARALLEL TO EXTERIOR WALL. EXTEND REINFORCING SLAB 18" MINIMUM PAST DOOR JAMB OR EDGE OF SLAB WHICHEVER IS LONGER. PERPENDICULAR TO EXTERIOR WALL, EXTEND REINFORCED SLAB 60" PAST DOOR SILL. IN ALL CASES THE REINFORCED SLAB EXTENDS TO AN EDGE OF SLAB OR SCORE LINE.
- 12. APPROXIMATE LOCATION OF ELECTRICAL CONDUIT IN CONCRETE SLAB - COORDINATE EXACT CONDUIT LOCATIONS WITH ELECTRICAL DRAWINGS. FOR REQUIREMENTS FOR SMALL OPENINGS IN CONCRETE SLAB REFER TO TYPICAL DETAIL A2/S501.
- 15. FLOOR MOUNTED EQUIPMENT - FOR SEISMIC ANCHORAGE REQUIREMENTS REFER TO TYPICAL DETAIL C3/S530 FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION AND SIZE WITH ELECTRICAL DRAWINGS AND SPECIFICATIONS.
- 16. WALL MOUNTED ATC CABINET - FOR SEISMIC ATTACHMENT AND BACKING PLATE REQUIREMENTS REFER TO DETAIL ST5.00/S530 FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION AND SIZE WITH ELECTRICAL DRAWINGS AND SPECIFICATIONS.

**PEMB LATERAL BRACING NOTE:**  
 CROSS BRACING ALONG LINES A AND B  
 ORDINARY MOMENT FRAME ALONG  
 LINES 1, 2, AND 3

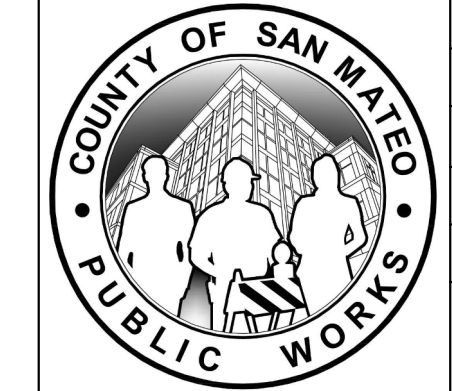
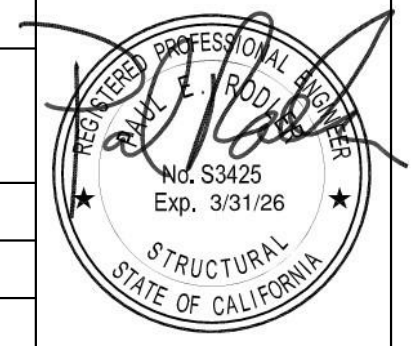


**A1 FOUNDATION PLAN**  
SCALE: 1/2" = 1'-0"

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 7801 Folsom Boulevard, Suite 210  
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 Phone: 916-364-1470  
 www.cscos.com



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 PAUL E. RODLER  
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 S.E. # 3425 / EXPIRES 3/31/2026



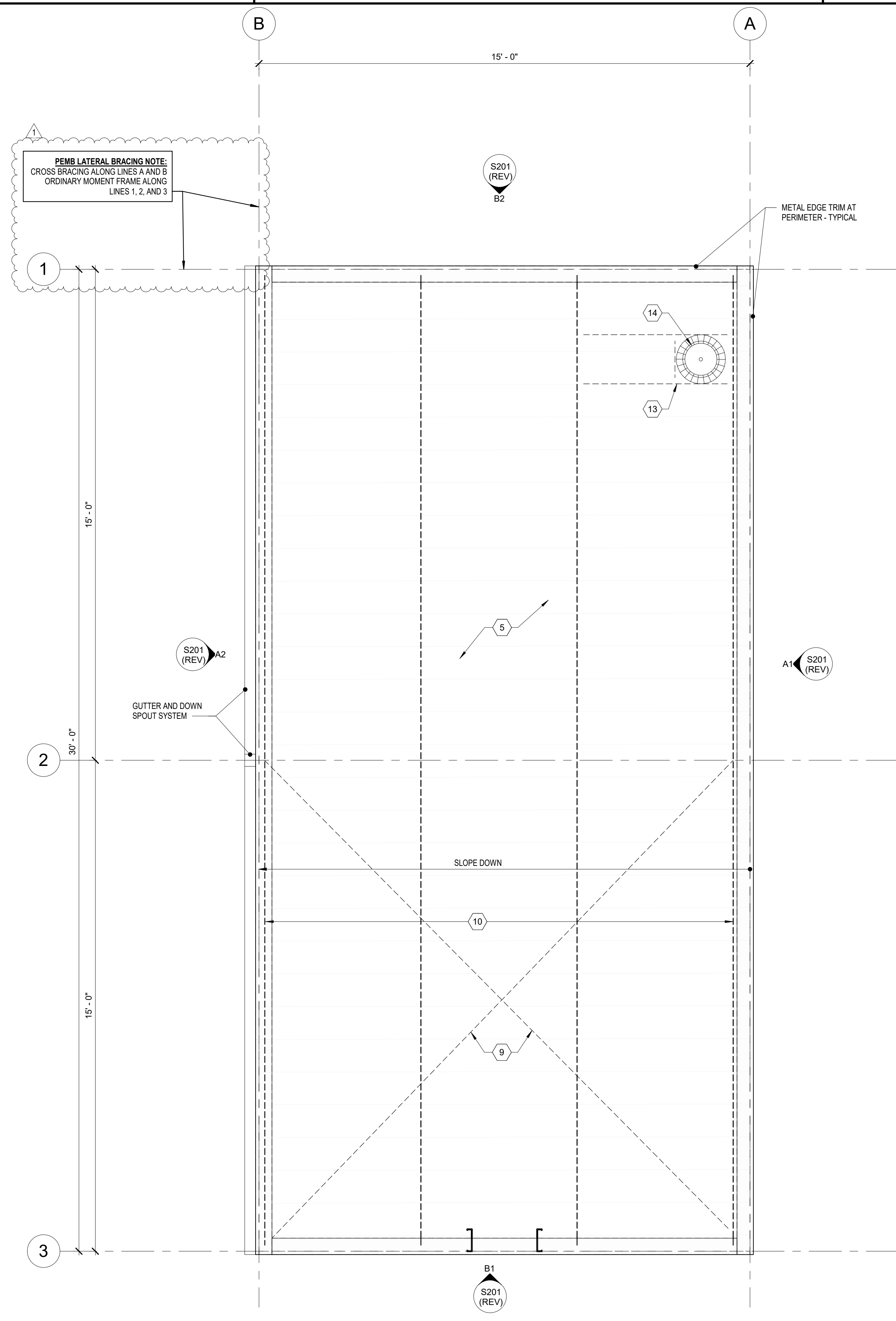
DESIGNED BY: J.L.	<b>FOUNDATION PLAN</b> <b>ELECTRICAL VAULT AND EMERGENCY GENERATOR</b>	SCALE: AS SHOWN
CHECKED BY: B.K.S.		DATE: AUGUST 4, 2023
DRAWN BY: C.A.V.		FILE NO.: E5079
REVISION	DATE	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO
		555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES		0 1 2 3 4 S101 (REV) SHEET 22 OF 32

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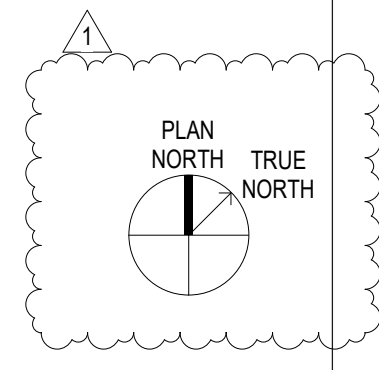
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APPROVED: \_\_\_\_\_  
 DATE: 04/03/2024  
 ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 R. C. E. # 47882 / EXPIRES 12-31-2025

- SHEET NOTES:**
- A. TOP OF STRUCTURAL REFERENCE ELEVATION = 0'-0" WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR FIRST FLOOR. VERIFY ALL ELEVATIONS WITH RESPECT TO REFERENCE DATUM ELEVATIONS WITH CIVIL DRAWINGS.
  - B. REFER TO SHEETS S001, S002, S003 AND S004 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, LEGEND AND SPECIAL INSPECTIONS.
  - C. THE ARCHITECT FURNISHES ALL ELEVATIONS AND DIMENSIONS. RESOLVE ANY DISCREPANCY WITH ARCHITECT. NOTIFY C&S COMPANIES THROUGH ARCHITECT OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS.
  - D. ALL OPENINGS THROUGH FLOORS, WALLS OR ROOF ARE NOT SHOWN ON PLANS. COORDINATE ALL OPENING LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE ADDITIONAL FRAMING REQUIREMENTS OR REINFORCING WITH TYPICAL DETAILS.
  - E. REFER TO SHEET S201 FOR FRAMING ELEVATIONS.
  - F. REFER TO SHEET S301 FOR FRAMING SECTIONS.
  - G. REFER TO S500 SERIES SHEETS FOR TYPICAL DETAILS.
  - H. REFER TO S510 SERIES SHEETS FOR FOUNDATION DETAILS.
  - I. NOT USED
  - J. REFER TO S520 SERIES SHEETS FOR FRAMING DETAILS.
  - K. REFER TO PEMB MANUFACTURER DRAWINGS FOR FRAMES, GIRTS, FRAMING FOR ROOF AND WALL OPENING, WALL PANELS AND VERTICAL BRACING. IF BRACE LOCATIONS DIFFER FROM WHAT IS SHOWN ON PLANS, CONTACT STRUCTURAL ENGINEER OF RECORD.

- KEYED NOTES:**
- KEYNOTE NUMBERS MAY NOT BE SEQUENTIAL ON SHEET
  - 5 ROOF FRAMING AND ROOF PANELS BY PRE-ENGINEERED METAL BUILDING VENDOR.
  - 9 HORIZONTAL BRACING, REFER TO PRE-ENGINEERED METAL BUILDING (PEMB) DRAWINGS.
  - 10 ROOF PURLINS, REFER TO PRE-ENGINEERED METAL BUILDING (PEMB) DRAWINGS.
  - 13 PROVIDE SUPPORT FRAMING AT VENTILATOR AND ROOF OPENING AS REQUIRED. VENTILATOR WEIGHT = 50 LBS.
  - 14 20-INCH TURBINE ROOF VENTILATOR - SEE SPECIFICATIONS.



**A1 ROOF FRAMING PLAN**

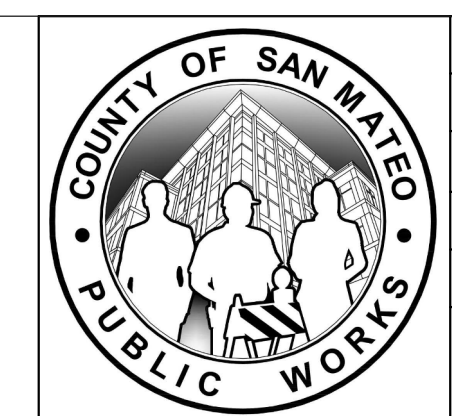
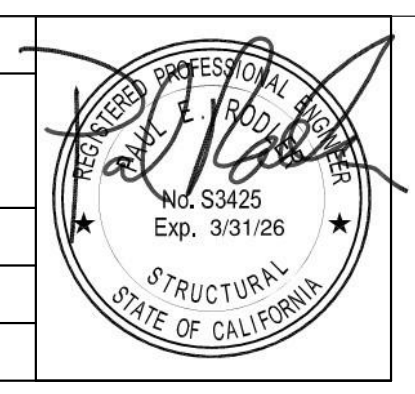
SCALE: 1/2" = 1'-0"

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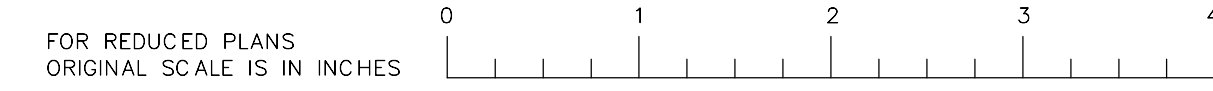


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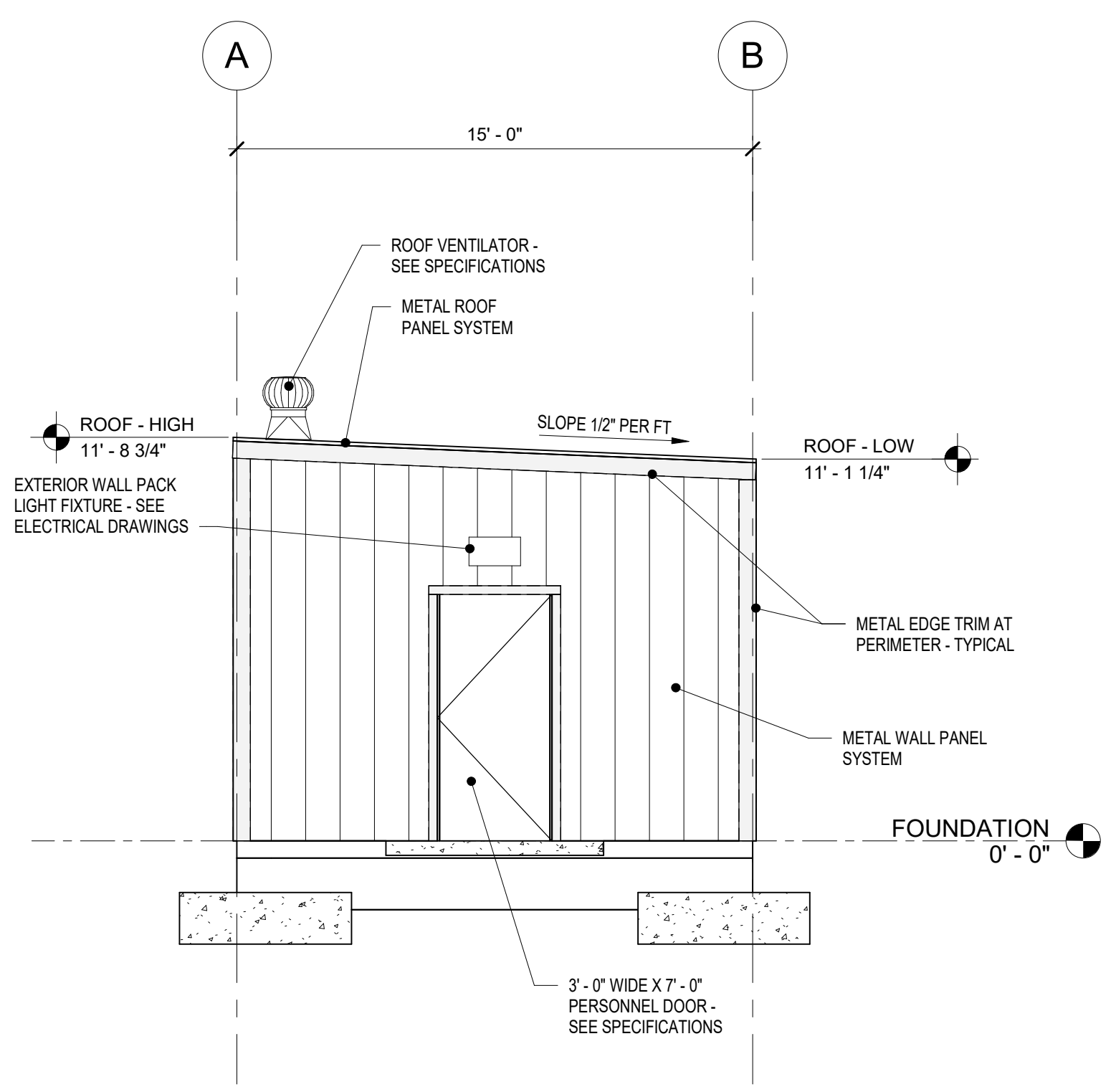
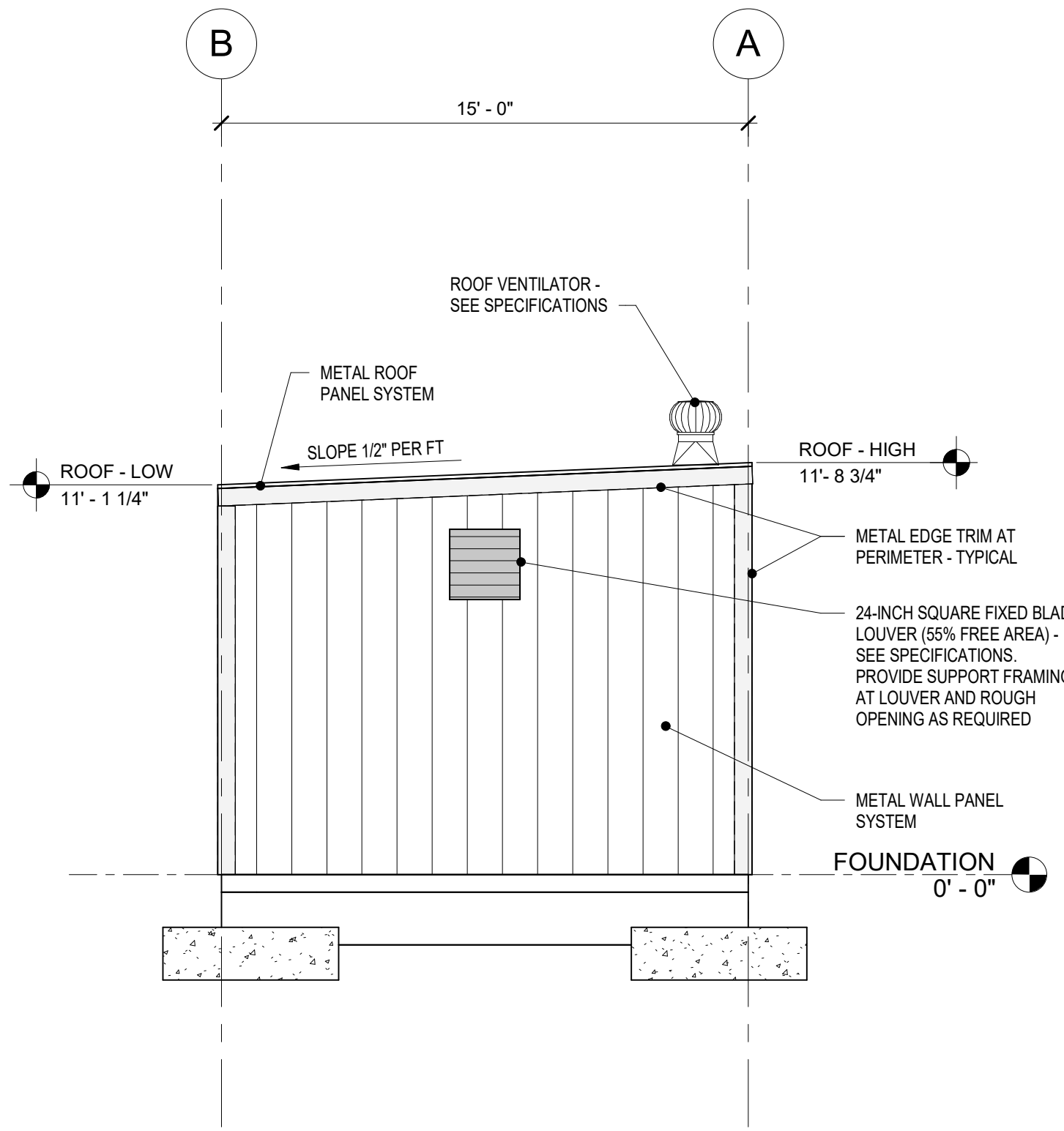


DESIGNED BY: J.L.	ROOF FRAMING PLAN	SCALE: AS SHOWN
CHECKED BY: B.K.S.	ELECTRICAL VAULT AND EMERGENCY GENERATOR	DATE: AUGUST 4, 2023
DRAWN BY: C.A.V.	ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO	FILE NO.: E5079
REVISION	DATE	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063
1	04/01/2024	
FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES		S102 (REV) SHEET 23 OF 32





APPROVED: \_\_\_\_\_  
 DATE: 04/03/2024  
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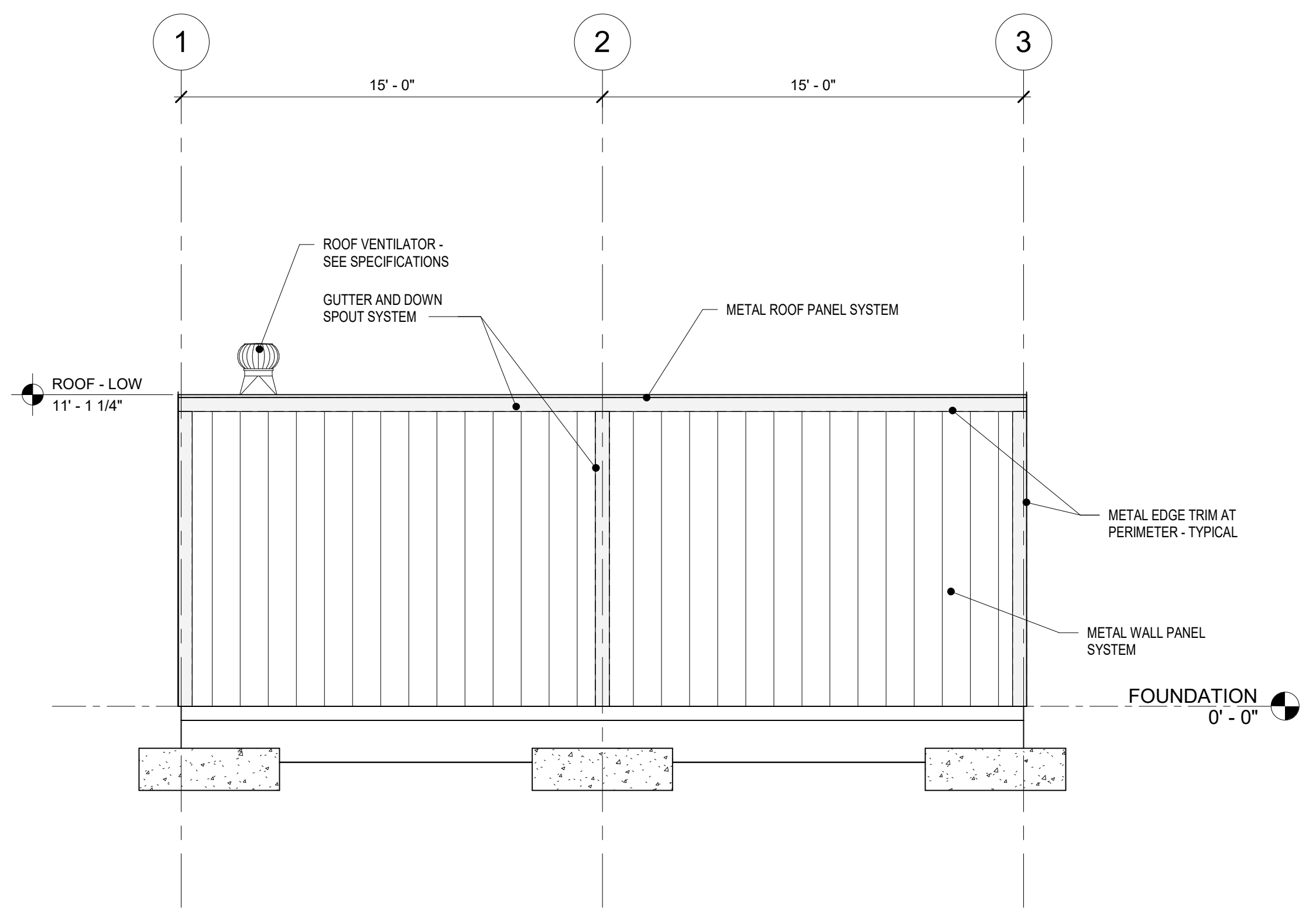
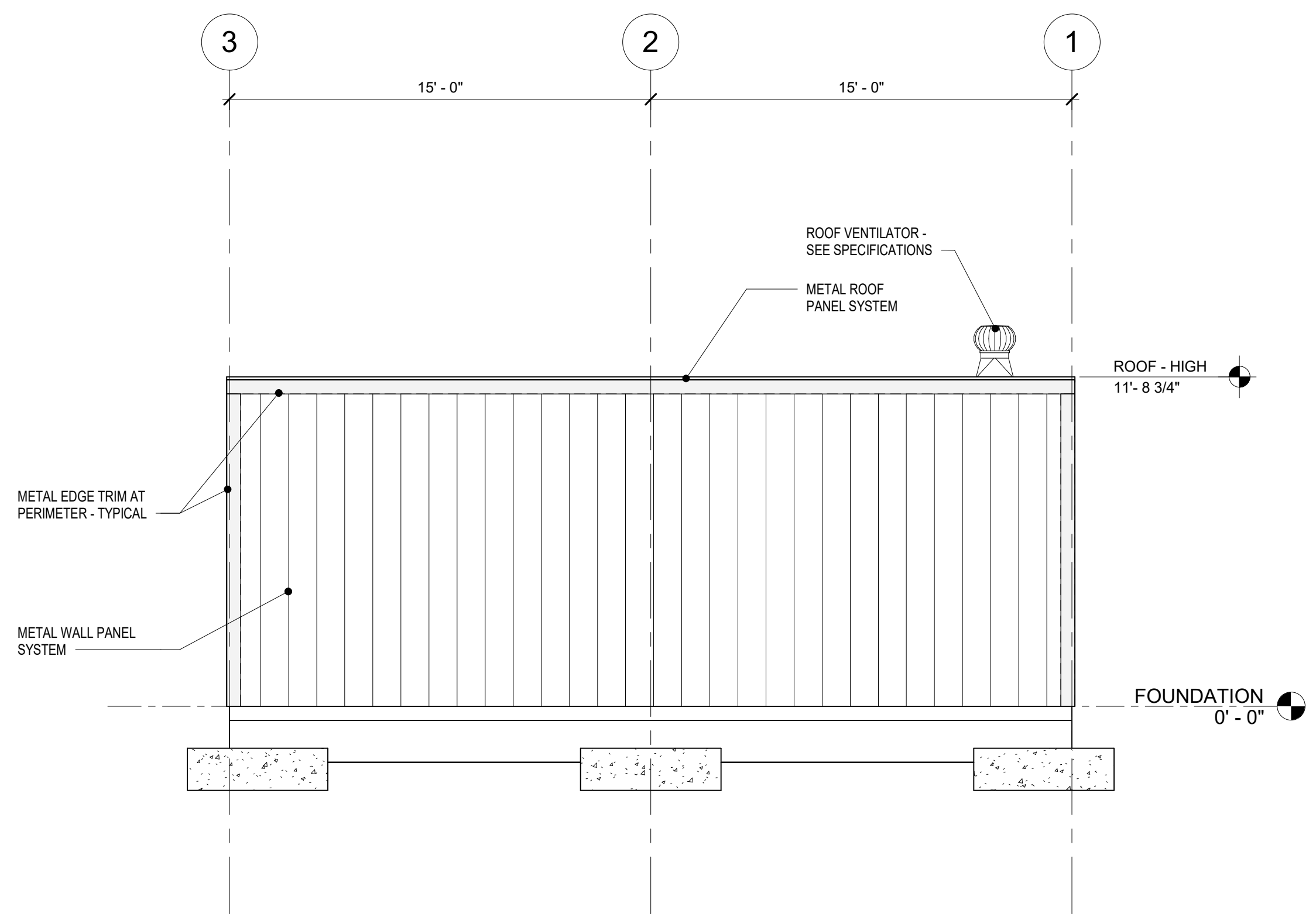


- SHEET NOTES:**
- A. TOP OF STRUCTURAL REFERENCE ELEVATION = 0'-0" WHICH IS THE TOP OF FINISHED SLAB ELEVATION FOR FIRST FLOOR. VERIFY ALL ELEVATIONS WITH RESPECT TO REFERENCE DATUM ELEVATIONS WITH CIVIL DRAWINGS.
  - B. REFER TO SHEETS S001, S002, S003 AND S004 FOR GENERAL STRUCTURAL NOTES, ABBREVIATIONS, LEGEND AND SPECIAL INSPECTIONS.
  - C. THE ARCHITECT FURNISHES ALL ELEVATIONS AND DIMENSIONS. RESOLVE ANY DISCREPANCY WITH ARCHITECT. NOTIFY C&S COMPANIES THROUGH ARCHITECT OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS.
  - D. ALL OPENINGS THROUGH FLOORS, WALLS OR ROOF ARE NOT SHOWN ON PLANS. COORDINATE ALL OPENING LOCATIONS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. COORDINATE ADDITIONAL FRAMING REQUIREMENTS OR REINFORCING WITH TYPICAL DETAILS.
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  - I. NOT USED
  - J. REFER TO S520 SERIES SHEETS FOR FRAMING DETAILS.
  - K. REFER TO PEMB MANUFACTURER DRAWINGS FOR FRAMES, GIRTS, FRAMING FOR ROOF AND WALL OPENING, WALL PANELS AND VERTICAL BRACING. IF BRACE LOCATIONS DIFFER FROM WHAT IS SHOWN ON PLANS, CONTACT STRUCTURAL ENGINEER OF RECORD.

**KEYED NOTES:**  
 KEYNOTE NUMBERS MAY NOT BE SEQUENTIAL ON SHEET

**B1 ELEVATION ALONG GRIDLINE 3**  
 SCALE: 1/4" = 1'-0"

**B2 ELEVATION ALONG GRIDLINE 1**  
 SCALE: 1/4" = 1'-0"



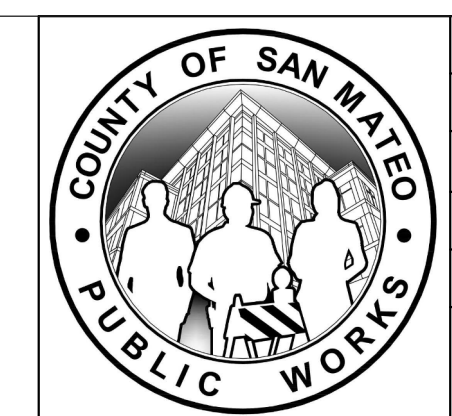
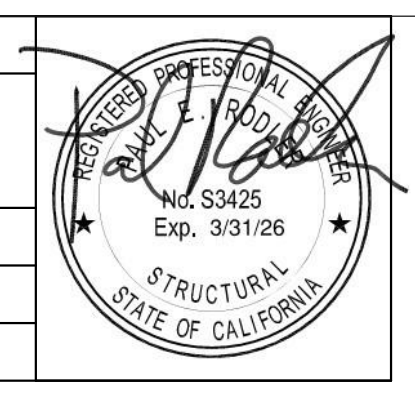
**A1 ELEVATION ALONG GRIDLINE A**  
 SCALE: 1/4" = 1'-0"

**A2 ELEVATION ALONG GRIDLINE B**  
 SCALE: 1/4" = 1'-0"

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APPROVED DATE: 04/01/2024  
 PAUL E. RODLER  
 C&S ENGINEERS, INC.  
 S.E. # 3425 / EXPIRES 3/31/2026



DESIGNED BY: J.L.	DATE: 04/01/2024
CHECKED BY: B.K.S.	REVISION
DRAWN BY: C.A.V.	DATE

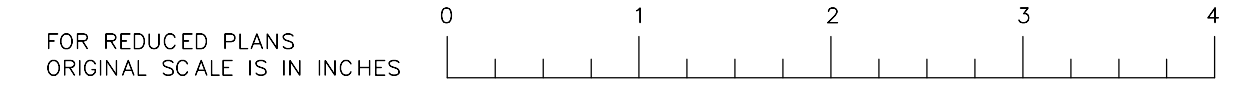
**FRAME ELEVATIONS**  
**ELECTRICAL VAULT AND EMERGENCY GENERATOR**

SCALE: AS SHOWN  
 DATE: AUGUST 4, 2023  
 FILE NO.: E5079

ANN MADER STILLMAN,  
 DIRECTOR OF PUBLIC WORKS  
 COUNTY SAN MATEO

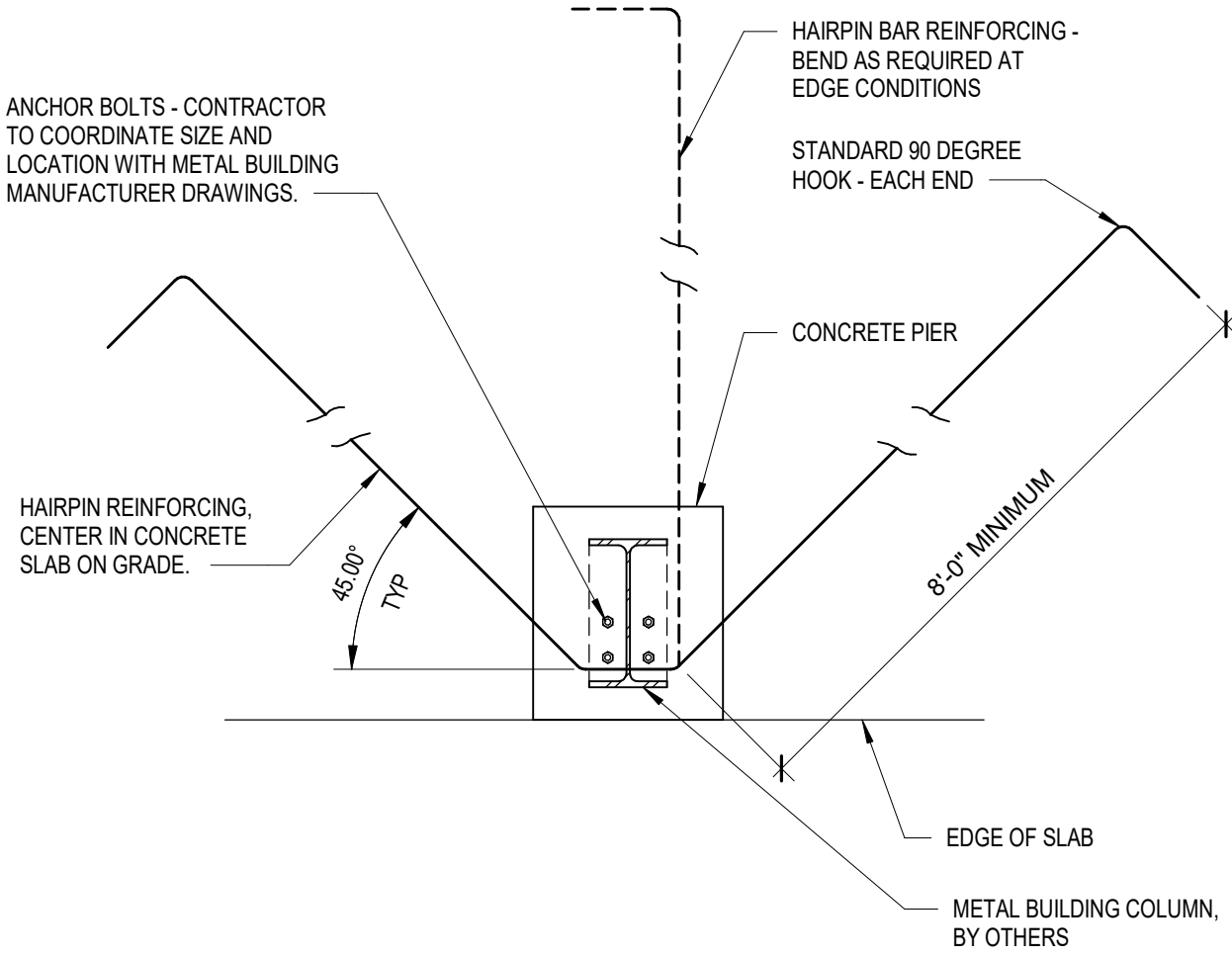
555 COUNTY CENTER, 5th FLOOR  
 REDWOOD CITY, CALIFORNIA 94063

S201 (REV)  
 SHEET 24 OF 32

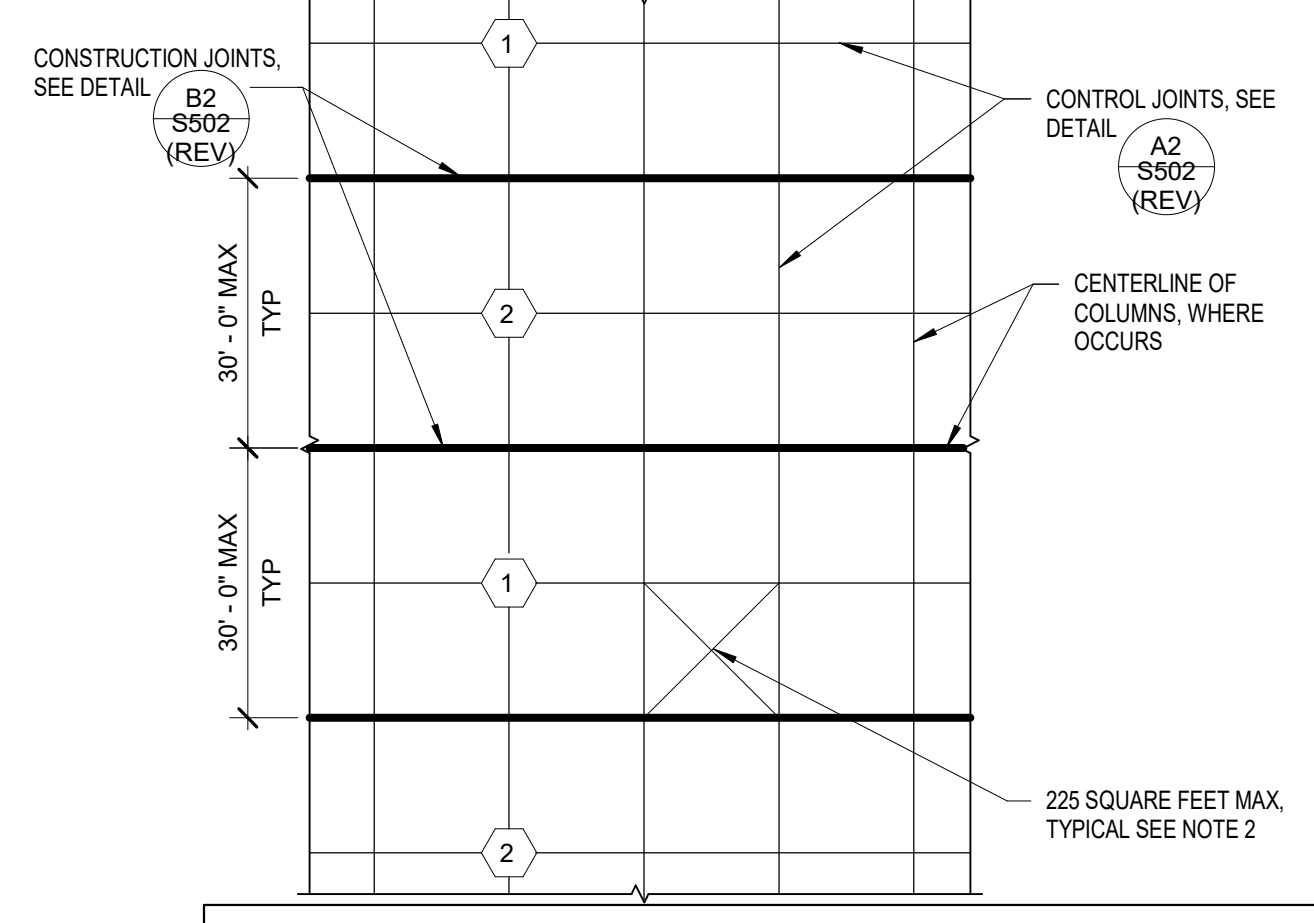


APPROVED: \_\_\_\_\_ DATE: 04/03/2024

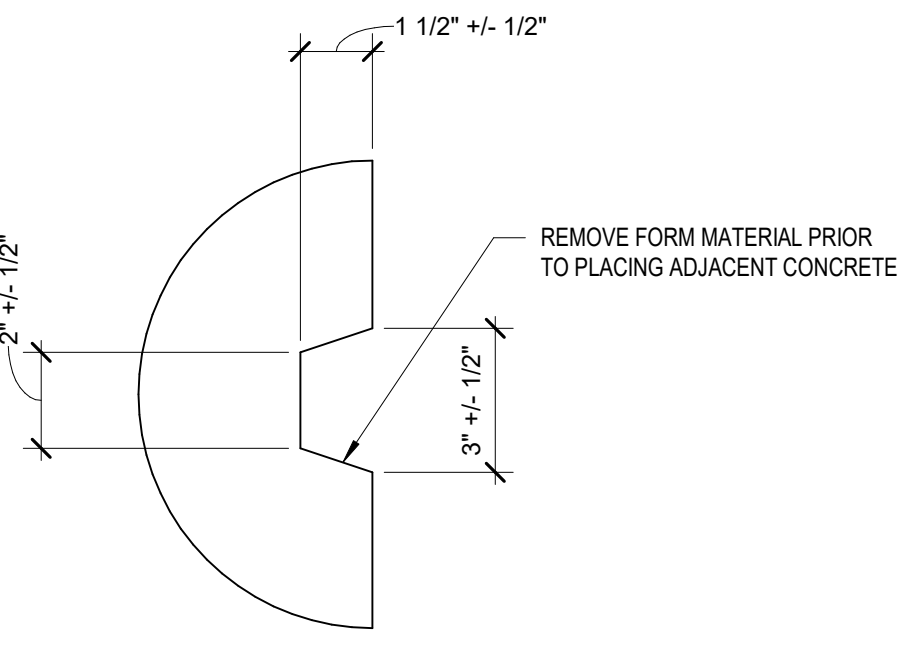
ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS R. C. E. # 47882 / EXPIRES 12-31-2025



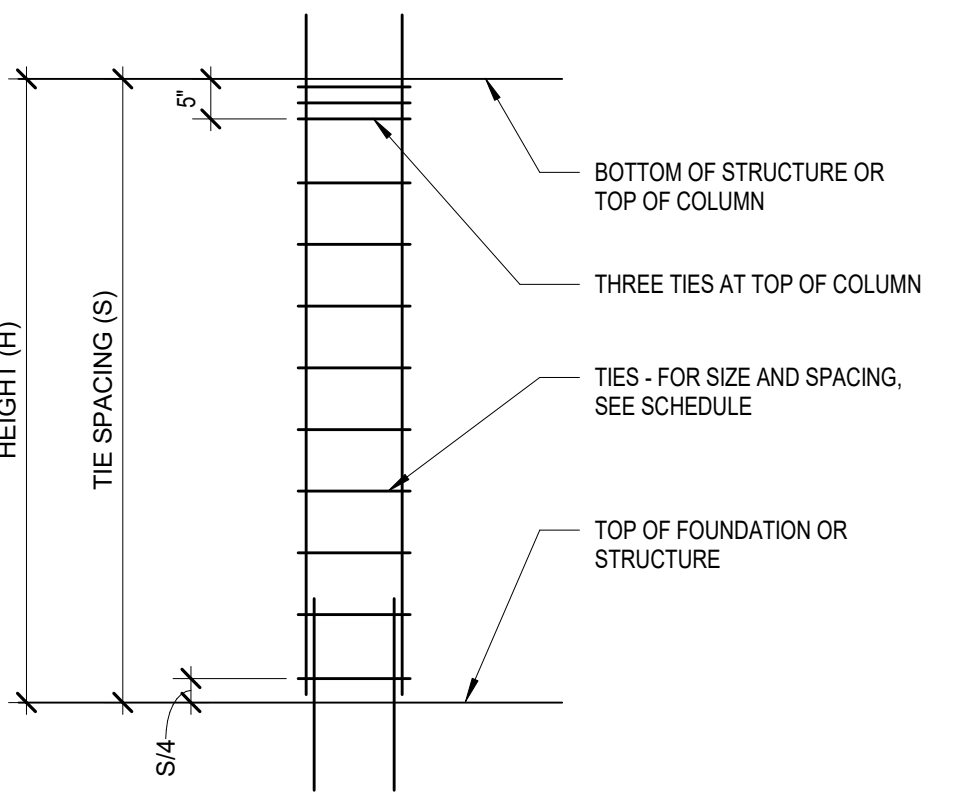
**C2** TYPICAL DETAIL - HAIRPIN REINFORCING AT ANCHOR RODS  
SCALE: NOT TO SCALE



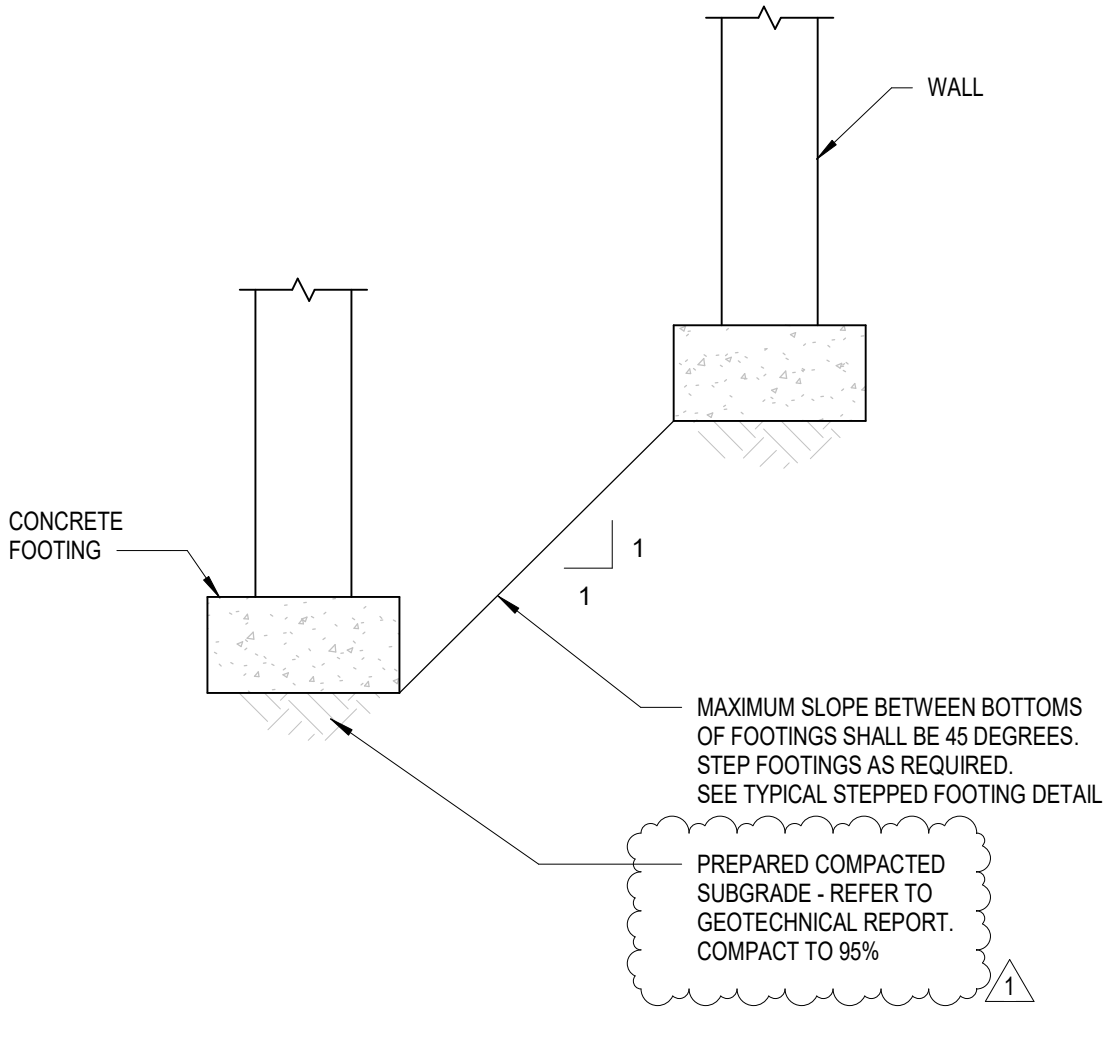
**C3** TYPICAL DETAIL - METHOD OF POURING SLAB ON GRADE  
SCALE: NOT TO SCALE



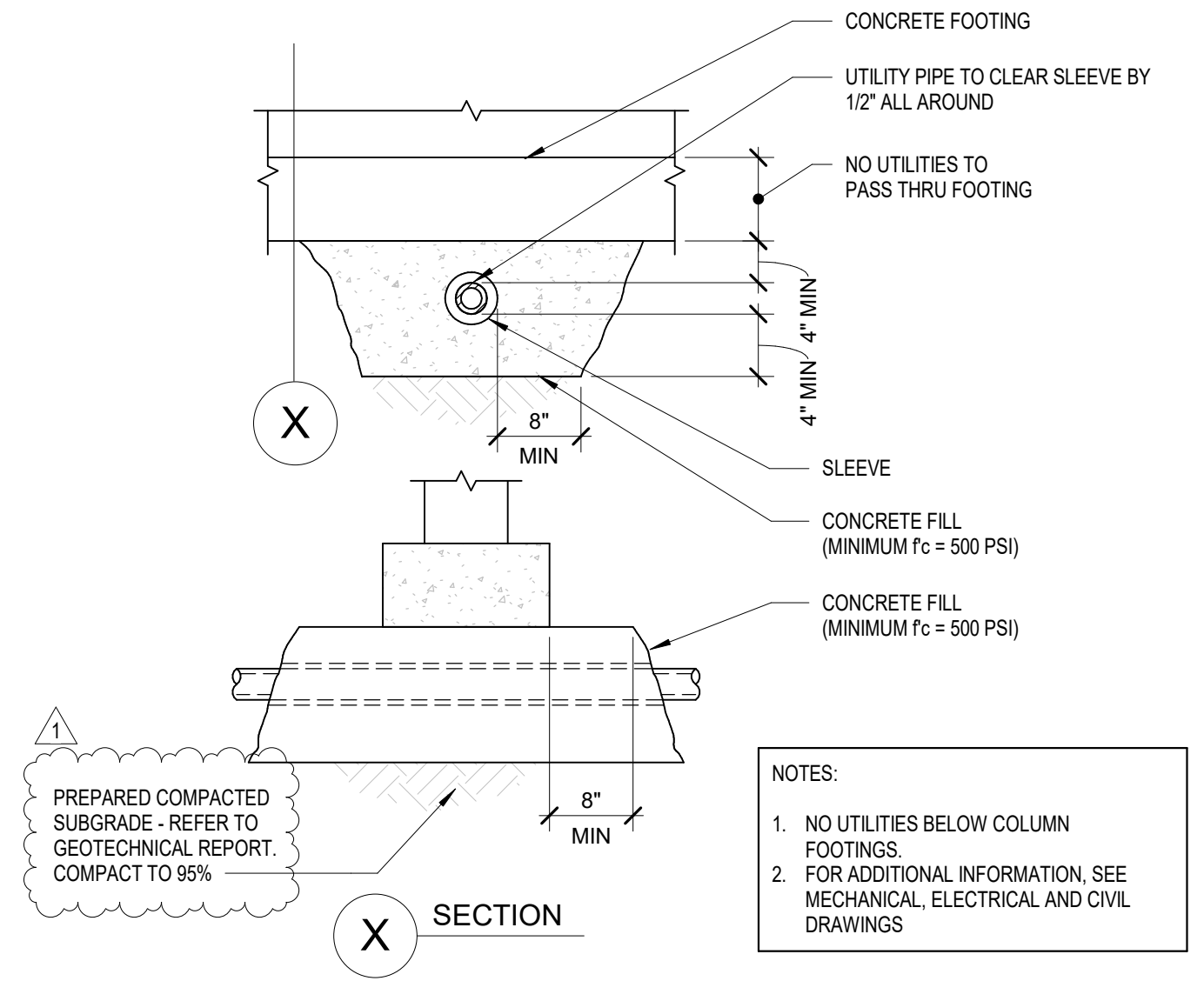
**B1** TYPICAL DETAIL - KEY IN CONCRETE  
SCALE: NOT TO SCALE



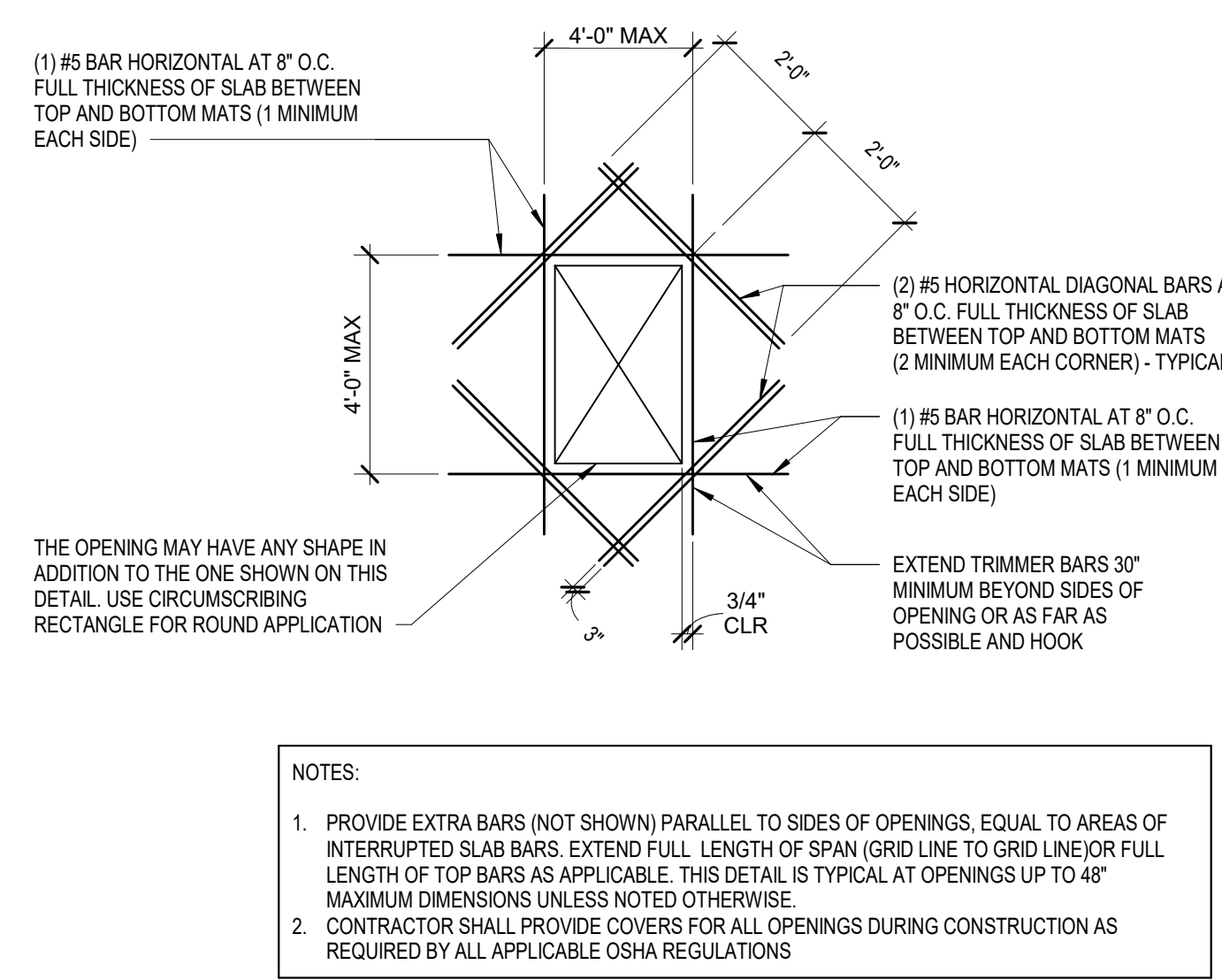
**B2** TYPICAL DETAIL - TIE SPACING FOR CONCRETE COLUMN  
SCALE: NOT TO SCALE



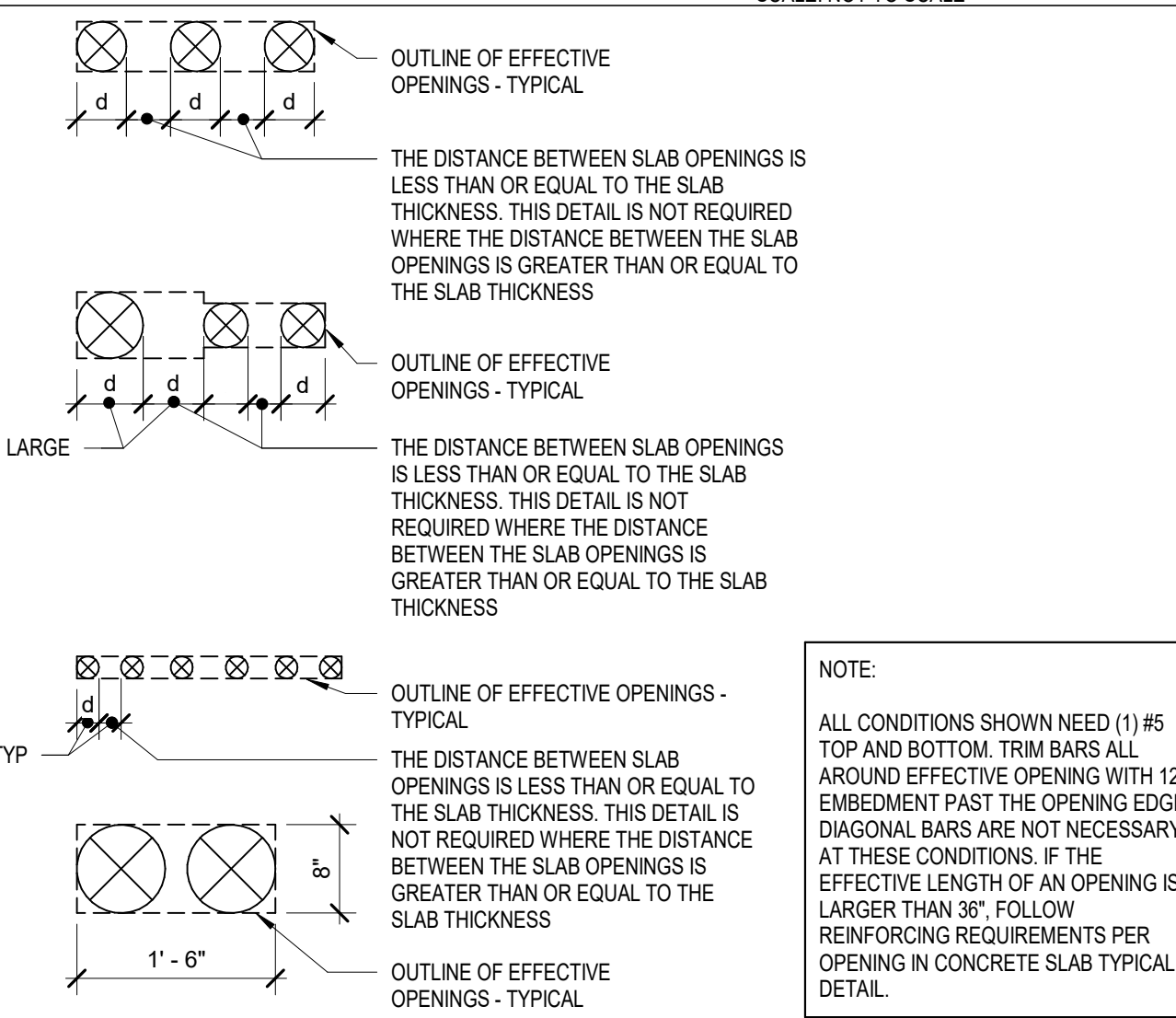
**B3** TYPICAL DETAIL - MAXIMUM SLOPE BETWEEN ADJACENT FOOTINGS  
SCALE: NOT TO SCALE



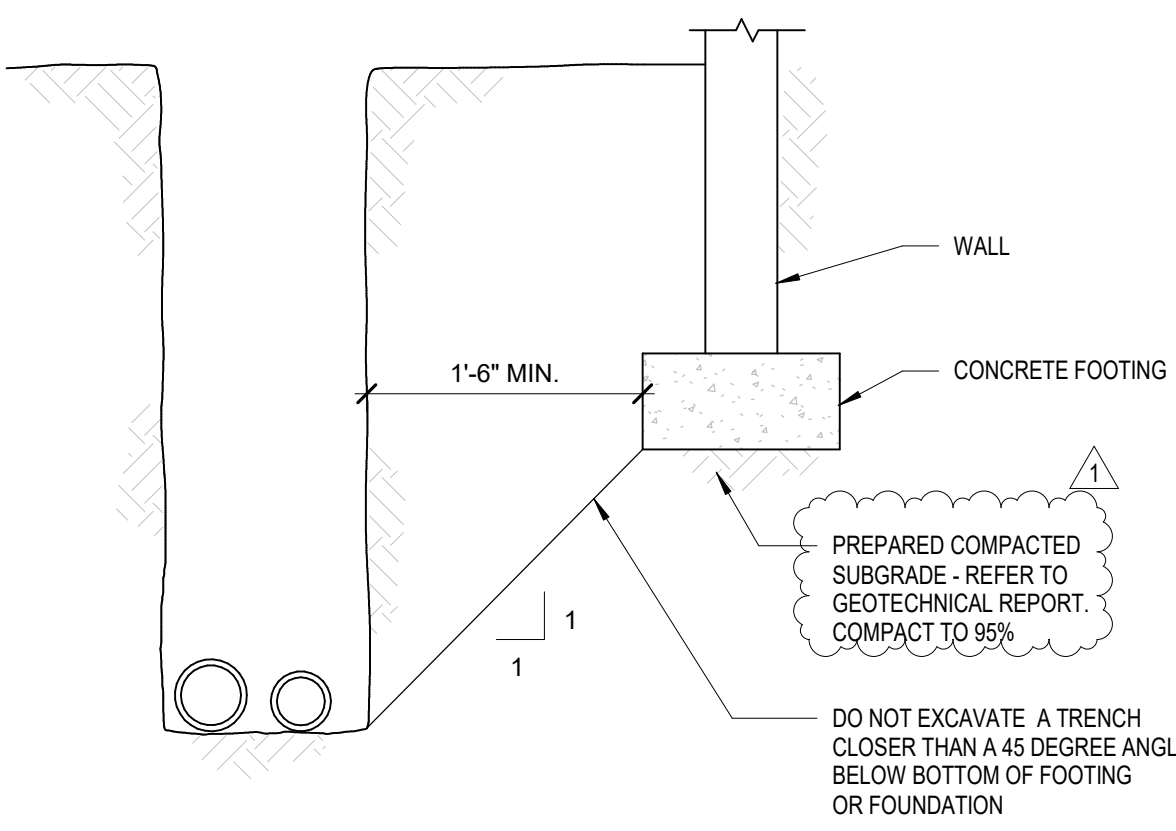
**B4** TYPICAL DETAIL - UTILITY BELOW WALL FOOTING  
SCALE: NOT TO SCALE



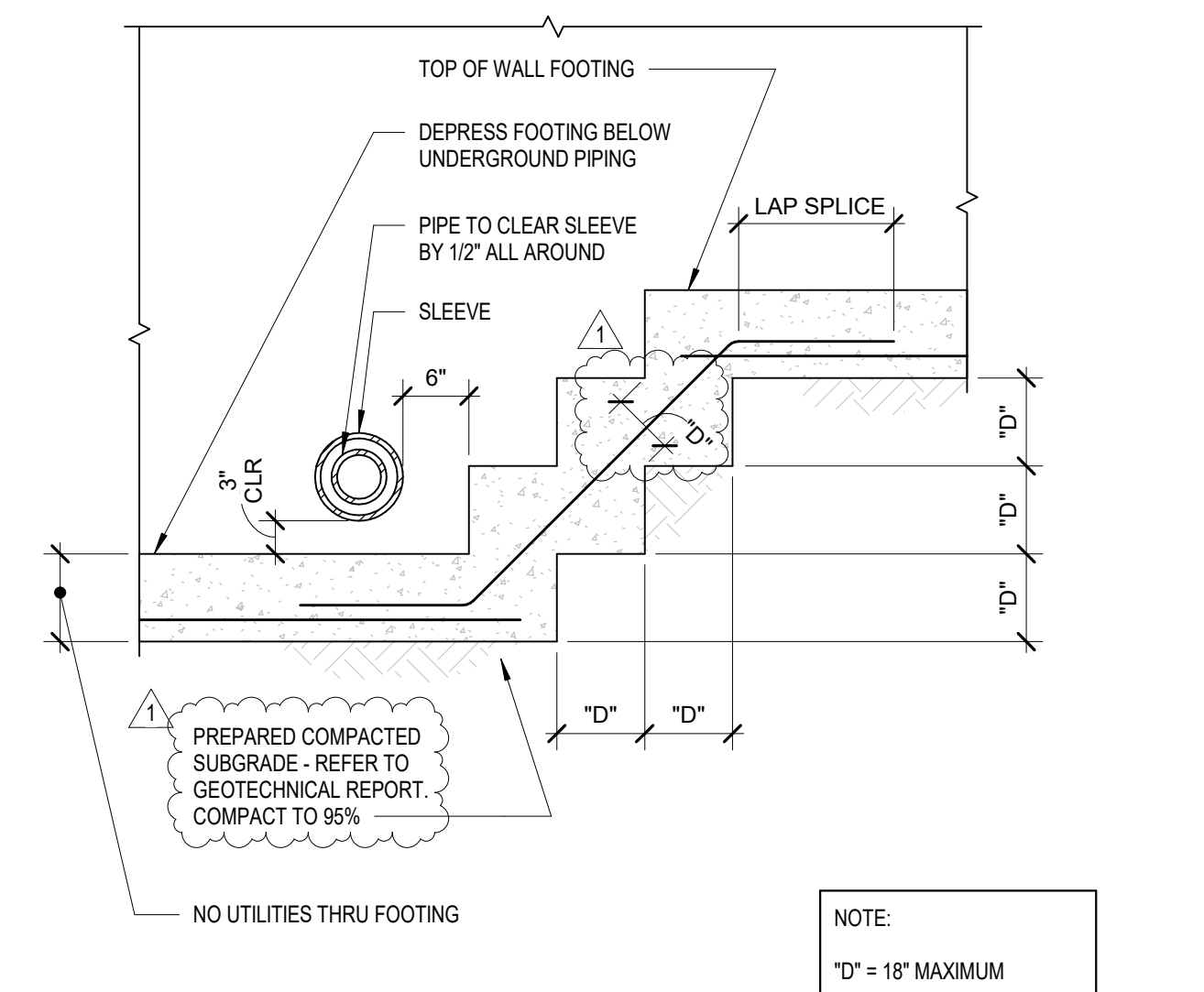
**A1** TYPICAL DETAIL - PLAN VIEW OPENING IN CONCRETE SLAB ON GRADE  
SCALE: NOT TO SCALE



**A2** TYPICAL DETAIL - PLAN VIEW SMALL MULTIPLE OPENINGS IN CONCRETE SLAB, WALL OR MAT FOUNDATION  
SCALE: NOT TO SCALE



**A3** TYPICAL DETAIL - TRENCH ADJACENT TO FOOTING  
SCALE: NOT TO SCALE



**A4** TYPICAL DETAIL - STEPPED FOOTING  
SCALE: NOT TO SCALE

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APPROVED DATE: 04/01/2024

PAUL E. RODLER  
C&S ENGINEERS, INC.  
S.E. # 3425 / EXPIRES 3/31/2026



DESIGNED BY: J.L.	DATE: 04/01/2024
CHECKED BY: B.K.S.	REVISION
DRAWN BY: C.A.V.	DATE

TYPICAL DETAILS 1/2  
ELECTRICAL VAULT AND EMERGENCY GENERATOR

ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063

SCALE: AS SHOWN  
DATE: AUGUST 4, 2023  
FILE NO.: E5079

S501 (REV)  
SHEET 27 OF 32

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES



**TENSION LAP SPLICE LENGTHS**  
(GRADE 60 - NORMAL WEIGHT CONCRETE)

BAR SIZE	LAP CLASS	f <sub>c</sub> = 3,000 psi				f <sub>c</sub> = 4,000 psi				f <sub>c</sub> = 5,000 psi			
		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	A	22	32	17	25	19	28	15	22	17	25	13	19
	B	28	42	22	32	24	36	19	28	22	33	17	25
#4	A	29	43	22	33	25	37	19	29	22	33	17	26
	B	37	56	29	43	32	48	25	37	29	43	22	33
#5	A	36	54	28	41	31	47	24	36	28	42	22	32
	B	47	70	36	54	40	60	31	47	36	54	28	42
#6	A	43	64	33	50	37	56	29	43	33	50	26	38
	B	56	84	43	64	48	72	37	56	43	65	33	50
#7	A	63	94	48	72	54	81	42	63	49	73	37	56
	B	81	122	63	94	70	106	54	81	63	94	49	73
#8	A	72	107	55	82	62	93	48	72	55	83	43	64
	B	93	139	72	107	80	121	62	93	72	108	55	83
#9	A	81	121	62	93	70	105	54	81	63	94	48	72
	B	105	157	81	121	91	136	70	105	81	122	63	94
#10	A	91	136	70	105	79	118	61	91	70	105	54	81
	B	118	177	91	136	102	153	79	118	91	137	70	105
#11	A	101	151	78	116	87	131	67	101	78	117	60	90
	B	131	196	101	151	113	170	87	131	101	152	78	117

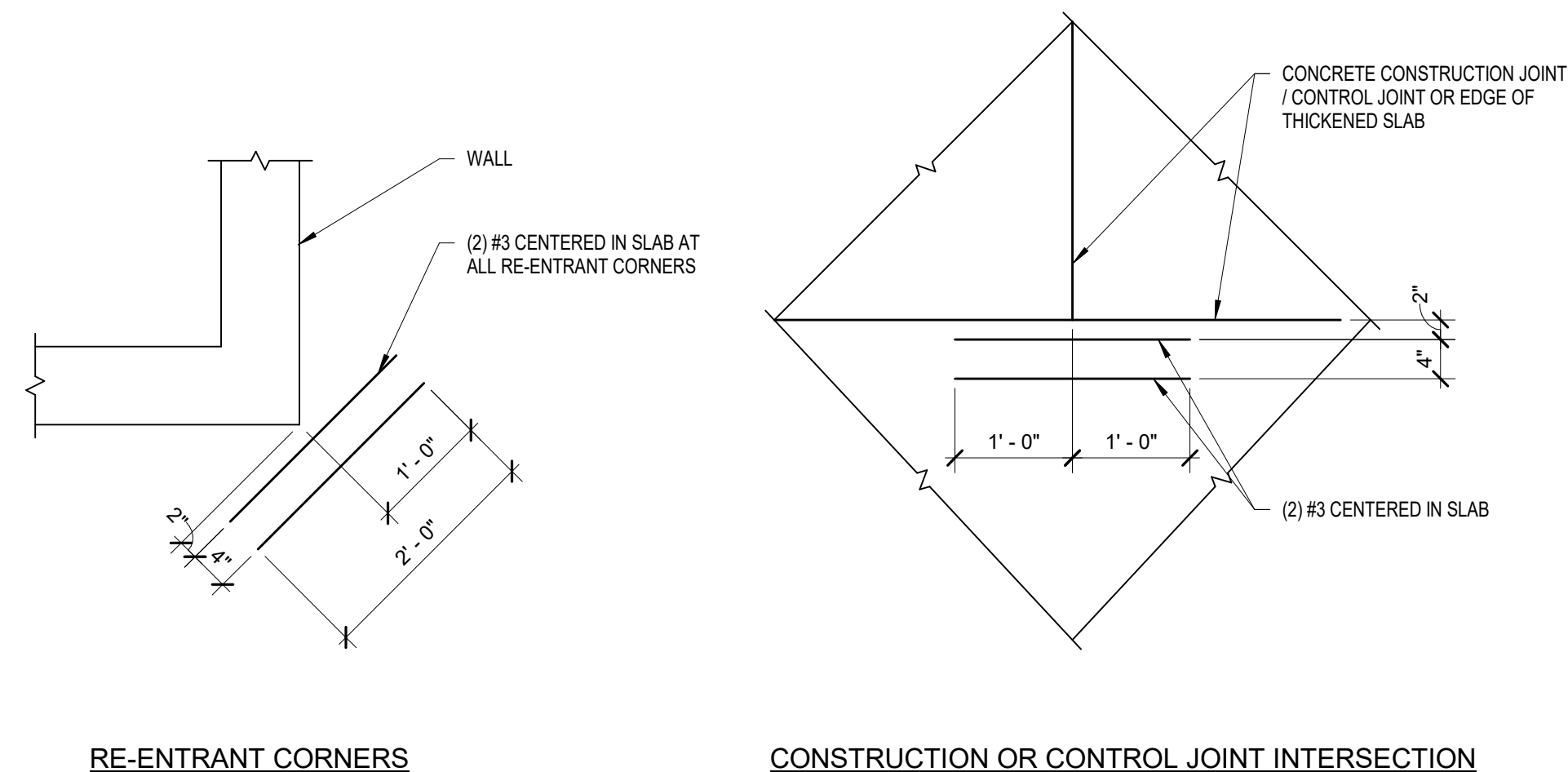
NOTES:

- TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS. LENGTHS ARE IN INCHES.
- CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CENTER-TO-CENTER SPACING OF THE BARS, ARE DEFINED AS:

BEAMS OR COLUMNS	CASE 1	COVER AT LEAST 1db AND c-c. SPACING AT LEAST 2db
	CASE 2	COVER LESS THAN 1db OR c-c. SPACING LESS THAN 2db
ALL OTHERS	CASE 1	COVER AT LEAST 1db AND c-c. SPACING AT LEAST 3db
	CASE 2	COVER LESS THAN 1db OR c-c. SPACING LESS THAN 3db

- LAP CLASS A VALUES ARE THE REQUIRED TENSION DEVELOPMENT LENGTHS. (db = LAP SPLICE LENGTHS ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS A - 1.0db (ACI 318-14, SECTION 25.5.2.1); CLASS B = 1.3db (ACI 318-14, SECTION 25.5.2.1))
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
- FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3. OR WHEN l<sub>ci</sub> IS SPECIFIED, THE FACTOR IS 6.7 √f<sub>ci</sub> / f<sub>c</sub> ≥ 1.0.
- FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED VALUES BY ONE OF THE FOLLOWING FACTORS:

CONCRETE COVER AND SPACING	TOP BARS	OTHER BARS
COVER < 3db OR c-c. SPACING > 7db	1.7 / 1.3 - 1.31	1.50
COVER ≤ 3db OR c-c. SPACING ≤ 7db	120	120



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**C1** TYPICAL DETAIL - REINFORCING TENSION LAP AND SPLICE LENGTHS

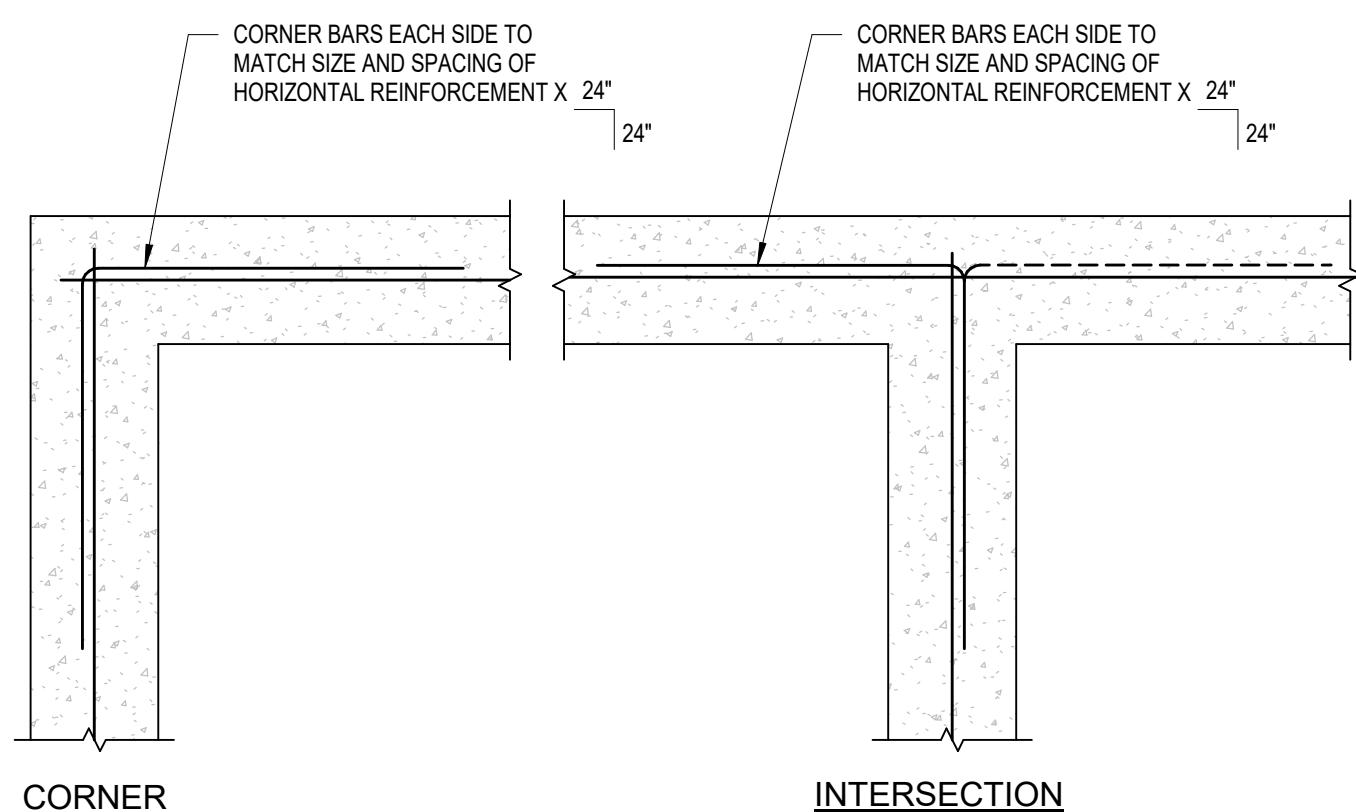
03310.00.20

SCALE: NOT TO SCALE

**C3** TYPICAL DETAIL - PLAN VIEW REINFORCING IN SLAB ON GRADE

03310.00.23

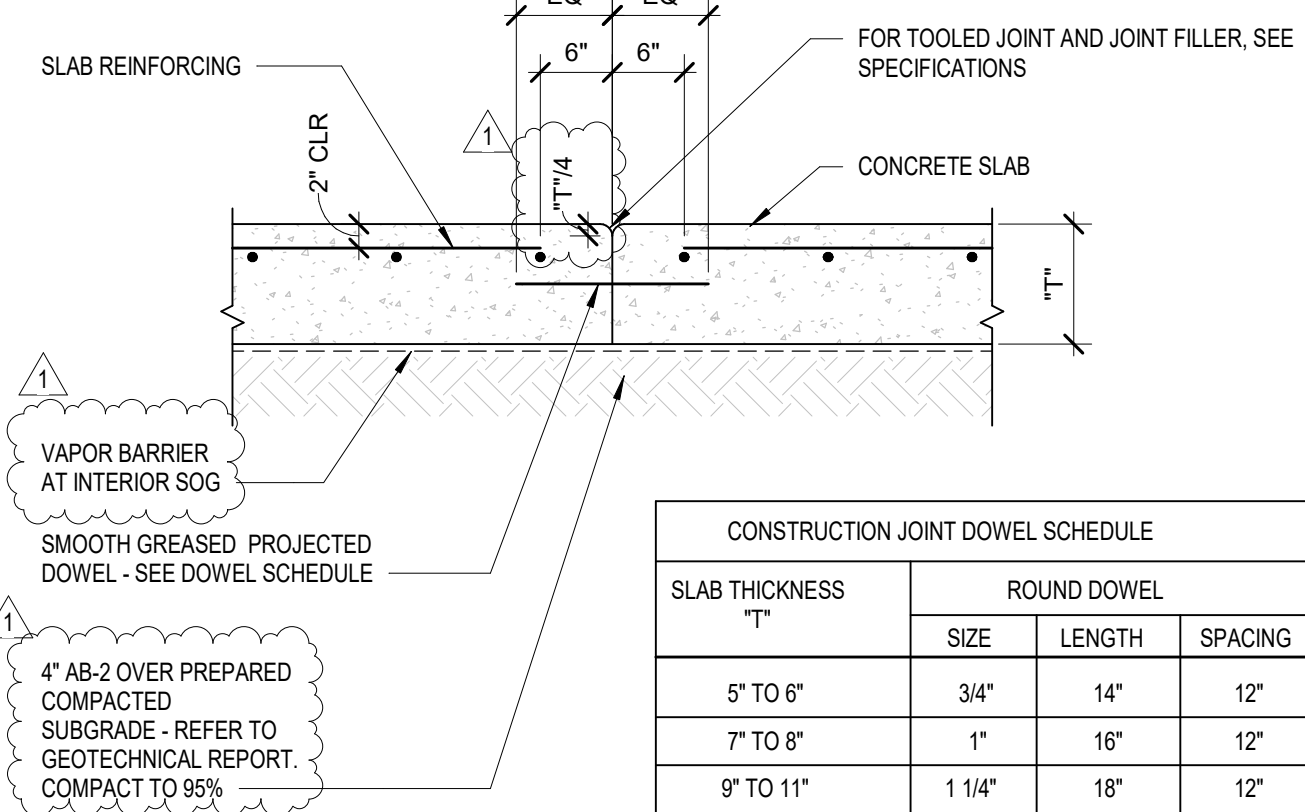
SCALE: NOT TO SCALE



03310.00.08

**B1** TYPICAL DETAIL - CORNER REINFORCING IN CONCRETE FOOTING AND STEM WALL

SCALE: NOT TO SCALE



03310.00.05

**B2** TYPICAL DETAIL - DOELED CONSTRUCTION JOINT IN REINFORCED CONCRETE SLAB ON GRADE

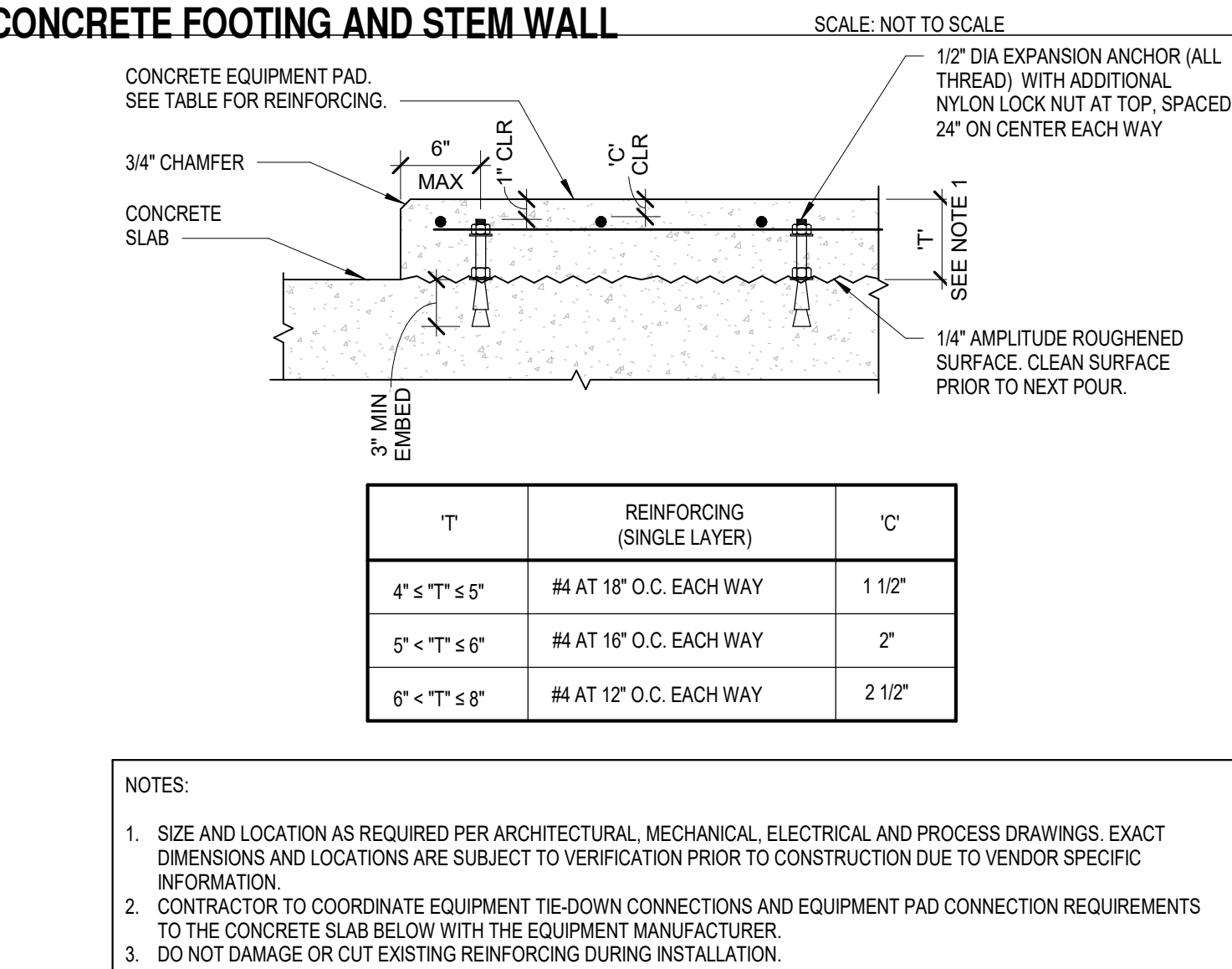
SCALE: NOT TO SCALE

**B3** TYPICAL DETAIL - REINFORCEMENT TENSION DEVELOPMENT AND HOOKED LENGTH SCHEDULE

SCALE: NOT TO SCALE

TYPE OF STANDARD HOOK	BAR SIZE	MINIMUM INSIDE BEND DIAMETER, (in)	STRAIGHT EXTENSION L exts (in)	TYPE OF STANDARD HOOK	BAR DATA						HOOKED REINFORCING TENSION DEVELOPMENT LENGTH (GRADE 60 - NORMAL WEIGHT CONCRETE)				HOOKED END LENGTH		
					BAR DIA	Db (in)	INSIDE DIA (in)	3,000 psi		4,000 psi		5,000 psi		6,000 psi		L90 (in)	L180 (in)
								Ldh (in)	Ldh (in)	Ldh (in)	Ldh (in)	Ldh (in)	Ldh (in)				
90-DEGREE HOOK	#3 TO #8	6Db	12Db	90° BEND	#3	0.375	2 1/4	6	6	6	6	6	6	5			
	#9 TO #11	8Db			#4	0.500	3	8	7	6	6	8	6				
180-DEGREE HOOK	#3 TO #8	6Db	GREATER OF 4Db AND 2.5 (in)	180° BEND	#5	0.625	3 3/4	10	9	8	7	10	7				
	#9 TO #11	8Db			#6	0.750	4 1/2	12	10	9	9	12	8				
					#7	0.875	5 1/4	14	12	11	10	14	10				
					#8	1.000	6	16	14	12	11	16	11				
					#9	1.128	9 1/2	18	15	14	13	19	15				
					#10	1.270	10 3/4	20	17	16	14	22	17				
					#11	1.410	12	22	19	17	16	24	19				

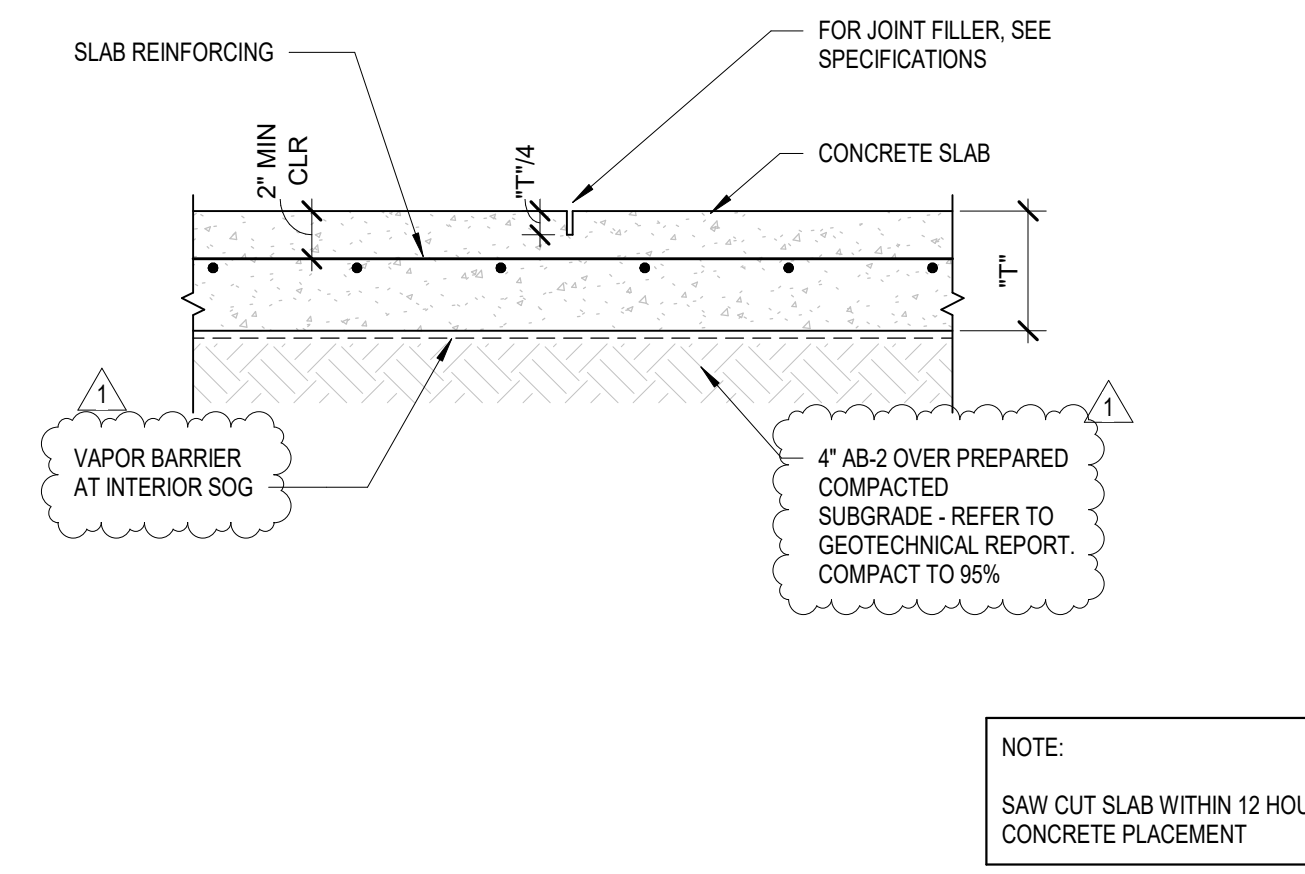
03310.00.14



03310.00.41

**A1** TYPICAL DETAIL - CONCRETE EQUIPMENT PAD AT CONCRETE SLAB

SCALE: NOT TO SCALE



03310.00.09

**A2** TYPICAL DETAIL - SAW CUT CONTROL JOINT IN REINFORCED CONCRETE SLAB ON GRADE

SCALE: NOT TO SCALE

**A3** TYPICAL DETAIL - REINFORCING BEND AND HOOK LENGTHS FOR STIRRUPS, TIES AND HOOPS

03310.00.15

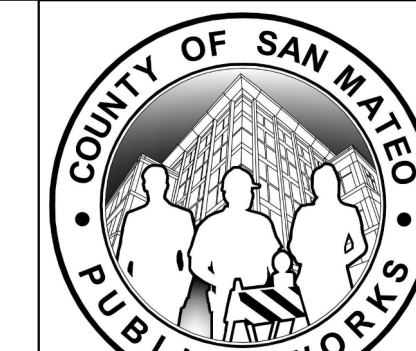
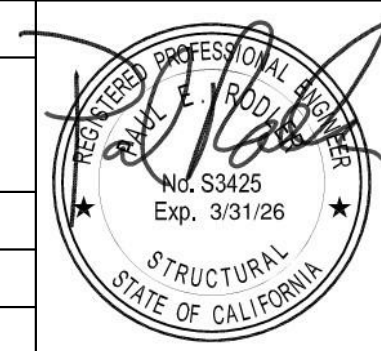
TYPE OF STANDARD HOOK	BAR SIZE	MINIMUM INSIDE BEND DIAMETER, (in)	STRAIGHT EXTENSION L exts (in)	TYPE OF STANDARD HOOK	COLUMN	BEAM	BAR DATA					HOOKED END LENGTH	
							BAR DIA	Db (in)	INSIDE DIA (in)	L90 (in)	L135 (in)	L180 (in)	L90 (in)
90-DEGREE HOOK	#3 TO #5	4Db	GREATER OF 6Db AND 3 (in)	90° BEND	90 BEND - 135 BEND	ALTERNATE HOOKS	#3	0.375	1 1/2	4	4	4	4
	#6 TO #8	6Db					12Db	#4	0.500	2	4 1/2	4 1/2	4
135-DEGREE HOOK	#3 TO #5	4Db	GREATER OF 6Db AND 3 (in)	135° BEND	TIES	135 BEND	#5	0.625	2 1/2	6	5 1/2	4	
	#6 TO #8	6Db					12Db	#6	0.750	4 1/2	12	8	6
180-DEGREE HOOK	#3 TO #5	4Db	GREATER OF 4Db AND 2.5 (in)	180° BEND	CROSS TIES	90 BEND	#7	0.875	5 1/4	14	9	6 1/2	
	#6 TO #8	6Db					12Db	#8	1.000	6	16	10 1/2	7

03310.00.15

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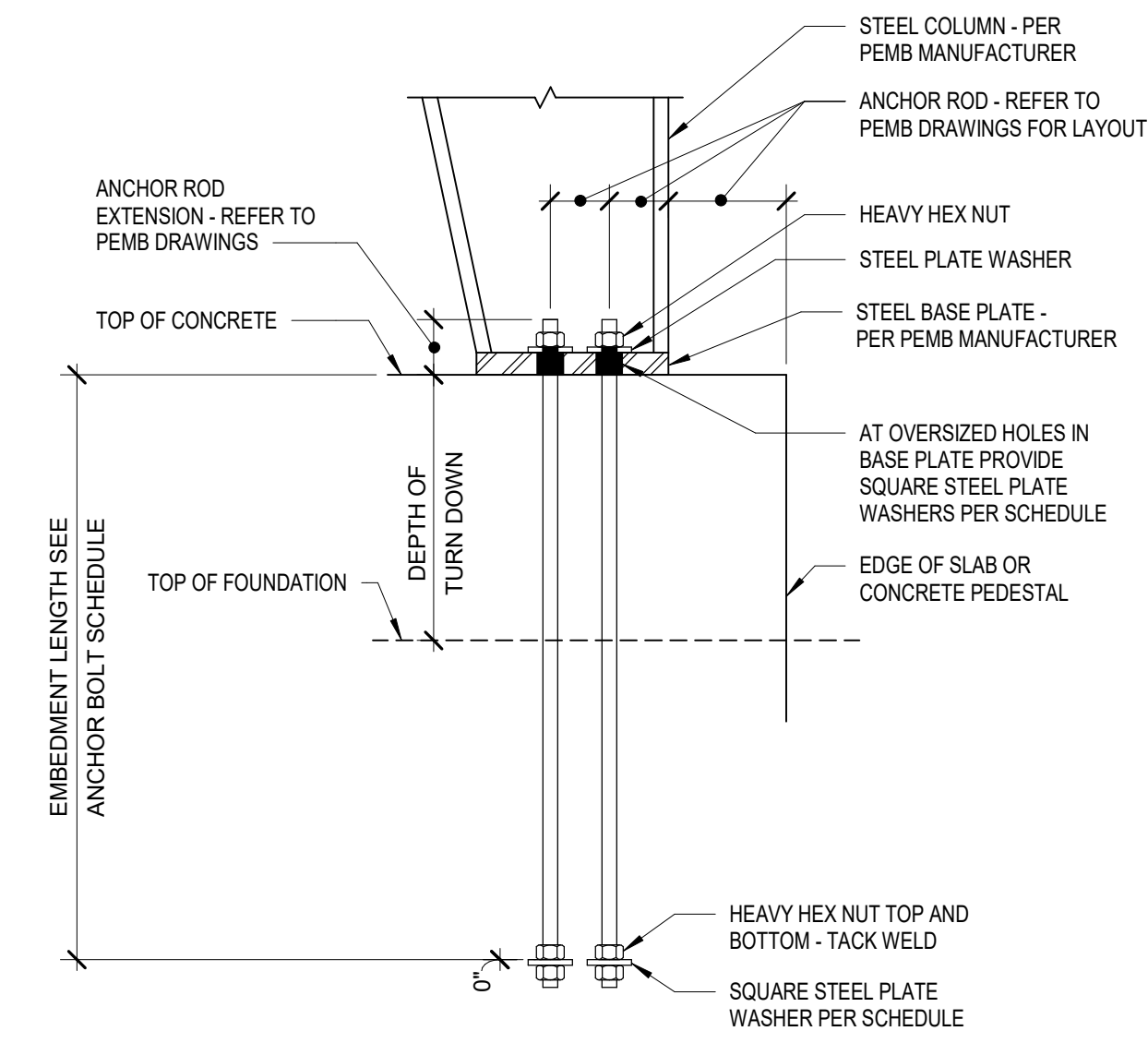
DESIGNED BY: J.L.  
CHECKED BY: B.K.S.  
DRAWN BY: C.A.V.  
DATE: 04/01/2024  
ANN MADER STILLMAN,  
DIRECTOR OF PUBLIC WORKS  
COUNTY SAN MATEO  
555 COUNTY CENTER, 5th FLOOR  
REDWOOD CITY, CALIFORNIA 94063  
S502 (REV)  
SHEET 28 OF 32

**(AB) ANCHOR BOLT SCHEDULE**

ANCHOR RODS		
MARK	DIAMETER (IN.)	EMBEDMENT (IN.)
AB1	3/4	31

**ANCHOR BOLT PLATE WASHERS (GRADE 36 STEEL UNLESS NOTED OTHERWISE)**

F1554 ANCHOR ROD DIA	STEEL PLATE WASHER (A36)	HOLE SIZE AT STEEL PLATE WASHER	OVERSIZED HOLE DIA AT STEEL BASE PLATE
3/4"	1/4" X 2" X 2"	13/16"	1 5/16"
7/8"	5/16" X 2 1/2" X 2 1/2"	15/16"	1 9/16"
1"	3/8" X 3" X 3"	1 1/16"	1 13/16"
1 1/4"	1/2" X 3" X 3"	1 5/16"	2 1/16"
1 1/2"	1/2" X 3 1/2" X 3 1/2"	1 9/16"	2 5/16"



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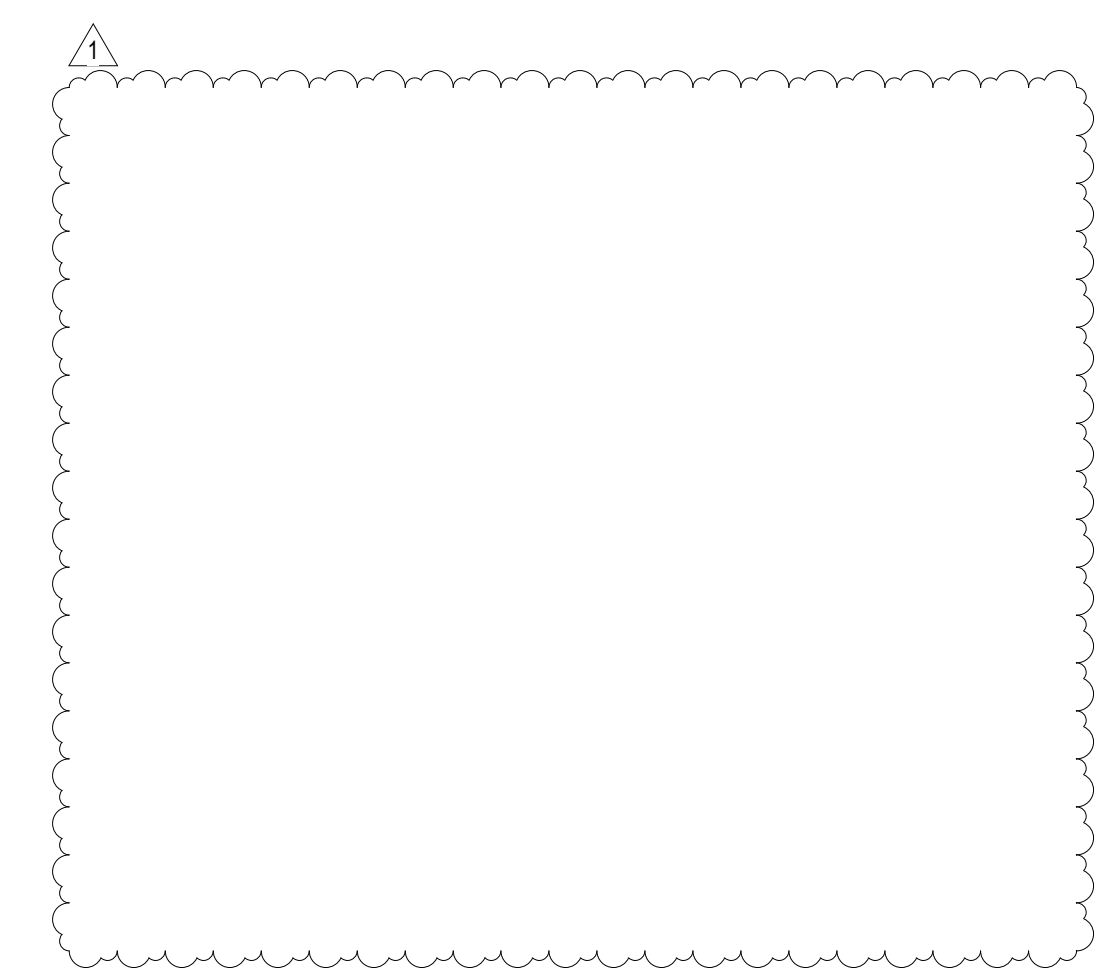
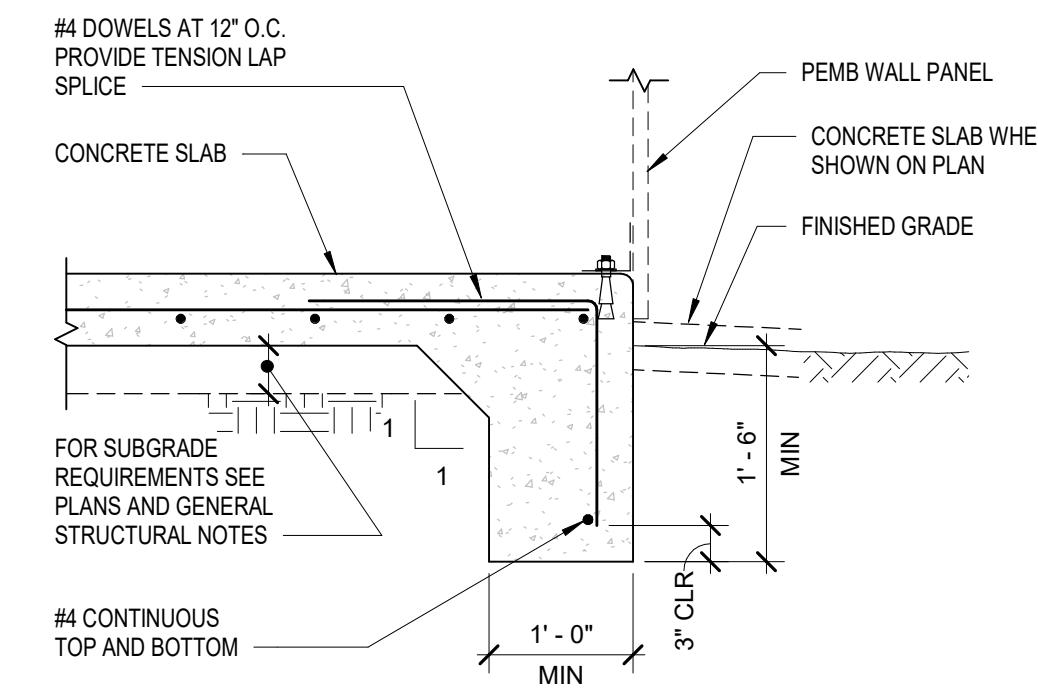
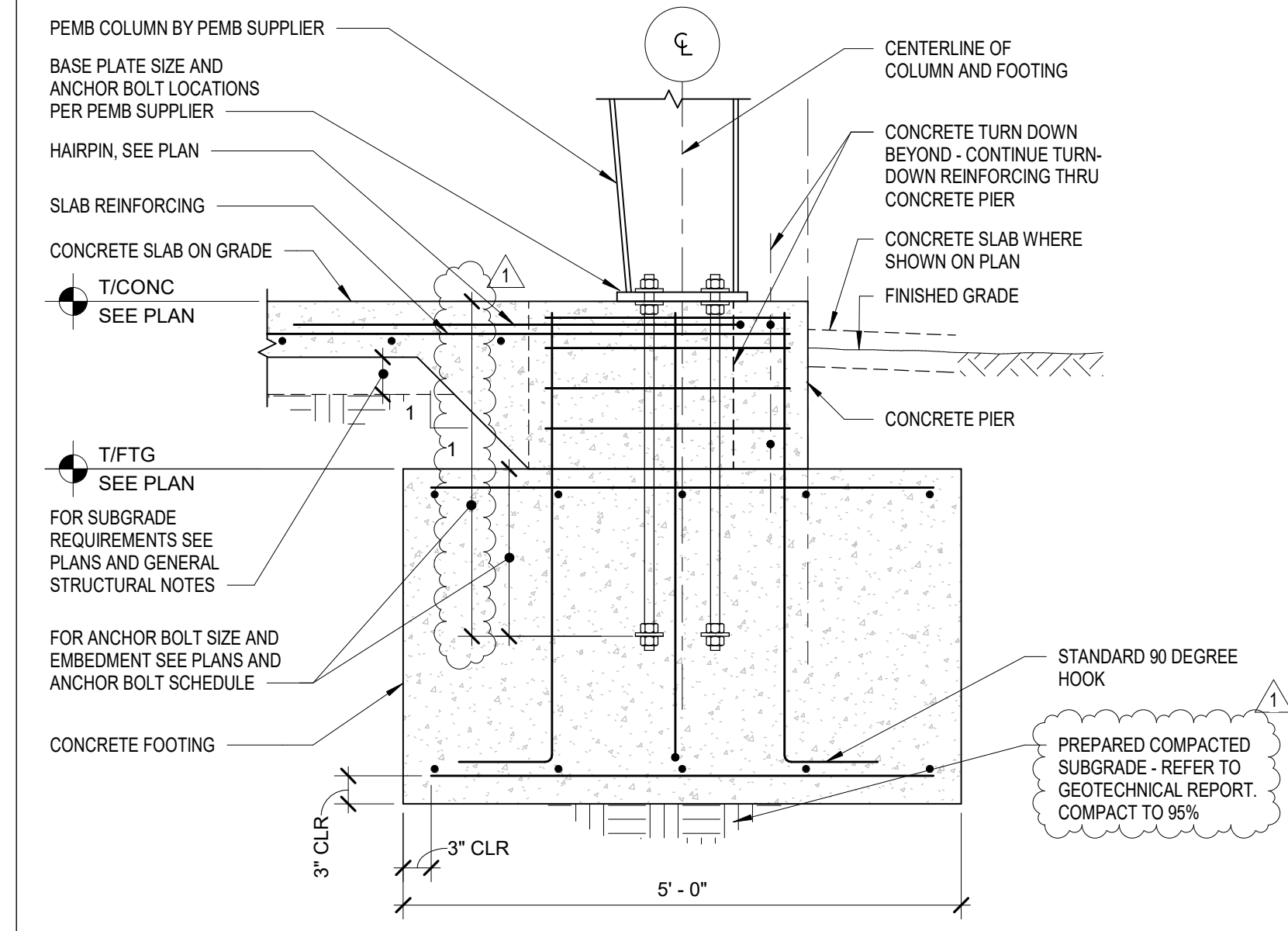
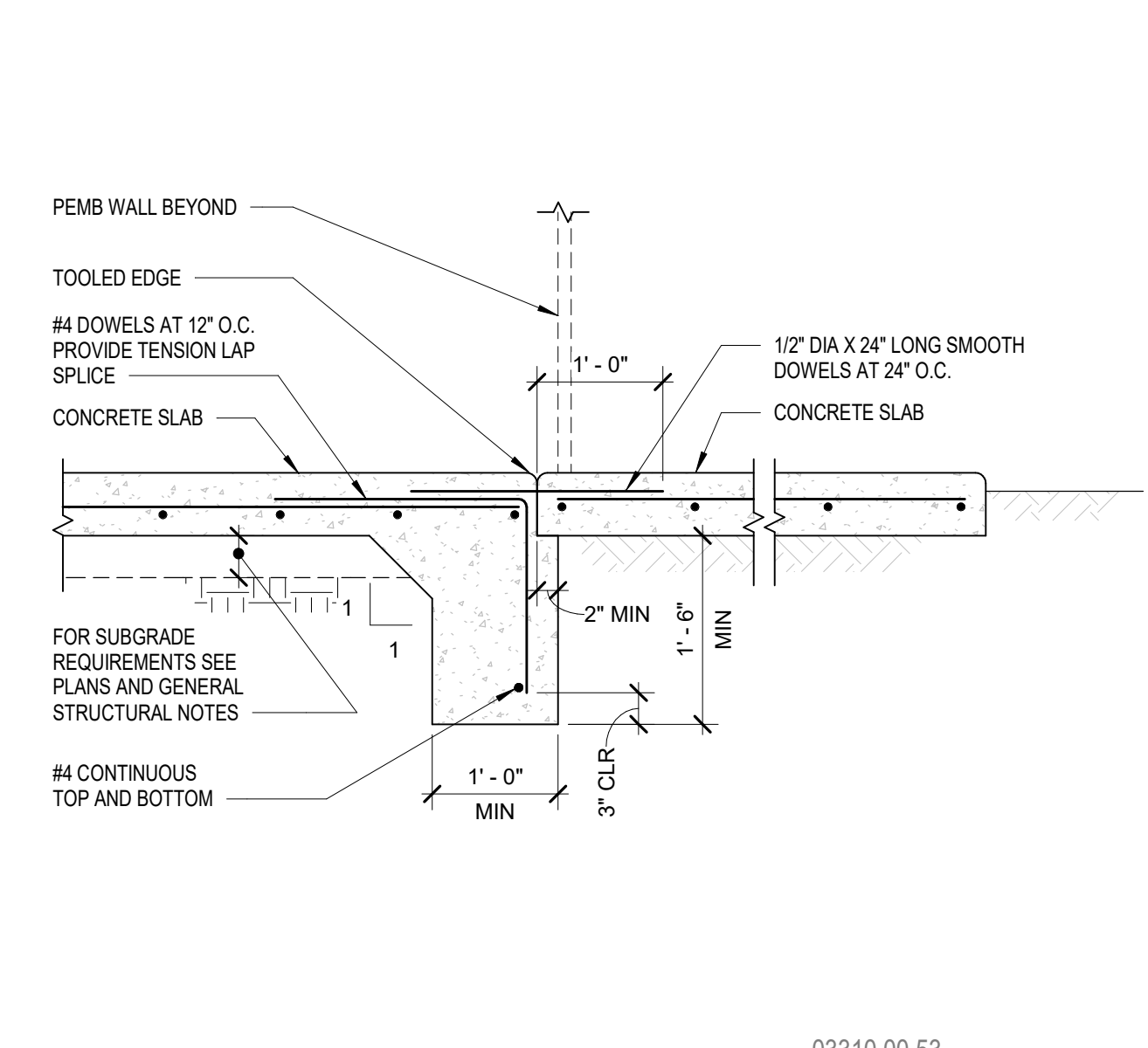
REGISTERED PROFESSIONAL ENGINEER  
ANN MADER STILLMAN  
EXPIRES 12/31/25  
CIVIL  
STATE OF CALIFORNIA

**(F) FOOTING SCHEDULE**

MARK	DIMENSIONS			REINFORCING	REMARKS
	"W"	"L"	"H"		
F1	5'-0"	5'-0"	1'-6"	(6) #5 EACH WAY TOP AND BOTTOM	

**C1 TYPICAL DETAIL - ANCHOR BOLT PLATE WASHERS AND HOLE SIZES AT PEMB STEEL COLUMN BASE PLATES**

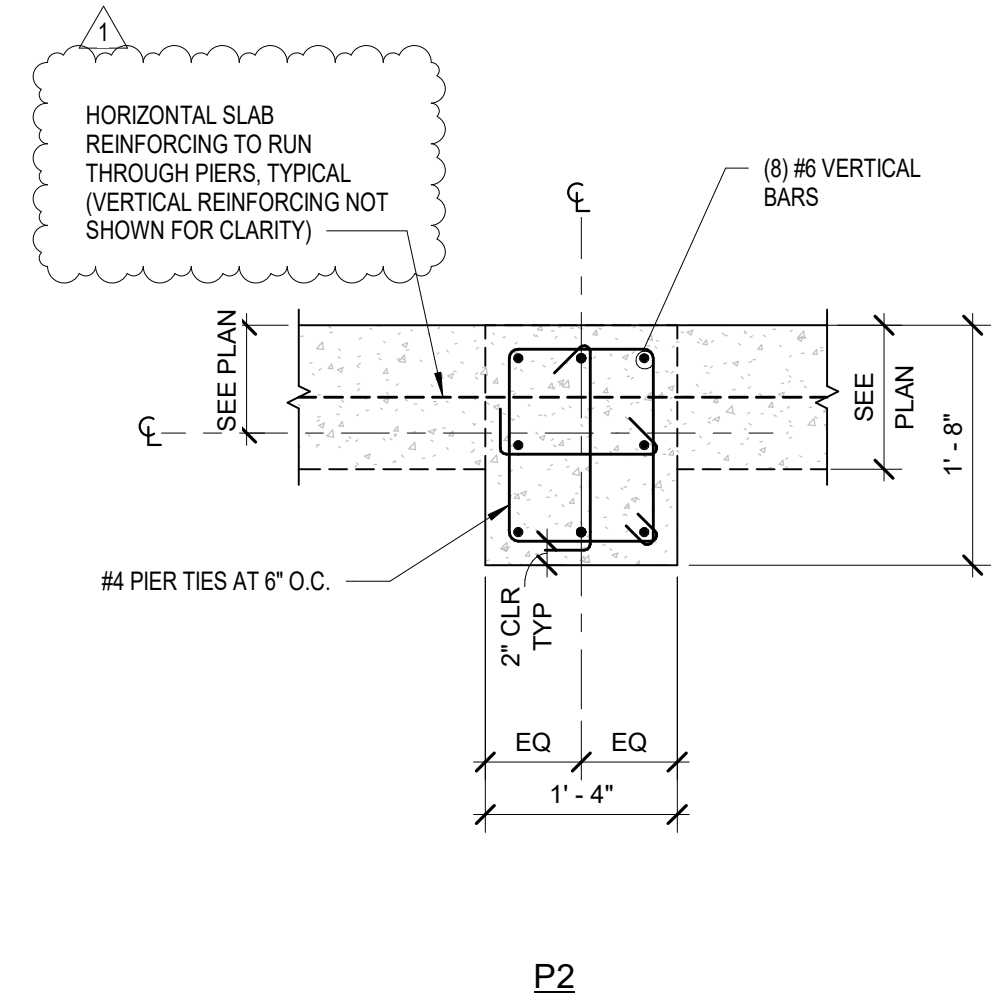
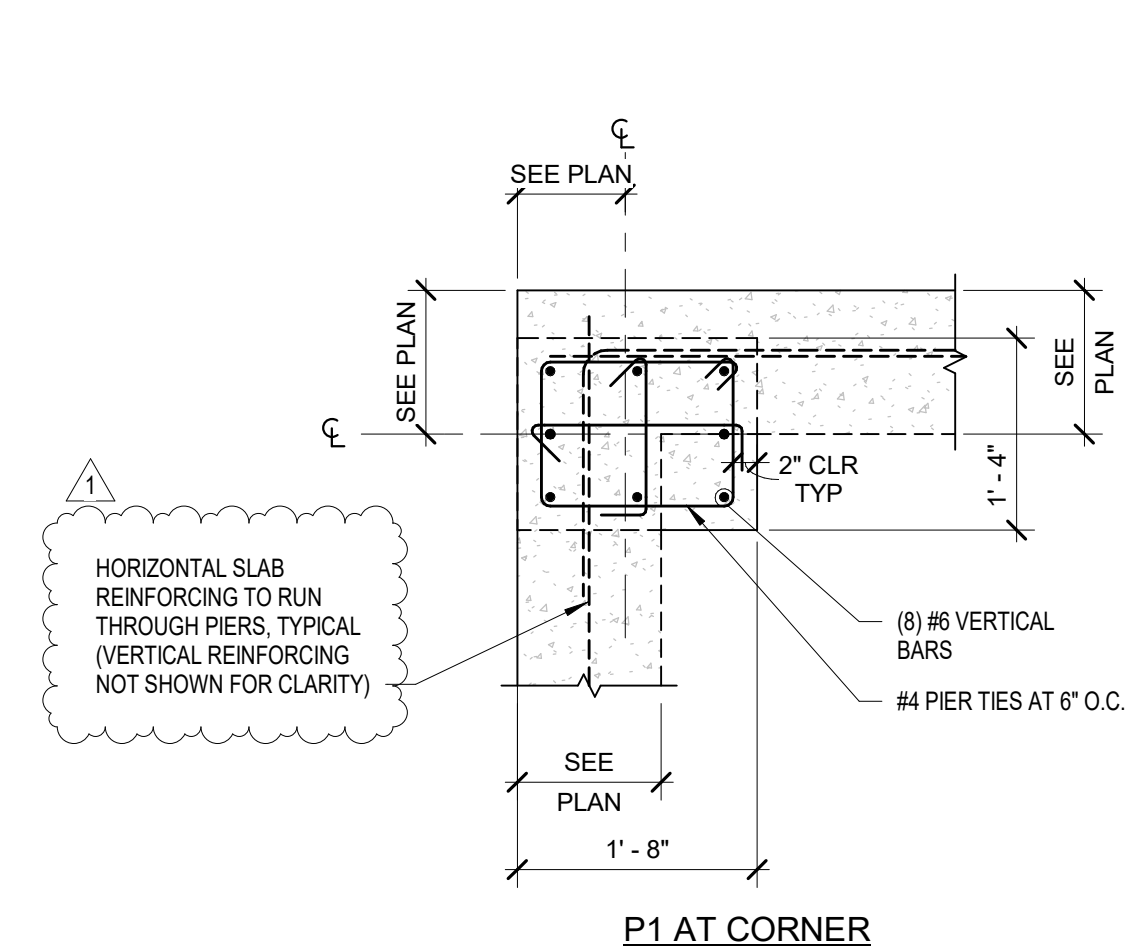
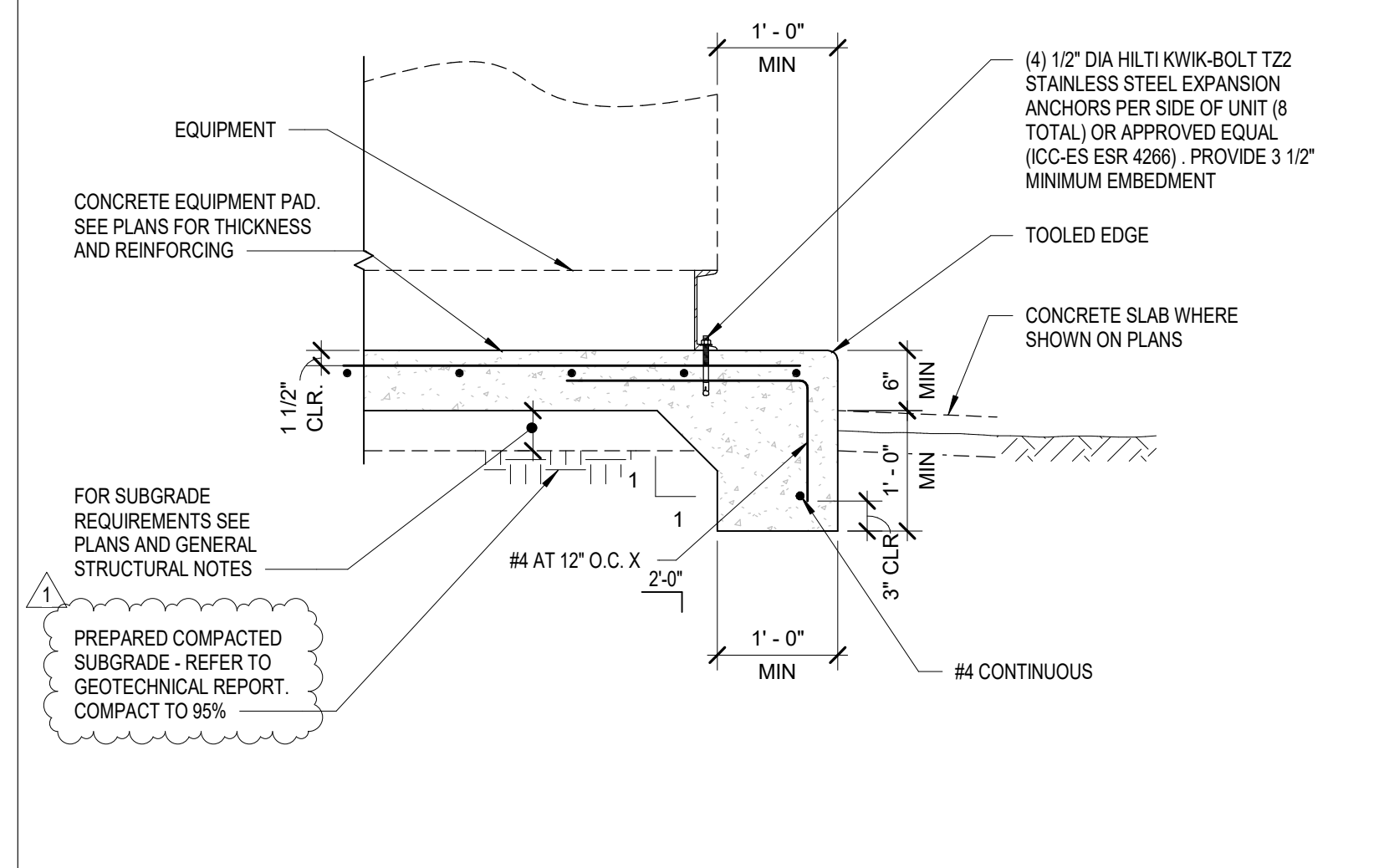
SCALE: NOT TO SCALE



**B1 TYPICAL DETAIL - TURN DOWN AT CONCRETE SLAB**

**B2 TYPICAL DETAIL - PEMB EXTERIOR COLUMN FOOTING**

**B3 TYPICAL DETAIL - PEMB WALL PANEL AT CONCRETE SLAB**



**A2 GENERATOR CONCRETE PAD**

**A3 CONCRETE PIER AT PEMB STEEL COLUMN**

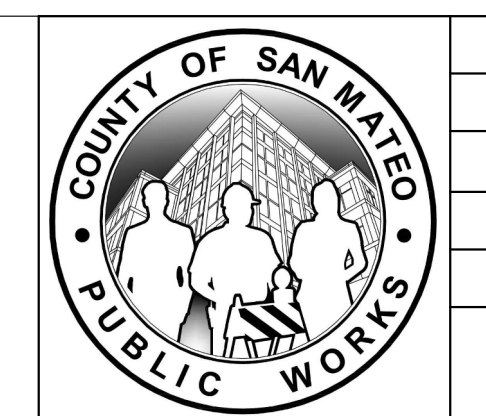
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C&S ENGINEERS, INC.  
S.E. # 3425 / EXPIRES 3/31/2026

REGISTERED PROFESSIONAL ENGINEER  
PAUL E. RODLER  
No. S3425  
Exp. 3/31/26  
STRUCTURAL  
STATE OF CALIFORNIA



DESIGNED BY: J.L.  
CHECKED BY: B.K.S.  
DRAWN BY: C.A.V.

ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO

555 COUNTY CENTER, 5th FLOOR  
REDWOOD CITY, CALIFORNIA 94063

FOUNDATION DETAILS AND SCHEDULES  
ELECTRICAL VAULT AND EMERGENCY GENERATOR

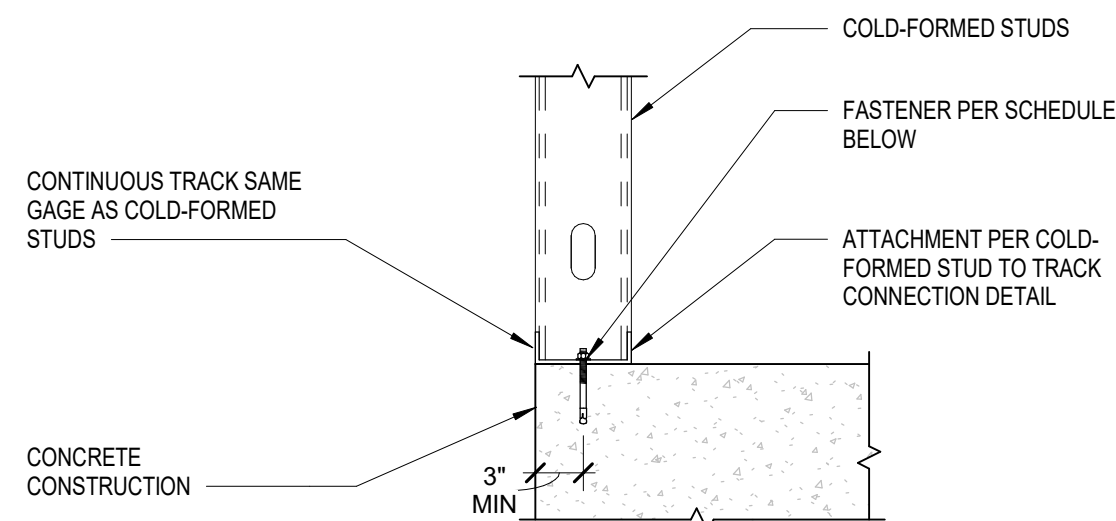
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DATE: AUGUST 4, 2023  
FILE NO: E5079

REVISION DATE: 04/01/2024

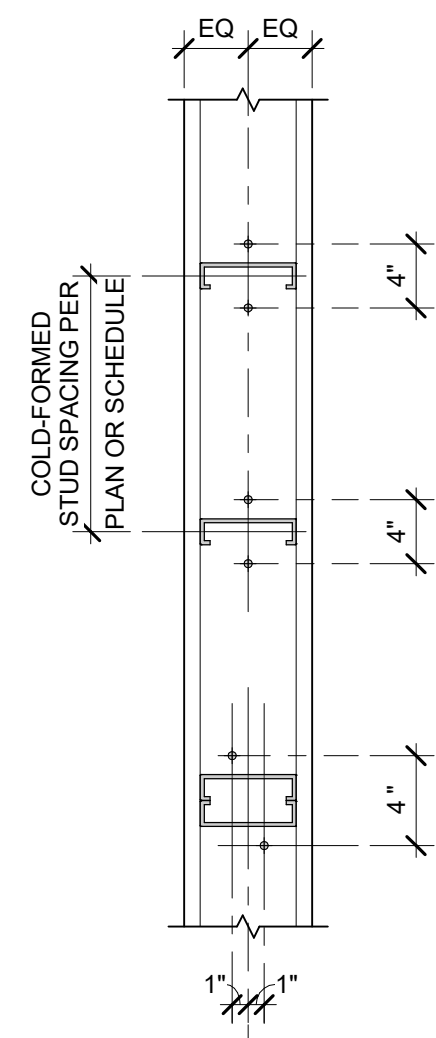
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S510 (REV)  
SHEET 29 OF 32

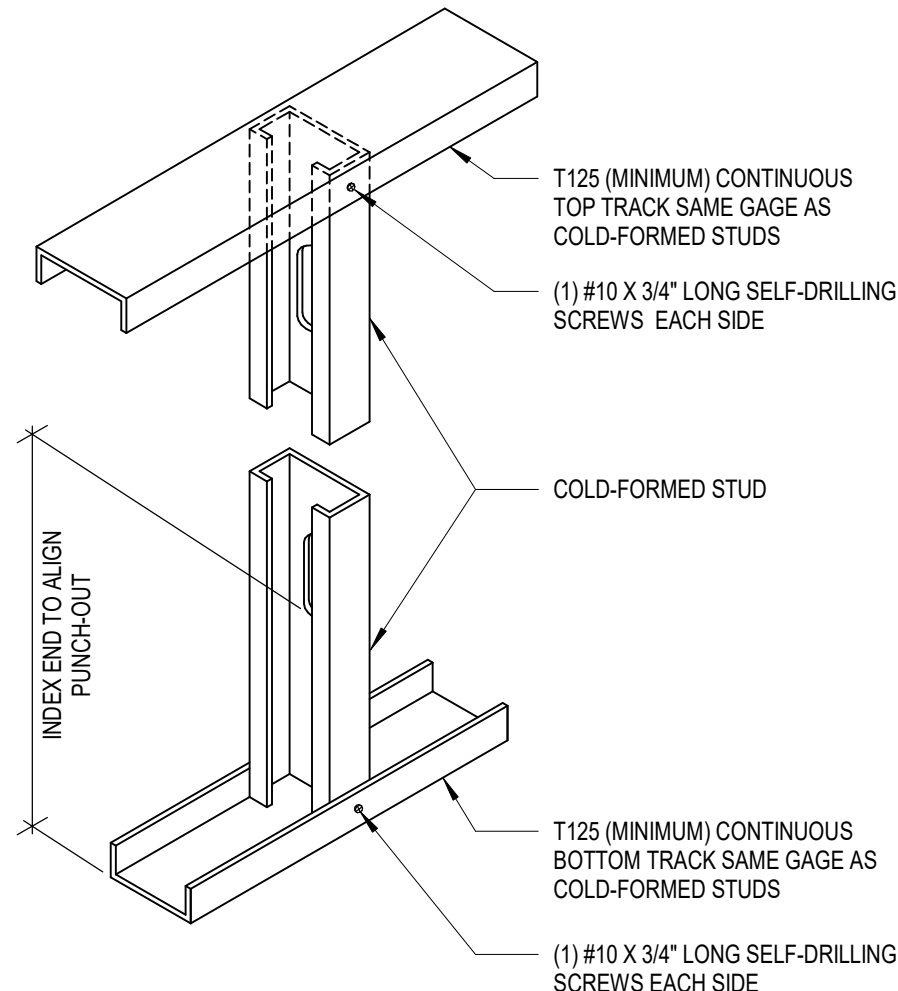


FASTENER SCHEDULE	
LOCATION	# OF FASTENERS REQUIRED
TYPICAL FRAMING	3/8" HILTI KWIK BOLT TZ2 (ICC ESR 4266) EXPANSION ANCHOR WITH 2 1/2" EMBEDMENT (OR APPROVED EQUAL)
JAMB STUDS	(2) 3/8" HILTI KWIK BOLT TZ2 (ICC ESR 4266) EXPANSION ANCHOR WITH 2 1/2" EMBEDMENT AT EACH STUD (OR APPROVED EQUAL)



- NOTES:
- 3/4" MINIMUM EMBED REQUIRED FOR ALL FASTENERS
  - MAINTAIN 4" MINIMUM SPACING FOR ALL FASTENERS

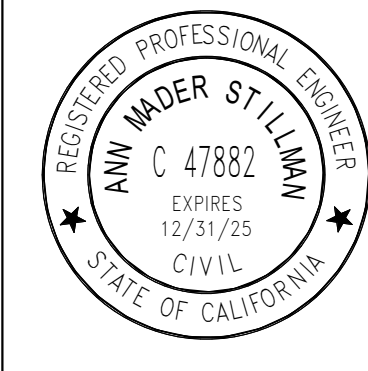
PLAN VIEW OPTIONS



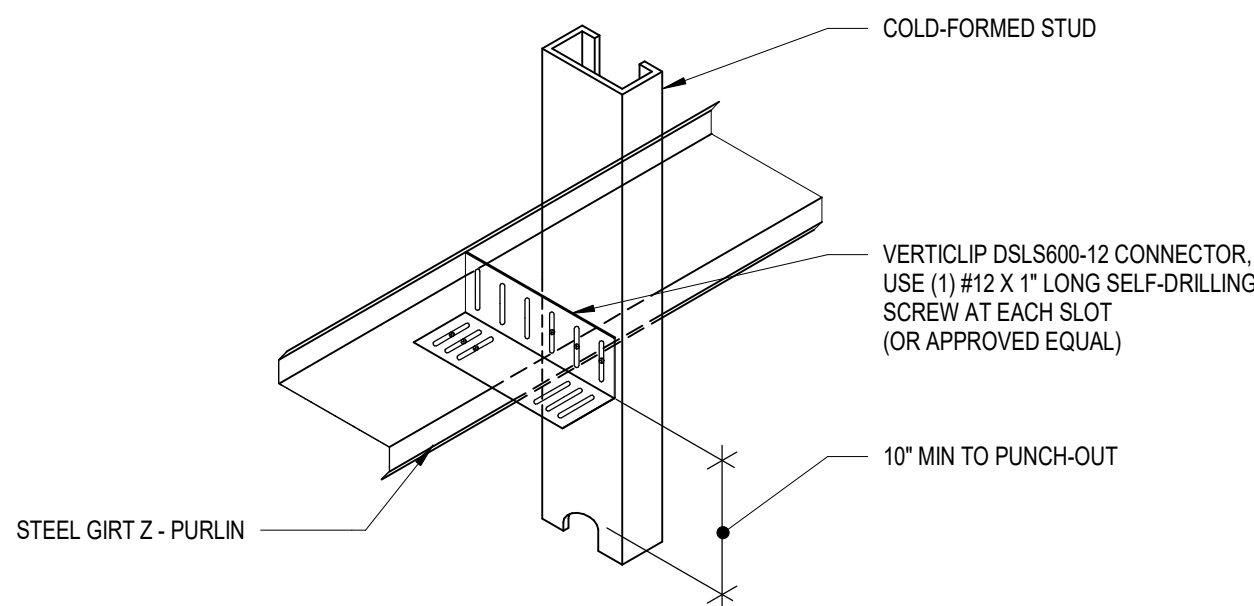
05411.00.06

C1 TYPICAL DETAIL - BOTTOM TRACK CONNECTION AT CONCRETE

C3 TYPICAL DETAIL - COLD-FORMED STUD TO TRACK CONNECTION

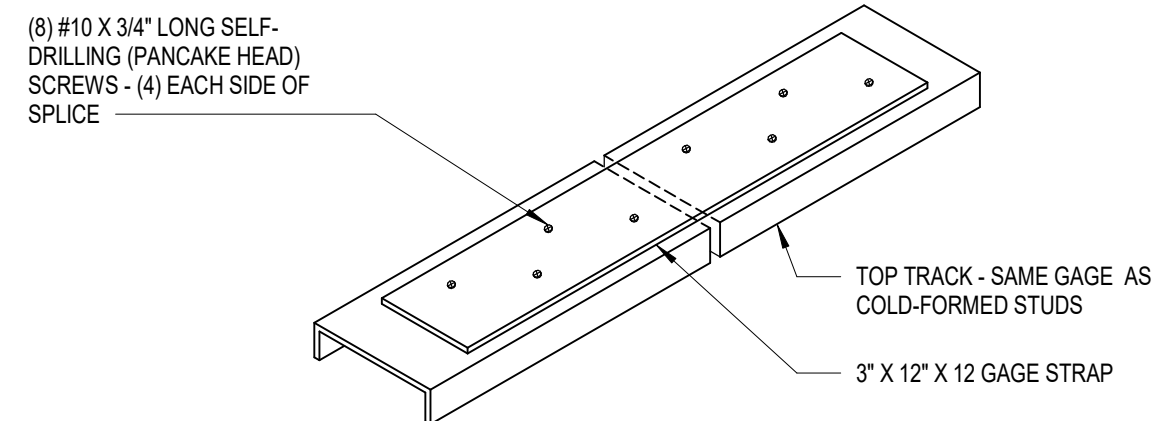


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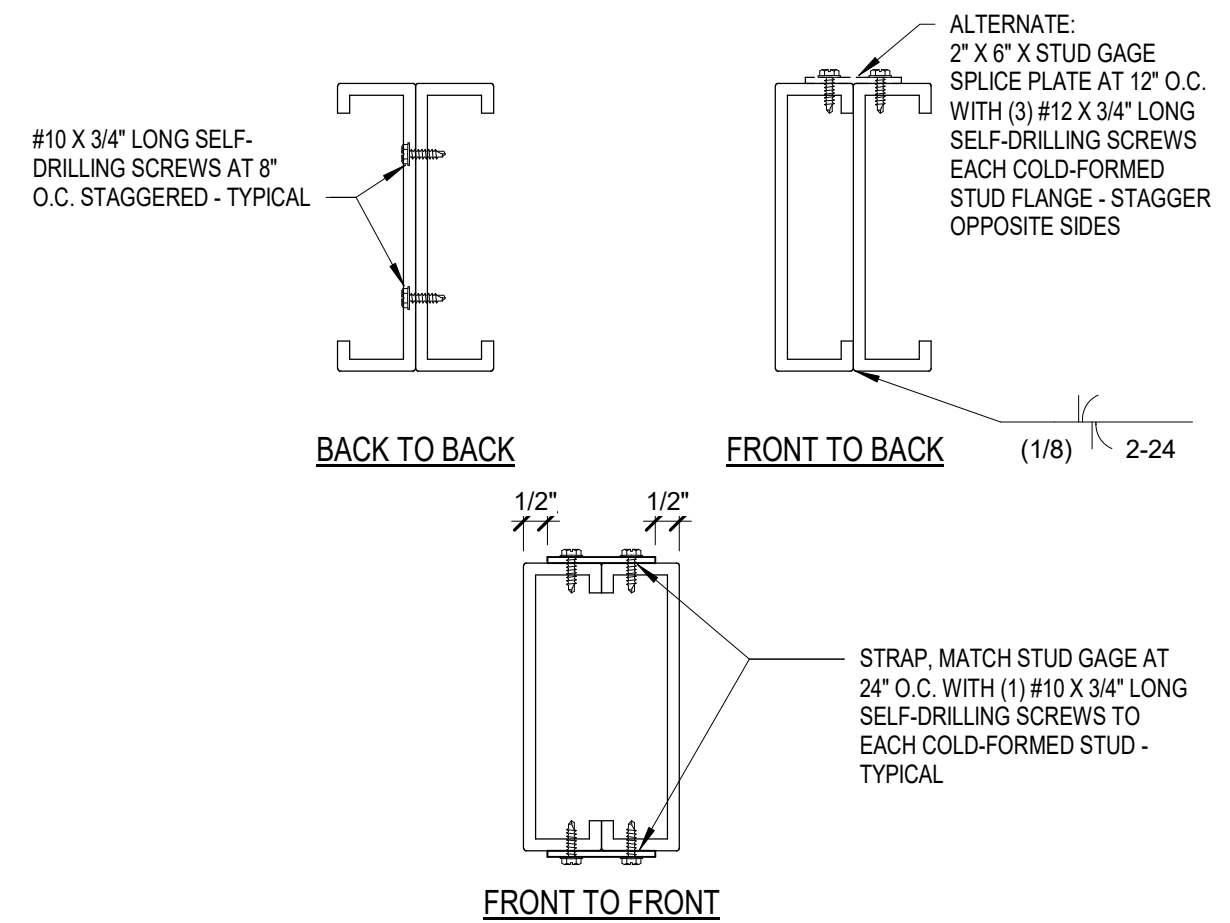
SCALE: NOT TO SCALE

B1 VERTICAL SLIDE TO STEEL CLIP DETAIL



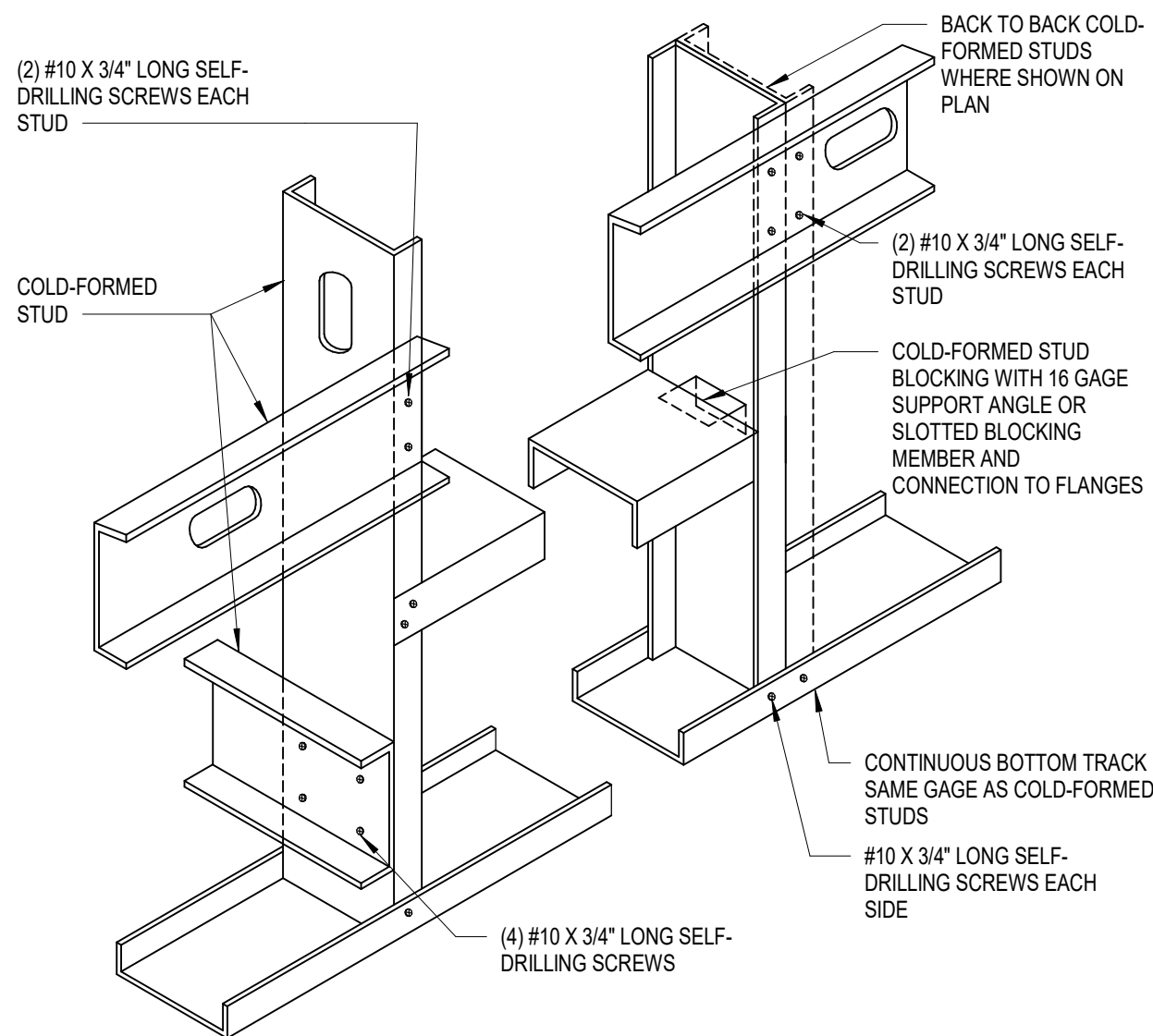
05411.00.02

B3 TYPICAL DETAIL - SPLICE IN TOP TRACK



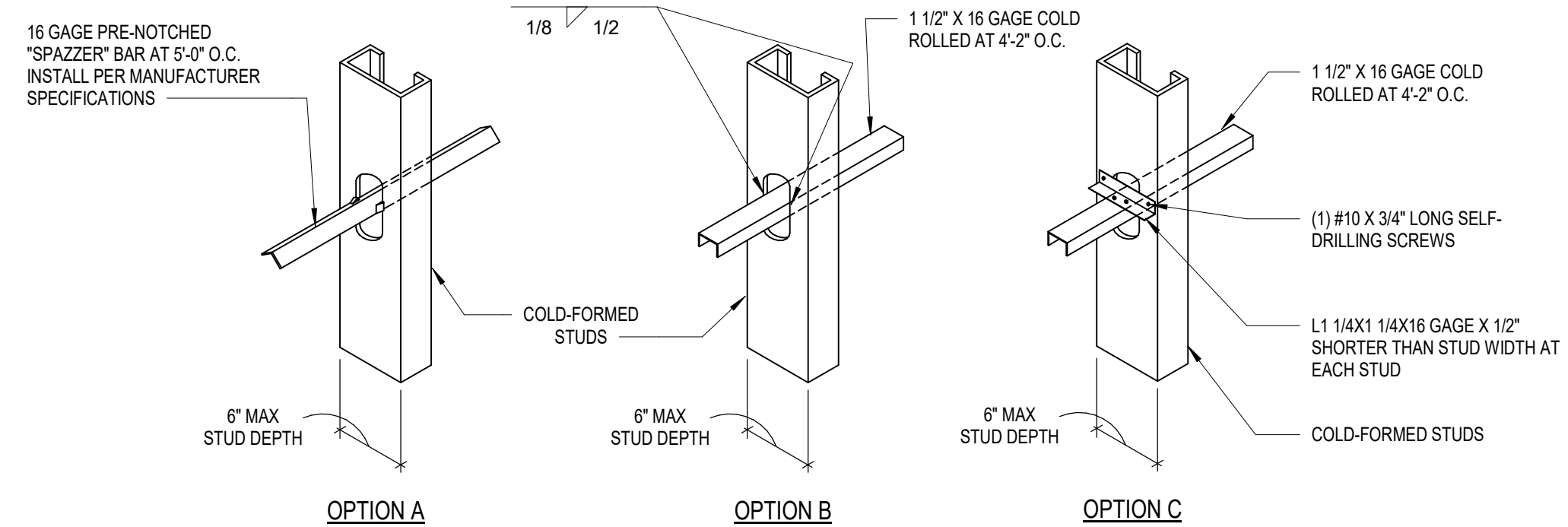
05411.00.03

B4 TYPICAL DETAIL - STUD TO STUD CONNECTIONS



05411.00.05

A2 TYPICAL DETAIL - TRACK AND BLOCKING TO COLD-FORMED STUD ATTACHMENT



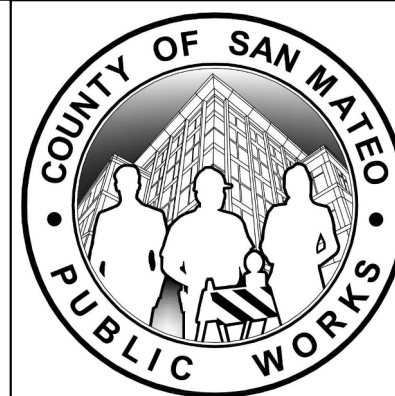
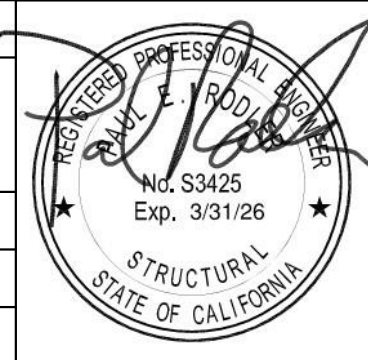
A3 TYPICAL DETAIL - BRIDGING ATTACHMENT

C&S Engineers, Inc.  
 7801 Folsom Boulevard, Suite 210  
 Sacramento, California 95826  
 Phone: 916-364-1470  
 www.cscos.com



APPROVED DATE: 04/01/2024

PAUL E. RODLER  
 C&S ENGINEERS, INC.  
 S.E. # 3425 / EXPIRES 3/31/2026



DESIGNED BY: J.L.		FRAMING DETAILS		SCALE: AS SHOWN
CHECKED BY: B.K.S.		ELECTRICAL VAULT AND EMERGENCY GENERATOR		DATE: AUGUST 4, 2023
DRAWN BY: C.A.V.		ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS COUNTY SAN MATEO		FILE NO.: E5079
REVISION	DATE	555 COUNTY CENTER, 5th FLOOR REDWOOD CITY, CALIFORNIA 94063		S520 (REV) SHEET 30 OF 32

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

NOTE:  
 ALTERNATE BRIDGING INCLUDING BUT NOT LIMITED TO CLARKDETRICH OR THE STEEL NETWORKS SYSTEMS ARE ACCEPTABLE