

Project Data

Project Address: Intersection of Fyffe Ave & N Hooper St.
Rough & Ready Island, Stockton, CA 95203
Project Jurisdiction: City of Stockton
APN: 162-03-007

Engineer

JCWagner & Associates, Inc.
2132 N El Dorado St.
Stockton, CA 95204
Contact: Doug Wagner, PE
Wk (209) 227-7646

Code Analysis

Occupancy Classification:	New
Construction Type	U
Risk Category	II
Zoning	VB
	port area PT

Code Compliance

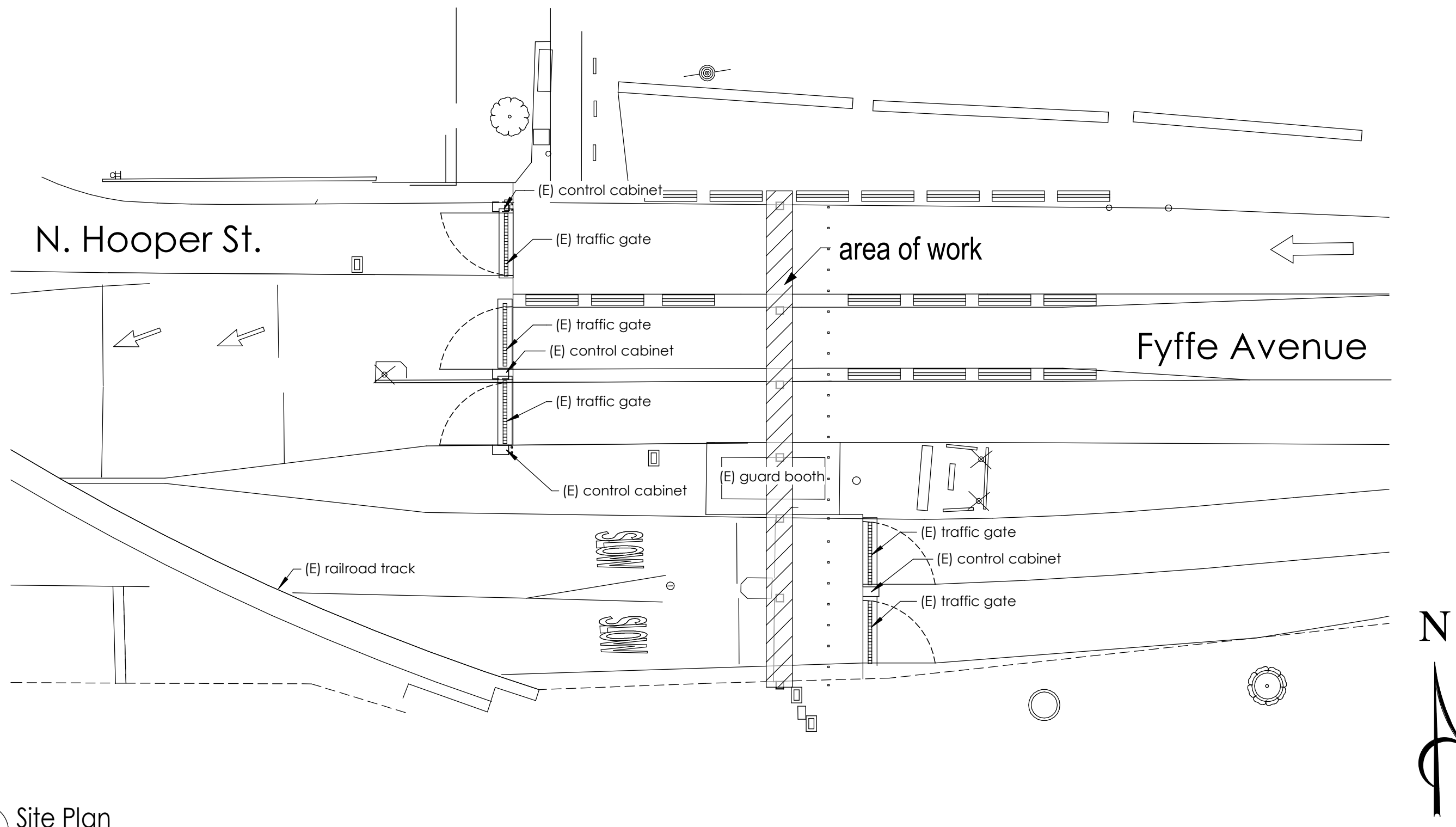
All work shall be performed in accordance with the following codes, including but not limited to:

- 2016 California Building Code
- 2016 California Electrical Code
- 2016 California Mechanical Code
- 2016 California Plumbing Code
- 2016 Building Energy Efficiency Standards
- 2016 California Existing Building Code
- 2016 California Fire Code
- 2016 California Green Building Code

Any Codes Referenced by the CBC, e.g. ASCE 7, ACI 318, 2015 IBC, AISC-360, etc.

Basis For Design

Governing Building Code: 2016 CBC								
Risk Category: II								
Loading Information								
Seismic								
Seismic Design Requirements for Non-Building Structures (ASCE 7-10 Ch. 15)								
Analysis Procedure: Equivalent Lateral Force Procedure								
Ss	SDS	S1	SD1	Site Class	Seismic Design Category	R	Cs	N/A
0.97	0.719	0.351	0.398	D	D	2	0.36	N/A
Wind								
Analysis Procedure: ASCE 7-10 Chapters 27 & 29								
Main Wind Force Resisting System				Component & Cladding (PFSF)				
V	exposure	G	qh [psf]	N/A	N/A	N/A	N/A	N/A
110 mph	C	0.85	22.64	N/A	N/A	N/A	N/A	N/A



1 Site Plan
S0.0 1" = 20'-0"

General Notes

- These drawings have been prepared using standards of professional care and completeness normally exercised under similar conditions by a reputable Engineer. They necessarily assume the work depicted will be performed by an experienced Contractor and/or workman who has a working knowledge of the applicable code, standards and requirements of industry acceptable standards of good installation/construction practices. As not every condition or detail is (or can be) explicitly shown on these drawings, it is understood that the Contractor will use acceptable industry standard good practice for all miscellaneous work not shown on the plans.
- Calculations and design of miscellaneous non-structural items, such as stairs, railings, non-structural walls and prefabricated items, such as roof trusses or floor trusses, are not included and are to be provided by others unless specifically noted on these drawings.
- These drawings represent the finished structure. They do not explain the method of construction. The Contractor shall be solely responsible for construction means, methods, techniques, sequences, schedule and procedures. It shall be the Contractor's responsibility to design and provide adequate shoring, bracing, form-work, etc., as required for the protection of life and property during construction. Visits to the site by the Engineer shall not include inspection of this item.
- During construction materials shall be uniformly spread out such that the design live load per square foot as stated herein is not exceeded. Visits to the site by the Engineer shall not include inspection of this item.
- The Contractor shall be responsible for all excavation procedures including shoring and protection of adjacent property, structures, streets and utilities in accordance with local building codes, the local building department and/or OSHA requirements.
- The Contractor shall be responsible for verification of all dimensions, conditions and elevations within architectural and/or structural drawings prior to the start of construction. The Contractor shall inform the Architect or Engineer in writing of any discrepancies or omissions noted on the drawings. Any such discrepancy, omission or variance not reported before the start of the construction shall be the responsibility of the Contractor. If discrepancies exist on these drawings, notes and details shall take precedence over the general notes.
- Where reference is made to codes or test standards for materials of construction, the latest edition and/or addendum adopted by the governing agency shall be used.
- Any options stated or drawn are for the Contractor's convenience. If the option is used the Contractor shall use the latest code, test standard or manufacturer's recommendations.
- Typical details and notes shall apply, though not necessarily indicated at a specific location on the drawings. Where no details are shown, construction shall conform to similar work on the project. Details may show only one side of the detail or may omit information for clarity.
- Verify and establish all openings, inserts or offsets for Architectural, Mechanical, Electrical or Plumbing, etc., with appropriate trades, drawings and Subcontractors prior to construction.
- All inspections required by the Codes, Local Building Department or the Plans shall be provided by an independent qualified inspection agency or the Building Department. Site visits by the Engineer do not constitute an inspection, unless specifically contacted for.
- Shop Drawings shall be submitted for all structural items upon written request or as detailed in Contract Documents. Shop drawings are reviewed only for general compliance with the structural drawings. Review does not indicate that the drawings are correct or complete. Responsibility shall rest with the Contractor. Any changes, substitutions, or deviations from the Contract Drawings shall be clouded. Any of the aforementioned shall not be considered approved by the Engineer unless specially noted. The shop drawings do not supersede or replace the original Contract Drawings. Any engineering provided by others and submitted for review shall bear the seal of the appropriate Registered Engineer. JCWagner & Associates shall not be responsible for the adequacy of engineering designs performed by others. Allow 5 working days for the Engineer's review. One copy of each submittal shall be retained for the engineer's records.

Structural Steel

- Structural steel members shall conform to the following minimum standards and material properties

Shape	Standard/Grade	Fy
W,WT	ASTM A992 Grade 50	50 ksi
Channels & Angles	ASTM A36	36 ksi
Bars and Plates	ASTM A36	36 ksi
HSS (round)	ASTM A500 (Grade B)	42 ksi
HSS (rectangular)	ASTM A500 (Grade B)	46 ksi
Cold Formed Shapes	ASTM A570	33 ksi
Bolts	ASTM A325	--
Nuts	ASTM A563	--
Hardened Steel Washers	ASTM F436	--
Load Indicator Washers	ASTM F959	--
Anchor Bolts	ASTM F1554	36 ksi
Shear Studs	ASTM A108 (type B)	--
Threaded Rod	ASTM A36	36 ksi
	ASTM F959	--
	ASTM F1554	--
	ASTM A108 (type B)	--
- All bolts shall be installed as bearing type connections with the threads included in shear planes (type "N" connection unless otherwise noted). All high strength bolts shall be fully pretensioned using load indicator washers or appropriate torque wrench. Foundation anchor bolts do not need to be pretensioned.
- All galvanized bolts and nuts shall be of the same process as specified in the plans. Mixing of hot dipped galvanized bolts with mechanically galvanized nuts is prohibited.
- All structural and miscellaneous steel shall be fabricated and erected in accordance with the latest edition of AISC specifications for design, fabrication and erection.
- Welding shall be performed by welders holding valid certificates and having current experience in the type of welding shown on the plans. All welding shall use E70XX low hydrogen electrodes or 70ksi weldable wire unless otherwise noted on the plans. Shop welding may use 70ksi weldable wire. All welds involving reinforcing bars shall use E7018 electrodes. All welding shall conform to the latest edition of American Welding Society Standards. No tack welding of ASTM A325 or ASTM A490 bolts.
- Grout beneath column bases or bearing plates shall be 5,000 psi (min) non-shrink flowable grout or drypack. Install grout under bearing plates before forming members are installed have been plumbed but prior to floor or roof installation. Grout depth shall be sufficient to allow grout or drypack to be placed beneath plate without voids (1-1/2" typical).
- All structural steel, plates, and bolt assemblies shall be hot dip galvanized in accordance with ASTM A123. Repair all areas affected by field welding. Use Rust-Oleum Industrial Choice 1600 System Galvanizing Compound Spray.**

Concrete

- Min. 28 day compressive strength
 - Drilled Pier Foundations 4,000 psi
 - Max. Water to Cement Ratio 0.50
 - Concrete Slump 4'-6"
- Concrete mix designs shall be done by a certified laboratory and approved by the Engineer.
- All concrete shall be regular weight of 145-150 pounds per cubic foot using aggregates conforming to ASTM C33. Water shall be clean and potable.
- Portland Cement shall be Type II and conform to ASTM C150.
- No more than 90 minutes shall elapse between concrete batching and placement, unless approved by Engineer or Authorized Testing Agency.
- Concrete mixing, transport, & placement shall be per ACI 304. Mechanically vibrate all concrete as necessary when placed to achieve a uniform placement minimizing voids. Remove all debris from forms before placing concrete. Concrete shall not be allowed to be dropped through reinforcing steel or greater than 5 feet or any situation that may adversely affect the air entrainment or structural properties of the concrete. Care must be taken when placing slabs on grade as to not disturb the subgrade material.
- All items to be cast in concrete such as reinforcing steel, ducts, anchor bolts, dowels, pipes, sleeves, conduits, etc., shall be securely fastened to prevent movement during the concrete placement.
- Concrete slab on grade control joints shall be placed such that the enclosed area is less than 150 square feet (12 x 12'), unless otherwise stated on plans or an approved mix design allowing greater enclosed area is approved.
- Pipes shall not be embedded in structural concrete unless stated on the plans or approved by the Engineer. Maximum pipe size shall be 1/3 of the slab thickness, located at mid-depth. Minimum spacing shall 3 times the pipe diameter. Pipes/sleeves shall not impair the strength of the member.
- Protect concrete from hot or cold weather conditions, which can reduce strength or damage concrete, in accordance with ACI 305 and 306.
- Anchor bolts for general use and at hold down locations shall be ASTM F1554 Gr. 36 bolts, with A563 Grade A heavy hex nuts & F436 Type I washers.
- Grouting shall be done after steel is in its final position using non-shrink cementitious grout (5,000 psi, min.) by Five Star, or approved equal.

Reinforcing Steel

- Reinforcing steel shall conform to the requirements of ASTM 615. Reinforcing steel shall be Grade 60 (Fy = 60 ksi) deformed bars for all bars #4 and larger including bars used for concrete walls, beams or columns. Reinforcing may be grade 40 (Fy = 40 ksi) deformed bars for all bars #3 and smaller unless otherwise noted on plans. Reinforcing shall be bent cold. Bars are allowed only one bend per detail, no straightening and re-bending is allowed.
- Lap splices of reinforcing steel in concrete shall be according to ACI 318 Chapter 25 or lap schedule where present, unless otherwise noted. Stagger splices a minimum of one lap length. No tack welding of reinforcing bars is allowed. The latest ACI code and detailing manual apply. Provide bent corner bars to match and lap with horizontal bars at all corners and intersections per typical details. Vertical bars shall be spliced at or near floor lines. Splice top bars at center line of span and bottom bars at the support in spandrels, beams, grade beams, etc., unless otherwise noted.
- Mechanical splice couplers shall have current ICBO approval and shall be capable of developing 125% of the bar strength.
- Welding of reinforcing bars, metal inserts, and connections shall conform to AWS D.4, and shall be made only at locations shown on the plans or details. All reinforcing to be welded shall be ASTM A706, Grade 60 weldable steel.
- Reinforcing bar spacing shown on plans are maximum on centers. All bars shall be detailed and placed per CRSI specifications handbook. Securely tie all bars in location prior to concrete placement.



2 Isometric View Looking Northwest
S0.0

Number	Sheet	
	Number	Sheet Name
1	S0.0	Structural Notes
2	S0.1	CALGreen 1
3	S0.2	CALGreen 2
4	S1.0	Canopy Foundation Plan & Details
5	S2.0	Canopy Steel Framing
6	S2.1	Steel Details

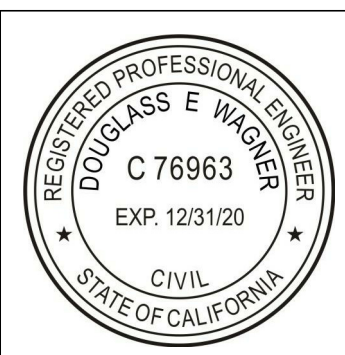
Port of Stockton Canopy
Fyffe Ave. at N Hooper St.
Stockton, CA 95203

Drawn By: PI
Job #: 19006
Scale: Noted

#	Date	Description
A	5/14/19	Issued for Bid

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Structural Notes

S0.0

2016 CALIFORNIA GREEN BUILDING STANDARDS NONRESIDENTIAL MANDATORY MEASURES, SHEET 1

CHECKLIST	CHAPTER 3 GREEN BUILDING SECTION 301 GENERAL	COMP
301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.		
301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.		
A code section will be designated by a banner to indicate where the code section only applies to newly constructed building [N] or to additions and alterations [A]. When the code section applies to both, no banner will be used.		
SECTION 301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.		
SECTION 302 MIXED OCCUPANCY BUILDINGS		
302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.		
SECTION 303 PHASED PROJECTS		
303.1 Phased Projects. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.		
303.1.1 Initial Tenant Improvements. The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 303.1.3 non-residential additions and alterations.		
ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development BSC California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety OSHPD Office of Statewide Health Planning and Development LR Low Rise HR High Rise AA Additions and Alterations N New		
CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.1 PLANNING AND DESIGN SECTION 5.101 GENERAL		
5.101.1 Scope. The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.		
SECTION 5.102 DEFINITIONS		
5.102.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)		
CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.		
LOW-EMITTING AND FUEL EFFICIENT VEHICLES. Eligible vehicles are limited to the following: 1. Zero emission vehicle (ZEV) including neighborhood electric vehicles (NEV), partial zero emission-vehicle (PEV), advanced technology PEV [AT ZEV] or CNG electric original equipment manufacturer (only) regulated under Health and Safety Code section 43800 and CCR, title 13, Sections 1961 and 1962. 2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lanes stickers issued by the Department of Motor Vehicles.		
NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.		
TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.		
VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ride-sharing. Note: Source: Vehicle Code, Division 1, Section 468 ZEV. Any vehicle certified to zero-emission standards.		
SECTION 5.104 SITE DEVELOPMENT		
5.104.1 STORM WATER POLLUTION PREVENTION. Newly constructed projects and additions which disturb less than one acre of land shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures: 5.104.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance. 5.104.1.2 Best Management Practices (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP. 1. Soil loss BMP that should be considered for each project include, but are not limited to, the following: a. Scheduling construction activity. b. Preservation of natural features, vegetation and soil. c. Drainage swales or lined ditches to control stormwater flow. d. Mulching or hydrosedding to stabilize disturbed soils. e. Erosion control to protect slopes. 1. Protection of storm drain inlets (grovel bags or catch basin inserts). g. Perimeter sediment control (perimeter silt fence, fiber rolls). h. Sediment trap or sediment basin to retain sediment on site. i. Stabilized construction exits. j. Wind erosion control. k. Other soil loss BMP acceptable to the enforcing agency. 2. Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following: a. Material handling and waste management. b. Building materials stockpile management. c. Management of washout areas (concrete, paints, stucco, etc.). d. Control of vehicle/equipment fueling to contractor's staging area. e. Vehicle and equipment cleaning performed off site. f. Spill prevention and control. g. Other housekeeping BMP acceptable to the enforcing agency.		
5.104.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2.		
5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2, or meet the applicable local ordinance, whichever is stricter.		
5.106.4.1.1 Short-term bicycle parking. If the project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.		
5.106.4.1.2 Long-term bicycle parking. For new buildings with 10 or more tenant-occupants or for additions or alterations that add 10 or more tenant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicle parking spaces being added, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and shall meet one of the following: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; or 3. Lockable, permanently anchored bicycle lockers. Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates. 5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2		
5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new buildings. 5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of low staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; or 3. Lockable, permanently anchored bicycle lockers.		
5.106.5.2 DESIGNATED PARKING for clean air vehicles. In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and compact/van/pool vehicles as follows: 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; or 3. Lockable, permanently anchored bicycle lockers.		

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0
10-25	1
25-50	3
51-75	4
76-100	8
101-150	11
151-200	16
201 AND OVER	AT LEAST 8% OF TOTAL

5.106.5.2.1 Parking stall marking. Paint, in the point used for stall striping, the following character in black on the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle:

CLEAN AIR / VAN POOL / EV

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.

5.106.5.3 - Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code, and as follows:

- 5.106.5.3.1 - Single charging space requirements. When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:
1. The type and location of the EVSE
2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1"
4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure, or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE

5.106.5.3.2 - Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3, raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code. Construction plans and specifications shall include, but are not limited to, the following:
1. The type and location of the EVSE
2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet(s), box(es), enclosure(s), or equivalent.
3. Plan design shall be based upon 40-ampere minimum branch circuit.
4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.
Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:
1. Where there is insufficient electrical supply.
2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TOTAL NUMBER OF ACTUAL ARRANGING	NUMBER OF REQUIRED EV CHARGING
0-9	1
10-25	2
25-50	4
51-75	8
76-100	11
101-150	16
151-200	21
201 AND OVER	AT LEAST 8% OF TOTAL

5.106.5.3.4 Identification. [N] The service panel or subpanel(s) circuit directory shall identify the reserved or current protective device space(s) for future EV charging as "EV Capable". The raceway termination location shall be permanently and visibly marked as "EV Capable"

5.106.5.3.5 [N] Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles

CHECKLIST		COMP
5.106.8 LIGHT POLLUTION REDUCTION. [N] Outdoor lighting systems shall be designed and installed to comply		
1. The minimum requirements in the California Energy Code for lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and 2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and 3. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.		
Exceptions: [N] 1. Luminaires that qualify as exceptions in Section 140.7 of the California Energy Code. 2. Emergency lighting. 3. Building facade meeting the requirements in Table 140.7-8 of the California Energy Code, Part 6. 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.		
Note: [N] See also California Building Code, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.		
5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales. 2. Water collection and disposal systems. 3. French drains. 4. Water retention gardens. 5. Other water measures which keep surface water away from buildings and aids in groundwater recharge.		
Exception: Additions and alterations not altering the drainage path.		
DIVISION 5.2 ENERGY EFFICIENCY SECTION 5.201 GENERAL		
5.201.1 Scope [BSC-CG]. California Energy Code [DSA-SS]. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.		
DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION SECTION 5.301 GENERAL		
5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.		
SECTION 5.302 DEFINITIONS		
GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.		
MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) [BSC-CG & DSA-SS]. A California regulation commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations. The MWELO regulation establishes a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects.		
MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) [HCD] The California model ordinance [California Code of Regulations, Title 23, Division 2, Chapter 2.7], regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance that is at least as effective as the MWELO.		
POTABLE WATER [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.		
RECYCLED WATER. Water, which as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.		
SUBMETER. A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of CALGreen, a dedicated meter may be considered a submeter.		
SECTION 5.303 INDOOR WATER USE		
5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2.		
5.303.1.1 New Buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows: 1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems: a. Makeup water for cooling towers where flow through is greater than 500 gpm (1,915 L/s) b. Makeup water for evaporative coolers greater than 4 gpm (0.04 L/s) c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).		
5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.		
5.303.2 Reserved.		
5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following: 5.303.3.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush. 5.303.3.2 Urinals. 5.303.3.2.1 Wall-mounted urinals. The effective flush volume of urinals shall not exceed 0.125 gallons per flush. 5.303.3.2.2 Floor-mounted urinals. The effective flush volume of floor-mounted urinals shall not exceed 0.5 gallons per flush.		
5.303.3.3 Showerheads. 5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads. 5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead.		
5.303.4 Commercial kitchen equipment. 5.303.4.1 Food waste disposers. Disposers shall either modulate the use of water to no more than 1.5 gpm when the disposer is not in use (not actively grinding food waste/no load) or shall automatically shut off no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.		
5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code and in Chapter 6 of this code.		

CHECKLIST	TABLE 5.303.2.2 - WATER USE BASE LINE X	DURATION	DAILY USE	OCCUPANTS	COMP
FIXTURE <td>FLOW RATE<td></td><td></td><td></td><td></td></td>	FLOW RATE <td></td> <td></td> <td></td> <td></td>				
SHOWER HEADS	2.0 GPM @ 80 PSI	5 MIN.	1	X	
LAVATORY FAUCETS (NON-RESIDENTIAL)	0.5 GPM @ 60 PSI	25MIN.	3	X	
KITCHEN FAUCETS	2.2 GPM @ 60 PSI	4 MIN.	1	X	
REPLACEMENT AERATORS	2.2 GPM @ 60PSI				
WASH FOUNTAINS	22 (RIM SPACE (IN)/20 GPM @ 60 PSI)				X
METERING FAUCETS	0.25 GAL/CYCLE	0.25 MIN.	3	X	
METERING FAUCETS FOR WASH FOUNTAINS	0.25 (RIM SPACE (IN)/20 GPM @ 60 PSI)	0.25 MIN.			X
GRAVITY TANK WATER CLOSET	1.28 GAL/FLUSH	1 FLUSH	1 MALE, 3 FEMALE	X	
FUSHMETER TANK WATER CLOSET	1.28 GAL/FLUSH	1 FLUSH	1 MALE, 3 FEMALE	X	
FUSHMETER VALVE WATER CLOSET	1.28 GAL/FLUSH	1 FLUSH	1 MALE, 3 FEMALE	X	
ELECTROMECHANICAL HYDRAULIC WATER CLOSET	1.28 GAL/FLUSH	1 FLUSH	1 MALE, 3 FEMALE	X	
URINALS	0.5 GAL/FLUSH	1 FLUSH	2 MALE	X	

FIXTURE "WATER USE" = FLOW RATE X DURATION X OCCUPANTS X DAILY USES

1. THE DAILY USE NUMBER SHALL BE INCREASED TO THREE IF URINALS ARE NOT INSTALLED IN THE ROOM.
2. REFER TO TABLE A, CHAPTER 4, CALIF. PLUMBING CODE, FOR OCCUPANT LOAD FACTORS.
a. SHOWER USE BY OCCUPANTS DEPENDS ON THE TYPE OF USE OF A BUILDING OR PORTION OF A BUILDING. E.G., TOTAL OCCUPANT LOAD FOR A HEALTH CLUB, BUT ONLY A FRACTION OF THE OCCUPANTS IN AN OFFICE BUILDING AS DETERMINED BY THE ANTICIPATED NUMBER OF USERS
b. NONRESIDENTIAL KITCHEN FAUCET USE IS DETERMINED BY THE OCCUPANT LOAD OF THE AREA SERVED BY THE FIXTURE.
3. USE WORKSHEET WS-1 TO CALCULATE BASELINE WATER USE.

FIXTURE TYPE	MAX. FLOW RATE w/ 20% REDUCTION
KITCHEN FAUCET	1.8 GPM @ 60 PSI
WASH FOUNTAINS	1.8 (RIM SPACE (IN)/20 GPM @ 60 PSI)
METERING FAUCETS	0.20 GALLONS / CYCLE
METERING FAUCETS FOR WASH FOUNTAINS	20 (RIM SPACE (IN)/20 GPM @ 60 PSI)

SECTION 5.304 OUTDOOR WATER USE

5.304.1 Scope. The provisions of Section 5.304, Outdoor Water Use reference the mandatory Model Water Efficiency Landscape Ordinance (MWELO) contained within Chapter 2.7, Division 2, Title 23, California Code of Regulations.

5.304.2 Outdoor water use in landscape areas equal to or greater than 500 square feet. When water is used for outdoor irrigation for new construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review, one of the following shall apply:
1. A local water efficient landscape ordinance that is, based on evidence in the record, at least as effective in conserving water as the updated model ordinance adopted by the Department of Water Resources (DWR) per Government Code Section 65959(c).
2. The California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulations
5.304.3 Outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 square feet. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review shall comply with Section 5.304.2, Item 1, or 2.
5.304.4 Outdoor water use in landscape areas of 2,500 square feet or less. Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of MWELO or conform to the prescriptive compliance measures contained in MWELO's Appendix D.
5.304.5 Graywater or rainwater use in landscape areas. For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2,500 square feet of landscape area shall comply with the prescriptive compliance measures (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D Section 5).

Notes:
1. DWR's Model Water Efficient Landscape Ordinance, definitions and supporting documents are available at the following link: <http://water.ca.gov/waterefficiency/landscapeordination/>
2. A water budget calculator is available at the following link: <http://water.ca.gov/waterefficiency/landscapeordination/>
3. The MWELO prescriptive compliance measure Appendix D may be found at the following link: <http://water.ca.gov/waterefficiency/landscapeordination/>. In addition, a copy of MWELO's Appendix A may be found in Chapter 8 of this code.

5.304.6 Outdoor potable water use in landscape areas [DSA-SS]. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, California Code of Regulation, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SAL) of 0.35.
Exception: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWELO.
5.304.6.1 Newly constructed landscapes. [DSA-SS] New construction projects with an aggregate landscape area equal to or greater than 500 square feet.
5.304.6.2 Rehabilitated landscapes. [DS-SS] Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY
SECTION 5.401 GENERAL
5.401.1 SCOPE. The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

SECTION 5.402 DEFINITIONS
5.402.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference)

ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.
BALANCE. To proportion flows within the distribution system, including sub-panels, branches and terminals, according to design quantities.
BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.
TEST. A procedure to determine quantitative performance of a system or equipment

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT
5.407.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2 (Weather Protection) and California Energy Code Section 150.1 (Mandatory Features and Devices), manufacturer installation instructions or local ordinance, whichever is more stringent.

5.407.2 Moisture Control. Employ moisture control measures by the following methods.

CHECKLIST	5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures. 5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows: 5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbed floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least 4 feet in depth. 3. The door is recessed at least 4 feet. 4. Other methods which provide equivalent protection. 5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane. SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING 5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent. 5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that: 1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale. 2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream). 3. Identifies diversion facilities where construction and demolition waste material collected. 4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both. 5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section. Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company. Exceptions to Sections 5.408.1.1 and 5.408.1.2: 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. 3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets. 5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency. 5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency. Notes: 1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan. 2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CALRecycle). 5.408.2 Universal Waste. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials shall be included in the construction documents. Note: Refer to the Universal Waste Rule Link at: http://www.bsc.ca.gov/water/Policies/Regs/plood/CEAR-AREGS_UWR_FinalText.pdf 5.408.3 Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed. Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation. Notes: 1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material. (www.cdffa.ca.gov/esc/county/contact.html) 2. For a map of know pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdffa.ca.gov) SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS 5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, computer and printer glass plates, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive. Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42449.82 (a)(2)(A) et seq. shall also be exempt from the organic waste portion of this section. 5.410.1.1 Additions. All additions constructed within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site. Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area. 5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the Public Resources Code. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (PLC). Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site. 5.410.2 COMMISSIONING. [N] For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. All occupancies other than I-occupancies and L-occupancies shall comply with the CEC as prescribed in CEC Section 120.8. For I-occupancies that are not regulated by OSHPD or for L-occupancies and L-occupancies that are not regulated by the CEC Section 120.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply. Commissioning requirements shall include: 1. Owner's or Owner representative's project requirements. 2. Basis of design. 3. Commissioning measures shown in the construction documents. 4. Commissioning plan. 5. Functional performance testing. 6. Documentation and training. 7. Commissioning report. Exceptions: 1. Unconditioned warehouses of any size. 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses. 3. Tenant improvements under 10,000 square feet as described in Section 303.1. 4. Open parking garages of any size, or open parking garage areas, of any size, within a structure. Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and/or air conditioning.
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Port of Stockton Canopy
Fyffe Ave. at N Hooper St.
Stockton, CA 95203

Drawn By CM
Job # 19006
Scale Noted

Revision Schedule		
#	Date	Description
A	5/14/19	Issued for Bid

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

5.408.2 Universal Waste. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials shall be included in the construction documents.

Note: Refer to the Universal Waste Rule Link at: http://www.bsc.ca.gov/water/Policies/Regs/plood/CEAR-AREGS_UWR_FinalText.pdf

5.408.3 Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse

2016 CALIFORNIA GREEN BUILDING STANDARDS NONRESIDENTIAL MANDATORY MEASURES, SHEET 2

	COMP.		COMP.	COMP.																																																																																																																		
<p>Informational Notes:</p> <p>1. IAS AC 476 is an accreditation criteria of organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 does not certify individuals to conduct functional performance tests or to adjust and balance systems.</p> <p>2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the California Energy Code.</p> <p>5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:</p> <ol style="list-style-type: none"> Environmental and sustainability goals. Energy efficiency goals. Indoor environmental quality requirements. Project program, including facility functions and hours of operation, and need for after hours operation. Equipment and systems expectations. Building occupant and operation and maintenance (O&M) personnel expectations. <p>5.410.2.2 Basis of Design (BOD). [A] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:</p> <ol style="list-style-type: none"> Heating, ventilation, air conditioning (HVAC) systems and controls In door lighting system and controls Water heating system. Renewable energy systems. Land scape irrigation systems. Water reuse systems. <p>5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:</p> <ol style="list-style-type: none"> General project information. Commissioning goals. Systems to be commissioned. Plans to test systems and components shall include: <ol style="list-style-type: none"> An explanation of the original design intent. Equipment and systems to be tested, including the extent of tests. Functions to be tested. Conditions under which the test shall be performed. Measurable criteria for acceptable performance. Commissioning team information. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included. <p>5.410.2.4 Functional performance testing [N] Operational performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.</p> <p>5.410.2.5 Documentation and training [N] A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR), Title 8, Section 5142, and other related regulations.</p> <p>5.410.2.5.1 Systems manual [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:</p> <ol style="list-style-type: none"> Site information, including facility description, history and current requirements. Site contact information. Basic operations and maintenance, including general site operating procedures, basic trouble shooting, recommended maintenance requirements, site events log. Major systems. Site equipment inventory and maintenance notes. A copy of verifications required by the enforcing agency or this code. Other resources and documentation, if applicable. <p>5.410.2.5.2 Systems operations training [N] A program for training of the appropriate maintenance staff for each equipment type and or system shall be developed and documented in the commissioning report and shall include the following:</p> <ol style="list-style-type: none"> System equipment overview (what it is, what it does and with what other systems and or equipment it interfaces). Review and demonstration of servicing preventive maintenance. Review of the information in the systems manual. Review of the record drawings on the system /equipment. <p>5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design, construction phases of the building project shall be completed and provided to the owner or representative.</p> <p>5.410.4 Testing and adjusting. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.</p> <p>5.410.4.1 (Reserved)</p> <p>5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:</p> <ol style="list-style-type: none"> HVAC systems and controls. Indoor and outdoor lighting and controls. Water heating systems. Renewable energy systems. Landscape irrigation systems. Water reuse systems. <p>5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.</p> <p>5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards, the National Environmental Balancing Bureau Procedural Standards, Associated Air Balance Council National Standards or as approved by the enforcing agency.</p> <p>5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.</p> <p>5.410.4.5 Operation and maintenance (O&M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of warranties/warranties for each system. O&M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.</p> <p>5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.</p> <p>DIVISION 5.5 ENVIRONMENTAL QUALITY</p> <p>SECTION 5.501 GENERAL</p> <p>5.501.1 SCOPE The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.</p> <p>SECTION 5.502 DEFINITIONS</p> <p>5.502.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)</p> <p>ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.</p> <p>A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made.</p>	<p>1 BTU/HOUR. British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32° Fahrenheit.</p> <p>COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10 pm) in addition to the 10 dB night time adjustment used in the Ldn.</p> <p>COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particle board and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood joists or finger-jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.11(a).</p> <p>Note: See CCR, Title 17, Section 93120.1.</p> <p>DAY-NIGHT AVERAGE SOUND LEVEL (Ldn).</p> <p>DECIBEL (dB).</p> <p>ENERGY EQUIVALENT (NOISE) LEVEL (Leq).</p> <p>EXPRESSWAY.</p> <p>FREEWAY.</p> <p>GLOBAL WARMING POTENTIAL (GWP).</p> <p>GLOBAL WARMING POTENTIAL VALUE (GWP VALUE).</p> <p>HIGH-GWP REFRIGERANT.</p> <p>LONG RADIUS ELBOW.</p> <p>LOW-GWP REFRIGERANT.</p> <p>MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2-1999.</p> <p>MAXIMUM INCREMENTAL REACTIVITY (MIR).</p> <p>PRODUCT-WEIGHTED MIR (PWIMIR).</p> <p>PSIG.</p> <p>REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.</p> <p>SCHRADER ACCESS VALVES.</p> <p>SHORT RADIUS ELBOW.</p> <p>SUPERMARKET.</p> <p>VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chain lengths with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508 (a).</p> <p>Note: Where specific regulations are cited from different agencies such as South Coast Air Quality Management District (SCAQMD), California Air Resources Board (ARB or CARB), etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.</p> <p>SECTION 5.503 FIREPLACES</p> <p>5.503.1 Fireplaces. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed wood stove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 4, Sub chapter 7, Section 150. Wood stoves, pellet stoves and fireplaces shall comply with applicable local ordinances.</p> <p>5.503.1.1 Wood stoves. Wood stoves and pellet stoves shall comply with U.S. EPA Phase II emission limits where applicable, and shall have a permanent label indicating they are certified to meet the emission limits.</p> <p>SECTION 5.504 POLLUTANT CONTROL</p> <p>5.504.1 Temporary ventilation. The permanent HVAC system shall only be used during construction if necessary to condition the building or are as of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.1-1999, or an average efficiency of 30 percent based on ASHRAE 52.1-1999 Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.</p> <p>5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, or during storage on the construction site and until final start up of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may collect in the system.</p> <p>5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.</p> <p>5.504.4.1 Adhesives, sealant and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:</p> <ol style="list-style-type: none"> Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (Chloroform, ethylene dichloride, methylenechloride, perchloroethylene, and trichloroethylene), except or aerosol products as specified in subsection 2, below. Aerosol adhesives, and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product's packaging, which do not weigh more than one pound and do not consist of more than 1/6 fluid ounces) shall comply with state wide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507. 	<p>1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.</p> <p>2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.</p> <p>http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF.</p> <p>TABLE 5.504.4.2 - SEALANT VOC LIMIT Less water and Less Exempt Compounds in grams per liter</p> <table border="1"> <thead> <tr> <th>SEALANTS</th> <th>CURRENT VOC LIMIT</th> </tr> </thead> <tbody> <tr><td>ARCHITECTURAL</td><td>250</td></tr> <tr><td>MARINE DECK</td><td>760</td></tr> <tr><td>NON-MEMBRANE ROOF</td><td>300</td></tr> <tr><td>ROADWAY</td><td>250</td></tr> <tr><td>SINGLE-PLY ROOF MEMBRANE</td><td>450</td></tr> <tr><td>OTHER</td><td>420</td></tr> </tbody> </table> <p>TABLE 5.504.4.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS GRAMS OF VOC PER LITER OF COATING, LESS WATER, LESS EXEMPT COMPOUNDS</p> <table border="1"> <thead> <tr> <th>COATING CATEGORY</th> <th>CURRENT VOC LIMIT</th> </tr> </thead> <tbody> <tr><td>FLAT COATINGS</td><td>50</td></tr> <tr><td>NON-FLAT HIGH GLOSS COATINGS</td><td>100</td></tr> <tr><td>SPECIALTY COATINGS</td><td>150</td></tr> <tr><td>ALUMINUM ROOF COATINGS</td><td>400</td></tr> <tr><td>BASEMENT SPECIALTY COATINGS</td><td>400</td></tr> <tr><td>BITUMINOUS ROOF COATING</td><td>350</td></tr> <tr><td>BITUMINOUS ROOF PRIMERS</td><td>50</td></tr> <tr><td>BOND BREAKERS</td><td>350</td></tr> <tr><td>CONCRETE CURING COMPOUNDS</td><td>350</td></tr> <tr><td>CONCRETE/MASONRY SEALERS</td><td>100</td></tr> <tr><td>DRIVEWAY SEALERS</td><td>50</td></tr> <tr><td>DRY FOG COATINGS</td><td>150</td></tr> <tr><td>FAUX FINISHING COATINGS</td><td>350</td></tr> <tr><td>FIRE RESISTIVE COATINGS</td><td>350</td></tr> <tr><td>FLOOR COATING</td><td>100</td></tr> <tr><td>FORM-RELEASE COMPOUNDS</td><td>250</td></tr> <tr><td>GRAPHIC ARTS COATINGS(INKS/PAINTS)</td><td>500</td></tr> <tr><td>HIGH TEMPERATURE COATINGS</td><td>420</td></tr> <tr><td>INDUSTRIAL MAINTENANCE COATINGS</td><td>150</td></tr> <tr><td>LOW SOLIDS COATINGS</td><td>250</td></tr> <tr><td>MAGNESITE CEMENT COATING</td><td>400</td></tr> <tr><td>MASTIC TEXTURE COATING</td><td>150</td></tr> <tr><td>METALLIC PIGMENTED COATING</td><td>500</td></tr> <tr><td>MULTI-COLOR COATING</td><td>250</td></tr> <tr><td>PETREMENT WASH PRIMERS</td><td>420</td></tr> <tr><td>PRIMERS, SEALERS, UNDERCOATERS</td><td>100</td></tr> <tr><td>REACTIVE PENETRATING SEALERS</td><td>350</td></tr> <tr><td>RECYCLED COATINGS</td><td>250</td></tr> <tr><td>ROOF COATINGS</td><td>50</td></tr> <tr><td>RUST PREVENTATIVE COATINGS</td><td>250</td></tr> <tr><td>SHELLACS</td><td>750</td></tr> <tr><td>SPRINKLE PANEL ADHESIVES</td><td>550</td></tr> <tr><td>OPAQUE</td><td>420</td></tr> <tr><td>SPECIALTY PRIMERS, SEALER UNDERCOATER</td><td>100</td></tr> <tr><td>STAINS</td><td>250</td></tr> <tr><td>STONE CONSOLIDANTS</td><td>450</td></tr> <tr><td>SWIMMING POOL COATINGS</td><td>140</td></tr> <tr><td>TRAFFIC MARKING COATINGS</td><td>300</td></tr> <tr><td>TUB & TILE FINISH COATING</td><td>420</td></tr> <tr><td>WATERPROOFING MEMBRANES</td><td>250</td></tr> <tr><td>WOOD COATINGS</td><td>275</td></tr> <tr><td>WOOD PRESERVATIVES</td><td>350</td></tr> <tr><td>ZINC-RICH PRIMERS</td><td>340</td></tr> </tbody> </table> <p>NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THE SE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.</p> <p>5.504.4.3 Paints and coatings: Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Non flat or Non Flat-High Gloss coating, based on its gloss, as defined in Sub sections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.</p> <p>5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PWIMIR limits for ROC in Section 94522(a)(3) and other require ments, including prohibitions on use of certain toxic compounds and/or zone depleting substances, in Sections 94522 (c)(2) and (a) (1) (2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.</p> <p>5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:</p> <ol style="list-style-type: none"> Manufacturer's product specification Field verification of non-steps product containers 	SEALANTS	CURRENT VOC LIMIT	ARCHITECTURAL	250	MARINE DECK	760	NON-MEMBRANE ROOF	300	ROADWAY	250	SINGLE-PLY ROOF MEMBRANE	450	OTHER	420	COATING CATEGORY	CURRENT VOC LIMIT	FLAT COATINGS	50	NON-FLAT HIGH GLOSS COATINGS	100	SPECIALTY COATINGS	150	ALUMINUM ROOF COATINGS	400	BASEMENT SPECIALTY COATINGS	400	BITUMINOUS ROOF COATING	350	BITUMINOUS ROOF PRIMERS	50	BOND BREAKERS	350	CONCRETE CURING COMPOUNDS	350	CONCRETE/MASONRY SEALERS	100	DRIVEWAY SEALERS	50	DRY FOG COATINGS	150	FAUX FINISHING COATINGS	350	FIRE RESISTIVE COATINGS	350	FLOOR COATING	100	FORM-RELEASE COMPOUNDS	250	GRAPHIC ARTS COATINGS(INKS/PAINTS)	500	HIGH TEMPERATURE COATINGS	420	INDUSTRIAL MAINTENANCE COATINGS	150	LOW SOLIDS COATINGS	250	MAGNESITE CEMENT COATING	400	MASTIC TEXTURE COATING	150	METALLIC PIGMENTED COATING	500	MULTI-COLOR COATING	250	PETREMENT WASH PRIMERS	420	PRIMERS, SEALERS, UNDERCOATERS	100	REACTIVE PENETRATING SEALERS	350	RECYCLED COATINGS	250	ROOF COATINGS	50	RUST PREVENTATIVE COATINGS	250	SHELLACS	750	SPRINKLE PANEL ADHESIVES	550	OPAQUE	420	SPECIALTY PRIMERS, SEALER UNDERCOATER	100	STAINS	250	STONE CONSOLIDANTS	450	SWIMMING POOL COATINGS	140	TRAFFIC MARKING COATINGS	300	TUB & TILE FINISH COATING	420	WATERPROOFING MEMBRANES	250	WOOD COATINGS	275	WOOD PRESERVATIVES	350	ZINC-RICH PRIMERS	340	<p>5.504.4.4 Carpet Systems. All carpet installed in the building interior shall meet at least one of the testing and product requirements:</p> <ol style="list-style-type: none"> Carpet and Rug Institute's Green Label Plus Program; Compliant with the VOC emission limits and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as CDPH Standard Method V.1), or Specification 01330). NEHA-S145 at the Gold level or higher; Scientific Certification Systems Sustainable Choice; or Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ2.2 dated July 2012 and listed in the CHPS High Performance Product Data base. <p>5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.</p> <p>5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.</p> <p>5.504.4.5 Composite wood products: Hard wood plywood, particle board and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.). Those materials not exempt under the ATCM must meet the specified emission limits as shown in Table 5.504.4.5.</p> <p>5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:</p> <ol style="list-style-type: none"> Product certifications and specifications. Chain of custody certifications. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.). Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 35 standards. Other methods acceptable to the enforcing agency. <p>TABLE 5.504.4.5 - FORMALDEHYDE LIMITS 1 MAXIMUM FORMALDEHYDE EMISSIONS IN HOURS PARTS PER MILLION</p> <table border="1"> <thead> <tr> <th>PRODUCT</th> <th>CURRENT LIMIT</th> </tr> </thead> <tbody> <tr><td>HARDWOOD PLYWOOD VENEER CORE</td><td>0.05</td></tr> <tr><td>HARDWOOD PLYWOOD COMPOSITE CORE</td><td>0.05</td></tr> <tr><td>PARTICLE BOARD</td><td>0.09</td></tr> <tr><td>MEDIUM DENSITY FIBERBOARD</td><td>0.11</td></tr> <tr><td>THIN MEDIUM DENSITY FIBER BOARD 2</td><td>0.13</td></tr> </tbody> </table> <p>1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.</p> <p>2. THIN MEDIUM DENSITY FIBER BOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8MM).</p> <p>5.504.4.6 Resilient flooring systems. For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:</p> <ol style="list-style-type: none"> Certified under the Resilient Floor Covering Institute (RFCI) Floor Score program; Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010; Compliant with the California Collaborative for High Performance Schools (CA-CHPS) Criteria Interpretation for EQ 7.0 and EQ 7.1, (formally EQ 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or Product certified under UL GREENGUARD Gold (formerly the GreenGuard Children's & Schools Program). <p>5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.</p> <p>5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> An ASHRAE 10 to 15 efficiency filter shall be permitted for an HVAC unit meeting the 2013 California Energy Code having 60,000 btu/h or less capacity per fan coil, if the energy use of the air delivery system is 0.4W/ctm or less at design airflow. Existing mechanical equipment. <p>5.504.5.3.1 labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.</p> <p>5.504.7 Environmental tobacco smoke (ETS) control. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, which ever are more stringent. When ordinances, regulations or policies are not in place, post signage to in form building occupants of the prohibitions.</p> <p>SECTION 5.505 INDOOR MOISTURE CONTROL</p> <p>5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1203 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures not applicable to low rise residential occupancies, see Section 5.407.2 of this code.</p> <p>SECTION 5.506 INDOOR AIR QUALITY</p> <p>5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 12 (Requirements for Ventilation) of the 2010 California Energy Code, or the applicable local code, which ever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.</p> <p>5.504.2 CARBON DIOXIDE (CO2) MONITORING. For buildings or additions equipped with demand control ventilation, CO 2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the 2013 California Energy Code, Section 120(c)(4).</p> <p>SECTION 5.507 ENVIRONMENTAL COMFORT</p> <p>5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM90 and ASTM 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.</p> <p>Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.</p> <p>Exception: DSA-S5 For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.</p>	PRODUCT	CURRENT LIMIT	HARDWOOD PLYWOOD VENEER CORE	0.05	HARDWOOD PLYWOOD COMPOSITE CORE	0.05	PARTICLE BOARD	0.09	MEDIUM DENSITY FIBERBOARD	0.11	THIN MEDIUM DENSITY FIBER BOARD 2	0.13	<p>5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:</p> <ol style="list-style-type: none"> Within the 65 CNEL noise contour of an airport. <p>Exceptions:</p> <ol style="list-style-type: none"> Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone(AICLUZ) plan. Ldn or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element. <p>5.507.4.2 Performance Method. For buildings located as defined in Section 5.507.4.1, or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1hr) of 50dBA in occupied areas during any hour of operation.</p> <p>5.507.4.2.1 Site Features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.</p> <p>5.507.4.2.2 Documentation of Compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.</p> <p>5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.</p> <p>Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: http://www.tolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.</p> <p>CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS</p> <p>702 QUALIFICATIONS</p> <p>702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installation only under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:</p> <ol style="list-style-type: none"> State certified apprenticeship programs. Public utility training programs. Training programs sponsored by trade, labor or state wide energy consulting or verification organizations. Programs sponsored by manufacturing organizations. Other programs acceptable to the enforcing agency. <p>702.2 SPECIAL INSPECTION (HCD). When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:</p> <ol style="list-style-type: none"> Certification by a national or regional green building program or standard publisher. Certification by a state wide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors. Successful completion of a third party apprentice training programing the appropriate trade. Other programs acceptable to the enforcing agency. <p>Notes:</p> <ol style="list-style-type: none"> Special inspector shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS). <p>[BSJ] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.</p> <p>Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.</p> <p>703 VERIFICATIONS</p> <p>703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrates substantial conformance. When specific, documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.</p>
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Port of Stockton Canopy
 Fyffe Ave. at N Hooper St.
 Stockton, CA 95203

Drawn By CM
Job # 19006
Scale Noted

Revision	Schedule
#	Date Description
A	5/14/19 Issued for Bid



21320 N El Dorado St
 Stockton, CA 95204
 (209)-227-7646
 Lic# 76963

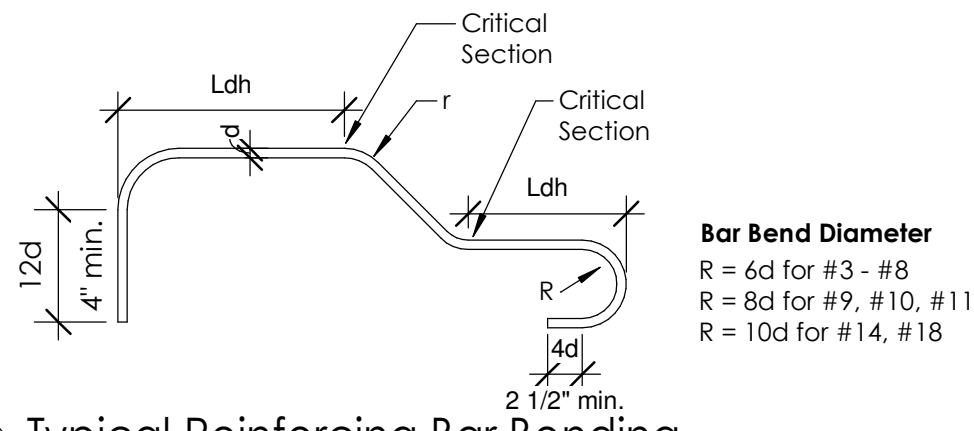
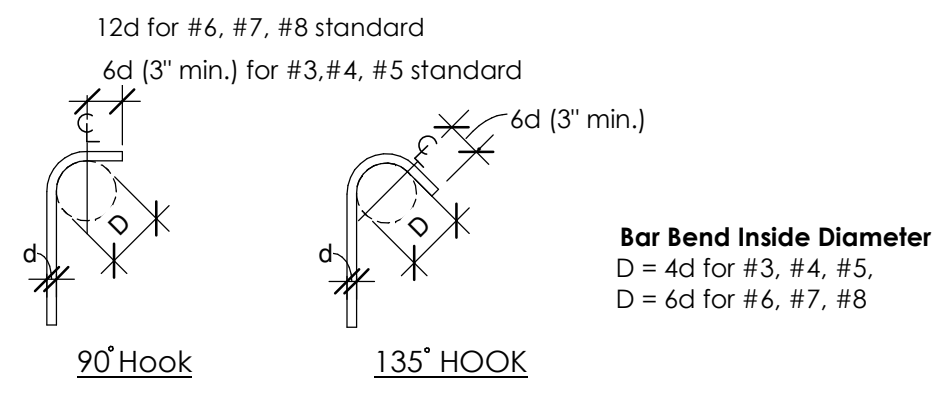


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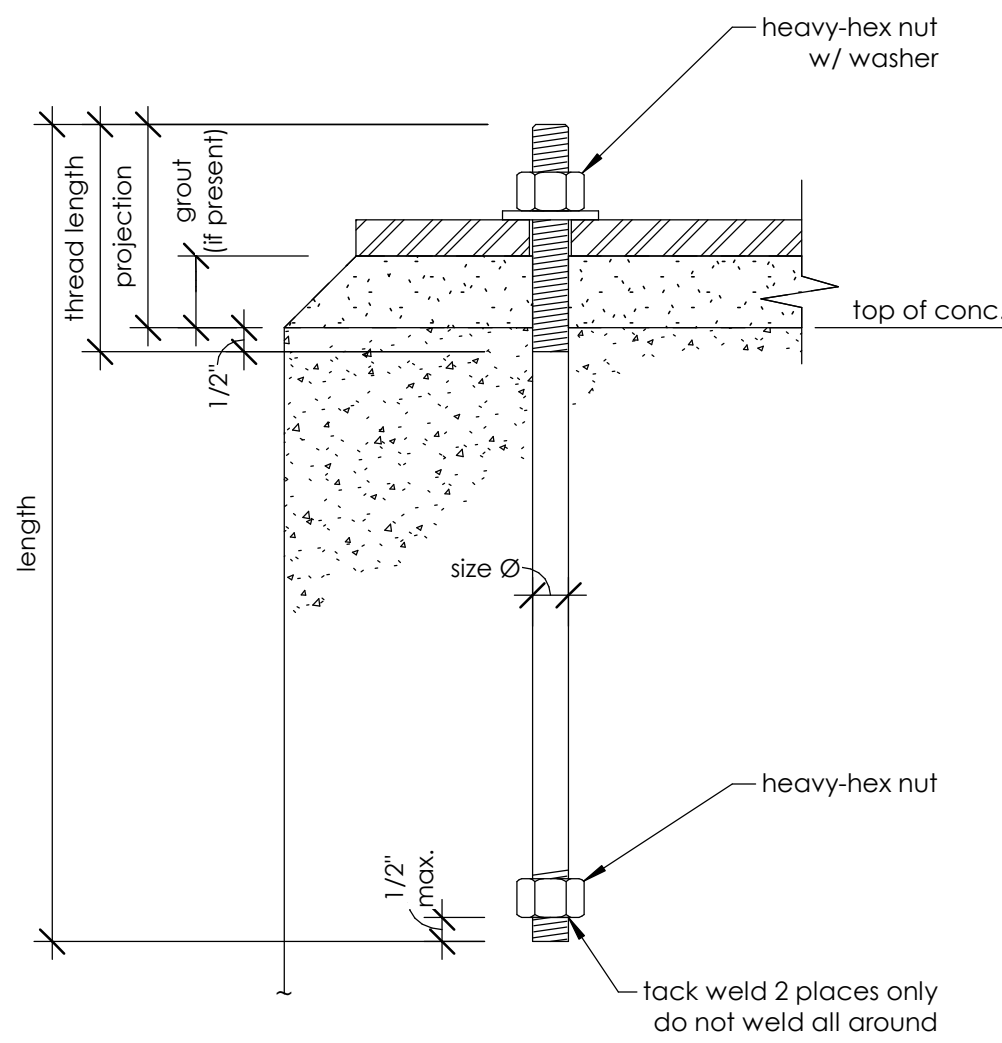
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Stirrup/Tie Hooks

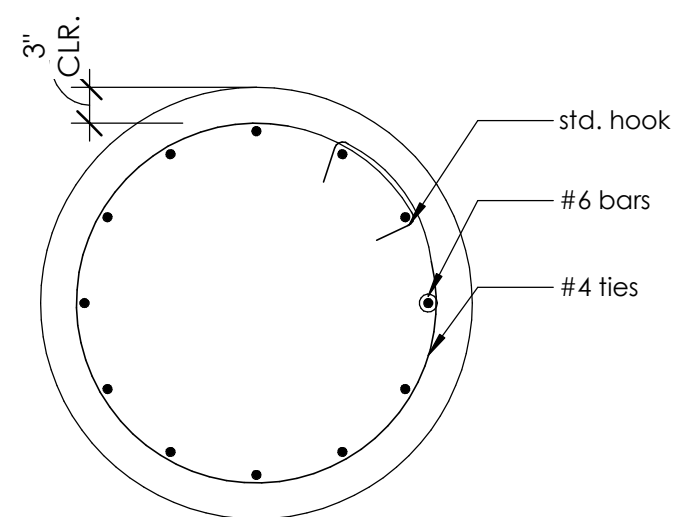


6 Typical Reinforcing Bar Bending
3/16" = 1'-0"

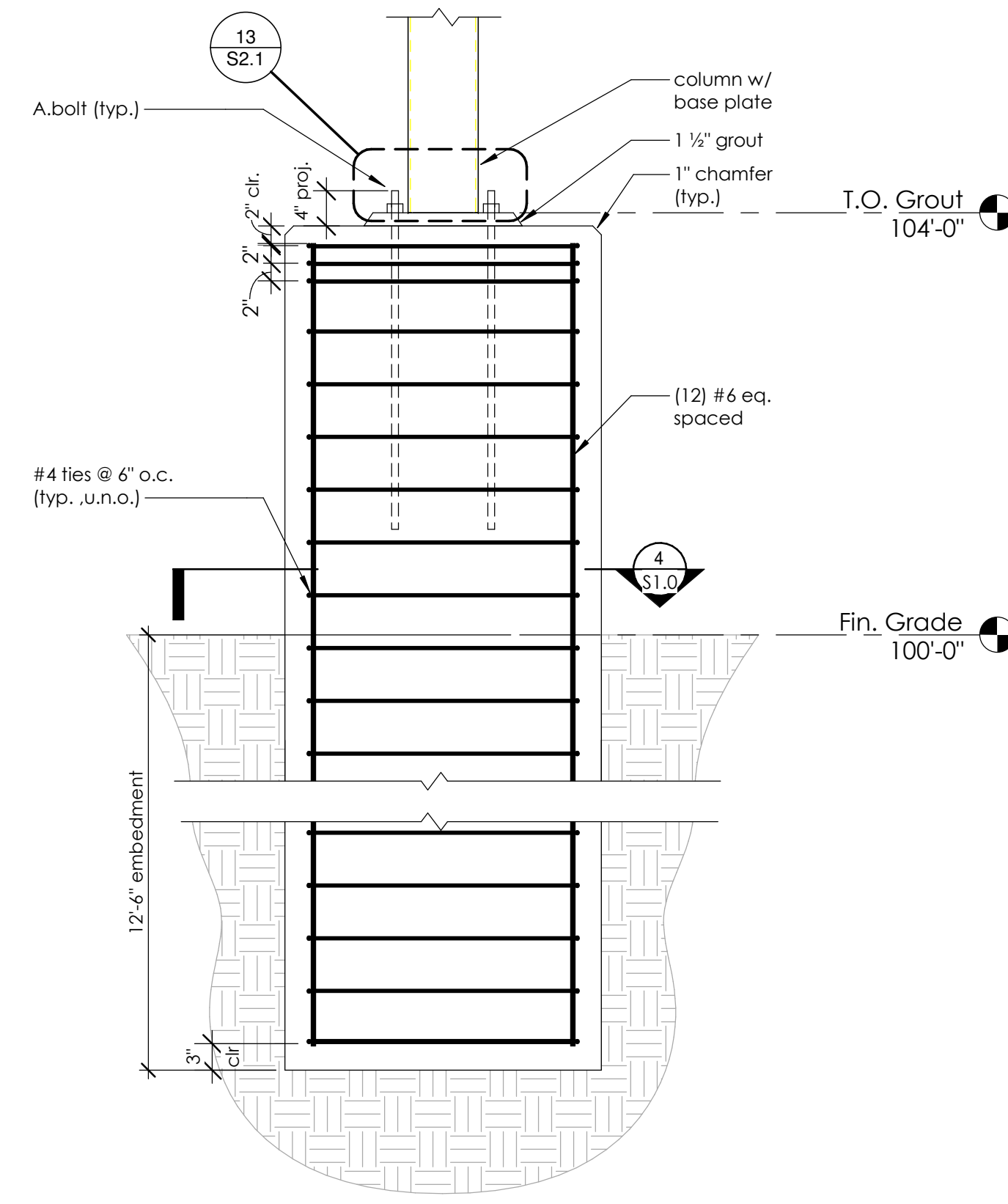


5 Type 1 Anchor Bolt
3" = 1'-0"

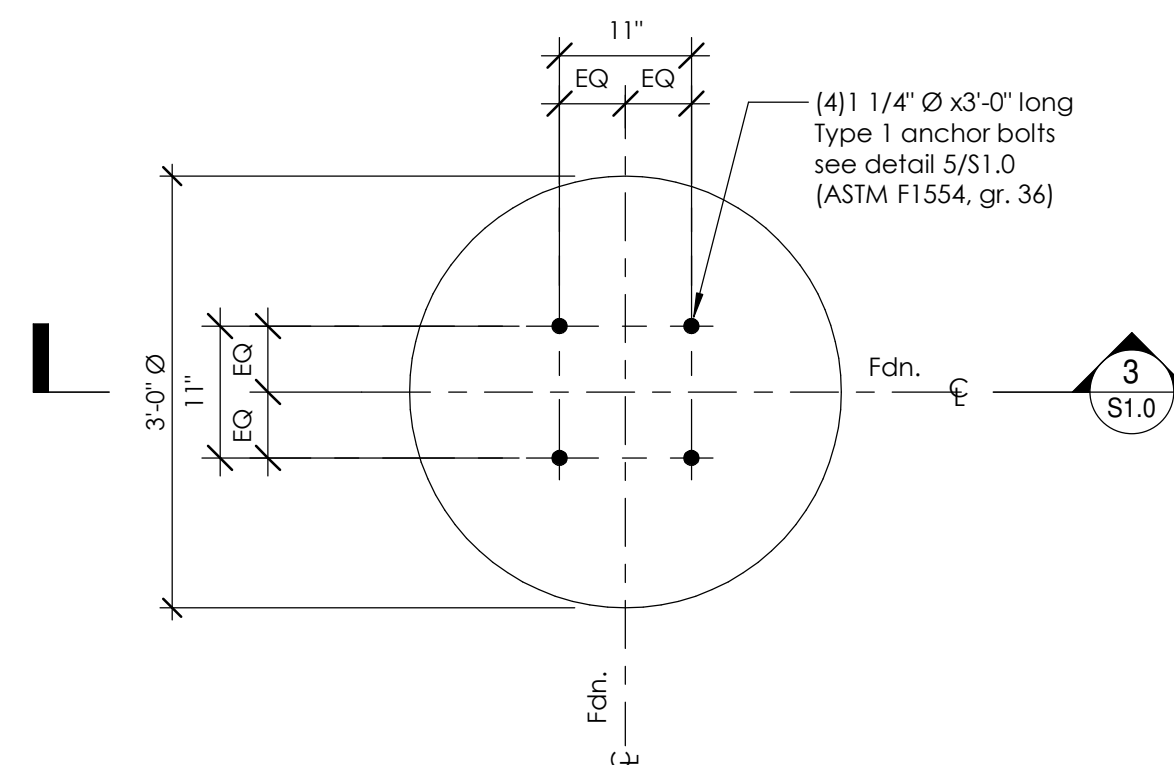
*A. bolt shown is a generic assembly, see fdn. plan for additional information



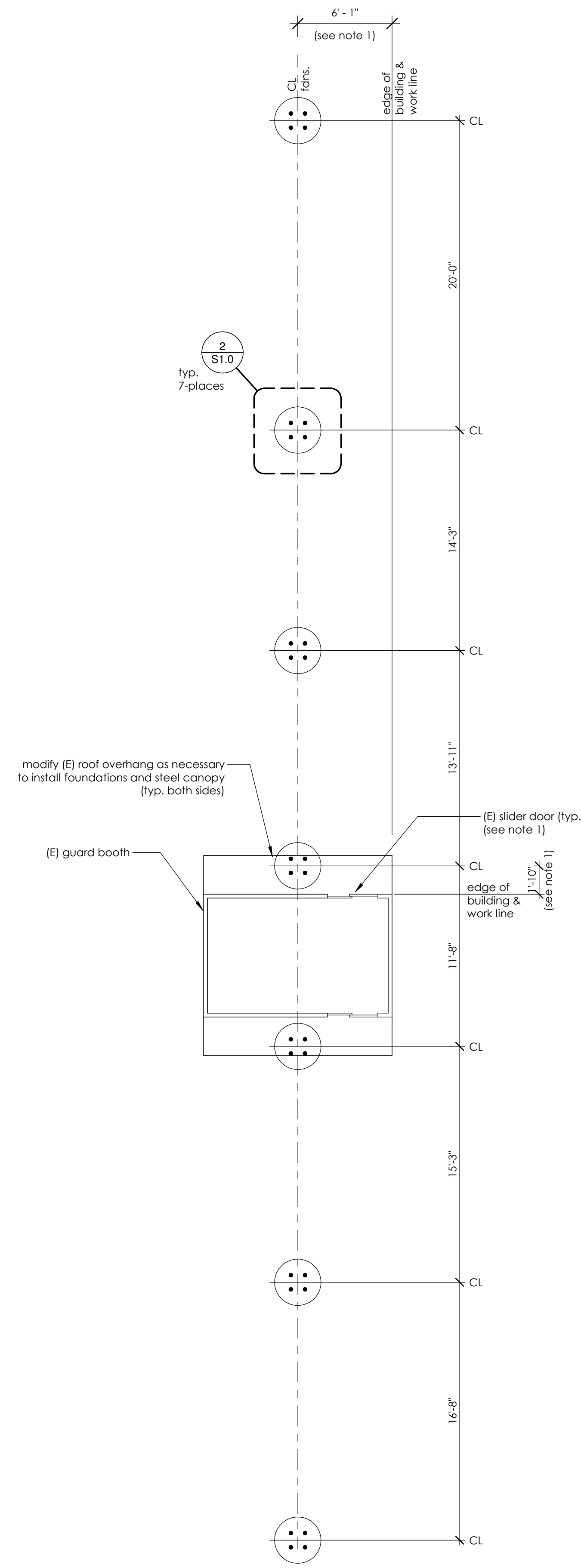
4 Foundation Section
3/4" = 1'-0"



3 Drilled Pier Foundation Elevation
3/4" = 1'-0"



2 Drilled Pier Foundation Plan
3/4" = 1'-0"



1 Foundation Plan
3/16" = 1'-0"

Notes:

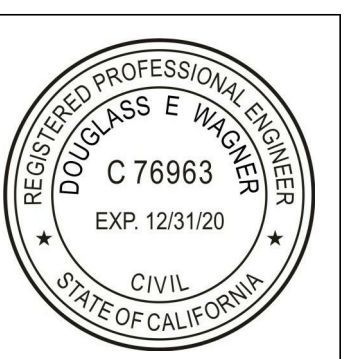
- Contractor shall verify that locations of foundations do not impede access to existing guard booth. Coordinate with Owner and Engineer if adjustments are needed.

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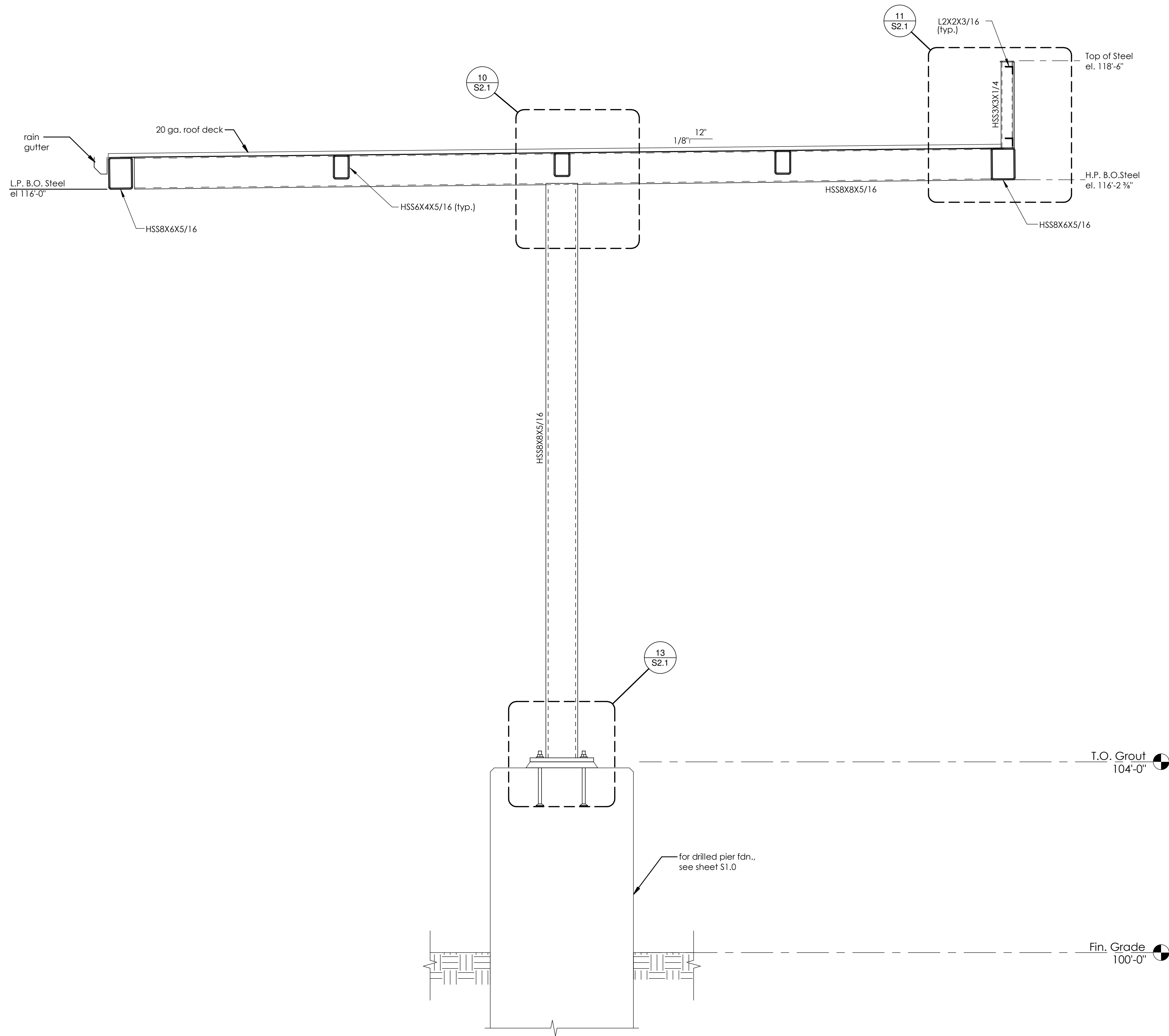
Revision Schedule	
#	Description
A	5/14/19 Issued for Bid



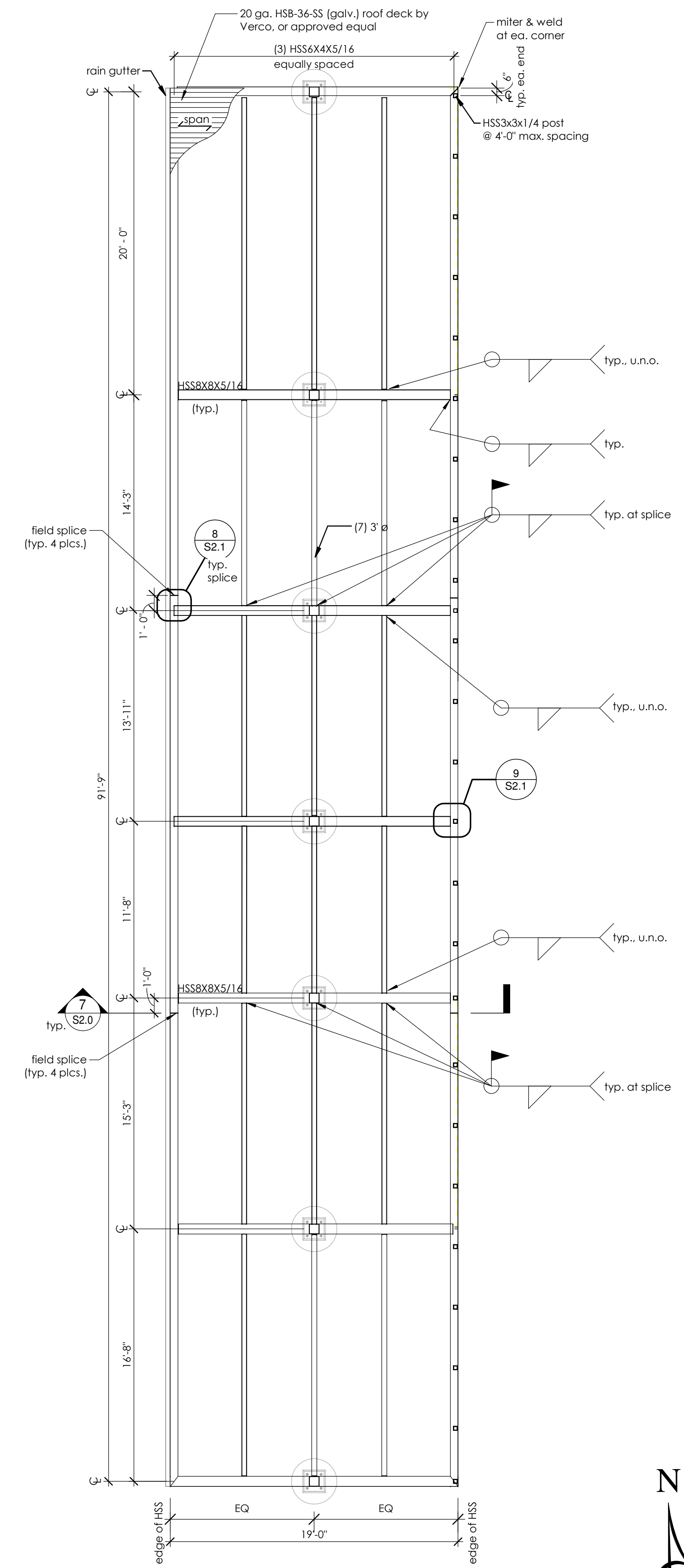
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7 Section
S2.0 3/4" = 1'-0"



6 Steel Framing Plan
S2.0 3/16" = 1'-0"

Notes:

1. Repair all areas affected by field welding. Use Rust-Oleum Industrial Choice 1600 System Galvanizing Coumpound Spray.

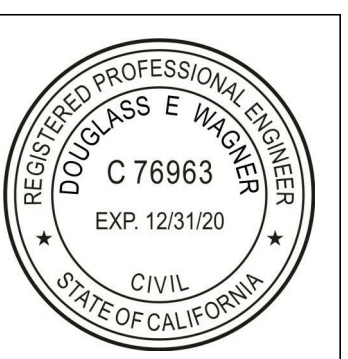
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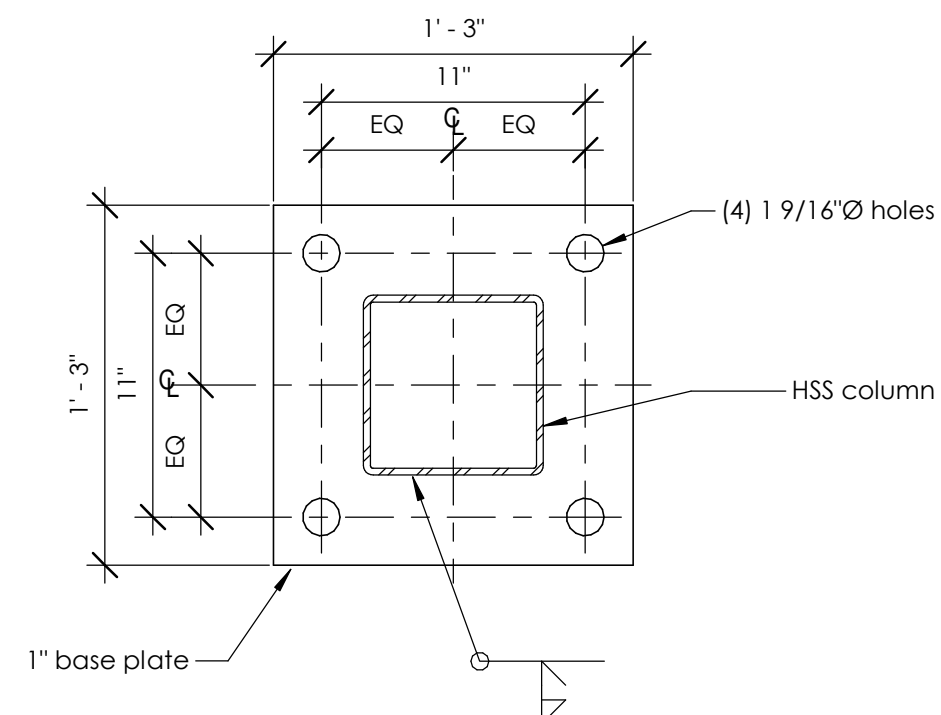
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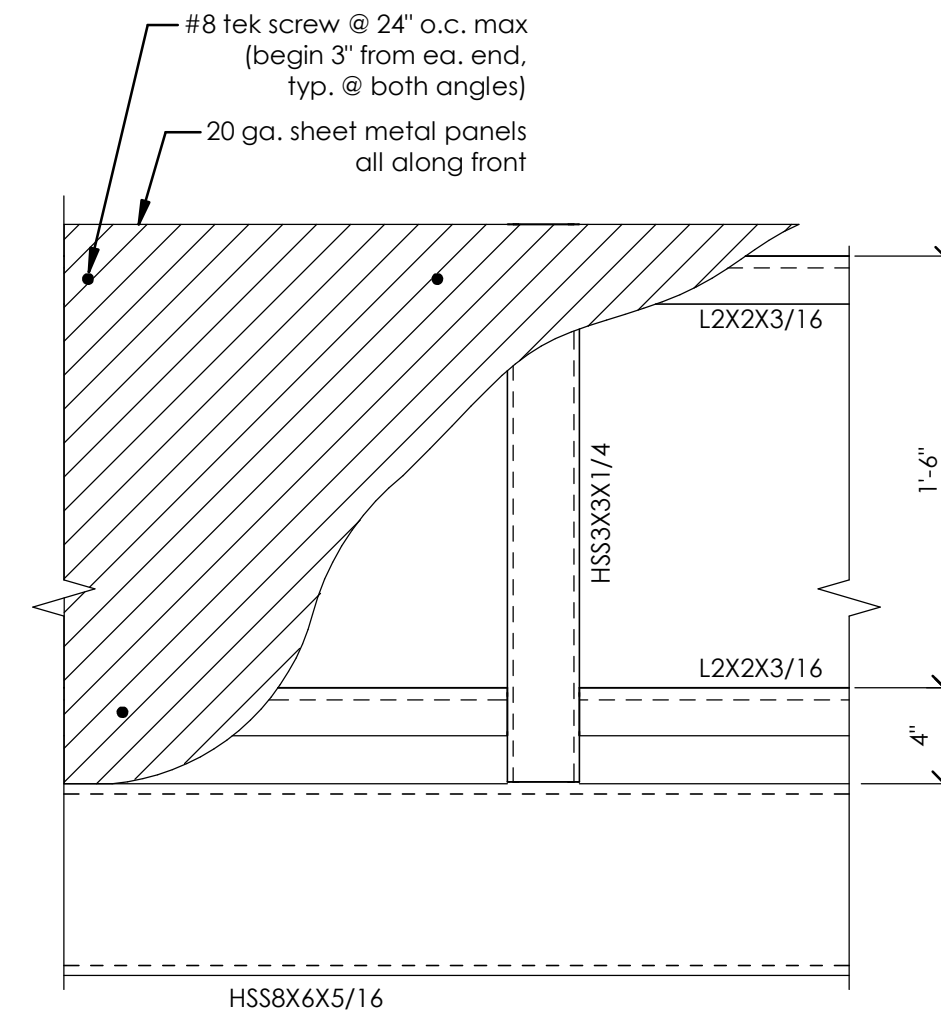
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Canopy Steel Framing

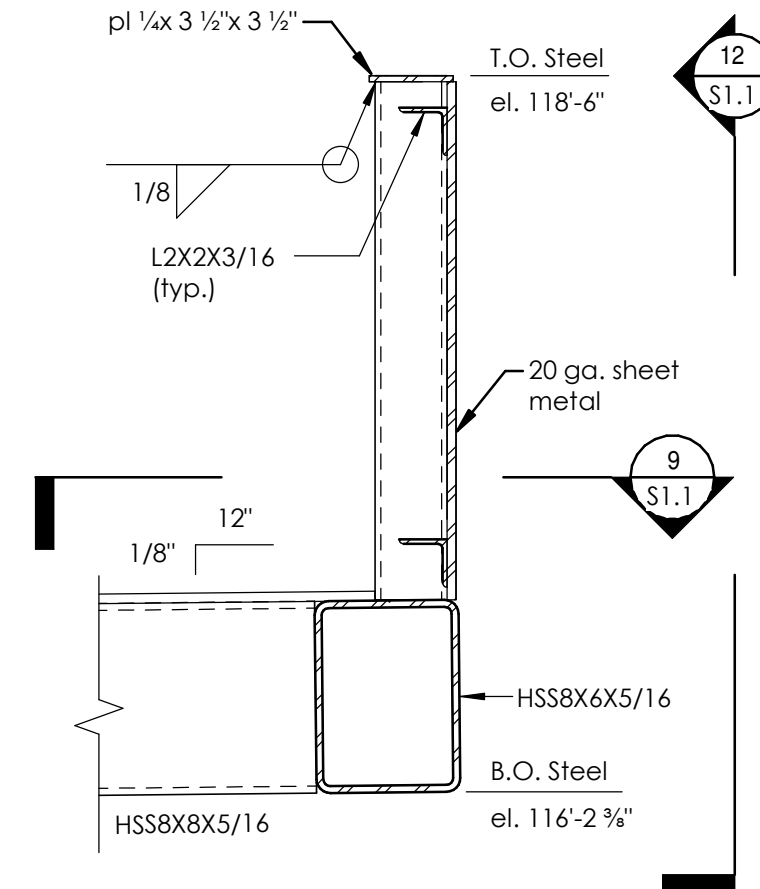
S2.0



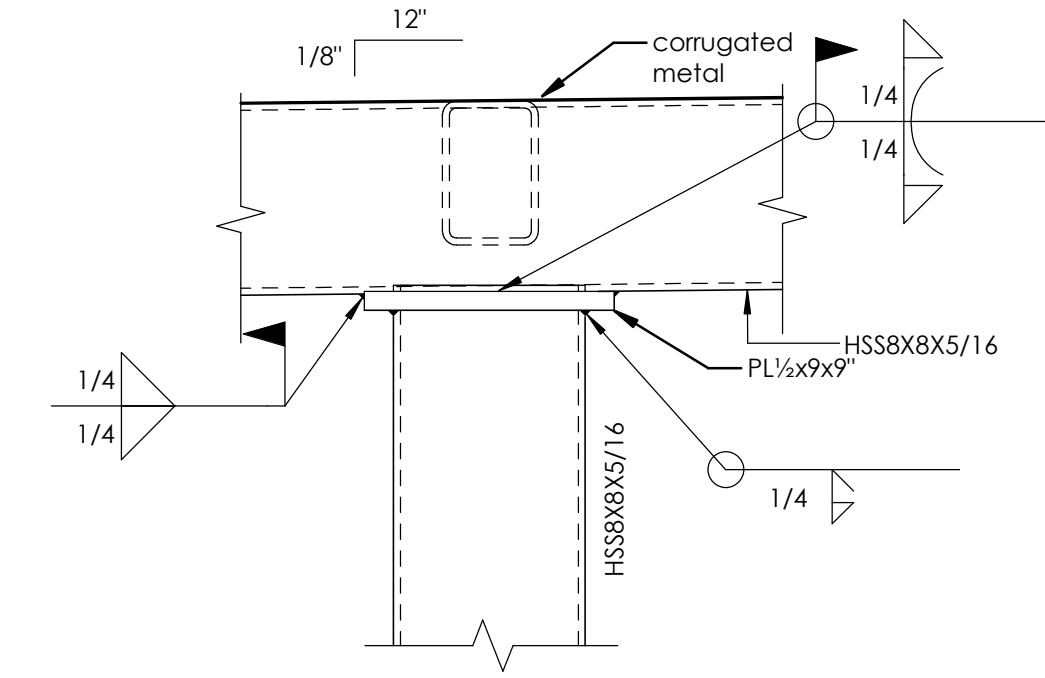
13 Base Plate
S2.1 1 1/2" = 1'-0"



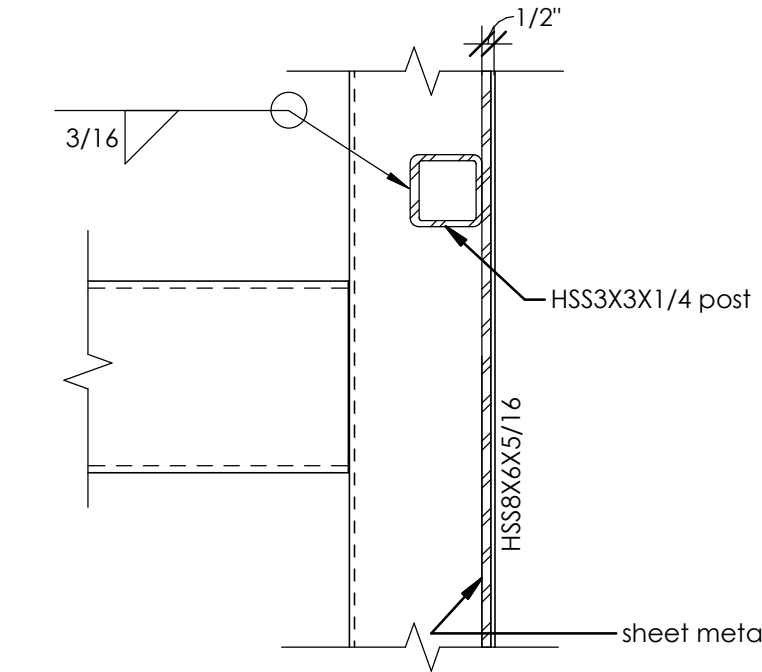
12 Front Elevation
S2.1 1 1/2" = 1'-0"



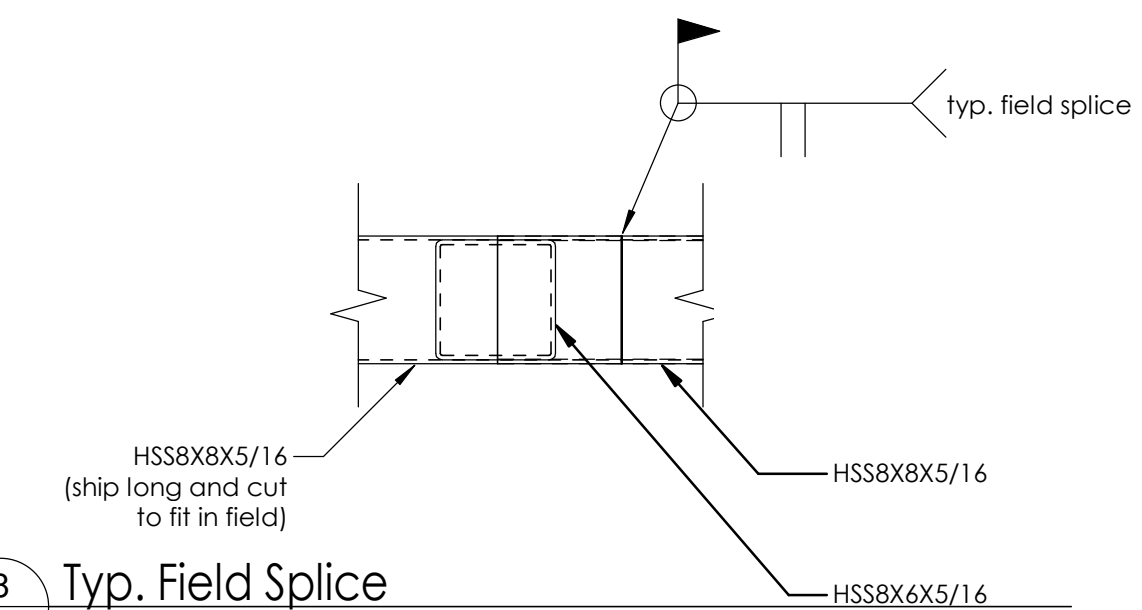
11 Post Side Elevation
S2.1 1 1/2" = 1'-0"



10 Typ. Column To Beam Connection
S2.1 1 1/2" = 1'-0"



9 Post Plan
S2.1 1 1/2" = 1'-0"



8 Typ. Field Splice
S2.1 1" = 1'-0"

Notes:
1. Repair all areas affected by field welding. Use Rust-Oleum Industrial Choice 1600 System Galvanizing Compound Spray.

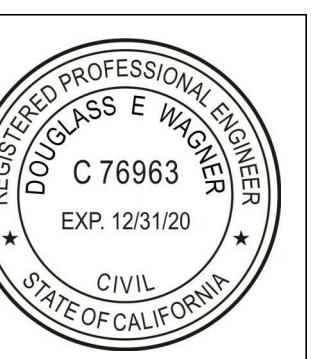
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Steel Details

S2.1