LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING

ADDENDUM NO. 1 - REBID

PUBLIC SAFETY BUILDING

LITTLE JOB #913-4675-01

DSA: A# 03-117673, File #19-C1

Compton Community College
1111 E. Artesia Blvd.
Compton, CA 90221

April 26, 2018

LITTLE
1300 Dove Street, Suite 100
Newport Beach, CA 92660

Architect- Rita S. Carter, C- 35431, expires 4/30/2019

1. PART 1 - GENERAL

1.1. The following revisions and/or clarifications shall be made to the Bidding Requirements and Contract Documents. Revise and amend the Documents for the above named project in accordance with this Addendum. The bid shall reflect these addendum changes and each bidder shall make reference in their bid to this addendum.

1.2. All Bidding Requirements and Contract Documents shall apply to this addendum as originally indicated in the applicable portions of the contract documents, unless otherwise modified by this addendum.

2. PART 2 - PROJECT MANUAL

2.1. CHANGES TO PROJECT MANUAL TABLE OF CONTENTS

2.1.1. Remove and replace current table of contents (attached).

2.1.1.1. The following sections are removed from the project manual: 01 11 00, 01 20 00, 01 25 00, 01 26 00, 01 31 13, 01 32 16, 01 33 00, 01 42 29 , 01 45 00, 01 60 00, 01 77 19. Refer to 'Division One Conversion Table' for District Specifications replacing deleted Division 1 sections. (attached)

2.1.1.2. The following sections are removed from the project manual: 03 35 10, 10 11 16.

2.1.1.3. The following section is added to the project manual: 26 32 13.

2.2. SPECIFICATIONS ISSUED

2.2.1. **Section 01 50 00, Temporary Facilities and Controls** - Delete **Section 01 50 00** originally issued, and replace with revised **Section 01 50 00** (attached).

2.2.2. **Section 03 35 10, Polished Concrete Finishing** - Delete **Section 03 35 10** originally issued, in Architectural Specifications.

2.2.3. **Section 04 22 00, Concrete Unit Masonry** - Delete **Section 04 22 00** originally issued, and replace with revised **Section 04 22 00** (attached).

2.2.4. **Section 08 71 00, Door Hardware** - Delete **Section 08 71 00** originally issued, and replace with revised **Section 08 71 00** (attached).

2.2.5. **Section 10 11 16, Markerboards and Tackboards** - Delete **Section 10 11 16** originally issued, in Architectural Specifications.

2.2.6. **Section 10 51 13, Metal Lockers** - Delete **Section 10 51 13** originally issued, and replace with revised **Section 10 51 13** (attached).

2.2.7. **Section 26 32 13, Engine Generators** - Add new **Section 26 32 13** (attached).

2.2.8. **Section 32 31 17, Ornamental Metal Fence and Gates** - Delete **Section 32 31 17** originally issued, and replace with revised **Section 32 31 17** (attached).

2.3. NARRATIVE CHANGES TO SPECIFICATIONS

2.3.1. **Section 05 12 00, Structural Steel Framing, Section 1.3** - Modify this Section as follows:

2.3.1.1. Add: '**Section 1.3.2.8: Steel Erection Plans'.**

2.3.2. **Section 08 62 01, Tubular Skylights** - Modify this Section as follows:

2.3.2.1. Revise '**2.1 PREFABRICATED SKYLIGHT- TYPE 1'** to '**2.1 PREFABRICATED SKYLIGHT- TYPE ST2/ST3**'.

2.3.2.2. Revise '**2.1.2 Series: …'** to '**2.1.2 Series: SolaMaster solatube 750 DSC/290 DS penetrating ceiling series.'**

2.3.2.3. Revise '**2.1.3.1 Nominal Size: …'** to '**21 inch (750 DSC)/14 inch (290 DS.)'.**

2.3.2.4. Revise '**2.1.3.3 Roof Flashing Base: Type F08, …'** to "**2.1.3.3 Roof Flashing Base: Type F8, …'.**

2.3.2.5. Delete paragraph '**2.1.3.6'** in its entirety**.**

2.3.2.6. Delete paragraph '**2.1.5.1.4'** in its entirety.

2.3.2.7. Delete paragraph '**2.1.5.1.5'** in its entirety.

2.3.2.8. Delete paragraph '**2.1.7.2'** in its entirety.

2.3.2.9. Delete paragraph '**2.1.7.3'** in its entirety.

2.3.3. Section 22 05 00, Common Work Results for Plumbing - Modify this Section as follows:

2.3.3.1. Add following paragraphs 220500-1.6.3.1:

1.6.3.1. Contractor shall coordinate and provide shop drawings of the following:

1.6.3.1.1. Plumbing equipment and piping systems show sections indicating routing and clearances between other trades.

1.6.3.1.2 Potable hot and cold water, non-potable cold water, potable hot water return, tempered water, sewer and vent, storm water and gas piping plans and sections (1/4" scale).

1.6.3.1.3 Dimension drawings for concrete pad, curb and equipment foundations (1/4" scale minimum) including bolt sizes and locations.

1.6.3.1.4 Steel fabrication drawings for equipment and pipe supports attachments (1/8" scale)

2.3.3.2. Add following paragraphs 220500-2.10:

2.10. CORROSION PROTECTION:

2.10.1. Prior to delivery to the job site, wrap buried steel pipe with corrosion protective wrap of pressure sensitive polyvinyl chloride or polyethylene tape applied after pipe has been thoroughly cleaned. Tape shall be nominal thickness of 20-mil consisting of one layer of 20-mil tape or two separate layers of 10-mil tape. Apply with suitable primer adhesive recommended by manufacturer.

2.10.2 Tightly apply tapes with 1/2-inch minimum uniform lap, free from wrinkles and voids. Use approved wrapping machines and experienced operators.

2.10.3 Tapes: "Chasekote" No. 775, Plicoflex No. 340-25, Polyker 922 and 923, "Scotchwrap" No. 51 or equal. Apply tape after pipe is cleaned as recommended by the tape manufacturer.

2.10.4 Cover filed joints and fittings by wrapping polyethylene or polyvinyl tape specified for wrapping piping, except use two layers of 10-mil thick tape. Wrap joints to provide minimum of six-inches over adjacent pipe covering.

Where fittings are wrapped, width of tape shall not exceed two inches. Apply adequate tension so tape will conform tightly to contours of fittings. Use putty tape insulation compounds such as “Scotchfil” or equal to fill voids and provide smooth even surface for application of tape wrap

2.10.5 Alternate: In lieu of tape wrap, factory applied plastic coating on steel pipe will be acceptable. Use tapes for field joints, fittings and valves same as specified above. Pipe Coating: “X-Tru Coat” (20-mil thick) as manufactured by Standard Pipe Protection, Republic, Pipe Line Service Corp., Scotchkote 202 (12-mil thick) as manufactured by 3M Company, or equal, with “X-Tru-Tape”, or equal, for joints and valves.

2.10.6 Test wrapped or coated pipe, fittings and field joints on job site, after assembly, with approved high voltage holiday detector Tinker and Rasor, or equal, with positive signaling device to indicate any flaws, holes or breaks in wrapping. Set peak voltage to 10,000-Volt. If Scotchkote 202 is used, set peak voltage to 1,000-Volt. Place piping on temporary blocks to allow testing to run along underside of pipe. Repair defects before covering. Conduct testing in presence of Architect.

2.10.7 No special precautions are required for copper or plastic piping below grade.

2.10.8 Special wrapping is required for contact with concrete such as thrust blocks or floor slabs. Piping shall be wrapped with minimum 8-mil thick polyethylene plastic sheets.

2.3.4. Section 26 32 13, Engine Generators - Modify this Section as follows:

1.1. SUMMARY

1.1.3. The contractor is required to fill the emergency generator fuel tank to ¾ full after testing and training is completed.

1.1.4 The contractor is responsible to install the annunciator panel for the emergency generator system in the Dispatch area. Exact location to be provided during construction.

3. PART 3 - DRAWINGS

3.1. CIVIL DRAWINGS ISSUED

3.1.1. The following Addendum (“AD”) Drawings, marked Delta 1, are issued.

3.1.1.1. Add new Drawings AD1-C1.1, AD1-C1.2.

3.2. LANDSCAPE DRAWINGS ISSUED

3.2.1. Narrative changes to Landscape Drawings are issued as follows:

3.2.1.1. Drawings **L-1 thru L-5** - Modify as follows:

3.2.1.1.1. Delete all work shown on the 'L' Drawings and protect the existing irrigation in place along the east and south side of the site. The contractor will still be responsible for repairing and replacing all damaged plant material with like size and type within the median on Campus Road, where the new left turn lane will be installed to access the new Public Safety Building Parking Lot. Provide 4" of compacted DG (California Gold or equal), weed control fabric and weed killer spray around the building in the areas shown on the C1.1.1 drawing issued in this addendum.

3.3. ARCHITECTURAL DRAWINGS ISSUED

3.3.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued.

3.3.1.1. Add new Drawings AD1-G01.1, AD1-A0.0.1, AD1-A1.1.1, AD1-A1.3.1, AD1-A1.3.2, AD1-A1.3.3, AD1-A2.1.1, AD1-A3.0.1, AD1-A4.1.1, AD1-A5.0.1, AD1-A6.0.1, AD1-A6.1.1, AD1-A6.2.1, AD1-A8.0.1, AD1-A9.0.1, AD1-A9.0.2, AD1-A9.1.1, AD1-A9.1.2, AD1-A9.1.5, AD1-A9.3.1, AD1-A9.3.2 .

3.3.2. The following sheet to be removed from Drawing Set: A9.1.4

3.4. STRUCTURAL DRAWINGS ISSUED

3.4.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued.

3.4.1.1. Add new Drawings AD1-S0.1, AD1-S0.2, AD1-S1.3, AD1-S2.1, AD1-S2.2, AD1-S5.2, AD1-S6.1, AD1-S6.2.

3.4.2. The following sheet to be removed from Drawing Set: S5.3.

3.5. MECHANICAL DRAWINGS ISSUED

3.5.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued.

3.5.1.1. Add new Drawings AD1-M0.0.2, AD1-M2.1.1, AD1-M2.2.1, AD1-M5.0.1, AD1-M5.0.2, AD1-M6.0.1, AD1-M6.0.2.

3.6. PLUMBING DRAWINGS ISSUED

3.6.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued.

3.6.1.1. Add new Drawings AD1-P0.0.1, AD1-P0.0.2, AD1-P2.1.1, AD1-P4.0.1, AD1-P5.0.1.

3.7. ELECTRICAL DRAWINGS ISSUED

3.7.1. The following Addendum ("AD") Drawings, marked Delta 1, are issued.

3.7.1.1. Add new Drawings AD1-E0.0.1, AD1-E0.0.2, AD1-E0.0.3, AD1-E0.0.4, AD1-

E1.1.0, AD1-E1.1.1, AD1-E2.1.1, AD1-E2.1.2, AD1-E2.1.3, AD1-E3.1.1.

END OF ADDENDUM #1 - REBID

Enclosures:

New Project Manual Documents Issued:

a) Division One Conversion Table
b) Table of Contents 00 01 03
c) Section 01 50 00
d) Section 04 22 00
e) Section 08 71 00
f) Section 10 51 13
g) Section 26 32 13
h) Section 32 31 17

3) Revised Drawing Sheets Issued:

a) AD1-G0.1
b) AD1-C1.1
c) AD1-C1.2
d) AD1-A0.0.1
e) AD1-A1.1.1
f) AD1-A1.3.1
g) AD1-A1.3.2
h) AD1-A1.3.3
i) AD1-A2.1.1
j) AD1-A3.0.1
k) AD1-A4.1.1
l) AD1-A5.0.1
m) AD1-A6.0.1
n) AD1-A6.1.1
o) AD1-A6.2.1
p) AD1-A8.0.1
q) AD1-A9.0.1
r) AD1-A9.0.2
s) AD1-A9.1.1
t) AD1-A9.1.2
u) AD1-A9.1.5
v) AD1-A9.3.1
w) AD1-A9.3.2
x) AD1-S0.1
y) AD1-S0.2
z) AD1-S1.3
aa) AD1-S2.1
bb) AD1-S2.2
cc) AD1-S5.2
dd) AD1-S6.1
ee) AD1-S6.2
ff) AD1-M0.0.2
gg) AD1-M2.1.1
hh) AD1-M2.2.1
ii) AD1-M5.0.1
jj) AD1-M5.0.2
kk) AD1-M6.0.1
ll) AD1-M6.0.2

mm) AD1-P0.0.1
nn) AD1-P0.02
oo) AD1-P2.1.1
pp) AD1-P4.0.1
qq) AD1-P5.01
rr) AD1-E0.0.1
ss) AD1-E0.0.2
tt) AD1-E0.0.3
uu) AD1-E0.0.4
vv) AD1-E1.1.0
ww) AD1-E1.1.1
xx) AD1-E2.1.1
yy) AD1-E2.1.2
zz) AD1-E2.1.3
aaa) AD1-E3.1.1

DIVISION ONE CONVERSION TABLE

DISTRICT'S DIVISION ONE		**ARCHITECT'S DIVISION ONE***	
01 01 00	Summary of Work	01 11 00	Summary of Work
01 21 00	Allowances		
01 23 00	Alternates		
01 25 00	Contract Modification Procedures	01 26 00	Contract Modification Procedures
01 29 00	Payment Procedures	01 20 00	Price and Payment Procedures
01 30 40	Post Bid Interview		
01 30 50	Construction Procedures Manual		
01 31 00	Project Coordination	01 31 13	Project Coordination
01 32 00	Acceleration of Work		
01 33 00	Submittal Procedures	01 33 00	Submittal Procedures
01 35 10	Alteration Project Procedures		
		01 35 93	Off-Site Improvement Procedures
01 42 00	References	01 42 29	Reference Standards
01 43 80	Work Plan and Milestone Schedule	01 32 16	Construction Progress Schedule
01 45 00	Quality Control	01 45 00	Quality Control
		01 45 29	Testing Laboratory Services
01 50 00**	Temporary Facilities and Controls	01 50 00**	Temporary Facilities and Controls
01 62 00	Product Options	01 25 00	Product Options
01 63 00	Product Substitution Procedures	01 60 00	Product Requirements
01 70 00	Cleaning	01 77 19, 1.4	Closeout Requirements
01 72 00**	Field Engineering	01 71 23**	Field Engineering
01 73 20	Cutting Patching		
01 74 00	Warranties and Guarantees	01 77 19, 1.8	Closeout Requirements
		01 74 19	Construction Waste Management and Disposal
01 77 00	Closeout Procedures	01 77 19	Closeout Requirements
01 78 20	Project Records Documents	01 77 19, 1.6	Closeout Requirements
01 78 50	Operating and Maintenance Data	01 77 19, 1.7	Closeout Requirements
01 81 00	Commissioning		

*Architect's Division One sections provided for "cross-reference" to the District's Division One sections, as applicable. Reference to a deleted Division One section throughout Architect's Project Manual should be referenced to the corresponding District Standard Division One section.

**Contractor subject to both District and Architect sections. If there is conflict, they are subject to the most stringent requirements.

TABLE OF CONTENTS

GENERAL DOCUMENTS

END OF TABLE OF CONTENTS

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

1. PART 1 - GENERAL

1.1. SECTION INCLUDES

1.1.1. Temporary Utilities: Electricity, lighting, telephone service, and sanitary facilities.

1.1.2. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and related operational requirements.

1.1.3. Construction Facilities: Access, parking, and progress cleaning.

1.2. TEMPORARY ELECTRICITY

1.2.1. Connect to existing power service. Power consumption shall not disrupt Owner's need for continuous service. Coordinate location of connection with owner.

1.2.2. Owner will not pay cost of energy used. Exercise measures to conserve energy.

1.2.3. Provide all required disconnects, overcurrent protection devices, branch circuits, power cords, and outlets as required for the Work.

1.2.4. Where approved by Architect, permanent convenience outlets may be used during construction.

1.2.5. Connect to existing power service unless specified otherwise. Power consumption shall not disrupt Owner's need for continuous service. Coordinate location of connection with Owner.

1.2.6. Pay cost of all temporary electricity, including connection costs from point of connection designated by serving utility.

1.2.7. Provide all required disconnects, overcurrent protection devices, branch circuits, power cords, and outlets as required for the Work.

1.2.8. Permanent convenience receptacles within area of work may not be utilized during construction.

1.3. TEMPORARY LIGHTING

1.3.1. Utilize existing fixtures where feasible or connect temporary lighting to existing power service. Power consumption shall not disrupt Owner's need for continuous service. Coordinate location of connection with owner.

1.3.2. Owner will not pay cost of energy used. Exercise measures to conserve energy.

1.3.3. Provide all required disconnects, overcurrent protection devices, branch circuits, power cords, and outlets as required for the Work.

1.3.4. Where approved by Architect, permanent convenience outlets may be used during construction.

1.3.5. Provide and maintain adequate lighting for construction operations.

1.3.6. Provide adequate lighting for security of construction operations and storage areas. .

1.3.7. Provide all lighting required for safety and security of paths and areas affected by construction, including pedestrian walkways.

1.3.8. Maintain lighting and provide routine repairs.

1.3.9. Provide and maintain, at all times, temporary lighting and exit light/path devices in corridor areas as required by applicable codes.

1.3.10. Existing permanent lighting fixtures may be utilized during construction, supplemented by temporary lighting as required.

1.4. TEMPORARY HEAT AND VENTILATION

1.4.1. Provide temporary heating, ventilating and air conditioning (HVAC) systems as necessary for the drying out of the building, the proper installation of Work and materials, and the protection of Work and materials against injury from condensation, dampness and cold. Where necessary to comply with requirements of this Section, provide ducted ventilation system.

1.4.2. Ventilate enclosed areas to prevent accumulation of dust, fumes, vapors, or gases. Where necessary to comply with requirements of this Section, provide ducted ventilation system.

1.4.2.1. Utilize equipment as required to exhaust noxious fumes directly to the outside of the building at an approved location.

1.4.2.2. Locate ventilation discharge point at an approved location, away from walkways, HVAC intakes, windows of occupied areas, and other similar locations.

1.4.2.3. No internal combustion engines will be allowed within the building or within 50 feet of the building without prior written authorization from the Owner.

1.4.3. Use of permanent equipment for temporary HVAC is prohibited without prior approval by Architect. Where prior approval is given, Contractor shall be responsible for cost of all energy used, filter replacement, and other operational criteria.

1.4.4. Maintain temperatures as required by occupational safety regulations.

1.5. TELEPHONE/FAX/COPY/DATA SERVICE

1.5.1. Provide portable phone, pager, or similar device for use by Superintendent when away from field office.

1.5.2. Provide, maintain and pay for xerographic copy machine, with 11 x 17 copy capability, able to scan up to 300 dpi to PDF format, with email export capability, located in Contractors field office.

1.5.2.1. Provide, maintain and pay for xerographic copy machine, with 11 x 17 copy capability, able to scan up to 300 dpi to PDF format, with email export capability, located in Inspectors field office.

1.5.3. Provide, maintain and pay for internet data service to Contractor's field office and to Owners/Inspectors office.

1.5.3.1. Provide separate internet service line for inspector's office. Service shall be high-speed cable. DSL is acceptable if no cable service is available.

1.5.3.2. Coordinate with Owner and Project Inspector on all required connection protocols, including security. Modify service as required to comply with Owner requests. Provide data jack type and location as required by Owner.

1.5.3.3. Data service shall be in place prior to start of construction.

1.6. TEMPORARY WATER SERVICE

1.6.1. Provide and maintain connection to existing water service.

1.6.2. Owner will not pay cost of water used. Exercise measures to conserve water.

1.6.3. The Contractor shall provide, maintain, and pay for all temporary potable water piping as required to implement the work. Provide temporary potable water service in compliance with all applicable regulations. Coordinate location, including point of connection, with Architect.

1.6.4. The Contractor shall provide, maintain, and pay for suitable water source for construction operations, including cost of connection, temporary meters, distribution to point of use, and associated components. Provide temporary potable water service in compliance with all applicable regulations.

1.6.5. Provide non-potable water source for dust control and other construction operations as required by local jurisdictional authority regulations. Do not apply to any areas used by students or staff without Architects prior approval.

1.7. TEMPORARY SANITARY FACILITIES

1.7.1. Provide, maintain, and pay for all temporary toilet facilities as required to implement the work in compliance with all regulations, including *CAL* OSHA, and as specified.

1.7.1.1. Provide two toilet facilities at site, one each for male and female employees, or as required for all Contractor and subcontractor forces on each site, whichever is greater.

1.7.1.2. In addition, provide lockable toilet facility for Architect and Inspector of Record exclusive use.

1.7.1.3. Locate toilet facilities as directed by Architect. Relocate when required by Architect.

1.7.1.4. Maintain in a clean and sanitary condition at all times, with all required supplies.

1.7.2. Use of existing toilet facilities, or toilets constructed as a part of this Contract, is prohibited.

1.8. BARRIERS AND BARRICADES

1.8.1. Exterior

1.8.1.1. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1.8.1.1.1. When regulated by codes, such legal requirements for protection shall be considered as minimum requirements. Provide protective measures in excess of such minimum requirements as specified or required.

1.8.1.2. Provide barricades around excavations.

1.8.1.3. Provide protection for all plant life designated to remain.

1.8.1.3.1. Replace damaged plant life with approved equivalent.

1.8.1.3.2. Erect tree protection within 3 days of mobilization. Enclose trees designated to remain with 2 x 4 wood frame. Install frame minimum 6 feet from trunk diameter, all sides. Provide 4x4 post supports, minimum 3 feet high, embedded 3 feet, at 3 foot on center maximum. Wrap frame with snow type fencing, in bright iridescent color visible at night.

1.8.1.4. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

1.8.2. Interior

1.8.2.1. After beneficial occupancy, and where required to permit Owners on-going operations, provide barriers as specified.

1.8.2.1.1. Construct barriers as metal framed/fire-resistive gypsum board fire resistive corridor construction, with self-closing, latching door assembly. Provide temporary partition and door assembly fire resistivity rating equal to the assembly being replaced. Close joints and seal edges at intersections with existing surfaces.

1.8.2.1.2. Use of sheet plastic dust barriers in place of rated assemblies is prohibited.

1.8.2.2. Protect existing surfaces, equipment and furnishings from damage from construction operations and demolition. Where necessary, remove and store in separate area.

1.8.2.3. Where demolition or construction operations generate fine dust or air-borne particulates, provide fire retardant drop cloths, screening or other approved barriers to prevent dust intrusion into existing cabinet interiors, equipment, drawers, and similar conditions.

1.8.2.4. Provide contamination control mats at construction area access locations to prevent tracking of construction dust and dirt into Owner-occupied portion of building and elevator cars.

1.8.3. Paint surfaces exposed to view from Owner-occupied areas with approved water based paint and in color as selected by Owner.

1.9. FENCING

1.9.1. Prior to starting construction, provide chain link fence around perimeter of work under this contract, including storage areas and each individual building, at locations as directed by Architect so as to provide for complete segregation of construction and Owner operations. Submit detailed plan of fencing barriers, including gates, for review and approval by Architect and Owner. Show flow of construction traffic.

1.9.2. Erect chain link fence around entire perimeter of site [around perimeter of work areas as shown on drawings] within 3 days of mobilization. Submit detailed plan of fence, including gates, for review and approval by Architect and Owner. Show flow of construction traffic.

1.9.2.1. Provide **8** foot high fence, with top rail and bottom wire. Provide fabric with selvedge edge and line posts at maximum 9 feet on center.

1.9.2.2. Obtain Architect approval of embedment method at paving areas. Provide portable T-frame fencing panels with concrete base supports.

1.9.2.3. Provide chain link fencing fabric and supports free of sags, breaks, rust and distortion.

1.9.2.4. Following Owners beneficial occupancy of portions of project, erect chain link fence at locations as approved by Architect to provide for complete segregation of construction and Owner operations.

1.9.3. Provide gates affording access as required by fire department having jurisdictional authority.

1.9.4. Obtain and pay for required permits and inspections.

1.9.5. Remove construction fence and other related construction upon completion of Work, or sooner if so authorized or required to maintain Project progress.

1.10. WATER CONTROL

1.10.1. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

1.10.2. Protect site from puddling or running water. Provide water barriers as required to protect site and adjacent property from soil erosion and siltation.

1.11. PROTECTION OF INSTALLED WORK

1.11.1. Protect installed Work and provide special protection where specified in individual specification Sections.

1.11.2. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.

1.11.3. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

1.11.4. Provide and maintain all required dams, screens and collection systems necessary to prevent water used in interior demolition or construction operations from damaging adjacent areas.

1.11.5. Take all means required to prevent damage to project, including interior areas, resulting from inclement weather, water, wind or other environmental impacts. Provide temporary coverings or enclosures as required for all roof and wall penetrations. Where moisture from condensation, rain or high winds is forecast or present, Contractor shall take all means to eliminate or prevent danger to the Work and to adjacent property, including covering unprotected surfaces, making all openings weather tight, removing loose materials, tools or equipment from exposed locations and removing or securing scaffolding.

1.11.6. Provide, operate, and maintain pumping equipment required to remove water from the site, roof and interior flooded areas.

1.12. PARKING AND TRAFFIC CONTROL

1.12.1. Parking Criteria

1.12.1.1. Coordinate location and number of parking spaces to be made available for Contractors forces with Owner.

1.12.1.2. Do not permit parking on adjacent public streets.

1.12.1.3. Parking for workmen employed on the work may be provided on the site, when approved by the Owner, and to the extent that space for that purpose is available without interference with activities related to performance of the Work. Additional parking spaces required by the Contractor shall be secured at Contractors own expense.

1.12.2. Traffic Control

1.12.2.1. Traffic maintenance: Prior to start of work, determine the routing of construction vehicles, and the safeguards and procedures necessary to carry out the work. Obtain the Owner's approval of the traffic routes, and for any removal, temporary relocation and reinstallation of traffic control signal. In addition:

1.12.2.1.1. Be responsible for controlling construction traffic within and adjacent to the site.

1.12.2.1.2. Provide entrances, lifts and safeguards required or necessary to the progress of the work, and effectively control such traffic to provide minimum hazard to the work and all persons.

1.12.2.1.3. Route construction equipment, trucks, and similar vehicles via existing public streets to and from the site as approved by the governing authorities.

1.12.2.1.4. Where construction traffic occurs when Owner personnel*, students and staff* are on *site* campus, provide “spotter” responsible for leading construction traffic through *site* campus areas.

1.12.2.1.5. Obtain and pay for permits and inspections made necessary by use of public street, sidewalks, curbs, and paving. Post guarantees and bonds that may be required, and repair and make good any damages thereto acceptable to the authorities having jurisdiction.

1.12.2.1.6. Construct and maintain temporary walks for pedestrians. Keep streets adjacent to the site open to vehicular and pedestrian traffic.

1.12.2.1.7. Maintain constant access for police, fire and ambulance service.

1.12.2.1.8. Provide and maintain for proper control of traffic and safety of all concerned. Provide all necessary barricades, suitable and sufficient lights, reflectors, and danger signals.

1.12.2.1.9. Provide warning and closure signs, directional and detour signs, and whatever additional measures are necessary.

1.12.2.1.10. Indicate on a 24-hour basis restricted and dangerous conditions existing on or adjacent to the site. Illuminate barricades, danger signals, warning signs and obstructions at night. Keep warning lights burning from sunset until sunrise.

1.13. ACCESS ROADS

1.13.1. Coordinate location of access roads with Owner.

1.13.1.1. Contractor shall maintain temporary access roads as required to implement the work under this contract, including currently developed access road.

1.13.2. Provide and maintain access to fire lanes and fire hydrants at all times, free of obstructions. Coordinate location, locking device and dimension of gates with fire department having jurisdiction.

1.13.2.1. Provide trench plates as required to resist traffic loads, including fire department vehicles.

1.13.2.2. Where trench plates occur in pedestrian paths, install with transitions as required to comply with accessibility regulations.

1.13.2.3. Obtain Fire Marshal approval of all trench plate installations.

1.13.3. Do not permit delivery trucks to block, park or wait on public streets.

1.13.4. Coordinate site access through locked access gates with Owner. Keys to such gates will not be released to Contractor.

1.14. PROGRESS CLEANING

1.14.1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

1.14.2. Use cleaning materials which do not create hazards to health or property and which will not damage surfaces. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

1.14.3. Provide for all dumpsters, haul fees and dump charges as required. Do not use Owners collection facilities at any time.

1.14.4. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

1.14.5. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

1.14.6. Remove waste materials, debris, and rubbish from interior spaces daily and deposit in approved dumpster location. Remove from site daily. Dispose off-site in a legal manner.

1.14.7. Broom and vacuum clean interior areas prior to start of all surface finishing, including painting, and continue cleaning on an as-needed basis until painting and surface finishes are complete.

1.14.8. Schedule operations so that dust and other contaminants resulting from cleaning procedures or construction operations will not fall on wet or newly-coated surfaces.

1.14.9. Maintain all public streets free of dust, mud, and debris as required by jurisdictional authority. Maintain parking lots, drives and walkways free of dust, mud and debris when Owner takes beneficial occupancy of a portion of project prior to final completion.

1.14.10. Provide watering, dust palliative admixture or other methods as required to minimize dust generation during work. Where required by Owner, provide dust screen netting at property line temporary fencing.

1.15. FIELD OFFICES AND SHEDS

1.15.1. Provide and maintain a weatherproof and waterproof field office trailer, with lockable exterior access, for the Owner's, Architect's and Inspector's exclusive use, complying with the following criteria:

1.15.1.1. Provide an office area, a minimum area of 120 square feet, with sufficient dimension to accommodate furniture as specified below.

1.15.1.2. Provide adequate heating and cooling, including air conditioning.

1.15.1.3. Provide overhead fluorescent lighting.

1.15.1.4. Provide phone service for inspector's exclusive use as specified in Article 1.7 of this Section. Provide a data outlet.

1.15.1.5. Provide a 3x5 foot desk and a 3x6 foot lay out table, a 4 drawer file cabinet, and 2 office chairs. Provide plan rack suitable for 3 sets of 30 x 42 drawings in inspectors office.

1.15.2. Provide and maintain weatherproof and waterproof field office structures for Contractors use as necessary for the proper execution of the work. Use of Inspectors office for Contractors administration of the work is not permitted.

1.15.2.1. Provide phone/fax/copy machine service for Contractor's use as specified in Article 1.7 of this Section.

1.15.3. Locate offices and sheds as directed by Architect .

1.15.4. Architect, Owner, and their representatives shall have free access to the Owners and Inspectors office at all times.

1.15.5. All field offices shall remain the property of the Contractor and shall be removed from the site upon completion of the work.

1.15.6. Furnish, install and maintain tool cribs, sheds and storage units for the Contractors use as necessary for the proper execution of the work.

1.15.6.1. Provide all necessary barricades, warning devices and enclosures required to protect and direct visitors and staff around tool and equipment located in passageways and corridors.

1.15.6.2. Return all small tools and secure in locked compartments or cribs at close of work day.

1.15.6.3. Safe-off or lock all equipment and large tools. Disable from malicious or accidental start-up and operation.

1.15.6.4. Storage facilities shall provide protection of all products from damage due to environmental conditions, abuse, or theft.

1.15.7. Requirements of regulatory agencies: Comply with requirements of regulatory agencies having jurisdiction. Obtain and apply for permits required by governing authorities.

1.15.8. Job Conditions: Locate temporary structures to avoid interference with Work. Relocate temporary structures as required by job progress.

1.16. RECORD DOCUMENTS: JOB SET

1.16.1. Contractor shall maintain, on site, one copy of the following contract documents, defined as the Record Job Set. Stamp set "RECORD JOB SET - DO NOT REMOVE". During the course of construction, use this set to record actual revisions to the Work.

1.16.1.1. Construction Drawings.

1.16.1.2. Project Manual/Specifications.

1.16.1.3. Addenda.

1.16.1.4. Change Orders and other Modifications to the Contract.

1.16.1.5. Reviewed shop drawings, product data, and samples.

1.16.2. Store Record Job Set separate from documents used for construction.

1.16.3. Transfer information concurrent with construction progress. Record Job Sets will be reviewed at each Progress Meeting.

1.16.3.1. Where Record Job Sets do not reflect actual field conditions, the Architect may delay certification of Payment Request until sets are updated to the Architects satisfaction.

1.16.3.2. Record Job Set information reflecting engineering elevations, locations and alignments shall be prepared by competent staff experienced in surveying methods *a licensed Land Surveyor or Civil Engineer, licensed in California.*

1.16.3.3. Cost of Record Job Set preparation shall be paid by Contractor at no additional cost to Owner.

1.16.3.4. Cost of all civil engineering and surveying associated with Record Job Set preparation shall be paid by Contractor at no additional cost to Owner. *Other than the payment for services related to work of this contract, the Civil Engineer or Surveyor shall have no financial or business relationship with Contractor.*

1.16.4. Specifications: Legibly mark and record at each Part 2 Product section description of actual Products installed, including the following:

1.16.4.1. Manufacturer's name and product model and number.

1.16.4.2. Product substitutions or alternates utilized.

1.16.4.3. Changes made by Addenda and Modifications.

1.16.5. Recording Data: Legibly mark each item to record actual construction including:

1.16.5.1. Measured actual horizontal and vertical locations of underground utilities, sub-drains, services and appurtenances, to a tolerance of 2 inches plus/minus, referenced to permanent surface improvements. Include elevations of all water lines, utilities, sanitary and storm drain inverts and storm drain/sub-drain/canyon drain system outfalls.

1.16.5.2. Field changes of dimension and detail, including alignments, gutter slopes, slope bank locations, drainage structures, and related site improvements.

1.16.5.3. Earthwork Engineering Record Documents, consisting of actual field elevations of grading and earthwork, to a tolerance of 0.1 feet. The actual elevation of each elevation shown on drawings shall be recorded. In addition, provide actual elevations at 50 foot intervals along all finish grade contours as shown on drawings, including all grade breaks and the top and toe of all slopes.

1.16.5.3.1. Where actual field elevations exceed specified tolerances, correct field condition and re-survey prior to preparation of final Record Set.

1.16.5.3.2. Record actual elevation in a rectangular box directly above the elevation or contour shown on drawings, using red, permanent ink.

1.16.5.4. Measured locations of internal utilities, services, and appurtenances concealed in construction, to a tolerance of 1 inch plus/minus, referenced to visible and accessible features of the Work.

1.16.5.5. Field changes of major architectural features, such as door relocation, wall furring, field changes of dimension and detail, and material transitions.

1.16.5.6. Details not on original Contract Drawings.

1.17. REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

1.17.1. Remove temporary utilities, equipment, facilities, and materials, prior to Final Application for Payment.

1.17.2. Clean and repair damage caused by installation or use of temporary work.

1.17.3. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.18. SECURITY

1.18.1. Provide security and facilities as necessary to protect work and personnel from vandalism, unauthorized entry, theft, damage, or assault.

1.18.1.1. Security Service: Contractor shall provide licensed and bonded on-site security service, approved by Owner, at all times the work is not being prosecuted, including nights, inclement weather, holidays and weekends. Such security service shall be responsible for maintaining the premises in a secure condition at all times, and shall include roaming tours and inspection of all work under construction. Owner reserves right to require replacement of service for non-performance.

1.18.2. Within a 48 hour period, replace or repair, to specified condition *Architects satisfaction*, all surfaces or items damaged by graffiti during course of construction.

1.18.3. Where Owner has given approval to take fire detection system off-line, return system to active status at completion of work or end of each work period.

1.18.3.1. Fire Safety During Construction: Comply with provisions of Article 87, California Fire Code, CCR, [Uniform Fire Code] including, but not limited to, access roads, fire extinguisher and fire watch regulations.

1.18.3.2. Where security or fire detection systems are disabled for any reason, including where Owner has given approval for such system shut-down, provide fire watch or security guard service as directed by Owner and at no additional cost to the Owner.

1.18.4. *After beneficial occupancy by Owner,* all Contractor staff, subcontractors and suppliers shall notify Owners administrative staff when on site, and sign in and out with staff as directed by Owner. Notify staff when work is completed or shut-down for that work period.

1.18.4.1. Wear badges with photo identification as directed by Owner at all times. In addition, wear orange safety vests or other approved shirt design at all times.

1.18.4.2. Do not enter patient/student or staff rooms at any time without approval of staff.

1.18.4.3. All Contractor's staff, subcontractors and suppliers shall avoid interaction, contact and communication with patients/students. Under no circumstances shall Contractors staff, subcontractors and suppliers be in contact with patients/students without Owner staff present.

1.18.4.4. All work, including work of subcontractors, shall be conducted under the observation of the Contractor's supervisory personnel complying with fingerprint regulations established by the Document: Special Conditions.

1.18.5. Remove all radio or other music generating devices operated sufficiently loud so as to be objectionable, as determined solely by the Owner, to neighbors, or Owner's operations.

1.18.6. Dogs and other pets are not permitted on site *campus* without prior approval by Owner.

1.18.7. No smoking or use of any tobacco products is permitted on Owner's property.

1.18.8. All Contractor staff, subcontractors and suppliers shall present a professional and civil manner to staff, visitors, neighbors *and students*. Use of language or behavior judged offensive, obscene or suggestive by the Owner is not permitted. Clothing that is suggestive, is marked with images that suggest or promote drug, alcohol or tobacco use, or represents behavior judged offensive, obscene or suggestive by the Owner is not permitted. Immediately remove from site *campus* any Contractor personnel exhibiting such behavior.

1.18.9. Persons under the influence of or engaged in the use of drugs or controlled substances, as defined by Schedules I through V of Section 202 of the Controlled Substances Act and regulations defined at 21 CFR 1308 - 1308.15, shall be immediately removed from site *campus*.

1.18.10. Use of alcoholic beverages is prohibited on site *campus*. Persons under the influence of or engaged in the use of alcoholic beverages shall be immediately removed from site *campus*.

1.19. PROJECT IDENTIFICATION AND SIGNAGE

1.19.1. Provide 4 x 8 sign, constructed of marine grade plywood, mounted on wood frame construction with concrete footings. Provide professional sign painter quality painted design and message as directed by Architect.

1.19.2. Message will include project identification, name of client, architect, and contractor, and miscellaneous data *as shown on drawings*.

1.19.3. Install sign at location directed by Architect. Remove at end of project and deliver to Owner.

1.19.4. No other signs are permitted except those required by law.

1.20. DOCUMENTATION OF EXISTING CONDITIONS

1.20.1. Prior to beginning any alterations, including grading, wall demolition or fixture removal, prepare a record of existing improvements affected by the work of this contract, including but not limited to the following:

1.20.1.1. Off-site street and frontage improvements, identifying all evidence of existing settlement, cracking, and other signs of damage, distress or failure.

1.20.1.2. Condition of adjacent properties, including fencing, retaining walls, pools, paving, and structures. Clearly identify all evidence of existing settlement, cracking, alignment and other signs of damage, distress or failure.

1.20.1.3. Condition of landscaping, including canopy overhang, shrubbery and grass/groundcover. Clearly identify all evidence of existing trunk damage, grass compaction, crushed and broken shrubs and other signs of distress or failure.

1.20.2. Format

1.20.2.1. Prepare record document using digital color video, recorded on DVD, and any other means of documentation necessary to describe existing condition.

1.20.2.2. Prepare digital color video at such scale and detail as required to document existing damage occurred prior to beginning work. If the record documents do not clearly show damage as a pre-existent condition, Contractor shall be responsible for repair or replacement of such damaged improvements.

1.20.2.3. Obtain Owners' Inspector of Record certification that documents were prepared prior to beginning construction. Deliver DVD and associated documentation to Owner prior start of construction.

2. PART 2 – PRODUCTS

Not Used

3. PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 04 22 00

CONCRETE UNIT MASONRY

1. PART 1 - GENERAL

1.1. SECTION INCLUDES

1.1.1. Masonry units.

1.1.2. Reinforcement, anchorage, and accessories.

1.1.3. *Precast concrete wall cap.*

1.2. PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

1.2.1. Section 05 50 00 - Metal Fabrications: Placement of fabricated metal items built into masonry.

1.3. REFERENCES

1.3.1. California Building Code (CBC) 2013 edition, as adopted by Authority Having Jurisdiction (AHJ).

1.3.2. ACI 315 - Details and Detailing of Concrete Reinforcement.

1.3.3. ASTM A615- Deformed and Plain Carbon Steel Bars for Concrete Reinforcement.

1.3.4. ASTM A706 - Low Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.

1.3.5. ASTM C90 - Loadbearing Concrete Masonry Units.

1.3.6. ASTM C1314 - Compressive Strength of Masonry Prisms.

1.3.7. ASTM C90 - Hollow Load Bearing Concrete Masonry Units.

1.3.8. ASTM C 55 - Standard Specification for Concrete Brick.

1.4. QUALIFICATIONS

1.4.1. Installer: Company specializing in performing the work of this Section with minimum 5 years documented experience.

1.5. SUBMITTALS

1.5.1. Submit under provisions of Division 01.

1.5.2. Samples:

1.5.2.1. Submit two full size *6-inch square* samples of each block type and color indicating surface texture and color.

1.5.3. Certification: Submit certification from block manufacturer confirming compliance with criteria established by referenced standard and this section.

1.5.4. Materials List: Submit proposed materials list for all products used.

1.5.5. Shop Drawings

1.5.5.1. Submit steel reinforcement shop drawings in accordance with ACI 315. Include placing drawings and bending charts. Show length and locations of splices, size and length of reinforcing steel, bar position dimensions and spacings.

1.5.6. *Mock-up*

1.5.6.1. Prior to beginning installation, prepare in-place mock-up of approximately 4 foot by 6 foot high, and obtain Architect's approval.

1.5.7. Grouting Procedures: Prior to beginning high lift grouting, provide submittal defining proposed grouting procedures. Incorporate DSA IR 21-2, as well as qualification statement of installing contractor demonstrating experience with high lift grouting techniques on Title 24 projects.

1.6. DELIVERY, STORAGE, AND HANDLING

1.6.1. Deliver products to site under provisions of Division 01.

1.7. SEQUENCING AND SCHEDULING

1.7.1. Coordinate work under provisions of Division 01.

1.8. GUARANTEE

1.8.1. Provide the Owner with a guarantee, in Architect approved form, against the following specific defects or failures for a period of three (3) years after Notice of Substantial Completion:

1.8.1.1. Expansion/contraction cracks.

1.9. *EXTRA STOCK*

1.9.1. Provide ten (10) corner units of ground face block. Store and deliver to Owner as directed.

2. PART 2 – PRODUCTS

2.1. MANUFACTURERS

2.1.1. Basis of Design: Orco, or approved equal. Characteristics of specific products, where named in this Section, are indicated to establish required level of quality, appearance, and performance. Architect will consider requests for substitutions, under the provisions of Section 01 25 00.

2.2. CONCRETE MASONRY UNITS: PRECISION WITH CENTER SCORE

2.2.1. Type:

2.2.1.1. Block: Hollow Load Bearing Block Units per ASTM C90 and Section 2103A.1, Chapter 21A, Part 2, Title 24, CCR.

2.2.1.1.1. Minimum compressive strength of 1900 psi as a component of design f'm assembly value of 1500 psi.

2.2.2. Weight Classification All units: Medium Weight (greater than 105 pcf to less than 125 pcf).

2.2.3. Size and style

2.2.3.1. Block: Nominal 8 x 8 x 16 and 8 x 12 x 16, hollow load bearing units, one open end at vertical reinforcing, bond beam units at horizontal reinforcing. Provide additional sizes as required and as shown on drawings.

2.2.3.2. Provide pilaster units as required for conditions shown on drawings.

2.2.3.3. Provide closed end units at all outside corners and ends.

2.2.3.4. Provide cap block and sill block profiles as shown on drawings.

2.2.3.5. Provide U-lintel solid bottom units at exposed lintel conditions.

2.2.4. Finish: Manufacturer's Precision Block finish.

2.2.5. Color:

2.2.5.1. Concealed applications: Provide natural gray color.

2.2.5.2. Exposed Applications at Buildings: Provide specified *RCP* block colors. *Color match is critical. Architect will be sole judge of color match when considering acceptability of proposed substitutions.*

2.2.5.2.1. Color 1: *Cool Grey*

2.2.6. Fire Rating: Where masonry units are components in fire rated assemblies, provide written certification of compliance with *Title 24,* UL material listing requirements or other approved material certification methods.

2.3. ACCESSORIES, REINFORCEMENT AND ANCHORAGE

2.3.1. Precast concrete wall cap

2.3.1.1. Provide precast concrete wall cap, configured as shown on drawings, Type II cement, minimum 3,000 psi concrete mix design.

2.3.1.2. Provide embed as shown on drawing, coordinated with wall reinforcing layout.

2.3.1.3. Provide natural gray concrete, light sandblast finish.

2.3.1.4. Where required, provide cast corner units. Do not cast as mitered or butt joint corner units.

2.3.2. Reinforcing Steel: ASTM A 615 or ASTM A 706, in accordance with Section 2103A.13, Chapter 21A, Part 2, Title 24, CCR, and as specified in Section 03 20 00 *03 30 00* of this Project Manual.

2.3.3. Where required or shown on structural drawings, provide prefabricated horizontal joint reinforcement complying with Section 2103A.13, Chapter 21A, Part 2, Title 24, CCR, hot dipped galvanized.

2.3.4. Mortar and Grout: Per Section 04 05 13.

2.4. SOURCE QUALITY CONTROL AND TESTING

2.4.1. Provide for testing under the provisions of Division 01. .

2.4.1.1. Masonry Units: Section 2105A, Chapter 21A, Part 2, Title 24, CCR.

2.5. OTHER MATERIALS

2.5.1. Provide all other materials, not specifically described but required for complete and proper installation of this work, as selected by the contractor and subject to the approval of the Architect.

3. PART 3 - EXECUTION

3.1. SURFACE CONDITIONS

3.1.1. Inspection

3.1.1.1. Prior to work of this section, carefully inspect previously installed work. Verify all such work is complete to the point where this installation may properly commence.

3.1.1.2. Verify that work of this section may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

3.1.1.3. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.1.1.4. In the event of discrepancy, immediately notify the Architect.

3.1.1.5. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2. PREPARATION

3.2.1. Direct and coordinate placement of metal anchors supplied to other Sections.

3.2.2. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.2.3. Provide templates for setting anchor bolts, maintaining clearances and embedment in compliance with Section 2104A, Chapter 21A, Title 24, Part 2, CCR.

3.3. COURSING

3.3.1. Establish lines, levels, and coursing indicated. Protect from displacement.

3.3.2. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

3.3.3. Lay masonry units in *running* bond. Course one unit and one mortar joint to equal 8 *4* inches.

3.3.4. Joint Tooling:

3.3.4.1. Tool exterior wall joints concave.

3.3.4.2. Tool exposed interior wall joints concave.

3.3.4.3. Tool joints tight and flush at locations where waterproofing or tile finish occurs.

3.3.4.4. Where furring or framing assemblies are installed over masonry, tool joints tight and flush.

3.3.5. Surface preparation for waterproofing membranes: Provide smooth mortar parge coat at all block surfaces receiving below grade waterproofing systems, free of ridges, gaps, holes or other surface imperfections.

3.3.6. Preparation for flashing assemblies: Where roof or other flashing assemblies butt against or slope against adjoining masonry wall surface, sawcut reglet joint as required to receive flashing termination and as directed by Architect.

3.4. REINFORCEMENT AND ANCHORAGES - REINFORCED UNIT MASONRY

3.4.1. Install reinforcement at spacing indicated and to allow a minimum grout coverage of 1/2 inch or 1 bar diameter, whichever is greater.

3.4.2. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.

3.4.3. Retain vertical reinforcement in position at top and bottom of cells and at intervals not exceeding 192 bar diameters. Splice reinforcement in accordance with Section 03 20 00 *03 30 00*.

3.4.4. Splice reinforcing bars in accordance with Sections 2107A and 2108A, Chapter 21A; Part 2, Title 24, and as shown on structural drawings.

3.4.5. Embed anchors for attachment of metal fabrications.

3.5. PLACING AND BONDING

3.5.1. Lay masonry in accordance with Section 2104A, Chapter 21A; Part 2, Title 24, CCR.

3.5.2. Perform jobsite cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.5.3. Lay masonry units with full face shell bedding on bed joints and full head joints.

3.5.4. Buttering corners of joints or excessive furrowing of mortar joints are not permitted.

3.5.5. Lay masonry units with core cells grout space vertically aligned, clear of mortar, and unobstructed with a minimum cell dimension of 3 inches.

3.5.6. Interlock intersections and external corners.

3.5.7. Where expansion or control joints are shown on structural drawings, provide Type 1 sealant and backer rod as specified in Section 07 90 00 at both sides of joint.

3.5.8. Remove excess mortar as Work progresses. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.

3.5.9. Grout may be placed after mortar has been set and cured. Cure time shall be adequate to prevent blow-outs in high lift grouting operations.

3.6. GROUTING

3.6.1. Wet masonry unit surfaces in contact with grout just prior to grout placement.

3.6.2. Provide coarse grout.

3.6.3. Grout masonry using specified grouting techniques.

3.6.3.1. Maintain weep joints free of grout.

3.6.4. When grouting is stopped for more than one hour, terminate grout 1/2 inch below top of upper masonry unit to form a positive key for subsequent grout placement.

3.6.5. Low Lift Grouting

3.6.5.1. Conform to requirements of Section 2104A, Chapter 21A, Part 2, Title 24, CCR.

3.6.5.2. Install masonry units to a maximum height of 48 inches.

3.6.5.3. Remove all overhanging mortar and mortar droppings.

3.6.5.4. Place grout and mechanically vibrate for grout consolidation.

3.6.6. High Lift Grouting:

3.6.6.1. Conform to requirements of Section 2104A.6, Chapter 21A, Part 2, Title 24, CCR, DSA IR 21-2, and the following requirements.

3.6.6.2. Provide clean-out openings at the bottom of each grout pour.

3.6.6.3. Clean out masonry cells, reinforcing and cavities with high pressure water stream. Completely drain cavity and cell bottom of water.

3.6.6.4. Obtain Inspector's review of cleaned cells and cavities.

3.6.6.5. After review, seal opening with masonry face shell.

3.6.6.6. Pump grout into cells. Maintain water content in grout as required to achieve required slump without aggregate segregation.

3.6.6.7. Place grout in maximum 4 foot lifts. Provide initial grout consolidation by mechanical vibration.

3.6.6.8. After the grout has become plastic, but before any setting has occurred, place next grout lift. In normal weather conditions, delay placing subsequent grout lifts for 30 minutes minimum, and 60 minutes maximum. Reconsolidate the preceding grout lift by mechanical vibration, and repeat procedure.

3.7. PRECAST CONCRETE CAP INSTALLATION

3.7.1. Install in full mortar bed and with full head joints.

3.7.2. Tool all joints concave.

3.8. BUILT - IN WORK

3.8.1. As work progresses, build in anchor bolts, plates, and other items furnished by other Sections.

3.8.2. Build in items plumb and level.

3.8.3. Do not build in pipes or ducts unless specifically detailed by the Structural Engineer.

3.8.4. Do not build in organic materials subject to deterioration.

3.9. TOLERANCES

3.9.1. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.

3.9.2. Maximum Variation From Plane of Wall: 1/4 inch in 10 feet and 1/2 inch in 20 feet or more.

3.9.3. Maximum Variation From Plumb: 1/4 inch per story non-cumulative.

3.9.4. Maximum Variation From Level Coursing: 1/8 inch in 3 feet and 1/4 inch in 10 feet; 1/2 inch in 30 feet.

3.9.5. Maximum Variation of Joint Thickness: 1/8 inch in 3 feet.

3.10. CUTTING AND FITTING

3.10.1. Cut and fit for chases, pipes, conduit, sleeves, grounds, and other penetrations. Coordinate with other Sections of work to provide correct size, shape, and location.

3.10.2. Obtain Architect approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.11. CLEANING

3.11.1. Clean work under provisions of Division 01.

3.11.2. Remove excess mortar and mortar smears.

3.11.3. Replace defective mortar. Match adjacent work.

3.11.4. Use non-metallic tools in cleaning operations.

3.11.5. Do not use acid or acid base cleaning agents.

3.12. PROTECTION OF FINISHED WORK

3.12.1. Protect finish installation under provisions of Division 01..

3.12.2. Without damaging completed work, provide protective boards at exposed external corners which may be damaged by construction activities.

3.12.3. Protection of groundface units:

3.12.3.1. Without damaging completed work, provide protective covers at groundface block external corners to prevent damaged by construction activities.

3.12.3.2. Without damaging completed work, provide protective covers to prevent dirt staining on surfaces.

3.13. FIELD QUALITY ASSURANCE

3.13.1. Perform testing and inspection under the provisions of Division 01..

3.13.2. Masonry Inspection: Provide inspection per Table 1704A.5.3, Chapter 17A, Part 2, Title 24, CCR.

3.13.3. Masonry Testing: Provide testing per Section 2105A.2.2.1.4 and 2105A.4, Chapter 21A, Part 2, Title 24, CCR.

3.13.4. Masonry Prism Testing: For each different masonry compressive strength. Provide testing per Section 2105A.2.2.2, Chapter 21A, Part 2, Title 24, CCR. Prepare prisms as follows:

3.13.4.1. A set of five masonry prisms shall be built and tested in accordance with ASTM C 1314 prior to the start of construction. Materials used for the construction of the prisms shall be taken from those specified to be used in the project. Prisms shall be constructed under the observation of the special inspector or an approved agency and tested by an approved agency.

3.13.4.2. A set of three prisms shall be built and tested during construction in accordance with ASTM C1314 for each 5,000 square feet of wall area, but not less than one set of three masonry prisms for the project.

3.13.5. Masonry Core Tests: Provide masonry core tests for each different masonry compressive strength in accordance with Section 2105A.4, Chapter 21A, Part 2, Title 24, CCR.

END OF SECTION

SECTION 08 71 00 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Mechanical door hardware.
2. Electrified door hardware.
3. Electronic access control system components.

B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:

1. Windows.
2. Cabinets.
3. Signage.
4. Toilet accessories.
5. Conduit, junction boxes & wiring.
6. Operable partitions.
7. Sliding aluminum doors.
8. Overhead doors.
9. Gates.

1.2 REFERENCES

A. Use date of standard in effect as of Bid date.

1. American National Standards Institute
    a. ANSI 156.18 – Materials and Finishes.
2. BHMA – Builders Hardware Manufacturers Association
3. 2013 California Building Code
    a. Chapter 11B – Accessibility to Public Buildings, Public Accommodations, Commercial Buildings and Public Housing
4. DHI – Door and Hardware Institute
5. NFPA – National Fire Protection Association
    a. NFPA 80 – Standard for Fire Doors and Other Opening Protectives.
    b. NFPA 105 – Smoke and Draft Control Door Assemblies
    c. NFPA 252 – Fire Tests of Door Assemblies
6. UL – Underwriters Laboratories
    a. UL10C – Positive Pressure Fire Tests of Door Assemblies.
    b. UL 305 – Panic Hardware
7. WHI – Warnock Hersey Incorporated
8. SDI – Steel Door Institute
9. WI – Woodwork Institute
10. AWI – Architectural Woodwork Institute
11. NAAMM – National Association of Architectural Metal Manufacturers
12. Local Applicable Codes

1.3 SUBMITTALS

A. Submit product data including manufacturers' technical product data for each item of door hardware.
B. After final approval of hardware schedule, submit details of electrified door hardware including riser and wiring diagrams.
C. Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by DHI. Indicate complete designations of each item required for each door or opening, including:

1. Door number, heading number, and Architects hardware set number.
2. Locking device and function for each opening.
3. Type, style, function, size, and finish of each hardware item.
4. Name and manufacturer of each item.
5. Fastenings and other pertinent information.
6. Mounting locations for hardware.
7. Door and frame sizes and materials.
8. Name and phone number for local manufacturer's representative for each product.
9. Operational Description of openings with any electrified hardware. Operational description should include how door will operate on egress, ingress, and fire and smoke alarm connection.

D. Provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.

1. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
2. Provide complete bitting list of key cuts and key system schematic illustrating system usage and expansion.
3. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.

E. Provide operations and maintenance data including:

1. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
2. Catalog pages for each product.
3. Name, address, and phone number of local representative for each manufacturer.
4. Parts list for each product.
5. Final approved hardware schedule, edited to reflect conditions as-installed.
6. Final keying schedule.
7. Copies of floor plans with keying nomenclature
8. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
9. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.4 QUALITY ASSURANCE

A. Product Substitutions:

1. Where specific manufacturer's product is named and accompanied by "District Standard," provide product specified.

2. Where products indicate “acceptable manufacturers,” products have been approved as acceptable alternates to the specified product, subject to compliance with specified requirements stated herein.

B. Supplier Qualifications**:**

1. Direct factory contract supplier who employs a certified architectural hardware consultant (AHC), available at reasonable times during course of work for hardware consultation to Owner, Architect and Contractor.
2. Responsible for detailing, scheduling and ordering of finish hardware. Detailing implies that the submitted schedule of hardware is correct and complete for the intended function and performance of the openings.

C. Installer Qualifications:

1. Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.

D. Hardware**:**

1. Free of defects, blemishes and excessive play.
2. Obtain each kind of hardware (latch and locksets, exit devices, hinges and closers) from one manufacturer.
3. Furnish hardware items required to complete the work in accordance with specified performance level and design intent, complying with manufacturers’ instructions and code requirements.

E. Pre-Installation Meetings**:**

1. Initiate and conduct with supplier, installer and related trades, coordinate materials and techniques, and sequence complex hardware items and systems installation.
2. Include manufacturers' representatives of locks, panic hardware and door closers in the meetings. Convene prior to commencement of related work.

F. Keying Conference:

1. Attendees: Owner, Contractor, Architect, Installer, Owner's security consultant, and Supplier’s Architectural Hardware Consultant.
2. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
b. Preliminary key system schematic diagram.
c. Requirements for key control system.
d. Requirements for access control.
e. Address for delivery of keys.
f. Requirements for final installation of permanent cylinders/cores.

1.5 DELIVERY, STORAGE AND HANDLING

A. Delivery: coordinate delivery to appropriate locations (shop or field).

1. Permanent keys and cores: secured delivery direct to Owner’s representative.

B. Acceptance at Site: Items individually packaged in manufacturers’ original containers, complete with proper fasteners and related pieces. Clearly mark packages to indicate contents, locations in hardware schedule and door numbers.

C. Storage: Provide securely locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, dust, excessive heat and cold, etc.

1.6 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.
B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
E. Direct shipments not permitted, unless approved by Contractor.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
    1. Warranty Period: From date of Substantial Completion, for duration indicated:
        a. Locksets and Exit Devices (mechanical): Three years.
        b. Locksets and Exit Devices (electrified): One year.
        c. Door Closers: 30 years.
        d. Architectural Hinges: One year.
        e. Continuous Hinges: Lifetime.
        f. Key Blanks: Lifetime.

1.8 COMMISSIONING

A. Conduct these tests prior to request for certificate of substantial completion:
    1. With installer present, test door hardware operation with climate control system and stairwell pressurization system both at rest and while in full operation.
    2. With installer, access control contractor and electrical contractor present, test electronic hardware systems for satisfactory operation.
    3. With installer and electrical contractor present, test hardware interfaced with fire/life-safety system for proper operation and release.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Approval of products from manufacturers indicated in “Acceptable Manufacturer” is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer’s product.

ITEM:	SCHEDULED MFR:	ACCEPTABLE ALTERNATE:
Hinges	(IVE) Ives	District Standard
Continuous Hinges	(IVE) Ives	District Standard
Key System	(SAR) Sargent	District Standard
Locks	(SCH) Schlage	District Standard
Exit Devices:	(VON) Von Duprin	District Standard
Closers:	(LCN) LCN	District Standard
Thresholds:	(NGP) National Guard Product	Zero, Pemko
Seals & Door Bottoms:	(ZER) Zero International	Pemko, Reese
Floor Stops:	(IVE) Ives	District Standard
Power Supplies:	(VON) Von Duprin	District Standard
Auto Operators:	(LCN) LCN	District Standard

2.2 HINGES

A. Conform to manufacturer’s published hinge selection standard for door dimensions, weight and frequency, and to hinge selection as scheduled. Where manufacturer’s standard exceeds the scheduled product, furnish the manufacturer’s standard size and notify Architect of deviation from scheduled hardware.
B. Use wide-throw hinges where necessary to allow door to swing 180 degrees.
C. Conventional Hinges**:** Steel or stainless steel pins and approved bearings. Use minimum hinge width necessary to permit maximum door swing.
D. Continuous Hinges: Provide continuous hinges conforming to ANSI/BHMA A156.26, Grade 2.

2.3 ELECTRIC POWER TRANSFER

A. Provide power transfer with electrified options as scheduled in the hardware sets. Provide with number and gage of wires sufficient to accommodate electric function of specified hardware.

2.4 FLUSH BOLTS

A. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch steel or brass rods at doors up to 90 inches in height. For doors over 90 inches in height increase top rods by 6 inches for each additional 6 inches of door height. Provide dust-proof strikes at each bottom flush bolt.

2.5 COORDINATORS

A. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.
B. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers and surface vertical rod exit device strikes. Factory-prep coordinators for vertical rod devices if required.

2.6 MORTISE LOCKS

A. Scheduled Manufacturer and Product: Schlage (SCH) L9000 series
B. Requirements:
    1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1 Operational, Grade 1 Security, and manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to “KEYING” article, herein.
    2. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
    3. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide a request to exit (RX) switch that is actuated with rotation of inside lever.
    4. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
        a. Lever Design: 06A.
    5. Force to retract latchbolt and deadbolt: 5 lbs or less per CBC 2013.

2.7 EXIT DEVICES

A. Scheduled Manufacturer and Product: Von Duprin (VON) 98/99 or 33/35 series
B. Requirements:
    1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1, and UL listed for Panic Exit or Fire Exit Hardware. Cylinders: Refer to “KEYING” article, herein.
    2. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
    3. Touchpad: Extend minimum of one half of door width. Match exit device finish, stainless steel for US26, US26D, US28, US32, and US32D finishes; and for all other finishes, provide compatible finish to exit device. No plastic inserts are allowed in touchpads.
    4. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
    5. Provide flush end caps for exit devices.
    6. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
    7. Provide cylinder dogging at non-fire-rated exit devices, .
    8. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.

9. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Provide vandal-resistant levers that will travel to 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set.

    a. Lever Style: Match lever style of locksets.

10. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
11. Provide electrified options as scheduled.
12. Provide “AX“ feature, where touchpad directly retracts the latchbolt with 5 lb or less of force.

2.8 POWER SUPPLIES

A. Scheduled Manufacturer and Product: Schlage (SCE) or Von Duprin (VON) PS900 series
B. Requirements:

1. Provide power supplies, recommended and approved by manufacturer of electrified locking component, for operation of electrified locks, electrified exit devices, magnetic locks, electric strikes, and other components requiring power supply.
2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
3. Provide regulated and filtered 24 VDC power supply , and UL class 2 listed.
4. Provide power supply in an enclosure, complete, and requiring 120VAC to fused input.
5. Provide power supply with emergency release terminals, where specified, that allow release of all devices upon activation of fire alarm system complete with fire alarm input for initiating “no delay” exiting mode.

2.9 KEY SYSTEM

A. Assa V-10 system, interchangeable core. Contact Campus Locksmith to determine system structure. Furnish temporary construction-keyed and permanent cylinders. Contractor to demonstrate to the Campus Locksmith that temporary keys no longer operate the locking cylinders at the end of the project.

2.10 DOOR CLOSERS

A. Scheduled Manufacturer and Product: LCN 4040XP series.
B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.

4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.11 ELECTRO-MECHANICAL AUTOMATIC OPERATORS

A. Scheduled Manufacturer and Product: LCN Senior Swing
B. Requirements:

1. Provide low energy automatic operator units that are electro-mechanical design complying with ANSI/BHMA A156.19.
    a. Opening: Powered by DC motor working through reduction gears.
    b. Closing: Spring force.
    c. Manual, hydraulic, or chain drive closers: Not permitted.
    d. Operation: Motor is off when door is in closing mode. Door can be manually operated with power on or off without damage to operator. Provide variable adjustments, including opening and closing speed adjustment.
    e. Cover: Aluminum.
2. Provide units with manual off/auto/hold-open switch, push and go function to activate power operator, vestibule interface delay, electric lock delay, hold-open delay adjustable from 2 to 30 seconds, and logic terminal to interface with accessories, mats, and sensors.
3. Provide drop plates, brackets, or adapters for arms as required to suit details.
4. Provide hard-wired motion sensors and/or actuator switches for operation as specified. Provide weather-resistant actuators at exterior applications.
5. Provide key switches, with LED’s, recommended and approved by manufacturer of automatic operator as required for function as described in operation description of hardware sets. Cylinders: Refer to “KEYING” article, herein.
6. Provide complete assemblies of controls, switches, power supplies, relays, and parts/material recommended and approved by manufacturer of automatic operator for each individual leaf. Actuators control both doors simultaneously at pairs. Sequence operation of exterior and vestibule doors with automatic operators to allow ingress or egress through both sets of openings as directed by Architect. Locate actuators, key switches, and other controls as directed by Architect.

7. Provide units with inputs for smoke evacuation doors, where specified, which allow doors to power open upon fire alarm activation and hold open indefinitely or until fire alarm is reset, presence detector input, which prevents closed door from opening or door that is fully opened from closing, hold open toggle input, which allows remote activation for indefinite hold open and close second time input is activated, vestibule inputs, which allow sequencing operation of two units, and SPDT relay for interfacing with latching or locking devices.

2.12 DOOR TRIM

A. Scheduled Manufacturer: Ives (IVE)
B. Requirements:

1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
4. Provide flush pulls as scheduled. Where required, provide back-to-back mounted model.
5. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
6. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
7. Provide wire pulls of solid bar stock, diameter and length as scheduled.
8. Provide decorative pulls as scheduled. Where required, mount back to back with pull.

2.13 PROTECTION PLATES

A. Scheduled Manufacturer: Ives (IVE)
B. Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes of plates:

    a. Kick Plates: 10 inches (254 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
    b. Mop Plates: 4 inches (102 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
    c. Armor Plates: 36 inches (914 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

2.14 DOOR STOPS AND HOLDERS

A. Scheduled Manufacturer: Ives (IVE)
B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.

2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.
3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.15 SEALS, DOOR SWEEPS, AND GASKETING

A. Scheduled Manufacturer: Zero International (ZER)
B. Requirements:

1. Provide weatherstripping (including door sweeps, seals, astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Provide door sweeps, seals, and astragals only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.16 THRESHOLDS

A. Scheduled Manufacturer: Zero International (ZER)
B. Requirements:

1. Saddle thresholds: 0.125 inches minimum thickness.
2. Exterior: Seal perimeter to exclude water and vermin.
3. Provide noncombustible sill or threshold where combustible floor covering extends through door opening.
4. Fire rated openings: Where scheduled, thresholds to extend at least the depth of the door frame.
5. Acoustic openings: Set units in full bed of Division-7-compliant sealants, leave no air space between threshold and substrate.
6. Plastic plugs with wood or sheet metal screws are not an acceptable substitute for specified fastening methods.
7. Fasteners: Generally, exposed screws to be Phillips or Robertson drive. Pinned TORX drive at high security areas. Flat head sleeve anchors (FHSL) may be slotted drive. Sheet metal and wood screws: full-thread. Sleeve nuts: full length to prevent door compression. Plastic plugs with wood or sheet metal screws are not an acceptable fastening method.

2.17 SILENCERS

A. Scheduled Manufacturer: Ives (IVE)
B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.18 FINISHES

A. Provide finishes to match BHMA 626 Satin Chrome where specified.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
B. Existing Door and Frame Compatibility: Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Where on-site modification of doors and frames is required:
    1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
    2. Field modify and prepare existing door and frame for new hardware being installed.
    3. When modifications are exposed to view, use concealed fasteners, when possible.
    4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:
        a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
        b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
        c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
    1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
    2. Custom Steel Doors and Frames: HMMA 831.
    3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
B. Install each hardware item in compliance with manufacturer’s instructions and recommendations, using only fasteners provided by manufacturer.
C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
H. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches (750 mm) of door height greater than 90 inches (2286 mm).
I. Lock Cylinders: Install construction cores to secure building and areas during construction period.

    1. Replace construction cores with permanent cores as indicated in keying section.

J. Lead Protection: Lead wrap hardware penetrating lead-lined doors. Levers and roses to be lead lined. Apply kick and armor plates on lead-lined doors with adhesive as recommended by manufacturer.
K. Wiring: Coordinate with Division 26, ELECTRICAL sections for:

    1. Conduit, junction boxes and wire pulls.
    2. Connections to and from power supplies to electrified hardware.
    3. Connections to fire/smoke alarm system and smoke evacuation system.
    4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
    5. Testing and labeling wires with Architect’s opening number.

L. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
M. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Closers shall not be visible in corridors, lobbies and other public spaces unless approved by Architect.
N. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
O. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

    1. Configuration: Provide [one power supply for each door opening][least number of power supplies required to adequately serve doors] with electrified door hardware.

P. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
Q. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
R. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
S. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
T. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant: Engage qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three[six] <Insert number> months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.
B. Clean operating items as necessary to restore proper function and finish.
C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DEMONSTRATION

A. Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.8 DOOR HARDWARE SCHEDULE

A. Locksets, exit devices, and other hardware items are referenced in the following hardware sets for series, type and function. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.
B. Hardware Sets:

HW SET: 01 - LOBBY TO EXTERIOR

DOOR(S):
101

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	TOP PIVOT	H340	626	RIX
1	EA	FLOOR CLOSER	PH-H28-N-105	626	RIX
1	EA	EXIT DEVICE	PA-100-D EXIT ONLY	630	CRL
1	EA	EXIT DEVICE	PA-100-D KEY ACCESS	630	CRL
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	ELECTRIC STRIKE PR	ESP2BS	630	CRL
1	EA	AUTO OPERATOR	2811 STD/CP POS MS	ANCLR	LCN
1	EA	FLOOR MTD CLOSER ARM	CRL9040CB		CRL
2	EA	FULL LENGTH ACTUATOR	8310-836T	630	LCN
1	EA	IN-GROUND CONVERTER	OPCON - LCN		OPC
1	EA	THRESHOLD	430E - OPCON PREP	AL	NGP
1	EA	DESK MOUNT BUTTON	660-PB	628	SCE

COORDINATE: ACCESS CONTROL, WIRING, CONDUIT, POWER.
COORDINATE: DOOR RAILS BY GLASS DOOR MANUFACTURER.

HW SET: 02 - DISPATCH TO LOBBY

DOOR(S):
102

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	RX-EL-AX-98-L-06	626	VON
1	EA	ELEC PANIC HARDWARE	RX-EL-AX-98-L-NL-06	626	VON
1	EA	IC RIM CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS914 900-2RS	LGR	VON

COORDINATE: ACCESS CONTROL, WIRING, CONDUIT, POWER.

HW SET: 03 - HALLWAY TO DISPATCH

DOOR(S):
103

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	PANIC HARDWARE	LD-AX-98-L-06	626	VON
1	EA	IC RIM CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
			SEALS BY DOOR SUPPLIER		

HW SET: 04 - STORAGE

DOOR(S):
104 113 134

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080L 06A	626	SCH
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 05 - ELECTRICAL/HALLWAY EXIT

DOOR(S):
105 125

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	700	630	IVE
1	EA	PANIC HARDWARE	LD-AX-98-NL-OP-110MD	626	VON
1	EA	IC RIM CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	CYLINDER GUARD	K-24L	US26D	KEE
1	EA	DOOR PULL	VR910 NL	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	GASKETING	188S-BK	S-BK	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	545A-MSLA-10	A	ZER

HW SET: 06 - BREAK/GUN CLEANING

DOOR(S):
114 119

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM SECURITY	L9071L 06A	626	SCH
2	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
2	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 07 - SECURE EVIDENCE

DOOR(S):
115

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	CONST LATCHING BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM W/DEADBOLT	L9480L 06A L583-363	626	SCH
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	FLOOR STOP	FS438	626	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 08 - HALLWAY ENTRANCE

DOOR(S):
117B 121B

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1	EA	CONT. HINGE	700 EPT	630	IVE
1	EA	POWER TRANSFER	EPT10	689	VON
1	EA	ELEC PANIC HARDWARE	RX-EL-AX-98-NL-OP-110MD	626	VON
1	EA	IC RIM CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	CYLINDER GUARD	K-24L	US26D	KEE
1	EA	DOOR PULL	VR910 NL	630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	GASKETING	188S-BK	S-BK	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	545A-MSLA-10	A	ZER
1	EA	POWER SUPPLY	PS914 900-2RS	LGR	VON

COORDINATE: ACCESS CONTROL, WIRING, CONDUIT, POWER.

HW SET: 09 - OFFICE

DOOR(S):
106 107 108 109A 109B 110

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE/ENTRY LOCK	L9050L 06A L583-363	626	SCH
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 10 - TOILET

DOOR(S):
128 132

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	KEYED PRIVACY W/ IND.	L9056L 06A L583-363 L283-722	626	SCH
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 11 - STORAGE W/ DEADBOLT

DOOR(S):
116 118

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM W/DEADBOLT	L9480L 06A L583-363	626	SCH
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 12 - WATCH STATION TOILET

DOOR(S):
122

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	CLASSROOM SEC W/DB	L9457L 06A	626	SCH
2	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
2	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 13 - LOCKER

DOOR(S):
126 127 130 131

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
4	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PUSH PLATE	8200 4" X 16"	630	IVE
1	EA	PULL PLATE	8303 10" 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW	630	IVE
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 14 - HALLWAY TO HALLWAY

DOOR(S):
117A 121A

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	PANIC HARDWARE	LD-AX-98-L-06	626	VON
1	EA	IC RIM CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 15 - OPERABLE GLASS PARTITION - HARDWARE PER MANUFACTURER.

DOOR(S):
111A 111B 111C 111D 111E

HW SET: 16 - INTERVIEW

DOOR(S):
123 124

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	EL MORTISE LOCK	L9093LEL 06A RX	626	SCH
2	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
2	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	SURFACE CLOSER	4040XP EDA	689	LCN
1	EA	FLOOR STOP	FS438	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	EA	POWER SUPPLY	PS902	LGR	VON

HW SET: 17 - GATE 1

DOOR(S):
G1

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	EA	GATE HINGE	BY GATE MANUFACTURER		B/O
1	EA	PANIC HARDWARE	LD-AX-98-NL-OP-110MD	626	VON
1	EA	IC RIM CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	CYLINDER GUARD	K-24L	US26D	KEE
1	EA	DOOR PULL	VR910 NL	630	IVE
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	FLOOR STOP	FS18L	BLK	IVE

HW SET: 18 - GATE 2

DOOR(S):
G2

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	EA	GATE HINGE	BY GATE MANUFACTURER		B/O
1	SET	CONST LATCHING BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM W/DEADBOLT	L9480L 06A L583-363	626	SCH
1	EA	IC MORTISE CYLINDER	ASSA V-10 TWIN	626	SAR
1	EA	PERMANENT CORE	ASSA V-10 TWIN	626	SAR
1	EA	COORDINATOR	COR X FL	628	IVE
2	EA	SURFACE CLOSER	4040XP	689	LCN
2	EA	FLOOR STOP	FS18L	BLK	IVE

HW SET: 19 - GATE 3 - ROLLING GATE - HARDWARE BY MANUFACTURER.

DOOR(S):
G3

END OF SECTION

SECTION 10 51 13

METAL LOCKERS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Divisions 1 Specifications, apply to this Section.

1.02 SUMMARY

A. This Section includes the following:
- **1.** Athletic Wardrobe Lockers configured:
  - **a.** Double Tier (DeBourgh Junior Varsity) – Type 2 Cadet Locker
- **2.** Team Athletic Lockers configured:
  - **a.** Single Tier (DeBourgh All Sport) – Type 1 Officer Locker
- **3.** Locker Room Benches
- **4.** Provide fasteners and anchorage devices to install lockers provided under this section.
- **5.** Provide metal filler panels to fill between banks of lockers and adjacent construction.

1.03 SUBMITTALS

A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of locker and bench.

B. Shop Drawings: Show lockers in detail, method of installation, fillers, trim, base and accessories. Include locker numbering sequence information.

C. Samples for verification: Submit one full-size locker sample for evaluation. Adherence to the specification is required. Locker submitted must meet specification regardless of manufacturer's standard product. Submit manufacturer's technical data and installation instructions for metal locker units.

D. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals specified in Division 1.

1.04 QUALITY ASSURANCE

A. Uniformity and Single Manufacturer Requirements: Provide each type of metal locker as produced by a single manufacturer, including necessary mounting accessories, fittings, and fastenings.

B. All of the locker products in this specification as well as all of the materials used to manufacture this product to be produced in the United States of America. No exceptions will be allowed.

C. Installers Qualifications: Lockers to be installed by an experienced agent of the manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Do not deliver metal lockers until building is enclosed and ready for locker installation.

B. Storage and Protection: Protect materials from damage during delivery, handling, storage, and installation.

1.06 WARRANTY

A. Locker manufacturer shall warrant the locker for the lifetime use of the original purchaser from date of shipment. Warranty shall include all defects in material and workmanship, excluding finish, vandalism and improper installation.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements of the Contract Documents, acceptable manufacturers are as follows:

1. DeBourgh Manufacturing Company

2.02 FABRICATION

A. Locker Construction
1. Lockers to be welded at seams and joints with exposed welds sanded smooth.
2. No bolts, screws or rivets to be used in assembly of locker units.
3. Ship lockers set-up, ready to be anchored in place in accordance with manufacturer's instructions.

B. Body of Lockers
1. Sides and Intermediate Partitions: Constructed of 1 inch by 1 inch by 1/8 inch steel angle iron frame with 3/4 inch, 13 gauge (Ga), cold rolled sheet steel welded to steel angle frames. Formed sheet steel locker frames are not acceptable.
2. Exposed End Panels: Constructed of 1 inch by 1 inch by 1/8 inch steel angle iron frame with 16 Ga sheet steel welded to steel angle frame.
3. Backs: Solid sheet of 18 Ga cold rolled sheet steel welded to frames of sides and intermediate partitions.
4. Shelves and Tier Dividers: Constructed of 16 Ga cold rolled sheet steel welded to side and intermediate partition construction. Shelves provided in lockers 48 inches and taller, located to provide a minimum of 12 inches clearance.

C. Doors
1. 1 inch by 1 inch by 1/8 inch angle iron frame with inserts of (available only when used with Sentry I latching)
    a. Secur-N-Vent – three-dimensional vertical vents formed on fronts and backs of door.
2. 14 Ga formed doors constructed of single piece cold rolled steel with double bends on vertical sides and a single bend on horizontal sides (available with the above ventilation styles excluding mesh).

D. Latching
1. Sentry III Single-Point Latch
    a. Eleven Ga stationary latch welded securely to locker frame.
    b. Latch extends no more than 1-1/4 inch into locker opening, penetrating through cup.
    c. Flush-mounted, recessed stainless steel cup in a formed door with 18 Ga vertical back panel stiffener.
2. Special Needs Latch (ADA)
    a. Latching operation with a three-point/three-sided cremone latch (like the Sentry III) has an extended six inch handle creating a weighted counterbalance allowing activation by either upward or downward motion.

E. Hinges
1. Hinges to be 3 inch, five knuckle, 14 Ga heavy-duty fast pin welded to both door and frame.
2. Locker doors 42 inches high or less shall have 2 hinges.
3. Doors over 42 inches shall have 3 hinges.
4. Box lockers to have knife hinges securely riveted to shelves, tops and bottoms. Hinges attached to 3/16 rod securely welded to the hinge side of box locker door.

F. Slope Tops
1. Provide 18 Ga all welded slope top with 25 degree pitch, attached at factory with concealed fasteners. Slope top to be in addition to standard 16 Ga flat top.

G. Closed Bases
1. 4 inch high, 14 Ga welded steel base enclosed on all four sides securely welded to locker bottom.

H. Legs
1. 6 inch, 14 Ga gusset style legs securely welded to locker bottom.

I. Reinforced Bottom
1. Provide 16 Ga spacer channel welded to locker bottom from front to back for a more secure installation (when closed bases are not used).

J. Filler Panels: Manufacturer's standard fabricated from 18 Ga solid steel finished to match lockers. Provide slip joint fillers angle formed to receive filler panel.

K. Finish
1. Complete locker unit to be thoroughly cleaned, phosphatized and sealed.

2. Finish to be baked powder coat with a minimum 2-3 mil thickness.
3. Color of lockers shall be chosen from manufacturer's 25 standard colors.

2.03 LOCKER ACCESSORIES

A. Interior Equipment: Furnish each locker with the following items, unless otherwise indicated:
   1. Hooks
      a. Hooks to be heavy-duty forged steel with ball ends and zinc plated.
      b. Provide two single ceiling hooks and one double ceiling hook in each locker opening 20 inches or taller.
   2. Numbering
      a. Finish each locker with black anodized laser-etched aluminum number plate.
      b. Locate number plate near center of each door.
      c. Owner to furnish numbering sequence.
   3. Coat Rods: Manufacturer's standard zinc plated. Optional clothes rod in lieu of ceiling hook available (recommended for lockers 18 inches deep or greater).

2.04 BENCHES

A. Bench tops to be made of butcher block, maple hardwood 1-1/4 inches thick and 9-1/2 inches wide. Apply double coat of satin-gloss sealer for protection.
B. Pedestals
   1. Heavy Duty Pedestals: Heavy duty cast iron bell shaped base with a diameter of 7-3/4 inches threaded for 1-1/2 inch pipe. The pedestal is secured to the floor with a 1/2 inch by 5-1/2 inch concealed concrete anchor. Overall pedestal height is 16 inches. Misty Gray powder coat is standard, with optional standard color choice available.
   2. Standard Duty Pedestal: 1-5/16 inch steel tubing welded to a 7-3/4 inch diameter base and top flange. All parts are finished with zinc plating. Overall pedestal height is 16-1/4 inches.
   3. Moveable Pedestal: Gold anodized aluminum channel 1/8 inches thick by 3 inches wide. The trapezoidal shape measures 13-3/4 inches at the base. Overall pedestal height is 16 inches. To guard against skidding and scratching, a nonabrasive rubber pad is attached to the bottom of each leg.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Wall Installation
   1. Securely anchor every locker to wall and/or floor before use. Installation hardware to be determined based upon wall/floor construction.
   2. Tie adjacent locker units by bolting at four points, two at top and two at bottom, using 1/4 inch cadmium plated bolts.
B. Island Installation
   1. Securely anchor every locker to floor or base before use. Installation hardware to be determined based upon wall/floor construction.
   2. Tie adjacent locker units together by bolting at four points, two at top and two at bottom, using 1/4 inch cadmium plated bolts.
   3. Tie back-to-back locker units together with 1/4 inch cadmium plated bolts and washers.

3.02 ADJUSTING

A. General Requirements: Upon completion of installation, inspect lockers and adjust for proper door and locking mechanism operation.

3.03 CLEANING

A. General Requirements
   1. Clean interior and exposed exterior surfaces, removing debris, dust, dirt and foreign substances on exposed surfaces.
   2. Touch up scratches and abrasions to match original finish.
   3. Polish stainless steel and non-ferrous metal surfaces.
   4. Replace locker units that cannot be restored to factory-finished appearance.
   5. Use only materials and procedures recommended by locker manufacturer.

END OF SECTION

SECTION 263213

ENGINE GENERATORS

1. GENERAL

1.1. SUMMARY

1.1.1. Section includes engine generator set, exhaust silencer and fittings, fuel fittings and sub base tank, remote control panel, battery, charger and sound attenuated weatherproof enclosure.

1.1.2. The CONTRACTOR shall furnish and install as a part of the engine-generator package a complete system of the Automatic Transfer Switch. The Automatic Transfer Switch shall be based on Emergency Generator Set manufacturer's product, 4 Poles, 3-phase, four wires with current ratings noted on the drawings.

1.2. REFERENCES

1.2.1. National Electrical Manufacturers Association

1.2.1.1. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.2.1.2. NEMA AB 1 - Molded Case Circuit Breakers and Molded Case Switches.

1.2.1.3. NEMA ICS 10 - Industrial Control and Systems: AC Transfer Switch Equipment.

1.2.1.4. NEMA MG 1 - Motors and Generators.

1.2.2. International Electrical Testing Association:

1.2.2.1. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

1.2.3. National Fire Protection Association:

1.2.3.1. NFPA 30 - Flammable and Combustible Liquids Code.

1.2.3.2. NFPA 110 - Standard for Emergency and Standby Power Systems.

1.3. SYSTEM DESCRIPTION

1.3.1. Description: Engine generator assembly, Automatic Transfer Switch and accessories to provide source of power for Level 1 and 2 applications in accordance with NFPA 110.

1.3.2. Capacity: As required with standby rating using specified engine cooling scheme.

1.3.3. Diesel generator muffler, flex and mounting hardware.

1.3.4. 24 hour minimum fuel capacity with dual wall sub-base fuel storage tank. Tank shall be constructed of corrosion resistance steel material. Tank shall be equipped with Leak detection system.

1.3.5. Provide engine generators approved by SCAQMD and local environmental agency for use as emergency backup and Tier 3 regulations compliance.

1.4. SUBMITTALS

1.4.1. Shop Drawings: Indicate electrical characteristics and connection requirements. Include plan and elevation views with overall and interconnection point dimensions, fuel consumption rate curves at various loads, ventilation and combustion air requirements, electrical diagrams including schematic and interconnection diagrams.

1.4.2. Product Data: Submit data showing dimensions, weights, ratings, interconnection points, and internal wiring diagrams for engine, generator, control panel, transfer switch, battery, battery rack, battery charger, exhaust silencer, vibration isolators, day tank, and remote radiator.

1.4.3. Test Reports: Indicate results of performance testing.

1.4.4. Manufacturer's Field Reports: Indicate inspections, findings, and recommendations.

1.5. CLOSEOUT SUBMITTALS

1.5.1. Operation and Maintenance Data: Submit instructions and service manuals for normal operation, routine maintenance, oil sampling and analysis for engine wear, and emergency maintenance procedures. Include list of spare parts.

1.6. FACTORY PROTOTYPE TESTING

1.6.1. The system manufacturer must certify that engine, generator and controls have been tested as a complete system of representative engineering models (not on equipment sold). The manufacturer shall supply equipment that is a current factory standard production model.

1.6.2. Prototype testing shall include:

1.6.2.1. Fuel consumption at 1/4, 1/2, 3/4 and full load.

1.6.2.2. Exhaust emissions.

1.6.2.3. Mechanical and exhaust noise.

1.6.2.4. Governor speed regulation at 1/4, 1/2, 3/4 and full load; and during transients

1.6.2.5. Motor starting kVA.

1.6.2.6. Generator temperature rise in accordance with NEMA MG1-22.40 and 16.40

1.6.2.7. Harmonic analysis, voltage waveform deviation and telephone influence factor.

1.6.2.8. Generator short circuit capability.

1.6.2.9. Cooling system performance.

1.6.2.10. 3 phase short circuit tests.

1.6.2.11. Maximum power (kW)

1.7. QUALIFICATIONS

1.7.1. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience, and with service facilities within 100 miles of project.

1.7.2. Supplier: Authorized distributor of specified manufacturer with minimum ten years documented experience.

1.8. WARRANTY

1.8.1. The manufacturer shall warrant the material and the workmanship of the Engine-Generator assembly and Auto Transfer Switch for minimum of five year from Final Acceptance Date.

1.8.2. Five Year Manufacturer Warranty: The manufacturer's standard warranty shall in no event be for a period of less than five years form date of final acceptance date, after initial start-up of the system and shall include repair parts, labor, reasonable travel expense necessary for repairs at the job site, and expendables (lubricating oil, filters, antifreeze, and other service items made unusable by the defect) used during the course of repair.

1.9. MAINTENANCE SERVICE

1.9.1. Furnish service and maintenance of engine generators for five years from Date of Substantial Completion.

1.10. MAINTENANCE MATERIALS FOR EACH ENGINE GENERATOR

1.10.1. Furnish one set of tools required for preventative maintenance of engine generator system. Package tools in adequately sized metal tool box.

1.10.2. Furnish two of each fuel, oil and air filter element.

2. PRODUCTS

2.1. BASIS OF DESIGN

2.1.1. KOHLER Power Systems Model 50REOZJD, 50kW Standby Rating, 208/120V-3Phase, 4 Wire-60Hz, EPA NSPS Stationary Emergency Tier 3 Emission Level. Steel Sound attenuated Housing with Muffler Enclosure and 20-50KW Dual Wall Subset Fuel Tank (min 24 Hour).

2.1.2. Automatic Transfer Switch : 7000 Series ASCO Automatic Transfer Switch, 7ATS B 3200 C5X-C open transition, 200A-4P in UL type 1 Enclosure, with accessory 1G, 18B/18G, 31Z, 72EE2, 125A. Or alternate approved KOHLER Power Systems Automatic Transfer Switch equal product.

2.2. ENGINE

2.2.1. Manufacturers:

2.2.1.1. Kohler.

2.2.1.2. Cummins.

2.2.2. Product Description: Air-cooled in-line or V-type, four-stroke cycle, compression ignition Diesel internal combustion engine.

2.2.3. Rating: Sufficient to operate under 10 percent overload for one hour in ambient of 90 ° F.

2.2.4. Fuel System: No. 2 fuel oil.

2.2.5. Engine speed: 1800 rpm.

2.2.6. Safety Devices: Engine shutdown on high water temperature, low oil pressure, overspeed, and engine overcrank. Limits as selected by manufacturer.

2.2.7. Engine Starting: DC starting system with positive engagement, number and voltage of starter motors in accordance with manufacturer's instructions. Furnish remote starting control circuit, with MANUALOFF-REMOTE selector switch on engine-generator control panel.

2.2.8. Engine Jacket Heater: Thermal circulation type water heater with integral thermostatic control, sized to maintain engine jacket water at 90 degrees F, and suitable for operation on 120 volts AC, single phase.

2.2.9. Radiator: Radiator using glycol coolant, with blower type fan, sized to maintain safe engine temperature in ambient temperature of 110 degrees F. Radiator air flow restriction 0.5 inches of water maximum.

2.2.10. Engine Accessories: Fuel filter, lube oil filter, intake air filter, lube oil cooler, fuel transfer pump, fuel priming pump, gear-driven water pump. Furnish fuel pressure gage, water temperature gage, and lube oil pressure gage on engine/generator control panel.

2.2.11. Mounting: Furnish unit with suitable vibration isolators and mount on structural steel base on sub-base double wall sub-base tank.

2.3. GENERATOR

2.3.1. Manufacturers: As provided by engine generator manufacturer.

2.3.2. Product Description: NEMA MG1, three phase, four pole, drip proof, re-connectable brushless synchronous generator with brushless exciter. 2/3 pitch Stator and single bearing, flexible discs Rotor.

2.3.3. Insulation: The insulation material shall meet NEMA standards for Class H insulation and be vacuum impregnated with epoxy varnish to be fungus resistant. Temperature rise of the rotor and stator shall not exceed NEMA class F. The excitation system shall be of brushless construction.

2.3.4. Temperature Rise: 130 degrees C Standby, maximum as measured by resistance and based on 40 degrees C ambient temperature.

2.3.5. Enclosure: NEMA MG1, open drip proof

2.3.6. Total Harmonic Distortion (THD): Not to exceed three percent for any single harmonic..

2.3.7. Telephone Influence: Below 50 per- NEMA MG1-22.43.

2.3.8. Exciter (Self-Excited): The self-excited, brushless exciter shall consist of a three-phase armature and a three-phase full wave bridge rectifier mounted on the rotor shaft. Surge suppressors shall be included to protect the diodes from voltage spikes.

2.3.9. Automatic Voltage Regulator: The digital automatic voltage regulator (DVR) shall maintain generator output voltage within +/- 0.5% for any constant load between no load and full load. The regulator shall be a totally solid state design, which includes electronic voltage buildup, volts per Hertz regulation, three phase sensing, over excitation protection, loss of sensing protection, temperature compensation, shall limit voltage overshoot on startup, and shall be environmentally sealed.

2.4. GOVERNOR

2.4.1. Manufacturers: As provided by engine generator manufacturer.

2.4.2. Product Description: Isochronous governor 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. Equip governor with means for manual operation and adjustment.

2.5. CIRCUIT BREAKER

2.5.1. Circuit Breaker Specifications: Provide a generator mounted circuit breaker, molded case or insulated case construction, rating as indicated. Breaker shall utilize a thermal magnetic trip unit. The breaker shall be UL listed and shall be set to protect the generator from short circuit damage. Breaker shall be housed in an extension terminal box mounted on the side of the generator. Mechanical type lugs, sized for the circuit breaker feeders, shall be supplied on the load side of breaker.

2.5.2. Provide an additional circuit breaker for the radiator mounted load bank if applicable.

2.6. CONTROL PANEL

2.6.1. Generator Mounted Control Panel: Provide a generator mounted control panel for complete control and monitoring of the engine and generator set functions. Panel shall include automatic start/stop operation; adjustable cycle cranking, digital AC metering (0.5% true rms accuracy) with phase selector switch, digital engine monitoring, shutdown sensors and alarms with horn and reset, adjustable cool down timer and emergency stop push-button. Panel shall incorporate self-diagnostics capabilities and fault logging. Critical components shall be environmentally sealed to protect against failure from moisture and dirt. Components shall be housed in a NEMA 1/IP22 enclosure with hinged lid.

2.6.2. Digital Readouts: Provide the following digital readouts:

2.6.2.1. Engine oil pressure

2.6.2.2. Coolant temperature

2.6.2.3. Engine RPM

2.6.2.4. System DC Volts

2.6.2.5. Engine running hours

2.6.2.6. Generator AC volts

2.6.2.7. Generator AC amps

2.6.2.8. Generator frequency

2.6.2.9. KW meter

2.6.2.10. Percentage of rated Power

2.6.2.11. KVA meter

2.6.2.12. KVAR meter

2.6.2.13. Power Factor meter

2.6.2.14. KWHR meter

2.6.3. Alarm NFPA 110: Provide the following indications for protection and diagnostics according to NFPA 110 level 1:

2.6.3.1. Low oil pressure

2.6.3.2. High water temperature

2.6.3.3. Low coolant level

2.6.3.4. Overspeed

2.6.3.5. Over crank

2.6.3.6. Emergency stop depressed

2.6.3.7. Approaching high coolant temperature

2.6.3.8. Approaching low oil pressure

2.6.3.9. Low coolant temperature

2.6.3.10. Low voltage in battery

2.6.3.11. Control switch not in auto. position

2.6.3.12. Low fuel main tank

2.6.3.13. Battery charger ac failure

2.6.3.14. High battery voltage

2.6.3.15. EPS supplying load

2.6.3.16. Base mounted tank low fuel level

2.6.3.17. Base mounted tank high fuel level

2.6.3.18. Spare

2.6.4. Remote Annunciator NFPA 110: Provide one remote annunciator to meet the requirements of NFPA 110, Level 1. The annunciator will be installed by contractor. The annunciator shall provide remote annunciation of all points stated above and shall incorporate ring-back capability so that after silencing the initial alarm, any subsequent alarms will sound the horn.

2.6.5. Programmable Control Panel: Provide programmable protective relay functions inside the control panel to include the following:

2.6.5.1. Undervoltage

2.6.5.2. Overvoltage

2.6.5.3. Over frequency

2.6.5.4. Under frequency

2.6.5.5. Reverse power

2.6.5.6. Overcurrent (phase and total)

2.6.5.7. KW level (overload)

2.6.5.8. Three spare LED's

2.6.5.9. Four spare inputs

2.7. FUEL SYSTEM

2.7.1. Fuel Filter: Filter/Separator - In addition to the standard fuel filters provided by the engine manufacturer, there shall also be installed a primary fuel filter/water separator in the fuel inlet line to the engine.

2.7.2. Fuel Piping: All fuel piping shall be black iron or flexible fuel hose rated for this service. No galvanized piping will be permitted.

2.7.3. Fuel Line Rating: Flexible fuel lines rated 300 degrees F and 100 PSI.

2.7.4. Sub-Base Fuel Tank, dual wall with annular leak detection system.

2.8. SUB-BASE FUEL TANK

2.8.1. Manufacturers:

2.8.1.1. Kohler

2.8.1.2. International Supply Co.

2.8.1.3. Tramont

2.8.2. Provide a sub-base dual-wall fuel tank for the generator set, sized to allow 24 hours of operation.

2.8.2.1. All Protected Base Tanks are UL Secondary Containment list and labeled. It is comprised of a UL142 steel tank, enclosed by a UL142 steel outer shell with a interstitial monitoring tube. All steel tanks are tightness tested at the manufacturer's facility, in accordance with testing procedures specified by UL142 for AST's, and meet UL requirements for standard and emergency venting. The interior of the primary tank has been cleaned and free of any loose material, mill scale, or debris.

2.8.2.2. The base tank shall be furnished as a complete, factory assembled and tested assembly and listed as an assembly by Underwriters Laboratories, to UL 142 and factory installed.

2.8.2.3. Primary tanks shall be of minimum thickness per UL 142. Inner tanks will be of rectangular configuration per UL standard 142. All welds must comply with AWS, and ASME IX and ASME B31.1. Designed to meet requirements of NFPA 30, NFPA 37 and NFPA 110.

2.8.2.4. Secondary containment consists of UL 142 primary tank, completely enclosed by a UL 142 secondary containment tank, which is 110% of the primary. Primary and secondary tank will be Rectangular in configuration. Both tanks are pressure tested to between 3PSI and 5PSI per UL requirements. Insulation material will be of a lightweight concrete design. Concrete will be poured in a monolithic method to eliminate voids. The minimum insulation thickness will be 6". The exterior of the tank will be steel.

2.8.2.5. All tank systems and sub-assemblies shall be installed in strict accordance with the manufacturer's recommendations and applicable fire and environmental codes.

2.8.2.6. All tanks are primed with a Rust-Oleum Shop Coat Enamel. Top coat is an Alkyd High Gloss Enamel paint (Sherwin WilliamsSW6004 Mink.)

2.8.2.7. Tanks shall be marked on a visible side with "Flammable", "Combustible", and "No Smoking", product identification, and other signs as required by state and local codes.

2.8.2.8. The system installation (end user) shall be inspected and approved by the system installer or its certified contractor. The system installer shall submit a comprehensive checklist of quality and safety items associated with the installation of the system and its sub-assemblies to verify that the installation is in compliance with applicable local fire and environmental codes.

2.8.3. Features

2.8.3.1. Emergency tank and basin vents. Normal Vent extended 12 ft above grade

2.8.3.2. Over Fill Prevention Valve

2.8.3.3. Mechanical level gauge.

2.8.3.4. Fuel supply and return lines, connected to generator set with flexible fuel lines as recommended by the engine manufacturer and in compliance to UL2200 and NFPA requirements.

2.8.3.5. Leak detection complete system, wired to the generator set control for local and remote alarm indication.

2.8.3.6. High and low level float switches to indicate fuel level. Wire switches to generator control for local and remote indication of fuel level.

2.8.3.7. Basin drain.

2.8.3.8. Integral lifting provisions

2.9. NSPS CI STATIONARY EMERGENCY TIER 3 CERTIFIED ENGINE EXHAUST

2.9.1. Provide and install as per manufacturer recommendations.

2.9.2. Silencer: A critical type silencer, companion flanges, and flexible stainless steel exhaust fitting properly sized shall be furnished and installed according to the manufacturer's recommendation. Mounting shall be provided by the contractor. The silencer shall be mounted so that its weight is not supported by the engine nor will exhaust system growth due to thermal expansion be imposed on the engine. Exhaust pipe size shall be sufficient to ensure that exhaust backpressure does not exceed the maximum limitations specified by the engine manufacturer.

2.9.3. Exhaust System: The muffler and all indoor exhaust piping shall be "lagged" by the contractor to maintain a surface temperature not to exceed 150 degrees F. The insulation shall be installed so that it does not interfere with the functioning of the flexible exhaust fitting.

2.9.4. Muffler shall be critical type similar to Nelson-300 or equal. Provide engine exhaust roof thimbles with flexible tubes and pipes as required.

2.10. STARTING SYSTEM

2.10.1. Starting Motor: The engine shall be started by a 12V DC electric starting motor. Crank termination switch and 12V DC fuel solenoid valve shall be provided for remote automatic start/stop capability.

2.10.2. Jacket Water Heater: A unit mounted forced circulation type water heater. The heater Watt rating shall be sized by the manufacturer to maintain jacket water temperature at 90 degrees F, and shall be a 120/208volt, single phase, 60 hertz.

2.10.3. Batteries: Lead acid batteries of sufficient capacity for four 15 second crank periods with 10 second rest intervals shall be furnished. Battery voltage of 24 V DC shall be derived from four 12 V DC, 205 amp hour high performance batteries, dry charged. Two battery interconnection cables and four battery-to starter cables.

2.10.3.1. Battery Trays: A battery tray shall be provided for the batteries and shall conform to NEC 480-7(b). It shall be treated to be resistant to deterioration by battery electrolyte. Further, construction shall be such that any spillage or boil-over battery electrolyte shall be contained within the tray to prevent a direct path to ground.

2.10.3.2. Battery Charger: A current limiting battery charger shall be furnished to automatically recharge batteries. Charger shall float at 2.17 volts per cell and equalize at 2.33 volts per cell. It shall include overload protection, silicon diode full wave rectifiers, voltage surge suppressor, DC ammeter, DC voltmeter, and fused AC input. Ac input voltage shall be 120 volts, single phase. Charger shall have LED annunciation for low DC volts, rectifier failure, loss of AC power, high DC volts. Amperage output shall be no less than ten (10) amperes. Charger shall be wall-mounting type in NEMA 1 enclosure, factory mounted inside the generator enclosure.

2.11. AUTOMATIC TRANSFER SWITCH

2.11.1. Automatic Transfer Switch is based on ASCO, or alternate approved Emergency Generator Set manufacturer's product.

2.11.2. Transfer switches utilizing molded case circuit breakers do not meet the requirements of this specification and will not be accepted.

2.11.3. Neutral Switching: Transfer switches designated on the drawings as 4-pole shall be provided with a switched neutral pole. The neutral pole shall be of the same construction and have the same ratings as the phase poles. All poles shall be switched simultaneously using a common crossbar. Substitute equipment using overlapping neutral contacts is not acceptable.

2.11.4. Fault-Current Closing and Withstand Ratings: UL 1008 WCR ratings must be specifically listed as meeting the requirements for use with protective devices at installation locations, under specified fault conditions. Withstand and closing ratings shall be based on use of the same set of contacts for the withstand test and the closing test.

2.11.5. Solid-State Controls: All settings should be accurate to +/- 2% or better over an operating temperature range of - 40 to + 60 degrees C (- 40 to + 140 degrees F).

2.11.6. Control: Transfer switch control shall be capable of communicating with the genset control, other switches and remote programming devices over a high-speed network interface.

2.11.7. Factory wiring: Transfer switch internal wiring shall be composed of pre-manufactured harnesses that are permanently marked for source and destination. Harnesses shall be connected to the control system by means of locking disconnect plug(s), to allow the control system to be easily disconnected and serviced without disconnecting power from the transfer switch mechanism.

2.11.8. Automatic Transfer Switch Control Features

1) The transfer switch control system shall be configurable in the field for any operating voltage level up to 600 VAC. Voltage sensing shall be monitored based on the normal voltage at the site. Systems that utilize voltage monitoring based on standard voltage conditions that are not field configurable are not acceptable.

2) All transfer switch sensing shall be configurable from an operator panel or from a Windows XP or later PC-based service tool. Designs utilizing DIP switches or other electromechanical devices are not acceptable.

3) The transfer switch shall be configurable to accept a relay contact signal and a network signal from an external device for load shedding purposes. On receipt of this signal, the transfer switch shall switch to a neutral position when connected to Source 2. If Source 1 is available when the load-shed signal is received, the transfer switch shall connect to Source 1.

4) The transfer switch shall be configurable to accept a relay contact signal and a network signal from an external device to prevent transfer to the generator service.

5) The transfer switch shall provide a relay contact signal prior to transfer or re-transfer. The time period before and after transfer shall be adjustable in a range of 0 to 50 seconds.

6) The control system shall be designed and prototype tested for operation in ambient temperatures from - 40 degrees C to + 60

degrees C (- 40 to +140 degrees F). It shall be designed and tested to comply with the requirements of the noted voltage and RFI/EMI standards.

7) The control shall have optically isolated logic inputs, high isolation transformers for AC inputs and relays on all outputs, to provide optimum protection from line voltage surges, RFI and EMI.

2.12. VIBRATION ISOLATORS FOR EACH ENGINE GENERATOR

2.12.1. For unit to base provide neoprene acoustical pads, leveling devices and vertical limit stops. Minimum static deflection shall be 1 inch.

2.12.2. For base to concrete pad spring mountings, provide adjustable type to provide minimum clearance of 4 inches between structural base and floor, with alignment and lift off restraints.

2.12.3. Provide for engine-generator set base, engine-generator set base and remote radiator and silencer and exhaust pipe.

2.13. SPARE PARTS

2.13.1. Deliver 1 set of filter elements (air, fuel and oil), complete set of fuses, for each size used and one belt for every belt drive to District at final acceptance.

2.14. ENCLOSURE

2.14.1. Provide a weather proof enclosure, Quiet Level 2 (70dBA average at 7m). Corrosion resistance material and finish for enclosures, skid bases and fuel tanks shall be used for salt air in coastal regions to prevent corrosion issues on outdoor installation.

2.15. SOURCE QUALITY CONTROL

2.15.1. Provide shop inspection and testing of completed assembly.

2.15.2. Make completed engine-generator assembly available for inspection at manufacturer's factory prior to packaging for shipment. Notify District at least seven days before inspection is allowed.

2.15.3. Allow witnessing of factory inspections and tests at manufacturer's test facility. Notify District at least seven days before inspections and tests are scheduled.

3. EXECUTION

3.1. INSTALLATION

3.1.1. Install equipment in accordance with manufacturer's recommendations, and all applicable codes.

3.1.2. Install engraved plastic nameplates.

3.1.3. Ground and bond generator and other electrical system components.

3.1.4. The Contractor shall be responsible to install the remote annunciator panel for the Emergency Generator System in the Dispatch area. Exact location to be provided during construction.

3.2. START-UP AND TESTING

3.2.1. Inspect and test in accordance with NETA ATS, except Section 4.

3.2.2. Perform inspections and tests listed in NETA ATS, Section 7.22.

3.2.3. Coordinate all start-up and testing activities with Compton CCD.

3.2.4. After installation is complete and normal power is available, the manufacturer's local dealer shall perform the following:

3.2.4.1. Verify that the equipment is installed properly.

3.2.4.2. Check all auxiliary devices for proper operation, including battery charger, jacket water heater(s), generator space heater, remote annunciator, etc.

3.2.4.3. Test all alarms and safety shutdown devices for proper operation and annunciation.

3.2.4.4. Check all fluid levels.

3.2.4.5. Start engine and check for exhaust, oil, fuel leaks, vibrations, etc.

3.2.4.6. Verify proper voltage and phase rotation at the transfer switch before connecting to the load.

3.2.4.7. Perform a 4-hour load bank test at 1.0 power factor at full nameplate load using a resistive load bank and cables supplied with the generator. Observe and record the following data at 15-minute intervals:

3.2.4.7.1. Service meter hours

3.2.4.7.2. Volts AC - All phases

3.2.4.7.3. Amps AC - All phases

3.2.4.7.4. Frequency

3.2.4.7.5. Power factor

3.2.4.7.6. Jacket water temperature

3.2.4.7.7. Oil Pressure

3.2.4.7.8. Fuel pressure

3.2.4.7.9. Ambient temperature

3.2.4.8. Connect the generator to building load and verify that the generator will start and run all designated loads in the building.

3.2.5. Contractor is required to fill the emergency generator fuel tank to ¾ full after all testing and training is completed.

3.3. FIELD QUALITY CONTROL

3.3.1. Inspect and test in accordance with NETA ATS, except Section 4.

3.3.2. Perform inspections and tests listed in NETA ATS, Section 7.22.

3.4. MANUFACTURER'S FIELD SERVICES

3.4.1. Prepare and start up engine-generator assembly.

3.5. ADJUSTING

3.5.1. Adjust generator output voltage and engine speed to meet specified ratings.

3.6. CLEANING

3.6.1. Clean engine and generator surfaces. Replace oil and fuel filters with new.

3.7. TRAINING

3.7.1. Furnish four hours of instruction to be conducted at project site with manufacturer's representative to District choice of staff to be trained. Provide training session for each of 3 shifts.

3.7.2. Describe loads connected to emergency and standby system and restrictions for future load additions.

3.7.3. Simulate power outage by interrupting normal source, and demonstrate system operates to provide emergency and standby power.

3.7.4. Provide manuals for attendees.

END OF SECTION

SECTION 32 31 17

ORNAMENTAL METAL FENCES AND GATES

PART 1 – GENERAL

1.01 SECTION INCLUDES

1.01.1 The contractor shall provide all labor, materials and appurtenances necessary for installation of the welded ornamental steel fence system defined herein

1.02 PRODECTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

1.02.1 Section 03 30 00 – Cast-In-Place Concrete.

1.03 SYSTEM DESCRIPTION

1.03.1 The manufacturer shall supply a total fence system of Montage II Welded and Rackable Classic design. The system shall include all components (i.e., panels, posts, gates and hardware) required.

1.04 QUALITY ASSURANCE

1.04.1 The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

1.05 REFERENCES

1.05.1 ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process

1.05.2 ASTM B117 - Practice for Operating Salt-Spray (Fog) Apparatus.

1.05.3 ASTM D523 - Test Method for Specular Gloss.

1.05.4 ASTM D714 - Test Method for Evaluating Degree of Blistering in Paint.

1.05.5 ASTM D822 - Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.

1.05.6 ASTM D1654 - Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.

1.05.7 ASTM D2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.

1.05.8 ASTM D2794 - Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

1.05.9 ASTM D3359 - Test Method for Measuring Adhesion by Tape Test.

1.05.10 ASTM F2408 – Ornamental Fences Employing Galvanized Steel Tubular Pickets

1.06 SUBMITTAL

1.06.1 Submit under provisions of Division 01.

1.06.2 Product Data: Provide data on fence material, finishes and attachment.

1.06.3 Manufacturer's Installation Instructions: Submit criteria for preparation and application.

1.06.4 Samples: Accompanying materials list, submit three samples of each fence type., showing panel connection to post. Grind and seal all edges.

1.06.5 Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

1.06.6 Ornamental fence gate manufacturer shall be responsible for fencing, post and gate hinge engineering and anchorage. Provide shop drawings and calculations for fence and gate assemblies, signed by a California registered structural engineer.

1.06.7 Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.

1.07 PRODUCT HANDLING AND STORAGE

1.07.1 Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft

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1.08 PRODUCT WARRANTY

1.08.1 All structural fence components (i.e. rails, pickets, and posts) shall be warranted within specified limitations, by the manufacturer for a period of 20 years from date of original purchase. Warranty shall cover any defects in material finish, including cracking, peeling, chipping, blistering or corroding.

1.08.2 Reimbursement for labor necessary to restore or replace components that have been found to be defective under the terms of manufactures warranty shall be guaranteed for five (5) years from date of original purchase.

PART 2 – MATERIALS

2.01 MANUFACTURER

2.01.1 The fence system shall conform to Montage II Welded and Rackable Classic design, extended picket, bottom rail treatment, 3-Rail style manufactured by Ameristar Fence Products, Inc., in Tulsa, Oklahoma.

2.02 MATERIAL

2.02.1 Steel material for fence panels and posts shall conform to the requirements of ASTM A653/A653M, with a minimum yield strength of 45,000 psi (310 MPa) and a minimum zinc (hot-dip galvanized) coating weight of 0.90 oz/ft2 (276 g/m2), Coating Designation G-90.

2.02.2 Material for pickets shall be 1" square x 14 Ga. tubing. The rails shall be steel channel, 1.75" x 1. 75" x .105". Picket holes in the rail shall be spaced 4.715" o.c. Fence posts and gate posts shall meet the minimum size requirements of Table 1.

2.03 FABRICATION

2.03.1 Pickets, rails and posts shall be pre-cut to specified lengths. Rails shall be pre-punched to accept pickets.

2.03.2 Pickets shall be inserted into the pre-punched holes in the rails and shall be aligned to standard spacing using a specially calibrated alignment fixture. The aligned pickets and rails shall be joined at each picket-to-rail intersection by Ameristar's proprietary fusion welding process, thus completing the rigid panel assembly (Note: The process produces a virtually seamless, spatter-free good-neighbor appearance, equally attractive from either side of the panel).

2.03.3 The manufactured panels and posts shall be subjected to an inline electrodeposition coating (E-Coat) process consisting of a multi-stage pretreatment/wash, followed by a duplex application of an epoxy primer and an acrylic topcoat. The minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils (0.058 mm). The color shall be Black.The coated panels and posts shall be capable of meeting the performance requirements for each quality characteristic shown in Table 2 (Note: The requirements in Table 2 meet or exceed the coating performance criteria of ASTM F2408).

2.03.4 The manufactured fence system shall be capable of meeting the vertical load, horizontal load, and infill performance requirements for Industrial weight fences under ASTM F2408.

2.03.5 Swing gates shall be fabricated using 1.75" x 14ga Forerunner double channel rail, 2" sq. x 12ga. gate ends, and 1" sq. x 14ga. pickets. Gates that exceed 6' in width will have a 1.75" sq. x 14ga. intermediate upright. All rail and upright intersections shall be joined by welding. All picket and rail intersections shall also be joined by welding. Gusset plates will be welded at each upright to rail intersection. Cable kits will be provided for additional trussing for all gates leaves over 6'.

2.03.6 Pedestrian swing gates shall be self-closing, having a gate leaf no larger than 48" width. Integrated hinge-closer set (2 qty) shall be ADA compliant that shall include a variable speed and final snap adjustment with compact design (no greater than 5" x 6" footprint). Hinge-closer set (2 qty) shall be tested to a minimum of 500,000 cycles and capable of self-closing gates up to a maximum gate weight of 260 lbs. and maximum weight load capacity of 1,500 lbs. Hinge-closer device shall be externally mounted with tamper-resistant security fasteners, with full range of adjustability, horizontal (.5" - 1.375") and vertical (0 - .5"). Maintenance free hinge-closer set shall be tested to operate in temperatures of negative 20 F to 200 F degrees, and swings to negative 2 degrees to ensure reliable final lock engagement.

PART 3 – EXECUTION

3.01 PREPARATION

3.01.1 All new installation shall be laid out by the contractor in accordance with the construction plans.

3.02 FENCE INSTALLATION

3.02.1 Fence post shall be spaced according to Table 3, plus or minus ½". For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Fence panels shall be attached to posts with brackets supplied by the manufacturer. Posts shall be set in concrete footers having a minimum depth of 36" (Note: In some cases, local restrictions of freezing weather conditions may require a greater depth). The "Earthwork" and "Concrete" sections of this specification shall govern material requirements for the concrete footer. Posts setting by other methods such as plated posts or grouted core-drilled footers are permissible only if shown by engineering analysis to be sufficient in strength for the intended application

3.03 FENCE INSTALLATION MAINTENANCE

3.03.1 When cutting/drilling rails or posts adhere to the following steps to seal the exposed steel surfaces; 1) Remove all metal shavings from cut area. 2) Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry. 3) Apply 2 coats of custom finish paint matching fence color. Failure to seal exposed surfaces per steps 1-3 above will negate warranty. Ameristar spray cans or paint pens shall be used to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray. Use of non-Ameristar parts or components will negate the manufactures' warranty

3.04 GATE INSTALLATION

3.04.1 Gate posts shall be spaced according to the manufacturers' gate drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected. Type and quantity of gate hinges shall be based on the application; weight, height, and number of gate cycles. The manufacturers' gate drawings shall identify the necessary gate hardware required for the application. Gate hardware shall be provided by the manufacturer of the gate and shall be installed per manufacturer's recommendations.

3.05 CLEANING

3.05.1 The contractor shall clean the jobsite of excess materials; post-hole excavations shall be scattered uniformly away from posts.

Table 1 – Minimum Sizes for Montage II Posts

Fence Posts	Panel Height		
2-1/2" x 12 Ga.	Up to & Including 6' Height		
3" x 12 Ga.	Over 6' Up to & Including 8' Height		
Gate Leaf	Gate Height		
	Up to & Including 4'	Over 4' Up to & Including 6'	Over 6' Up to & Including 8'

Up to 4’	2-1/2” x 12 Ga.	3” x 12 Ga.	3” x 12 Ga.
4’1” to 6’	3” x 12Ga.	4” x 11 Ga.	4” x 11 Ga.
6’1” to 8’	3” x 12 Ga.	4” x 11 Ga.	6” x 3/16”
8’1” to 10’	4” x 11 Ga.	6” x 3/16”	6” x 3/16”
10’1” to 12’	4” x 11 Ga.	6” x 3/16”	6” x 3/16”
12’1” to 14’	4” x 11 Ga.	6” x 3/16”	6” x 3/16”
14’1” to 16’	6” x 3/16”	6” x 3/16”	6” x 3/16”

Table 2 – Coating Performance Requirements

Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 1,500 hours (Scribed per D1654; failure mode is accumulation of 1/8” coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625” ball).
Weathering Resistance	D822 D2244, D523 (60˚ Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

Table 3 – Montage II – Post Spacing By Bracket Type

	For INVINCIBLE® 8’ Nominal (91-1/2” Rail)				For CLASSIC, GENESIS, & MAJESTIC 8’ Nominal (92-5/8” Rail)					
Post Size	2-1/2”	3”	2-1/2”	3”	2-1/2”	3”	2-1/2”	3”	2-1/2”	3”
Bracket Type	Industrial Flat Mount (BB301)*		Industrial Line 2-1/2” (BB319)		Industrial Universal 2.5” (BB302)		Industrial Flat Mount (BB301)		Industrial Swivel (BB304)*	

			3" (BB320)		3" (BB303)					
Post Settings ± ½" O.C.	94-1/2"	95"	94-1/2"	95"	96"	96-1/2"	96"	96-1/2"	*96"	*96-1/2"
*Note: When using BB304 swivel brackets on either or both ends of a panel installation, care must be taken to ensure the spacing between post and adjoining pickets meets applicable codes. This will require trimming one or both ends of the panel. When using the BB301 flat mount bracket for Invincible style, rail may need to be drilled to accommodate rail to bracket attachment.										

PART 4 – STEEL ROLLING GATES

4.01 WORK INCLUDED

4.01.1 The contractor shall provide all labor, materials and appurtenances necessary for installation of the steel roll gate system defined herein.

4.02 SYSTEM DESCRIPTION

4.02.1 The manufacturer shall supply a total roll gate system of Ameristar PassPort II Industrial Ornamental design series and Classic style. The system shall include all components (i.e., pickets, rails, gate uprights, wheels and hardware) required.

4.03 QUALITY ASSURANCE

4.03.1 The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

4.04 REFERENCES

4.04.1 ASTM B117 - Practice for Operating Salt-Spray (Fog) Apparatus.

4.04.2 ASTM D523 - Test Method for Specular Gloss.

4.04.3 ASTM D714 - Test Method for Evaluating Degree of Blistering in Paint.

4.04.4 ASTM D822 - Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.

4.04.5 ASTM D1654 - Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.

4.04.6 ASTM D2244 - Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.

4.04.7 ASTM D2794 - Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

4.04.8 ASTM D3359 - Test Method for Measuring Adhesion by Tape Test

4.05 SUBMITTAL

4.05.1 The manufacturer's submittal package shall be provided prior to installation.

4.06 PRODUCT HANDLING AND STORAGE

4.06.1 Upon receipt at the job site, all materials shall be checked to ensure that no damages occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage and to protect against damage, weather, vandalism and theft.

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4.07 MANUFACTURER

4.07.1 The steel roll gate system shall conform to Ameristar PassPort II Industrial Ornamental design series, Classic style and 3-rail frame configuration manufactured by Ameristar Fence Products, Inc. in Tulsa, Oklahoma.

4.08 GATE OPERATOR

4.08.1 Manufacturer: Tymetal Corporation www.tymetal.com, or equal

4.08.2 Series/Model: TYM 1000 Gate Operator.

4.08.3 Characteristics

4.08.2.1 Power: 1/2 HP, 115 V, single phase.

4.08.2.2 Rating: 1000 pound Maximum gate weight

4.08.2.3 Compliance: UL 325 and 991 compliant, with integrated entrapment sensing

4.08.2.4 Controls: Apex Controller with loop sensor, remote control devices, and delay functions.

4.09 MATERIAL

4.09.1 Steel material for roll gate components (i.e. pickets, rails, diagonals and uprights), shall be commercial steel with a minimum yield strength of 45,000 psi (344 MPa).

4.09.2 Ornamental picket material shall be 1" square x 14 Ga. Tubing. Picket spacing shall be 4-3/4". Material for toprails, uprights and diagonals rails shall be 2" square x 12 Ga. Material for the bottom rail shall be 2" x 4" x 11 Ga. Posts shall be a minimum of 4" square x 11 Ga.

4.10 FABRICATION

4.10.1 Pickets/pales, rails, uprights and posts shall be precut to specified lengths. Diagonals shall be precut to specified lengths and angles. Frame materials shall be joined by welding. Pickets/pales shall be face welded to roll gate frame, except for Invincible or Gauntlet style

gates over 18' long. Invincible or Gauntlet style gates over 18' long shall have pickets face-welded to 2" x 2" angle iron to form panels equal in length to the gate frame bay width.

4.10.2 The manufactured roll gates and bolt-on panels (if applicable) shall be subjected to the PermaCoat® thermal stratification coating process (high-temperature, in-line, multi-stage, multi-layer) including, as a minimum, a six-stage pre-treatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils (0.0508mm). The topcoat shall be a "no-mar" TGIC polyester powder coat finish with a minimum thickness of 2 mils (0.0508mm). The color shall be Black. The stratification-coated framework shall be capable of meeting the performance requirements for each quality characteristic shown in Table 1.

4.10.3 Completed gates shall be capable of supporting a 200 lb. load applied at midspan without permanent deformation.

4.11 PREPARATION

4.11.1 All new installation shall be laid out by the contractor in accordance with the construction plans.

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4.12 INSTALLATION

4.12.1 Gateposts shall be set in accordance with the spacing's shown in the construction plans. The "Earthwork" and "Concrete" sections of this specification shall govern post base material requirements. 6" wheels shall be bolted to the gate (between the wheel plates welded near the ends of the gate bottom rail). The gate shall be set upright with the V-grooved wheels positioned over the pre-installed steel V-track that traverses the gate opening. Roller guides shall be affixed to the gateposts at a height even with the gate toprail to hold the gate in a vertical position. Gate stops shall be welded to the end of the gate or track so gate cannot pass rollers in either direction

4.13 CLEANING

4.13.1 The contractor shall clean the jobsite of excess materials; post hole excavations shall be scattered uniformly away from posts.

Table 1 – Coating Performance Requirements

Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 1,000 hours (Scribed per D1654; failure mode is accumulation of 1/8" coating loss from scribe or medium #8 blisters).

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Weathering Resistance	D822 D2244, D523 (60˚ Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

END OF SECTION

CAMPUS PUBLIC SAFETY BUILDING

DSA SET

COMPTON CCD

APPLICABLE STATE CODES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH:

2013 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R. *

2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2012 INTERNATIONAL BUILDING CODE VOLUMES 1-2 & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2011 NATIONAL ELECTRICAL CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
(2012 UNIFORM MECHANICAL CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2012 UNIFORM PLUMBING CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.

2013 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
(2012 INTERNATIONAL FIRE CODE & 2013 CALIFORNIA AMENDMENTS)

2013 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, CCR.

2013 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.

TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2007 ASME A17.1(w/A17.1a/CSA B44a-08 addenda) SAFETY CODE FOR ELEVATORS AND ESCALATORS

2. ALL WORK AND MATERIALS SHALL BE IN FULL CONFORMANCE WITH THE REQUIREMENTS OF THESE CODES AND ALL APPLICABLE LOCAL ORDINANCES. WHERE CONTRACT DOCUMENTS EXCEED SUCH REQUIREMENTS, WITHOUT VIOLATING SUCH CODES, REGULATIONS AND ORDINANCES, CONTRACT DOCUMENTS TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY.

3. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

5. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

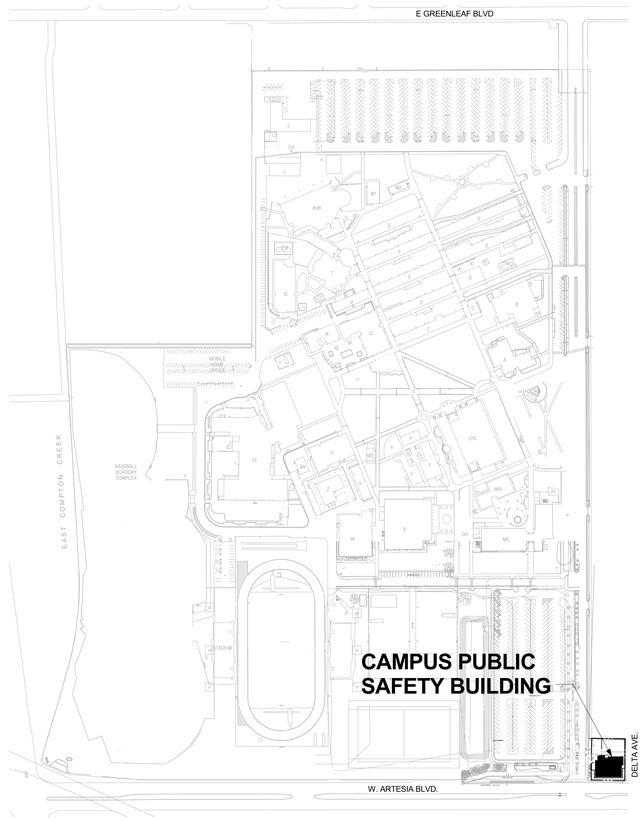
* CALIFORNIA ADMINISTRATIVE CODE, PART 1, CHAPTER 10, ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC).

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 10	STANDARD FOR PORTABLE FIRE EXINGUISHERS	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CA AMENDED)	2016 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE (CA AMENDED)	2016 EDITION
	(NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES")	
NFPA 75	STANDARD FOR FIRE PROTECTION OF INFORMATION TECHNOLOGY EQUIPMENT	2013 EDITION
NFPA 80	STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2013 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

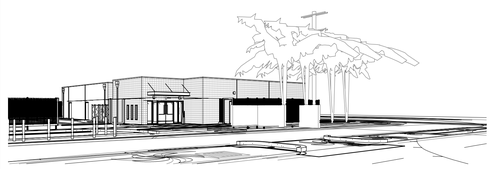
OVER ALL CAMPUS PLAN



VICINITY MAP

SITE ADDRESS: 1111 E ARTESIA BLVD., COMPTON, CA 90221

PROJECT PERSPECTIVE VIEW



SHEET INDEX

1

DEFERRED APPROVAL ITEMS

INSTALLATION OF DEFERRED APPROVAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER WHO HAS BEEN DELEGATED THE RESPONSIBILITY OF COVERING THE WORK SHOWN ON A PARTICULAR PLAN OR SPECIFICATION, AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. DEFERRED ITEMS SHALL BE COMPLETED PRIOR TO OCCUPANCY OF BUILDINGS AFFECTED BY THE DEFERRED WORK.

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R.

ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

DEFERRED APPROVAL ITEMS ARE AS FOLLOWS:

1. THERE ARE NO DEFERRED APPROVALS ON THIS PROJECT.

THE PLANS AND SPECIFICATIONS SHALL BE STAMPED AND SIGNED BY
THE ARCHITECT AND ENGINEER OF RECORD BEFORE SUBMITTAL TO DSA.

CODE ANALYSIS

BUILDING DATA:

(1) OCCUPANCY GROUP: B
(2) SECONDARY OCCUPANCY GROUP: N/A
(3) RISK CATEGORY: IV
(4) TYPE OF CONSTRUCTION: V-B, NON-RATED
(5) FIRE SPRINKLER: N/A
(6) ACTUAL STORIES: 1-STORY
(7) TOTAL ACTUAL BUILDING AREA: 5,550 SF

(8) PER 2013 CBC TABLE 503, ALLOWABLE BUILDING STORIES:
BASICAL ALLOWABLE STORIES: 2 STORIES.
ACTUAL STORIES: 1 STORY < 2 STORIES, THEREFORE: COMPLIANT

(9) PER 2013 CBC TABLE 503, ALLOWABLE BUILDING HEIGHT:
BASICAL ALLOWABLE HEIGHT: 40 FT
ACTUAL BUILDING HEIGHT: 14' - 8" FT < 40 FT, THEREFORE: COMPLIANT

(10) PER 2013 CBC TABLE 503, ALLOWABLE FLOOR AREA:
BASIC ALLOWABLE FLOOR AREA: 9,000 SF / STORY
ACTUAL BUILDING AREA: 5,550 SF < 9,000 SF, THEREFORE: COMPLIANT

FIRE-RESISTANTANCE RATING REQUIREMENTS PER 2013 CBC TABLE 601

CONSTRUCTION TYPE: VB	REQUIRED	PROVIDED
PRIMARY STRUCTURAL FRAME	0	0
EXT. BEARING WALLS	0	0
INT. BEARING WALLS	0	0
EXT. NON BEARING WALLS & PARTITIONS	0	0
INT. NON BEARING WALLS & PARTITIONS	0	0
FLOOR CONSTRUCTION & SECONDARY MEMBERS	0	0
ROOF CONSTRUCTION & SECONDARY MEMBERS		
ROOF MEMBERS ARE < 20 FT	0	0
ROOF MEMBERS ARE > 20 FT	0	0

FIRE-RESISTANTANCE RATING REQUIREMENTS PER 2013 CBC TABLE 602

CONSTRUCTION TYPE: VB
OCCUPANCY: B
SEPERATION DISTANCE X > 30' — REQUIRED: 0 — PROVIDED: 0

PLUMBING FIXTURE COUNT PER 2013 CPC TABLE 422.1
36 TOTAL OCCUPANCY OF BUILDING SPACES

	REQ:	WC:	U:	L:	DF:
18 MEN		1 OR	1	1	
18 WOMEN		1		1	
				2	

	PROV.	WC.	U:	L:	DF:
18 MEN		1	0	1	
18 WOMEN		1		1	
				2	

THEREFOR, ACTUAL PROVIDED PLUMBING FIXTURE COUNT COMPLIANT W/ 2013 CPC.

PROJECT DIRECTORY

PROJECT

CAMPUS PUBLIC SAFETY BUILDING
COMPTON COMMUNITY COLLEGE DISTRICT
1111 E ARTESIA BLVD., COMPTON, CA 90221

OWNER

COMPTON COMMUNITY COLLEGE DISTRICT
1111 E ARTESIA BLVD., COMPTON, CA 90221
(310) 900-1600

ARCHITECT

LITTLE
1300 DOVE STREET, SUITE 100
NEWPORT BEACH, CA 92660
(949) 698-1400
(949) 698-1433 (FAX)

CIVIL

FPL & ASSOCIATES, INC.
10 CORPORATE PARK, SUITE 310
IRVINE, CA 92606
(949) 252-1688

STRUCTURAL

TTG: TMAD TAYLOR & GAINES
901 VIA PIEMONTE, SUITE 400
ONTARIO, CA 91764
(909) 477-6915

MECHANICAL / ELECTRICAL / PLUMBING

dHA + Calpec
150 S. ARROYO PARKWAY, SUITE NO. 100
PASADENA, CA 91105
(626) 445-8580

1

CONSTRUCTION MANAGERS

PCM3
970 BRIGHTON CT., 2ND FLOOR
SAN DIMAS, CA 91773
(909) 592-4888

PROJECT DESCRIPTION

WORK UNDER THIS CONTRACT INCLUDES THE FOLLOWING AREAS, AS SHOWN ON THE DRAWINGS, SPECIFIED IN THE PROJECT MANUAL, AND DEFINED IN THE PROJECT CONTRACT DOCUMENTS. INCLUDING BUT NOT NECESSARILY LIMITED TO:

NEW CONSTRUCTION OF MINOR SITE IMPROVEMENTS & A ONE-STORY PUBLIC SAFETY BUILDING CONTAINING LOBBY, OFFICES, LOCKER ROOMS, AND ACCESSORY SUPPORT SPACES.

PROJECT INSPECTOR

A "DSA CERTIFIED" PROJECT INSPECTOR OF RECORD (IOR) EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR AND IR A-7. INSPECTOR SHALL BE CLASS 1.

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS,
INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(Application No. 03-117873 File No. 19-C1)

☒ The drawings or sheets listed on the cover or index sheet
☐ This drawing, page of specifications/calculations

have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1) design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and
2) coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

The Statement of General Conformance "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81139 of the Education Code and Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. *(Title 24, Part 1, Section 4-317 (b))*

I certify that: ☒ All drawings or sheets listed on the cover or index sheet
☐ This drawing or page
☒ is/are in general conformance and
☒ have been coordinated

12/12/17
Signature Date

Architect or Engineer designated to be in general responsible charge
Rita S. Carter
Print Name
C36431 4-30-2019
License Number Expiration Date

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA 92660
T: 949.698.1400 F: 949.698.1433
www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC____ FLS____ SS____
DATE

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DP, AM

REVISIONS

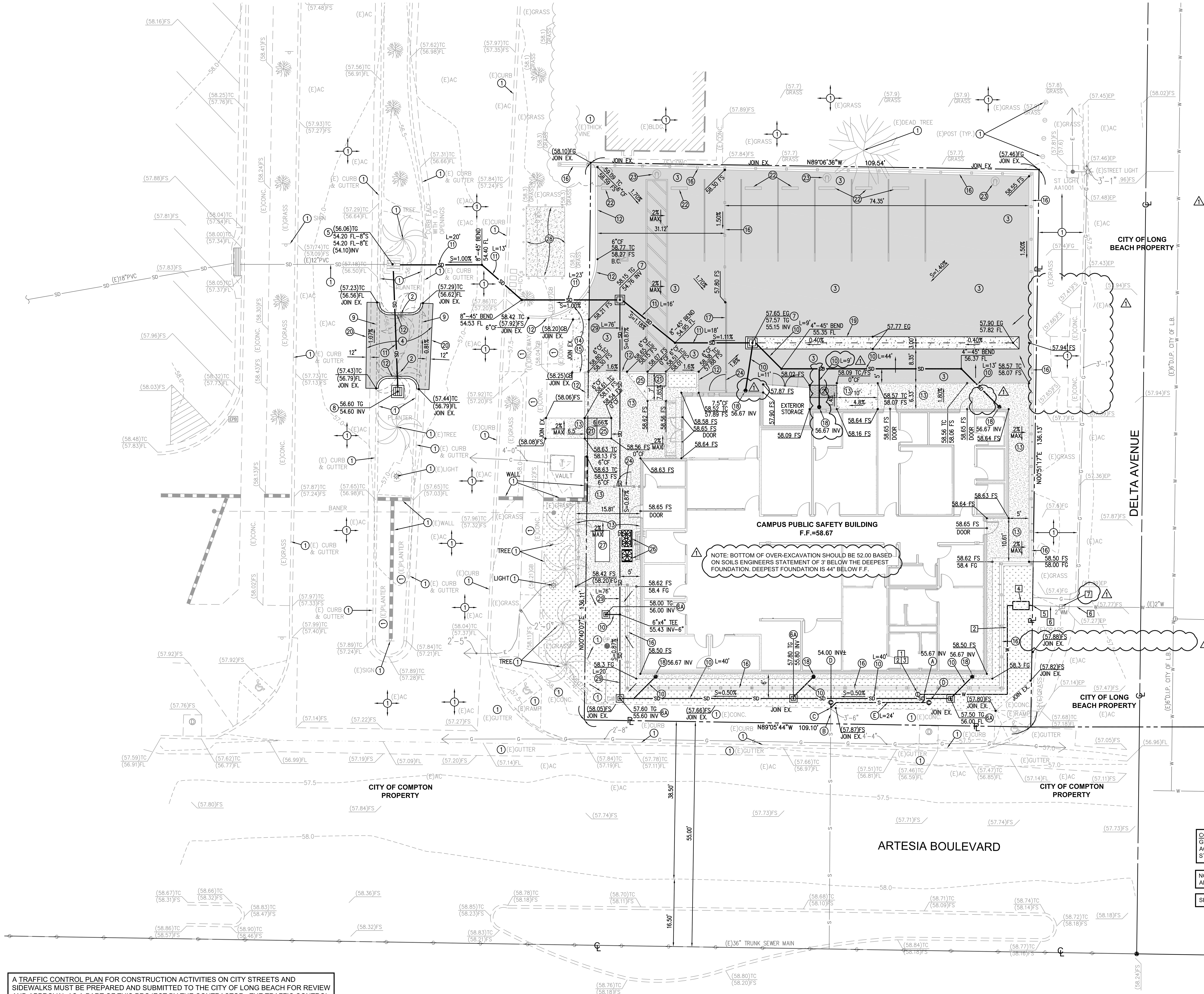
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C36431 REN. 4-30-19 STATE OF CALIFORNIA

SHEET TITLE
TITLE SHEET / SHEET INDEX

PROJECT NUMBER
913-4675-00

ISSUE DATE: 04/20/18
SHEET NO.: AD1-G0.1.1



CONSTRUCTION NOTES

1. PROTECT EXISTING IMPROVEMENTS IN PLACE.
2. REMOVE EXISTING PALM TREE & ROOTS.
3. CONSTRUCT ASPHALT PAVEMENT SECTION (LIGHT DUTY) PER TABLE 1, ON SHEET C1.2.
4. CONSTRUCT ASPHALT PAVEMENT SECTION (HEAVY DUTY) PER TABLE 1, ON SHEET C1.2.
5. BREAK INTO EXISTING CATCH BASIN AND INSTALL NEW PIPE.

6A. CONSTRUCT 12" SQUARE CATCH BASIN PER DETAIL 6A ON SHEET C1.2. INSTALL WITH GALVANIZED FRAME & STEEL GALVANIZED GRATE (PARKWAY RATED, A.D.A, BOLT-DOWN TYPE).

6B. CONSTRUCT 12" SQUARE CATCH BASIN PER DETAIL 6B ON SHEET C1.2. INSTALL WITH GALVANIZED FRAME & STEEL GALVANIZED GRATE (PARKWAY RATED, HEEL-PROOF, BOLT-DOWN TYPE).

6C. CONSTRUCT 12" SQUARE CATCH BASIN PER DETAIL 6C ON SHEET C1.2. FRAME & STEEL GALVANIZED GRATE (TRAFFIC RATED STEEL COVER).

7. CONSTRUCT 18" SQUARE CATCH BASIN PER DETAIL 7 ON SHEET C1.2. INSTALL WITH GALVANIZED FRAME & STEEL GALVANIZED GRATE (TRAFFIC RATED, A.D.A, BOLT-DOWN TYPE).
8. CONSTRUCT 24" SQUARE CATCH BASIN PER DETAIL 8 ON SHEET C1.2. INSTALL OLDCASTLE STORMWATER SOLUTIONS FLOGARD CATCH BASIN INSERT FILTER GRATED INLET STYLE MODEL FGP-24F8 OR APPROVED EQUAL.
9. REMOVE EXISTING CURB & GUTTER.
10. CONSTRUCT 4" SDR-35 P.V.C. DRAINAGE PIPE. SEE CORRESPONDING TRENCH DETAILS ON SHEET C1.2.
11. CONSTRUCT 8" SDR-35 P.V.C. DRAINAGE PIPE. SEE CORRESPONDING TRENCH DETAILS ON SHEET C1.2.
12. CONSTRUCT CONCRETE CURB PER DETAIL 12 ON SHEET C1.2.
13. CONSTRUCT 4" THICK CONCRETE SIDEWALK PER DETAIL 13 ON C1.2.
14. REMOVE EXISTING CONCRETE.
15. CONSTRUCT 6" THICK CONCRETE OVER 4" CRUSHED AGGREGATE BASE.
16. CONSTRUCT WROUGHT IRON FENCE PER DETAIL 18 ON A1.3.1. (revision 1)
17. CONSTRUCT STEEL ROLLING GATE PER ARCHITECTURAL PLANS.
18. CONNECT UNDERGROUND STORM DRAIN TO ROOF DRAIN DOWNSPOUT WITH FERNCO COUPLING OR APPROVED EQUAL.
19. CONSTRUCT 3' WIDE CONCRETE SWALE PER DETAIL 19 ON SHEET C1.2.
20. SAWCUT EXISTING ASPHALT PAVEMENT WITH CLEAN EDGE.
21. CONSTRUCT DETECTABLE WARNING PER DETAIL 11 ON SHEET A1.3.1.
22. CONSTRUCT WHEEL STOPS PER DETAIL 6 ON SHEET A1.3.1.
23. CONSTRUCT SITE LIGHTING PER ELECTRICAL PLANS.
24. CONSTRUCT GATE PER ARCHITECTURAL PLANS.
25. CONSTRUCT ACCESSIBLE CURB RAMP PER GRADES HEREON AND DETAILS A1.3.1.
26. CONDENSER UNIT PER SHEET E1.1.1.
27. EMERGENCY GENERATOR ENCLOSURE PER SHEET E1.1.1.
28. NEW PAD MOUNTED SUB-STATION PER SHEET E1.1.1.
29. CONSTRUCT 6" SDR-35 P.V.C. DRAINAGE PIPE. SEE CORRESPONDING TRENCH DETAILS ON SHEET C1.2.

HATCH LEGEND:

- = NEW BUILDING
- = NEW CONCRETE PAVEMENT
- = NEW ASPHALT PAVEMENT
- = NEW DECOMPOSED GRANITE (revision 1)

NOTE: STRAIGHT GRADES SHALL BE CONSTRUCTED BETWEEN SPOT ELEVATIONS OR CONTOURS INDICATED, EXCEPT WHERE GRADE BREAKS INTERVENE.

NOTE: CONSTRUCTION TOLERANCES DO NOT PERMIT THE VARIATION OF DIMENSIONS OR GRADES AND SLOPES AND THEIR RELATIONSHIPS REQUIRED BY CODE. ADJUST WORK AS REQUIRED TO COMPLY WITH SUCH REQUIREMENTS.

NOTE: CONTRACTOR IS REQUIRED TO RESTORE ALL EXISTING IMPROVEMENTS TO THE SAME CONDITION, THAT ARE NOT PART OF THIS PROJECT, THAT EXISTED PRIOR TO HIS STARTING CONSTRUCTION.

CONSTRUCTION STORM WATER NOTE:
GRADING WORK ASSOCIATED WITH THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF SOIL AND THUS SHALL NOT BE SUBJECT TO COMPLY WITH THE NPDES STORMWATER CONSTRUCTION GENERAL PERMIT 2009-0009-DWQ.

NOTE: CONTRACTOR SHALL BOLT DOWN ALL NEW GRATES TO FRAME FOR ANTI-THEFT PURPOSES AFTER CONSTRUCTION IS COMPLETED.

SEE ARCHITECTURAL PLANS FOR ALL STRIPING IMPROVEMENTS SHOWN HEREON.

A TRAFFIC CONTROL PLAN FOR CONSTRUCTION ACTIVITIES ON CITY STREETS AND SIDEWALKS MUST BE PREPARED AND SUBMITTED TO THE CITY OF LONG BEACH FOR REVIEW AND APPROVAL AS A PART OF THIS PROJECT BY THE CONTRACTOR. THE TRAFFIC CONTROL PLAN SHALL BE DRAWN TO SCALE AND SHALL DELINEATE THE EXISTING CURBS AND TRAFFIC STRIPING. ALL TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST CALTRANS TRAFFIC MANUAL (CHAPTER 5 - MANUAL OF TRAFFIC CONTROLS) AND THE LATEST WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH MANUAL). TRAFFIC CONTROL PLAN MUST BE APPROVED BY THE CITY PRIOR TO THE ISSUANCE OF A PERMIT.

NOTE TO CONTRACTOR: NO CONSTRUCTION OR EXCAVATION WORK IS ALLOWED WITHIN THE CITY OF LONG BEACH RIGHT-OF-WAY (WHICH INCLUDES THE SIDEWALK AND PARKWAY) WITHOUT AN ENCROACHMENT PERMIT, OBTAINED FROM THE PUBLIC WORKS DEPARTMENT. TO OBTAIN A PERMIT YOU MUST BE A LICENSED AND INSURED CONTRACTOR.

WATER CONSTRUCTION NOTES

1. SEE PLUMBING PLANS FOR CONTINUATION OF WATER LINE INTO BUILDING.
2. CONSTRUCT 2" SCH. 80 PVC PIPE, FITTINGS. AND COUPLINGS. SEE CORRESPONDING TRENCH DETAIL ON SHEET C1.2.
3. CONSTRUCT 2" WATER SHUT-OFF VALVE PER DETAIL 2 ON SHEET C1.3.
4. CONSTRUCT 2" BACKFLOW PREVENTER PER DETAIL 4 ON C1.3.
5. CONNECT TO EXISTING WATER LINE WITH APPROPRIATE FITTINGS.
6. PROTECT EXISTING WATER IMPROVEMENT IN PLACE.
7. CITY OF LONG BEACH WATER DISTRICT TO REPLACE EXISTING 1.5" WATER METER WITH NEW 2" METER.

SEWER CONSTRUCTION NOTES

A. SEE PLUMBING PLANS FOR CONTINUATION INTO BUILDING.
B. PROTECT EXISTING SEWER IMPROVEMENT IN PLACE.
C. CONNECT TO EXISTING 4" SEWER LINE WITH APPROPRIATE FITTINGS.
D. CONSTRUCT SEWER CLEAN-OUT & YARD BOX PER DETAIL 'D' ON SHEET C1.3.
E. CONSTRUCT 4" SDR-35 PVC SEWER PIPE. SEE CORRESPONDING TRENCH DETAIL ON SHEET C1.2.

10 5 0 10 20 30
SCALE: 1" = 10'

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CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC ___ FLS ___ SS ___
DATE ___

CONSULTANT
FPL and Associates, Inc.
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30 Corporate Park, Suite 401
Irvine, CA 92606
Phone: 949-252-1688

PROJECT TEAM
PRINCIPAL IN CHARGE: RC
PROJECT MANAGER: RC
DRAWN BY: AL

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
GRADING PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/17
SHEET NO.: C1.1

ON-SITE TRENCHING DETAILS - STORM DRAINS, SEWER & WATER LINES

TRENCH EXCAVATION, BEDDING, & BACKFILL NOTES:

EXCAVATION NOTE: EXCAVATION 5.0 FEET AND DEEPER SHALL BE SUPPORTED AS SET FORTH IN THE RULES, ORDERS AND REGULATIONS OF THE CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF INDUSTRIAL ACCIDENTS. THE CONTRACTOR SHALL SUBMIT A DETAIL SHOWING THE DESIGN OR SHORING; BRACING SLOPING OR OTHER PROVISIONS TO BE MADE FOR WORKER PROTECTION FROM THE HAZARDS OF CAVING GROUND DURING THE EXCAVATION. THE PLAN SUBMITTED SHALL BE SIGNED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER CERTIFIED THAT THE PLAN COMPLIES WITH ALL OSHA CONSTRUCTION SAFETY ORDERS.

BEDDING MATERIAL SHALL BE COARSE SAND WITH SAND EQUIVALENT OF 30 OR GREATER. NO ANGULAR STONES OR PEA GRAVELS WILL BE ALLOWED IN PIPE BEDDING.

BEDDING & BACKFILL SHALL BE PLACED IN ACCORDANCE WITH SECTION 306-1.2.1 AND 306-1.3 OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (S.S.P.W.C.), LATEST EDITION" AND AS SUPPLEMENTED HEREIN. TRENCH BACKFILL SLURRY PER SECTION 201-1. EXISTING SITE SOILS, WHERE CONDITIONS DICTATE HEREIN, ARE CONSIDERED SUITABLE FOR BACKFILLING OF UTILITY TRENCHES PROVIDED THEY ARE FREE OF DEBRIS, PARTICLES GREATER THAN 4 INCHES IN MAXIMUM DIMENSION, ORGANIC MATTER OR OTHER DELETERIOUS MATERIALS. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO CONDUITS, PIPES, AND ANY APPURTENANCES. PER SECTION 306-1.2.1 OF S..S.P.W.C., IF SOFT, SPONGY, UNSTABLE OR OTHER UNSUITABLE MATERIAL IS ENCOUNTERED UPON WHICH THE BEDDING MATERIAL OR PIPE IS TO BE PLACED, THIS MATERIAL SHALL BE REMOVED TO A DEPTH ORDERED BY THE CIVIL ENGINEER AND REPLACED WITH BEDDING MATERIAL SUITABLY DENSIFIED.

COMPACTION METHODS: ALL BEDDING & BACKFILL COMPACTION SHALL BE BY HAND-OPERATED, PLATE-TYPE, VIBRATORY, OR OTHER SUITABLE HAND-TAMPERS IN AREAS NOT ACCESSIBLE TO LARGER ROLLERS OR COMPACTERS. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO CONDUITS, PIPES, AND ANY APPURTENANCES. WATER DENSIFICATION BY INUNDATION OR JETTING SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM CIVIL ENGINEER.

SHEETING: WHEN EXCAVATION DEPTHS OR SOIL CONDITIONS REQUIRE SHORING OR USE OF A TRENCH BOX, THE BOTTOM OF THE SHORING OR TRENCH BOX SHOULD BE PLACED NO LOWER THEN THE TOP OF THE PIPE. THIS PREVENTS DISRUPTION OF THE BACKFILL ENVELOPE WHEN REMOVING THE SHORING OR TRENCH BOX. IF THIS PRACTICE CANNOT BE FOLLOWED, CONSIDERATION SHOULD BE GIVEN TO LEAVING THE SHORING IN PLACE.

WARNING TAPE NOTES (ON-SITE WATER):

A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED WATER LINE BELOW", IN POLYETHYLENE FILM COLOR BLUE, INSTALLED ABOVE PIPE, 6" WIDE.

WARNING TAPE NOTES (ON-SITE STORM DRAIN):

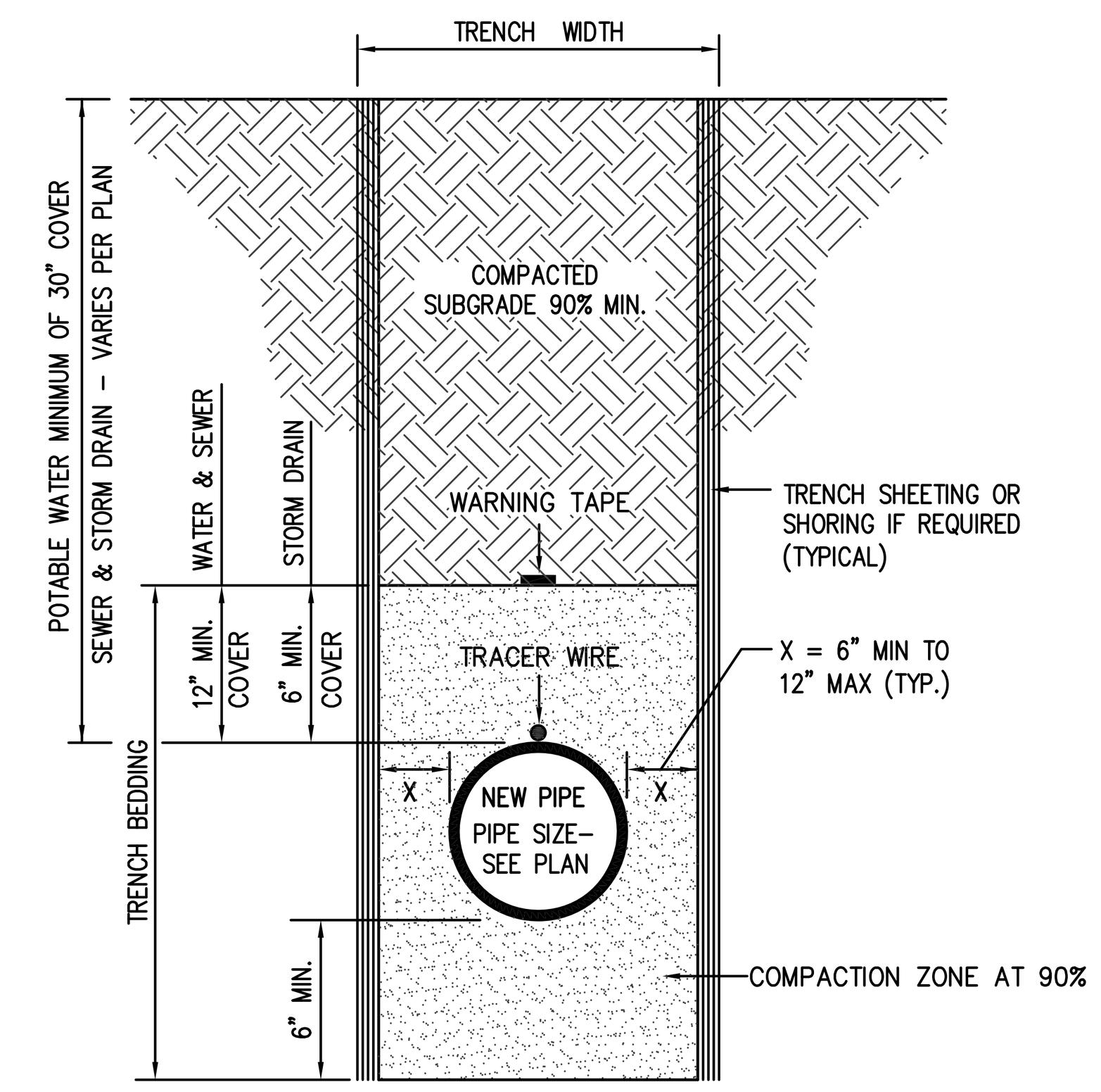
A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION STORM DRAIN LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN, INSTALLED ABOVE PIPE, 6" WIDE.

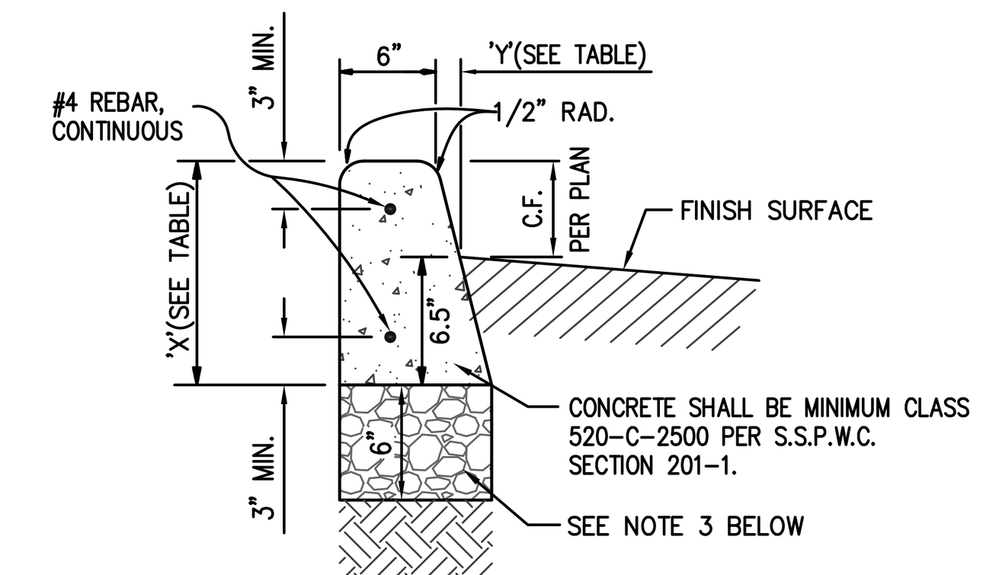
WARNING TAPE NOTES (ON-SITE SEWER):

A METALLIC LINED TAPED FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED SEWER LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN, INSTALLED ABOVE PIPE, 6" WIDE.

TRACER WIRE NOTES:

COPPER TRACER WIRE SHALL BE INSTALLED ON ALL NON-METALLIC PIPELINES JUST ABOVE THE HORIZONTAL CENTERLINE OF THE PIPE. THE COPPER WIRE SHALL BE THWN, #12 AWG GAUGE, WITH HEAT AND MOISTURE RESISTANT INSULATION.



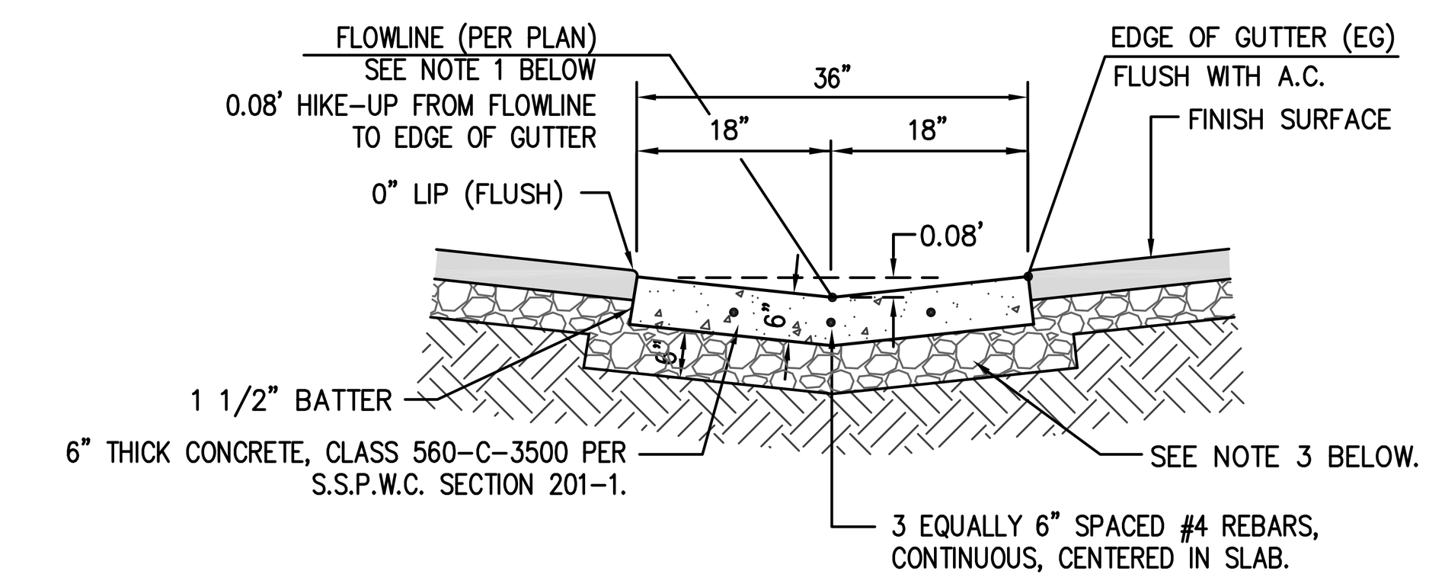


(12) CONCRETE CURB DETAIL
NOT TO SCALE

CURB FACE	0"	4"	5"	6"	8"	9"
'X'	6.5"	10.5"	11.5"	12.5"	14.5"	15.5"
'Y'	0"	1"	1.25"	1.5"	2"	2"

GENERAL NOTES:

1. ALL EXPOSED EDGES SHALL HAVE A 1/2" RADIUS.
2. CONTROL JOINTS SHALL BE PLACED IN CURBING AT REGULAR INTERVALS OF 10'. EXPANSION JOINTS AT 30' INTERVALS, AND AT DRIVE APPROACHES, B.C.'S, E.C.'S, CROSS GUTTERS AND CATCH BASIN TRANSITIONS.
3. A 6" THICK LAYER OF CRUSHED BASE MATERIAL SHALL BE PLACED UNDER ALL CURB. MINIMUM COMPACTION OF 90% ON SUBGRADE AND 95% ON AGGREGATE BASE IS REQUIRED.
4. CONCRETE CURB SHALL BE MINIMUM CLASS 520-C-2500 PER S.S.P.W.C. SECTION 201-1.
5. PLACE CONTINUOUS #4 REBARS, 3" MINIMUM FROM TOP AND 3" MINIMUM FROM BOTTOM OF CURB.



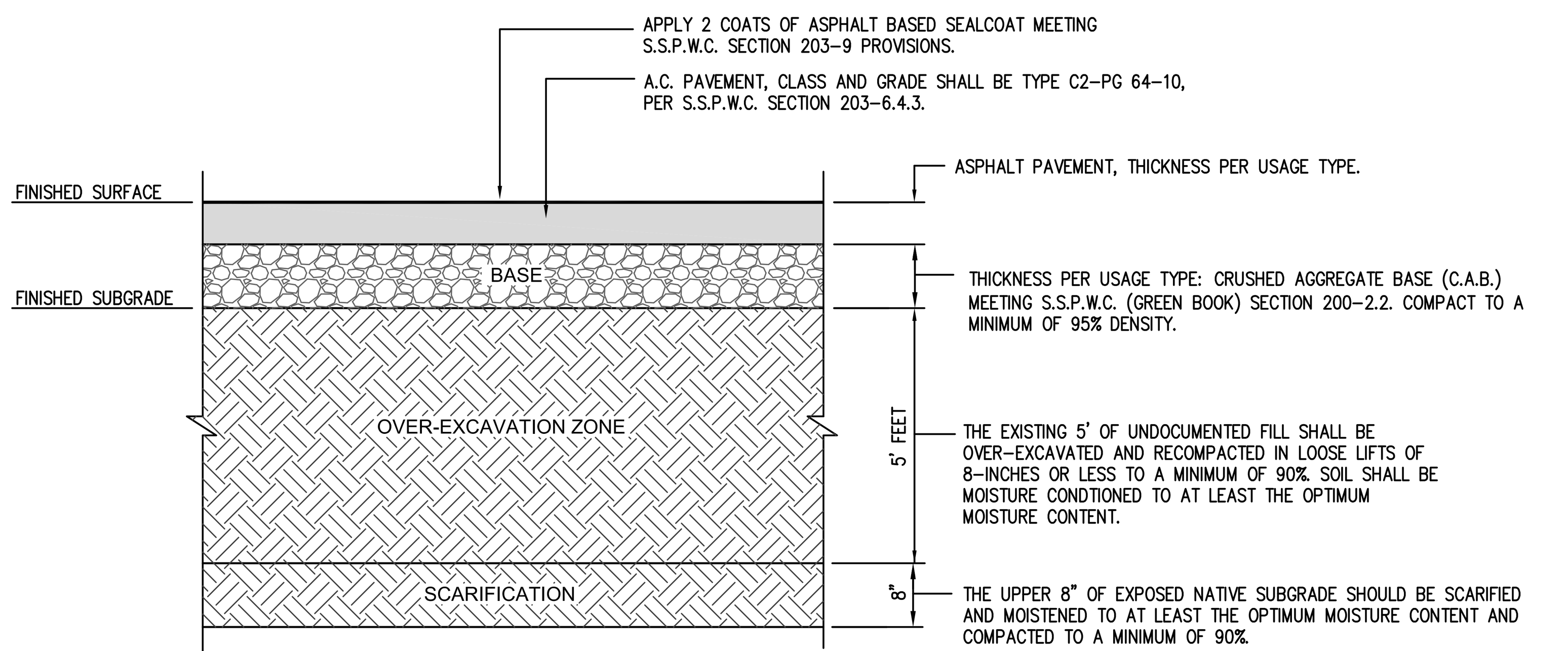
(19) CONCRETE SWALE DETAIL
NOT TO SCALE

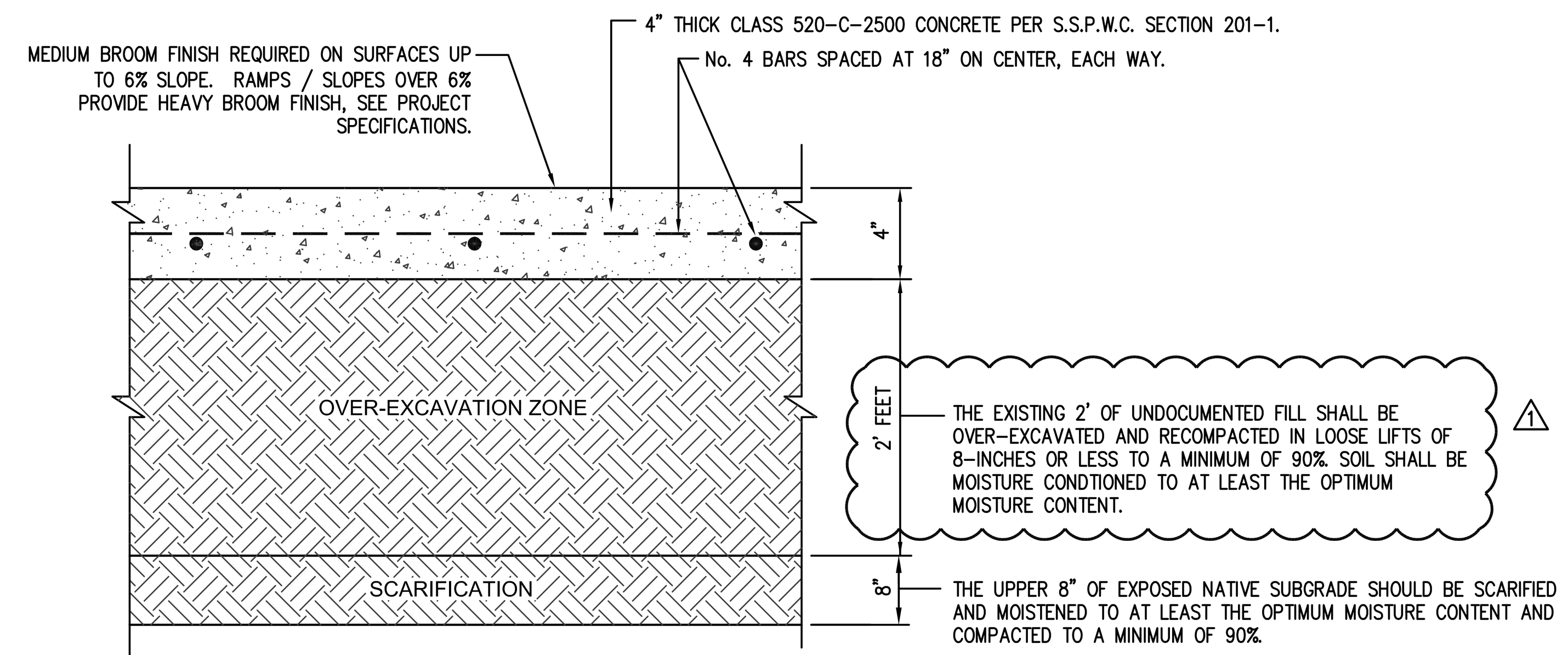
CONCRETE SWALE NOTES:

1. CONCRETE SWALE SHALL HAVE AN 4" WIDE FLOWLINE SMOOTH STEEL TROWEL FINISH.
2. CONSTRUCT CONTROL JOINTS IN SWALE AT REGULAR INTERVALS OF 10'.

   CONSTRUCT EXPANSION JOINTS WITH REBAR IN SWALE AT REGULAR INTERVALS OF 30'. CONSTRUCT EXPANSION JOINTS WITHOUT REBAR IN SWALE WHERE SWALE ABUTS CONCRETE, PLUS ALL B.C. & E.C.'S.
3. A 6" THICK LAYER OF CRUSHED AGGREGATE BASE MATERIAL SHALL BE PLACED UNDER THE SWALE. MINIMUM COMPACTION OF 95% RELATIVE DENSITY IS REQUIRED.
4. CROSS-SLOPE MUST NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL MUST BE LESS THAN 5% IN AREAS DEFINED AS A PEDESTRIAN PATH OF TRAVEL.

USAGE TYPE	TABLE 1 ASPHALT CONCRETE PAVEMENT STRUCTURAL SECTION
(3) LIGHT DUTY	3" THICK ASPHALT OVER 4" THICK CRUSHED BASE
(4) HEAVY DUTY	4" THICK ASPHALT OVER 6" THICK CRUSHED BASE





(13) CONCRETE SIDEWALK DETAIL
NOT TO SCALE

NOTES:

1. MEDIUM BROOM FINISH REQUIRED ON WALK SURFACES UP TO 6% SLOPE.
2. ADJACENT PAVING, WHERE OCCURS, TO BE FLUSH WITH TOP EDGE OF SLAB.
3. ALL CONCRETE WALKS SHALL BE ASTM C-150 TYPE II PORTLAND CEMENT.
4. ALL CONCRETE WALKS SHALL BE 1" MAXIMUM COARSE AGGREGATE SIZE CONFORMING TO GRADING 'C' OF THE S.P.P.W.C. SECTION 201-1.3.2(A).

1212 CAST IRON GRATE

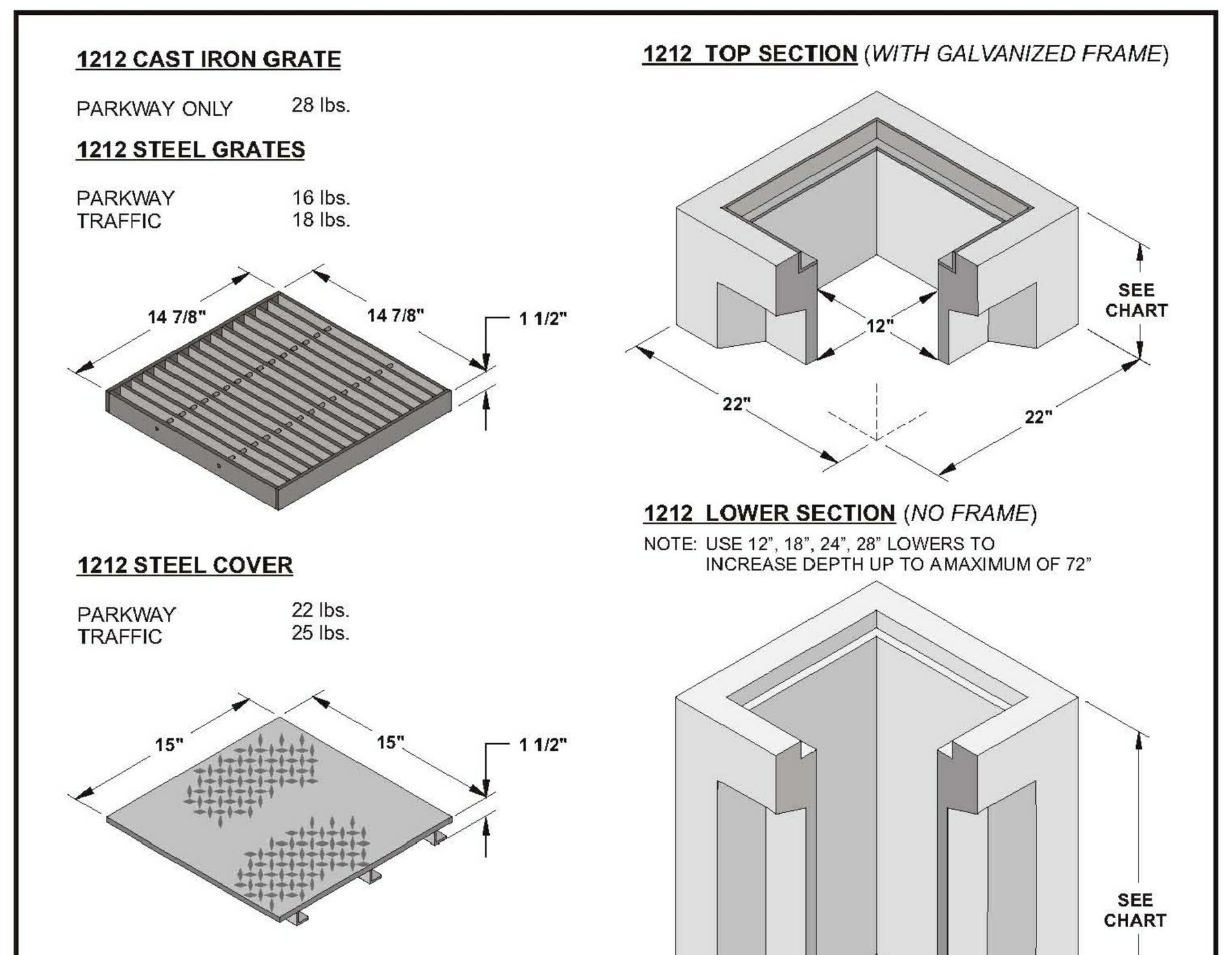
PARKWAY ONLY 28 lbs.

1212 STEEL GRATES

PARKWAY 16 lbs.
TRAFFIC 18 lbs.

1212 STEEL COVER

PARKWAY 22 lbs.
TRAFFIC 25 lbs.



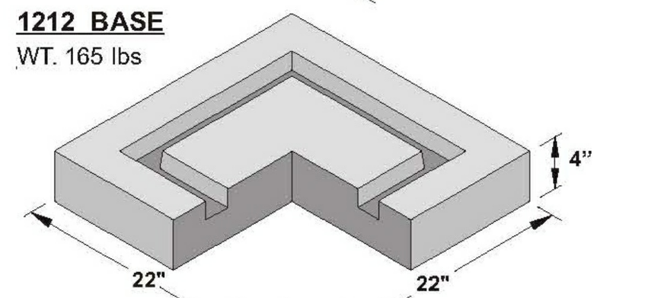
NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY & TRAFFIC
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

TOP SECTION	HT.	LBS	KNOCK-OUT
1212 T6	6"	170	NONE
1212 T12	12"	275	(4) 5" x 10"
1212 T18	18"	270	(4) 8" x 12"
1212 T24	24"	430	(4) 8" x 15"
1212 T28	28"	380	(4) 8" x 22"

EXTENSION SECTION	HT.	LBS	KNOCK-OUT
1212 E6	6"	170	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUT
1212 L12	12"	275	(4) 5" x 10"
1212 L18	18"	270	(4) 8" x 12"
1212 L24	24"	430	(4) 8" x 15"
1212 L28	28"	380	(4) 8" x 22"

1212 BASE
WT. 165 lbs



12" x 12" CATCH BASIN
BROOKS PRODUCTS
1212 CB
ORG. DWG. DATE 04-20-95
REV. DWG. DATE 05-18-00

(6A)(6B) 12" x 12" CATCH BASIN DETAIL
NOT TO SCALE

1818 CAST IRON GRATE

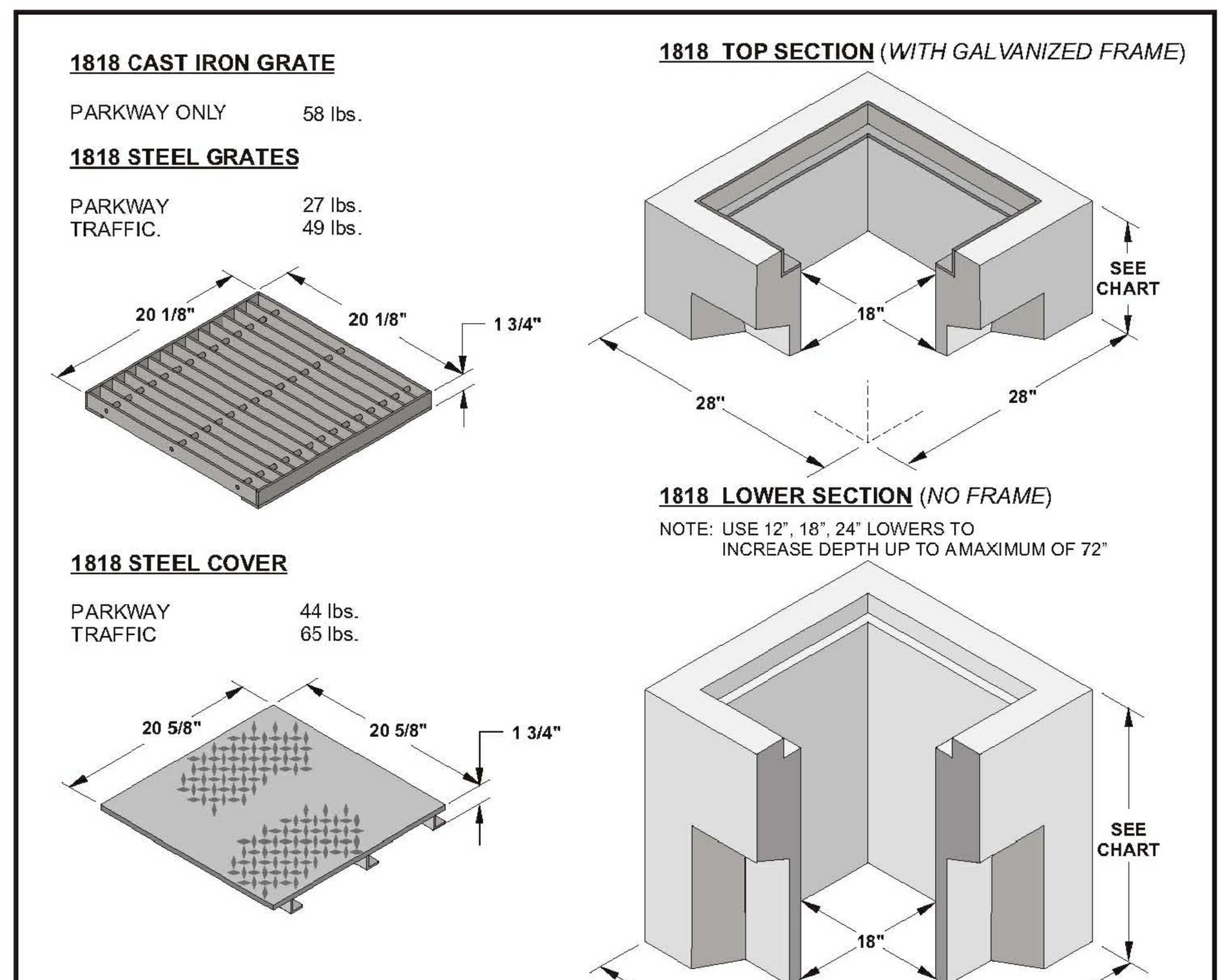
PARKWAY ONLY 58 lbs.

1818 STEEL GRATES

PARKWAY 27 lbs.
TRAFFIC. 49 lbs.

1818 STEEL COVER

PARKWAY 44 lbs.
TRAFFIC 65 lbs.



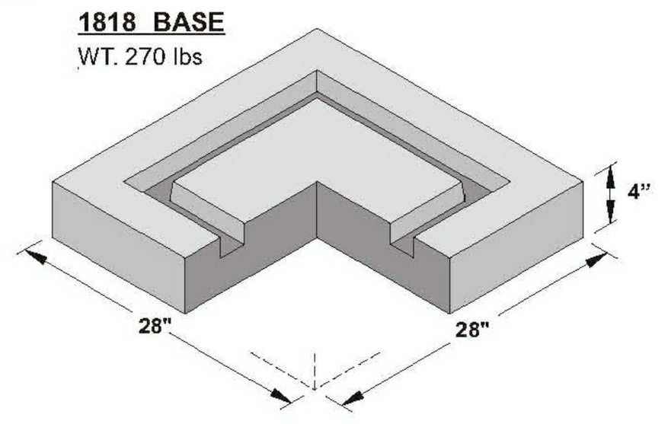
NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY & TRAFFIC
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

TOP SECTION	HT.	LBS	KNOCK-OUT
1818 T6	6"	215	NONE
1818 T12	12"	370	(4) 5" x 10"
1818 T18	18"	555	(4) 9" x 11"
1818 T24	24"	785	(4) 9" x 11"

EXTENSION SECTION	HT.	LBS	KNOCK-OUT
1818 E6	6"	215	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUT
1818 L12	12"	370	(4) 5" x 10"
1818 L18	18"	555	(4) 9" x 11"
1818 L24	24"	785	(4) 9" x 11"

1818 BASE
WT. 270 lbs



18" x 18" CATCH BASIN
BROOKS PRODUCTS
1818 CB
ORG. DWG. DATE 04-20-95
REV. DWG. DATE 02-28-00

(7) 18" x 18" CATCH BASIN DETAIL
NOT TO SCALE

2424 CAST IRON GRATE

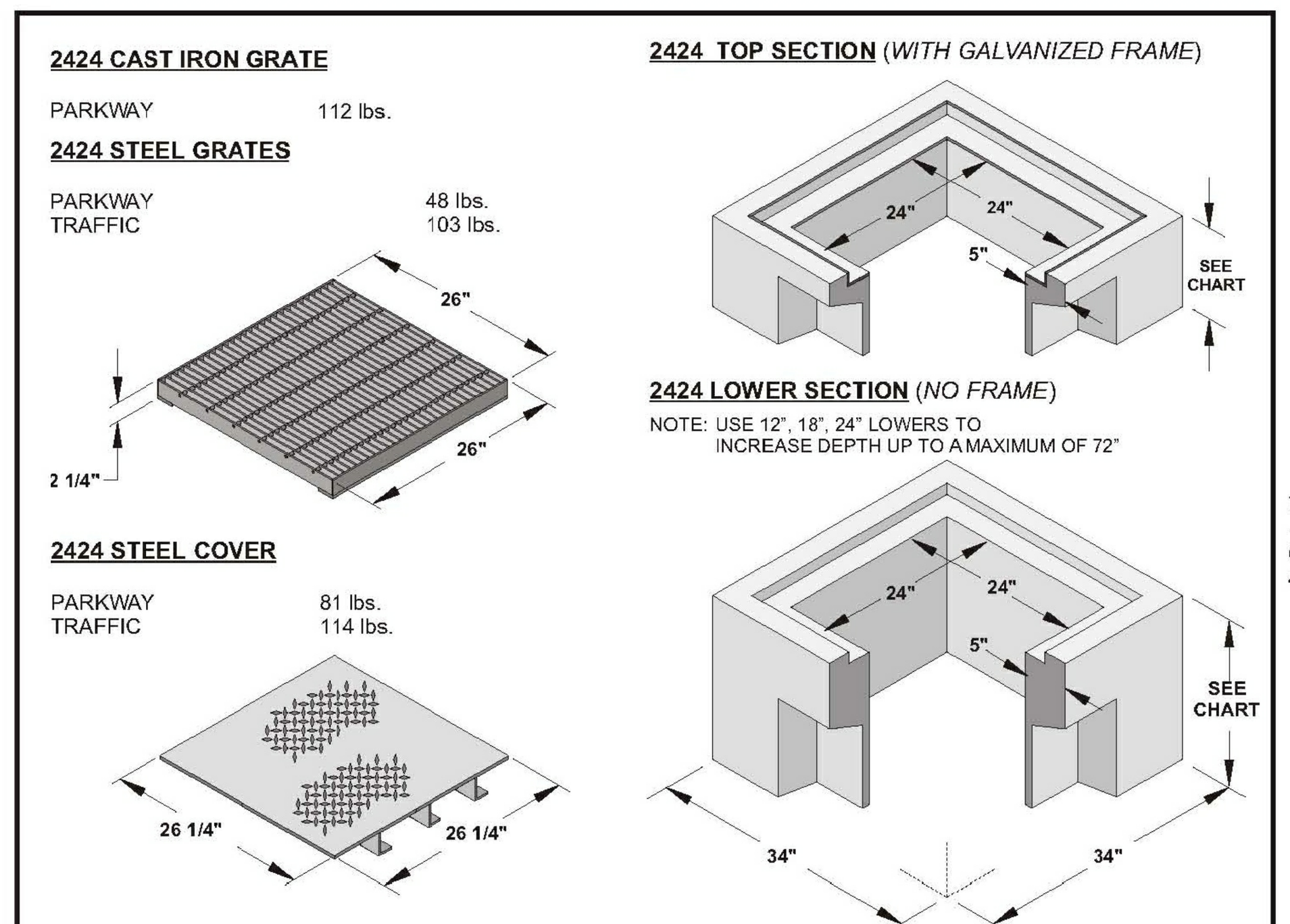
PARKWAY 112 lbs.

2424 STEEL GRATES

PARKWAY 48 lbs.
TRAFFIC 103 lbs.

2424 STEEL COVER

PARKWAY 81 lbs.
TRAFFIC 114 lbs.



NOTES:
1. GRATES AND COVERS AVAILABLE PAINTED BLACK OR GALVANIZED
2. "ADA" GRATES AVAILABLE IN PARKWAY & TRAFFIC .
3. "HEEL PROOF" GRATES AVAILABLE IN PARKWAY ONLY
4. A TOP SECTION WITH FRAME MUST BE USED IF BOLT DOWN REQUIRED

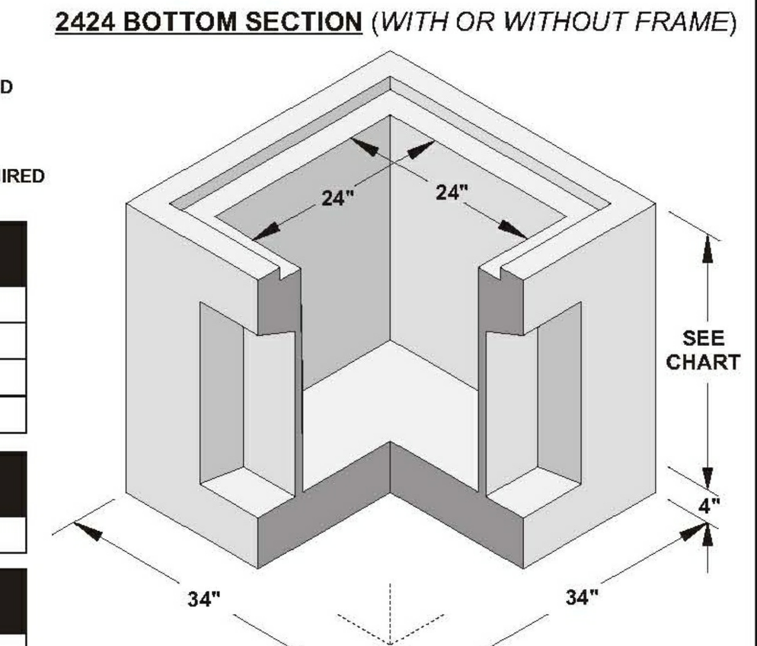
TOP SECTION	HT.	LBS	KNOCK-OUTS
2424 T6	6"	270	NONE
2424 T12	12"	495	(4) 6" x 11"
2424 T18	18"	745	(4) 9" x 12"
2424 T24	24"	870	(4) 14" x 14"

EXTENSION SECTION	HT.	LBS	KNOCK-OUTS
2424 E6	6"	270	NONE

LOWER SECTION	HT.	LBS	KNOCK-OUTS
2424 L12	12"	495	(4) 6" x 11"
2424 L18	18"	745	(4) 9" x 12"
2424 L24	24"	870	(4) 14" x 14"

BOTTOM SECTION	HT.	LBS	KNOCK-OUTS
2424 B30	30"	1595	(4) 18" x 18"
2424 B36	36"	1905	(4) 18" x 18"

2424 BOTTOM SECTION (*WITH OR WITHOUT FRAME*)

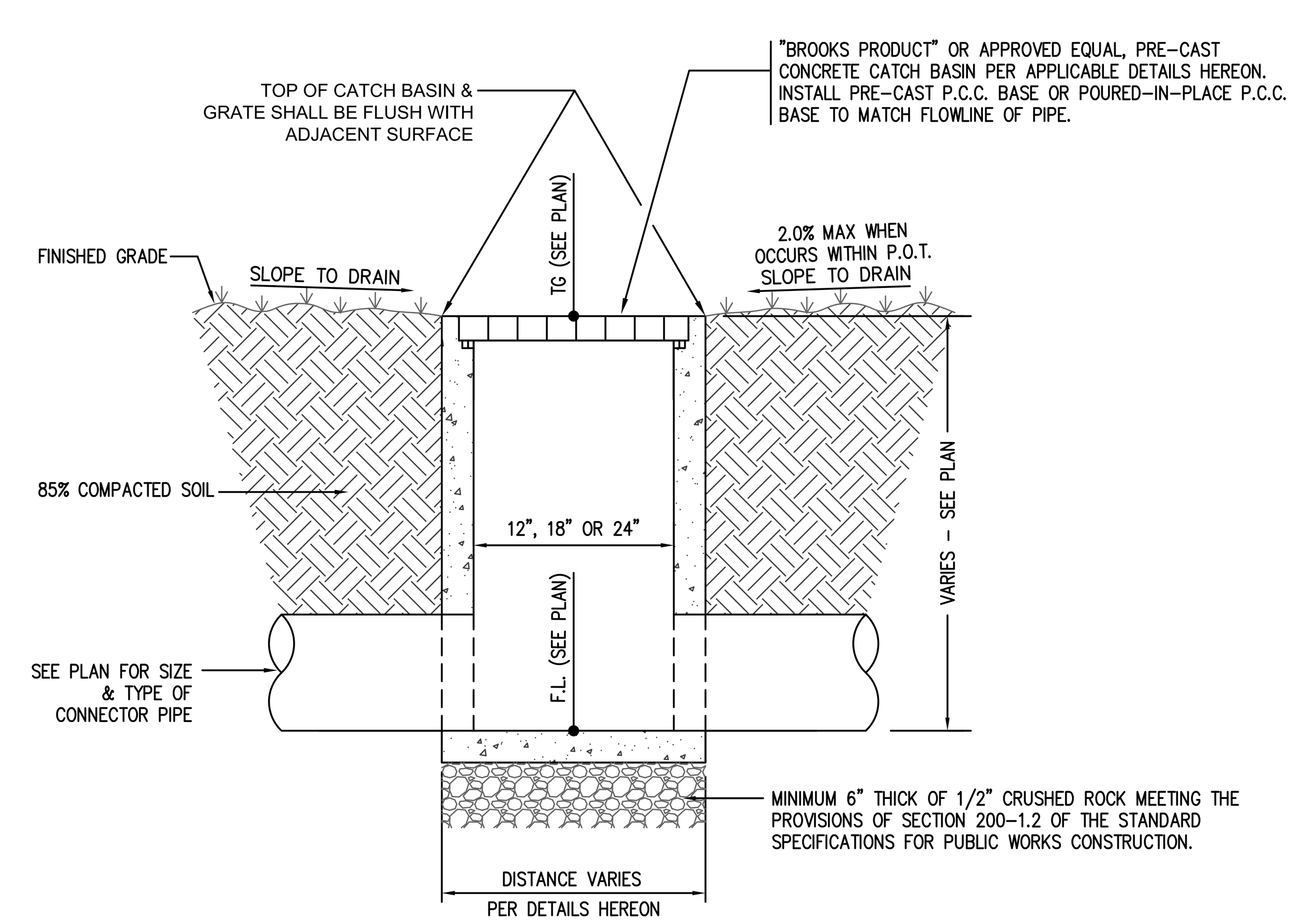


24" x 24" CATCH BASIN
BROOKS PRODUCTS
2424 CB
ORG. DWG. DATE 11-23-99
REV. DWG. DATE 02-28-00

(8) 24" x 24" CATCH BASIN DETAIL
NOT TO SCALE

GRATE OPENING NOTICE TO CONTRACTOR:

PER THE 2013 C.B.C. 11B-302.4 & 11B-302.3: GRATINGS LOCATED IN GROUND AND FLOOR SURFACES ALONG ACCESSIBLE ROUTES SHALL BE LIMITED TO SPACES NO GREATER THAN 1/2-INCH WIDE IN ONE DIRECTION. IF GRATINGS HAVE ELONGATED OPENINGS, THEY SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAFFIC.



(6A)(6B)(7)(8) CATCH BASIN DETAIL
NOT TO SCALE

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Phone: 949-252-1688

REGISTERED PROFESSIONAL ENGINEER
No. C 34971
Exp. 09-30-19
CIVIL
STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE
RC
PROJECT MANAGER
RC
DRAWN BY
AL

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
GRADING DETAIL SHEET

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/17
SHEET NO. AD1-C1.2

GENERAL NOTES

1. FOR APPLICABLE CODES AND STANDARDS, REFER TO SHEET G0.1.1

2. DURING THE ENTIRE CONSTRUCTION PERIOD, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONDITIONS AT THE PROJECT SITE, TO MEET THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND CALIFORNIA OCCUPATIONAL REGULATIONS . THIS PROVISION SHALL COVER THE CONTRACTOR'S EMPLOYEES AND ALL OTHER PERSONS WORKING UPON OR VISITING THE SITE. THE CONTRACTOR SHALL BECOME FULLY INFORMED OF ALL APPLICABLE STANDARDS AND REGULATIONS AND INFORM ALL PERSONS AND REPRESENTATIVES RESPONSIBLE FOR WORK UNDER THIS CONTRACT.

3. CONFIRM ALL NEW AND EXISTING CONDITIONS WITH THE CONTRACT DOCUMENTS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL DISCREPANCIES OR CONFLICTS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.

4. REVIEW THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF SYSTEMS SHOWN ON CONSULTING ENGINEERS DOCUMENTS. DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEER'S DOCUMENTS SHALL BE BROUGHT TO ARCHITECT'S ATTENTION FOR DIRECTION. CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.

5. DO NOT SCALE THE CONSTRUCTION DOCUMENTS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED GRAPHICS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL ADDITIONAL REQUIRED DIMENSIONS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF THE CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.

6. CORRECT ALL WORK INSTALLED IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS BY CONTRACTOR AS DIRECTED BY ARCHITECT AND AT NO ADDITIONAL EXPENSE TO THE OWNER.

7. VISIT JOB SITE PRIOR TO BEGINNING WORK AND VERIFY ALL DIMENSIONS AND CONDITIONS.

8. SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES AND LICENSES REQUIRED FOR PROPER COMPLETION OF THE WORK. REQUEST ALL INSPECTIONS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES AND COORDINATE THE WORK ACCORDINGLY.

9. WHERE WORK OR EQUIPMENT IS INDICATED "N.I.C." (NOT IN CONTRACT) ON THE DRAWINGS, SUCH WORK AND/OR EQUIPMENT SHALL BE PROVIDED BY OTHERS. CONTRACTOR SHALL COORDINATE AND COOPERATE TO EFFECT SUCH INSTALLATION.

10. ALL PLAN DIMENSIONS SHOWN AT CENTER OF WALL REPRESENT CENTER LINE OF STUD OR STRUCTURAL ELEMENT UNLESS NOTED OTHERWISE.

11. ALL PLAN DIMENSIONS FOR MASONRY AND CONCRETE REPRESENT FACE OF MATERIAL AND OPENING UNLESS NOTED OTHERWISE.

12. ALL DIMENSIONS SHOWN ARE TO FACE OF STUD AT NEW CONSTRUCTION AND FACE OF FINISH AT EXISTING CONSTRUCTION, UNLESS NOTED OTHERWISE.

13. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT THE REVIEW OF ARCHITECT UNLESS NOTED (+/-) OR 'VERIFY'. DIMENSIONS NOTED 'HOLD' SHALL BE CONSIDERED AS ABSOLUTE AND USED FOR LAY-OUT CONTROL UNLESS OTHERWISE DIRECTED BY ARCHITECT.

14. ALL HEIGHTS ARE DIMENSIONED FROM TOP OF SLAB UNLESS NOTED "AFF" (ABOVE FINISH FLOOR).

15. "TYPICAL" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED. WHEN A DETAIL OR NOTE IS IDENTIFIED AS "TYPICAL", CONTRACTOR SHALL APPLY THIS DETAIL OR NOTE TO EVERY LIKE CONDITION, WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE. VERIFY DIMENSIONS AND ORIENTATION ON PLANS.

16. PROVIDE WORK NOT SPECIFICALLY DETAILED OR SPECIFIED IN ACCORDANCE WITH DETAILS OR SIZES COVERING SIMILAR WORK.

17. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED VERIFY DIMENSIONS AND ORIENTATION ON PLANS.

18. ABBREVIATIONS THROUGHOUT THE DOCUMENTS COMPLY WITH DOCUMENT ABBREVIATION LIST OR ARE THOSE IN COMMON USE. ARCHITECT WILL DEFINE THE INTENT OF ANY IN QUESTION.

19. REFER TO THE PROJECT MANUAL FOR GENERAL CONDITIONS, SUPPLEMENTARY AND SPECIAL CONDITIONS, AND OTHER REQUIREMENTS.

20. PROVIDE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS. PROVIDE TEMPORARY PASSAGES AS REQUIRED. PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE, CHECK WITH [*OWNER/ARCHITECT/ RESIDENT INSPECTOR)* FOR ACCEPTABLE ACCESS ROUTE AND TIME. UNDER NO CIRCUMSTANCES USE AREA OUTSIDE THE CONSTRUCTION ZONE WITHOUT PRIOR CLEARANCE FROM THE *[OWNER/ARCHITECT/ RESIDENT INSPECTOR]*. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

21. PROVIDE FOR THE PROPER SEQUENCE OF CONSTRUCTION, LOCATION AND SIZE OF OPENINGS. COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED BY ARCHITECT.

22. TAKE ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL BUILDING PROCEDURES. NOTIFY OWNER IN ADVANCE OF HVAC, ELECTRICAL OR OTHER BUILDING SYSTEM SHUT-OFFS. MINIMIZE NOISE AND DUST GENERATION TO MAXIMUM EXTENT POSSIBLE. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

23. REMOVE ALL TRASH AND DEBRIS DAILY. DO NOT STORE BUILDING MATERIALS IN CORRIDORS AT ANY TIME. COMPLY WITH REQUIREMENTS AS SPECIFIED IN PROJECT MANUAL.

24. PERFORM ALL CUTTING, PATCHING, AND FINISHING NECESSARY TO RESTORE THE BUILDING AND SITE TO ORIGINAL CONDITION OF ALL EXISTING PORTIONS OF THE BUILDING AND SITE AFFECTED BY CONTRACTORS WORK, TO THE SATISFACTION OF ARCHITECT AND OWNER.

25. VERIFY POINTS OF CONNECTION, INCLUDING SIZES AND LOCATIONS, AND ALL OTHER REQUIRED OPERATING CRITERIA WITH EQUIPMENT MANUFACTURER.

26. COORDINATE THE LOCATION AND TYPE OF ALL ACCESS PANELS REQUIRED FOR ACCESSING MECHANICAL, PLUMBING, ELECTRICAL AND OTHER BUILDING SYSTEMS WITH ARCHITECT.

27. CONTRACTOR SHALL STIPULATE THAT ALL PROPOSED SUBSTITUTIONS ARE EQUAL IN PERFORMANCE AND COMPLY WITH APPLICABLE CODES AND REGULATIONS. CONTRACTOR'S SUBSTITUTION OF ALTERNATE MATERIALS OR SYSTEMS SHALL BE AT NO ADDITIONAL COST TO OWNER.

28. CONTRACTOR SHALL INSURE ALL CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED BY THE INSPECTOR OF RECORD. FOR CONTINUOUS INSPECTION, TESTING, AND OBSERVATION REQUIREMENTS, REFER TO THE TESTING AND OBSERVATION PROGRAM.

29. PROTECTION DURING WELDING: CONFORM TO TITLE 8, C.C.R. FURTHER PROTECT OCCUPANTS AND THE PUBLIC WITH PORTABLE SOLID VISION BARRICADES AROUND LOCATION WHERE WELDING IS BEING PERFORMED. PROVIDE SIGNS WARNING AGAINST LOOKING AT WELDING WITHOUT PROPER EYE PROTECTION OR EQUIVALENT. SEE C.F.C. FOR REQUIREMENTS FOR ON SITE WELDING.

30. ONSITE SOILS ARE HIGHLY CORROSIVE. GENERAL CONTRACTOR SHALL TAKE PROTECTIVE MEASURES FOR ALL BURIED FERROUS METALS.

DSA NOTES

1. ALL WORK TO CONFORM TO 2013 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

2. CHANGES TO THE APPROVED DRAWINGS OR SPECIFCATIONS SHALL BE MADE BY AN ADDENDA OR A CONSTRUCTION CHANGE DOCUMENT (C.C.D.) APPROVED BY THE DIVISION OF THE STATE ARCHITECT (DSA) PER SECTION 4-338, PART 1, TITLE 24, CCR.

3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT(OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

4. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROADS AND ACCESS REQUIREMENTS NAD ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

EQUIPMENT ANCHORAGE

EQUIPMENT ANCHORAGE NOTES:

ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2013 CBC, SECTION 1615A, 1616A, ASCE 7-05 AND CHAPTER 6.

THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS, AND THE PROJECT INSPECTOR WILL VERIFY THAT THESE ITEMS (EQUIPMENT) HAVE BEEN ANCHORED.

A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.
B. FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH ASCE 7-05 SECTION 13.5
C. TEMPORARY OR MOVABLE EQUIPMENT WITH FLEXIBLE CONNECTION TO POWER OR UTILITIES
D. EQUIPMENT WEIGHING LESS THAN 200 POUNDS SUPPORTED BY VIBRATION ISOLATORS
E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR HUNG FROM A WALL

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL

PIPING, DUCTWORK & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, 13.6.5.5 ITEM 6, AND 2013 CBC 1615A AND 1616A.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH 2013 CBC 1613A.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

FINISH NOTES

1. ALL CEILING HEIGHT DIMENSIONS MEASURED TO FINISH SURFACES UNLESS NOTED OTHERWISE.

2. EXTEND BASE MATERIAL BEHIND ALL MOVABLE EQUIPMENT AND INTO ALL ALCOVES, KNEESPACES AND SIMILAR AREAS, UNLESS NOTED OTHERWISE.

3. WHEN COUNTERTOP SPLASH IS REQUIRED, EXTEND SPLASH ON SIDES WHERE COUNTER JOINS ADJACENT WALL SURFACE UNLESS NOTED OTHERWISE.

4. ALL INTERIOR FINISHES SHALL COMPLY WITH CHAPTERS 8 AND 25A, PART 2, TITLE 24, CCR, INCLUDING TABLE 8-A, AND TABLES 25A-25L.

5. PROVIDE BACKING PLATES OR BLOCKING BEHIND ALL WALL MOUNTED EQUIPMENT, CASEWORK, AND ACCESSORIES AS REQUIRED FOR POSITIVE ATTACHMENT TO STRUCTURE. SEE DETAIL 2/S1.3.

6. SEAL ALL PENETRATIONS OF SOUND RATED PARTITIONS, FLOORS OR CEILING ASSEMBLIES , INCLUDING ELECTRICAL DEVICES, CABINETS AND OTHER ELEMENTS WITH APPROVED RESILIENT SEALANT. SEE AGENCY NOTES FOR PENETRATION REQUIREMENTS OF FIRE RATED AND SOUND RATED ASSEMBLIES.

STRUCTURAL NOTES

1. SUPPORT AND BRACE ALL PIPES, DUCTS, AND CONDUITS PER APPROPIATE DETAIL ON ARCHITECTURAL DETAIL SHEET(S) AND THE FOLLOWING STANDARDS OR APPROVED EQUAL:

   * SMACNA SEISMIC RESTRAINT MANUAL

2. PROVIDE ALL TEMPORARY SHORING AND BRACING AS REQUIRED FOR ALL DEMOLITION AND NEW WORK AS REQUIRED. ASSUME FULL RESPONSIBILITY FOR REPAIR AND/OR REPLACEMENT OF DAMAGED AREAS, INCLUDING BUT NOT NECESSARILY LIMITED TO, STRUCTURE, FINISHES, EQUIPMENT AND FURNISHINGS IF DAMAGE OF ANY KIND OCCURS AS RESULT OF IMPROPER OR INADEQUATE SHORING OR BRACING,

3. UNLESS SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS, DO NOT CUT OR OTHERWISE MODIFY STRUCTURAL ELEMENTS WITHOUT DIRECTION FROM ARCHITECT. PROVIDE REINFORCEMENT, SUPPORT, TEMPORARY SHORING SATISFACTORY TO THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO CUTTING INTO STRUCTURAL PORTIONS OF ANY BUILDING ELEMENT. PROVIDE ALL CUTTING OF STRUCTURAL ELEMENTS, AND ALL ASSOCIATED REPAIR OR REFINISHING OF ADJACENT SURFACES AT NO ADDITIONAL EXPENSE TO THE OWNER.

4. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING NON-PRE-STRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWER DRIVEN PINS IN EXISTING PRE-STRESSED REINFORCED CONCRETE (POST OR PRE TENSIONED), USE A NON-DESTRUCTIVE METHOD TO LOCATE TENDONS PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

5. PROVIDE TEMPORARY SHORING FOR EXCAVATIONS THAT REMOVE THE LATERAL SUPPORT FROM AN EXISTING BUILDING OR A PUBLIC WAY. PRIOR TO ISSUANCE OF PERMIT, OBTAIN APPROVAL FROM THE ENFORCING AGENCY FOR EXCAVATIONS ADJACENT TO A PUBLIC WAY.

6. OBTAIN NECESSARY PERMITS, INCLUDING CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, PRIOR TO ISSUANCE OF A BUILDING OR GRADING PERMIT FOR ALL TRENCHING.

FIRE & LIFE SAFETY NOTES

1. ALL INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 8, PART 2, TITLE 24, CCR. ALL FINISHES SHALL HAVE A FLAME SPREAD RATING OF 75 OR LESS AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH U.B.C. STANDARD NO. 8-1, and SHALL HAVE A CLASS I OR II FLAME SPREAD CLASSIFICATION PER TABLE 8-A .

2. ALL INSULATION MATERIALS INSTALLED WITHIN ROOF - CEILING ASSEMBLIES, ATTICS, OR WALLS SHALL HAVE A FLAME - SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH U.B.C. STANDARD NO. 8-1.

3. MANUFACTURERS INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON THE JOB SITE FOR ALL RATED OPENING ASSEMBLIES.

4. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A-10BC WITHIN A 75 FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR.

5. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 1-BC FOR ELECTRICAL ROOMS, MECHANICAL ROOMS, ELEVATOR MACHINE ROOMS AND TRASH ROOMS.

6. PROVIDE AN APPROPRIATE NUMBER OF PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 4A-60BC FOR PROTECTION DURING CONSTRUCTION.

7. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY PEDESTRIAN PROTECTION AS REQUIRED BY LOCAL CODE AND SPECIFICATION.

8. DO NOT BLOCK EXITS AT ANY TIME.

9. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS OF FIRE RATED WALLS, FLOORS, SHAFTS AND CEILINGS. COMBINATION FIRE/SMOKE DAMPERS SHALL BE USED AT DUCT PENETRATIONS OF RATED CORRIDOR WALLS.

10. FIRE DAMPER DETAILS SHOWN FOR REFERENCE ONLY. FIRE DAMPERS SHALL BE APPROVED AND LISTED BY STATE FIRE MARSHAL. INSTALL STRICTLY PER MANUFACTURER'S PRINTED INSTRUCTIONS AND LISTING APPROVAL. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.

11. DUCT INSULATION APPLIED TO THE EXTERIOR SURFACE OF DUCTS LOCATED IN BUILDINGS SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSTALLATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED.

12. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF THE CALIFORNIA ELECTRICAL CODE. STANDARDS AS DEFINED IN CHAPTER 35 CALIFORNIA BUILDING CODE AND APPLICABLE NFPA STANDARDS.

13. THE CONTRACTOR SHALL PROVIDE PROTECTION COMPLYING WITH TITLE 8, CCR, DURING WELDING. FURTHER PROTECTION SHALL BE PROVIDED TO ANY OCCUPANTS AND THE PUBLIC WITH PORTABLE SOLID VISION BARRICADES AROUND LOCATION WHERE WELDING IS BEING PERFORMED. PROVIDE SIGNS WARNING AGAINST LOOKING AT WELDING WITHOUT PROPER EYE PROTECTION OR EQUIVALENT.

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CLIENT NAME

COMPTON CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES

FILE NO: **19-C1**
A#: **03-117673**
AC_____ FLS_____ SS_____
DATE_____

CONSULTANT

PROJECT TEAM

PRINCIPAL IN CHARGE
RITA S. CARTER

PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN

DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

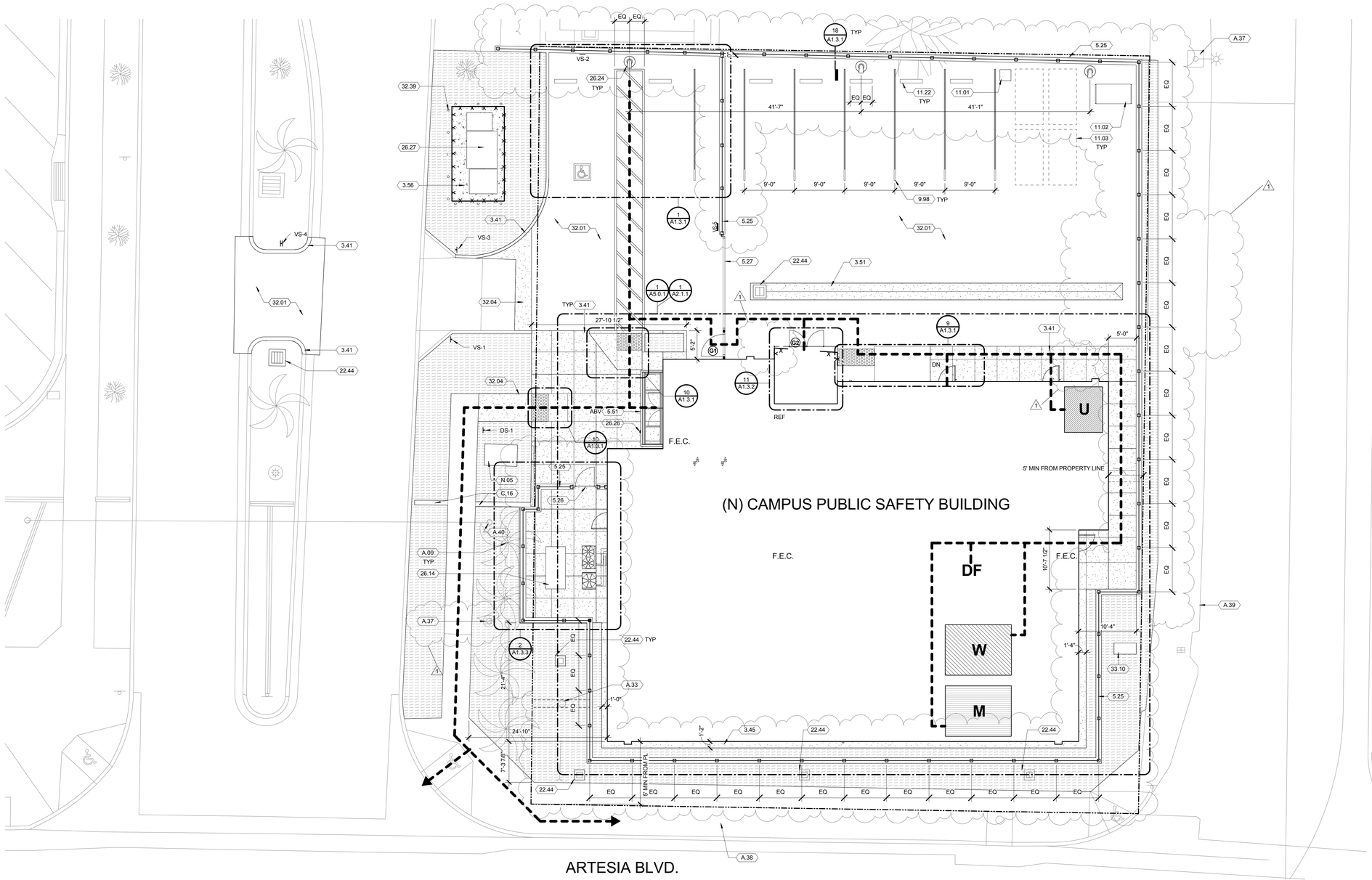
SHEET TITLE

GENERAL NOTES

PROJECT NUMBER

913-4675-00

ISSUE DATE	SHEET NO.
04/20/18	AD1-A0.0.1



1 A1.1.1 ENLARGED SITE PLAN V3
1/8" = 1'-0"

KEYNOTES

3.41	CAST-IN-PLACE CONCRETE CURB PER CIVIL, SEE DET 4 OR 5/A1.3.2 FOR ADD. INFO - 32 13 13
3.45	CAST IN PLACE CONCRETE MOW STRIP, SEE SIM. DET 1/A1.3.2 - 32 13 13
3.51	CONCRETE SWALE, PER CIVIL - 32 13 13
3.56	CONCRETE PAD, SEE CIVIL
5.25	FABRICATED STEEL FENCE - 32 31 17
5.26	FABRICATED STEEL GATE - 32 31 17
5.27	FABRICATED STEEL ROLLING GATE, SEE SHEET A1.3.3 - 32 31 17 (1)
5.51	EXTRUDED ALUMINUM CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
9.98	PARKING STRIPING - 32 17 23
11.01	AIR COMPRESSOR, SEE PLUMBING
11.02	3 YARD DUMPSTER, NIC
11.03	GOLF CART PARKING LOCATION, GOLF CARTS NIC
11.22	PARKING WHEEL STOP, SEE DET. 6/A1.3.1 - 32 17 13
22.44	CATCH BASIN, PER CIVIL
26.14	EMERGENCY GENERATOR, PER ELECTRICAL
26.24	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
26.26	AUTOMATIC DOOR OPERATOR, SEE ELECTRICAL & DETAIL 3/A1.3.3
26.27	SUBSTATION, REFER TO ELECTRICAL
32.01	ASPHALT PAVING, PER CIVIL
32.04	CONCRETE PAVING, REFER TO 3/A1.3.2 - 32 13 13
32.39	PROTECTIVE BOLLARDS - 05 50 00 (1)
33.10	BACKFLOW PREVENTER & ENCLOSURE, PER CIVIL
A.09	(E) TREE AND ROOTS TO REMAIN, COORDINATE ALL LANDSCAPE PROTECTION WITH LANDSCAPE
A.33	(E) UTILITY COMPANY POWER POLE AND BRACE TO REMAIN, PROTECT IN PLACE.
A.37	(E) SITE LIGHTING & BASE TO PROTECT IN PLACE
A.38	(E) CITY SIDEWALK
A.39	(E) CITY RIGHT OF WAY
A.40	(E) SIGNAGE POLE TO REMAIN, PROTECT IN PLACE
C.16	EXISTING BRICK VENEER WALL & ASSOCIATED GATES TO REMAIN, PROTECT IN PLACE
N.05	EXISTING UNDERGROUND COMMUNICATIONS VAULT/PULLBOX TO REMAIN, PROTECT IN PLACE.

SITE SIGNAGE SCHEDULE

TYPE	DESCRIPTION	SPEC	DETAIL
VS-1	ACCESSIBLE PARKING SITE ENTRANCE	10440	12/A1.3.1
VS-2	VAN ACCESSIBLE PARKING SPACE	10440	7/A1.3.1
VS-3	VEHICLE STOP SIGN	10440	17/A1.3.1
VS-4	NO PEDESTRIAN & VEHCILE CROSSING SIGN	10440	16/A1.3.1
VS-5	AUTHORIZED VEHICLES ONLY SIGN	10440	13/A1.3.1
DS-1	ACCESSIBLE DIRECTIONAL SIGN	10440	15/A1.3.1

NOTES

1. SEE NOTES ON SHEET G0.3.1 FOR MORE ACCESSIBILITY INFORMATION.

LEGEND

- WROUGHT IRON FENCE
- CHAINLINK FENCE & GATE, SEE DETAILS 7/A1.3.3
- ACCESSIBLE PATH OF TRAVEL 4'-0" WIDE MIN. CONCRETE OR A.C. PAVED. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION ON MATERIAL, SLOPES AND ELEVATIONS. SEE NOTES ABOVE.
- ASSUMED PROPERTY LINE
- CONTROL JOINTS, SEE DETAIL 6A A1.3.2
- EXPANSION JOINTS, SEE DETAIL 6B A1.3.2

4'-0" TYP. UNO; 4'-0" TYP. UNO

NOTE: TYP. SITE WORK CONCRETE EXPANSION & CONTROL JOINTS TO BE 5' - 0" MAX OC

- VS-1 / 9 VS-1 — MOUNTED SIGNAGE / POLL MOUNTED SIGNAGE
- M — MEN'S RESTROOM LOCATION
- W — WOMEN'S RESTROOM LOCATION
- U — UNISEX RESTROOM LOCATION
- DF — DRINKING FOUNTAIN LOCATION
- DECOMPOSED GRANITE (1)
- DETECTABLE WARNING TILE, SEE DETAIL 11/A1.3.1
- CONCRETE SITE WORK, PER CIVIL DRAWINGS

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CONSULTANT

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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

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SHEET TITLE
SITE PLAN

PROJECT NUMBER
913-4675-00

ISSUE DATE: 04/20/18
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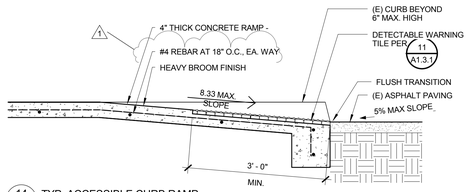
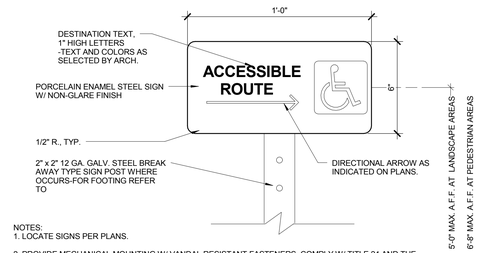


14 TYP. ACCESSIBLE CURB RAMP
A1.3.1 3/4" = 1'-0"



NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS.

3. ARROW CONFIGURATION **A:** **B:**

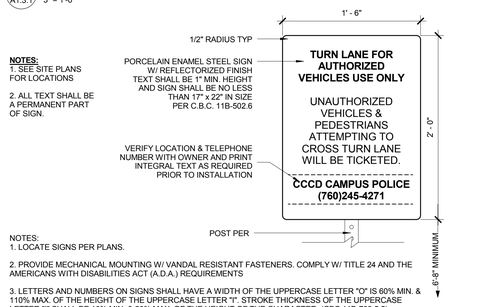
4. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

5. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

6. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

DS-1

15 ACCESSIBLE DIRECTIONAL SIGN
A1.3.1 3" = 1'-0"



NOTES:
1. SEE SITE PLANS FOR LOCATIONS

2. ALL TEXT SHALL BE A PERMANENT PART OF SIGN.

NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70% MIN.)

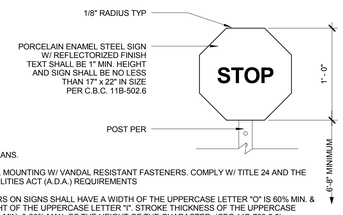
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-4

16 NO PEDESTRIAN & VEHICLE CROSSING SIGN
A1.3.1 1 1/2" = 1'-0"

NOTES:
1. SEE SITE PLANS FOR LOCATIONS

2. ALL TEXT SHALL BE A PERMANENT PART OF SIGN.



NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

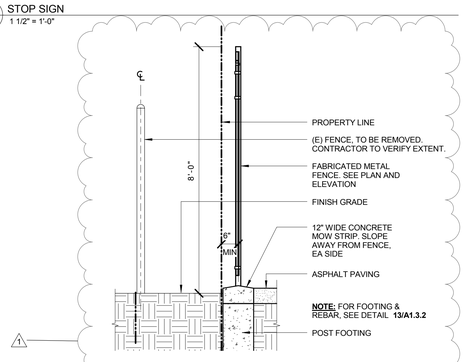
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.5 (70% MIN.)

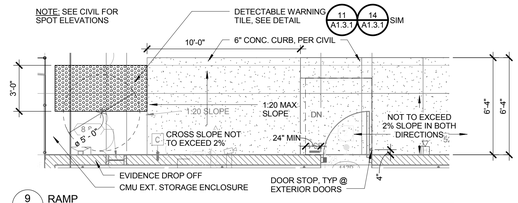
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-3

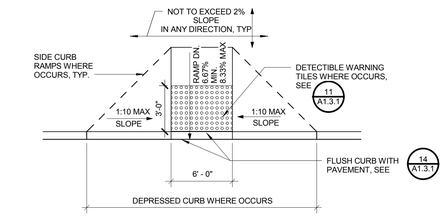
17 STOP SIGN
A1.3.1 1 1/2" = 1'-0"



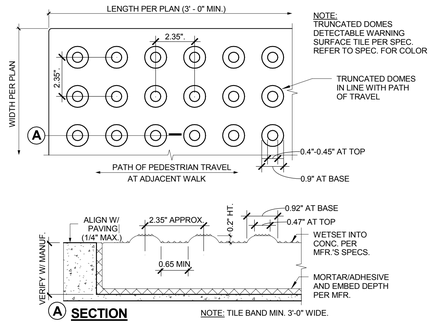
18 WROUGHT IRON SITE FENCE
A1.3.1 1/2" = 1'-0"



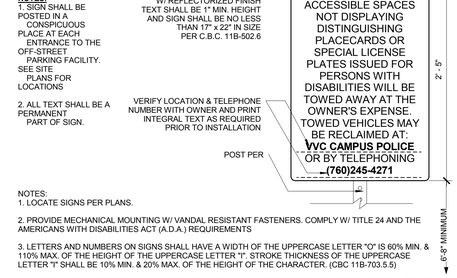
9 RAMP
A1.3.1 1/4" = 1'-0"



10 ACCESSIBLE CURB RAMP
A1.3.1 1/4" = 1'-0"



11 TYP. DETECTABLE WARNING SURFACE TILE
A1.3.1 3/4" = 1'-0"



NOTES:
1. SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EACH ENTRANCE TO THE OFF-STREET PARKING FACILITY. SEE SITE PLANS FOR LOCATIONS

2. ALL TEXT SHALL BE A PERMANENT PART OF SIGN.

NOTES:
1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

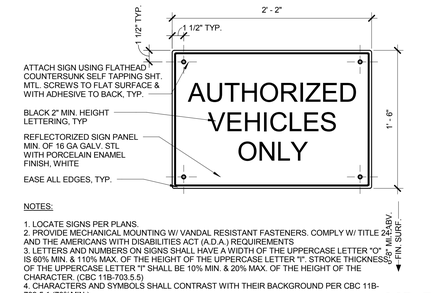
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-1

12 EXISTING ACCESSIBLE PARKING ENTRANCE SIGNAGE
A1.3.1 1 1/2" = 1'-0"

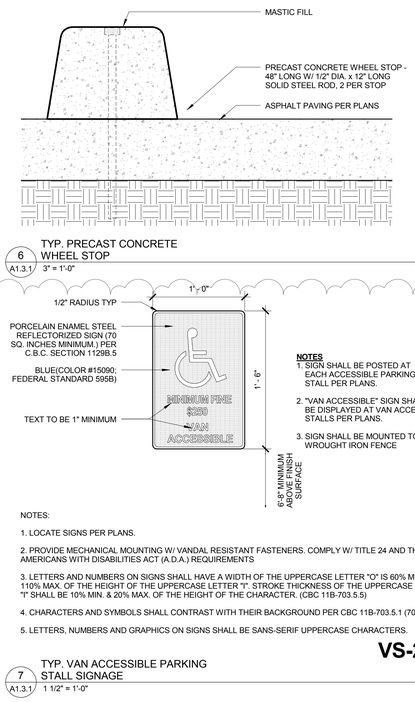


NOTES:

1. LOCATE SIGNS PER PLANS.
2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)
4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-5

13 TYP. SERVICE VEHICLES ONLY SIGN
A1.3.1 1 1/2" = 1'-0"



6 TYP. PRECAST CONCRETE WHEEL STOP
A1.3.1 3" = 1'-0"

NOTES
1. SIGN SHALL BE POSTED AT EACH ACCESSIBLE PARKING STALL PER PLANS.

2. "VAN ACCESSIBLE" SIGN SHALL BE DISPLAYED AT VAN ACCESSIBLE STALLS PER PLANS.

3. SIGN SHALL BE MOUNTED TO WROUGHT IRON FENCE

NOTES:

1. LOCATE SIGNS PER PLANS.

2. PROVIDE MECHANICAL MOUNTING W/ VANDAL RESISTANT FASTENERS. COMPLY W/ TITLE 24 AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.) REQUIREMENTS

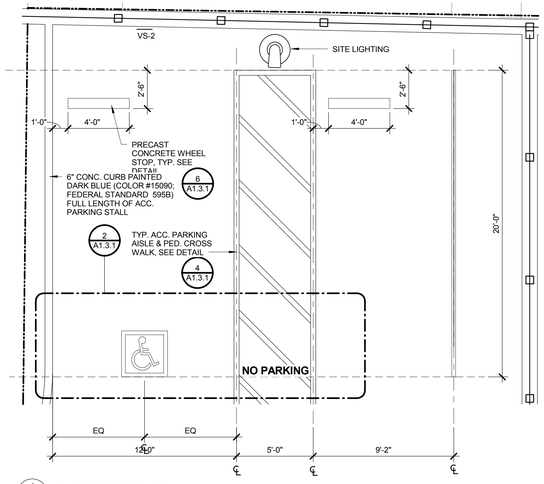
3. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH OF THE UPPERCASE LETTER "O" IS 60% MIN. & 110% MAX. OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN. & 20% MAX. OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.5.5)

4. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND PER CBC 11B-703.5.1 (70%MIN.)

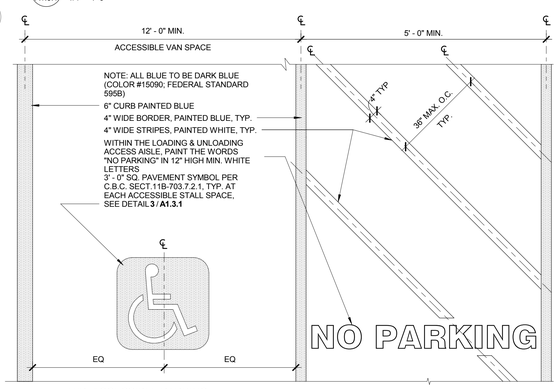
5. LETTERS, NUMBERS AND GRAPHICS ON SIGNS SHALL BE SANS-SERIF UPPERCASE CHARACTERS.

VS-2

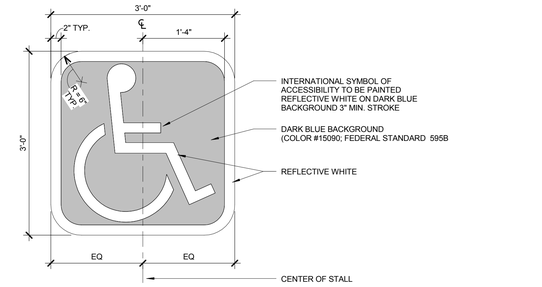
7 TYP. VAN ACCESSIBLE PARKING STALL SIGNAGE
A1.3.1 1 1/2" = 1'-0"



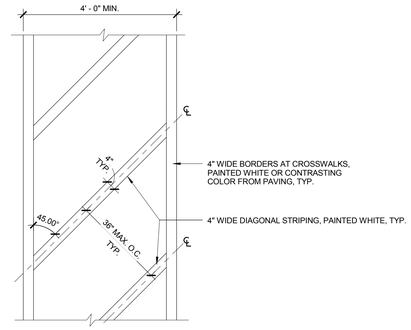
1 ENLARGED PARKING PLAN
A1.3.1 1/4" = 1'-0"



2 TYP. ACCESSIBLE PARKING ACCESS AISLE
A1.3.1 1/2" = 1'-0"



3 TYP. ACCESSIBLE PARKING STALL SYMBOL
A1.3.1 1" = 1'-0"



4 TYP. ACC. PEDESTRIAN P.O.T. CROSSWALK
A1.3.1 1/2" = 1'-0"

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Newport Beach, CA 92660
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CLIENT NAME
COMPTON CCD

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DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

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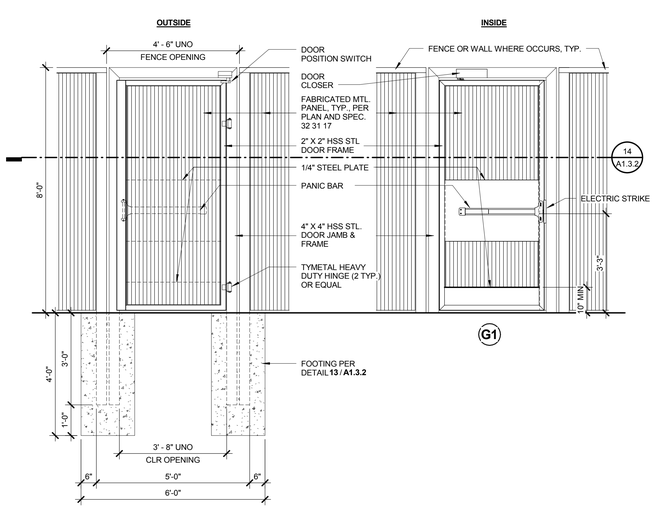
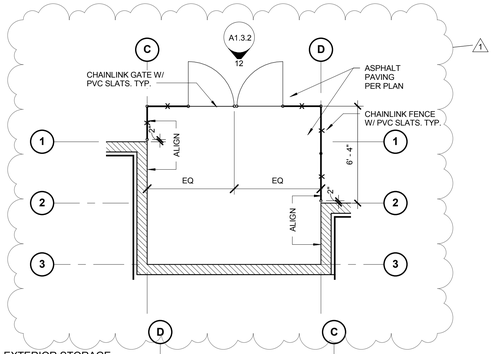
SHEET TITLE
SITE DETAILS

PROJECT NUMBER
913-4675-00

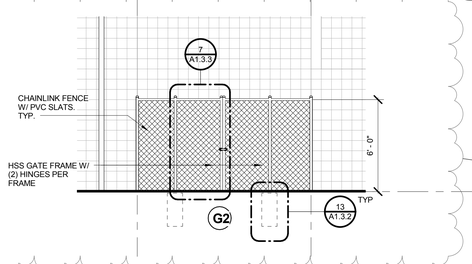
ISSUE DATE 04/20/18
SHEET NO. AD1-1.3.1



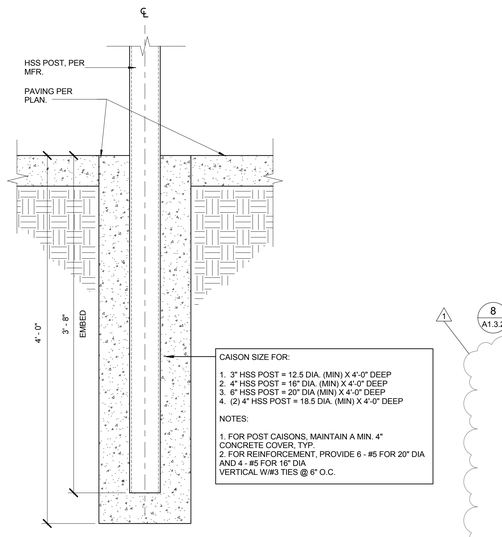
16 A1.3.2 PANIC HARDWARE GATE
1/2" = 1'-0"



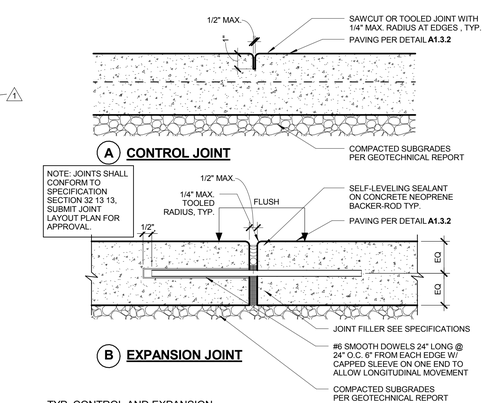
11 A1.3.2 EXTERIOR STORAGE ENCLOSURE - PLAN
1/4" = 1'-0"



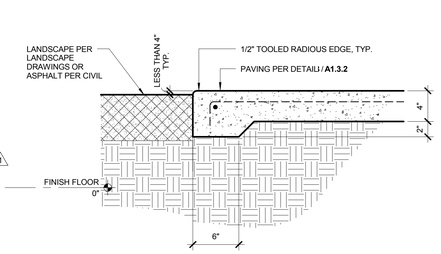
12 A1.3.2 EXT. STORAGE ENCLOSURE N. ELEVATION
1/4" = 1'-0"



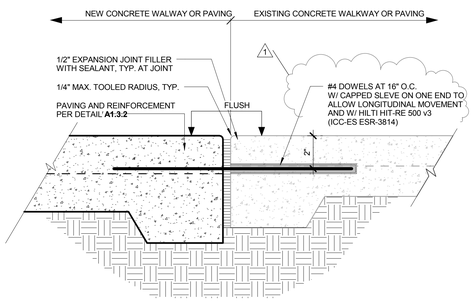
13 A1.3.2 SITE FENCING POST FOOTING DETAIL
1 1/2" = 1'-0"



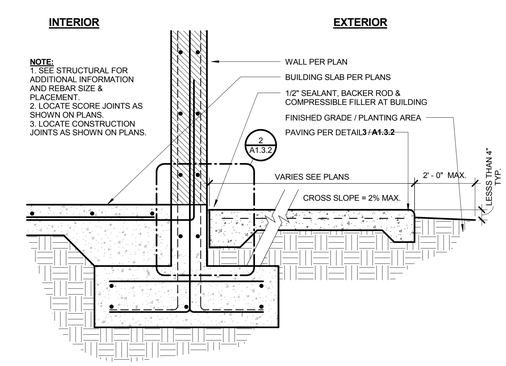
6 A1.3.2 TYP. CONTROL AND EXPANSION JOINTS
3" = 1'-0"



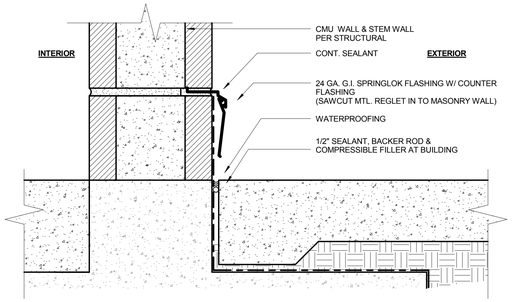
7 A1.3.2 TYP. CONCRETE PAVING AT LANDSCAPE
1 1/2" = 1'-0"



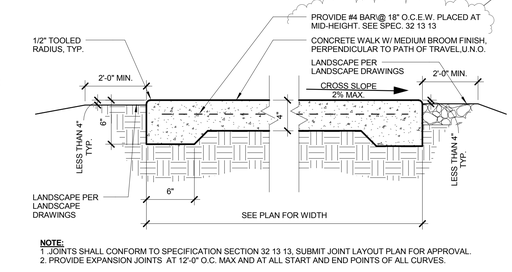
8 A1.3.2 TYP. CONCRETE WALK TO EXISTING CONCRETE WALK1
3" = 1'-0"



1 A1.3.2 TYP. CONCRETE WALKWAY / MOW STRIP AT BUILDING
1" = 1'-0"

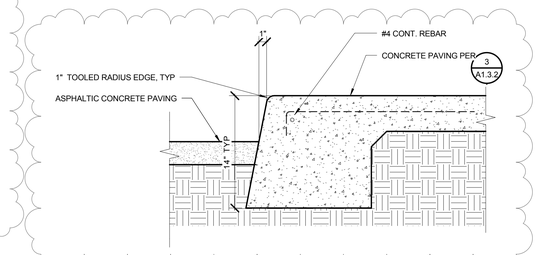


2 A1.3.2 TYP. WATERPROOFING DETAIL
3" = 1'-0"

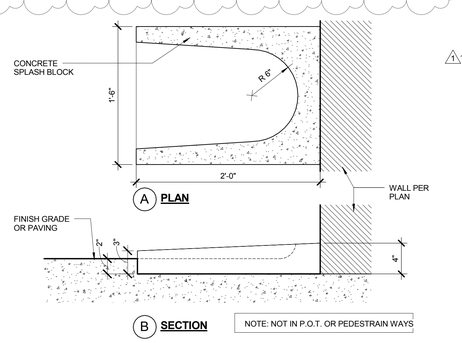


NOTE:
1. JOINTS SHALL CONFORM TO SPECIFICATION SECTION 32 13 13, SUBMIT JOINT LAYOUT PLAN FOR APPROVAL.
2. PROVIDE EXPANSION JOINTS AT 12'-0" O.C. MAX AND AT ALL START AND END POINTS OF ALL CURVES.

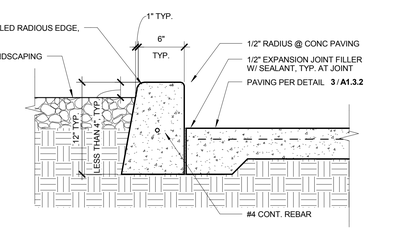
3 A1.3.2 TYP. CONCRETE WALKWAY PAVING
1 1/2" = 1'-0"



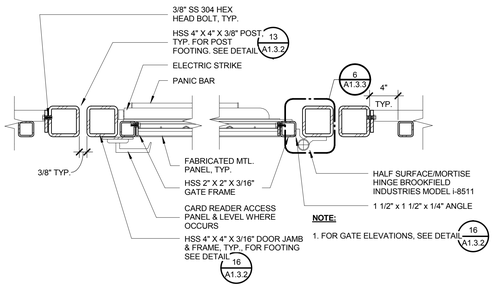
4 A1.3.2 TYP. CONCRETE CURB TO ASPHALT PAVING
1 1/2" = 1'-0"



10 A1.3.2 TYP. CONCRETE SPLASH BLOCK ON GRADE
1 1/2" = 1'-0"



5 A1.3.2 TYP. CONCRETE CURB TO EXISTING LANDSCAPING
1 1/2" = 1'-0"



14 A1.3.2 TYP. GATE SECTION
1 1/2" = 1'-0"

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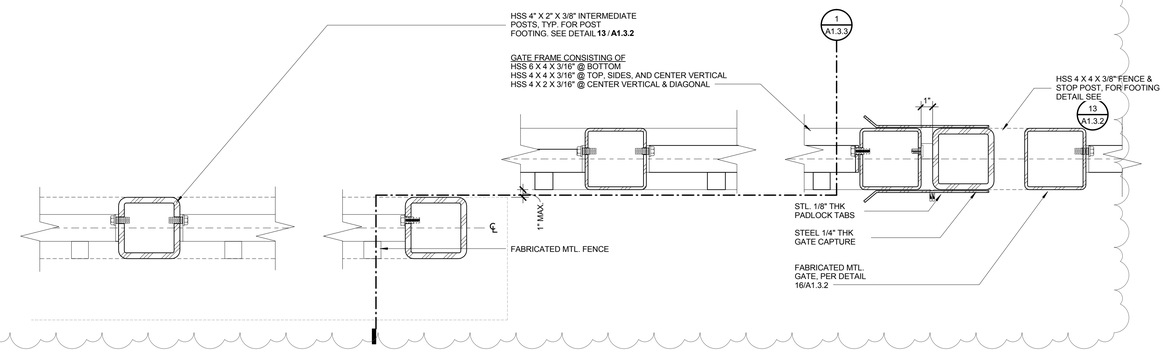
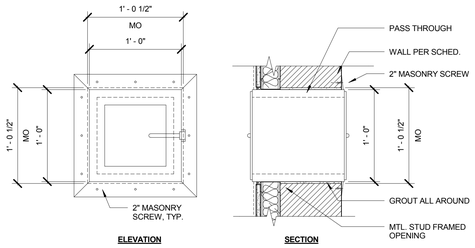
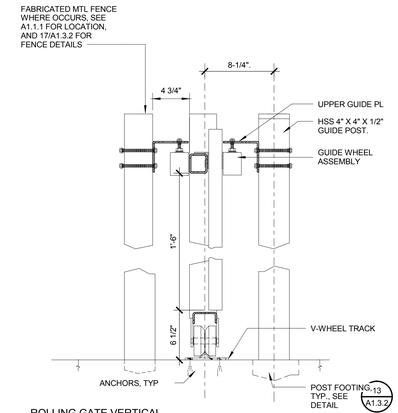


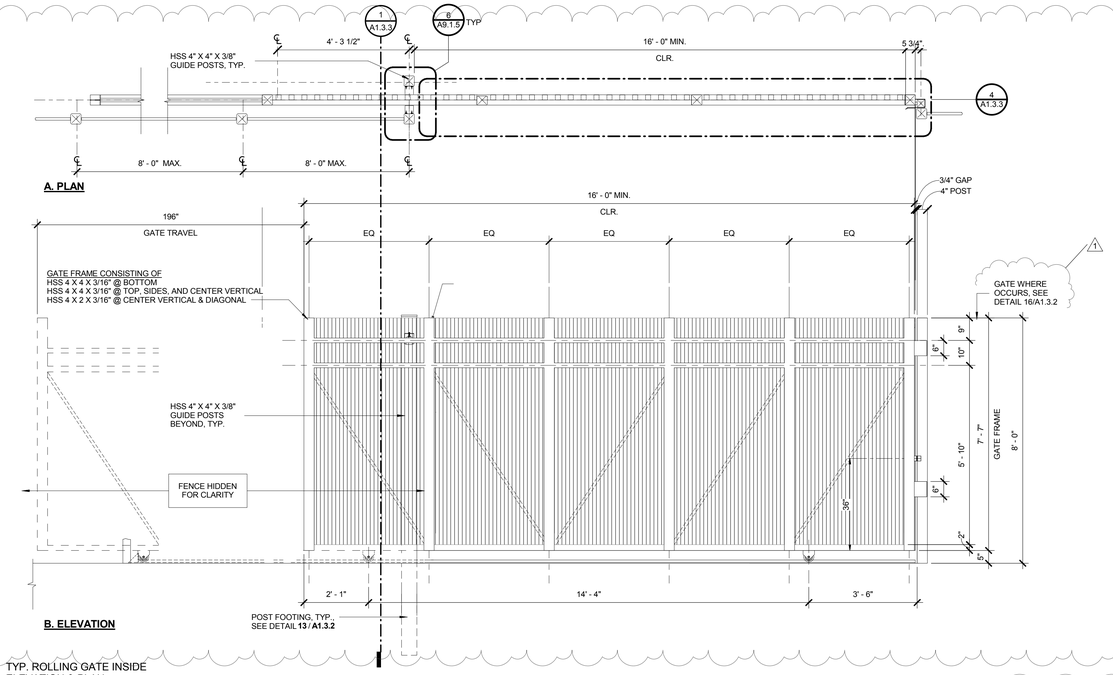
4 A1.3.3 ROLLING GATE HORIZONTAL SECTION
3" = 1'-0"



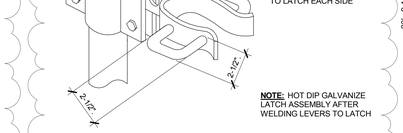
8 A1.3.3 PASS-THROUGH DETAIL
1 1/2" = 1'-0"



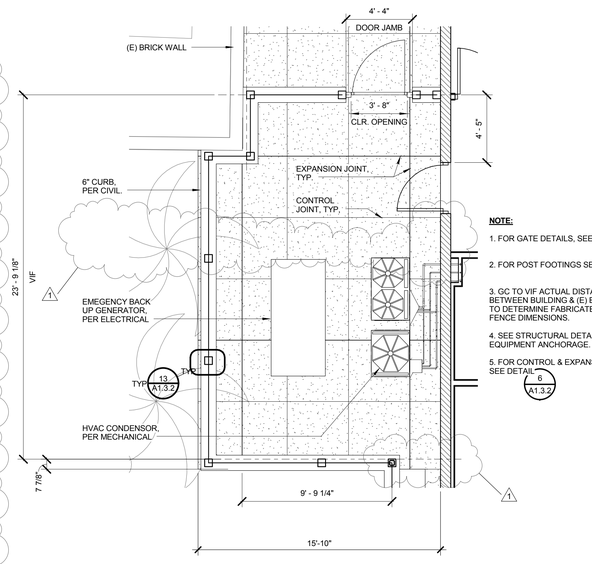
1 A1.3.3 ROLLING GATE VERTICAL SECTION
1 1/2" = 1'-0"



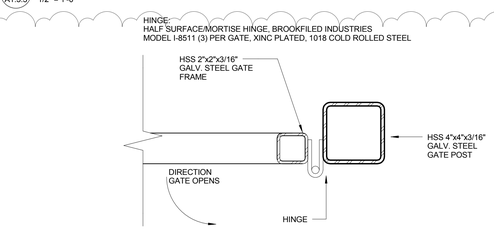
5 A1.3.3 TYP. ROLLING GATE INSIDE ELEVATION & PLAN
1/2" = 1'-0"



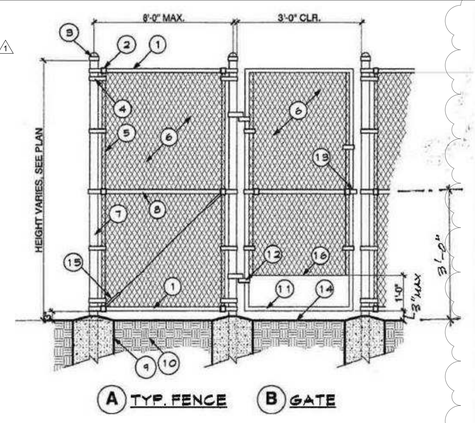
9 A1.3.3 GATE LATCH
6" = 1'-0"

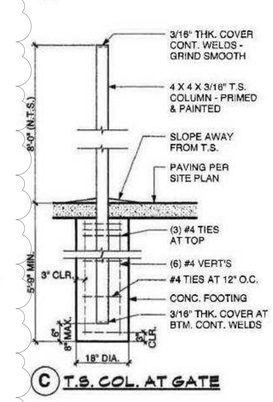


2 A1.3.3 ENLARGED EQUIPMENT ENCLOSURE PLAN
1/4" = 1'-0"



6 A1.3.3 HINGE@IRON GATE
3" = 1'-0"





LEGEND:

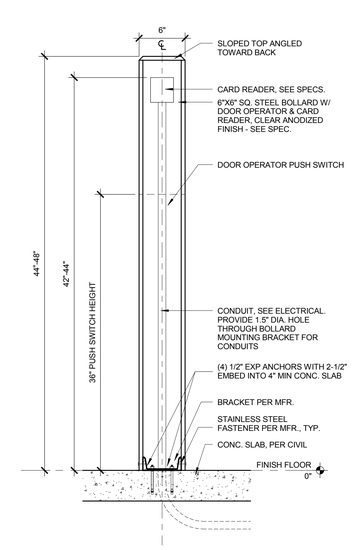
1. TOP AND BOTTOM RAIL
2. RAIL END, TYPICAL
3. POST CAP, GALVANIZED
4. STRETCHER BAND, TYP.
5. STRETCHER BAR, TYP.
6. 2" GRID MESH, 9 GA. CHAIN LINK FABRIC KNUCKLED SELVAGE
7. POSTS PER FENCING MANUF.
8. MID-RAIL, 1-5/8" O.D. GALV. STEEL PIPE PER FENCING MANUF.
9. CONCRETE FOOTING PER: C
10. COMPACTED SUBGRADE
11. GATE FRAME, 1-5/8" GALV. STEEL PIPE
12. HEAVY-DUTY GATE HINGE (2) PER GATE
13. LOCKABLE U-LATCH, GALV. STEEL - 5 LBS. MAX. TO OPERATE. NO TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST
14. FINISH GRADE OR TOP OF PAVING, REFER TO PLAN
15. TURNBUCKLE & DIAGONAL BRACE ROD
16. KICK PLATE

NOTES:

1. ALL COMPONENTS OF FENCING SYSTEM THAT ARE STEEL SHALL BE GALVANIZED.
2. ALL CHAIN LINK FABRIC - KNUCKLED SELVAGE, TOP AND BOTTOM.
3. ALL FENCING TO HAVE TOP AND BOTTOM RAIL.
4. CHAIN LINK FABRIC SHALL BE ON PLAZA SIDE OF FENCE.

C.L. FABRIC - 2" MESH, 9 GAUGE
TRUSS RODS - 3/8" DIAMETER
TURNBUCKLES - 3-1/8" X 7-1/8"
STRETCHER BAR - 1/4" X 3/4"
POSTS AND RAILS - STANDARD STEEL PIPE

7 A1.3.3 FENCE & GATE DETAIL @ ELECTRICAL ENCLOSURE
1/2" = 1'-0"



3 A1.3.3 DOOR OPERATOR POST
1 1/2" = 1'-0"

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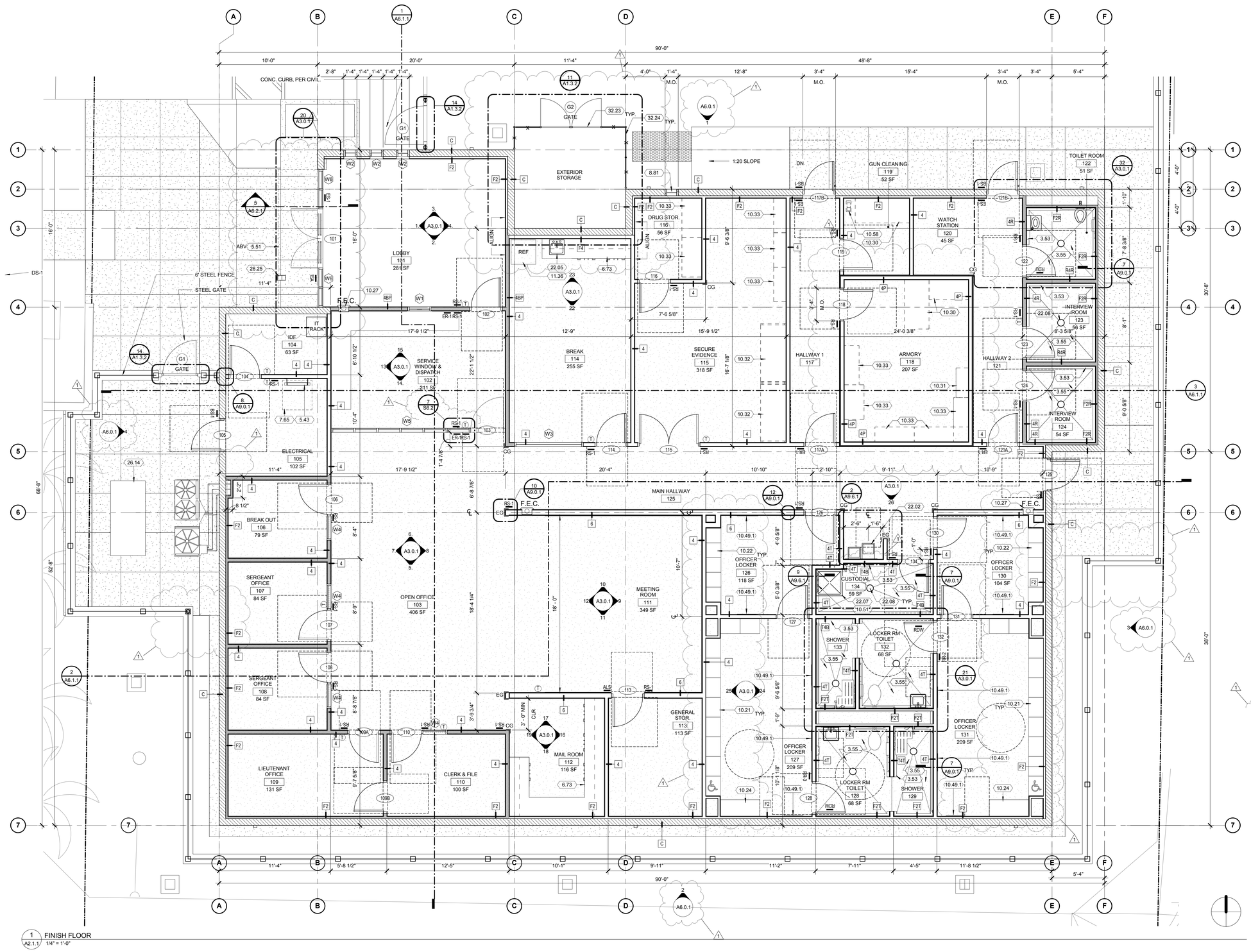

1 FINISH FLOOR
A2.1.1 1/4" = 1'-0"

TO (E) PUBLIC R.O.W.

KEYNOTES

3.53	CONCRETE COVE BASE, TYP. SEE DET. 6 & 7/A9.0.1
3.55	2-1/2" DEPRESSED CONCRETE SLAB PER STRUCTURAL
5.43	PREFABRICATED ALUMINUM ACCESS LADDER, SEE DETAIL 7/A9.1.1 - 05 50 00
5.51	EXTRUDED ALUMINUM CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
6.73	LAMINATE COUNTERTOP, SEE INT. ELEVATION FOR MORE INFORMATION - 06 41 00
7.65	ROOF ACCESS HATCH - 07 72 00
8.81	STEEL PASS-THROUGH EVIDENCE DROP-OFF, SEE DETAIL 8/A1.3.3
10.21	TYPE 1 OFFICER LOCKERS, SEE DETAIL 17/A9.6.1 - 10 51 13
10.22	TYPE 2 CADET LOCKERS, SEE DETAIL 17/A9.6.1 - 10 51 13
10.24	48" x 24" ADA BENCH, SEE 4/A9.6.1 FOR ANCHORAGE - 10 51 13
10.27	FIRE EXTINGUISHER CABINET, SEMI-RECESSED, SEE DETAIL 6/A9.6.1 - 10 44 00
10.30	ROUSSEAU DESK WITH UPPER WALL MOUNT UNITS - 10 56 13
10.31	WEAPONWRX SHELVING - 10 56 13
10.32	WIDESPAN SHELVING - 10 56 13
10.33	SPACESAVER 4-POST METAL STORAGE SHELVING - 10 56 13
10.49.1	LOCKER ROOM FULL HEIGHT MIRROR, TYP. - 10 28 00
10.51	MOP RACK - 10 28 00
10.58	EMERGENCY-CLEAR CLEARING BARREL
11.36	SIDE BY SIDE OR FREEZER ON BOTTOM REFRIGERATOR TO BE OWNER PROVIDED, OWNER INSTALLED. NIC
22.02	DRINKING FOUNTAIN, PER PLUMBING DRAWINGS
22.05	SINK, PER PLUMBING DRAWINGS
22.07	MOP SINK, PER PLUMBING DRAWINGS
22.08	FLOOR DRAIN, PER PLUMBING DRAWINGS
26.14	EMERGENCY GENERATOR, PER ELECTRICAL
26.25	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
32.23	CHAIN LINK GATE W/ PVC SLATS
32.24	CHAIN LINK FENCE W/ PVC SLATS

SIGNAGE SCHEDULE

ER-1	EXIT ROUTE, SEE DETAIL 3/A9.6.2
ES-1	EXIT SIGNAGE, SEE DETAIL 3/A9.6.2
ALS	ASSISTED LISTENING SYSTEM 11/A9.6.2
RS-1	TYP. ROOM SIGNAGE, SEE DETAIL 5/A9.6.2
BS-1	EXTERIOR BUILDING SIGNAGE, SEE DETAIL 5/A9.6.2
RR-1	RESTROOM SIGNAGE ON WALL, SEE DETAIL 6/A9.6.2
RDW RDM RDU	RESTROOM SIGNAGE ON DOOR, SEE DETAIL 6/A9.6.2

WALL LEGEND

XX	WALL TYPES PER SHEET A9.0.1
	NON-RATED PARTITION
	ACOUSTICAL PARTITION
EG CG	CORNER & END WALL GUARDS, SEE DETAIL 10/A9.0.1 & SPEC. SECTION 10 26 00

GENERAL NOTES

1. FIRST FLOOR FINISH FLOOR IS ASSUMED TO BE 0'-0", REFER TO CIVIL FOR ACTUAL ELEVATION. 0' - 0" = 58.67'
2. DOOR FRAMES LOCATED NEAR ADJACENT WALLS OR CASEWORK TO BE 4" FROM INSIDE CORNER, OR TO NEAREST BLOCK MODULE AT CMU WALLS, U.N.O.
3. COORDINATE AND CONFIRM EXACT LOCATIONS OF ALL FLOOR MOUNTED OUTLETS PRIOR TO CONCRETE PLACEMENT, SEE ELECT.
4. FOR WALL TYPES, SEE SHEET A9.0.1, A9.0.2 & REFER TO STRUCTURAL FOR TYPICAL WALL FRAMING DETAILS.
5. FOR TYPICAL MOUNTING AND ACCESSIBILITY HEIGHTS, SEE SHEET A3.0.1
6. FOR ALL WALLS THAT REQUIRE BACKING, PROVIDE 16 GA MTL STUDS
7. SEE DETAIL 9/A9.3.1 FOR TRANSITIONS STRIPS BETWEEN MATERIALS
8. ROOM IDENTIFICATION SIGNAGE - SPEC SECTION 10 14 00 FOR MOUNTING HEIGHT SEE DETAIL 9 / A9.6.2
9. TOILET ROOM SYMBOLS - SPEC SECTION 10 14 00. FOR MOUNTING HEIGHT SEE DETAIL 6 & 7/A9.6.2
10. SEE DETAIL 11 & 14/A9.6.3, 2/S1.3 & 1/S1.4 FOR FLOOR AND WALL ANCHORAGE OF ROUSSEAU DESK WITH UPPER WALL MOUNTED UNITS, WEAPONWRX SHELVING, WIDESPAN SHELVING, AND SPACESAVER 4-POST METAL STORAGE SHELVING UNITS.
11. PROVIDE (1) ACCESSIBLE LOCKER AT EACH LOCKER ROOM.
12. PROVIDE CURB IN ALL RESTROOMS, SHOWERS, TOILETS, CUSTODIAL ROOM, AND INTERVIEW ROOMS, PER DETAIL 7/A9.0.1

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CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC____ FLS____ SS____
DATE____

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

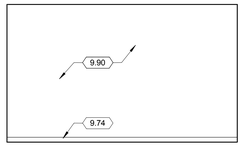
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

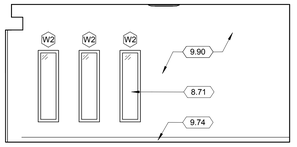
SHEET TITLE
FLOOR PLAN

PROJECT NUMBER
913-4675-00

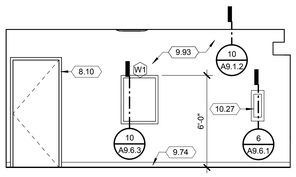
ISSUE DATE	SHEET NO.
04/20/18	AD1-A2.1.1



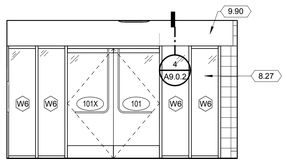
4. LOBBY - EAST ELEV.
A3.0.1 1/4" = 1'-0"



3. LOBBY - NORTH ELEV.
A3.0.1 1/4" = 1'-0"

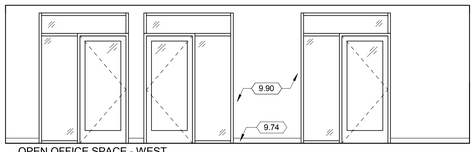


2. LOBBY - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

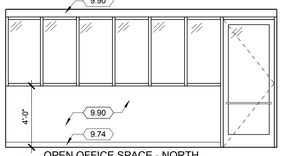


1. LOBBY - WEST ELEV.
A3.0.1 1/4" = 1'-0"

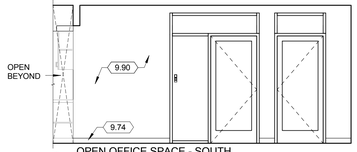
8 OPEN OFFICE SPACE - EAST ELEV.
A3.0.1 1/4" = 1'-0"



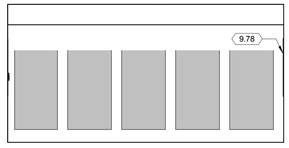
7. OPEN OFFICE SPACE - WEST ELEV.
A3.0.1 1/4" = 1'-0"



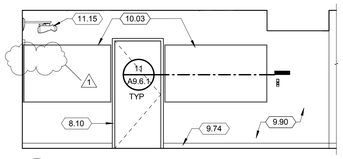
6. OPEN OFFICE SPACE - NORTH ELEV.
A3.0.1 1/4" = 1'-0"



5. OPEN OFFICE SPACE - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"



12 MEETING RM - WEST ELEV.
A3.0.1 1/4" = 1'-0"



11 MEETING RM - SOUTH ELEV.
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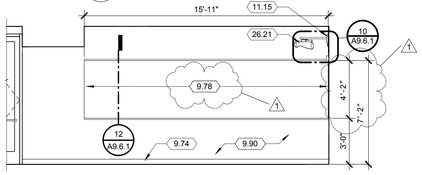
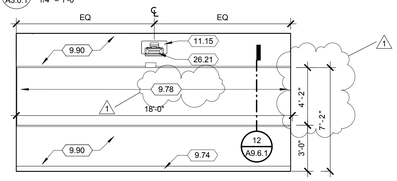
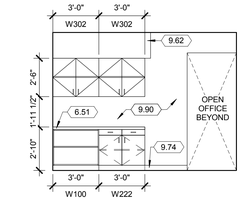


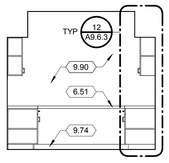
10 MEETING RM - NORTH ELEV.
A3.0.1 1/4" = 1'-0"



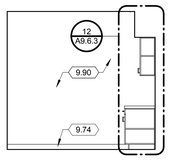
9 MEETING RM - EAST ELEV.
A3.0.1 1/4" = 1'-0"



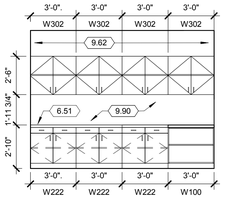
19 MAIL RM - WEST ELEV.
A3.0.1 1/4" = 1'-0"



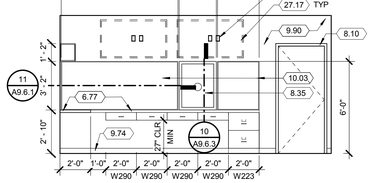
18 MAIL RM - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"



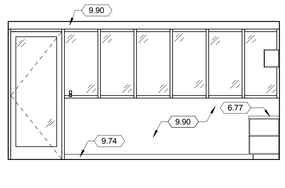
17 MAIL RM - NORTH ELEV.
A3.0.1 1/4" = 1'-0"



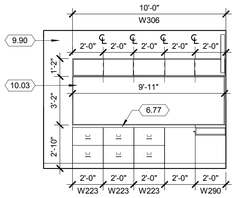
16 MAIL RM - EAST ELEV.
A3.0.1 1/4" = 1'-0"



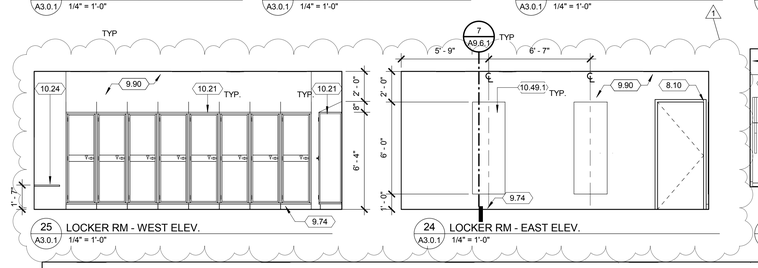
15 SERVICE - NORTH ELEV.
A3.0.1 1/4" = 1'-0"



14. SERVICE - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"

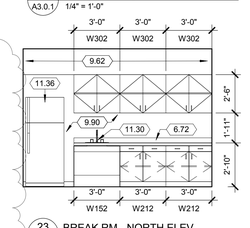


13 SERVICE - WEST ELEV.
A3.0.1 1/4" = 1'-0"

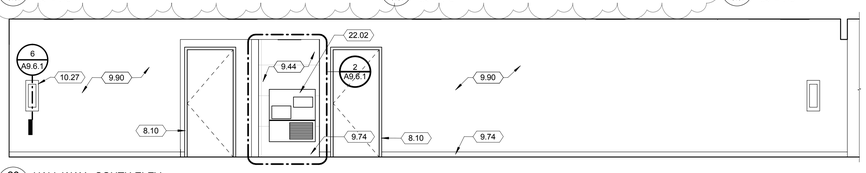


25 LOCKER RM - WEST ELEV.
A3.0.1 1/4" = 1'-0"

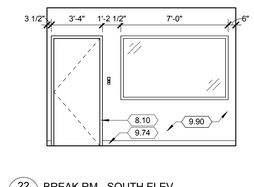
24 LOCKER RM - EAST ELEV.
A3.0.1 1/4" = 1'-0"



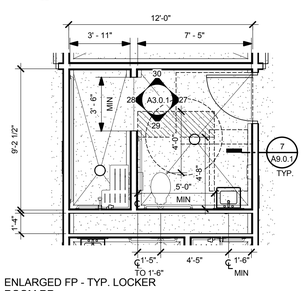
23 BREAK RM - NORTH ELEV.
A3.0.1 1/4" = 1'-0"



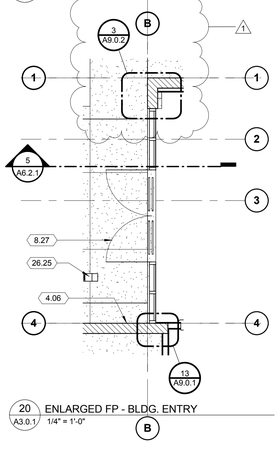
26 HALL WAY - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"



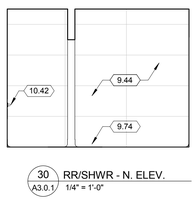
22 BREAK RM - SOUTH ELEV.
A3.0.1 1/4" = 1'-0"



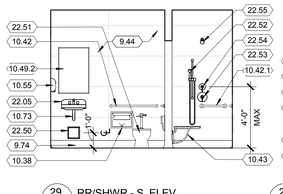
ENLARGED FP - TYP. LOCKER ROOM RR
21 A3.0.1 1/4" = 1'-0"



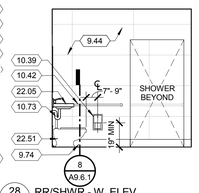
20 ENLARGED FP - BLDG. ENTRY
A3.0.1 1/4" = 1'-0"
B



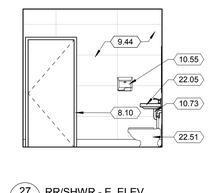
30 RR/SHWR - N. ELEV.
A3.0.1 1/4" = 1'-0"



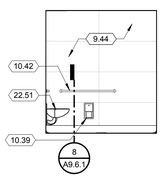
29. RR/SHWR - S. ELEV.
A3.0.1 1/4" = 1'-0"



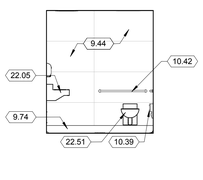
28 RR/SHWR - W. ELEV.
A3.0.1 1/4" = 1'-0"



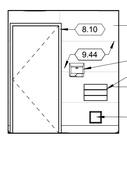
27 RR/SHWR - E. ELEV.
A3.0.1 1/4" = 1'-0"



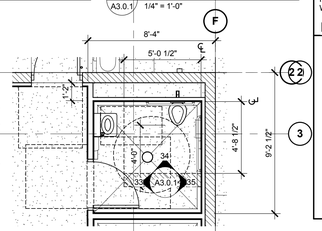
35 UNISEX - E. ELEV.
A3.0.1 1/4" = 1'-0"



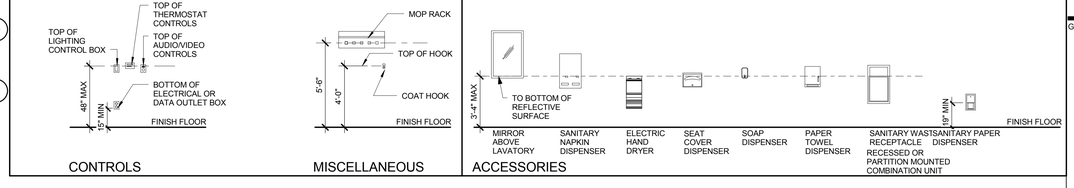
34 UNISEX - N. ELEV.
A3.0.1 1/4" = 1'-0"



33 UNISEX - W. ELEV.
A3.0.1 1/4" = 1'-0"



32 ENLARGED FP - UNISEX RR
A3.0.1 1/4" = 1'-0"



31 ACCESSIBLE MOUNTING SCHEDULE
A3.0.1 1/4" = 1'-0"

KEYNOTES

4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
6.51	PLASTIC LAMINATE COUNTERTOP - 06 41 00
6.72	PLASTIC LAMINATE COUNTERTOP WITH BACKSPLASH - 06 41 00
6.77	STAINLESS STEEL LAMINATED COUNTERTOP - 06 41 00
8.10	PREFINISHED HOLLOW METAL FRAMES - 08 12 13
8.27	ALUMINUM STOREFRONT SYSTEM - 08 41 00
8.35	ALUMINUM PASS THRU WINDOW - 08 58 00
8.71	TUBULAR SKYLIGHT, TYPE 2 - 08 62 00
9.44	CERAMIC TILE - 09 30 13
9.62	SOFFIT, SEE DETAIL 10/A9.1.2
9.74	WALL BASE, SEE FINISH SCHEDULE - 09 65 00
9.78	NON-GLARE, PROJECTABLE MARKERBOARD WALL COVERING - 09 72 33
9.90	PAINT FINISH - INTERIOR, SEE FINISH SCHEDULE - 09 91 00
9.93	VINYL WALL COVERING - 09 72 17
10.03	TACKBOARD PANEL - 09 72 60
10.13	CORNER/END GUARD(S) - 10 26 13
10.21	TYPE 1 OFFICER LOCKERS, SEE DETAIL 17/A9.6.1 - 10 51 13
10.24	48" x 24" ADA BENCH, SEE 4/A9.6.1 FOR ANCHORAGE - 10 51 13
10.27	FIRE EXTINGUISHER CABINET, SEMI-RECESSED, SEE DETAIL 6/A9.6.1 - 10 44 00
10.38	SEAT COVER DISPENSER - 10 28 00
10.39	SANITARY PRODUCTS DISPENSER - 10 28 00
10.42	GRAB BAR - 10 28 00
10.42.1	SHOWER GRAB BAR - 10 28 00
10.43	FOLDING SHOWER SEAT - 10 28 00
10.49.1	LOCKER ROOM FULL HEIGHT MIRROR, TYP. - 10 28 00
10.49.2	RESTROOM MIRROR - 10 28 00
10.55	ELECTRIC HAND DRYER - 10 28 00
10.73	BURN PROTECTION TRAP/WATER PIPE WRAP - 22 07 00
11.15	PROJECTOR MOUNT - 11 52 00
11.30	STAINLESS STEEL SINK, SEE PLUMBING
11.36	SIDE BY SIDE OR FREEZER ON BOTTOM REFRIGERATOR TO BE OWNER PROVIDED, OWNER INSTALLED, NIC
22.02	DRINKING FOUNTAIN, PER PLUMBING DRAWINGS
22.05	SINK, PER PLUMBING DRAWINGS
22.50	RECESSED HOSE BIB BOX, SEE PLUMBING
22.51	WALL HUNG TOILET, SEE PLUMBING
22.52	HAND SHOWER, SEE PLUMBING
22.53	THERMOSTATIC MIXING VALVE, SEE PLUMBING
22.54	DIVERTER, SEE PLUMBING
22.55	SHOWER HEAD, SEE PLUMBING
26.02	ELECTRICAL & DATA OUTLETS, SEE ELECTRICAL
26.21	PROJECTOR,SEE DET. 10/A9.6.1 FOR MOUNTING
26.25	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
27.17	SECURITY MONITORS OWNER PROVIDED & INSTALLED, TYP. SEE DET. 13/A9.6.1 FOR MOUNTING DETAIL

CASEWORK SCHEDULE

TYPE	DETAIL #
W100	1/A9.6.3
W152	4/A9.6.3
W212	2/A9.6.3
W222	2/A9.6.3
W223	3/A9.6.3
W290	5/A9.6.3
W302	7/A9.6.3
W306	8/A9.6.3

GENERAL NOTES

1. ALL MILLWORK FINISH IS PL-2 FOR UPPER AND PL-3 FOR LOWER CABINETS, U.O.N.
2. ALL COUNTERTOPS ARE PL-1, U.O.N.
3. ALL PLAM GRAIN TO RUN VERTICAL
4. SEE SPEC SECTION 00 41 00 FOR ACCESSORIES AND ADDITIONAL INFORMATION.
5. MILLWORK BASED ON ARCHITECTURAL WOODWORK STANDARDS' CABINET DESIGN SERIES.
6. DIMENSIONS SHOWN OF CASEWORK WIDTH ARE GENERAL ESTIMATIONS GIVING DESIGN INTENT. GENERAL CONTRACTOR TO FIELD VERIFY OVERALL DIMENSIONS OF CASEWORK LOCATION AND ADJUST CASEWORK DIMENSIONS ACCORDINGLY.
7. SCRIBE BASE CABINET END PANELS TO MATCH SELF COVE BASE PROFILE WHERE OCCURS.
8. FOR ACCESSIBLE FIXTURES AND EQUIPMENT HEIGHTS, REFER TO 31/A3.0.1

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CONSULTANT

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PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

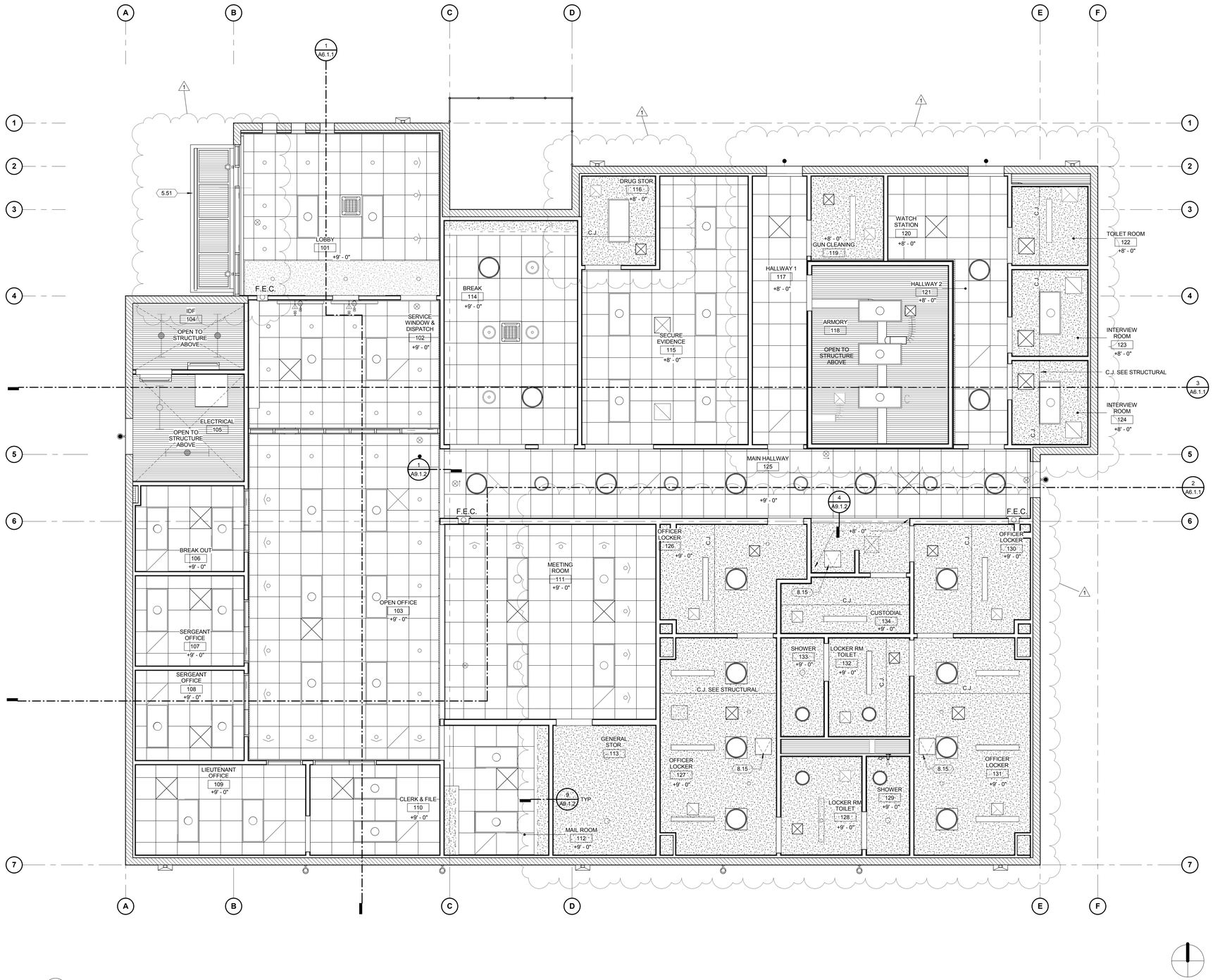
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
DETAILED FLOOR PLANS & INTERIOR ELEVATIONS

PROJECT NUMBER
913-4675-00

ISSUE DATE 04/20/18
SHEET NO. AD1-A3.0.1



1 REFLECTED CEILING PLAN
A4.1.1 1/4" = 1'-0"

LEGEND

5.43	PREFABRICATED ALUMINUM ACCESS LADDER, SEE DETAIL 7/A9.1.1 - 05 50 00
5.51	EXTRUDED ALUMINUM CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
7.65	ROOF ACCESS HATCH - 07 72 00
8.15	CEILING ACCESS PANEL, SEE DET. 13/A9.1.2 - 08 31 13

LEGEND

- EXPOSED GALVANIZED METAL DECK, SEE STRUCT.
- 2'-0" x 2'-0" SUSPENDED ACOUSTICAL GRID PANELS PER ROOM FINISH SCHEDULE
- GYPSUM BOARD PER FINISH SCHEDULE, FOR MORE INFO. SEE DETAIL **5/A9.1.2**
- + X'-X" — HEIGHT OF CEILING / SOFFIT
- S — SWITCH, SEE ELECTRICAL
- SD — SMOKE DETECTOR, SEE FIRE ALARM DWGS.
- F — FIRE HORN, SEE FIRE ALARM DWGS.
- LIGHT FIXTURES SEE ELECTRICAL DRAWINGS
- UNIT SKYLIGHT, SEE ELECTRICAL DWGS FOR TYPE.
- SUPPLY AIR DIFFUSER
- RETURN AIR DIFFUSER
- EXHAUST AIR DIFFUSER

GENERAL NOTES

1. CENTER SUSPENDED CEILING GRIDS EACH WAY WITHIN SPACE, UNLESS NOTED OTHERWISE
2. CENTER MECHANICAL AIR GRILLES BETWEEN LIGHTS / WALLS IN GYPSUM BOARD CEILINGS AS SHOWN
3. CENTER LIGHT FIXTURES WITHIN SPACES UNLESS NOTED OTHERWISE
4. CEILING HEIGHT IS 9'-0" A.F.F. UNLESS NOTED OTHERWISE
5. FOR ALL LOCATIONS OF N.I.C. LCD PROJECTORS, INSTALL OVERHEAD MOUNTED EQUIPMENT SUPPORT PER ELECTRICAL DRAWINGS.
6. FOR TYPICAL CEILING NOTES AND DETAILS, SEE SHEET A9.1.3
7. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED, INCLUDING METAL DECK.
8. FOR GYP. BD CEILING DET, SEE 5/A9.1.2

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CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: **19-C1**
A#: **03-117673**
AC____ FLS____ SS____
DATE____

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE:
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

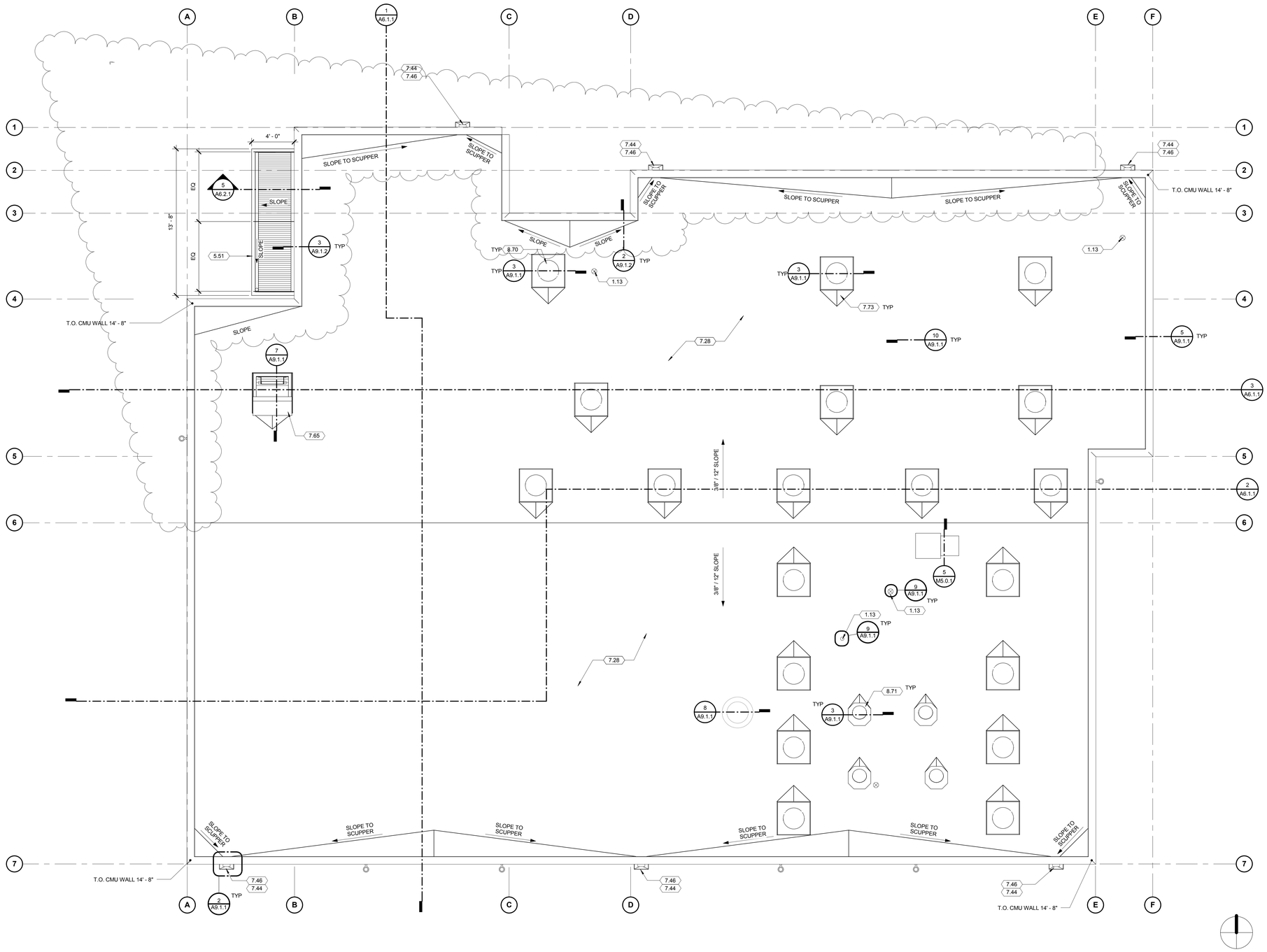
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
LICENSED ARCHITECT
RITA S. CARTER
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
REFLECTED CEILING PLAN

PROJECT NUMBER
913-4675-00

ISSUE DATE: 04/20/18
SHEET NO.: AD1-4.1.1



1 A5.0.1 ROOF PLAN
1/4" = 1'-0"

KEYNOTES

1.13	SEE PLUMBING DRAWINGS
5.51	EXTRUDED ALUMINUM CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
7.28	PVC SINGLE PLY MEMBRANE - 07 54 19
7.44	METAL COLLECTOR BOX - 07 60 00
7.46	OVERFLOW SCUPPER - 07 60 00
7.65	ROOF ACCESS HATCH - 07 72 00
7.73	CRICKET
8.70	TUBULAR SKYLIGHT, TYPE 1 - 08 62 00
8.71	TUBULAR SKYLIGHT, TYPE 2 - 08 62 00

LEGEND

GENERAL NOTES

1. FOR TYPICAL ROOF PENETRATIONS, SEE SHEET A9.1.1.
2. SEE MECHANICAL FOR TYPICAL DUCT SUPPORT
3. SEE STRUCTURAL FOR T.O. ROOF FRAMING.
4. SEE PLUMBING FOR VENT PENETRATIONS.

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REN 4-30-19
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SHEET TITLE
ROOF PLAN

PROJECT NUMBER
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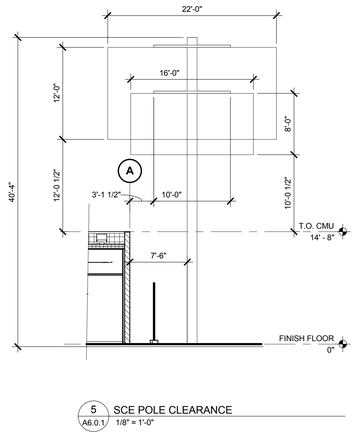
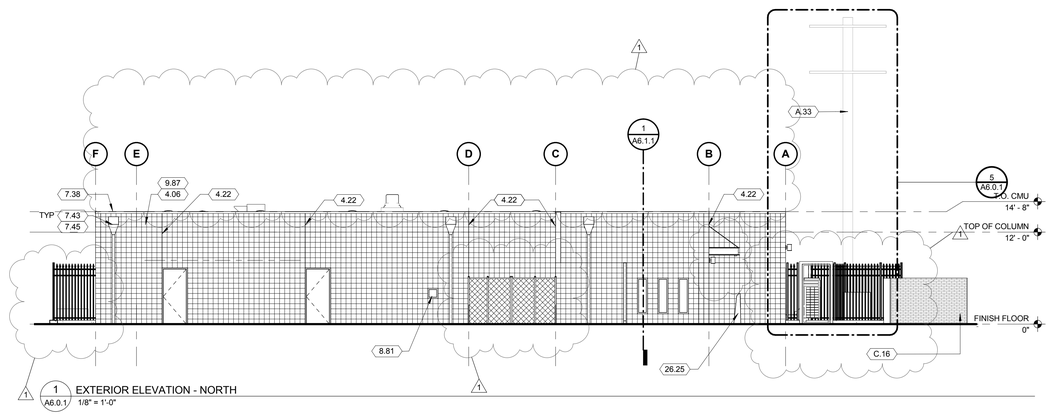
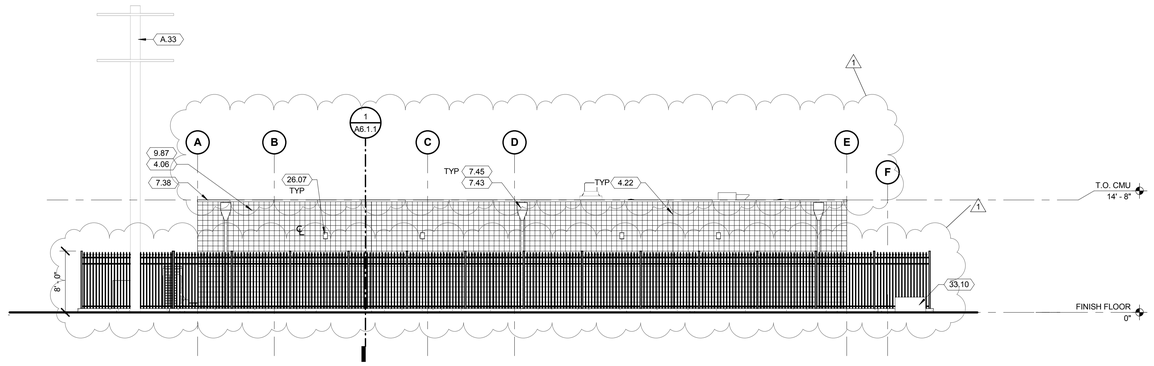
ISSUE DATE: 04/20/18
SHEET NO.: AD1-A5.0.1



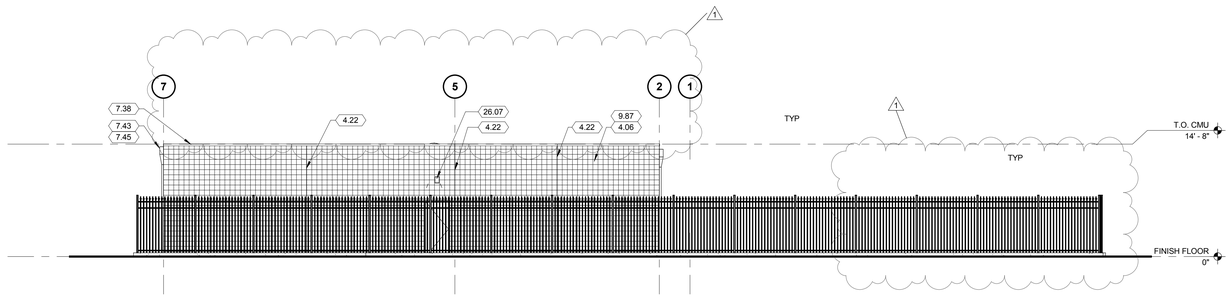
5 SCE POLE CLEARANCE
A6.0.1 1/8" = 1'-0"



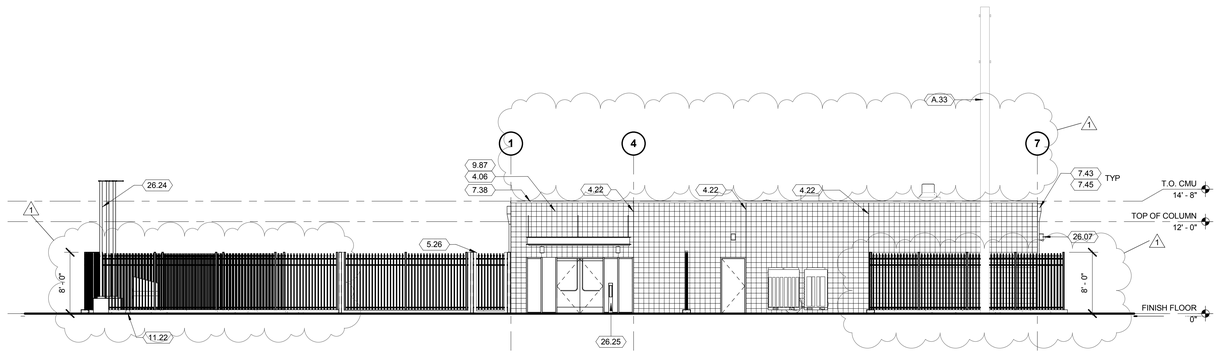
1 EXTERIOR ELEVATION - NORTH
A6.0.1 1/8" = 1'-0"



2 EXTERIOR ELEVATION - SOUTH
A6.0.1 1/8" = 1'-0"



3 EXTERIOR ELEVATION - EAST
A6.0.1 1/8" = 1'-0"



4 EXTERIOR ELEVATION - WEST
A6.0.1 1/8" = 1'-0"

KEYNOTES

4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
4.22	CONCRETE MASONRY CONTROL JOINT, SEE DET. 2/S5.1
5.26	FABRICATED STEEL GATE - 32 31 17
7.38	METAL COPING - 07 60 00
7.43	METAL LEADER & DOWNSPOUT - 07 60 00
7.45	METAL SCUPPER - 07 60 00
8.81	STEEL PASS-THROUGH EVIDENCE DROP-OFF, SEE DETAIL 8/A1.3.3
9.87	PAINT FINISH - EXTERIOR - 09 91 00
11.22	PARKING WHEEL STOP, SEE DET. 6/A1.3.1 - 32 17 13
26.07	LIGHT FIXTURE, SEE ELECTRICAL
26.24	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
26.25	SITE POLE LIGHTING & CONCRETE BASE PER 7/E0.0.6, TYP., SEE ELECTRICAL
33.10	BACKFLOW PREVENTER & ENCLOSURE, PER CIVIL
A.33	(E) UTILITY COMPANY POWER POLE AND BRACE TO REMAIN, PROTECT IN PLACE.
C.16	EXISTING BRICK VENEER WALL & ASSOCIATED GATES TO REMAIN, PROTECT IN PLACE

LEGEND

CONCRETE MASONRY UNIT

GENERAL NOTES

1. FIRST FLOOR FINISH FLOOR FOR BUILDING 'A' IS 0'-0" = 58.67'
2. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED

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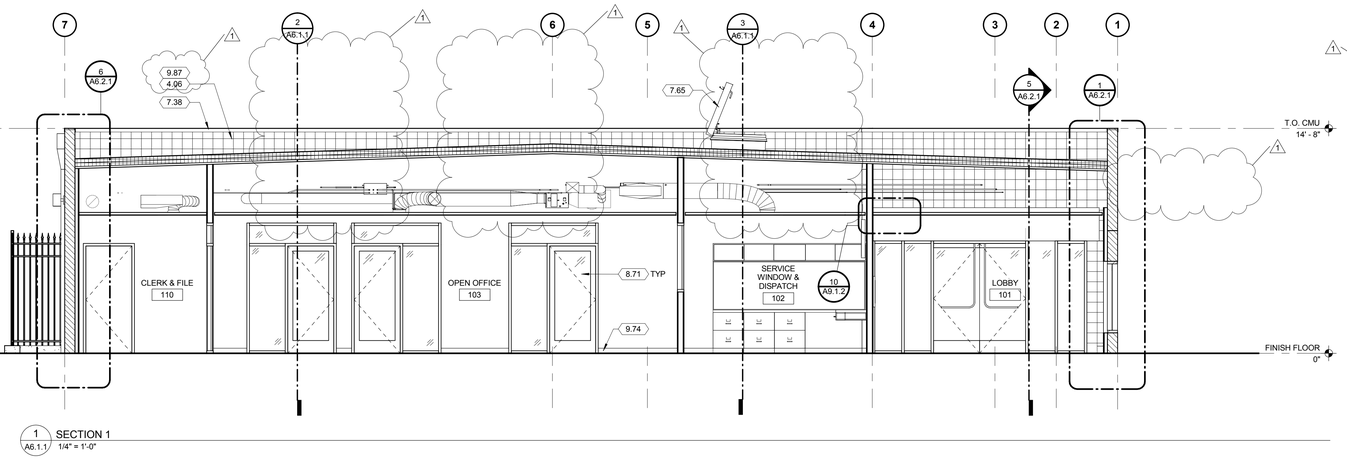
SHEET TITLE

EXTERIOR ELEVATIONS

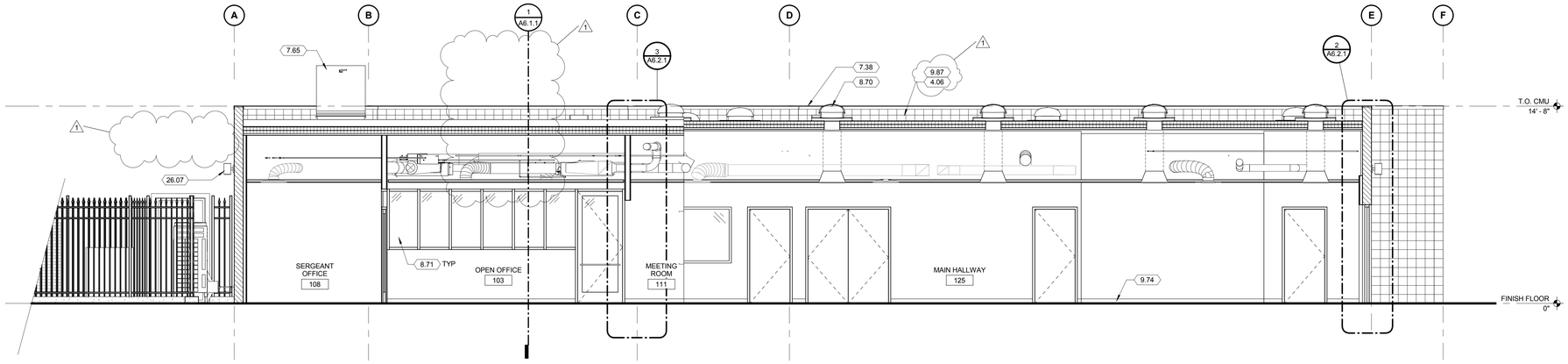
PROJECT NUMBER

913-4675-00

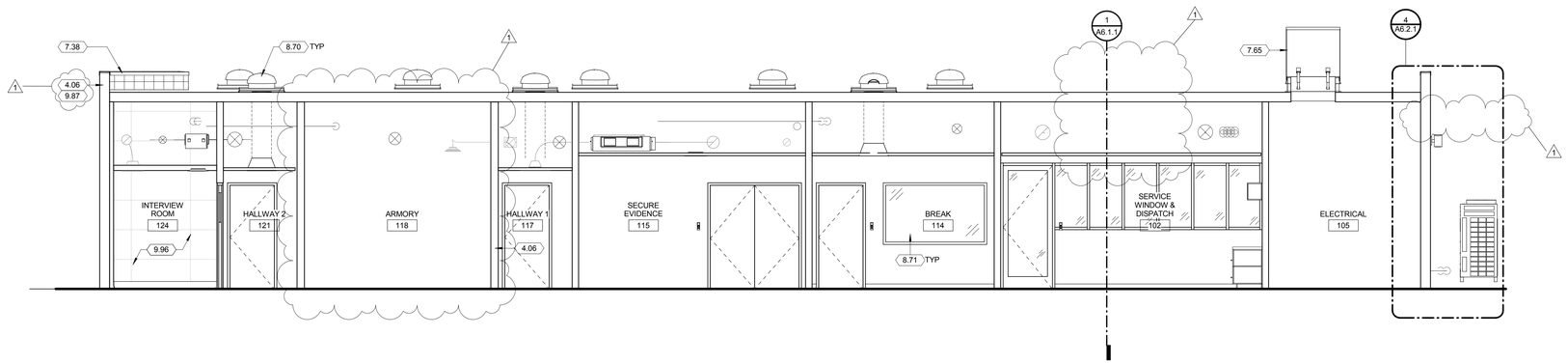
ISSUE DATE	SHEET NO.
04/20/18	AD1-A6.0.1



1 A6.1.1 SECTION 1
1/4" = 1'-0"



2 A6.1.1 SECTION 2
1/4" = 1'-0"



3 A6.1.1 SECTION 3
1/4" = 1'-0"

KEYNOTES

4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
7.38	METAL COPING - 07 60 00
7.65	ROOF ACCESS HATCH - 07 72 00
8.70	TUBULAR SKYLIGHT, TYPE 1 - 08 62 00
8.71	TUBULAR SKYLIGHT, TYPE 2 - 08 62 00
9.74	WALL BASE, SEE FINISH SCHEDULE - 09 65 00
9.87	PAINT FINISH - EXTERIOR - 09 91 00
9.96	RIGID PROTECTIVE WALL COVERING - 09 72 17
26.07	LIGHT FIXTURE, SEE ELECTRICAL

GENERAL NOTES

1. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED

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SHEET TITLE

BUILDING SECTIONS

PROJECT NUMBER

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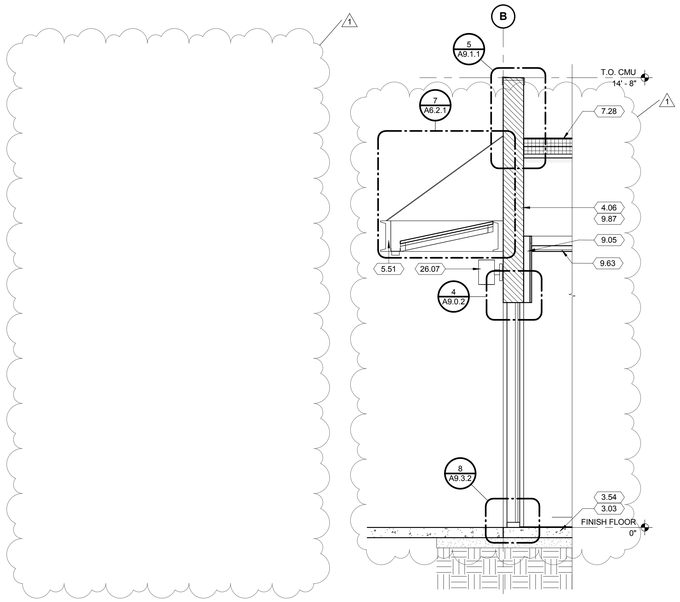
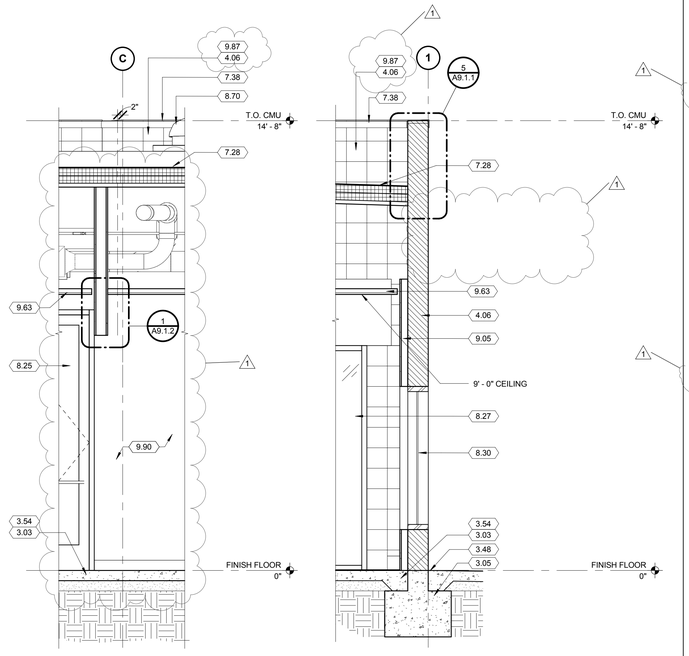


5 A6.2.1 ENTRY
1/2" = 1'-0"

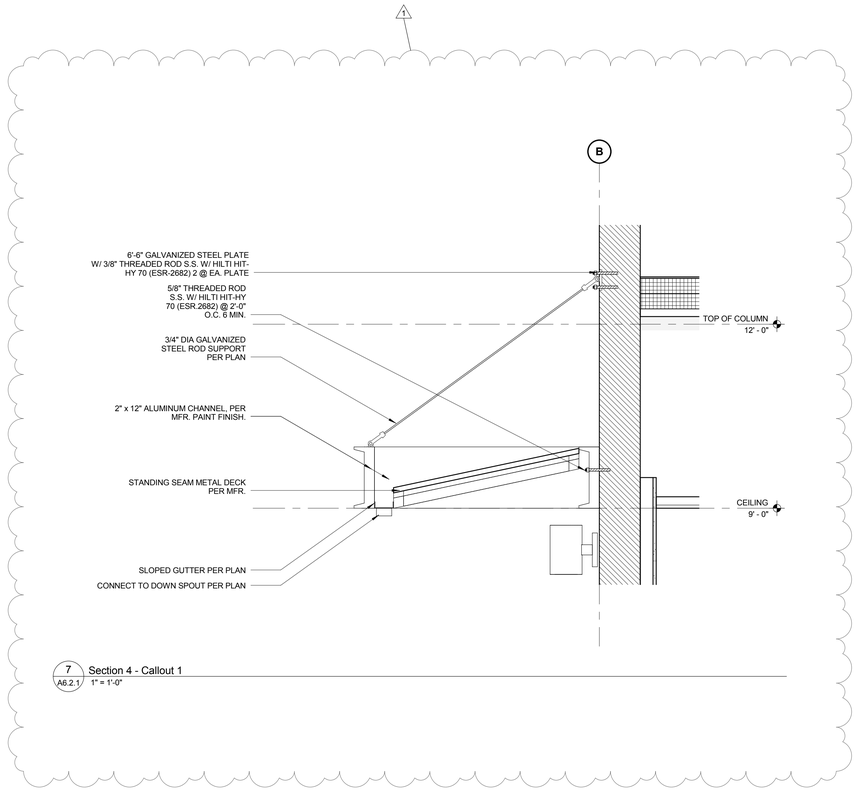


3 A6.2.1 MEETING ROOM / OPEN OFFICE
1/2" = 1'-0"

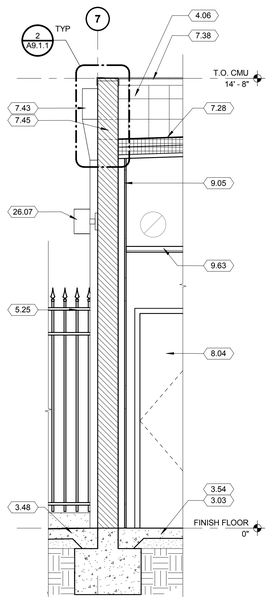
1 A6.2.1 WALL SECTION 1
1/2" = 1'-0"

KEYNOTES

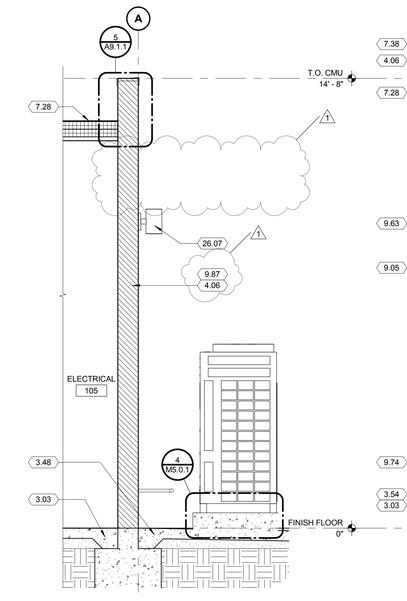
3.03	CAST-IN-PLACE CONCRETE SLAB, SEE STRUCTURAL - 03 30 10
3.05	CAST-IN-PLACE CONCRETE FOOTING, SEE STRUCTURAL - 03 30 10
3.48	CONCRETE SIDEWALK/PAVEMENT, SEE CIVIL
3.54	SEALED CONCRETE FINISH - 03 35 16
4.06	CONCRETE MASONRY UNIT CMU - 04 22 00
5.01	STEEL BEAM, PER STRUCTURAL - 05 12 00
5.25	FABRICATED STEEL FENCE - 32 31 17
5.51	EXTRUDED ALUMINUM CANOPY STRUCTURAL FRAMING, PER STRUCTURAL - 05 12 00
7.28	PVC SINGLE PLY MEMBRANE - 07 54 19
7.38	METAL COPING - 07 60 00
7.43	METAL LEADER & DOWNSPOUT - 07 60 00
7.45	METAL SCUPPER - 07 60 00
8.04	HOLLOW METAL DOOR - 08 11 00
8.25	ALUMINUM STOREFRONT DOOR - 08 41 00
8.27	ALUMINUM STOREFRONT SYSTEM - 08 41 00
8.30	HOLLOW METAL WINDOW, SEE ELEVATIONS - 08 51 23
8.70	TUBULAR SKYLIGHT, TYPE 1 - 08 62 00
9.05	METAL STUD FURRING
9.63	SUSPENDED ACOUSTICAL CEILING (ACP-1) - 09 51 00
9.74	WALL BASE, SEE FINISH SCHEDULE - 09 65 00
9.87	PAINT FINISH - EXTERIOR - 09 91 00
9.90	PAINT FINISH - INTERIOR, SEE FINISH SCHEDULE - 09 91 00
10.01	NON-GLARE, PROJECTABLE MARKERBOARD WALL COVERING - 10 11 16
26.07	LIGHT FIXTURE, SEE ELECTRICAL



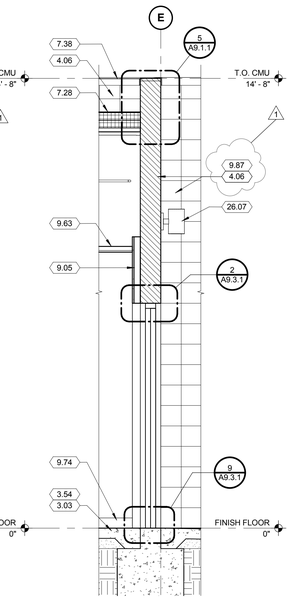
7 A6.2.1 Section 4 - Callout 1
1" = 1'-0"



6 A6.2.1 TYP. DOWNSPOUT @ WALL
1/2" = 1'-0"



4 A6.2.1 TYP. CANOPY @ WALL
1/2" = 1'-0"



2 A6.2.1 TYP EXT. DOOR
1/2" = 1'-0"

GENERAL NOTES

1. ALL STEEL MEMBERS EXPOSED TO WEATHER AND EXTERIOR SHALL BE HOT DIP GALVANIZED

2. FOR FOOTINGS, SEE STRUCTURAL FOUNDATION PLAN 1/S2.1

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DAVID PHAN

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NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
913-4675-00

ISSUE DATE: 04/20/18
SHEET NO.: AD1-A6.2.1

DOOR / GATE SCHEDULE

WT	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR MAT.	DOOR FIN.	DOOR GLASS	FRAME TYPE	FRAME MAT.	FRAME FIN.	OPENING LABEL	DETAILS HEAD	DETAILS JAMB	DETAILS THRESH	HW SET	REMARKS
101	3' - 0"	7' - 2"	G	ALUM	ALUM-1	GL-2	SEE DET.	ALUM	ALUM-1	-	4/A9.0.2	10/A9.3.2	9/A9.3.1	05	
102	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	04	13
103	3' - 4"	8' -4"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10 & 4/A9.3.2	9/A9.3.1	06	13
104	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	09	
105	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	1/A9.3.1	3/A9.3.1	9/A9.3.1	03	
106	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
107	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
108	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
109A	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	4/A9.3.2	9/A9.3.1	02	
109B	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	02	
110	3' - 0"	7' - 0"	E	ALUM	ALUM-1	GL-3	SEE DET.	ALUM	ALUM-1	-	9/A9.3.2	10/A9.3.2	9/A9.3.1	02	
113	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	09	
114	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	
115	6' - 0"	7' - 0"	F	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	07	
116	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	08	
117A	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	13
117B	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1	4/A9.3.1	9/A9.3.1	14	
118	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1 SIM	4/A9.3.1 SIM	9/A9.3.1	11	
119	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	
121A	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	06	13
121B	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1	4/A9.3.1	9/A9.3.1	14	
122	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	10	
123	3' - 0"	7' - 0"	C	HM	PFX-1	GL-5	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	12	
124	3' - 0"	7' - 0"	C	HM	PFX-1	GL-5	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	12	
125	3' - 0"	7' - 2"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	2/A9.3.1	4/A9.3.1	9/A9.3.1	14	
126	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
127	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
128	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	10	
130	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
131	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	13	
132	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	10	
134	3' - 0"	7' - 0"	A	HM	PFX-1	-	SEE DET.	HM	PFX-1	-	5/A9.3.1	6/A9.3.1	9/A9.3.1	09	

ROOM FINISH SCHEDULE

RM #	ROOM NAME	FLOOR MAT.	FLOOR FIN.	BASE	WALLS NORTH MAT.	WALLS NORTH FIN.	WALLS EAST MAT.	WALLS EAST FIN.	WALLS SOUTH MAT.	WALLS SOUTH FIN.	WALLS WEST MAT.	WALLS WEST FIN.	WAINSCOT MAT.	WAINSCOT FIN.	WAINSCOT HT.	CEILING MAT.	CEILING FIN.	CEILING HT.	GENERAL NOTE REMARKS
101	LOBBY	CONC	CS-1	MTL-1	GB	PT-1	GB / GBBP	PT-1	GBBP	CT-1	GB / SF	CT-1	-	-	-	ACT	ACT-2	9' - 0"	6
102	SERVICE WINDOW & DISPATCH	CONC	CS-1	MTL-1	GBBP / TBD	PT-1	GB / TBD	PT-1	GB	PT-1	GB / TBD	PT-1	-	-	-	ACT	ACT-2	9' - 0"	6
103	OPEN OFFICE	CONC	CS-1	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-2	9' - 0"	6
104	IDF	CONC	CS-1	RB-1	EXP	-	GB	PT-1	GB	PT-1	EXP	-	-	-	-	EXP	-	-	
105	ELECTRICAL	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	EXP	-	-	-	-	EXP	-	-	
106	BREAK OUT	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
107	SERGEANT OFFICE	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	ACT-1	9' - 0"	
108	SERGEANT OFFICE	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	ACT-1	9' - 0"	
109	LIEUTENANT OFFICE	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
110	CLERK & FILE	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
111	MEETING ROOM	CONC	CS-1	MTL-1	GB	EXP	GB	PT-1	GB / TBD	PT-1	GB	PT-1	-	-	-	ACT	ACT-2	9' - 0"	
112	MAIL ROOM	CONC	CS-1	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
113	GENERAL STOR.	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	-	
114	BREAK	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
115	SECURE EVIDENCE	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-1	8' - 0"	
116	DRUG STOR.	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-1	8' - 0"	
117	HALLWAY 1	CONC	CS-1	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	8' - 0"	
118	ARMORY	CONC	CS-1	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	-	-	-	CAP	EXP	8' - 0"	
119	GUN CLEANING	CONC	CS-1	COVE	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	8' - 0"	
120	WATCH STATION	CONC	CS-1	RB-1	GB	PT-1	-	-	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	8' - 0"	
121	HALLWAY 2	CONC	CS-1	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	8' - 0"	
122	TOILET ROOM	CONC	CS-1	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	8' - 0"	
123	INTERVIEW ROOM	CONC	CS-1	COVE	GB	FRP-1	GB	FRP-1	GB	FRP-1	GB	FRP-1	-	-	-	GB	PT-2	8' - 0"	
124	INTERVIEW ROOM	CONC	CS-1	COVE	GB	FRP-1	GB	FRP-1	GB	FRP-1	GB	FRP-1	-	-	-	GB	PT-2	8' - 0"	
125	MAIN HALLWAY	CONC	CS-1	MTL-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	ACT	ACT-1	9' - 0"	
126	OFFICER LOCKER	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
127	OFFICER LOCKER	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
128	LOCKER RM TOILET	CONC	CS-1	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
129	SHOWER	CONC	CS-1	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
130	OFFICER LOCKER	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
131	OFFICER LOCKER	CONC	CS-1	RB-1	GB	PT-1	GB	PT-1	GB	PT-1	GB	PT-1	-	-	-	GB	PT-2	9' - 0"	
132	LOCKER RM TOILET	CONC	CS-1	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
133	SHOWER	CONC	CS-1	COVE	EXP	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GBMR	PT-2	9' - 0"	
134	CUSTODIAL	CONC	CS-1	COVE	CBU	CT-1	CBU	CT-1	CBU	CT-1	CBU	CT-1	-	-	-	GB	PT-2	9' - 0"	
135	EXTERIOR STORAGE	ASPH	-	-	CMU		CMU		CMU		CMU		-	-	-	EXP	-	-	

MATERIAL FINISHES

ACT	2'-0"x2'-0" ACOUSTICAL PANELS - 09 51 00
CBU	CEMENTITIOUS BACKER UNIT - 09 21 16
CS-1	CONCRETE SEALER - COLORLESS - 03 30 10
CONC	SEALED CONCRETE SLAB - 03 35 16
CMU	CONCRETE MASONRY UNIT - 04 22 00
CT-1	CERAMIC TILE - 09 30 13
EXP	EXPOSED STRUCTURE
FF	FACTORY FINISH
FRP-1	FIBERGLASS REINFORCED PLASTIC - 09 72 17
GB	GYPSUM BOARD - 09 21 16
GBMR	GYPSUM BOARD, MOISTURE RESISTANT - 09 21 16
TBD	TACKABLE WALL PANELS
RB-1	4" RESILIENT BASE - 09 65 00
MTL-1	4" METAL REVEAL BASE - 09 65 00
LVT-1	LUXURY VINYL TILE FLOORING - 09 65 00
SSTL	STAINLESS STEEL
UNF	UNFINISHED
VCTBD-1	VINYL COVERED TACKABLE WALL PANEL - 09 72 33
VWC-1	VINYL WALL COVERING - 09 72 16
SF	STORE FRONT - 08 41 00
ALUM	ALUMINUM
HM	HOLLOW METAL
WD	WOOD
STL	STEEL

INTERIOR PAINT COLORS

PT-1	PAINT - SEMI-GLOSS, COLOR PER ARCHITECT - 09 91 00
PT-2	PAINT - EPOXY, COLOR PER ARCHITECT - 09 91 00

EXTERIOR PAINT COLORS

PF-1	PAINT - SEMI-GLOSS - 09 91 00
PF-2	PAINT - EGGSHELL - 09 91 00
PF-3	PAINT - SEMI-GLOSS ENAMEL - 09 91 00
PF-4	PAINT - FERROUS METAL PIPING, MISC METALS - 09 91 00
PF-5	PAINT - GALVANIZED DUCTWORK, ELECT CONDUIT - 09 91 00
PF-6	PAINT - EPOXY - 09 91 00
PFX-1	PAINT - STEEL DOORS & FRAMES - 09 91 00
PFX-2	PAINT - HIGH PERFORMANCE COATING - 09 91 00
PFX-3	PAINT - FERROUS METAL PIPING, MISC METALS - 09 91 00
PFX-4	PAINT - FLAT FINISH ACRYLIC - 09 91 00

GLASS TYPES

GL-1	INT. BULLET RESISTANT GLASS - 08 81 00
GL-2	EXT. DUAL INSULATED GLASS, TINTED - 08 81 00
GL-3	INT. CLEAR LAMINATED GLASS, SAFETY LAMINATED GLASS STC 40 - 08 81 00
GL-4	INT. LAMINATED GLASS: PARTIAL OPAQUE & CLEAR, STC 40 - 08 81 00
GL-5	INT. LAMINATED SECURITY GLASS, STC 40 - 08 81 00
GL-6	EXT. CLEAR LOW-E GLASS - 08 81 00

REMARKS

1. FOR TILE PATTERN , SEE ENLARGED PLANS / INTERIOR ELEVATIONS

2. PAINT ALL EXPOSED STRUCTURAL STEEL, METAL DECK, DUCTWORK AND ELECTRICAL COMPONENETS - 09 91 00

3. PROVIDE CT TO WALLS WITH JANITOR SINK PER INTERIOR ELEVATIONS

4. FOR DIAGONALLY ORIENTED ROOMS, NORTHWEST WALL IS ASSUMED AS NORTH WALL

5. SEE DETAIL 9/A9.3.1 FOR TRANSITIONS STRIPS BETWEEN MATERIALS

6. ROOM IDENTIFICATION SIGNAGE - SPEC SECTION 10 14 00 FOR MOUNTING HEIGHT SEE DETAIL 9 / A9.6.2

7. TOILET ROOM SYMBOLS - SPEC SECTION 10 14 00. FOR MOUNTING HEIGHT SEE DETAIL 6 & 7/A9.6.2

11. SEE WINDOW TYPES FOR DOOR / WINDOW FRAME COMBINATIONS

12. GLASS TRANSOM (GLAZING TO MATCH DOOR GLAZING) 08 81 00

13. PANIC HARDWARE. SEE SPEC SECTION 08 71 00

GENERAL NOTES

1. ALL FINISHES SHALL COMPLY WITH C.B.C. CHAPTER 8 AND WITH TITLE 19 C.C.R. & C.F.C.

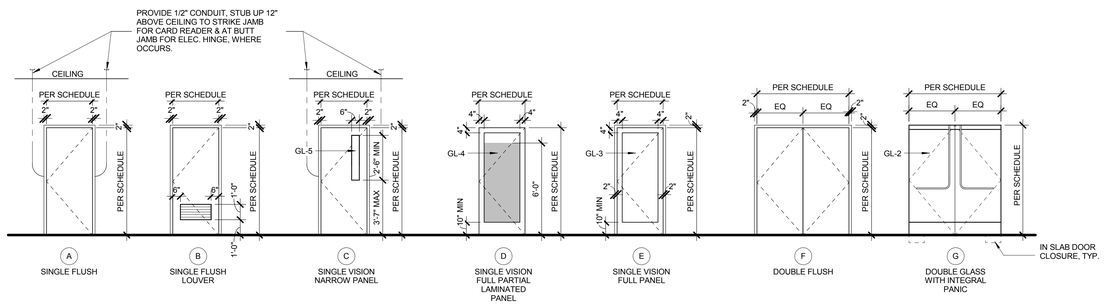
2. PAINT ALL EXPOSED SURFACES AND ITEMS WHICH ARE NOT FACTORY FINISHED, INCLUDING BUT NOT LIMITED TO; INTERIOR AND EXTERIOR SOFFITS, WOOD TRIM, REVEALS, METAL FLASHINGS AND TRIM, ROOF PENETRATIONS, EXPOSED STEEL STRUCTURE, EXPOSED PLUMBING, DUCTWORK AND OTHER MECHANICAL ITEMS, EXPOSED ELECTRICAL CONDUIT AND OTHER ELECTRICAL ITEMS, UNO.

3. PREPARE ALL SURFACES TO BE FINISHED PRIOR TO PAINTING, INCLUDING GALVANIZED STEEL AND ALL SURFACES ON WHICH DEBRIS OR OTHER RESIDUES EXIST WHICH MAY INTERFERE WITH FINISHING.

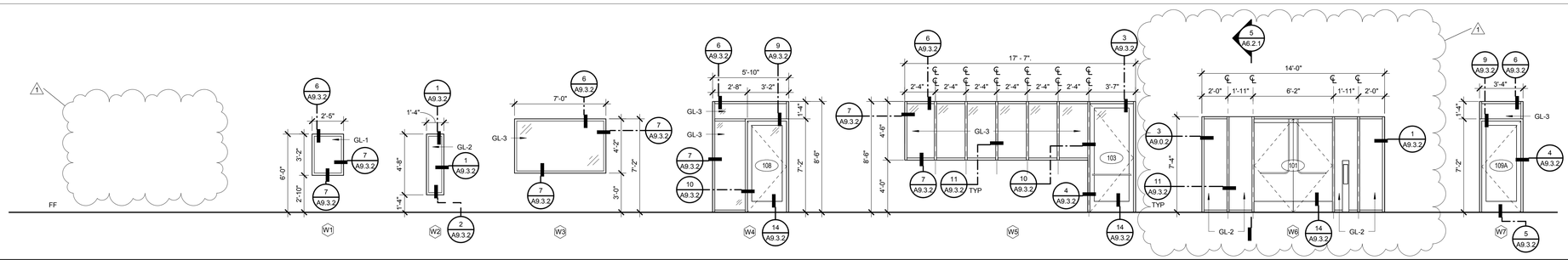
4. ALL DOORS ARE 1-3/4" THICK UNLESS NOTED OTHERWISE.

5. DIMENSIONS TO INTERMEDIATE WINDOW MULLIONS ARE TO CENTERLINE OF MULLION. DIMENSIONS TO EDGE MULLIONS ARE TO FACE OF FRAME.

DOOR & FRAME TYPES



WINDOW TYPES



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www.littleonline.com

CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC_____ FLS_____ SS_____
DATE_____

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

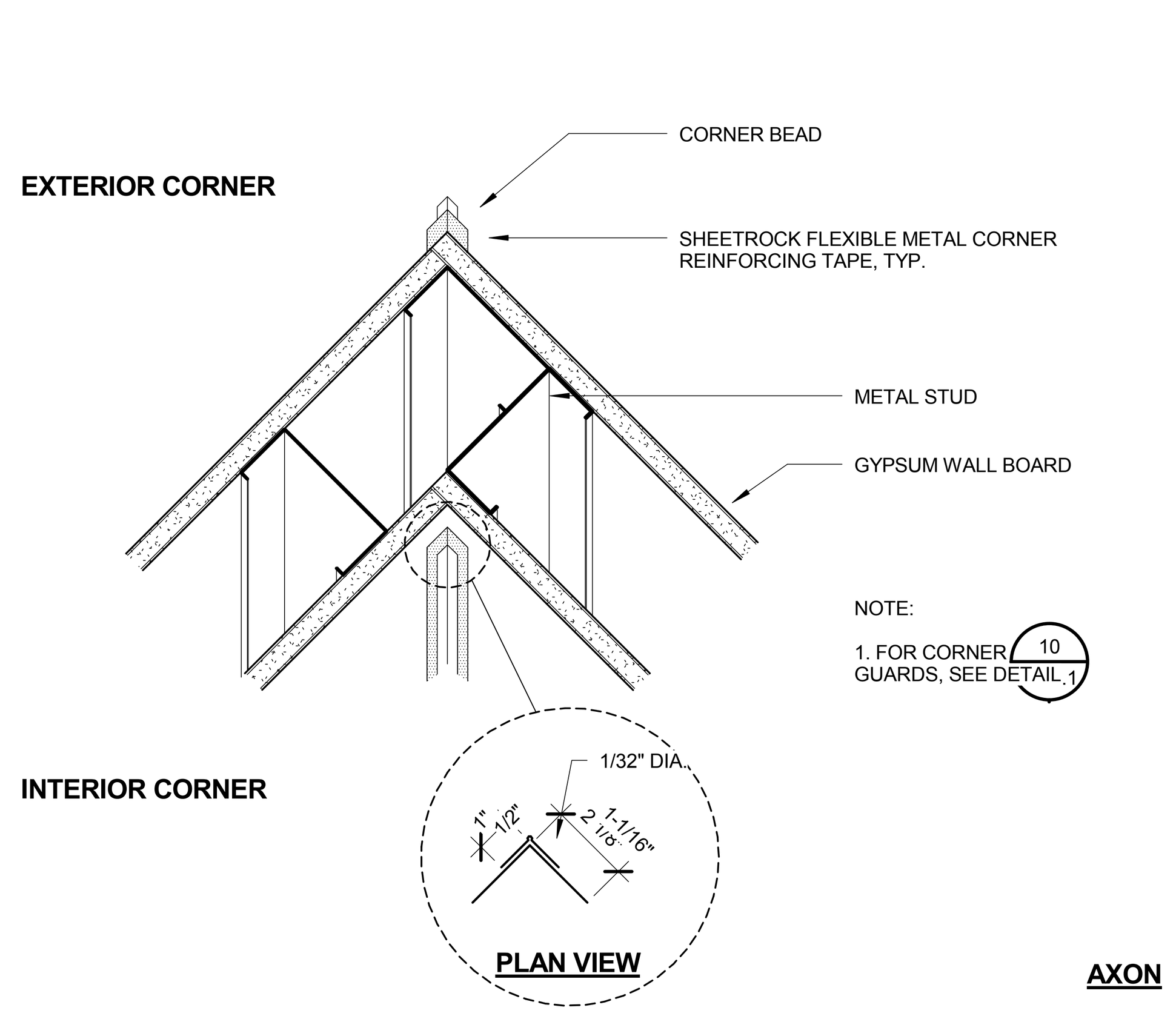
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

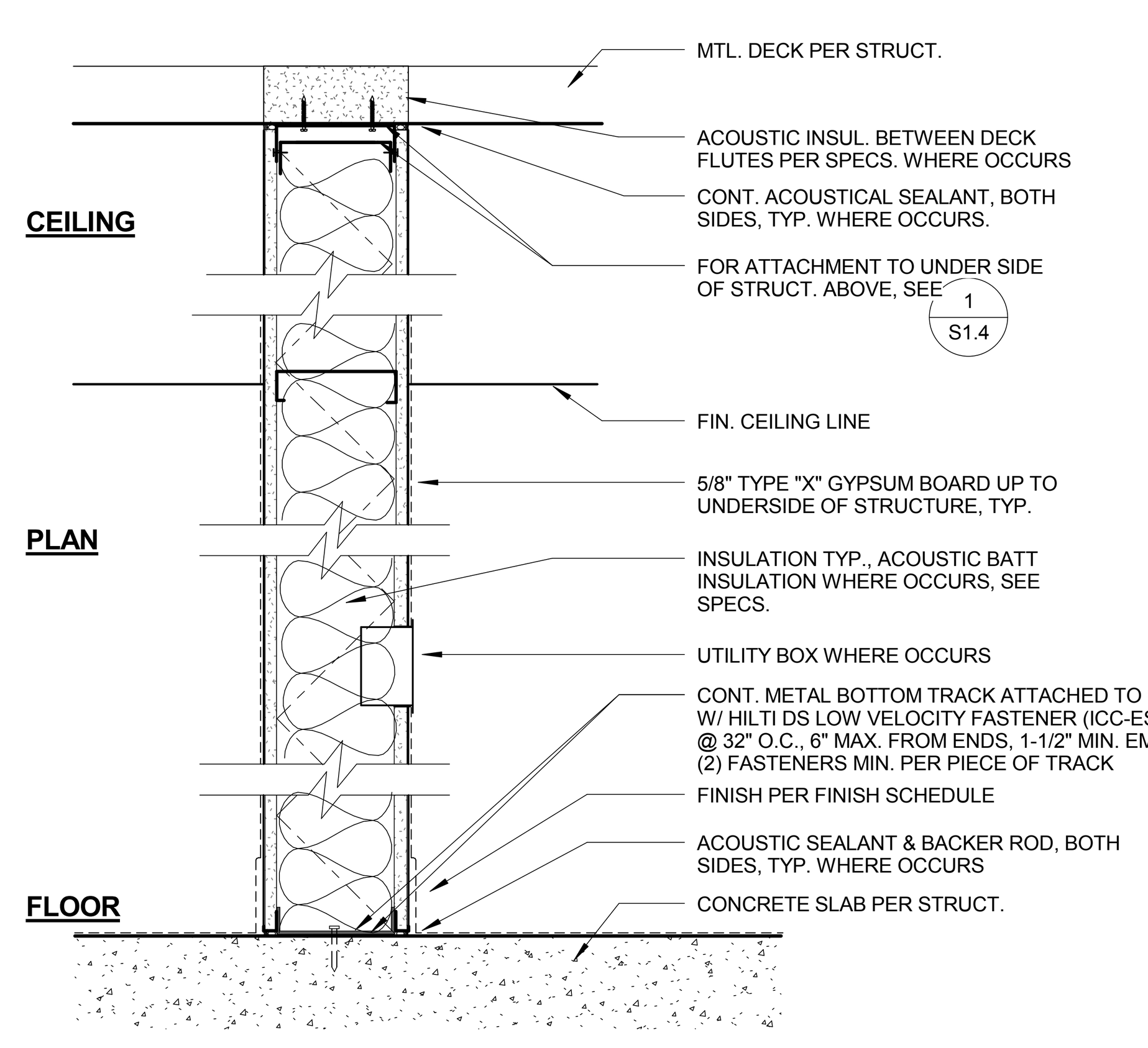
SHEET TITLE
ROOM FINISH, DOOR, & WINDOW SCHEDULE

PROJECT NUMBER
913-4675-00

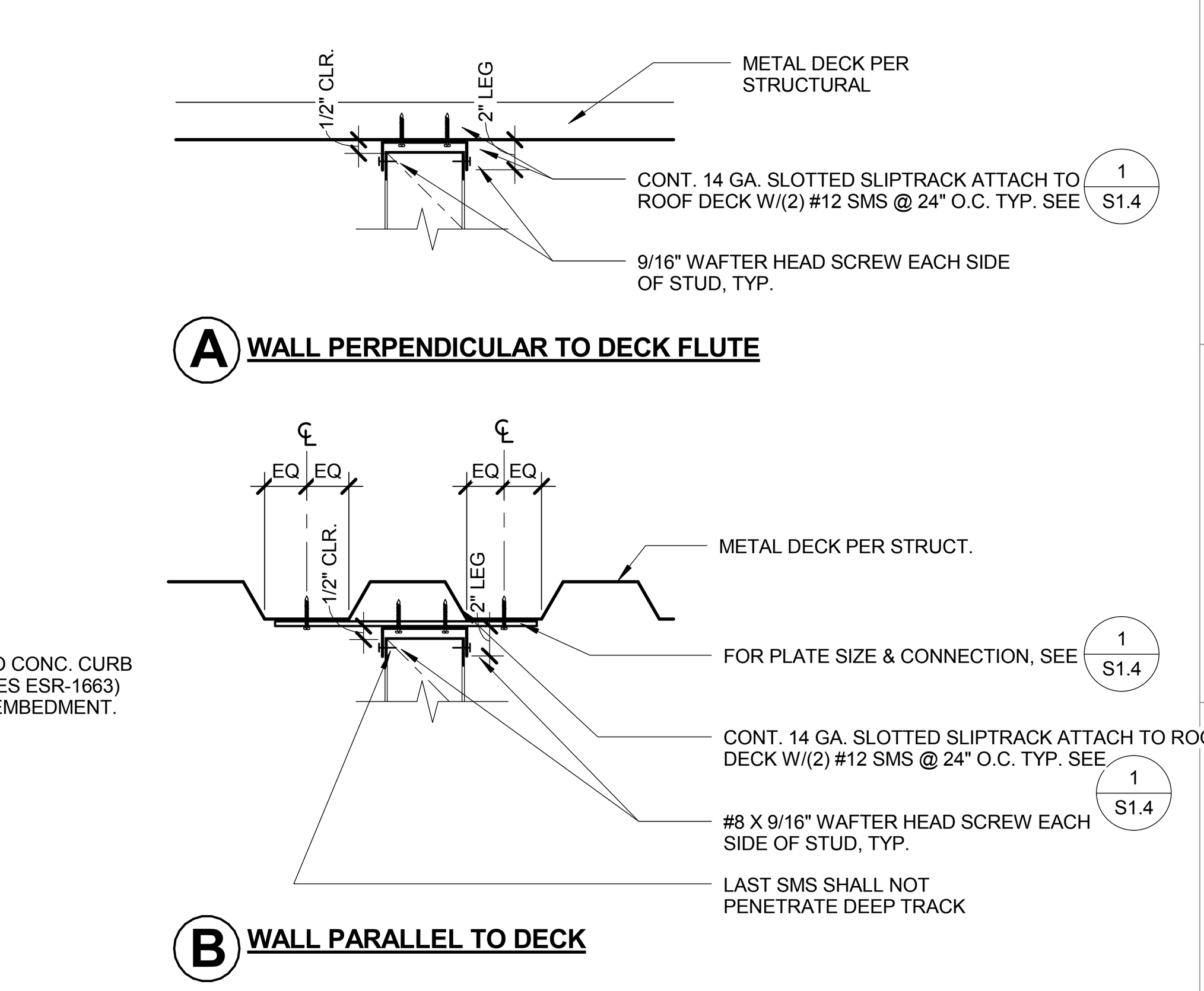
ISSUE DATE: 04/20/18
SHEET NO.: AD1-A8.0.1



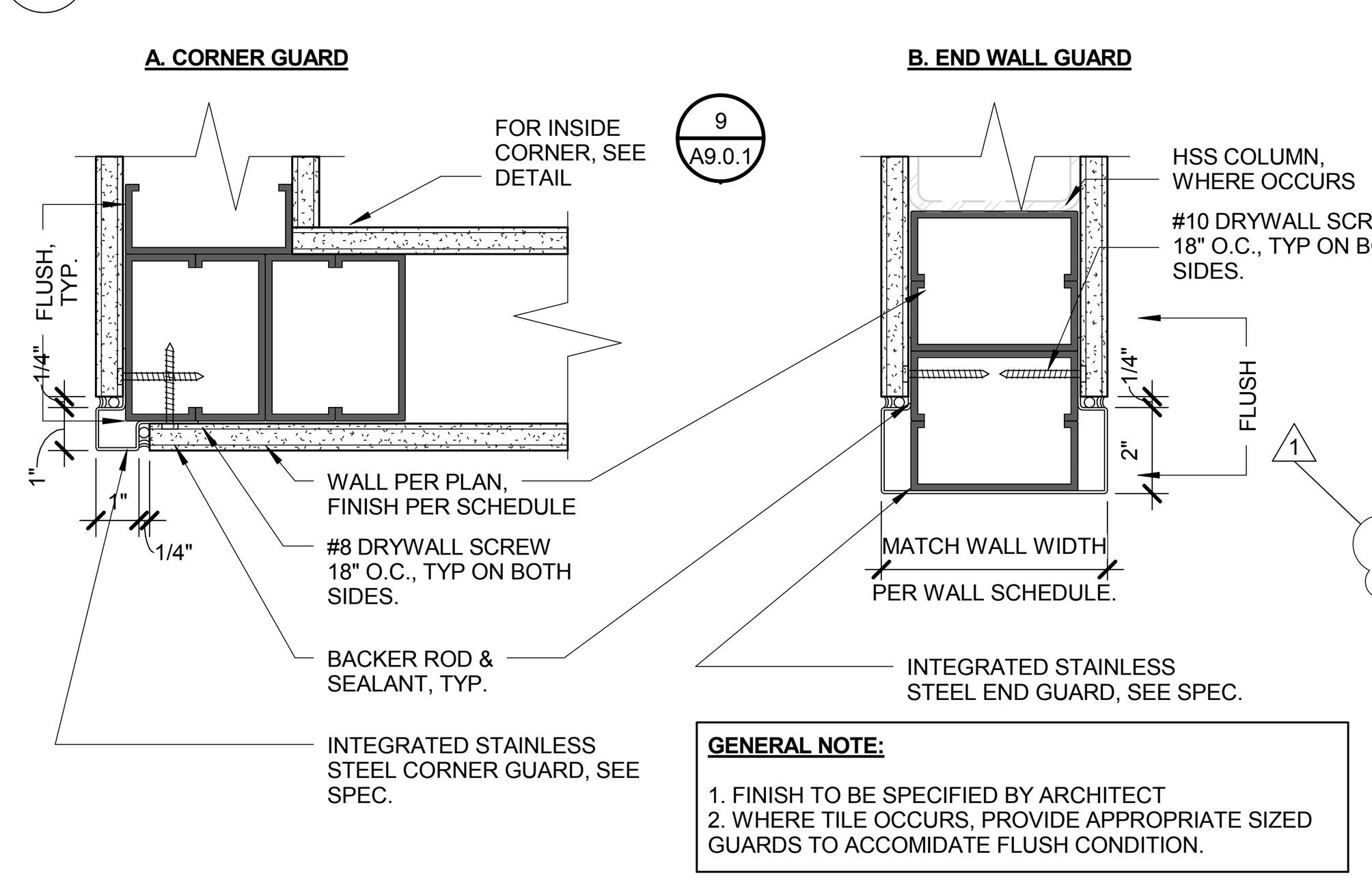
9 TYP. DRYWALL CORNER
A9.0.1 3" = 1'-0"



5 TYP. MTL STUD WALL
A9.0.1 1 1/2" = 1'-0"

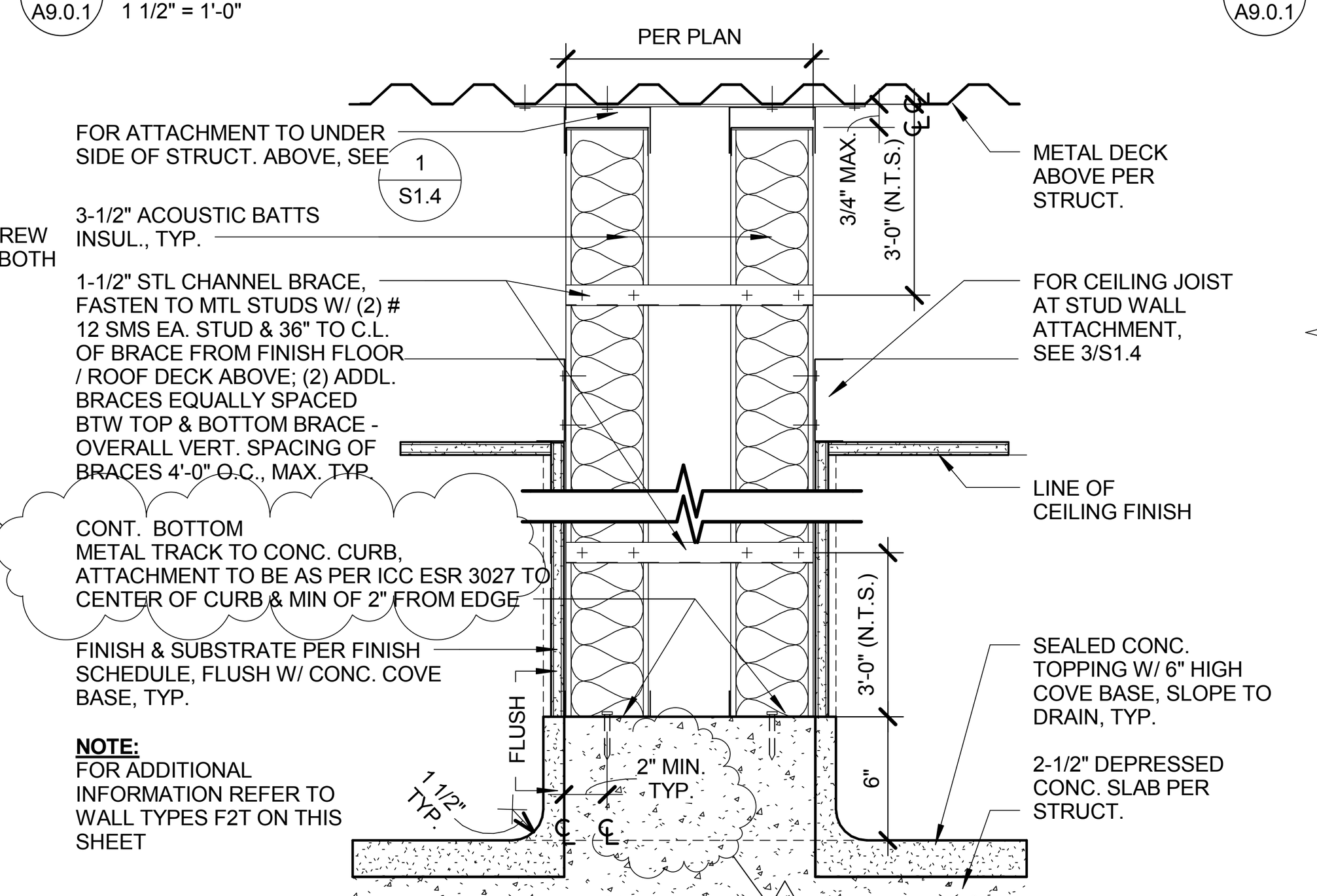


1 TYP. STUD CONNECTIONS AT MTL. DECKING
A9.0.1 1 1/2" = 1'-0"

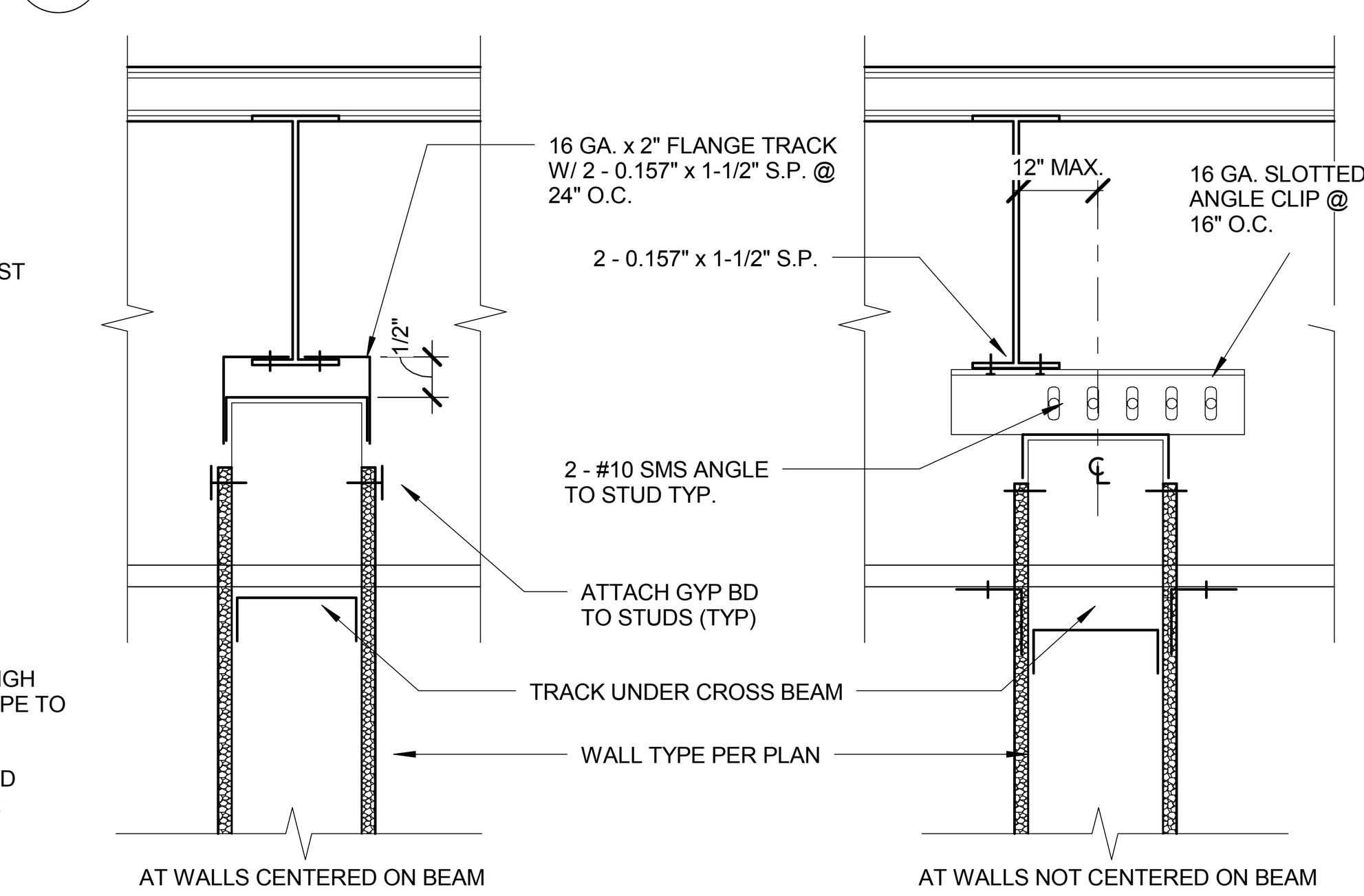


GENERAL NOTE:
1. FINISH TO BE SPECIFIED BY ARCHITECT
2. WHERE TILE OCCURS, PROVIDE APPROPRIATE SIZED GUARDS TO ACCOMIDATE FLUSH CONDITION.

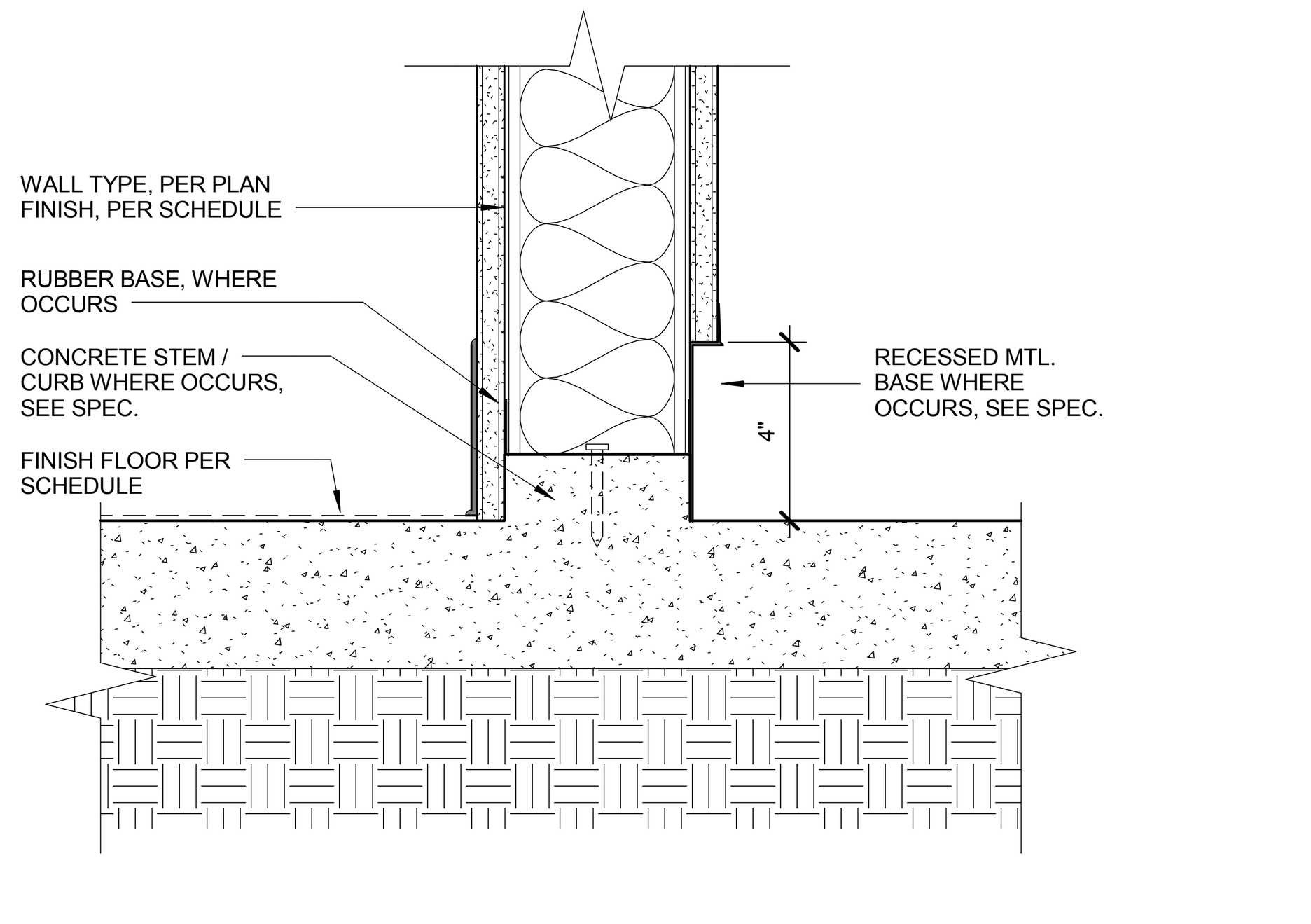
10 INTEGRATED CORNER & END WALL GUARDS
A9.0.1 3" = 1'-0"



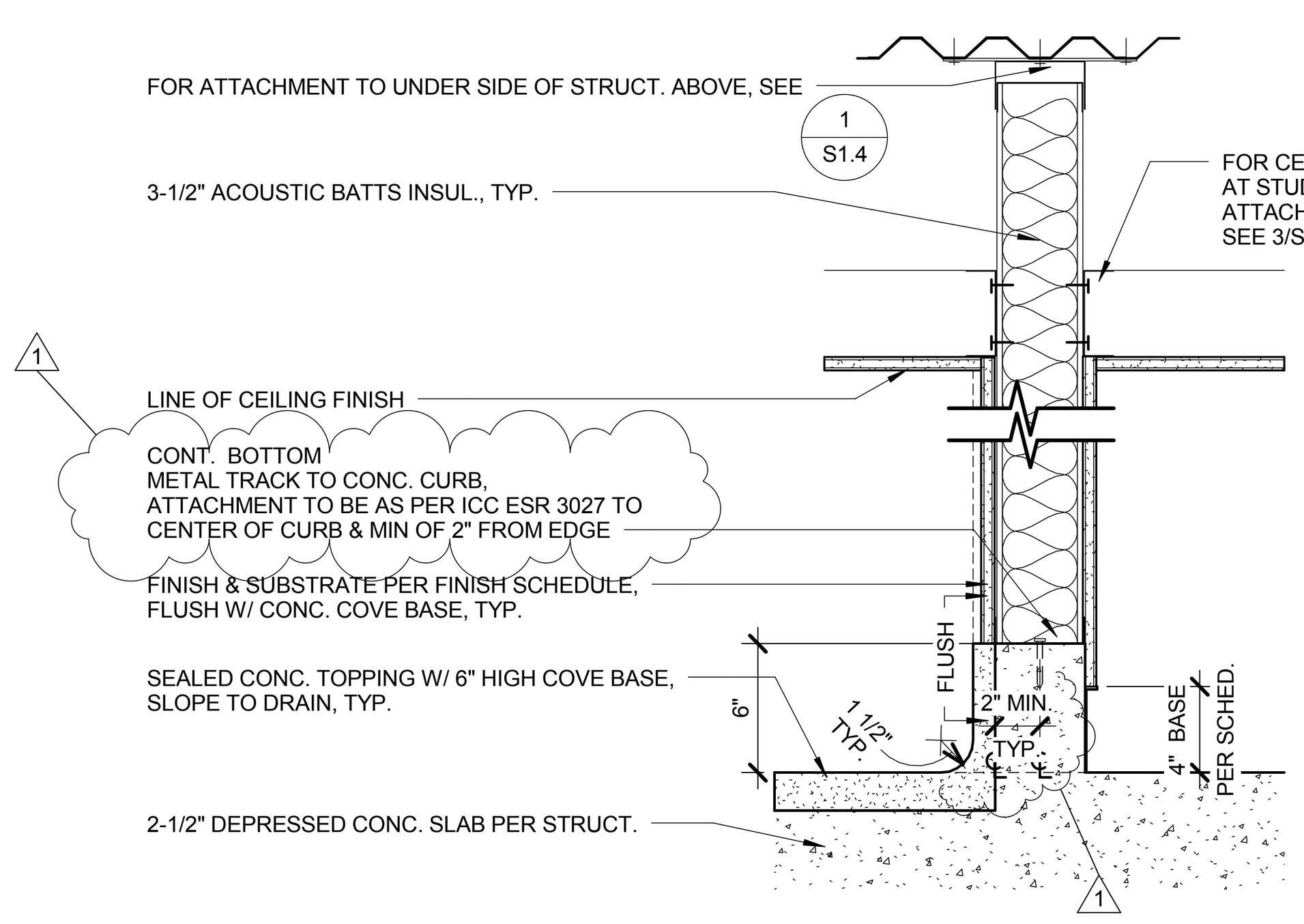
6 TYP. PLUMBING PARTITION
A9.0.1 1 1/2" = 1'-0"



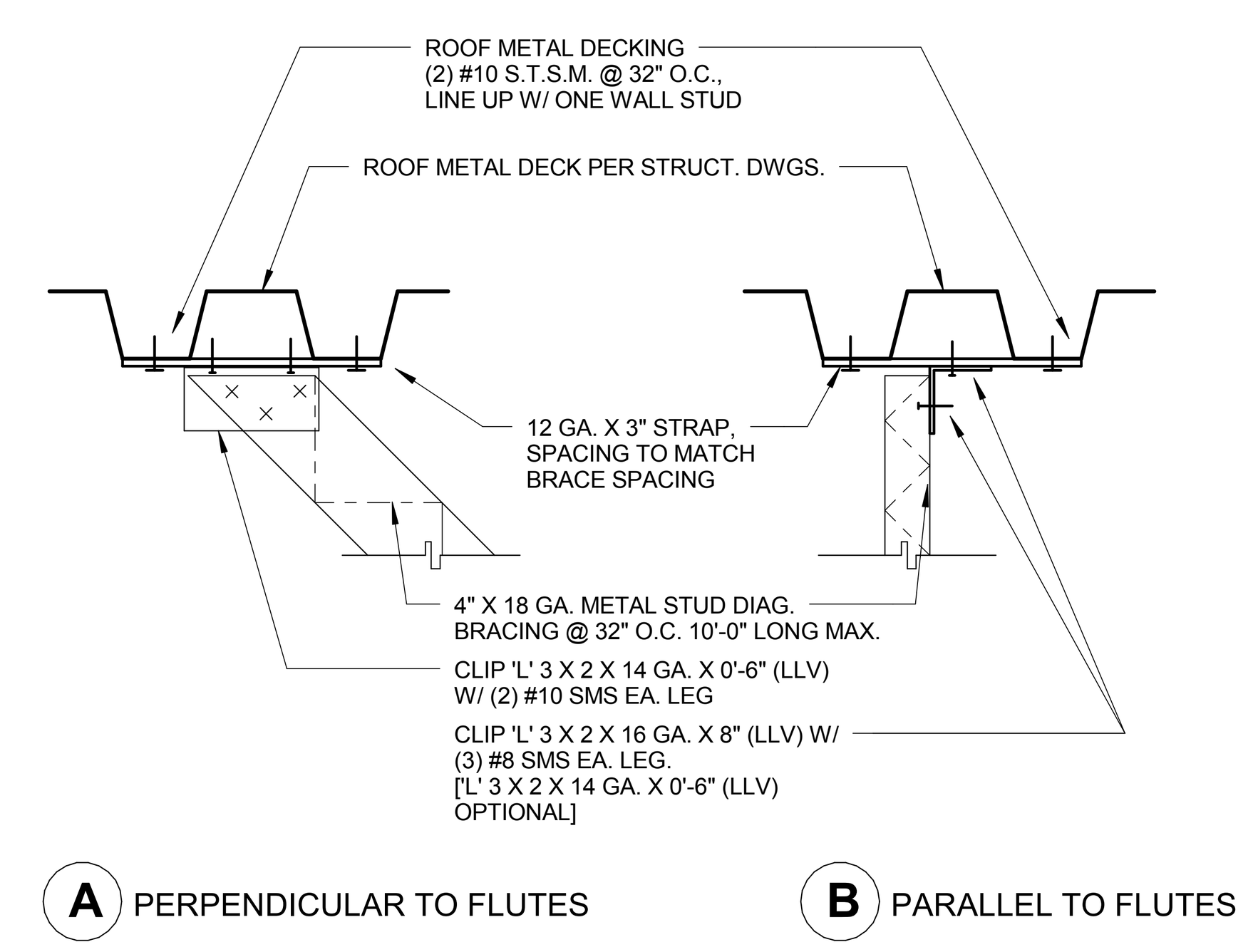
2 MTL STUD CONN. @ BEAM
A9.0.1 1 1/2" = 1'-0"



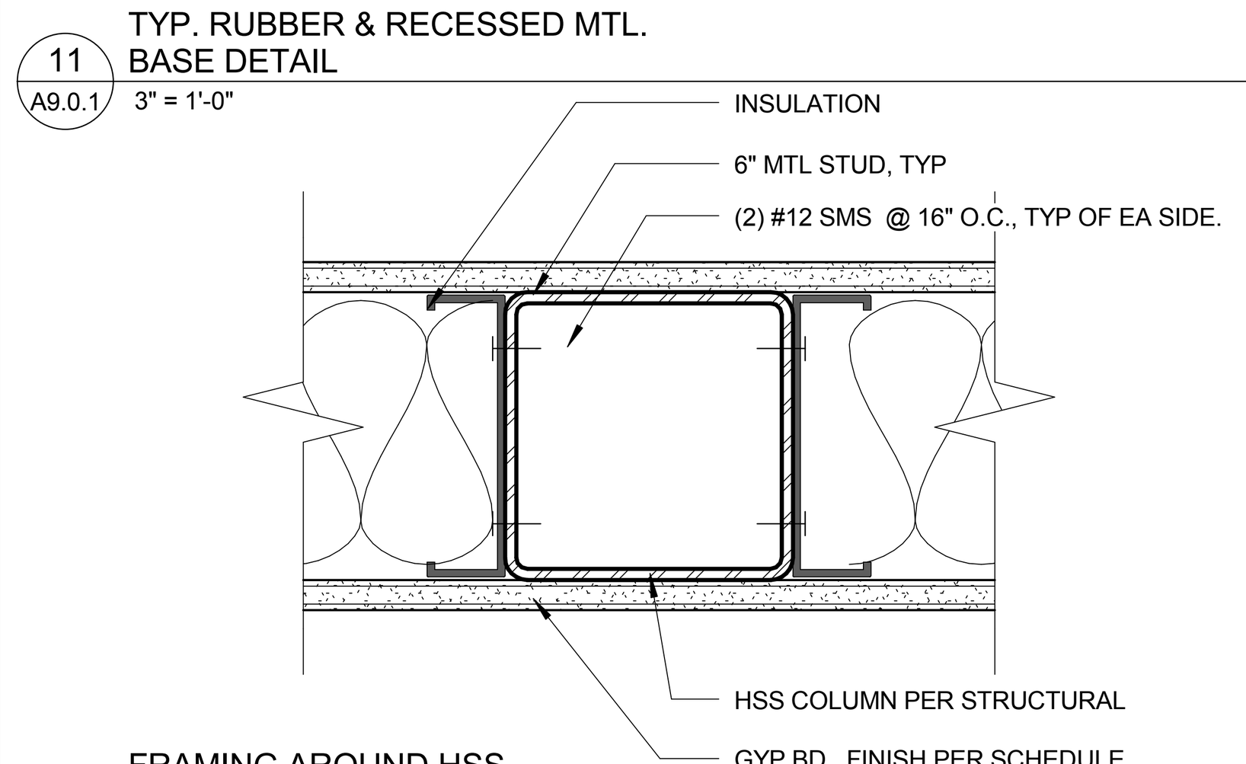
11 TYP. RUBBER & RECESSED MTL. BASE DETAIL
A9.0.1 3" = 1'-0"



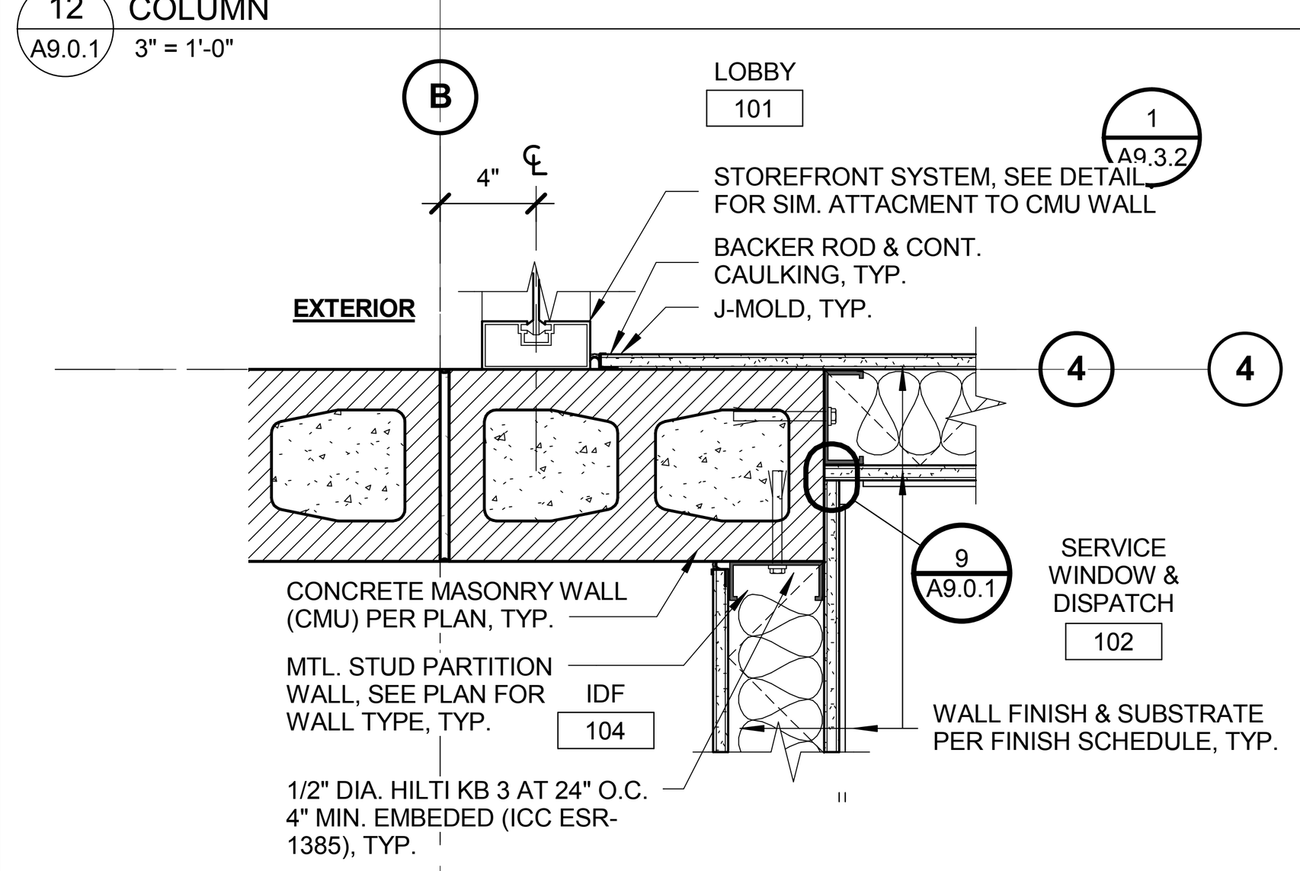
7 DEPRESSED CONC. SLAB @ CONC. COVE BASE
A9.0.1 1 1/2" = 1'-0"



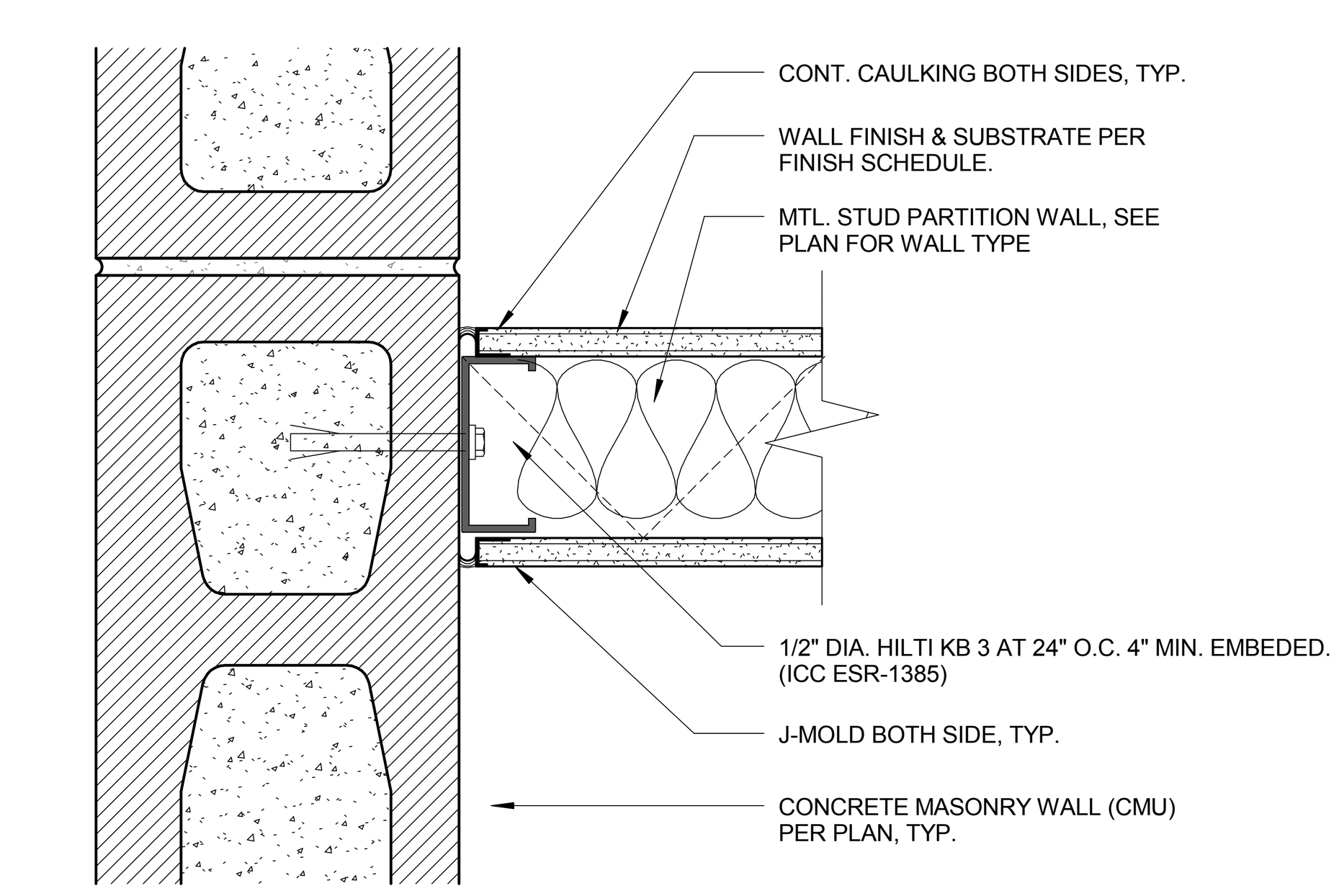
3 TYP. DIAGONAL BRACING DETAIL
A9.0.1 1 1/2" = 1'-0"



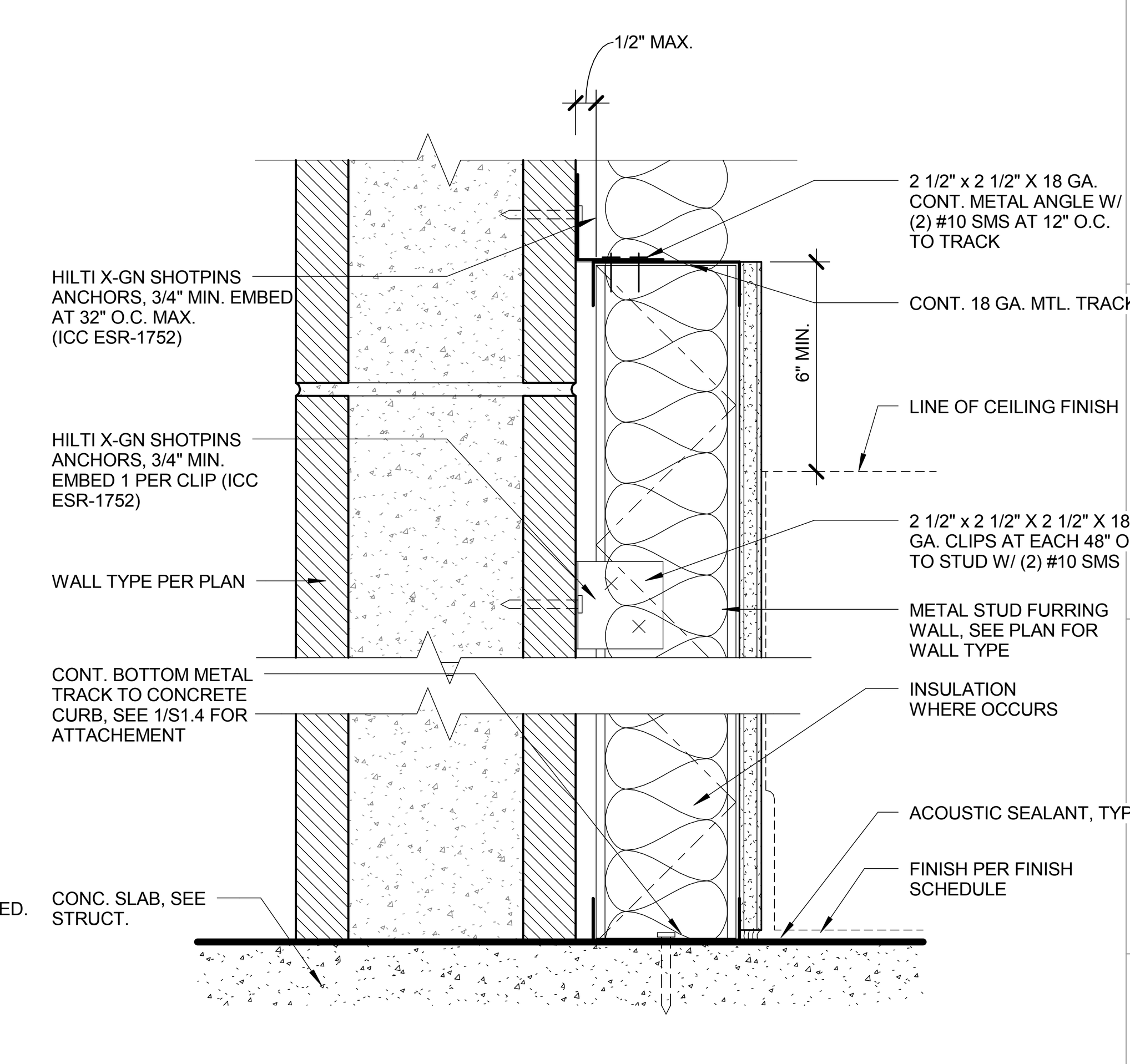
12 FRAMING AROUND HSS COLUMN
A9.0.1 3" = 1'-0"



13 DETAIL OF JUNCTION AT GRID LINE B & 4
A9.0.1 1 1/2" = 1'-0"



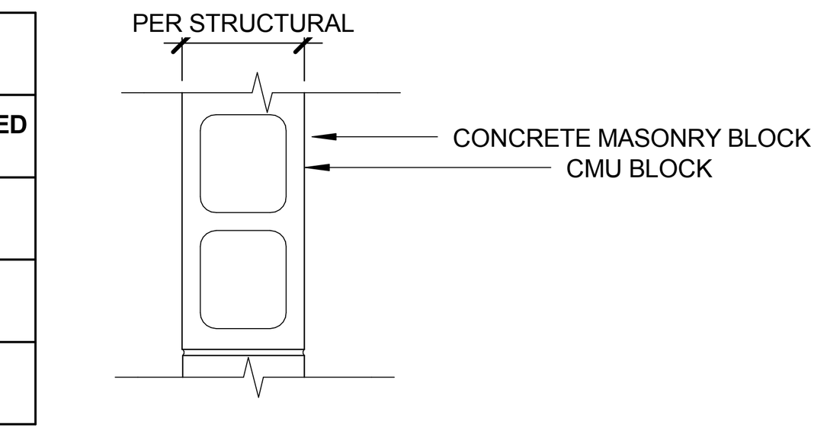
8. TYP. METAL STUD TO CMU WALL
A9.0.1 3" = 1'-0"



4 TYP. FURRED METAL STUD AT CMU WALL
A9.0.1 3" = 1'-0"

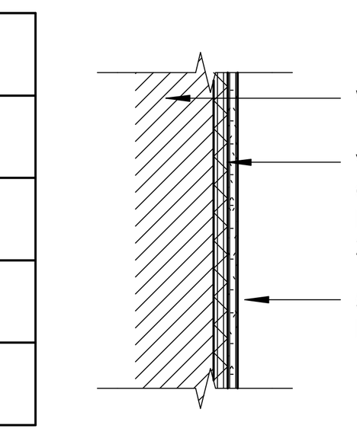
C

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	1



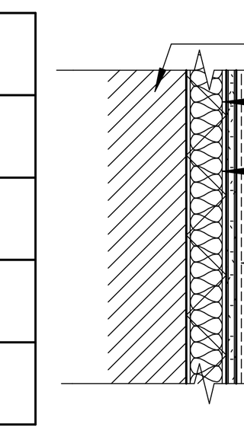
F1

SCALE:	1" = 1'-0"
FIRE RATING:	N/A
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



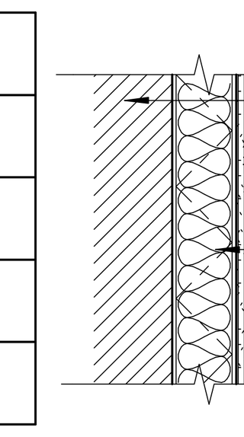
F2 / F2R

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



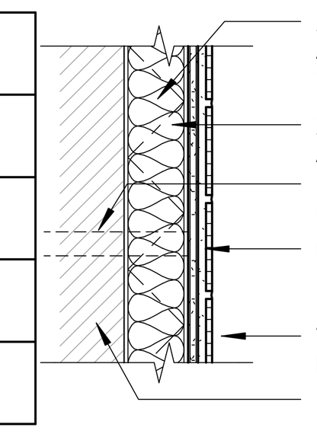
F4

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



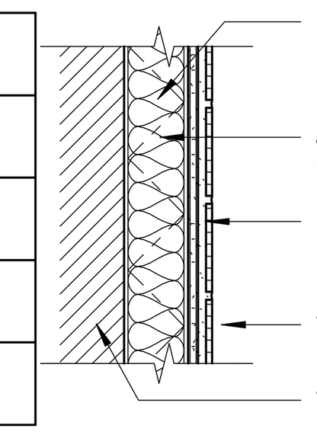
F2T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



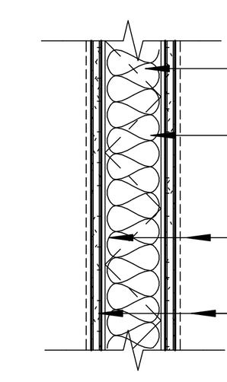
F4T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



4

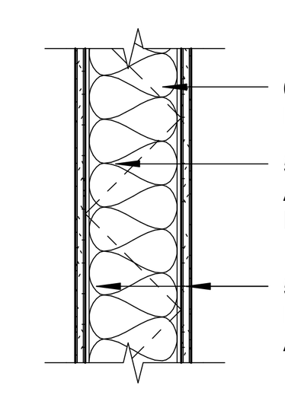
SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



4R 4R=FRP ONE SIDE
R4R R4R=FRP EA SIDE

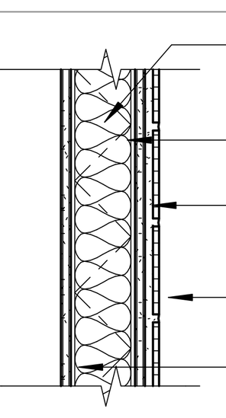
6

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



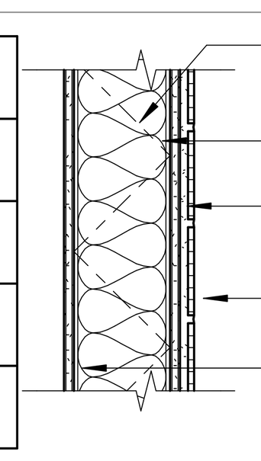
4T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



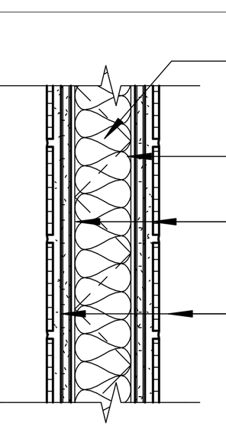
6T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



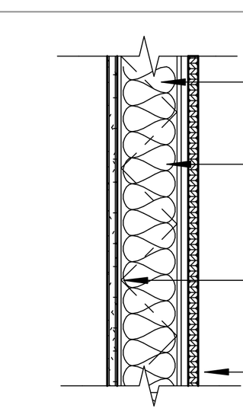
T4T

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



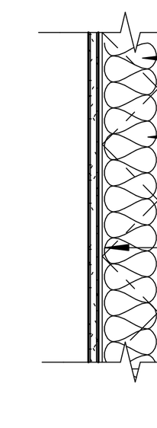
4BP

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



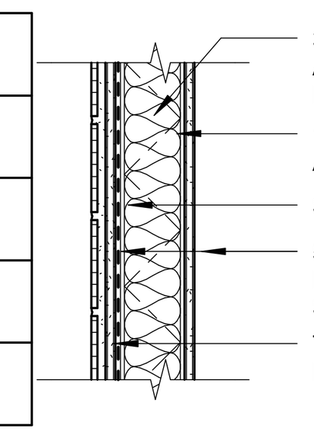
4P

SCALE:	1" = 1'-0"
FIRE RATING:	NON-RATED
ASSEMBLY REF:	N/A
SOUND RATING:	N/A
GENERAL NOTES:	2



T4B

SCALE:	1" = 1'-0"
FIRE RATING:	
ASSEMBLY REF:	
SOUND RATING:	
GENERAL NOTES:	2



GENERAL NOTES

1. SEE SPEC. SECTION 04 22 00. PROVIDE CMU PER ARCHITECTURAL, SHEET A6.0.1. SEE STRUCTURAL FOR SIZE, REINFORCEMENT, & ADDITIONAL INFORMATION.
2. SEE SPEC. SECTION 05 41 00. MTL. STUD THICKNESS SHALL BE 20 GA MIN & DEPENDENT ON HEIGHT AND SPAN. SEE STRUCTURAL AND MTL. STUD. MANUFACTURER FOR ADDITIONAL INFORMATION.
3. WALLS WITH CASEWORK, ELECTRICAL PANELS, & WALL HUNG PLUMBING FIXTURES. METAL STUDS SHALL BE 16 GA MIN., UNLESS OTHERWISE NOTED.
4. ALL WALLS SHALL EXTEND TO UNDERSIDE OF DECK ABOVE, U.N.O. FOR DECK TERMINATION DETAILS REFER TO 5/A9.0.1
5. FOR METAL STUD CONNECTIONS & SECTION PROPERTIES REFER TO 1/S1.3 & 9/S1.3 RESPECTIVELY.
6. ALL GYPSUM BOARD SHEETS TO RUN VERTICALLY.
7. NO JOINTS EXCEPT AT STUDS.
8. ALL SCREWS SHALL PENETRATE STUDS.
9. 1/2" CEMENTITIOUS TILE BACKER BOARD AT PORTIONS OF WALLS WITH CERAMIC TILE.
10. BLDG. INSULATION MATERIALS SHALL NOT EXCEED FLAME SPREAD RATING OF 25 OR SMOKE DENSITY OF 450 PER CBC SECT. 719.
11. FOR WALLS WITH ACOUSTICAL INSULATION, SEE PLAN & SPECIFICATIONS FOR MORE INFORMATION.
12. WHERE METAL STUDS HIT ROOF FRAMING, SEE DETAIL 2/A9.0.1
13. FOR MORE INFORMATION ON INSULATION, SEE SPEC. SECTION 07 21 00.

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COMPTON CCD

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AC ____ FLS ____ SS ____
DATE ____

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
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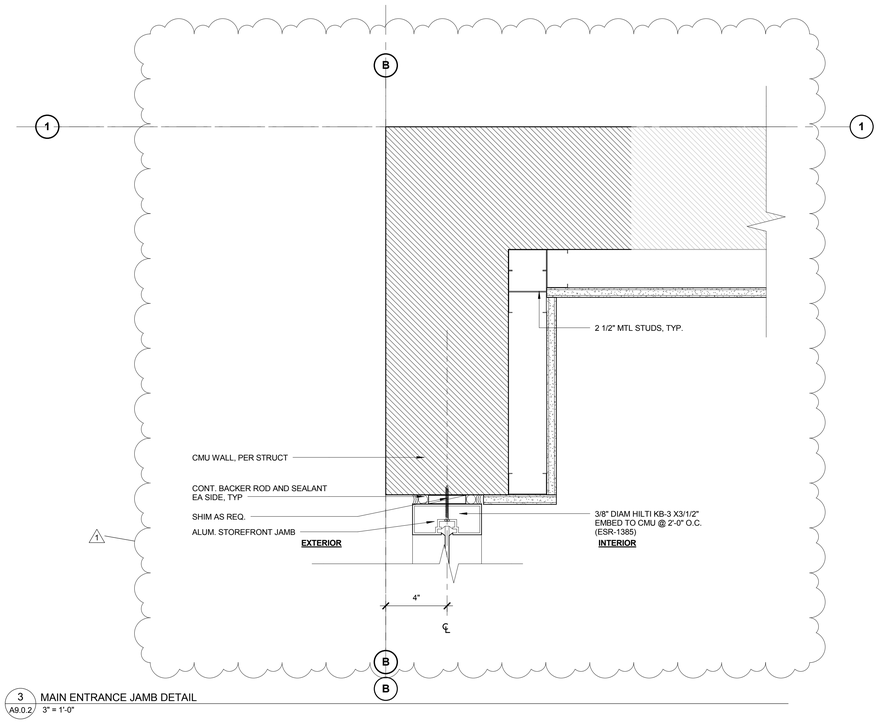
NO. C35431
REN. 4-30-19
STATE OF CALIFORNIA

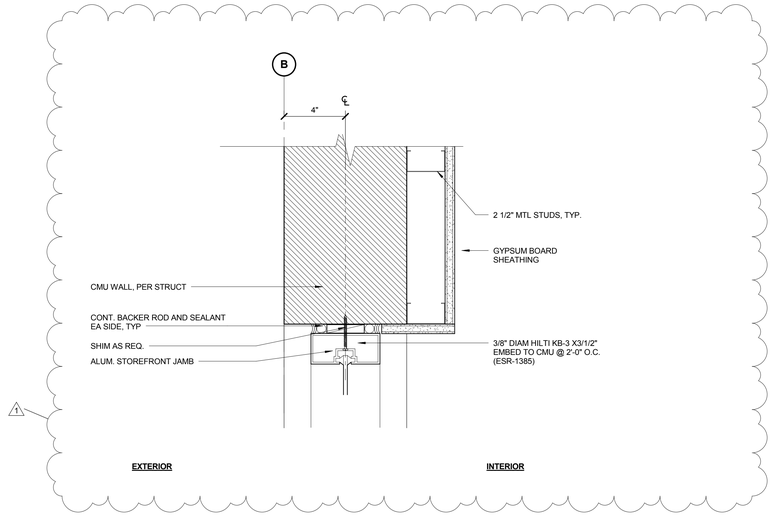
SHEET TITLE
WALL TYPES

PROJECT NUMBER
913-4675-00

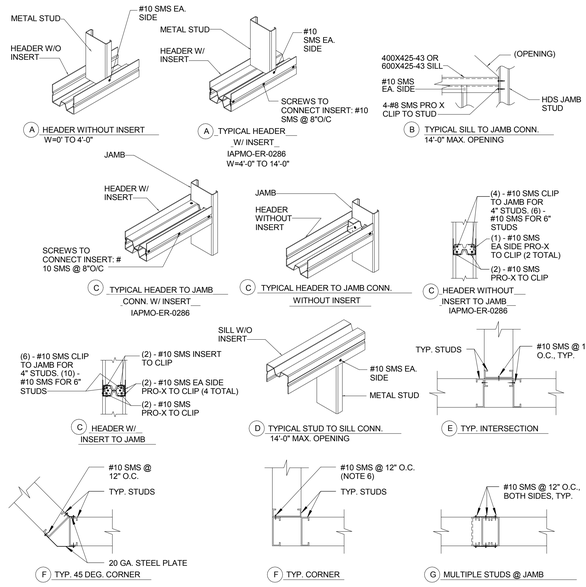
ISSUE DATE	SHEET NO.
04/20/18	AD1-A9.0.1

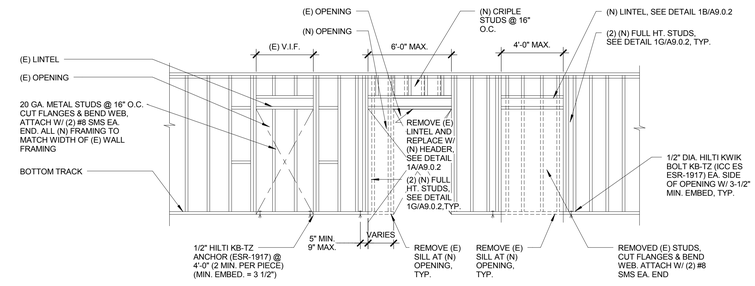


3 A9.0.2 MAIN ENTRANCE JAMB DETAIL
3" = 1'-0"



4 A9.0.2 STOREFRONT HEAD @ ENTRY
3" = 1'-0"

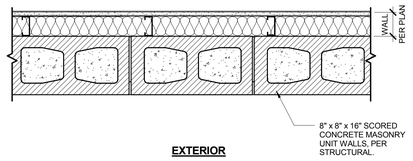




METAL STUD WALL ELEVATION - FULL HEIGHT

1 A9.0.2 PRO-X METAL STUD FRAMING OPTION
ICC # 3064P
1" = 1'-0"

INTERIOR



EXTERIOR

NOTE: TYPICAL AT WALL TYPES F2 THROUGH F4T. SEE SHEET A9.0.1

2 A9.0.2 CMU ACCENT
1 1/2" = 1'-0"

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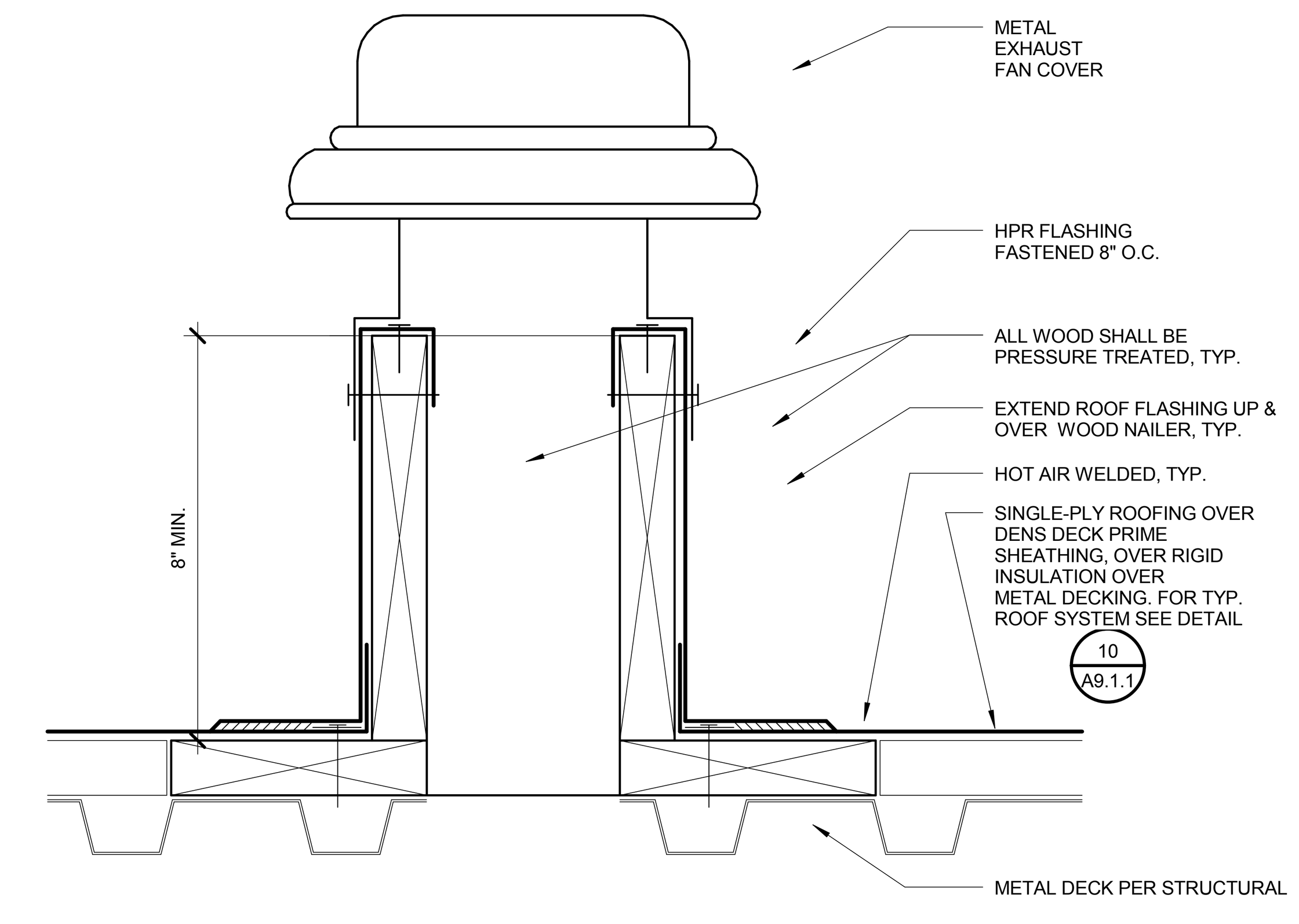
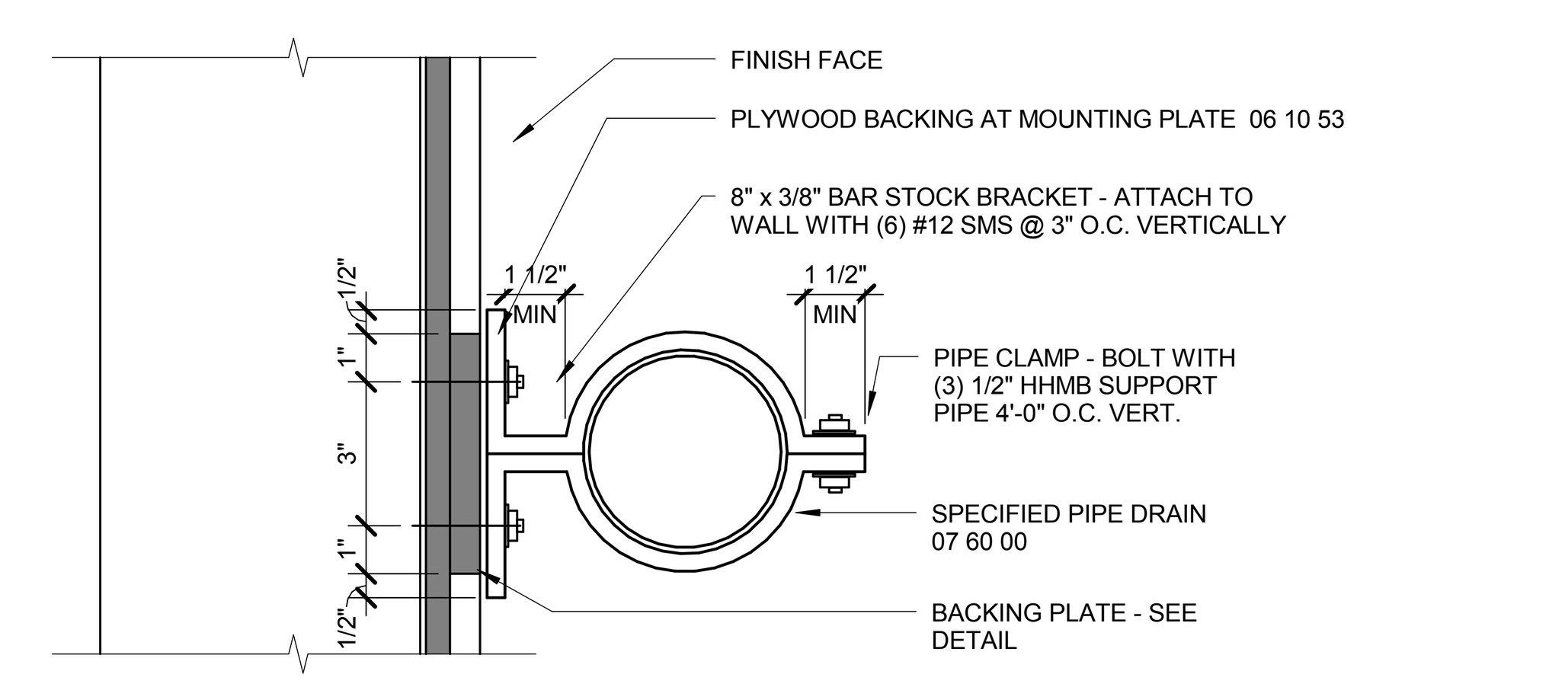
SHEET TITLE
TYP. MTL. STUD FRAMING & EXTERIOR DETAILS

PROJECT NUMBER
913-4675-00

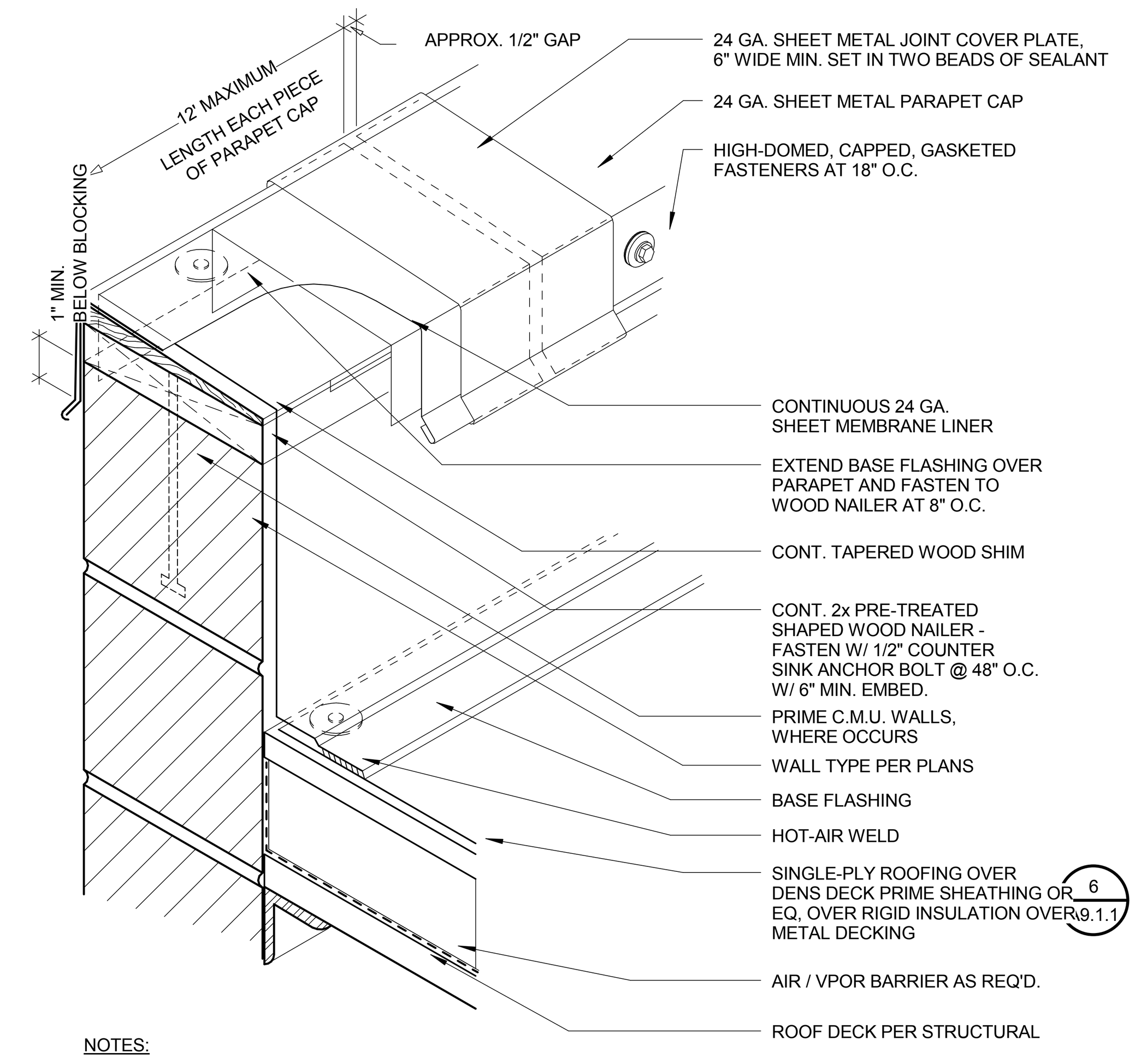
ISSUE DATE	SHEET NO.
04/20/18	AD1-A9.0.2



8 EXHAUST FAN DETAIL
A9.1.1 12" = 1'-0"



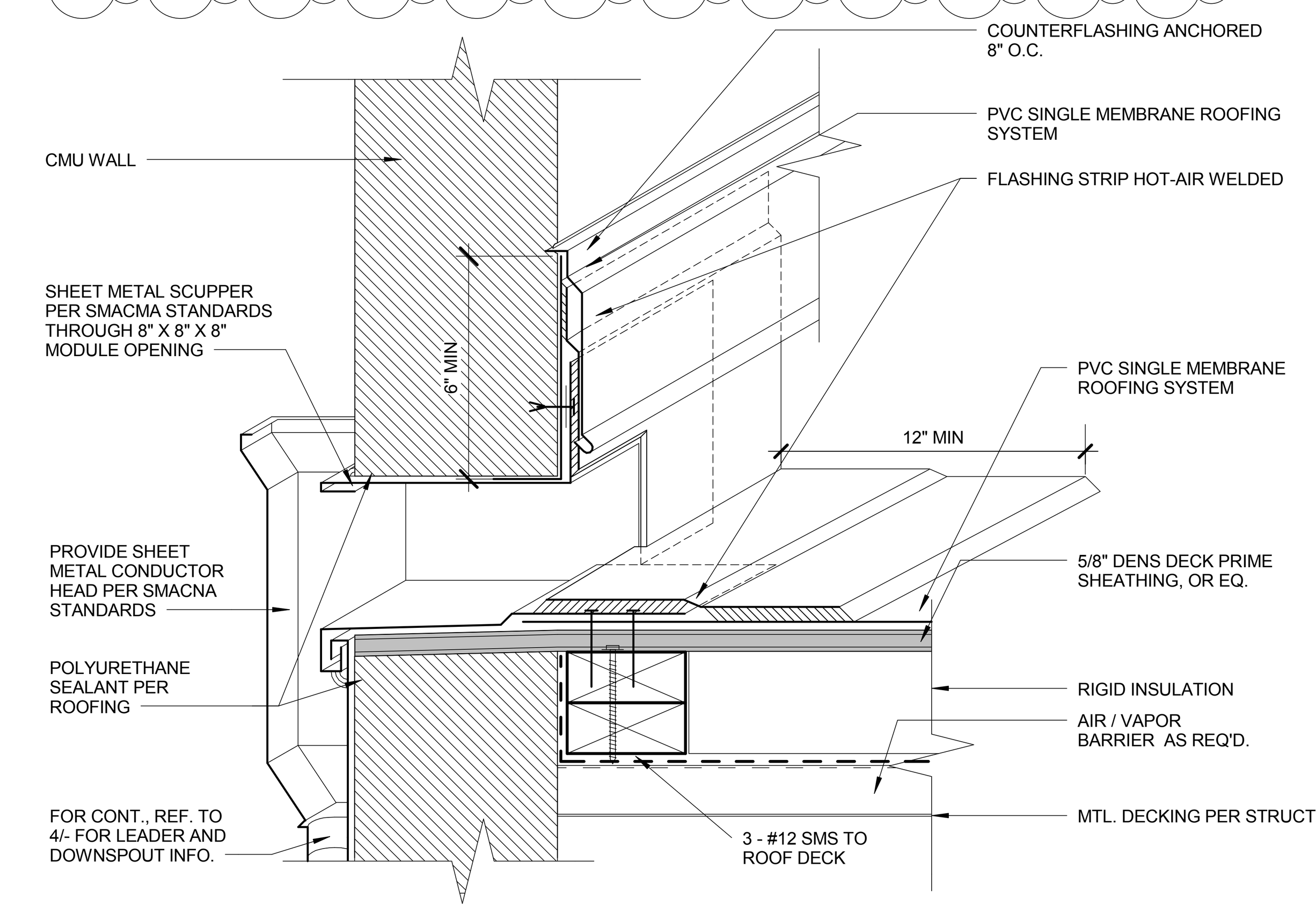
4 TYP. DOWNSPOUT ATTACHMENT BRACKET
A9.1.1 3" = 1'-0"



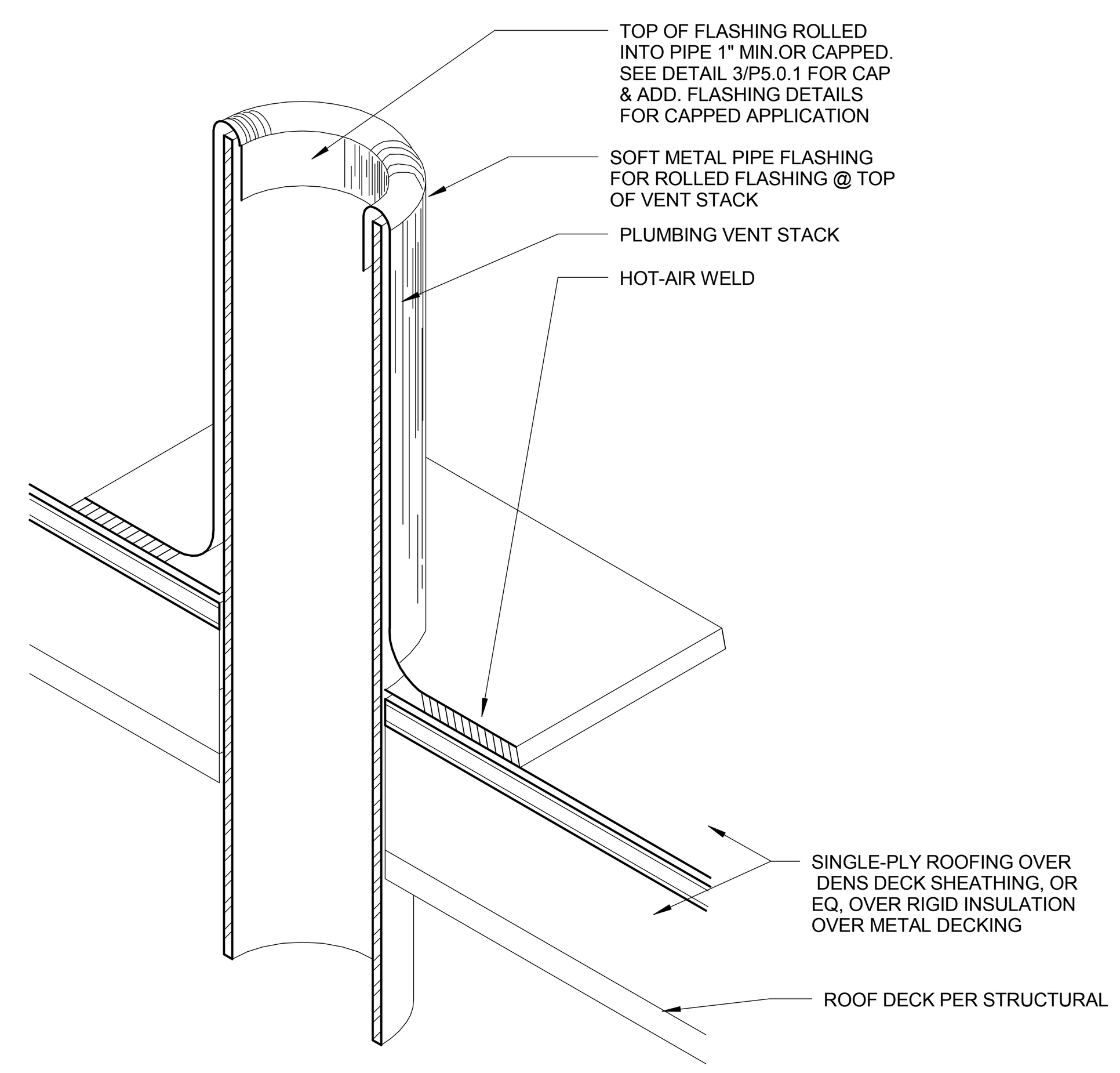
NOTES:

1. THIS DETAIL SHOULD BE USED ONLY WHEN THE ROOF DECK IS SUPPORTED BY THE WALL. (REFER TO STRUCT.)
2. ATTACH NAILER TO DECK WITH SUITABLE FASTENERS.
3. FIBER CANT STRIP SHALL BE SET IN BITUMEN OR ROOF ADHESIVE.
4. REFER TO BUR/MB TABLE 1 FOR METAL THICKNESS AND CLEAT REQUIREMENT.
5. SEE FIGURE 1 FOR ALTERNATE SHEET METAL PARAPET CAP SECUREMENT AND LOCKS AND SEAMS FOR JOINTS IN SHEET METAL.

5 TYP. ROOF FLASHING & COPING @ PARAPET
A9.1.1 3" = 1'-0"



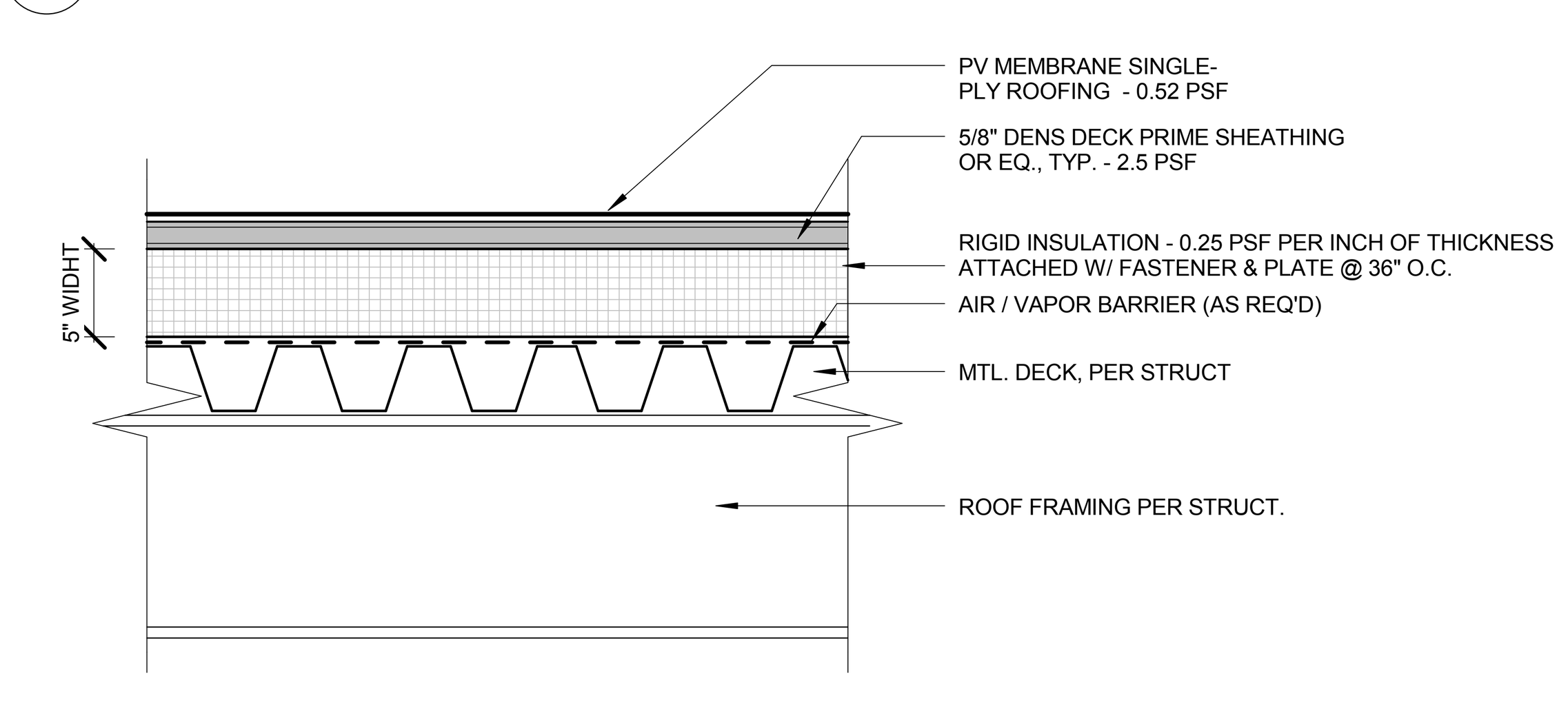
2 TYP. SCUPPER THRU WALL - ROOF TYPE 1A
A9.1.1 3" = 1'-0"



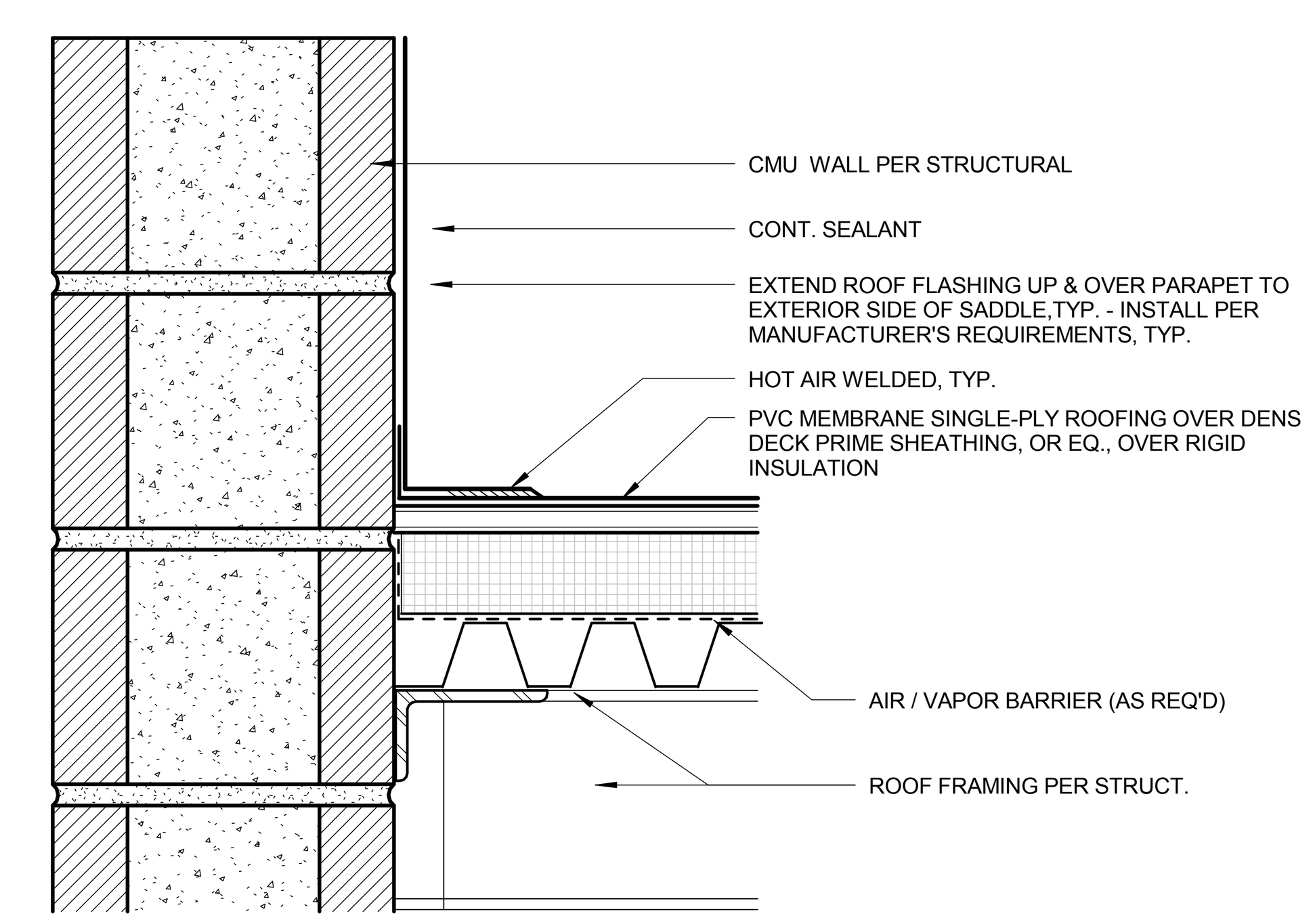
NOTES:

1. SOFT METAL PIPE FLASHING:
   - ALUM PER SPECS. OR
   - SHEET COPPER: MINIMUM 16 OZ.
2. IF USING COPPER FLASHING OVER AN IRON OR STEEL PIPE, INSERT A SEPARATOR SHEET (E.G., ASPHALT-SATURATED ROOFING FELT), WRAPPED AROUND PIPE, TO SEPARATE THE COPPER FLASHING FROM DIRECT CONTACT WITH PIPE, TO REDUCE GALVANIC ACTION.
3. VENT STACKS AND OTHER PIPES SHOULD HAVE A MINIMUM OF 12 INCHES OF CLEARANCE ON ALL SIDES FROM WALLS, CURBS, AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.
4. NRCA SUGGESTS THAT THE TOP STRIPPING PLY BE A HEAVY-WEIGHT POLYMER MODIFIED BITUMEN SHEET.

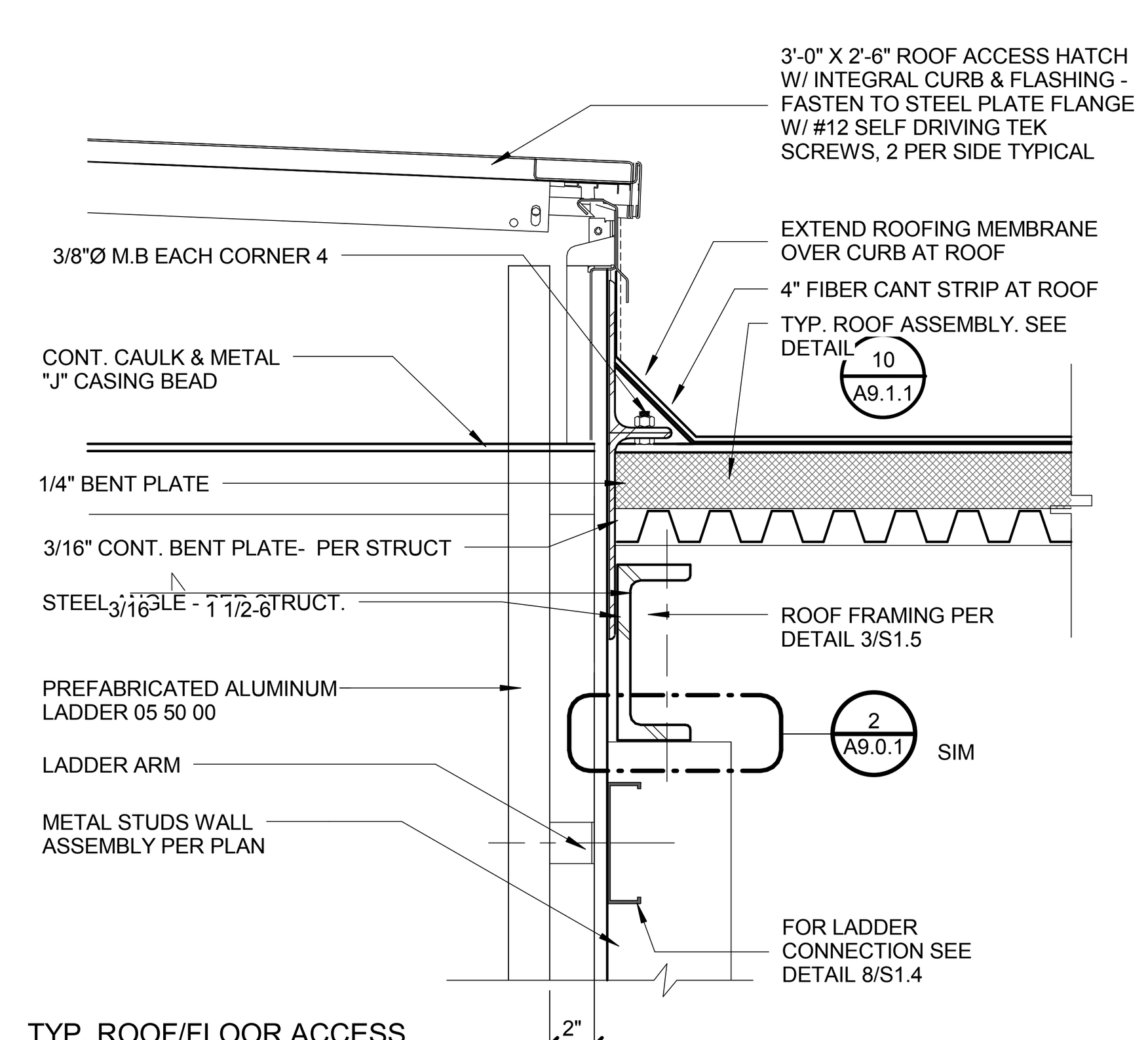
9 TYP. VENT STACK FLASHING
A9.1.1 3" = 1'-0"



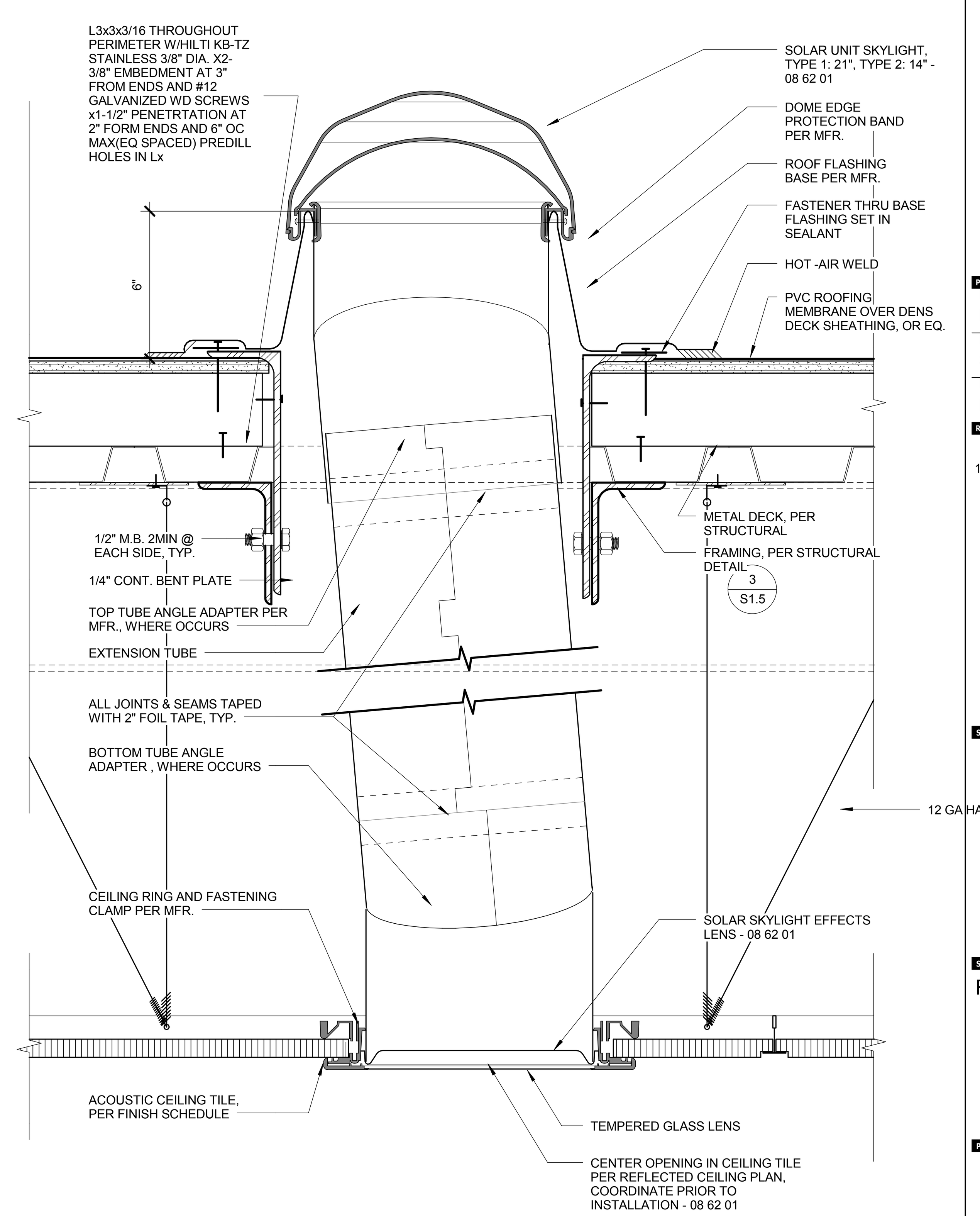
10 TYP. ROOF SYSTEM
A9.1.1 3" = 1'-0"



6 TYP. ROOF AT C.M.U. WALL
A9.1.1 3" = 1'-0"



7 TYP. ROOF/FLOOR ACCESS HATCH
A9.1.1 1 1/2" = 1'-0"



3 TYP. SOLAR SKYLIGHT
A9.1.1 3" = 1'-0"

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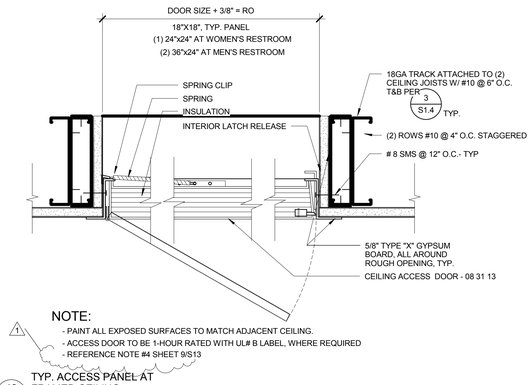
REN. 4-30-19
STATE OF CALIFORNIA

SHEET TITLE
ROOF DETAILS

PROJECT NUMBER
913-4675-00

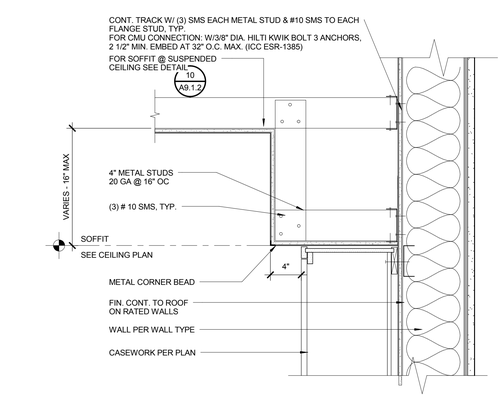
ISSUE DATE 04/20/18
SHEET NO. AD1-A9.1.1



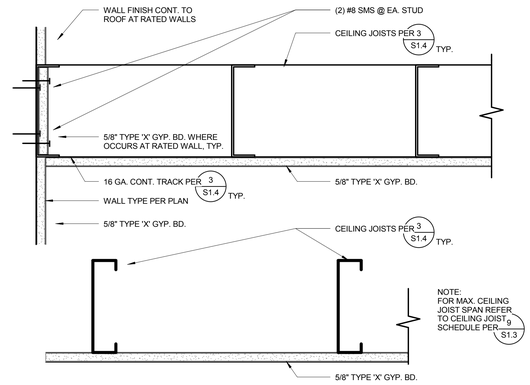
NOTE:

1. - PAINT ALL EXPOSED SURFACES TO MATCH ADJACENT CEILING.
   - ACCESS DOOR TO BE 1-HOUR RATED WITH UL# B LABEL, WHERE REQUIRED
   - REFERENCE NOTE #4 SHEET 9/S13

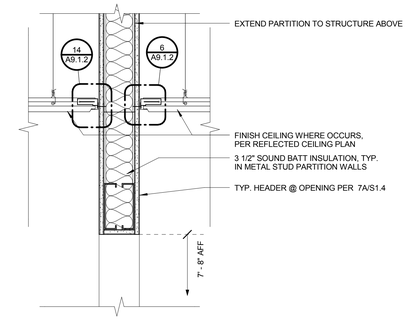
13 / A9.1.2 TYP. ACCESS PANEL AT FRAMED CEILING
3" = 1'-0"



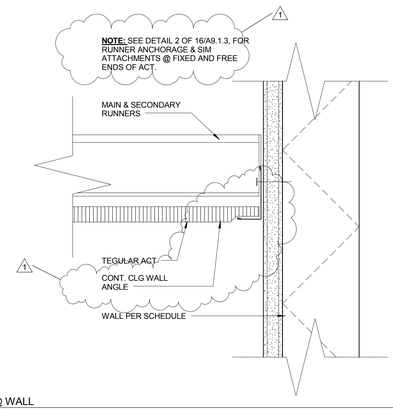
9 / A9.1.2 TYP. SOFFIT AT UPPER CASEWORK
1 1/2" = 1'-0"



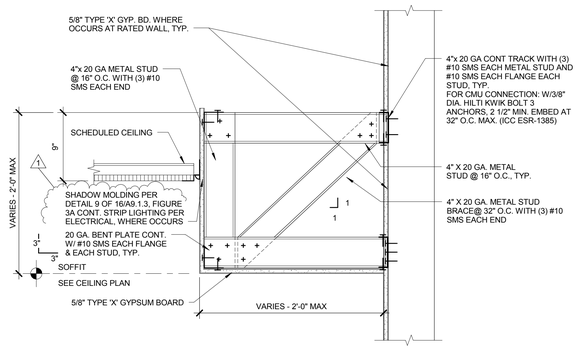
5 / A9.1.2 TYP. FRAMED GYPSUM BOARD CEILING
3" = 1'-0"



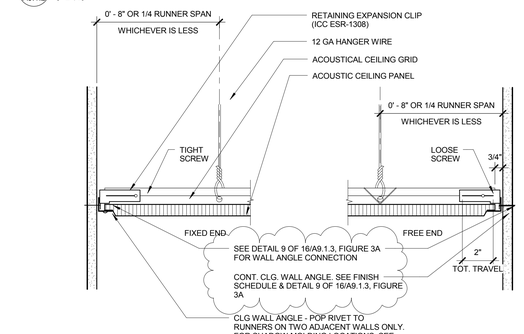
1 / A9.1.2 HEADER @ OPEN OFFICE & MAIN HALLWAY
1 1/2" = 1'-0"



14 / A9.1.2 ACT @ WALL
6" = 1'-0"

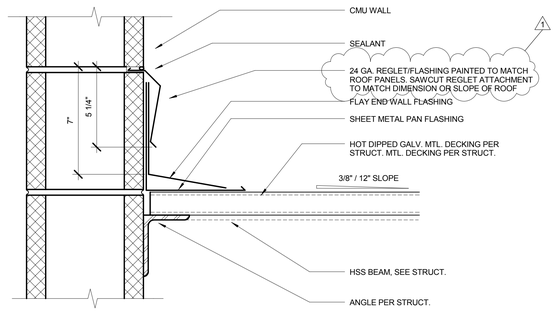


10 / A9.1.2 TYP. SOFFIT AT SUSPENDED CEILING
1 1/2" = 1'-0"



NOTE:
FOR ADDITIONAL INFORMATION, SEE A9.1.3

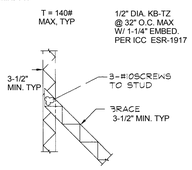
6 / A9.1.2 TYP. SUSPENDED ACOUSTICAL CEILING
3" = 1'-0"



2 / A9.1.2 CANOPY @ CMU EAST-WEST WALLS
3" = 1'-0"

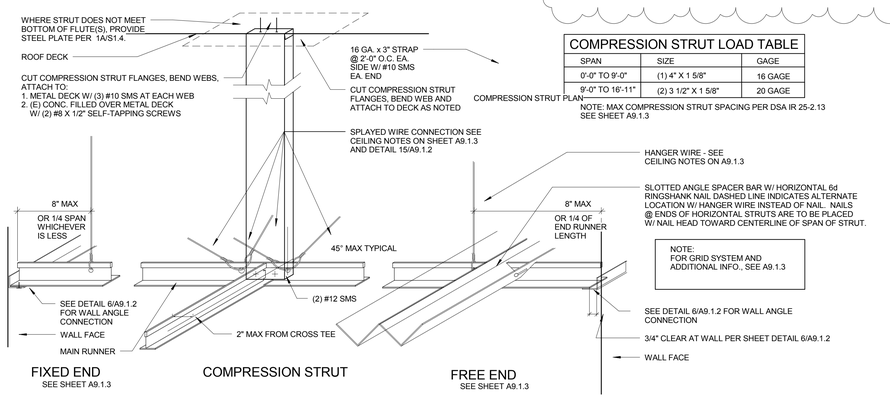
3-1/2" MIN. THICK TYP

3-1/2" MIN. TYP



E

15 / A9.1.2 TYP. CEILING AND SOFFIT CONNECTION DETAILS
3/4" = 1'-0"

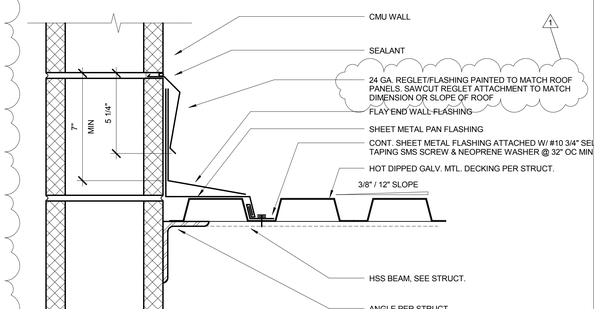


COMPRESSION STRUT LOAD TABLE		
SPAN	SIZE	GAGE
0'-0" TO 9'-0"	(1) 4" X 1 5/8"	16 GAGE
9'-0" TO 16'-11"	(2) 3 1/2" X 1 5/8"	20 GAGE

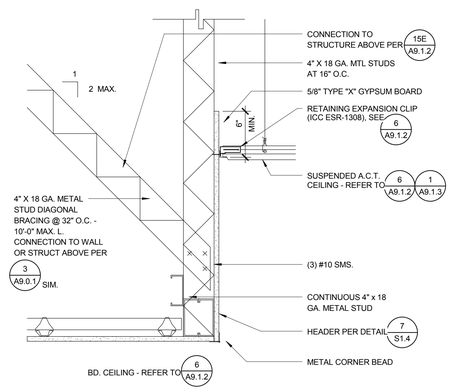
COMPRESSION STRUT PLAN

NOTE: MAX COMPRESSION STRUT SPACING PER DSA IR 25-2.13 SEE SHEET A9.1.3

12 / A9.1.2 TYP. CEILING COMPRESSION STRUT
3" = 1'-0"



3 / A9.1.2 CANOPY @ CMU NORTH-SOUTH WALLS
3" = 1'-0"



4 / A9.1.2 TYP. GYPSUM BOARD SOFFIT AT A.C.T. CEILING
1 1/2" = 1'-0"

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SHEET TITLE

CEILING DETAILS

PROJECT NUMBER

913-4675-00

ISSUE DATE: **04/20/18**
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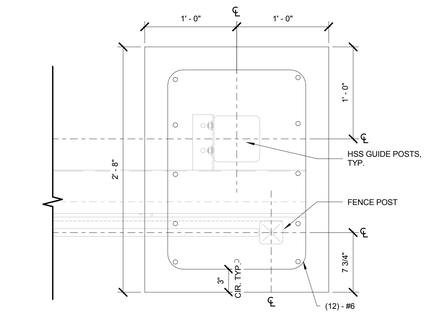
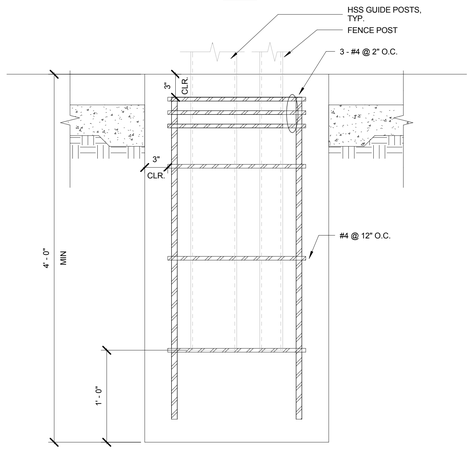


PLAN



SECTION

6 / A9.1.5 ROLLING GATE & FENCE POST COMBINED FOOTING
1 1/2" = 1'-0"

1

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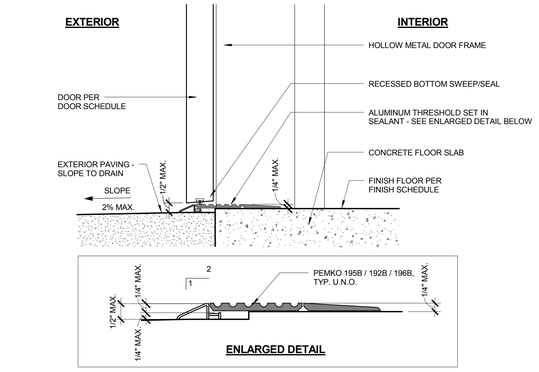
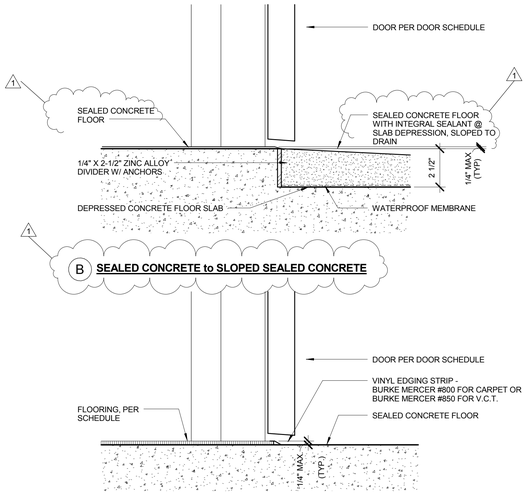


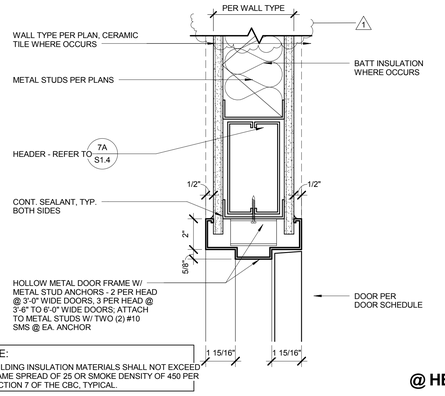
A **TYP. THRESHOLD @ EXT DOOR**



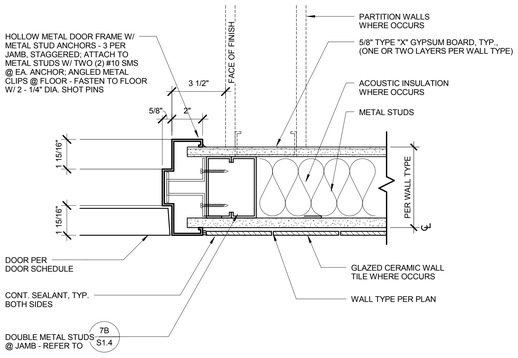
NOTE:

1. AT ALL ACCESSIBLE THRESHOLDS, PROVIDE A MAXIMUM OF 1/4-INCH IN HEIGHT AT TRANSITIONS AND BEVELED PER C.B.C. SECTION 1115B.4.4.2 AND FIGURE 11B-32.
2. VINYL EDGING STRIP COLOR TO BE SELECTED BY ARCHITECT FROM FULL COLOR LINE.

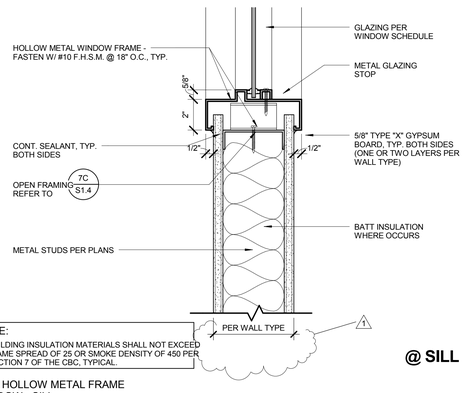
9 A9.3.1 TYP. DOOR THRESHOLDS
3" = 1'-0"



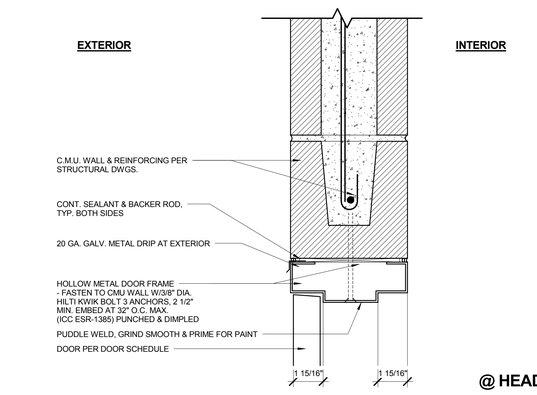
5 A9.3.1 TYP. INTEROR HOLLOW METAL FRAME DOOR
3" = 1'-0"



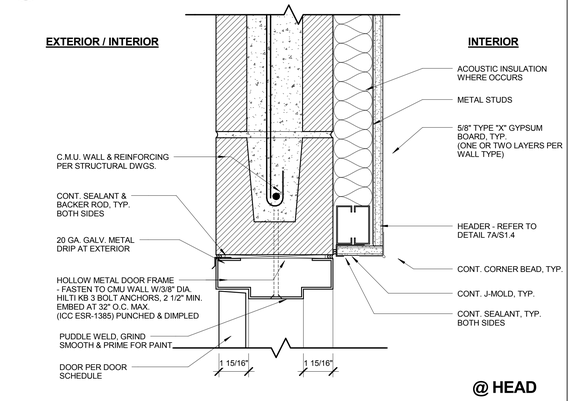
6 A9.3.1 TYP. INT. H.M. FRAME DOOR AT CERAMIC TILE WALL
3" = 1'-0"



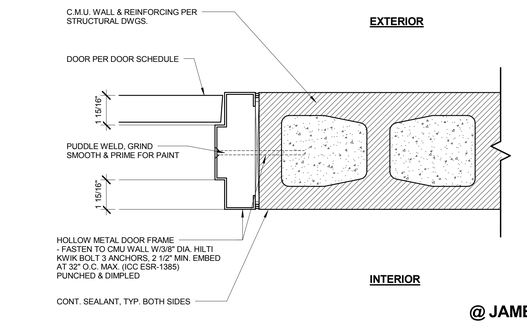
7 A9.3.1 TYP. HOLLOW METAL FRAME WINDOW - SILL
3" = 1'-0"



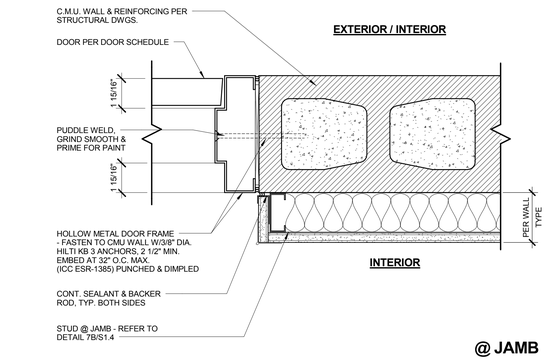
1 A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"



2 A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"



3 A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"



4 A9.3.1 TYP. HOLLOW METAL DOOR FRAME AT C.M.U. WALL
3" = 1'-0"

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CLIENT NAME

COMPTON CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

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DATE_____

CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN 4-30-19 STATE OF CALIFORNIA

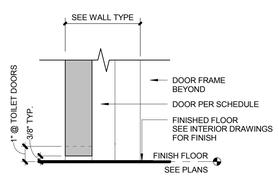
SHEET TITLE

HOLLOW METAL DOOR DETAILS

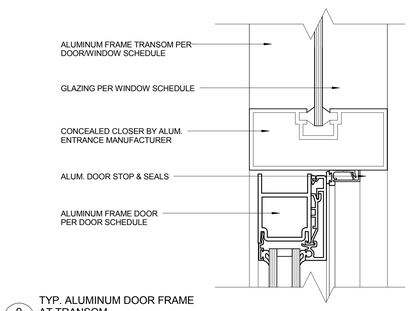
PROJECT NUMBER

913-4675-00

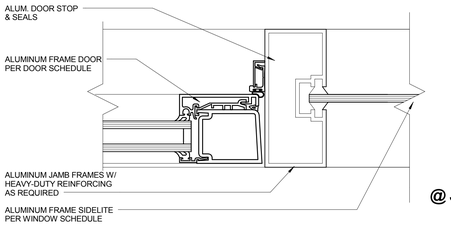
ISSUE DATE	SHEET NO.
04/20/18	AD1-A9.3.1



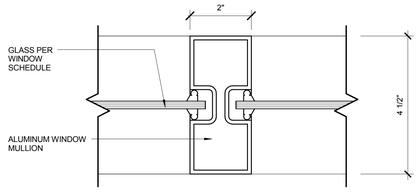
14 A9.3.2 INTERIOR DOOR UNDERCUT
3" = 1'-0"



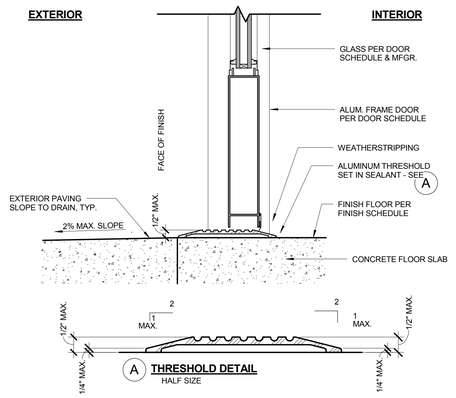
9 A9.3.2 TYP. ALUMINUM DOOR FRAME AT TRANSOM
6" = 1'-0"



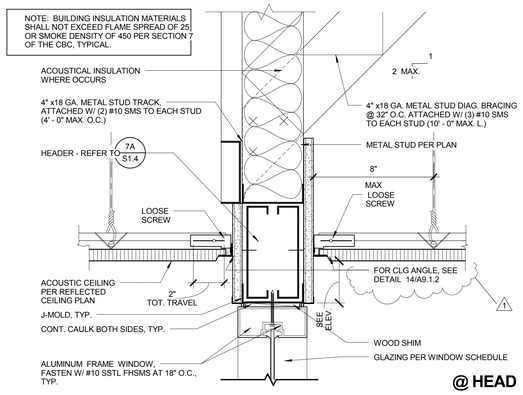
10 A9.3.2 TYP. ALUMINUM DOOR FRAME AT SIDELITE
6" = 1'-0"



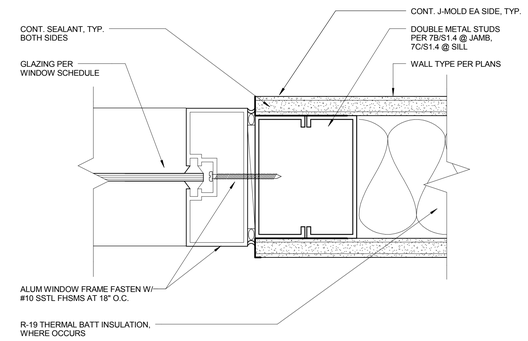
11 A9.3.2 TYP. WINDOW FRAME MULLION
6" = 1'-0"



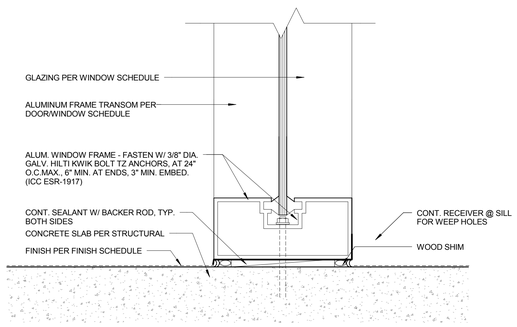
5 A9.3.2 TYP. THRESHOLD AT ALUMINUM DOOR
3" = 1'-0"



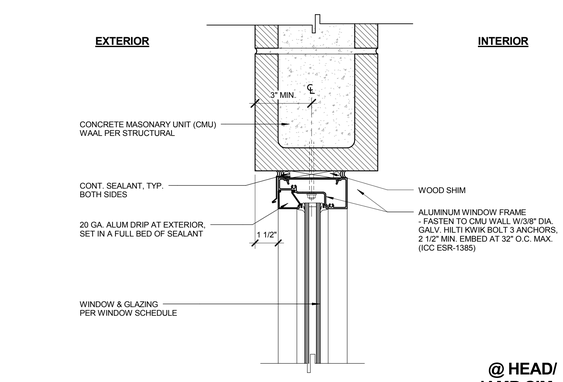
6 A9.3.2 TYP. INTERIOR ALUMINUM FRAMED WINDOW
3" = 1'-0"



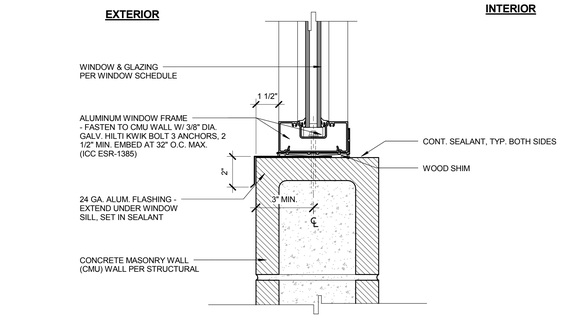
7 A9.3.2 TYP. ALUMINUM FRAME SIDELITE - JAMB
6" = 1'-0"



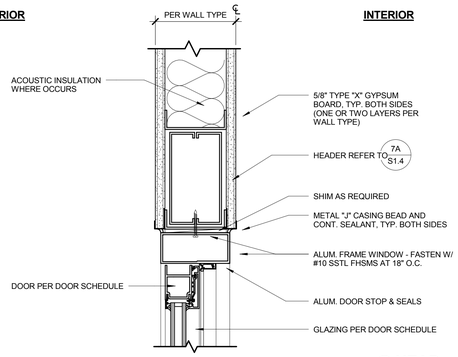
8 A9.3.2 TYP. ALUMINUM FRAME AT CONCRETE SLAB
6" = 1'-0"



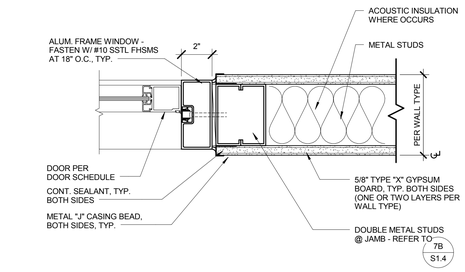
1 A9.3.2 TYP. ALUM. WINDOW AT CMU WALL
3" = 1'-0"



2 A9.3.2 TYP. ALUM. WINDOW AT CMU WALL
3" = 1'-0"



3 A9.3.2 TYP. INTERIOR ALUMINUM FRAME DOOR
3" = 1'-0"



4 A9.3.2 TYP. INTERIOR ALUMINUM FRAME DOOR
3" = 1'-0"

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CONSULTANT

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
DAVID PHAN

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE
LICENSED ARCHITECT RITA S. CARTER NO. C35431 REN. 4-30-19 STATE OF CALIFORNIA

SHEET TITLE
ALUMINUM DOOR & WINDOW DETAILS

PROJECT NUMBER
913-4675-00

ISSUE DATE: 04/20/18
SHEET NO.: AD1-A9.3.2

GENERAL NOTES

GENERAL

1. ALL WORK SHALL COMPLY WITH 2013 CALIFORNIA BUILDING CODE, CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 2 OF 2 (INCLUDING ALL SUPPLEMENTS) AND ALL OTHER LOCAL OR STATE AGENCIES HAVING JURISDICTION OVER THIS PROJECT.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
4. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
7. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
8. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.
9. FOR TRENCHES OR EXCAVATIONS (5) FIVE FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, THE CONTRACTOR IS TO OBTAIN THE NECESSARY PERMIT FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
10. REFER TO THE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS, ETC. FOR DETAILS, DIMENSIONS, CONDITIONS, PITS, TRENCHES, DEPRESSIONS, OPENINGS, SLEEVES, ITEMS TO BE EMBEDDED OR ATTACHED TO STRUCTURAL ELEMENTS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS.
11. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
12. THE SEISMIC ANCHORAGE OF MECHANICAL, ELECTRICAL, PLUMBING EQUIPMENT AND ARCHITECTURAL ITEMS SHALL CONFORM TO C.C.R. TITLE 24, 2013 CBC . ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.

EARTHWORK

1. SEE REPORT OF GEOTECHNICAL INVESTIGATION FOR PROPOSED CAMPUS POLICE STATION PROJECT (PROJECT NO. 1529-CR, DATED OCTOBER 24, 2016 BY GEOTEK INC. ; DSA109 DATED ON 1/16/2017)
2. THE ON-SITE SOILS HAVE VERY LOW POTENTIAL FOR EXPANSION.
3. SITE PREPARATION WILL REQUIRE THE REMOVAL OF BUILDING DEMOLITION DEBRIS, BURIED FOUNDATION, UTILITIES, ETC., AND REMEDIAL GRADING TO PROVIDE A RELATIVELY UNIFORM SOIL CONDITION FOR SUPPORT OF FUTURE SLABS, HARDSCAPE AND PAVEMENT.
4. ANY EXISTING FILL OR UNSUITABLE SOILS, AS DETERMINED BY THE GEOR, SHALL BE EXCAVATED AND REPLACED BY PROPERLY COMPACTED FILL.
5. EXTREME CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS SO AS NOT TO DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
6. ANY IMPORT FILL SOIL THAT MAY BE REQUIRED SHALL HAVE A LOW POTENTIAL FOR EXPANSION AND SHALL BE APPROVED BY THE GEOR PRIOR TO IMPORTING.
7. ALL REQUIRED BACKFILL SHOULD BE MECHANICALLY COMPACTED IN LAYERS. ANY REQUIRED FILL SHOULD BE PLACED IN LOOSE LIFTS NOT MORE THAN 8" THICK AND COMPACTED TO AT LEAST 95% OF THE LABORATORY DRY DENSITY PER THE ASTM D1557 TEST METHOD. THE MOISTURE CONTENT OF FILL MATERIAL AT THE TIME OF COMPACTION SHOULD BE WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT.
8. ALL EARTHWORK AND SITE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE ABOVE MENTIONED REPORT WHICH IS ON FILE WITH THE AOR AND IS A REQUIRED PORTION OF THE CONTRACT DOCUMENTS. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE GEOR. SEE SOIL REPORT FOR DETAILS OF SLAB-ON-GRADE.
9. WHERE DEEP EXCAVATION IS REQUIRED, AND THE NECESSARY SPACE IS AVAILABLE, TEMPORARY UNSURCHARGED EXCAVATIONS MAY BE SLOPED BACK IN LIEU OF SHORING. EXCAVATIONS SHALL BE DONE AS RECOMMENDED BY, AND UNDER THE OBSERVATIONS OF, THE GEOR. THE TOP OF EXCAVATIONS SHALL BE PROTECTED BY BARRICADES, ETC., TO PREVENT SURCHARGING AND BERMED TO PREVENT WATER RUN-OFF FROM ENTERING AND ERODING THE EXCAVATION. ADJACENT TO EXISTING BUILDINGS OR IMPROVEMENTS, THE EXCAVATION SHALL BE RESTRICTED TO 2:1 (HORIZONTAL TO VERTICAL) DOWNWARD FROM THE TOE OF THE EXISTING FOOTING, ETC. UNLESS SPECIAL PROCEDURES ARE IMPLEMENTED AS RECOMMENDED BY THE GEOR. ALL APPLICABLE REQUIREMENTS OF THE CALIFORNIA CONSTRUCTION AND GENERAL INDUSTRY SAFETY ORDERS, THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND THE CONSTRUCTION SAFETY ACT SHALL BE MET. IF AMPLE SPACE IS NOT AVAILABLE FOR THE REQUIRED EXCAVATION SLOPE, OR AS A CONSTRUCTION OPTION, SHORING MAY BE A POSSIBLE ALTERNATE. THE CONTRACTOR SHALL FOLLOW SHORING RECOMMENDATIONS BY THE GEOR AND CONFORM TO GENERAL NOTE NO. 8 CONCERNING CONSTRUCTION MEASURES.
10. THE ALLOWABLE SOIL BEARING PRESSURE FOR FOOTING ON THE COMPACTED SUBGRADE SOIL OR NEW COMPACTED FILL IS 2000 PSF FOR DEAD PLUS LIVE LOADS. THE MINIMUM DEPTH SHALL BE 18" BELOW LOWEST ADJACENT FINISH GRADE. A MINIMUM WIDTH OF 18" FOR CONTINOUS FOOTING AND 24" FOR ISOLATED FOOTING. THE ALLOWABLE PASSIVE PRESSURE IS 350 PSF PER FOOTING DEPTH AND THE COEFFICIENT OF FRICTION IS 0.35. BASE FRICTION AND PRESSIVE EARTH PRESSURE CAN BE COMBINED WITHOUT REDUCTION.

SHORING

1. WHERE THERE IS NOT SUFFICIENT SPACE FOR SLOPED EMBANKMENTS, SHORING WILL BE REQUIRED AND IS TO BE PROVIDED BY THE CONTRACTOR AND CONFORM EARTHWORK TO NOTE NO. 11.
2. REFER TO THE REPORT OF GEOTECHNICAL INVESTIGATION FOR INFORMATION REGARDING THE DESIGN AND INSTALLATION OF THE SHORING.
3. SHORING DRAWINGS (BY OTHERS), IF REQUIRED, ARE INCLUDED UNDER A SEPARATE PACKAGE.
4. SHORING/UNDERPINNING OF EXISTING BUILDINGS OR IMPROVEMENTS SHALL BE PROVIDED BEFORE EXISTING SUPPORTING WALLS, SLABS, FOUNDATIONS, PAVEMENT, ETC. ARE CUT OR REMOVED.

CONCRETE

1. ALL CONCRETE WORK SHALL COMPLY WITH ACI 318-11 AS MODIFIED BY CBC' 2013, TITLE 24, PART 2, VOLUME 2 OF 2.
2. ALL CEMENT SHALL CONFORM AT ASTM C-150, TYPE II MODIFIED OR TYPE V U.N.O. (SEE NOTE 18).
3. FINE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C-33.
4. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTH:
ALL CONCRETE U.N.O. - 3000 PSI NORMAL WEIGHT.
CONCRETE IN CONTACT WITH SOIL, SLAB ON GRADE AND FOUNDATION - 5000 PSI, WATER-TO-CEMENT RATIO IS NO MORE THAN 0.40, MAX. CL^- CONTENT: 0.15% (FOR CORROSIVE SOIL PER SOIL REPORT SECTION 5.3.5).
5. CONCRETE DESIGN MIXES SHALL BE PREPARED BY THE APPROVED TESTING LAB USING ACI 318-11, SECTION 5.3 AND APPROVED BY THE STRUCTURAL ENGINEER.
6. PLACING OF ALL CONCRETE SHALL BE INSPECTED BY THE JOB INSPECTOR. INSPECTOR TO VERIFY THAT REINFORCING STEEL IS SECURELY SUPPORTED IN PLACE DURING THE POUR.
7. LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER PRIOR TO POURING CONCRETE AND CONFORM TO ACI 318-11 AS MODIFIED BY CBC 2013, TITLE 24, PART 2, VOLUME 2 OF 2.
9. ANCHOR BOLTS, DOWELS, REINFORCING STEEL, INSERTS, ETC., SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE. ONLY CONCRETE BLOCKS SHALL BE USED TO SUPPORT REINFORCING OFF GRADE.
10. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR THEY MAY BE STRIPPED AFTER 3 DAYS AND THEN COVERED WITH BURLAP WHICH SHALL BE KEPT WET FOR AN ADDITIONAL 7 DAYS. NO CURING COMPOUNDS SHALL BE USED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
11. NOTIFY THE STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
12. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
13. ALL CONCRETE SHALL BE VIBRATED IN PLACE DURING PLACING OF CONCRETE.
14. THE STRUCTURAL STEEL AND STEEL FORM WILL DEFLECT WHILE CONCRETE IS BEING PLACED ON IT. THIS WILL RESULT IN THE NEED TO ADJUST THE SCREEDS AFTER THE CONCRETE HAS BEEN PLACED TO PRODUCE A LEVEL CONCRETE SURFACE. ALSO, THERE WILL BE ADDITIONAL CONCRETE REQUIRED, WHICH IS TO BE ANTICIPATED, AND NO REQUEST FOR EXTRA COST WILL BE CONSIDERED.
15. NO STAKES, STEEL OR WOOD, SHALL BE PERMITTED IN ANY CONCRETE POUR. SUSPEND FORMS FROM ABOVE GRADE.
16. DRYPACK SHALL BE 1:3-1/2 PORTLAND CEMENT TO SAND WITH A MINIMUM 28 DAY STRENGTH OF 3000 PSI.
17. GROUT SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 7000 PSI.
18. SPECIAL CONCRETE REQUIREMENTS FOR COMBINED FOOTING FOUNDATION: USE TYPE II CEMENT. USE APPROVED RETARDING ADMIXTURE WHEN INGREDIENT MATERIALS CAUSE THE FRESH CONCRETE TEMPERATURE TO EXCEED 75° F. HOT-WEATHER-CONCRETING TECHNIQUES SHALL BE STRICTLY EMPLOYED DURING PERIODS OF HOT WEATHER. CURING OF CONCRETE AS NOTED IN THE SPECIFICATIONS AND CONCRETE NOTE NO. 10 SHALL BE STRICTLY FOLLOWED.

REINFORCING

1. ALL REINFORCING IN SEISMIC FRAME FOOTINGS, COMBINED FOOTINGS, GRADE BEAMS AND WELDING SHALL CONFORM TO ASTM A-706 SPECIFICATIONS, GRADE 60. ALL OTHER REINFORCING SHALL CONFORM TO ASTM-A615, GRADE 60 (EXCEPT #3 BARS MAY BE GRADE 60).
2. REINFORCING BARS SHALL BE SPLICED AND BENT IN STRICT ACCORDANCE WITH THE DRAWINGS AND DETAILS. NO KINKS ALLOWED. ALL BARS SHALL BE CLEAN PRIOR TO CONCRETE PLACEMENT.
3. PROVIDE DOWELS OF SAME SIZE AND NUMBER FROM ADJACENT POUR, BOTH VERTICALLY AND HORIZONTALLY TO MATCH TYPICAL REINFORCING SHOWN. LAPS TO BE IN ACCORDANCE WITH THE DRAWINGS AND DETAILS. DOWELS SHALL BE CLEANED AFTER POUR.
4. USE LOW HYDROGEN ELECTRODES, GRADE E-70 OR E-80, FOR WELDING OF REINFORCING BARS, IF WELDING IS REQUIRED. COMPLY WITH 1903A.7 OF CBC 2010.
5. SHOP DRAWINGS AND WELDING PROCEDURE SPECIFICATIONS FOR REINFORCING STEEL SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
6. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER.
7. THE CONTRACTOR SHALL FURNISH (AS INSTALLED) 2 TONS OF BARS IN ADDITION TO THAT REQUIRED BY THE DRAWINGS TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATIONS AS NOTED BELOW AND TO THE AISC SPECIFICATIONS FOR FABRICATION AND ERECTION:
A. ALL WIDE FLANGE COLUMNS, WIDE FLANGE SHAPES W12 AND LARGER (U.N.O.): A-992, GRADE 50
B. ALL WIDE FLANGE BEAMS W10 AND SMALLER, ANGLES, CHANNELS AND MISCELLANEOUS: A-36.
C. PIPE SECTIONS: A-53, GRADE B.
D. TUBE SECTIONS: A-500, GRADE B.
E. BASE PLATES & CONNECTION PLATES: A-36
2. ALL WELDING SHALL CONFORM TO THE SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY AND SHALL BE PERFORMED BY CERTIFIED WELDERS USING E70XX ELECTRODES (U.N.O.) AND THE ELECTRIC ARC PROCESS. SUBMIT WELDING PROCEDURE SPECIFICATIONS FOR APPROVAL PRIOR TO FABRICATION.
3. WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION, 13TH EDITION, TABLE J.2.4.
4. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. ABRADED AREAS TO BE TOUCHED UP WITH GALVALOY. ALL TUBES AND/OR PIPES SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.
5. HIGH STRENGTH BOLTS (H.S.B.) SHALL CONFORM TO ASTM A-325SC STANDARD SPECIFICATIONS TYPICALLY UNLESS NOTED OTHERWISE. OTHER BOLTS, AS NOTED, SHALL CONFORM TO ASTM A-307. ANCHOR ROD MATERIAL SHALL CONFORM TO ASTM F1554 GRADE 36.
6. ALL STRUCTURAL STEEL SHALL BE FABRICATED IN THE SHOP OF A FABRICATOR LICENSED BY THE LOCAL BUILDING DEPARTMENT AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.
7. ALL FIELD WELDING, EXCEPT MINOR OR TACK WELDING, SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED WELDING INSPECTOR AND CONFORM TO WELDING REQUIREMENTS AS PER AWS D1.1: 2008.
8. PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.
9. AT MOMENT CONNECTIONS: HIGH STRENGTH BOLTS SHALL BE FULLY TIGHTENED AFTER WELDING IS DONE AND WELDED CONNECTIONS SHALL BE INSPECTED BY NON-DESTRUCTIVE METHODS SUCH AS X-RAY, ULTRASONIC OR OTHERWISE. CHECK FOR LAMELLAR TEARING.
10. ALL COMPLETE PENETRATION GROOVE WELDS SHALL BE TESTED 100%. ALL C.P. WELD JOINTS WITH MEMBERS OF DIFFERENT THICKNESS OR WIDTHS SHALL BE TRANSITIONED PER AWS D1.1, U.N.O.
11. HIGH STRENGTH BOLTING SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED INSPECTOR.

AUTOMATIC END WELDED STUDS

1. AUTOMATIC END WELDED STUDS SHALL BE NELSON GRANULAR FLUX-FILLED SHEAR CONNECTOR OR ANCHOR STUDS (OR APPROVED EQUAL) PER ICC-ES ESR-2856. STUDS SHALL BE MANUFACTURED OF GRADES C-1010 THROUGH C1020 COLD-DRAWN STEEL WHICH CONFORMS TO ASTM SPECIFICATIONS A-108.
2. THE STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" AND UNDER AND 3/16" FOR OVER 5/8" DIAMETER. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE DSA INSPECTOR-OF-RECORD (IOR).

METAL DECKING

1. ALL ROOF AND FLOOR METAL DECK AND ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A653 SPECIFICATIONS.
2. DECK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A924 COMMERCIAL COATING CLASS G-60.
3. ALL DECK SHALL BE VERCO (UES ER-0217) AND THE TYPES AND GAUGES SHALL BE AS INDICATED ON THE DRAWINGS, AND AS FOLLOWS:

SECTION PROPERTIES

TYPE	GAUGE	DEPTH	I(MIN.) IN 4/ FOOT	S(MIN.) IN 3/ FOOT
HSB (ROOF) or PLB (ROOF)	20	1-1/2"	0.216	0.235
	18	1-1/2"	0.302	0.322
	16	1-1/2"	0.377	0.411
W2 FORMLOK	18	2"	0.555	0.510
	16	2"	0.694	0.639

4. DECKING SHALL HAVE MINIMUM 2" BEARING AT SUPPORTS.
5. WELDING OF DECKING SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED INSPECTOR.
6. ALL FLOOR AND ROOF DECK RECEIVING CONCRETE SHALL BE VENTED.
7. CONDUITS ARE NOT ALLOWED IN CONCRETE SLAB ON METAL DECK.

EXPANSION ANCHOR BOLTS

1. CONCRETE: USE ONLY EXPANSION ANCHOR SYSTEMS THAT HAVE BEEN ISSUED AN ICC-ES REPORT IN ACCORDANCE WITH THE PROVISIONS OF ICC-ES AC193. ANCHOR SYSTEMS SHOULD BE APPROVED FOR USE IN CRACKED CONCRETE AND SEISMIC DESIGN CATEGORIES A-F PER SECTION 2.0 OF THE ICC EVALUATIONS SERVICES REPORT. ANCHOR SYSTEMS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE ICC-ES EVALUATION SERVICES REPORT FOR THE SPECIFIC ANCHOR, AND AS REQUIRED BY THE MANUFACTURER. ALL EXPANSION ANCHORS SHALL BE HILTI TZ (ICC ESR-1917 AT CONCRETE AND HILTI KB3 AT CMU, AS SPECIFIED ON DETAIL. ANY SUBSTITUTION MUST BE APPROVED BY SEOR) .
2. WHERE THE MANUFACTURER'S INSTALLATION INSTRUCTIONS OR APPLICABLE ICC-ES EVALUATION SERVICES REPORT CALL FOR THE APPLICATION OF AN INSTALLATION TORQUE, THE SPECIFIED TORQUE SHALL BE APPLIED WITH A CALIBRATED TORQUE WRENCH. THE SPECIFIED INSTALLATION TORQUE SHALL NOT BE EXCEEDED.
3. ANCHORS SHALL BE CARBON STEEL (INTERIOR) & STAINLESS STEEL (EXTERIOR) .
4. THE SPECIAL INSPECTOR SHALL BE ON THE JOBSITE CONTINUOUSLY DURING ANCHOR INSTALLATIONS, UNLESS OTHERWISE NOTED IN ICC-ES ESR, TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DIMENSIONS, ANCHOR SPACINGS, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.
5. THE TENSION TESTING OF THE EXPANSION ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION-TESTING REQUIREMENTS, THE ADDITIONAL TESTING REQUIREMENTS SHALL BE PERFORMED ACCORDING TO CBC 2010, SECTION 1916A.7
6. TEST QUANTITY OF ANCHORS AS NOTED BELOW:

APPLICATION	QUANTITY
STRUCTURAL	100% OF BOLTS
NON-STRUCTURAL	50% OF BOLTS
SILL PLATE BOLTING	10% OF BOLTS

7. ANCHORS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE SPECIAL INSPECTOR.
8. THE TEST LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY TRANSMIT A MEASURABLE TENSION LOAD TO THE ANCHOR. ACCEPTABLE METHODS INCLUDE:
A. USE OF A HYDRAULIC JACK, WHEREBY EITHER UNCONFINED OR CONFINED TESTING SHALL BE ACCEPTABLE;
B. USE OF CALIBRATED SPRING LOADED DEVICES; OR
C. USE OF A CALIBRATED TORQUE WRENCH FOR TORQUE-CONTROLLED EXPANSION ANCHORS.
9. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
A. HYDRAULIC RAM METHOD: THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR EXPANSION ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.
B. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN ONE-HALF (1/2) TURN OF THE NUT.
10. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
11. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR.
12. IF REBAR IS ENCOUNTERED DURING THE DRILLING, THE CONTRACTOR SHALL IMMEDIATELY TERMINATE DRILLING AND CONTACT THE ENGINEER OF RECORD.
13. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
14. IF THE CONCRETE CRACKS DURING THE INSTALLATION OF THE ANCHOR, THE ANCHOR SHALL BE REMOVED OR ABANDONED.
15. REQUIRED TEST LOADS SHALL BE DETERMINED AS THE LESSER OF TWICE THE MINIMUM ALLOWABLE TENSION LOAD PROVIDED IN THE ICC-ESR REPORT FOR THE SPECIFIC ANCHOR OR 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT, AS SUMMARIZED IN THE TABLES BELOW:
- HILTI KB-TZ CARBON & STAINLESS STEEL (ICC-ES/ESR-1917)
- CRACKED CONCRETE, SEISMIC (ASD), CONDITION B

HILTI KB-TZ AT CONCRETE

NOMINAL ANCHOR DIAMETER	EMBEDMENT DEPTH, H^{EF} (INCHES)	INSTALLATION TORQUE (FT-LB)
3/8	2	25
1/2	2	40
1/2	3-1/4	40
5/8	3-1/8	60
5/8	4	60
3/4	3-3/4	110
3/4	4-3/4	110

HILTI KH-EZ (ESR-3027)

NOMINAL ANCHOR DIAMETER	EMBEDMENT DEPTH EF (INCHES)	INSTALLATION TORQUE (FT-LB)
1/4	1 5/8	18
3/8	2 1/2	40
1/2	2 1/4	45

HILTI KB-3 AT CMU (ESR-1835)

NOMINAL ANCHOR DIAMETER	EMBEDMENT DEPTH (INCHES)	INSTALLATION TORQUE (FT-LB)
1/4	2	4
3/8	2-1/2	15
1/2	3-1/2	25
5/8	4	65
3/4	4-3/8	120

16. TESTING SHALL OCCUR A MINIMUM OF 24 HOURS AFTER INSTALLATION OF THE SUBJECT ANCHORS.

ADHESIVE ANCHOR RODS, DOWELS AND REBAR IN HARDENED CONCRETE

1. CHEMICAL ANCHOR SYSTEMS:
A. CONCRETE: HILTI HIT-RE-500 V3 (ICC-ES ESR 3814). USE ONLY ADHESIVE ANCHOR SYSTEMS THAT HAVE BEEN ISSUED AN ICC-ES REPORT IN ACCORDANCE WITH THE PROVISIONS OF ICC-ES AC308. ANCHOR SYSTEM SHOULD BE APPROVED FOR USE IN CRACKED CONCRETE AND SEISMIC DESIGN CATEGORIES A-F PER SECTION 2.0 OF THE ICC-ES EVALUATION SERVICES REPORT. ANCHOR SYSTEMS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE ICC-ES EVALUATION SERVICES REPORT FOR THE SPECIFIC ANCHOR, AND AS REQUIRED BY THE MANUFACTURER.
2. ANCHOR RODS:
HILTI HAS-E CONTINUOUSLY THREADED RODS OR HILTI HIS-N INTERNALLY THREADED INSERTS. ALL RODS SHALL BE ASTM A36 THREADED RODS WITH ASTM A 563 GRADE A NUTS AND ANSI B 18.22.1 TYPE A WASHERS, UNLESS OTHERWISE NOTED. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS SHALL USE ASTM 563 GRADE DH HEAVY HEX NUTS AND ASTM F436 WASHERS.
3. DOWELS:
ASTM A615 GRADE 60 REINFORCING STEEL.
4. REINFORCEMENT BARS:
ASTM A615 GRADE 60 STEEL.
5. REMOVE GREASE, OIL, RUST AND ANY OTHER LAITANCE FROM RODS AND DOWELS PRIOR TO INSTALLATION.
6. SPECIAL INSPECTION REQUIREMENTS WILL BE DICTATED BY SECTION 4.4 OF THE ICC-ES EVALUATION SERVICES REPORT. ANY SPECIAL INSPECTION SHALL VERIFY ANCHOR TYPE ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DIMENSIONS,ANCHOR SPACINGS, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE.
7. THE TENSION TESTING OF THE CHEMICAL ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION-TESTING REQUIREMENTS, THE ADDITIONAL TESTING REQUIREMENTS SHALL BE ACCEPTABLE TO THE ENFORCEMENT AGENCY.
8. TEST QUANTITY OF ANCHORS AS NOTED BELOW:

APPLICATION	QUANTITY
STRUCTURAL	100% OF BOLTS
NON -STRUCTURAL	50% OF BOLTS
SILL PLATE BOLTING	10% OF BOLTS

9. ANCHORS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE SPECIAL INSPECTOR.
10. WHERE ADHESIVE ANCHOR SYSTEMS ARE USED TO INSTALL REINFORCING DOWEL BARS IN HARDENED CONCRETE, ONLY 25% OF THE DOWELS NEED BE TESTED IF THE FOLLOWING CONDITIONS ARE MET:
A. THE DOWELS ARE USED EXCLUSIVELY TO TRANSMIT SHEAR FORCES ACROSS JOINTS BETWEEN EXISTING AND NEW CONCRETE;
B. THE NUMBER OF DOWELS IN ANY ONE MEMBER EQUALS OR EXCEEDS 12;
C. THE DOWELS ARE UNIFORMLY DISTRIBUTED ACROSS SEISMIC FORCE RESISTING MEMBERS (SUCH AS SHEAR WALLS, COLLECTORS AND DIAPHRAGMS).
11. TESTING OF SHEAR DOWELS ACROSS COLD JOINTS IN SLABS ON GRADE WHERE THE SLAB IS NOT PART OF THE LATERAL FORCE-RESISTING SYSTEM IS NOT REQUIRED.
12. REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, TEST 100% OF THE DOWELS AND ANCHORS INSTALLED WITHIN THE LAST 2 DAYS OF ANCHOR INSTALLATION.
13. A HYDRAULIC CYLINDER SHALL BE USED TO APPLY THE TENSION TEST LOAD TO THE ANCHOR WITH THE CYLINDER SUPPORTED ON A LOADING PLATE HAVING A HOLE DIAMETER EQUAL TO 1.5 TO 2.0 TIMES THE ANCHOR HOLE DIAMETER (CONFINED CONFIGURATION) UNLESS OTHERWISE APPROVED BY ENFORCEMENT AGENCY.
14. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS: A. HYDRAULIC RAM METHOD: THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD.
15. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE, INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.
16. ALL HOLES FOR POST-INSTALLED ANCHORS SHALL BE DRILLED, CLEANED AND PREPARED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE APPLICABLE ICC-ESR. WHERE AN ANCHOR DOES NOT SET PROPERLY, OR FAILS A TENSION TEST, OR REINFORCEMENT IS ENCOUNTERED DURING DRILLING, THE DRILLED HOLE MAY NOT BE REUSED. ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT. THE MINIMUM SPACING BETWEEN AN ABANDONED HOLE AND A DRILLED HOLE USED FOR A POST-INSTALLED ANCHOR SHALL NOT BE LESS THAN 1-1/2 ANCHOR DIAMETERS UNLESS OTHERWISE APPROVED BY THE ENFORCEMENT AGENCY. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE STATE WILL DETERMINE A NEW LOCATION.
17. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH ADHESIVE ANCHORS.
18. REQUIRED TEST LOADS SHALL BE DETERMINED AS THE LESSER OF TWICE THE MAXIMUM ALLOWABLE TENSION LOAD PROVIDE IN THE ICC-ESR FOR THE SPECIFIC ANCHOR OR 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT, AS SUMMARIZED IN THE TABLE BELOW:

TENSION TEST LOADS (POUNDS) [1]
HILTI HIT-RE 500-V3 (ICC-ES ESR-3814)
CRACKED CONCRETE, SEISMIC (ASD), CONDITION B

NOMINAL ANCHOR DIAMETER	NOMINAL REBAR SIZE	EMBED. DEPTH H_{ef} (INCHES)	NORMAL WEIGHT CONC. f'c = 3000 PSI CARBON STEEL
3/8	#3	3"	3436
1/2	#4	6"	6919
5/8	#5	8"	10590
3/4	#6	10"	16365
7/8	#7	12"	21019
1	#8	14"	26581

1. VALUES SHOWN ARE FOR IDEALIZED CASE WITH NO REDUCTIONS FOR EDGE DISTANCE, SPACING, OR BASE THICKNESS. CONTACT ENGINEER FOR VALUES BASED ON ACTUAL CONDITIONS.

STRUCTURAL SHEET INDEX

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S1.3	TYPICAL DETAILS
S1.4	TYPICAL DETAILS
S1.5	TYPICAL DETAILS
S2.1	FOUNDATION PLAN
S2.2	ROOF FRAMING PLAN
S4.1	FOUNDATION DETAILS
S5.1	MASONRY DETAILS
S5.2	MASONRY DETAILS
S5.3	NOT USED 1
S6.1	STEEL DETAILS
S6.2	STEEL DETAILS

Grand Total: 14 1

GENERAL NOTES

NONE 1

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COMPTON CCD

PROJECT NAME
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AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC_____ FLS_____ SS_____
DATE____________

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REGISTERED PROFESSIONAL ENGINEER
TERRY C. TSANG
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Exp. 06/30/2018
STRUCTURAL
STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

NO	REASON	DATE
1	Addendum #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
GENERAL NOTES

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/17
SHEET NO. AD-S0.1

POWDER ACTUATED FASTENERS

1. ALL POWDER ACTUATED FASTENERS SHALL BE APPROVED FOR TYPE, APPLICATION AND INSTALLATION AND SHALL HAVE AN APPROVED ICC REPORT NUMBER.
2. THE USE OF POWDER DRIVEN FASTENERS, IN TENSION, IS LIMITED TO SUPPORT OF MINOR LOADS SUCH AS DRYWALL OR ACOUSTICAL CEILINGS, DUCT WORK, CONDUIT, ETC. IN GENERAL, LOAD SHOULD BE LIMITED TO LESS THAN 100 POUNDS UNLESS APPROVED BY THE SEOR. POWDER ACTUATED FASTENERS SHALL NOT BE USED TO RESIST SEISMIC OR WIND LOADS.
3. FASTENERS SHALL NOT BE INSTALLED UNTIL THE CONCRETE HAS REACHED ITS DESIGNATED STRENGTH.
4. FASTENERS SHALL NOT BE INSTALLED IN CONCRETE WHOSE THICKNESS IS LESS THAN THREE TIMES THE PENETRATION REQUIRED, EXCEPT 1-1/8" PENETRATION IN 3-1/4" THICK FLOOR SLAB IS ACCEPTABLE.
5. THE MINIMUM DISTANCE FROM THE EDGE OF CONCRETE TO CENTER OF ANCHOR IS 3 INCHES.
6. FASTENERS IN THE UNDERSIDE OF CONCRETE SLABS ON METAL DECKING SHALL BE PLACED IN THE THICK PORTION OF THE SLAB.
7. FASTENERS SHALL BE INSTALLED BY A PRE-QUALIFIED OPERATOR ACCORDING TO THE ICC REPORT AND TESTED AS FOLLOWS: INSPECTOR SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL-OUT" LOAD OF NOT LESS THAN TWICE THE DESIGN LOAD, OR 200 POUNDS, WHICHEVER IS GREATER, SHALL BE APPLIED TO THOSE 10 PINS IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PINS.. RANDOM TESTS UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE MADE OF APPROXIMATELY 1 IN 10 PINS EXCEPT WHEN THE DESIGN LOAD IS 100 POUNDS OR MORE, ONE HALF OF THE PINS SHALL BE TESTED. SHOULD FAILURE OCCUR ON ANY PIN TESTED, ALL OF THE NEXT 20 INSTALLATIONS MUST BE TESTED AND UNFAIR PINS REPLACED.
8. WHEN INSTALLING POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID HITTING OR DAMAGING THE EXISTING REINFORCING BARS.

QUALITY CONTROL

1. UNLESS NOTED OTHERWISE, MATERIALS SHALL CONFORM TO THE PROVISIONS OF THE 2010 CALIFORNIA BUILDING CODE AND TESTS AND INSPECTIONS SHALL BE PERFORMED BY THE APPROVED TESTING AGENCY AND/OR THE JOB INSPECTOR WHO IS APPROVED BY DSA, THE ARCHITECT AND THE STRUCTURAL ENGINEER. COORDINATE AND WORK WITH THE DSA TESTING, INSPECTION AND OBSERVATION (TIO) PROGRAM FOR THE PROJECT.

DESIGN CRITERIA

GENERAL

1. STRUCTURE HAS BEEN DESIGNED TO COMPLY WITH ASCE/SEI 7-05 (MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES) AS MODIFIED BY 2010 CALIFORNIA BUILDING CODE AND SUPPLEMENTS.
2. LIVE LOADS:
   TYPICAL ROOF — 20 PSF (REDUCIBLE PER CODE)
   MECHANICAL ROOM — 50 PSF (REDUCIBLE PER CODE) AND INCLUDING 15 PSF PARTITION ALLOWANCE ON FLOOR.
3. WIND DESIGN DATA

1. BASIC WIND SPEED (3-SECOND GUST)	110 mph
2. WIND IMPORTANCE FACTOR, I AND OCCUPANCY CATEGORY	1.0, IV
3. WIND EXPOSURE	C

4. EARTHQUAKE DESIGN DATA

1. SEISMIC IMPORTANCE FACTOR, I AND OCCUPANCY CATEGORY	1.5, IV
2. MAPPED SPECTRAL ACCELERATIONS, S_S AND S_1	1.672g, 0.611g
3. SITE CLASS	D
4. SITE SPECIFIC SPECTRAL RESPONSE COEFFICIENTS, S_{DS} AND S_{D1}	1.114g, 0.611g
5. SEISMIC DESIGN CATEGORY	E
6. BASIC SEISMIC-FORCE-RESISTING SYSTEM(S)	SPECIAL REINFORCE MASONRY SHEAR WALLS IN BOTH DIRECTIONS, R=5, Ω_o =2 1/2, C_d =3 1/2
7. SEISMIC BASE SHEAR	$V=C_SW = 0.334W$

SEISMIC BRACING OF MECHANICAL SYSTEMS & FIRE SPRINKLERS

1. BRACING OF ALL DUCTS, PIPES, CONDUITS, FIRE SPRINKLERS, AND ANY OTHER SYSTEMS SHALL MEET 2013 CBC AND TITLE 24 REQUIREMENTS.
2. FIRE SPRINKLERS SHALL BE SEISMICALLY BRACED IN ACCORDANCE WITH THE 2010 VERSION OF NFPA13 AND SHALL HAVE ROD STIFFENERS ON ALL HANGER RODS ADJACENT TO LATERAL BRACING. (ROD STIFFENER SHALL BE PER PAGE 58 OF OSHPD OPA-0114).
3. PRE-APPROVED SYSTEMS SHALL BE USED AND HAVE "OPA" OSHPD APPROVAL
4. CONTRACTOR SHALL NOT MIX COMPONENTS OF TWO OR MORE PRE-APPROVED BRACING SYSTEMS. ONLY ONE PRE-APPROVED BRACING SYSTEM SHALL BE USED FOR RUN OF PIPE, DUCT OR CONDUIT. ANY SUBSTITUTION OF A COMPONENT OF A PRE-APPROVED BRACING SYSTEM REQUIRES DSA REVIEW AND APPROVAL.
5. INDEPENDENTLY ENGINEERED SYSTEMS SHALL BE DESIGNED AND STAMPED BY A LICENSED CALIFORNIA STRUCTURAL ENGINEER.
6. SHOP DRAWINGS SHOWING ALL BRACING LOCATIONS AND DETAILS OF ALL CONNECTIONS ARE REQUIRED FOR ALL PRE-APPROVED SYSTEMS. SUBMITTAL SHALL INCLUDE:
   A. REACTION AT SUPPORTS.
   B. REACTION AT BRACES.
   C. PRE-APPROVED SYSTEM ASSEMBLY DETAILS.
   D. SHOP DRAWINGS TO BE SUBMITTED FOR FINAL APPROVAL

METAL STUDS

1. METAL STUDS SHALL BE PER STEEL STUD MANUFACTURERS ASSOC. (OR APPROVED EQUAL). ICC ESR-3064P
2. ALL STEEL STUDS SHALL BE GALVANIZED.
3. STUD FRAMING SHALL BE IN ACCORDANCE WITH AISI, "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".
4. ALL 18GA (43mils) AND LIGHTER SECTIONS SHALL CONFORM TO ASTM A1003, STRUCTURAL GRADE 33 TYPE H, OR ASTM A653 SS GRADE 33. ALL OTHER SECTIONS SHALL CONFORM TO ASTM A1003 STRUCTURAL GRADE 50 TYPE H, OR ASTM A653 SS GRADE 50 CLASS 3.

1

ClarkDietrich™ PRODUCT INFORMATION
Example: 362S162-43 (33ksi, CP60) punched

ClarkDietrich structural member depths, flanges & available thickness

Member depths	Flange widths range	Mils range	Gauge range
(250) 2-1/2"	1-3/8" 1-5/8" 2" & 2-1/2"	33–68	20–14 ga
(350) 3-1/2"	1-3/8" 1-5/8" 2" & 2-1/2"	33–68	20–14 ga
(362) 3-5/8"	1-3/8" 1-5/8" 2" & 2-1/2"	33–97	20–12 ga
(400) 4"	1-3/8" 1-5/8" 2" & 2-1/2"	33–97	20–12 ga
(550) 5-1/2"	1-5/8" 2" & 2-1/2"	33–97	20–12 ga
(600) 6"	1-3/8" 1-5/8" 2" 2-1/2" & 3"	33–97	20–12 ga
(800) 8"	1-3/8" 1-5/8" 2" 2-1/2" & 3"	33–97	20–12 ga
(925) 9-1/4"	1-5/8" 2" & 2-1/2"	43–97	18–12 ga
(1000) 10"	1-5/8" 2" 2-1/2" & 3"	43–97	18–12 ga
(1200) 12"	1-5/8" 2" 2-1/2" & 3"	54–97	16–12 ga
(1400) 14"	1-5/8" 2" 2-1/2" & 3"	54–97	16–12 ga

ClarkDietrich return lip dimensions

Flange width	Return lip	Member depths
137 (1-3/8")	3/8"	3-5/8"–8"
162 (1-5/8")	1/2"	2-1/2"–14"
200 (2")	5/8"	3-5/8"–14"
250 (2-1/2")	5/8"	3-5/8"–14"
300 (3")	5/8"	6"–14"

Old stud/track designations

Designation	Type	Flange/leg
CWN	Stud	1-3/8"
CSJ	Stud	1-5/8"
CSW	Stud	2"
CSE	Stud	2-1/2"
CSS	Stud	3"
TSB	Track	1-1/4"
TSC	Track	2"
TSE	Track	3"

ClarkDietrich thickness identification and color coding

Member mils	Thickness gauge	Design thickness	Min. thickness	Color code
33	20	0.0346"	0.0329"	White
43	18	0.0451"	0.0428"	Yellow
54	16	0.0566"	0.0538"	Green
68	14	0.0713"	0.0677"	Orange
97	12	0.1017"	0.0966"	Red

ClarkDietrich ProSTUD™ Drywall framing system thickness

Member gauge	Mils	KSI	Design thickness	Min. thickness	Color code
ProSTUD 25	15	50	0.0158	0.0150	None
ProSTUD 20	19	65	0.0200	0.0190	Pink
ProSTUD 20XD	22	57	0.0232	0.0220	Pink
ProSTUD 30ML	30	33	0.0312	0.0296	Pink
ProSTUD 33ML	33	33	0.0346	0.0329	White

ProTRAK (25, 20 & 20XD) = 50ksi ProTRAK 30 & 33mil = 33ksi

HOW TO IDENTIFY OUR PRODUCTS

ClarkDietrich has adopted standard nomenclature established by the American Iron and Steel Institute (AISI) for identifying each of its products. Coding of each member consists of four parts, in this order:

- A number which identifies the web depth of the member to two decimal places. 600 = 6.00," 1000 = 10.00," 550 = 5.50," 362 = 3.625," etc.
- A letter that tells you the type of member, such as S = Stud/joist, T = Track, U = U-channel, and F = Furring channel.
- A number that defines the flange dimension in inches to two decimal places. 162 = 1.625," 200 = 2.00," 125 = 1.25," etc.
- A number following a hyphen that denotes the minimum delivered thickness in mils (33mils = 33/1000 inches which is approximately 0.0329"). Minimum delivered thickness is 95% of design thickness.

Product availability.
Most products manufactured by ClarkDietrich are readily available in all markets, but there can be exceptions. Please contact your ClarkDietrich Sales Representative to make sure the product you need is available in your market area.

Protective coatings.
Non-structural products are coated to meet the requirements of AISI S220 and ASTM C645, with a G40 or a protective coating with an equivalent corrosion resistance. ProSTUD® Drywall Framing System meets the Code Compliance Research Report ATI CCRR-0207. Non-structural products may also be ordered with enhanced coatings for special applications.

Structural framing products are available with a variety of protective coatings that meet the CP60 coating protection level requirements of AISI S200 and ASTM C955. These coatings may include G60, A60, AZ50 or GF30, all of which satisfy the above referenced standards. G90 coatings are an enhanced option that can be requested for highly corrosive environments. ClarkDietrich can supply a specific or enhanced coating to meet specific project requirements when requested.

ClarkDietrich is a proud member of the Steel Framing Industry Association (SFIA).
clarkdietrich.com — The technical content of this page is effective 5/19/14 and supersedes all previous information. Pub. No. CD-SubmittalPro-Identifier 05/14

MASONRY

1. CONCRETE BLOCKS SHALL BE OF SIZES SHOWN ON THE DRAWINGS, TYPE AND COLOR AS SELECTED BY THE ARCHITECT AND CONFORM TO ASTM C-90, GRADE N-1. BLOCK SHALL BE MEDIUM WEIGHT UNITS, fm = 1,900 PSI, f'm = 1,500 PSI. ALL CMU UNITS SHALL BE LAYED IN RUNNING BOND, UNLESS OTHERWISE ON THE DRAWINGS.
2. COARSE GROUT MIX SHALL BE 1:3:2 PORTLAND CEMENT TO SAND TO PEA GRAVEL WITH 1/10 PART LIME PUTTY OR HYDRATED LIME, 2000 PSI.
3. MORTAR MIX SHALL BE 1:3 PORTLAND CEMENT TO SAND WITH NOT MORE THAN ONE-HALF NOR LESS THAN ONE-QUARTER PART LIME PUTTY, TYPE M OR S, 1800 PSI.
4. ALL REINFORCING SHALL HAVE A MINIMUM COVERAGE OF ONE BAR DIAMETER (1/2" MIN.) OF GROUT AND VERTICAL BARS SHALL BE PLACED IN THE CENTER OF THE WALL UNLESS SHOWN OTHERWISE.
5. GROUT CELLS SOLID IN ALL WALLS. REINFORCING SHALL BE SECURELY HELD IN PLACE. GROUT IN 4'-0" MAXIMUM LOW LIFTS FOR CMU WALLS PER SECTION 1.19 OF BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-08/ACI 530-08/ASCE 5-08)
6. NO PIPES OR DUCTS SHALL BE PLACED IN MASONRY UNLESS NOTED OR DETAILED SPECIFICALLY.
7. BOLTS SHALL BE GROUTED SOLID WITH 1" MIN. GROUT BETWEEN BOLT AND MASONRY AT BLOCK FACE.
8. ALL CONCRETE TO RECEIVE MASONRY SHALL BE SANDBLASTED CLEAN.
9. BLOCK LAYING AND GROUTING TO BE CONTINUOUSLY INSPECTED BY SPECIAL INSPECTOR.

HIGH LIFT GROUTED CONSTRUCTION

1. WHERE HIGH LIFT GROUTING IS USED, CONFORM TO SECTION 1.19 OF BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-08/ACI 530-08/ASCE 5-08)
   IT SHALL BE APPROVED BY THE ARCHITECT IN ACCORDANCE WITH "TABLE 1.19.1 (OF REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402-08/ACI 530-08/ASCE 5-08)
2. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF EACH POUR OF GROUT. ANY OVERHANGING MORTAR OR OTHER DEBRIS SHALL BE REMOVED FROM THE INSIDES OF CELL WALLS.
3. THE FOUNDATION OR OTHER HORIZONTAL CONSTRUCTION JOINTS SHALL BE CLEANED OF ALL LOOSE MATERIAL AND MORTAR DROPPINGS BEFORE EACH POUR.
4. THE CLEANOUTS SHALL BE SEALED BEFORE GROUTING. ALL CELLS SHALL BE FILLED WITH GROUT.
5. AN APPROVED ADMIXTURE THAT REDUCES EARLY WATER LOSS AND PRODUCES AN EXPANSIVE ACTION SHALL BE USED IN THE GROUT.
6. HIGH LIFT GROUTING SHOULD COMPLY WITH DSA IR 21-2.10 AND 2010 CBC SECTION 2104A.5.1.2.3

LEGEND

MATERIALS

Earth
Concrete- Poured in Place
Metal Stud
Steel
Gravel
Grout or Drypack
Masonry
Concrete
Welded Wire Fabric
Footing Step
Drain / Overflow
Elevation
Difference in Elevation -1 1/2

Moment Connection
Strut Brace
Hole In Beam
Full Height Connection Plate
Drag Beam
Bent Beam
Splice in Beam
Number of Shear Studs on Beam (8)
Slab Depression -6"
Top of Steel Framing Elevation above 1st Floor Elevation 0'-0" (Maintain constant slope) 16'-0"
Detail
Section
Elevation
Bld'g. Section
Wall Section

ABBREVIATIONS

⌀	Diameter	Horiz.	Horizontal
#	Number of pounds	Intr.	Interior
@	At	Jt.	Joint
CL	Center line	Lt. Wt.	Lightweight
-3"	Slab depression	M.B.	Machine Bolt
A.B.	Anchor Bolt	Max.	Maximum
Anch.	Anchor	Mechl.	Mechanical
B.O.F.	Bottom of Footing	Mfr.	Manufacturer
Beam	Beam	Min.	Minimum
Bm.	Beam	Mtl.	Metal
Bott.	Bottom	N.I.C.	Not in Contract
Btwn.	Between	N.T.S.	Not to Scale
C.L.	Center Line	No.	Number
C.J.	Control Joint	o.c.	On Center
C.J.P	Complete Joint Penetration	P.D.F.	Power Driven Fasteners
Clr.	Clear	P.H.	Penthouse
Col.	Column	Pl.	Plate
Conc.	Concrete	Plcs.	Places
Cont.	Continuous	P.J.P.	Partial Joint Penetration
Det.	Detail	Reinf.	Reinforcing
Dim.	Dimension	S.	Footing Step
Dwg.	Drawing	S.F.R.S.	Seismic Force Resisting System
Dwl.	Dowel	Sched.	Schedule
E.F.	Each Face	Sect.	Section
E.W.	Each Way	Sepn.	Separation
Ea.	Each	Sim.	Similar
EL	Elevation	Spec.	Specification
Electl.	Electrical	Sq.	Square
Elev.	Elevator or Elevation	Std.	Standard
E.O.S.	Edge of Slab	Stiff.	Stiffener
Exist.	Existing	Stl.	Steel
Exp.	Expansion	Suppt.	Support
Extr.	Exterior	Sym.	Symmetrical
F.O.C.	Face of Concrete	T.C.J.	Typical Construction Joint
F.O.S.	Face of Stud	T.O.	Top of
F.O.W.	Face of Wall	T.O.S.	Top of Steel
Fdn.	Foundation	T.O.W.	Top of Wall
Fin.	Finish	Thk.	Thick
Flr.	Floor	Typ.	Typical
Frmg.	Framing	V.O.J.	Verify on Job
Ftg.	Footing	V.O.S.	Verify on Site
Ga.	Gauge	Vert.	Vertical
Galv.	Galvanized	w/	With
Gr. Bm.	Grade Beam	Wt.	Weight
H.S.B.	High Strength Bolt	U.N.O.	Unless Noted Otherwise

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COMPTON CCD

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REGISTERED PROFESSIONAL ENGINEER — TERRY C. TSANG — No.S2992 — Exp. 06/30/2018 — STRUCTURAL — STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE:
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

NO	REASON	DATE
1	Addendum #1	04/20/2018

SEAL / SIGNATURE

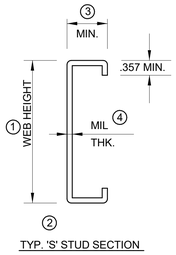
SHEET TITLE
GENERAL NOTES

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/17
SHEET NO.: AD-S0.2

MAXIMUM SPAN FOR CEILING JOIST INTERIOR STEEL STUDS, 'S' SECTIONS				
TYPE	MILS / SPACING	33	43	54
400S137	16"	7'-4"	9'-10"	
600S137	16"	11'-0"	13'-4"	16'-0"

MAXIMUM HEIGHT FOR NON-BEARING INTERIOR STEEL STUDS, 'S' SECTIONS				
TYPE	MILS / SPACING	33	43	54
362S137	16"	16'-9"	18'-2"	19'-6"
400S137	16"	18'-1"	19'-8"	21'-0"
600S137	16"	24'-11"	27'-2"	29'-1"



TYP. 'S' STUD SECTION

NOTES:

GENERAL:
1. METAL STUDS SHALL COMPLY W/ ICC ESR-3064P METAL STUD EFFECTIVE PROPERTIES ARE: Fy=50ksi 54 MIL SECTIONS. Fy=33ksi FOR 43 AND 33 MILS SECTIONS.
2. 362S137-33 SEE MANUFACTURERS CALL-OUT FOR (1) STUD DEPTH (2) STUD STYLE, (3) FLANGE WIDTH AND (4) STUD THICKNESS

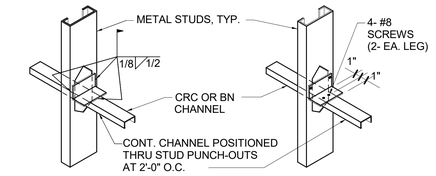
CEILING JOIST:
1. ALL DBL JOIST TO BE 54 MILS.
2. TOP OF ALL CEILING JOIST SHALL BE BRACED AT 48" O.C. MAX.
3. CEILING D.L. = 6 PSF L.L.= 10PSF
4. PROVIDE DOUBLE JOIST ON EA. SIDE OF CEILING ACCESS OPENING TYP.

PARTITIONS:
1. ALL TRACKS TO BE ONE MIL THICKER THAN STUDS OR JOIST FRAMING TO THEM UNLESS THICKER MILS REQUIRED AS NOTED BELOW OR NOTED OTHERWISE:
   A) PERIMETER WALLS = 33 MILS MIN.
2. ALL STUDS SUPPORTING DBL JOIST TO BE 54 MILS.
3. ALL PARTITIONS SUPPORTING ANY OF THE FOLLOWING ITEMS SHALL BE 43 MILS:
   A) HUNG CABINETS.
   B) FREE STANDING CABINETS AND EQUIPMENT TALLER THAN 36" SHALL BE ANCHORED TO WALL. SEE ARCH'L.

TRACK SECTION PROPERTIES					
SECTION	Sx (in^3)	Ix (in^4)	SECTION	Sx (in^3)	Ix (in^4)
362T150-33	0.264	0.499	600T150-33	0.517	1.590
362T150-43	0.343	0.650	600T150-43	0.673	2.072
362T150-54	0.431	0.823	600T150-54	0.843	2.611
400T150-33	0.300	0.622			
400T150-43	0.390	0.811			
400T150-54	0.489	1.025			

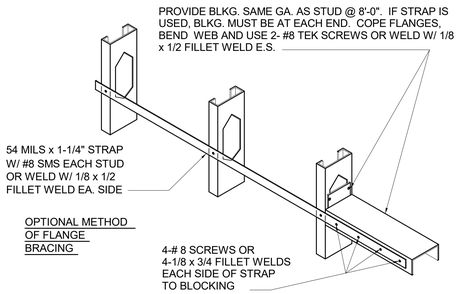
METAL STUD SECTION PROPERTIES					
SECTION	Sxx (in^3)	Ixx (in^4)	SECTION	Sxx (in^3)	Ixx (in^4)
362S137-33	0.264	0.479	600S137-33	0.527	1.582
362S137-43	0.340	0.616	600S137-43	0.681	2.042
362S137-54	0.417	0.756	600S137-54	0.839	2.518
400S137-33	0.301	0.603			
400S137-43	0.388	0.776			
400S137-54	0.477	0.953			

CLG. JOIST, PARTITION SCHED. AND METAL 'S' STUDS SECTION PROPERTIES — NONE — 9



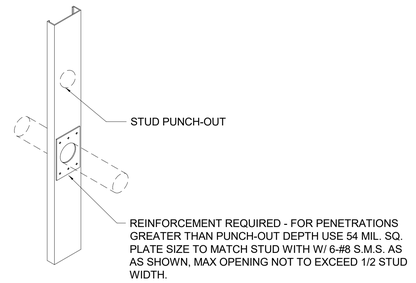
BRIDGING CHANNEL WELD-ATTACHED USING BRIDGE CLIP

BRIDGING CHANNEL SCREW-ATTACHED USING BRIDGE CLIP



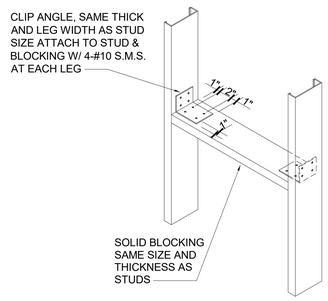
NOTE:
1. USE THIS BRACING AT MID HEIGHT FROM FLOOR TO FLOOR, AND SPACING SHALL NOT EXCEED 4'-0" O.C.
2. PROVIDE STRAP ON SIDE WITH NO FINISH MATERIAL ON WALL. IF NO FINISH ON EITHER SIDE, PROVIDE STRAP ON EACH SIDE.
3. BRACING NOT REQUIRED WHERE GYP. BOARD OCCURS ON BOTH SIDES OF PARTITION WALL.

STEEL STUD FLANGE BRACING DETAIL — NONE — 3



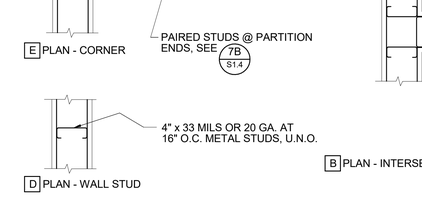
NOTES:
1. FLANGES SHALL NOT BE NOTCHED OR CUT.
2. PRIOR VERIFICATION BY STRUCTURAL IS REQ'D. FOR ANY OPENINGS LOCATED AT CONCENTRATED LOADS AND BEARING ENDS.
3. FOR UNPUNCHED MEMBERS OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO ANY FIELD PENETRATIONS.
4. OPENING LARGER THAN PUNCH-OUT SHALL NOT BE PERMITTED IN MID-THIRD OF THE STUD HEIGHT.

ALLOWABLE STUD WEB PENETRATIONS — NONE — 11

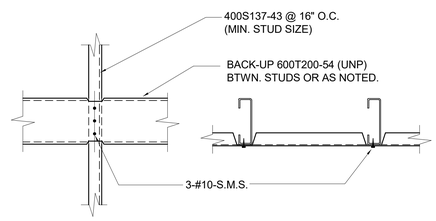


NOTES:
1. WHERE BLOCKING MATERIAL THICKNESS ALLOWS, NOTCH AND BEND TRACK 90° FOR CONNECTION.
2. WHERE PROVISIONS ARE PROVIDED FOR TRANSFER OF FLANGE FORCES TO SOLID BLOCKING, BLOCKING NEED NOT BE THE FULL DEPTH OF THE MEMBER.

SOLID BLOCKING AT STUDS — NONE — 8

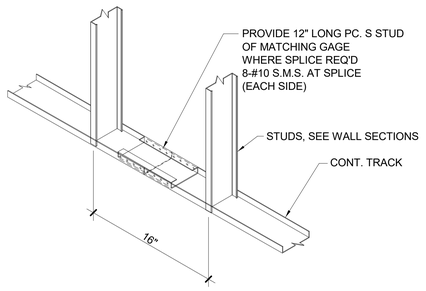


TYP DET. AT WALL INTERSECTIONS — NONE — 5



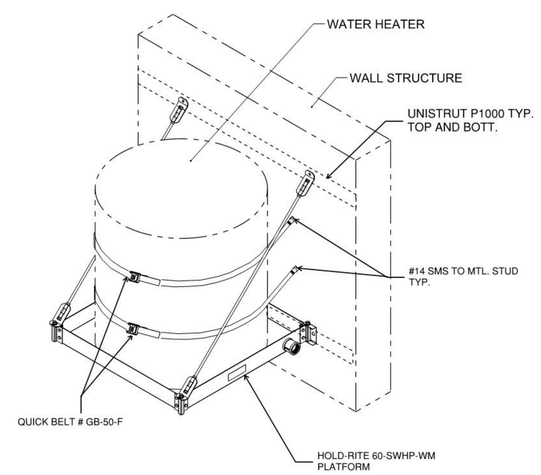
6x16 GA. BACK-UP W/ SCREWS

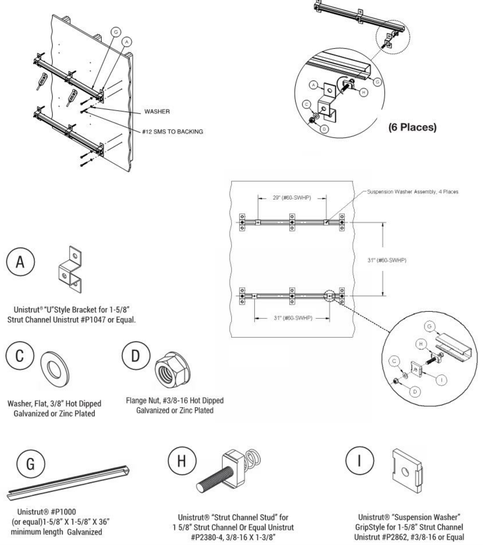
BACKING DETAIL — NONE — 2



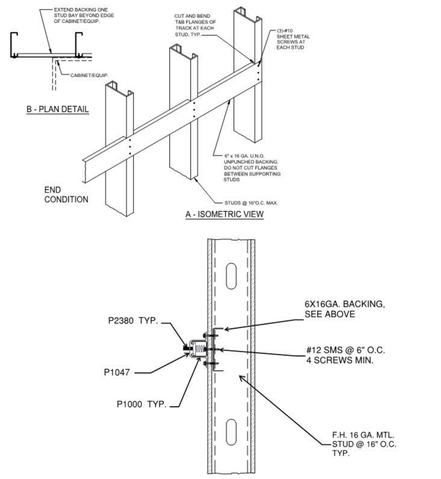
NOTE:
PROVIDE SLOTTED TRACK WITH SAME GAGE AT TOP TRACK WHERE SLIP TRACK SYSTEM OCCURS.

TOP AND BOTTOM TRACK SPLICE — NONE — 10





WATER HEATER MOUNTING DETAILS — NONE — 1



UNISTRUT TO BACKING CONN. SIDE VIEW

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REGISTERED PROFESSIONAL ENGINEER TERRY C. TSUMURA No.S2992 Exp. 06/30/2018 STRUCTURAL STATE OF CALIFORNIA

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PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

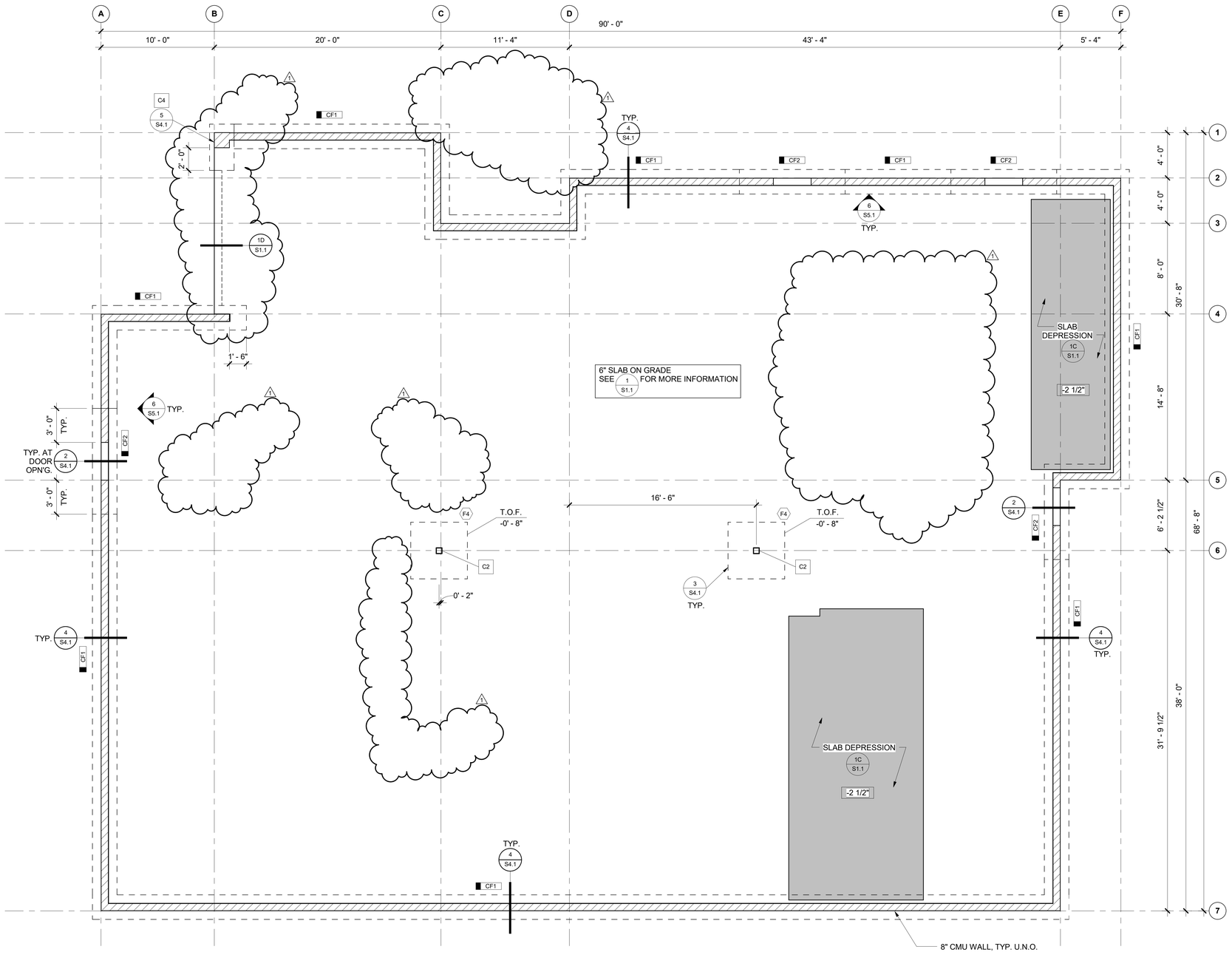
NO	REASON	DATE
1	Addendum #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
TYPICAL DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/17	AD-S1.3



COLUMN SCHEDULE				
MARK	COLUMN SIZE	BASE PL'T. THK.	WELD SIZE	SIZE AND NO. OF FDN. A.B. U.N.O.
C2	HSS6x6x1/4	5/8"	1/4"	(4) - 3/4"Ø x 12" A.B
		VERTICAL REINFORCING	TIE SIZE & SPACING	
C4	16"x16" CMU PILASTER (W/ 3000PSI CONC.)	(8) - #5	#4 TIES @ 6" O.C.	N/A

PAD FOOTING & CAISSON SCHEDULE		
MARK	SIZE	REINFORCEMENT
F4	5'-0"x5'-0"x1'-9"	5-#6 EA. WAY

CONTINOUS FOOTING SCHEDULE			
MARK	WIDTH	DEPTH	REINFORCEMENT
CF1	2'-2"	18"	2-#5 TOP AND 3-#5 BOTT. W/ #4 TIES @ 12" O.C.
CF2	2'-2"	3'-0"	3-#5 TOP AND 5-#5 BOTT.W/ #4 TIES @ 12" O.C. 1

FOUNDATION NOTES:

1. REFER TO SHEETS S0.1 & S0.2 FOR GENERAL NOTES.
2. REFER TO SHEETS S1.1 THRU S1.5 FOR TYPICAL DETAILS.
3. ALL DIMENSIONAL INFORMATION SHOWN IS BASED ON THE ARCHITECTURAL DRAWINGS. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN REFER TO THE ARCHITECTURAL DRAWINGS.
4. ALL SLAB OPENINGS, EDGES, PADS, CURBS, FLOOR SLOPES, DRAINS, TRENCHES, STEPS, EXTERIOR PAVING AND DEPRESSIONS SHALL BE LOCATED AND COORDINATED PER THE ARCHITECTURAL AND CIVIL DRAWINGS.
5. EQUIPMENT NOT SHOWN ENTIRELY FOR CLARITY, COORD., WITH ARCH'L., & MEP, DWG.
6. PROVIDE CORNER BARS AT ALL FOOTING OR GRADE BEAM INTERSECTIONS FOR ALL PERPENDICULARS LONGITUDINAL FOOTING REINFORCING.
7. CONTINUOUS FOOTING OR GRADE BEAM REINFORCING TO BE CONTINUED THROUGH ISOLATED PAD FTGS.
8. FOR TYPICAL FOOTING FORMING DETAIL, SEE 3/S1.1
9. FOR TYPICAL PIPE TRENCH DETAIL, SEE 10/S1.1
10. FOR TYPICAL STRUCTURAL SLAB AND GRADE BEAM CONSTRUCTION JOINT DETAILS, SEE 1/S1.1 & 2/S1.2
11. FOR TYPICAL REINFORCING AT FOOTING INTERSECTION SEE DETAIL 1/S1.2
12. SITE PREPARATION FOR FOOTING AND SLAB ON GRADE SEE 9/S4.1
13. CF2 EXTEND 3'-0" BEYOND EDGE OF OPENING BOTH SIDES, TYP. SEE 10/S1.2 FOR MORE INFO.

LEGEND:

1. C1 - INDICATES COLUMN SIZE, SEE SCHEDULE
2. F1 - INDICATES PAD FOOTING SIZE, SEE SCHEDULE
3. CF1 - INDICATES CONTINUOUS FOOTING SIZE, SEE SCHEDULE
4. T.O.F. - INDICATES TOP OF FOOTING ELEVATION
5. - INDICATES 8" CMU WALL PER PLAN W/ #5 VERT. @ 16" O.C. AND #5 HORIZ. @ 16" O.C. (ONE LAYER)
6. -2 1/2" - INDICATES DEPRESSION IN SLAB.

FOUNDATION PLAN 1/4" 1

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COMPTON CCD

PROJECT NAME
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1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

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REGISTERED PROFESSIONAL ENGINEER TERRY C. TSANG No.S2992 Exp. 06/30/2018 STRUCTURAL STATE OF CALIFORNIA

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA S. CARTER
PROJECT MANAGER
SHOJI TAKESHIMA / DAVID PHAN
DRAWN BY
GERARDO CARRANZA

REVISIONS

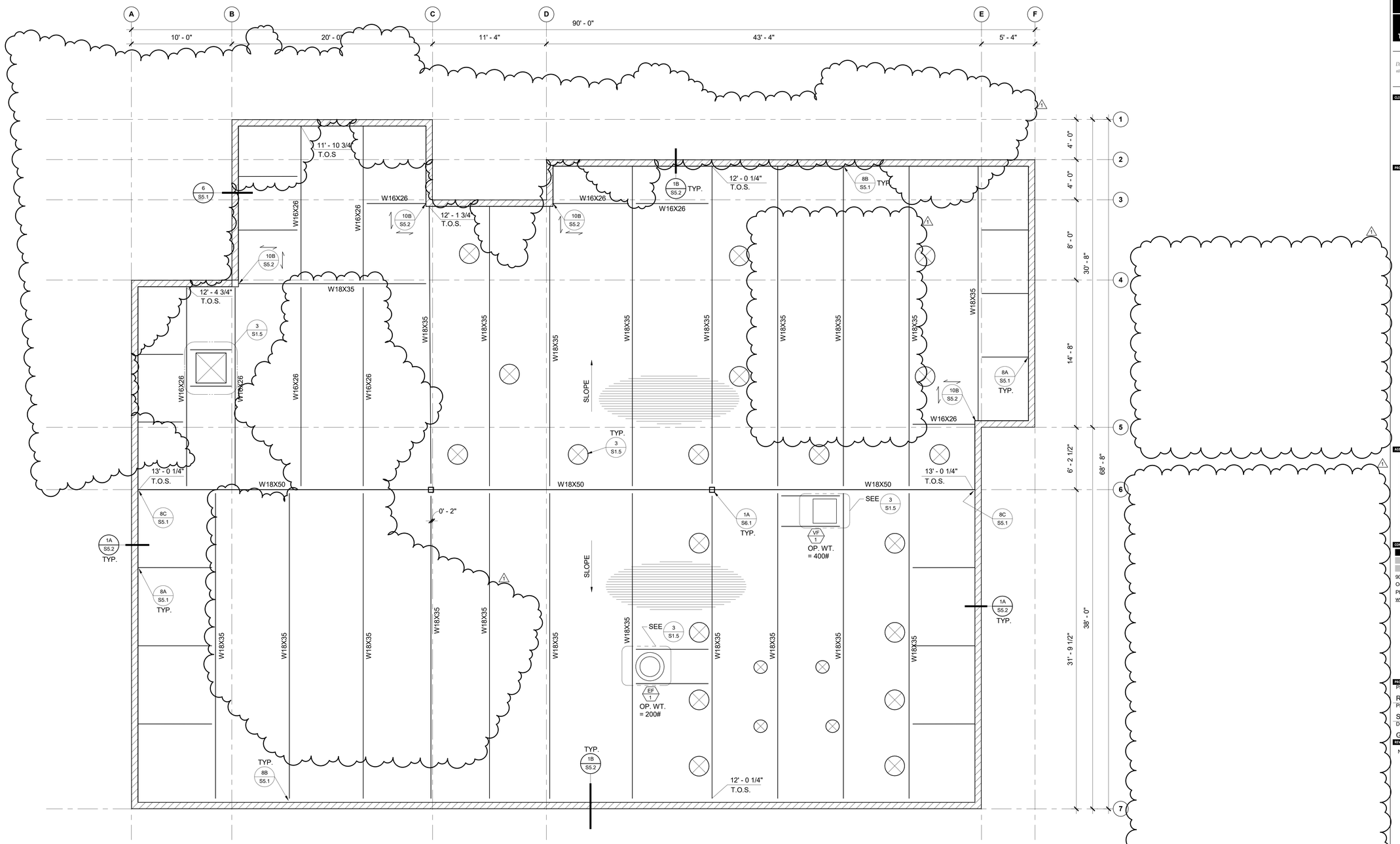
NO	REASON	DATE
1	Addendum #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
FOUNDATION PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/17
SHEET NO. AD-S2.1



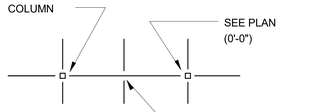
REFERENCE NOTES:

1. REFER TO SHEETS S0.1 & S0.2 FOR GENERAL NOTES.
2. REFER TO SHEETS S1.1 THRU S1.5 FOR TYPICAL DETAILS.
3. ALL DIMENSIONAL INFORMATION SHOWN IS BASED ON THE ARCHITECTURAL DRAWINGS. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN REFER TO THE ARCHITECTURAL DRAWINGS.
4. ALL SLAB OPENINGS, EDGES, PADS, CURBS, FLOOR SLOPES, DRAINS, TRENCHS, TEPS, EXTERIOR PAVING AND DEPRESSIONS SHALL BE LOCATED AND COORDINATED PER THE ARCHITECTURAL AND CIVIL DRAWINGS.
5. BEAM TO BE EQUALLY SPACED BETWEEN SUPPORTS U.N.O.
6. BEAMS SHOWN BUT NOT CALLED OUT SHALL BE W12x14.
7. TOP OF STEEL IS REFERENCE FROM FLOOR ELEVATION U.N.O.
8. WHEN PLACING CONCRETE FILL IN DECK, TOP OF SLAB SHALL BE SHOT TO TRANSIT LEVEL.
9. FOR COLUMN SIZES SEE FOUNDATION PLAN.
10. SEE 3/S1.5 FOR OPENINGS. ALSO, COORDINATE WITH M.E.P. & ARCH'L.

LEGEND:

1. INDICATES BRACE PER 5/S6.1
2. INDICATES 1 1/2"x18GA. VERCO-DECK SEE 1/S1.5
3. INDICATES CMU WALL BELOW SEE FOUNDATION PLAN FOR SIZE.
4. INDICATES CMU WALL SEE FOUNDATION PLAN FOR SIZE.
5. INDICATES DRAG DIRECTION

5. TOP OF STEEL OF SLOPING BEAMS ARE INDICATED THUSLY: SEE PLAN (0'-0") TOP OF STEEL INDICATED THUSLY SHALL BE FOR ALL BEAMS FRAMING INTO COLUMN



ROOF FRAMING PLAN

1/4" | 1

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SHEET TITLE

ROOF FRAMING PLAN

PROJECT NUMBER

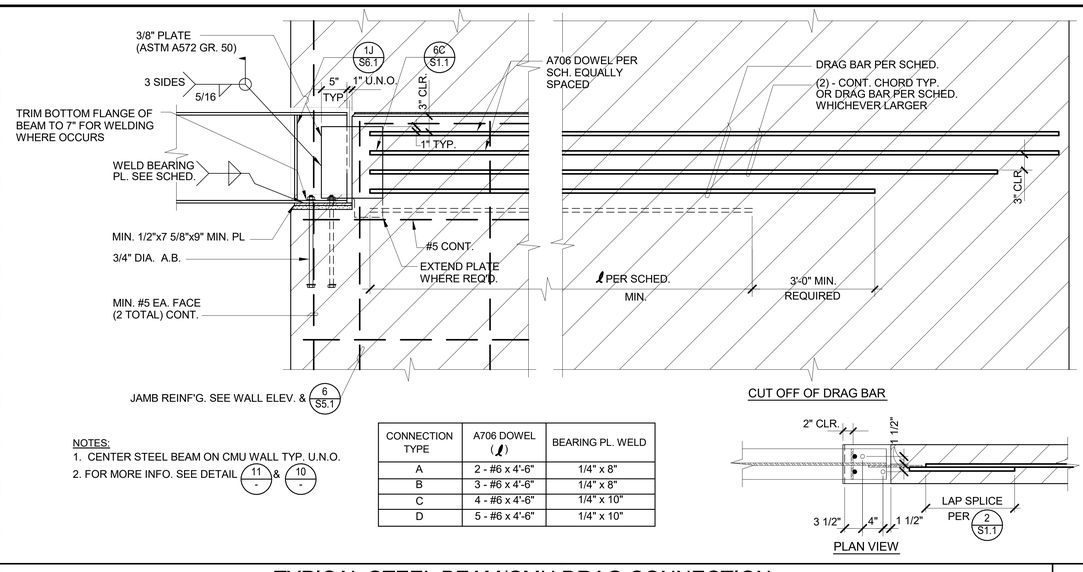
913-4675-01

ISSUE DATE: 11/21/17

SHEET NO.: AD-S2.2

NOT USED | - | 12

NOT USED | - | 9



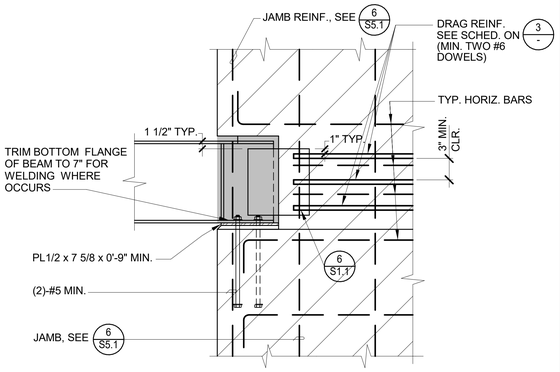
NOTES:
1. CENTER STEEL BEAM ON CMU WALL TYP. U.N.O.
2. FOR MORE INFO. SEE DETAIL 11 - & 10 -

CONNECTION TYPE	A706 DOWEL (ℓ)	BEARING PL. WELD
A	2 - #6 x 4'-6"	1/4" x 8"
B	3 - #6 x 4'-6"	1/4" x 8"
C	4 - #6 x 4'-6"	1/4" x 10"
D	5 - #6 x 4'-6"	1/4" x 10"

CUT OFF OF DRAG BAR

PLAN VIEW

TYPICAL STEEL BEAM/CMU DRAG CONNECTION | NONE | 3

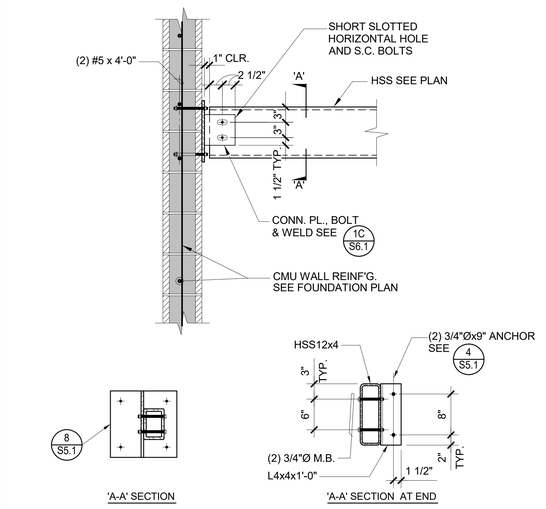


NOTES:
1. FOR INFORMATION NOT NOTED AND CONNECTION TYPE A,B,C, & D SEE 3 - & 10 -
2. ADD SHIM PLATE BETWEEN SHEAR PLATE AND BEAM WEB AS REQ'D. MAINTAIN SAME WELDING BETWEEN SHIM PLATE AND BEAM WEB AS SHOWN.

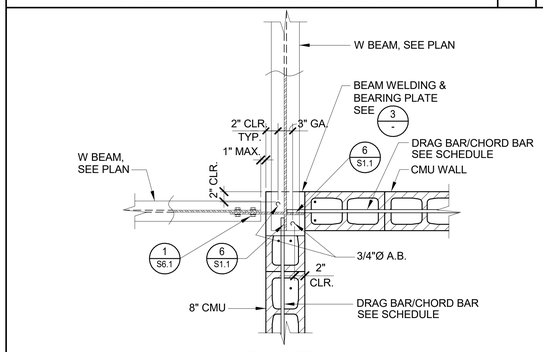
TYP. STEEL BEAM/CMU DRAG CONN. | NONE | 11

NOT USED | - | 8

NOT USED | - | 5



HSS TO CMU WALL CONNECTION | NONE | 2



PLAN VIEW

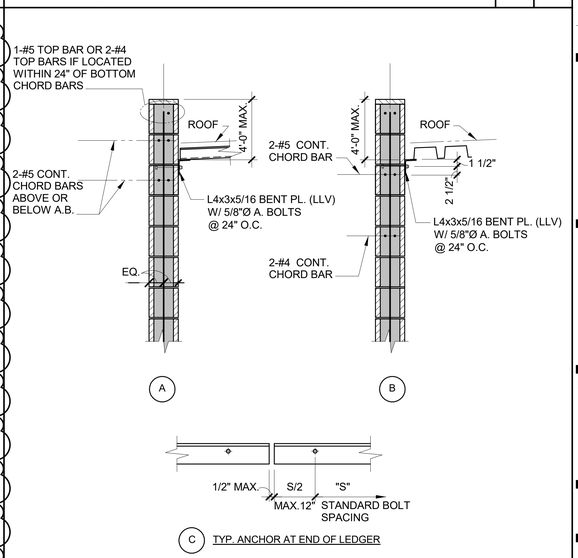
CONNECTION TYPE	A706 DOWEL (ℓ)	BEARING PL. WELD
A	2 - #6 x 4'-6"	1/4" x 8"
B	3 - #6 x 4'-6"	1/4" x 8"
C	4 - #6 x 4'-6"	1/4" x 10"
D	5 - #6 x 4'-6"	1/4" x 10"

NOTE:
1. FOR INFORMATION NOT NOTED SEE 3 - & 11 -
2. ADD SHIM PLATE BETWEEN SHEAR PLATE AND BEAM WEB AS REQUIRED. MAINTAIN SAME WELDING BETWEEN SHIM PLATE AND BEAM WEB AS SHOWN.

BEAM TO BEAM CONNECTION | NONE | 10

NOT USED | - | 7

NOT USED | - | 4



C TYP. ANCHOR AT END OF LEDGER

TYPICAL WALL SECTIONS | NONE | 1

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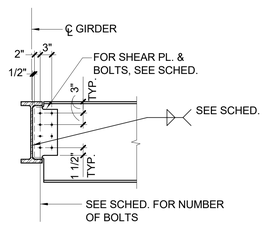
PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/17
SHEET NO. AD-S5.2

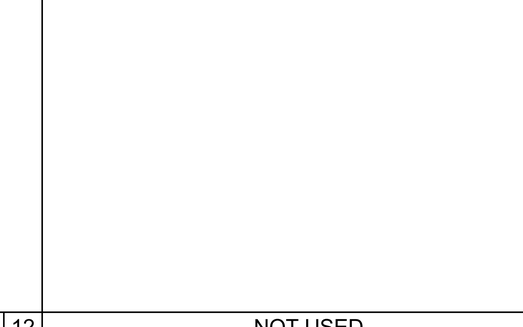
NOT USED	-	12	NOT USED	-	9	NOT USED	-	6	NOT USED	-	3
NOT USED	-	11	NOT USED	-	8	NOT USED	-	5	NOT USED	-	2

TYP. BEAM CONNECTION SCHEDULE**				
BEAM SIZE	CONNECTION PLATE THK.	CONNECTION* PLATE WELD	NO. OF BOLTS	BOLT SIZE (SC) BOLTS
C8, W6, W8, W10	3/8"	1/4"	2	1" DIA. H.S.B.
C OR MC12 W12, W14	3/8"	5/16"	3	1" DIA. H.S.B.
W 16	3/8"	5/16"	4	1" DIA. H.S.B.
W 18	1/2"	3/8"	5	1" DIA. H.S.B.
W 21	1/2"	3/8"	6	1" DIA. H.S.B.
W 24	1/2"	3/8"	7	1" DIA. H.S.B.

** NOTE:
1. WHERE CONNECTION PLATE IS NOT PERPENDICULAR TO BEAM OR COLUMN WEB OR FLANGES, USE COMPLETE PENETRATION BEVEL WELD. SEE 1G -
2. WHERE NUMBER OF BOLTS NOTED IN SCHEDULE CANNOT BE IN A SINGLE ROW, ADD SECOND ROW WITH TWO BOLTS MIN.
3. STIFF. PL. THK. WHERE NOT SPECIFIED SHALL BE SAME THK. AS CONN. PL. TYP. U.N.O.
4. ALL BOLTS ARE HSB, (A325 SC, LSL HOLE IN HORIZONTAL DIRECTION)
5. FOR ALL CONDITION "E", "K", & "L" SHOWN USE 2 ROWS OF BOLTS, IF REQUIRED SPACING NOT AVAILABLE AS SHOWN ON "C".

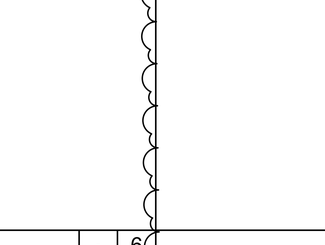


E - DEEP BEAM TO SHALLOW GIRDER



A - AT COLUMN

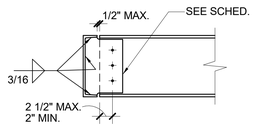
B - AT COLUMN



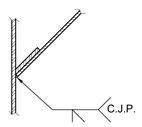
C - BEAM TO BEAM

NOTE:
ONE SIDED CONNECTION OCCURS WHERE OPPOSITE BEAMS ARE OFFSET BY 12" OR MORE.

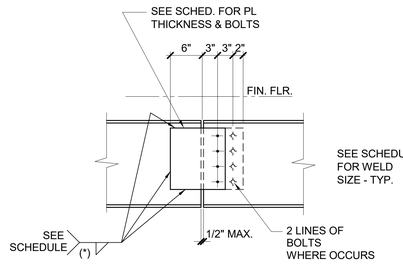
D - ONE SIDE BM. CONN.



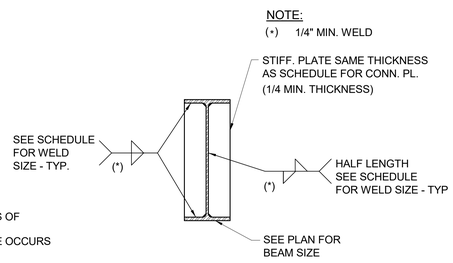
F - CHANNEL



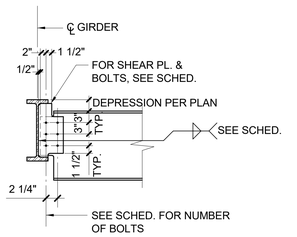
G - SKEWED BEAM



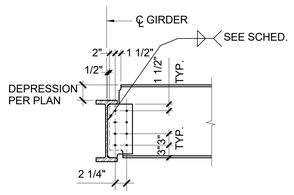
H - CONNECTION AT CANTILEVER



J - STIFFENER PLATE



K - DEPRESSED BEAM TO GIRDER



L - BEAM TO DEPRESSED GIRDER

TYPICAL BEAM TO BEAM CONNECTION DETAILS AND SCHEDULE

NONE | 1

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REVISIONS

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SHEET TITLE
STEEL DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/17

SHEET NO.
AD-S6.1

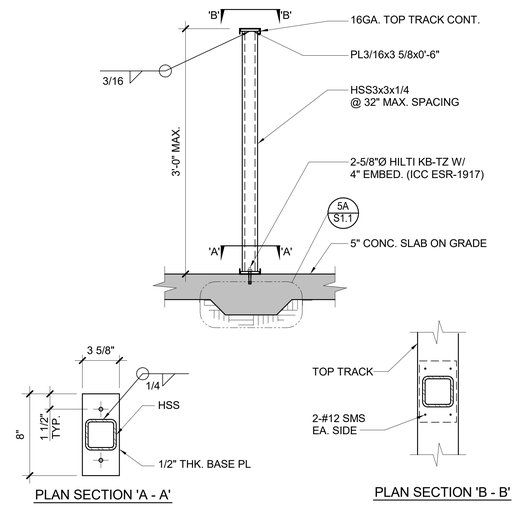
NOT USED - 9

NOT USED - 3

NOT USED - 11

NOT USED - 8

NOT USED - 2



PLAN SECTION 'A - A'

PLAN SECTION 'B - B'

NOT USED - 10

LOW WALL SUPPORT NONE 7

NOT USED - 4

NOT USED - 1

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11/21/17	AD-S6.2

VENTILATION FAN UNIT SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE	SUPPLY FAN						MINIMUM OSA (CFM)	HEATING COIL									FILTERS			ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
					AIRFLOW (CFM)	ESP (IN WG)	RPM	BHP	DRIVE	MOTOR HP		CAPACITY (MBH)	FACE VELOCITY (FPM)	AIR			WATER				TYPE	QTY	SIZE W x L x D (IN)	MCA	VOLTS	PHASE	HERTZ			
														ENT (°F)	LVG (°F)	PD (IN WG)	ENT (°F)	LVG (°F)	GPM	PD (FT WG)										
VF 1	COOK 100KSP–B	ROOF –	– –	ROOF MOUNTED	1,755	0.5	826	0.44	BELT	1/2	1,755	–	–	–	–	–	–	–	–	–	MERV 8	–	–	7.38	208	1	60	M5.0.1 5	400	PRE–FABRICATED ROOF CURB.
					1		1				1																			

EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE	CAPACITY (CFM)	SP (IN.)	RPM	BHP	DRIVE		ELECTRICAL CHARACTERISTICS				MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
									TYPE	VFD	HP	VOLTS	PHASE	HERTZ			
EF 1	COOK ACRU–B 150R4B	ROOF –	EXHAUST	UPBLAST ROOF MOUNTED	1,755	0.5	1068	0.30	BELT	Y	1/2	208	1	60	M5.0.1 5	200	BACK DRAFT DAMPER, PRE–FABRICATED ROOF CURB: COOK RCG–40, WEIGHT IS INCLUDED IN THE OPER. WEIGHT OF FAN, COOK LORENIZED COATING.
					1		1				1						

AIR COOLED VARIABLE REFRIGERANT FLOW CONDENSING UNIT

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE HEAT RECOVERY	BC CONTROLLER	COOLING			HEATING			COMPRESSOR					ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
						CAPACITY (MBH)	EFF.	AMBIENT TEMP (°F)	CAPACITY (MBH)	EFF.	AMBIENT TEMP (°F)	REFRIG–ERANT TYPE	QTY.	TYPE	RLA	LRA	MCA	MOCP	VOLTS	PHASE	HERTZ			
CU 1	LG ARUB192BTE4	– –	1ST FLOOR	HEAT RECOVERY FLOOR MTD	–	192.0	– EER	90	216.0	– COP	37	R410A	2	SCROLL	17.0 27.4	–	25.3 40.3	40 60	208	3	60	M5.0.1 4	1,200	1. INDIVIDUAL POWER CONNECTION FOR EA MCA &MOCP LISTED. 2. CONTRACTOR TO FIELD INSTALL TWINNING KIT

DIRECT EXPANSION FAN COIL UNIT SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	TYPE	SUPPLY FAN				MINIMUM OSA (CFM)	COOLING			HEATING	REFRIGERANT			FILTERS			ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
					AIRFLOW (CFM)	ESP (IN WG)	DRIVE	MOTOR OUTPUT (W)		CAPACITY		AIR	CAPACITY	TYPE	SUCTION LINE SIZE (IN)	LIQUID LINE SIZE (IN)	TYPE	QTY	SIZE W x L x D (IN)	MCA	MOCP	VOLTS	PHASE	HERTZ			
										TOTAL (MBH)	SENSIBLE (MBH)	PD (IN WG)	TOTAL (MBH)													
FC 1	LG ARNU183TQC4	– –	–	SUSPENDED CASSETTE	395	–	DIRECT	–	45	19.1	14.0	–	21.5	R410A	1/2	1/4	MERV 13	– –	– –	0.25	15	208	1	60	M5.0.1 3	100	PROVIDE VENTILATION KIT –
FC 2	LG ARNU093BGA4	– –	–	SUSPENDED DUCTED	450	0.48	DIRECT	–	30	9.6	7.0	–	11.3	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 3	LG ARNU093TRC4	– –	–	SUSPENDED CASSETTE	280	–	DIRECT	–	30	9.6	7.0	–	10.9	R410A	1/2	1/4	MERV 13	– –	– –	0.25	15	208	1	60	M5.0.1 3	100	PROVIDE VENTILATION KIT –
FC 4	LG ARNU073BGA4	– –	–	SUSPENDED DUCTED	260	0.48	DIRECT	–	45	6.9	5.3	–	8.8	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 5	LG ARNU243BGA4	– –	–	SUSPENDED DUCTED	900	0.58	DIRECT	–	240	21.3	17.7	–	28.2	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 6	LG ARNU483BRZ4	– –	–	SUSPENDED DUCTED	840	0.39	DIRECT	–	840	44.3	32.2	–	32.2	R410A	5/8	3/8	MERV 13	– –	– –	1.5	15	208	1	60	M5.0.1 1	200	– 1
FC 7	LG ARNU283BGA4	– –	–	SUSPENDED DUCTED	930	0.56	DIRECT	–	350	28.1	20.7	–	32.5	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 8	LG ARNU123BGA4	– –	–	SUSPENDED DUCTED	400	0.48	DIRECT	–	75	11.6	8.8	–	14.1	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 9	LG ARNU073BGA4	– –	–	SUSPENDED DUCTED	240	0.48	DIRECT	–	30	6.8	5.3	–	8.8	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 10	LG ARNU243BGA4	– –	–	SUSPENDED DUCTED	900	0.58	DIRECT	–	70	21.3	17.7	–	28.2	R410A	5/8	3/8	MERV 13	– –	– –	3.3	15	208	1	60	M5.0.1 1	150	– –
FC 11	LG ARNU123SBL4	– –	–	WALL MOUNT	370	–	DIRECT	–	0	12.3	8.8	–	–	R410A	1/2	1/4	MERV 13	– –	– –	0.2	15	208	1	60	M5.0.1 9	100	– –
FC 12	LG ARNU053SBL4	– –	–	WALL MOUNT	230	–	DIRECT	–	0	5.5	3.9	–	–	R410A	1/2	1/4	MERV 13	– –	– –	0.2	15	208	1	60	M5.0.1 9	100	– –

NOTE: PROVIDE CONDENSATE RETURN PUMP AS NECESSARY IF REQUIRED DURING SHOP DRAWING PREPARATION.

HEAT RECOVERY UNIT SCHEDULE

SYMBOL	MANUFACTURER AND MODEL NUMBER	LOCATION AND DRAWING REFERENCE	SERVICE	ELECTRICAL DATA					MOUNTING DETAIL	OPERATING WEIGHT (LB)	REMARKS
				MCA	MOCP	VOLTS	PHASE	HERTZ			
HRU 1 HRU 2 HRU 3	LG PRHR042A	– –	VRF SYSTEM	0.2	15	208	1	60	M5.0.1 1	80	– –

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PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER KEVIN S. CHEN M-31754 Exp. 12/31/19 MECHANICAL STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
MECHANICAL SCHEDULES

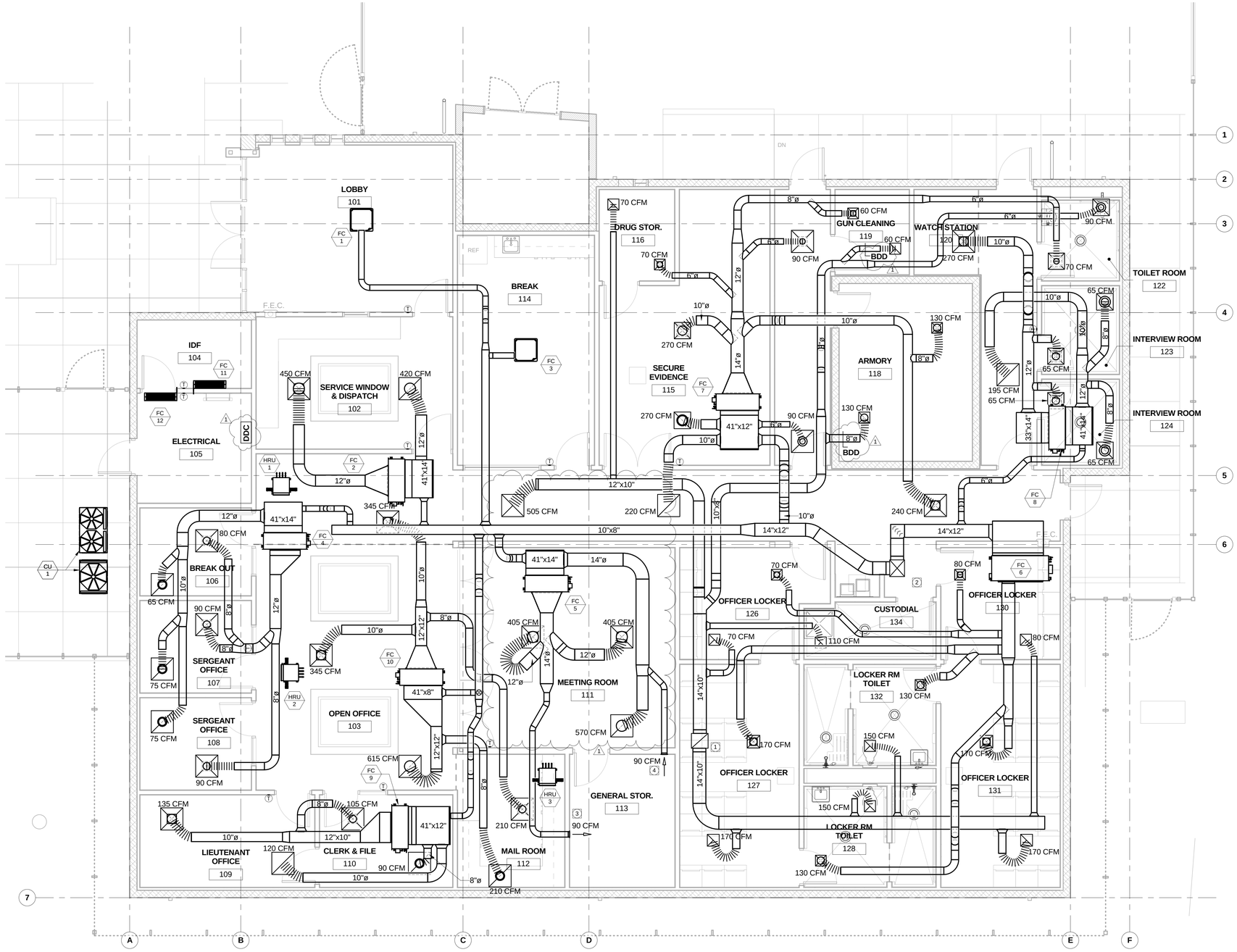
PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/2017

SHEET NO.
AD1-M0.0.2

REFERENCE NOTES

1. 18x16 EA DUCT UP THRU ROOF TO EF-1
2. 18x16 SA DUCT UP THRU ROOF TO VF-1
3. 6x6 SA GRILLE
4. 6x6 RA GRILLE



1 MECHANICAL FLOOR PLAN
1/4" = 1'-0"

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NO	REASON	DATE
1	Revision 1	Date 1

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/17
MECHANICAL
STATE OF CALIFORNIA

MECHANICAL-FLOOR PLAN

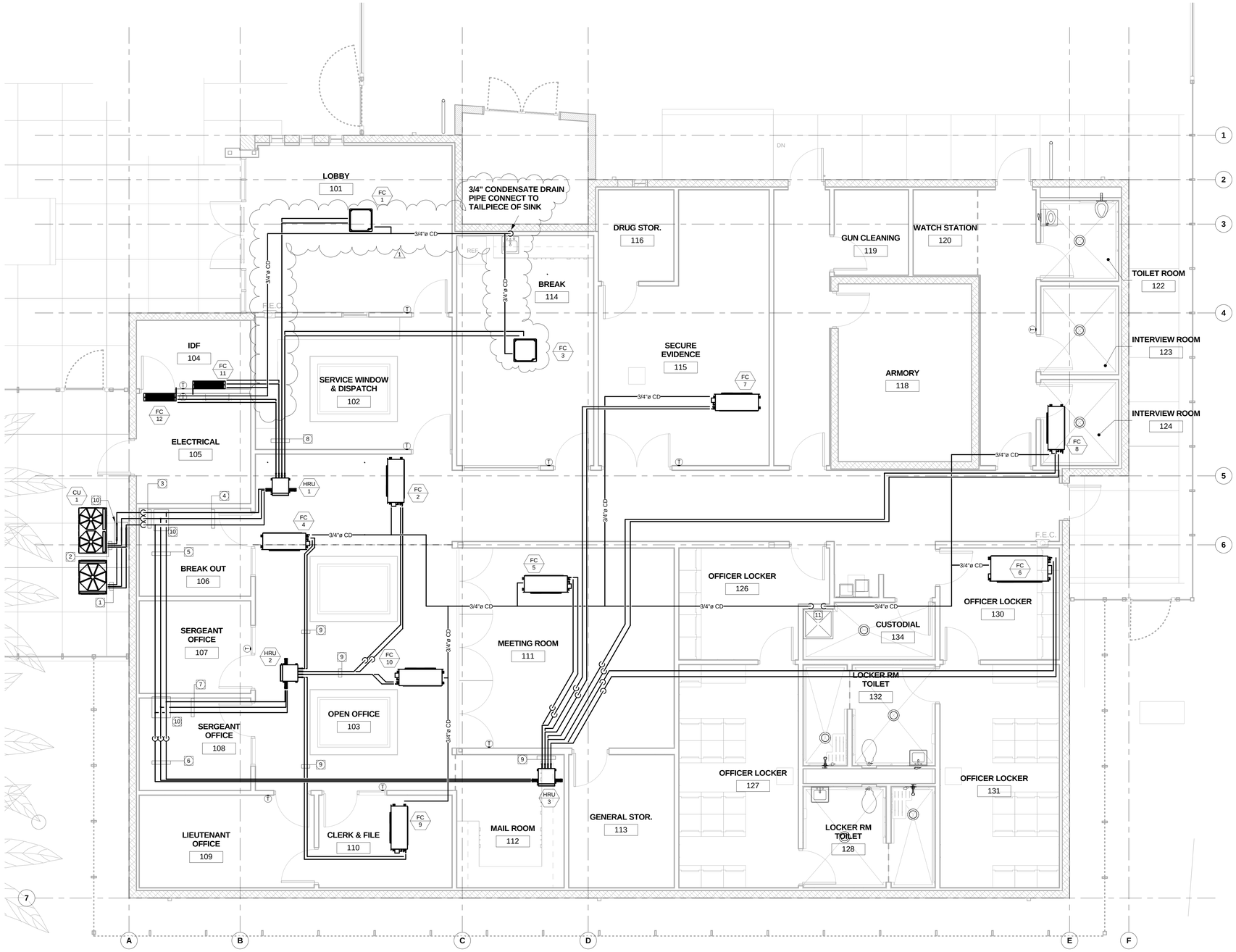
100% CD SET

913-4675-01

02/08/18 | AD1-M2.1.1

REFERENCE NOTES

1. 3/8" LIQUID , 5/8" HPV & 3/4" LPV REFRIGERANT PIPING
2. 1/2" LIQUID , 3/4" HPV & 1-1/8" LPV REFRIGERANT PIPING
3. 5/8" LIQUID , 7/8" HPV & 1-1/8" LPV REFRIGERANT PIPING
4. 3/8" LIQUID , 1/2" HPV & 5/8" LPV REFRIGERANT PIPING
5. 1/2" LIQUID , 7/8" HPV & 1-1/8" LPV REFRIGERANT PIPING
6. 3/8" LIQUID , 3/4" HPV & 7/8" LPV REFRIGERANT PIPING
7. 3/8" LIQUID , 1/2" HPV & 5/8" LPV REFRIGERANT PIPING
8. 1/4" LIQUID & 1/2" VAPOR REFRIGERANT PIPING
9. 3/8" LIQUID & 5/8" VAPOR REFRIGERANT PIPING
10. Y-BRANCH UNIT FROM MANUFACTURER
11. 3/4" CD DOWN TO CUSTODIAL SINK.



1 MECHANICAL PIPING FLOOR PLAN
1/4" = 1'-0"

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1	Revision 1	Date 1

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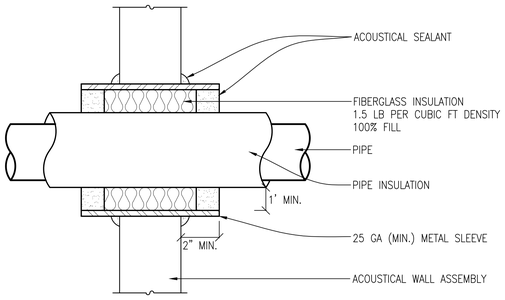
MECHANICAL-PIPING PLAN

100% CD SET

913-4675-01

02/08/18

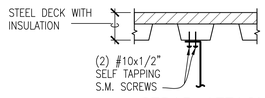
AD1-M2.2.1



NOTES:

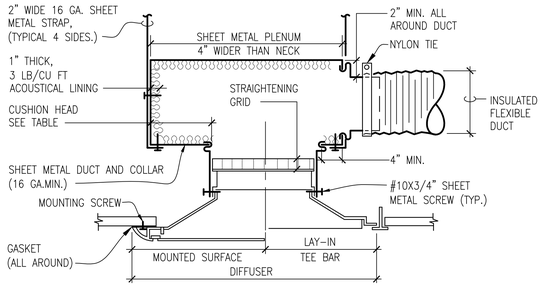
1. SPACE BETWEEN PIPE AND SLEEVE SHALL BE FREE OF ANY FOREIGN MATERIALS.
2. PIPE SHALL NOT CONTACT STRUCTURE AT ANY TIME. WEDGES SHALL NOT BE USED TO MAINTAIN PIPE IN POSITION.
3. PIPE MUST BE CENTERED IN OPENING.

PIPE PENETRATION THROUGH NON-RATED WALL — N.T.S. — 10



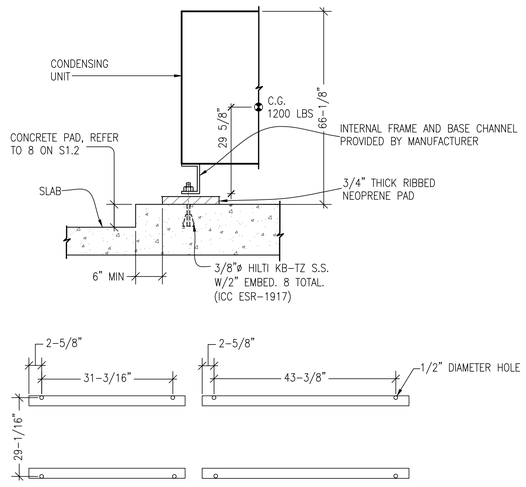
STRAP ATTACHMENT

NECK SIZE (INCHES)	CUSHION HEAD
6,8,10,12,14	8"
15,16,18	10"
20,21,22	12"
24 TO 38	16"



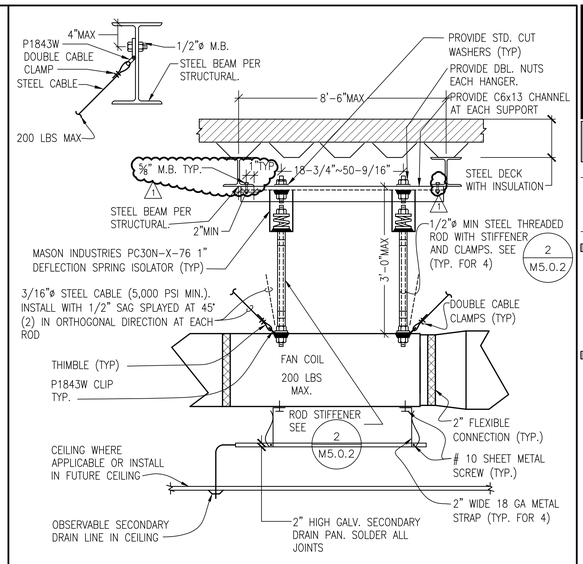
RESTRICED CLEARANCE CEILING

CEILING DIFFUSER AND GRILLE INSTALLATION — N.T.S. — 7

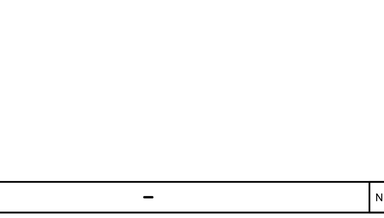


BOTTOM MOUNTING HOLES

CONDENSING UNIT INSTALLATION — N.T.S. — 4



FAN COIL UNIT INSTALLATION — N.T.S. — 1



UPPER ATTACHMENT

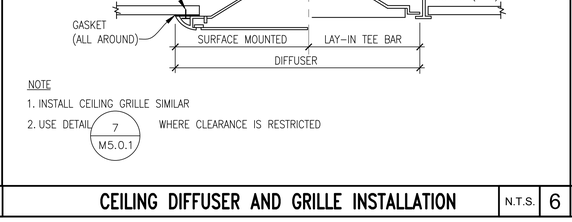
SIDE ELEVATION

NOTES:

1. SPACING OF DUCT HANGERS SHALL BE 8'-0" ON CENTER.
2. SEISMIC BRACING SHALL BE IN ACCORDANCE WITH SEISMIC RESTRAINT MANUAL CHOSEN TO MEET THE REQUIREMENTS OF SEISMIC BRACING NOTES ON M-001.
   2.1. VERTICAL HANGERS, DIAGONAL AND HORIZONTAL BRACES, BOLT SIZE AND CONNECTION TO STRUCTURAL SUPPORTING MEMBERS, AND SPACING OF BRACING SHALL BE IN ACCORDANCE WITH SEISMIC RESTRAINT MANUAL CHOSEN TO MEET THE REQUIREMENTS OF SEISMIC BRACING NOTES ON M-001 AND AS DETAILED IN THE SEISMIC RESTRAINT MANUAL.

STRAP HANGER — N.T.S. — 11

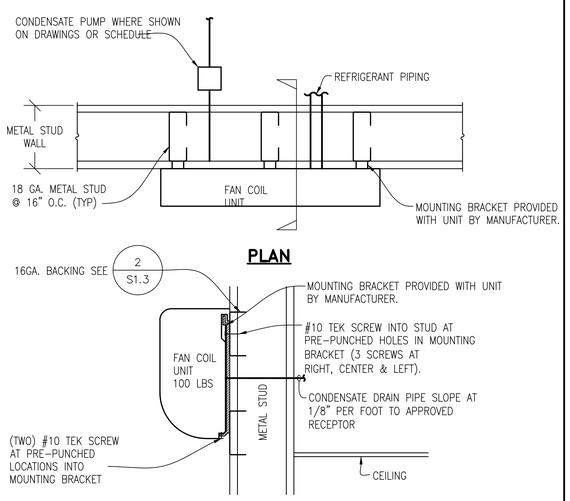
DUCT PENETRATION THROUGH NON-RATED WALL — N.T.S. — 8



ROOF CURB MOUNTED FAN INSTALLATION — N.T.S. — 5

SUSPENDED EQUIPMENT CONDENSATE DRAIN PIPING — N.T.S. — 2

— — N.T.S. — -



PLAN

SECTION

WALL MOUNTED FAN COIL INSTALLATION — N.T.S. — 9

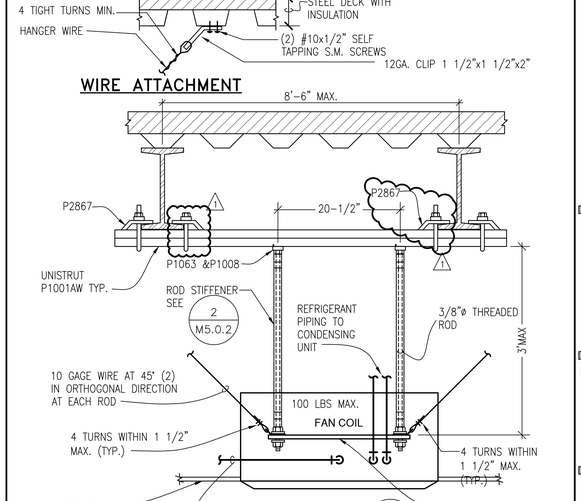
STRAP ATTACHMENT

WIRE ATTACHMENT

NOTE

1. INSTALL CEILING GRILLE SIMILAR
2. USE DETAIL 7 M5.0.1 WHERE CLEARANCE IS RESTRICTED

CEILING DIFFUSER AND GRILLE INSTALLATION — N.T.S. — 6



WIRE ATTACHMENT

CEILING CASSETTE TYPE FAN COIL INSTALLATION — N.T.S. — 3

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PROJECT TEAM
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PROJECT MANAGER
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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER — KEVIN S. CHEN — M-31154 — Ex. 12/31/18 — STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
MECHANICAL DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/2017
SHEET NO.: AD1-M5.0.1

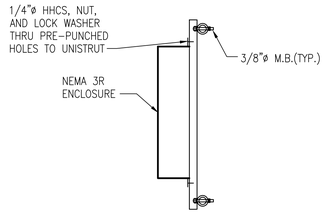
-

N.T.S. -

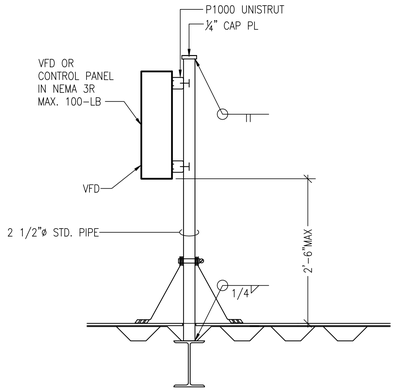
NOTES:
ALL STEEL SHALL BE HOT-DIPPED GALV. OR S.S

-

N.T.S. -



PLAN

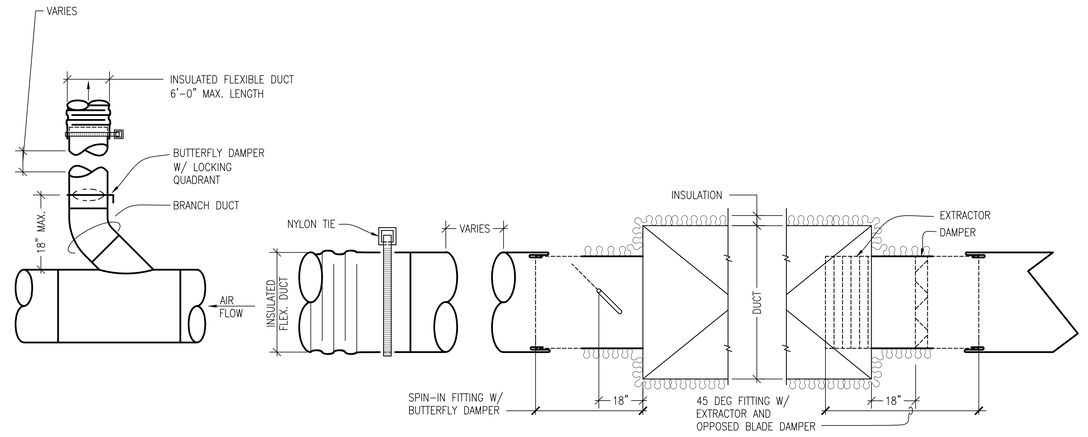


ROOF MOUNTED VFD OR CONTROL PANEL SUPPORT DETAIL

N.T.S. 5

-

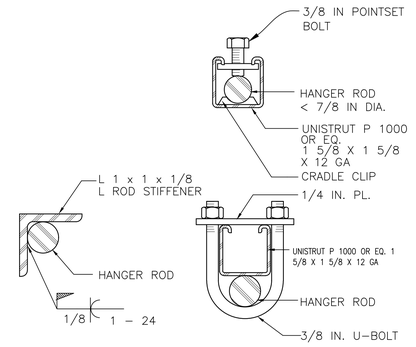
N.T.S. -



ROUND DUCT | RECTANGULAR DUCT | RECTANGULAR DUCT

DUCT TAKE-OFFS

N.T.S. 1



ROD STIFFENER | ALTERNATE ROD STIFFENERS

METHODS FOR TYING RODS AND ROD STIFFENERS.

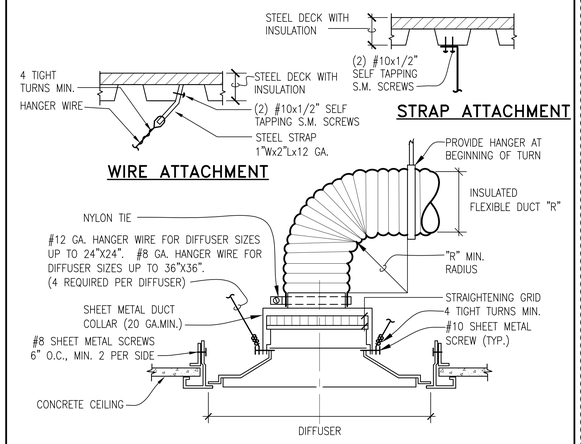
NOTES:
1. COORDINATE PIPE SUPPORT SYSTEM WITH STRUCTURAL.
2. SEE SEISMIC RESTRAINT MANUAL GUIDELINES AS INDICATED ON M0.1 SEISMIC BRACING NOTES FOR MECHANICAL SYSTEMS FOR OTHER HANGER ROD AND BRACING INFORMATION.

ROD STIFFENERS

N.T.S. 2

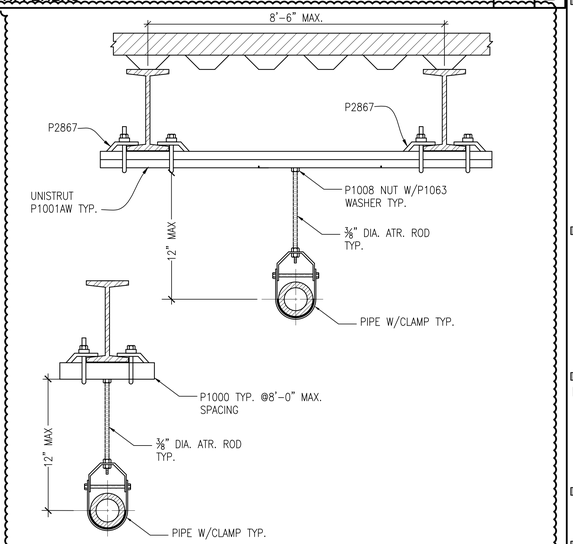
-

N.T.S. -



DIFFUSER WITH CONCRETE CEILING INSTALLATION

N.T.S. 4



HANGING PIPE SUPPORT

N.T.S. 3

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Exp. 12/31/18
CIVIL
STATE OF CALIFORNIA

SEAL / SIGNATURE

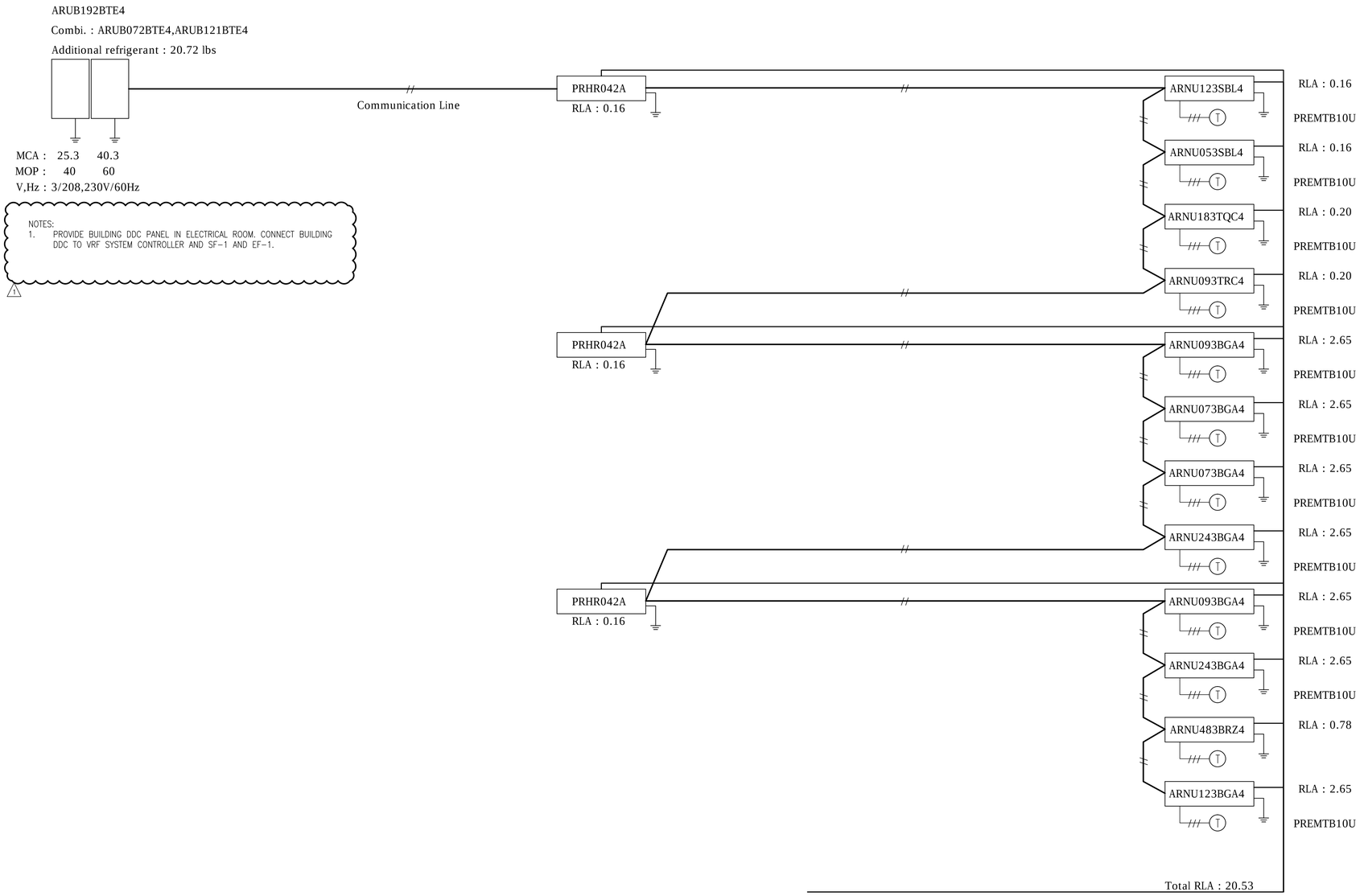
SHEET TITLE

MECHANICAL DETAILS

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-M5.0.2



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STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE

MECHANICAL CONTROLS

PROJECT NUMBER

913-4675-01

ISSUE DATE: 11/21/2017

SHEET NO.: AD1-M6.0.1

SEQUENCE OF OPERATION

1. GENERAL

A. HVAC SYSTEMS SHALL BE CONTROLLED WITH A DIRECT DIGITAL CONTROL (DDC) ACCORDING TO THE POINTS INDICATED ON THE CONTROL DIAGRAMS, AND SHALL BE STAND–ALONE. ADDITIONAL POINTS (WHETHER HARDWARE OR SOFTWARE POINTS) NOT INDICATED ON THE CONTROL DIAGRAMS BUT ARE REQUIRED TO MEET THE FOLLOWING SEQUENCES OF OPERATION SHALL BE PROVIDED. POINTS INDICATED ON CONTROL DIAGRAMS SHALL BE AVAILABLE FOR PROGRAMMING, TRENDING, AND REPORTING ON THE DDC SYSTEM AND ITS PC WORKSTATION.

B. SOFTWARE PROGRAMMING, TRENDING, REPORTS AND ALARMS SHALL BE PROVIDED TO MEET THE FOLLOWING SEQUENCES OF OPERATION.

C. CONTROL SETPOINTS, SCHEDULES AND LIMITS SHALL BE ADJUSTABLE.

D. ACTUATORS FOR VALVES, DAMPERS AND TERMINAL CONTROLLERS SHALL BE ELECTRIC/ELECTRONIC CONTROL.

E. PUMP AND FAN OPERATION (STATUS) SHALL BE MONITORED BY THE CORRESPONDING CURRENT SENSORS.

F. CONTROLLERS, RELAYS, TRANSDUCERS, ETC., REQUIRED FOR STAND–ALONE CONTROL SHALL BE HOUSED IN A NEMA 1 ENCLOSURE WITH A SCREW DRIVER LATCH ON DOOR BY CONTROL CONTRACTOR.

2. VARIABLE REFRIGERANT FLOW SYSTEMS

A. DESCRIPTION:

1) THE VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE CAPABLE OF PROVIDING SIMULTANEOUS HEATING AND COOLING IN DIFFERENT ZONES. EACH VRF SYSTEM SHALL CONSIST OF AN OUTDOOR CONDENSING UNIT (CU), BRANCH CIRCUIT (BC) CONTROLLER, MULTIPLE INDOOR FAN COIL UNITS (FCU), LOCAL THERMOSTATS, CENTRAL CONTROLLERS, AND SOFTWARE AS REQUIRED.
   a) CUs, BCs, FCUs, CENTRAL CONTROLLERS, AND VRF SYSTEM SOFTWARE SHALL BE PROVIDED BY VRF SYSTEM MANUFACTURER.
   b) THERMOSTATS SHALL BE MANUFACTURED BY THE VRF SYSTEM MANUFACTURER.
   c) THE VRF SYSTEM SHALL INTERFACE TO THE CAMPUS EMS THROUGH THE VRF SYSTEM CONTROLLER. CONTROLS CONTRACTOR AND VRF SYSTEM TECHNICIAN SHALL COORDINATE INTERFACES DURING PREPARATION OF SUBMITTALS.

2) THE VRF SYSTEM SHALL AUTOMATICALLY PERMIT FAN COILS IN DIFFERENT ZONES TO OPERATE IN EITHER HEATING OR COOLING MODE SIMULTANEOUSLY BY PROVIDING HEAT RECOVERY BETWEEN THOSE ZONES VIA THE BC CONTROLLER. EACH FAN COIL SHALL BE CAPABLE OF VARYING REFRIGERANT FLOW TO PROVIDE ADEQUATE HVAC ZONE CONTROL.

B. START / STOP CONTROL:

1) IN RESPONSE TO TIME OF DAY SCHEDULE DEFINED AND CONTROLLED BY THE CAMPUS EMS, FCUs SHALL TRANSITION BETWEEN UNOCCUPIED AND OCCUPIED SETTINGS.
   a) OCCUPIED MODE: FCUs SHALL OPERATE IN FAN, HEATING, COOLING, OR AUTO MODES BASED ON COMMAND FROM CENTRAL CONTROLLER TO MAINTAIN PROGRAMMED OCCUPIED SETPOINTS.
   b) UNOCCUPIED MODE: FCUs SHALL OPERATE IN FAN HEATING, COOLING, OR AUTO MODES BASED ON COMMAND FROM CENTRAL CONTROLLER TO MAINTAIN PROGRAMMED UNOCCUPIED SETPOINTS.

2) IN RESPONSE TO DOOR / WINDOW SWITCH : FCUs SHALL NOT OPERATE.

3) IN RESPONSE TO OCCUPANCY SENSORS: FCUs SHALL OPERATE IN UNOCCUPIED MODE BASED ON COMMAND FROM CENTRAL CONTOLLER TO MAINTAIN PROGRAMMED UNOCCUPIED SETPOINTS.

C. ZONE TEMPERATURE CONTROL:

1) SETPOINTS:
   a) OCCUPIED: 74°F COOLING AND 70°F HEATING
   b) UNOCCUPIED: 85°F COOLING AND 55°F HEATING

2) COOLING MODE: THE BC CONTROLLER VALVES ARE POSITIONED TO DIVERT COLD LIQUID REFRIGERANT TO FCUs. THIS FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE COOLING LOAD DEMAND. IF TEMPERATURE IN THE SPACE RISES ABOVE THE COOLING SETPOINT, THE FCU SHALL OPERATE IN COOLING MODE. IF TEMPERATURE IN THE SPACE IS BELOW COOLING SETPOINT THE FCU LINEAR EXPANSION VALVE SHALL CLOSE AND RESTRICT REFRIGERANT FLOW AND THE SUPPLY FAN SHALL CONTINUE TO RUN.

3) HEATING MODE: THE BC CONTROLLER VALVES ARE POSITIONED TO DIVERT HOT REFRIGERANT GAS TO FCUs. THIS FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE HEATING LOAD DEMAND. IF TEMPERATURE IN THE SPACE FALLS BELOW THE HEATING SETPOINT, THE FCU SHALL OPERATE IN HEATING MODE. IF THE TEMPERATURE IN THE SPACE IS ABOVE THE HEATING SETPOINT, THE FCU LINEAR EXPANSION VALVE WILL CLOSE AND RESTRICT REFRIGERANT FLOW AND THE SUPPLY FAN SHALL CONTINUE TO RUN.

4) AUTOMATIC CHANGEOVER (AUTO) MODE: IN AUTO MODE, THE INDOOR UNIT SHALL AUTOMATICALLY SWITCH BETWEEN AUTO–HEATING AND AUTO–COOLING TO MAINTAIN SPACE TEMPERATURE SETPOINT. THE SWITCH BETWEEN AUTO–HEATING AND AUTO–COOLING SHALL OCCUR WHEN THE SPACE TEMPERATURE RISES OR FALLS 3°F RELATIVE TO SPACE TEMPERATURE SETPOINT. THE BC CONTROLLER VALVES SHALL BE POSITIONED TO DIVERT HOT OR COLD REFRIGERANT TO FCUs BASED ON THE MODE OF THE INDOOR UNIT. THE REFRIGERANT FLOW RATE SHALL BE AUTOMATICALLY CONTROLLED BY MODULATING THE FCU LINEAR EXPANSION VALVE TO MATCH THE HEATING OR COOLING LOAD DEMAND.
   a) AUTO–COOLING: WHEN FCU IS IN AUTO–COOLING IT SHALL FUNCTION AS DESCRIBED IN COOLING MODE ABOVE.
   b) AUTO–HEATING: WHEN FCU IS IN AUTO–HEATING IT SALL FUNCTION AS DESCRIBED IN HEATING MODE ABOVE.

D. VENTILATION: DURING OCCUPIED HOURS, THE OSA DAMPER SHALL BE SET TO PROVIDE MINIMUM VENTILATION AS SCHEDULED ON THE DIRECT EXPANSION FAN COIL UNIT SCHEDULE ON M0.0.2.

1) VF–1 SHALL BE PROVEN ON BEFORE START OF FC–1 THROUGH FC–12 . IF VF–1 IS NOT ON WHEN ANY ONE OF THESE FCUs IS COMMANDED TO START THEN VF–1 SHALL START.

E. CONTROLS:

1) FCU OPERATION SHALL BE CONTROLLED THROUGH CENTRAL CONTROLLERS AND REMOTELY FROM THE CAMPUS EMS VIA BACNET COMMUNICATION PROTOCOL. OPERATIONAL MODE, TEMPERATURE SETPOINT, FAN SPEED, START/STOP CONTROLL, AND SCHEDULE SHALL BE CONTROLLED IN THIS MANNER.

2) CAMPUS EMS OPERATION AND MONITORING POINTS INCLUDE, BUT ARE NOT LIMITED TO: START/STOP, OPERATION MODE, FAN SPEED, PROHIBIT LOCAL ALARM STATE, ERROR CODE, AND ERROR ADDRESS.

3) TEMPERATURE SETPOINT LIMIT RANGE FOR EACH ZONE SHALL BE DEFINED AND CONTROLLED BY THE CAMPUS EMS.

F. VRF SYSTEM CONTROL NETWORK:

1) THE VRF SYSTEM CONTROL NETWORK (VSCN) SHALL CONSIST OF LOCAL REMOTE AND CENTRAL CONTROLLERS AND/OR INTEGRATED WEB BASED INTERFACE COMMUNICATING OVER A HIGH SPEED COMMUNICATION BUS. THE VSCN SHALL SUPPORT OPERATION MONITORING, SCHEDULING, ERROR AND ALARM REPORTING, ONLINE MAINTENANCE SUPPORT AND INTEGRATION WITH THE CAMPUS EMS USING BACNET INTERFACE.

2) LOCAL REMOTE CONTROLLER (LRC):
   a) THE LRC SHALL BE CAPABLE OF CONTROLLING UP TO 16 FCUs (DEFINED AS A GROUP). THE LRC SHALL HAVE LIMITED USER FUNCTIONALITY THAT ALLOWS THE USER TO CHANGE START/STOP, MODE, SETPOINT, AND FAN SPEED. THE LRC SHALL DISPLAY TEMPERATURE IN FAHRENHEIT OR CELSIUS. THE LRC SHALL DISPLAY ERROR CODE IN THE EVENT OF SYSTEM ABNORMALITY OR ERROR.
   b) THE LRC SHALL ONLY BE USED IN THE SAME GROUP OR WITH OTHER LRCS WITH UP TO 2 LRCs PER GROUP.
   c) THE LRC SHALL REQUIRE NO ADDRESSING AND CONNECT WITH 2–WIRE, STRANDED, NON–POLAR WIRE TO ITS FCU. THE LRC SHALL REQUIRE CROSSOVER WIRING FOR GROUPING TO OTHER FCUs.

3) CENTRAL CONTROLLER:
   a) THE CENTRAL CONTROLLER SHALL BE CAPABLE OF CONTROLLING A MAXIMUM OF 50 FCUs ACROSS MULTIPLE CUs. THE CENTRAL CONTROLLER SHALL BE POWERED BY A POWER SUPPLY UNIT PROVIDED BY THE VRF SYSTEM MANUFACTURER. THE CENTRAL CONTROLLER SHALL SUPPORT SYSTEM CONFIGURATION, SCHEDULING, STATUS MONITORING, SETBACK SETTING, INTERLOCK CONFIGURATION, AND ALARM REPORTING.
   b) THE CENTRAL CONTROLLER SHALL HAVE 5 BASIC OPERATING CONTROLS WHICH CAN BE APPLIED TO A FCU, GROUP OF FCUs, OR ALL FCUs. THE BASIC OPERATING CONTROLS SHALL INCLUDE START/STOP, MODE, TEMPERATURE SETPOINT, FAN SPEED, AIRFLOW DIRECTION SETTING, AND SCHEDULING. THE BASIC OPERATIONS SHALL BE AS DETERMINED BY THE CAMPUS EMS AND SENT TO CENTRAL CONTROLLER FOR DEPLOYMENT OF OPERATIONS.
   c) THE CENTRAL CONTROLLER SHALL BE CAPABLE OF ENABLING OR DISABLING OPERATION OF LRCs.
   d) THE CENTRAL CONTROLLER SHALL BE EQUIPPED WITH 1 RJ–45 ETHERNET PORT.

4) BACNET INTEGRATION:
   a) THE VSCN SHALL INTERFACE WITH THE CAMPUS EMS. THE VSCN INTERFACE SHALL BE COMPLIANT WITH BACNET PROTOCOL AND CERTIFIED BY THE BACNET TESTING LABORATORIES. THE BACNET INTERFACE SHALL SUPPORT BACNET BROADCAST MANAGEMENT.

4. EXHAUST FANS

A. RUN CONDITIONS – INTERLOCKED:
1) EF–1 SHALL BE INTERLOCKED TO RUN WHENEVER VF–1, VF–3, AND VF–5 RUN UNLESS SHUTDOWN ON SAFETIES.
2) EF–2 SHALL BE INTERLOCKED TO RUN WHENEVER VF–2 AND VF–4 RUN UNLESS SHUTDOWN ON SAFETIES.

B. FAN: THE FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

C. EXHAUST AIR DAMPER: THE EXHAUST AIR DAMPER SHALL OPEN ANYTIME THE UNIT RUNS AND SHALL CLOSE ANYTIME THE UNIT STOPS. THE EXHAUST AIR DAMPER SHALL CLOSE 30 SEC (ADJ.) AFTER THE FAN STOPS.

C. DAMPER STATUS: THE FAN SHALL BE ENABLED AFTER THE DAMPER STATUS HAS PROVEN.

D. FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

E. ALARMS SHALL BE PROVIDED AS FOLLOWS:
1) DAMPER FAILURE: COMMANDED OPEN, BUT THE STATUS IS CLOSED.
2) DAMPER IN HAND: COMMANDED CLOSED, BUT THE STATUS IS OPEN.
3) FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
4) FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
5) FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

5. FAN COIL UNIT (100% OSA)

A. RUN CONDITIONS – SCHEDULED: THE UNIT SHALL RUN ACCORDING TO A USER DEFINABLE TIME SCHEDULE TO MATCH BUILDING OPERATION SCHEDULE.

B. FAN: THE FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES.

C. TEMPERATURE CONTROL: THE UNIT SHALL MAINTAIN DISCHARGE TEMPERATURE SETPOINT OF 70°F.

D. HEATING COIL VALVE:

1) THE CONTROLLER SHALL MEASURE THE DISCHARGE TEMPERATURE AND MODULATE THE HEATING COIL VALVE TO MAINTAIN SETPOINT.

2) HEATING SHALL BE ENABLED WHENEVER:
   a) AND THE DISCHARGE TEMPERATURE IS BELOW SETPOINT.
   b) AND OUTSIDE AIR TEMPERATURE IS BELOW 60°F.
   c) AND THE FAN IS ON.

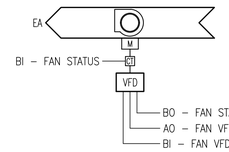
E. FILTER HOURS: THE CONTROLLER SHALL MONITOR THE FAN RUNTIME.

F. DISCHARGE AIR TEMPERATURE: THE CONTROLLER SHALL MONITOR THE DISCHARGE AIR TEMPERATURE.

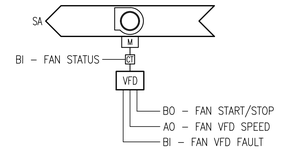
G. FAN STATUS: THE CONTROLLER SHALL MONITOR THE FAN STATUS.

H. AIRFLOW: THE CONTROLLER SHALL MONITOR THE AIRFLOW.

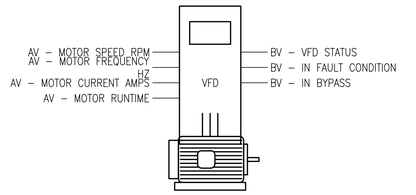
I. ALARMS SHALL BE PROVIDED AS FOLLOWS:
1) FILTER CHANGE REQUIRED: FILTER HAS BEEN IN USE FOR MORE THAN 2200 HRS (ADJ.).
2) HIGH DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
3) LOW DISCHARGE AIR TEMP: IF THE DISCHARGE AIR TEMPERATURE IS LESS THAN 40°F (ADJ.).
4) FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
5) FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
6) FAN RUNTIME EXCEEDED: FAN STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
7) HW VALVE POSITION FAILURE: VALVE FEEDBACK SIGNAL DOES NOT CORRESPOND TO VALVE POSITION.
8) LOW OUTSIDE AIRFLOW: AIRFLOW IS LESS THAN 15% OF SETPOINT.



EXHAUST FANS 6 / M–602
NOT TO SCALE



VENTILATION FANS 6 / M–602
NOT TO SCALE



VARIABLE FREQUENCY DRIVE INTERFACE 5 / M–602
NOT TO SCALE

CONTROL LEGEND (M–602 ONLY)

SYMBOL	ABBREV.	INDENTIFICATION
———		LOW VOLTAGE WIRING IS PROVIDED AND INSTALLED UNDER DIVISION 15 AND CONDUIT IS INSTALLED UNDER DIVISION 16.
		FAN
M		DAMPER – OPPOSED
		FILTER
HW		HOT WATER HEATING COIL
CHW		CHILLED WATER COOLING COIL
		PUMP
M		MOTOR
STARTER		MAGNETIC STARTER
VFD	VFD	VARIABLE FREQUENCY DRIVE
CT	CT	CURRENT SWITCH
DSW	DSW	DISCONNECT SWITCH
M		2–WAY CONTROL VALVE
M		3–WAY CONTROL VALVE
T		TEMPERATURE SENSOR WITH PIPE WELL INSERTION
T		TEMPERATURE SENSOR IN DUCT
H		HUMIDITY SENSOR IN DUCT
C		CARBON DIOXIDE SENSOR IN DUCT
T		TEMPERATURE SENSOR
H		HUMIDITY SENSOR
C		CARBON DIOXIDE SENSOR
H L		DIFFERENTIAL PRESSURE SENSOR IN DUCT
SD	SD	SMOKE DETECTOR IN DUCT
H L		DIFFERENTIAL PRESSURE SENSOR IN PIPING OR ACROSS FILTER
F		FLOW METER IN PIPING
FSW		FLOW SWITCH IN PIPING
		AIR FLOW SENSOR IN DUCT

AI	ANALOG INPUT
AO	ANALOG OUTPUT
BBD	BAROMETRIC BACKDRAFT DAMPER
BI	BINARY INPUT
BO	BINARY OUTPUT
CCP	CENTRAL CONTROL PANEL
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
EF	EXHAUST FAN
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
RF	RETURN FAN
SF	SUPPLY FAN

CONTROLS NOTES

1. CONTROL SYSTEM BASIS OF DESIGN: ALERTON BACNET CONTROLS. (1)
2. VERIFY ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PLANS PRIOR TO BID AND MATERIAL PURCHASE.
3. CONTROL DIAGRAM IS FUNCTIONAL, SINGLE LINE DIAGRAM. CONTROL CONTRACTOR SHALL SUBMIT DETAILED WIRING DIAGRAM FOR APPROVAL. PRIOR TO PURCHASE OR INSTALLATION.
4. CONTROL CONTRACTOR SHALL FURNISH AND INSTALL LOW VOLTAGE CONTROL WIRING AND CONDUIT FOR LOW VOLTAGE CONTROL WIRING. ALL LOW VOLTAGE WIRING SHALL BE IN CONDUIT.
5. CONTROL CONTRACTOR SHALL COORDINATE, REVIEW AND APPROVE CONTROL RELATED CONDUIT AND JUNCTION BOXES LOCATIONS FOR LINE VOLTAGE WIRING PROVIDED BY ELECTRICAL CONTRACTOR.
6. SEE FLOOR PLANS FOR EQUIPMENT QUANTITY AND LOCATION.
7. CONTROL PANELS AND UNITARY CONTROLLERS SHALL BE PROVIDED AND INSTALLED AND POWERED BY THE CONTROL CONTRACTOR.
8. ELECTRICAL CONTRACTOR SHALL POWER CONTROL PANELS AND UNITARY CONTROLLERS. POWER REQUIREMENTS SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR.

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CLIENT NAME
COMPTON CCD

PROJECT NAME
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AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC____ FLS____ SS____
DATE____

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PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M–31154
Exp. 12/31/18
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
MECHANICAL CONTROLS

PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/2017

SHEET NO.
AD1-M6.0.2

GENERAL NOTES

1. THE LOCATIONS SHOWN OF THE EXISTING UTILITIES ARE APPROXIMATE AND ARE TO IDENTIFY POINTS OF CONNECTIONS FOR NEW UTILITY SERVICES OR FOR COORDINATION OF CLEARANCES BETWEEN EXISTING AND NEW UTILITIES. INDICATION OF EXISTING UTILITIES SHALL NOT BE CONSIDERED AS AN EXACT LOCATION OR A COMPLETE SURVEY OF EXISTING UTILITIES.
2. EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES ARE FROM BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED AS APPROXIMATE AND INCOMPLETE. BEFORE ANY WORK IS STARTED, VERIFY AND COORDINATE ELEVATIONS AND SIZES OF EXISTING UTILITIES. DISCREPANCIES BETWEEN FIELD DATA AND DATA ON PLANS AND SPECIFICATIONS SHALL BE REPORTED TO THE ARCHITECT. DO NOT PROCEED WITH INSTALLATION IN AREAS OF DISCREPANCIES UNTIL DISCREPANCIES HAVE BEEN RESOLVED.
3. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED WORK. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. SUPERVISE AND DIRECT THE WORK FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
4. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
5. NO HOLES SHALL BE DRILLED OR CUT IN OR THROUGH ANY STRUCTURAL ELEMENT WITHOUT APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
6. SLEEVE AND GROUT ALL PIPE PENETRATIONS THROUGH FLOOR OR WALLS. USE CALIFORNIA FIRE MARSHALL APPROVED SEALANT FOR THE RATED FLOOR OR WALL PENETRATIONS.
7. PLUMBING EQUIPMENT, MATERIALS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2013 CALIFORNIA BUILDING CODE, CALIFORNIA MECHANICAL CODE, CALIFORNIA ENERGY CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA FIRE CODE. AND CALIFORNIA STATE ADMINISTRATIVE CODE TITLE 24.
8. FIELD OBSERVATION AND SUPPORT SERVICES PERFORMED BY THE ENGINEER PRIOR TO, DURING, OR AFTER CONSTRUCTION, ARE PERFORMED FOR THE PURPOSE OF ACHIEVING QUALITY CONTROL AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
9. MANUFACTURERS AND MODEL NUMBERS SHOWN ON FIXTURE AND EQUIPMENT SCHEDULES HAVE BEEN UTILIZED FOR DESIGN. REFER TO SPECIFICATIONS DIVISION 15 FOR ALTERNATE MANUFACTURER AND/OR EQUIVALENTS.
10. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED TEMPORARY AND PERMANENT PERMITS, INCLUDING LICENSES, CERTIFICATES, INSPECTIONS AND TESTS.
11. PIPES IN METAL STUD WALLS:
    A. METAL STUDS IN BEARING WALLS SHALL NOT BE BORED OR NOTCHED FOR THE COMBINING OF WATER, DRAIN, VENT OR OTHER SERVICE LINES.

    EXCEPTIONS:

    a. PRIOR APPROVAL IS OBTAINED FROM THE ARCHITECT OR STRUCTURAL ENGINEER.

    b. ANY SERVICE PIPE THAT IS 1" OR LESS IN DIAMETER.

    B. PIPE 1-1/4" AND LARGER IN DIAMETER SERVING ANY PLUMBING FIXTURE OR APPLIANCE SHALL RISE VERTICALLY ABOVE THE CEILING LINE AND OFFSET OUTSIDE OF WALL FRAMING BEFORE BEING COMBINED HORIZONTALLY. DRAIN LINES SHALL DROP VERTICALLY TO BELOW THE FLOOR SLAB BEFORE BEING COMBINED HORIZONTALLY. EXCEPTIONS TO THIS PROCEDURE ARE LINES RUNNING BETWEEN THE STUDS FORMING PIPE CHASES AND ISLAND VENTING.
12. THE LOCATION OF ALL PIPE RUNS, RISERS AND DROPS SHALL BE COORDINATED WITH THE FINAL LOCATION OF DUCT RUNS.
13. SEE SPECIFICATIONS, SECTION 22 05 00 FOR COMPLETE PIPE AND FITTINGS MATERIAL SPECIFICATION.
    A. SEWER, WASTE, VENT, STORM DRAIN AND OVERFLOW DRAIN PIPE AND FITTINGS SHALL BE CAST IRON NO-HUB DRAINAGE PATTERN. WATER PIPES, STORM DRAIN AND WASTE PIPES BENEATH SECOND FLOOR RESTROOMS IN CLASSROOM AREAS SHALL BE INSULATED WITH "KINETICS" PIPE LAGGING MATERIAL MODEL KNM-100ALQ.
    B. DOMESTIC WATER AND CONDENSATE DRAIN PIPING ABOVE GRADE SHALL BE TYPE "L" HARD DRAWN COPPER TUBING ASTM B88, WITH WROUGHT COPPER FITTINGS ASTM B18.22. DOMESTIC WATER PIPING AND CONDENSATE DRAIN PIPING BELOW GRADE SHALL BE TYPE "K" HARD DRAWN COPPER TUBING ASTM B.88, WITH WROUGHT COPPER FITTINGS ASTM B16.22 AND WRAPPED.
    C. GAS PIPING AND FITTINGS ABOVE GROUND SHALL BE BLACK STEEL SCHEDULE 40 ASTM A-53 WITH BLACK MALLEABLE FITTINGS. FOR GAS PIPING BELOW GROUND, USE SAME MATERIAL AS ABOVE GROUND PIPING EXCEPT POLYETHYLENE COATED OR WRAPPED.
14. STORM DRAINAGE SYSTEM IS SIZED BASED UPON 2" PER HOUR OF RAINFALL, AND UNLESS OTHERWISE NOTED, STORM AND OVERFLOW DRAIN PIPING IS SLOPED AT 1/4"/FOOT (2.00%).
15. UNLESS OTHERWISE NOTED, SOIL, WASTE AND VENT PIPING IS SLOPED AT 1/4"/FOOT (2.00%).
16. ALL GAS PIPING BELOW BUILDING FLOOR OR SLAB SHALL BE PROVIDED WITH PIPE SLEEVES PER 2013 CALIFORNIA BUILDING CODE, PARAGRAPH 1210.1.6. THE SLEEVE SHALL BE AN APPROVED TYPE, TWO PIPE SIZES LARGER AND VENTED AND SEALED AS REQUIRED.
17. VENT PIPING EXTENDING THRU ROOF SHALL TERMINATE AT NOT LESS THAN 8 INCHES ABOVE THE FINISHED ROOF.
18. HOT WATER PIPING INSULATION SHALL COMPLY WITH TITLE 24 AS A MINIMUM. FOR COMPLETE INFORMATION, SEE PLUMBING SPECIFICATIONS 22 05 00, SECTION 2.5 – INSULATION, PARAGRAPHS A & B.
19. PLUMBING FIXTURES OR FITTINGS INTENDED TO DISPENSE WATER FOR HUMAN CONSUMPTION WHICH CONTAIN MORE THAN 0.25% LEAD ARE NOT PERMITTED TO BE SOLD OR INSTALLED ANYWHERE WITHIN THE STATE OF CALIFORNIA. THESE DEVICES SHALL BE LISTED TO ANNEX G OF NSF/ANSI 61-2008 OR OTHER APPROVED TESTING STANDARD. EVIDENCE OF COMPLIANCE SHALL BE PRESENTED TO THE BUILDING INSPECTOR PRIOR TO FINAL INSPECTION (AB1963).
20. ALL REQUIRED CLEANOUTS SHALL BE INSTALLED PER SECTION 707.0 & 719.0 OF THE PLUMBING CODE.
21. ALL HOSE BIBBS SHALL BE EQUIPPED WITH AN APPROVED NON-REMOVABLE VACUUM BREAKER.
22. EACH PLUMBING VENT SHALL TERMINATE NOT LESS THAN TEN (10) FEET FROM OR AT LEAST THREE (3) FEET ABOVE ANY WINDOW, DOOR, OPENING, AIR INTAKE OR VENT SHAFT.
23. NEW OR REPAIRED POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE ACCORDING TO THE METHOD SET IN SECTIOHN 609.9 OF THE PLUMBING CODE.
24. LISTED MECHANICAL WATER HAMMER ARRESTERS SHALL BE INSTALLED FOR QUICK-ACTING VALVES. LOCATION AND METHOD OF INSTALLATION SHALL COMPLY WITH THE MANUFACTURER'S SPECIFICATIONS.
25. THE DRAIN PIPES FROM THE GREASE DUCTS SHALL BE PROVIDED AS PART OF THIS CONTRACT WHEN THE DRAINS ARE HARD PIPED. THE DRAIN LINES SHALL TERMINATE TO AN APPROVED INDIRECT WASTE RECEPTOR COMPLETE WITH MINIMUM 2" AIR GAP AS REQUIRED. PROVIDE PIPE SUPPORTS AND SLOPE THE DRAIN PIPE MINIMUM 2.00 %.
26. LOCATION OF WATER HAMMER ARRESTORS IS INDICATED ON THE FLOOR PLANS. FOR ADDITIONAL INFORMATION REFER TO PLUMBING SPECIFICATIONS.
27. NEW PLUMBING FIXTURES AND FITTINGS SHALL NOT EXCEED THE MAXIMUM ALLOWABLE FLOW RATE SPECIFIED IN THE PLUMBING CODE, LATEST EDITION, TABLES 6-5 AND 6-6.
28. PROVIDE REQUIRED CORROSIVE SOIL PROTECTION FOR UNDER SLAB UTILITIES/PIPING AS WELL AS ON SITE UTILITIES/PIPING PER RECOMMENDATION OF THE GEOTECHNICAL REPORT. COORDINATE METHOD OF UNDERGROUND PIPING PROTECTION BASED ON THE REPORT WITH CIVIL, ARCHITECTURAL AND OTHER TRADES.
29. THE CALIFORNIA STATE HEALTH AND SAFETY CODE, SECTION 116875, EFFECTIVE JANUARY 1, 2010 STATES IN PART AND REQUIRES THAT, NO PERSON SHALL USE ANY PIPE, PIPE OR PLUMBING FITTING OR FIXTURE, OR SOLDER OR FLUX THAT IS NOT LEAD FREE IN THE INSTALLATION OR REPAIR OF ANY PUBLIC WATER SYSTEM OR ANY PLUMBING IN A FACILITY PROVIDING FOR HUMAN CONSUMPTION EXCEPT WHEN NECESSARY FOR THE REPAIR OF LEADED JOINT OF CAST IRON PIPE. PLUMBING FIXTURES, FITTINGS AND PIPES THAT ARE INSTALLED WHERE THE WATER IS NOT INTENDED FOR HUMAN CONSUMPTION THROUGH DRINKING OR COOKING ARE NOT SUBJECT TO THE REQUIREMENTS OF THIS LAW (DSA BULLETIN #9-10)

SEISMIC BRACING NOTES

1. CONTRACTOR TO PROVIDE SEISMIC ANCHORAGE AND BRACING FOR MECHANICAL EQUIPMENT THAT IS DIRECTLY MOUNTED ON THE FLOOR OR ROOF AND MECHANICAL EQUIPMENT THAT IS SUSPENDED FROM THE FLOOR, WALL OR SUPPORTED BY VIBRATION ISOLATORS IN COMPLIANCE WITH THE 2013 CALIFORNIA BUILDING CODE AND VA H-18-8 (AUG. 2013).
2. ANCHORAGE AND SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED TO WITHSTAND THE LATERAL FORCES AS REQUIRED BY 2013 CALIFORNIA BUILDING CODE AND VA H-18-8 (AUG. 2013).
3. PROVIDE ANCHORAGE CALCULATIONS AND DETAILS CERTIFIED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
4. SEISMIC BRACING AND ANCHORAGE OF PIPING, DUCTWORK, AND SUSPENDED EQUIPMENT SHALL BE PROVIDED USING A SEISMIC RESTRAINT MANUAL: MASON INDUSTRIES "SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, DUCTWORK, AND ELECTRICAL SYSTEMS", I.S.A.T. "ENGINEERED SEISMIC BRACING OF SUSPENDED UTILITIES", OR APPROVED EQUAL.
    A. A COPY OF THE APPROVED SEISMIC RESTRAINT SYSTEMS INSTALLATION GUIDE/MANUAL SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING INSTALLATION AND KEPT ON THE JOB SITE.
    B. PROVIDE SHOP DRAWINGS SHOWING HOW PRE-APPROVED SYSTEM WILL BE APPLIED TO EACH PIPE AND DUCT SYSTEM. STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF SUPPORTING STRUCTURE TO SUPPORT LOADS OF ANCHORAGE AND BRACING SYSTEM BASED ON SHOP DRAWINGS. STRUCTURAL ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS.
    C. SHOP DRAWINGS OF SEISMIC BRACING SHALL BE AVAILABLE TO THE INSPECTOR OF RECORD TO VERIFY THE INSTALLATION OF THE SEISMIC BRACING.
5. THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND VA ENGINEER.
6. WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF VA ENGINEER, THE ARCHITECT, STRUCTURAL ENGINEER, AND MECHANICAL ENGINEER.
7. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE ANCHOR TYPE AND INSTALLATION REQUIREMENTS.
8. PIPING, DUCTWORK AND CONDUIT CROSSING BUILDING SEISMIC SEPARATIONS SHALL BE PROVIDED WITH APPROVED FLEXIBLE CONNECTORS.

PLUMBING PIPE TYPE LEGEND

SYMBOL	FLUID ABBREV.	DESCRIPTION
S OR W	S OR W	SOIL OR WASTE PIPING
S OR W	S OR W	SOIL OR WASTE PIPING BELOW FLOOR OR GRADE
V	V	VENT PIPING
SD	SD	STORM DRAIN PIPING
SD	SD	STORM DRAIN PIPING BELOW FLOOR OR GRADE
OD	OD	OVERFLOW STORM DRAIN PIPING
OD	OD	OVERFLOW STORM DRAIN PIPING BELOW FLOOR OR GRADE
CW	CW	POTABLE COLD PIPING
CW	CW	POTABLE COLD WATER PIPING BELOW FLOOR OR GRADE
HW	HW	POTABLE HOT WATER PIPING (ABOVE 110°F)
HW	HW	POTABLE HOT WATER PIPING BELOW FLOOR OR GRADE
HWR	HWR	POTABLE HOT WATER RETURN PIPING
HWR	HWR	POTABLE HOT WATER RETURN PIPING BELOW FLOOR OR GRADE
TP	TP	TRAP PRIMER WATER SUPPLY PIPING BELOW FLOOR OR GRADE
TW	TW	POTABLE TEMPERED WATER (85°F TO 110°F)
ICW	ICW	INDUSTRIAL COLD WATER
G	G	LOW PRESSURE GAS PIPING (8 TO 14-INCH WATER GAUGE)
G	G	LOW PRESSURE GAS PIPING BELOW FLOOR OR GRADE
MPG	MPG	MEDIUM PRESSURE GAS PIPING (3 OR 5-PSIG)
MPG	MPG	MEDIUM PRESSURE GAS PIPING BELOW FLOOR OR GRADE

PLUMBING ABBREVIATIONS

ABBREV.	DESCRIPTION
A, AMPS	AMPERES
ABV	ABOVE
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	AUTOMATIC FIRE SPRINKLER
AP	ACCESS PANEL
ARCH	ARCHITECTURAL
AUTO	AUTOMATIC
BEH	BEHIND
BEL	BELOW
BFG	BELOW FINISHED GRADE
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
C.C.	CENTER TO CENTER
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CLG	CEILING
COMP	COMPRESSOR
CONC	CONCRETE
CONN	CONNECTION
CP	CIRCULATING PUMP
CTR	COUNTER
CV	CHECK VALVE
D	DRAIN
DI	DEIONIZED WATER
DEMO	DEMOLITION
DN	DOWN
DWGS	DRAWINGS
EX, EXIST	EXISTING
EA	EACH
ESEW	EMERGENCY SHOWER AND EYEWASH
EWC	ELECTRIC WATER COOLING
ELECT	ELECTRICAL
ELEV	ELEVATION
ENCL	ENCLOSURE
°F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FR	FROM
FS	FLOOR SINK
FT	FOOT
FU	FIXTURE UNITS
FUT	FUTURE
FV	FLUSH VALVE
GAL	GALLON
GC	GAS COCK
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GT	GAS TURRET
H	HEIGHT
HB	HOSE BIBB
HDR	HEADER
HP	HORSEPOWER
HR	HOUR
HZ	HERTZ
I.E.	INVERT ELVATION
IN	INCH
KW	KILOWATT
L	LENGTH
LAV	LAVATORY
LBS	POUNDS
LO2	LIQUID OXYGEN
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFGR	MANUFACTURER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NO.	NUMBER
OC	ON CENTER
OFCI	OWNER FURNISHED AND CONTRACTOR INSTALLED
OPNG	OPENING
OP, OPER	OPERATING
PD	PRESSURE DROP
PH	PHASE
PIV	POST INDICATOR VALVE
PR, PRESS	PRESSURE
PSI	POUND PER SQUARE INCH
QTY	QUANTITY
REF	REFRIGERATOR
RPM	REVOLUTIONS PER MINUTE
SH	SHOWER
SHD	SHOWER DRAIN
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF, SQ FT	SQUARE FEET
SK	SINK
SKT	SINK TRIM
SOV	SHUT-OFF VALVE
SP	SUMP PUMP
SPEC(S)	SPECIFICATIONS
SS	SERVICE SINK
SW	SWITCH
T	TRANSFORMER
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UOS	UNDER OTHER SECTION OF SPECIFICATIONS
UR	URINAL
UTR	UP THRU ROOF
V	VOLTS
VB	VACUUM BREAKER
VO	VENT OFFSET
VR	VENT RISER
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W	WIDTH
W/	WITH
WC	WATER CLOSET
WCS	SECURITY WATER GAUGE
WH	WATER HEATER
W/O	WITHOUT
WP	WEATHER PROOF
WT	WEIGHT
WTR	WATER
YB	YARD BOX

PLUMBING SYMBOL LEGEND

SYMBOL	ABBREV.	DESCRIPTION
(E)XX	(E)	EXISTING TO REMAIN (XX INDICATES FLUID ABBREVIATION, REFER TO PLUMBING PIPE TYPE LEGEND)
XX	(N)	NEW WORK (XX INDICATES FLUID ABBREVIATION, REFER TO PLUMBING PIPE TYPE LEGEND)
		FLOW IN DIRECTION OF ARROW
		PIPE ELBOW DOWN OR AWAY FROM VIEWER
		PIPE ELBOW UP OR TOWARD VIEWER
		PIPE TEE DOWN OR AWAY FROM VIEWER
		PIPE TEE UP OR TOWARD VIEWER
		VALVE IN PIPE RISER DOWN OR AWAY FROM VIEWER
BFP	BFP	BACKFLOW PRENVENTOR (REFER TO DRAWINGS FOR TYPE)
		BALL VALVE
		BUTTERFLY VALVE
BLV	BLV	BALANCING VALVE
		CAPPED PIPE END
		CHECK VALVE
FCO	FCO	CLEAN-OUT (FLOOR)
COTG	COTG	CLEAN-OUT TO GRADE
WCO	WCO	CLEAN-OUT (WALL)
	CO	CLEAN-OUT
	EJ	EXPANSION JOINT
		INCREASER OR REDUCER
		FLEXIBLE PIPING CONNECTION
FSW	FSW	FLOW SWITCH
OR	SOV	SHUT-OFF VALVE
		PIPE SUPPORT
	GC	GAS COCK VALVE
		PLUG VALVE
PT		PRESSURE AND TEMPERATURE TEST PORT
P	PG	PRESSURE GAUGE
	PRV	PRESSURE REGULATING VALVE
PRV		PRESSURE RELIEF VALVE
P&TR	P&TR	PRESSURE AND TEMPERATURE RELIEF VALVE
		PUMP
		SOLENOID VALVE
	RD	STORM (ROOF) DRAIN
	OD	STORM DRAIN (OVERFLOW)
		STRAINER
		THERMOMETER IN PIPING
		UNION
		ANCHOR
	VTR	VENT THROUGH ROOF
OR	WHA	WATER HAMMER ARRESTOR (LOCATE BEHIND ACCESS PANEL)

PLUMBING NOTATION LEGEND

SYMBOL	ABBREV.	DESCRIPTION
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT OR DEMOLITION
1		SHEET KEY NOTES DEMOLITION
1		SHEET KEY NOTES NEW WORK
ø	DIA	DIAMETER
X		DETAIL NUMBER
XX		DETAIL SYMBOL
		DRAWING NUMBER WHERE DETAIL IS SHOWN
XX		PLUMBING EQUIPMENT OR FIXTURE ABBREVIATION
X		PLUMBING EQUIPMENT OR FIXTURE SYMBOL
		PLUMBING EQUIPMENT OR FIXTURE NUMBER

PLUMBING DRAWING LIST

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NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

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SHEET TITLE
PLUMBING - LEGEND AND GENERAL NOTES

PROJECT NUMBER
913-4675-01

ISSUE DATE: 11/21/2017
SHEET NO.: AD1-P0.0.1

DOMESTIC INSTANTANEOUS ELECTRIC HOT WATER HEATER SCHEDULE

SYMBOL	DESCRIPTION	USE	MANUFACTURER & MODEL NUMBER	RECOVERY	ELECTRICAL REQUIREMENTS KW	VOLTS	PHASE	HERTZ	OPERATING WEIGHT (LBS.)	REMARKS
IWH 1	INSTANTANEOUS WATER HEATER	SK-1 BRAK RM 114	CHRONOMITE MODEL NO. M-30/208	1.0 GPM @ 43°F RISE	6.2	208	1	60	8	AMPS = 30, MINIMUM OPERATING FLOW 0.65 GPM

DOMESTIC ELECTRIC HOT WATER HEATER SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	STORAGE CAPACITY (GALLONS)	RATE OF RECOVERY GPH @ 40°F RISE	ELECTRICAL REQUIREMENTS IMMERSION HEATERS NO. OF ELEMENTS	KW EACH	TOTAL KW	F.L.A.	VOLTS	PHASE	HERTZ	OPERATING WEIGHT (LBS.)	REMARKS
EWH 1	ELECTRICAL WATER HEATER	CUSTODIAL RM 134	BRADFORD WHITE E32-50S-5	50	93	3	3	9	25	208	1	60	555	PROVIDE "HOLDRITE" #60-SWHP-WM WALL MOUNTED PLATFORM UP TO 50 GAL OR UP TO 750 LBS. WITH "HOLDRITE" #QB-50-F SEISMIC SUPPORT STRAP BELT. PROVIDE 7-DAY TIME CLOCK.

1

SYMBOL	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	CW IN	HW IN	HW/TW OUT	REMARKS
TMV 1	THERMOSTATIC MIXING VALVE	FOR EACH LAVATORY AND SINK	LEONARD 170-LF-BP-BRKT	3/8"	3/8"	3/8"	
TMV 2	THERMOSTATIC MIXING VALVE	CUSTODIAL ROOM #A120	LEONARD XL-32-LF-BDT	3/4"	3/4"	3/4"	SET MIXING VALVE TEMERATURE AT 105°F MIN. AND 120°F MAX.

EXPANSION TANK SCHEDULE

SYMBOL	DESCRIPTION	LOCATION	MANUFACTURER & MODEL NUMBER	STORAGE CAPACITY (GALLONS)	OPERATING WEIGHT (LBS.)	REMARKS
ET 1	EXPANSION TANK	CUSTODIAL ROOM #A120	"AMTROL" THERM-X-TROL ST-5-C	2.1	40	USE WITH EWH-1 ASME RATED FOR 150 PSIG.

AIR COMPRESSOR SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NUMBER	LOCATION AND DRAWING REFERENCE	–	ELECTRICAL DATA HP	VOLTS	PHASE	HERTZ	OPERATING WEIGHT (LBS.)	MOUNTING DETAIL	REMARKS
CA 1	AIR COMPRESSOR WITH HOSE REEL	AIR MACHINE 8670-2FBGA WITH 6026	PARKING LOT	–	3/4	120	1	60	125	10/P5.01	JE ADAMS AIR MACHIN 3/4HP OILESS AIR COMPRESSOR CUT RESISTANT 25'x1/4" AIR HOUSE W/INFLATOR GUGE PUSH BUTTON OPERATION COMPLETE WITH JE ADAMES RETRACTABLE HOSE BASE STAINLESS STEEL

PLUMBING WATER SUPPLY FIXTURE UNITS CALCULATION

TYPE	NUMBER OF FIXTURE	FIXTURE UNIT		TOTAL FIXTURE UNITS
WATER CLOSET	3	5		15
LAVATORY	3	1		3
SHOWER HEAD	2	2		4
SINK	1	2		2
SERVICE SINK	1	3		3
DRINKING FOUNTAIN	1	1		1
HOSE BIBB	7	2.5/1		9.5
			OVERALL FIXTURE UNIT VALUE	1 37.5

PLUMBING DRAINAGE FIXTURE UNITS CALCULATION

TYPE	NUMBER OF QUALITIES	FIXTURE UNIT		DIFFERENCE FIXTURE UNITS
WATER CLOSET	3	4		12
LAVATORY	3	1		3
SHOWER DRAIN	2	2		4
SINK	1	2		2
SERVICE SINK	1	3		3
FLOOR DRAIN	6	2		12
DRINKING FOUNTAIN	1	1		1
			OVERALL FIXTURE UNIT VALUE	37

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	BRANCH CONNECTION TRAP	WASTE	VENT	HW	CW	CARRIER	REMARKS
WC 1	WATER CLOSET WALL HUNG	INTEGRAL	4"	2	–	1-1/2"	JR SMITH 0400 OR 0200 SERIES	"AMERICAN STANDARD" AFWALL FLUSH MODEL 3351.001 VITREOUS CHINA, WHITE, ELONGATED BOWL, SIPHON JET, COMPLETE WITH SLOAN "ROYAL" 111-1.28 SOLAR MANUAL FLUSHOMETER, 1.28 GALLONS PER FLUSH, "BEMIS" 1955C ELONGATED OPEN FRONT SEAT LESS COVER. MOUNT PER A.D.A REQ'S.
WC 2	WATER CLOSET WALL HUNG – ADA	INTEGRAL	4"	2	–	1-1/2"	JR SMITH 0400 SERIES	"ACORN" 2105-W-1-CN 1.28-FVH-ADA SIPHON JET 1.28 GPF COMPLETE WITH HYDRAULIC FLUSH VALVE WITH HYDRAULIC PUSHBUTTON P/N 3918762. MOUNT PER A.D.A REQ'S.
L 1	LAVATORY COUNTER MOUNTED	1-1/2"	2"	–	3/4"	3/4"	–	AMERICAN STANDARD DROP IN SELF RIMMING LAVATORY MODEL 0476.028 WITH SLOAN EBF-650-BDT FAUCET AND BELOW DECK THERMOSTATIC MIXING VALVE. FAUCET SHALL BE ELECTRONIC FAUCET, FLOW RATE 0.5-GPM FOR A 15-SEC. CYCLE. 4 C CELL ALKALINE BATTERIES. PROVIDE "TRUEBRO" INSULATING KIT FOR WASTE & HW SUPPLY. TRIMS & SUPPLIES (SELF CLOSING).
L 2	LAVATORY WALL HUNG	1-1/2"	2"	–	3/4"	3/4"	–	"ACORN" 1652-1-BP-03-M 18"LAVATORY WITH OVAL BOWL. MOUNT PER A.D.A REQ'S.
SK 1	1-COMPARTMENT SINK COUNTERTOP MOUNTED	1-1/2" CP 17 GA. CAST BRASS	2"	1-1/2"	3/4"	3/4"	–	"JUST" #SL-ADA-1921-A-GR, 19"x21"x6.5" DEEP. PROVIDE #J-ADA-35 BASKET STRAINER CHICAGO #201-AE35ABCP LEVER FAUCET, 1.5 GPM. RIGID RISER, ESCUTCHEON, ALL IN CHROME, OR ACCEPTED EQUAL. PROVIDE "TRUEBRO" W & HW INSULATING KIT.
SS 1	SERVICE SINK	3"	3"	2"	3/4"	3/4"	–	KOHLER "WHITBY" #K-6710 OR ACCEPTED EQUAL, SINK: 28"x28", FLOOR MOUNTED, ENAMELED CAST-IRON WITH VINYL RIM COVER K-8940 AND FAUCET WITH 2 3/8" HANDLES, STOPS, VACUUM BREAKER, BUCKET HOOK AND SPOUT BRACE TO WALL. FAUCET SHALL BE "CHICAGO" 897-RCF.
DF 1	DRINKING FOUNTAIN ACCESSIBLE	1-1/2" CP 17 GA. CAST BRASS	2"	1-1/2"	–	3/4"	–	"ELKAY" #LZWS-EDFPBM117K, DUAL LEVEL STAINLESS STEEL HI-LO WITH EZH20 BOTTLE FILLING STATION, INDOOR, WITH ADDITIONAL REPLACEMENT FILTER #51300C_3 PACK. 100% LEAD FREE WATERWAYS.
HB 1	HOSE BIBB	–	–	–	–	3/4"	–	"ACORN" 8121-SSLF STAINLESS STEEL LEAD FREE WITH VACUUM BREAKER.
HB 2	HOSE BIBB	–	–	–	–	3/4"	–	"ACORN" 8151-SSLF STAINLESS STEEL RECESSED HOSE BOX WITH WALL FLANGE LEAD FREE WITH VACUUM BREAKER.
TP 1	TRAP PRIMER (ELECTRONIC)	–	–	–	–	3/4" / 1/2"TP	–	TRAP PRIMER SHALL BE PPP INC. "MINI-PRIME" #MP-500-115V COMPLETE WITH DISTRIBUTION #DU-X UNIT AS REQUIRED OR APPROVED EQUAL BY MIFAB OR SIOUX CHIEF. PROVIDE ACCESS PANEL AND SHUT-OFF VALVE FOR EACH ASSEMBLY.
TP 2	TRAP PRIMER	–	–	–	–	3/4" / 1/2"TP	–	TRAP PRIMER SHALL BE PPP INC. "PRIME-RITE" #PR-500 COMPLETE WITH DISTRIBUTION #DU-X UNIT AS REQUIRED OR APPROVED EQUAL BY MIFAB OR SIOUX CHIEF. PROVIDE ACCESS PANEL AND SHUT-OFF VALVE FOR EACH ASSEMBLY.
FD 1	FLOOR DRAIN	2"	2"	1-1/2"	–	1/2"TP	–	"J.R. SMITH" FIG. 2005Y(B)-U-P050-BHP-PB CAST IRON BODY COMPLETE WITH FLASHING COLLAR, NO HUB CONNECTION, SQUARE TOP VANDAL PROOF SCREWS, TRAP PRIMER CONNECTION, ADJUSTABLE POLISH BRONZE STRAINER HEAD WITH HEEL PROOF GRATE OR APPROVED EQUAL.
SH 1	SHOWER	–	–	–	3/4"	3/4"	–	"LEONARD" THERMOSTATIC/PRESSURE SHOWERMASTER MODEL 7600-VP-515P-D-2L-H-06-1.5-D. VANDAL RESISTANT SCREW, 1.5 GPM HAND SPRAY, STAINLESS STEEL FLEX HOSE, SLIDE BAR, DOUBLE CHECK VALVE BACKFLOW PRVENTER, LEVER HANDLE DIVERTERS AND 1.5 GPM FIXED SHOWER HEAD OR APPROVED EQUAL.
SHD 1	SHOWER DRAIN	2"	2"	1-1/2"	–	–	–	"J.R. SMITH" FIG. 2005YA-PB CAST IRON BODY COMPLETE WITH FLASHING COLLAR, NO HUB CONNECTION, ADJUSTABLE POLISHED BRONZE STRAINER HEAD OR APPROVED EQUAL.

NOTE: ALL PLUMBING FIXTURES APPLIANCES AND DEVICES, EQUIPMENT SHALL BE LISTED OR APPROVED TYPE. THEY MUST ALSO MEET LEAD FREE AND L.A. CITY PLUMBING CODE 2014, SECTION 402. ALL FAUCETS IN PUBLIC RESTROOMS SHALL BE SELF CLOSING OR SELF CLOSING METERING FAUCETS PER L.A. PLUMBING CODE 2014, SECTION 402.

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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

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SHEET TITLE
PLUMBING SCHEDULES

PROJECT NUMBER
913-4675-01

ISSUE DATE
11/21/2017

SHEET NO.
AD1-P0.0.2

REFERENCE NOTES

1. 1-1/2"CW, 4"S DN & 2"VO.
2. 3/4"CW, 2"W DN & 1-1/2"VO.
3. 2"W DN & 1-1/2"VO.
4. 3/4"CW DN IN WALL.
5. 3/4"CW DN, 3/4"HW DN, 2"W DN & 1-1/2"VO.
6. EXTEND 3/4"CW & STUB-OUT W/SOV FOR THE REF.
7. 3/4"CW, 3/4"HW DN, 3"W DN & 2"VO.
8. 3/4"CW & 3/4"HW DN.
9. NOT USED.
10. 1-1/4"CW DN W/SOV.
11. PROVIDE PIPE SLEEVE.

1 PLUMBING FLOOR PLAN
1/4" = 1'-0"

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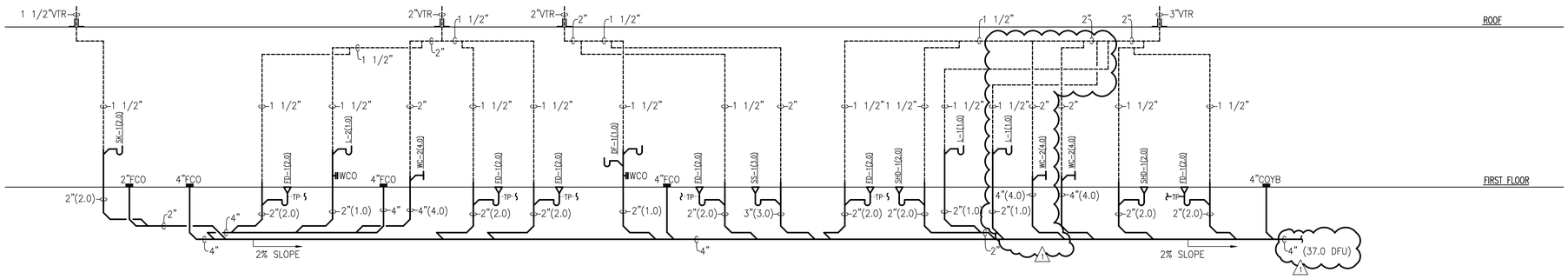
SHEET TITLE

PLUMBING - FLOOR PLAN

PROJECT NUMBER

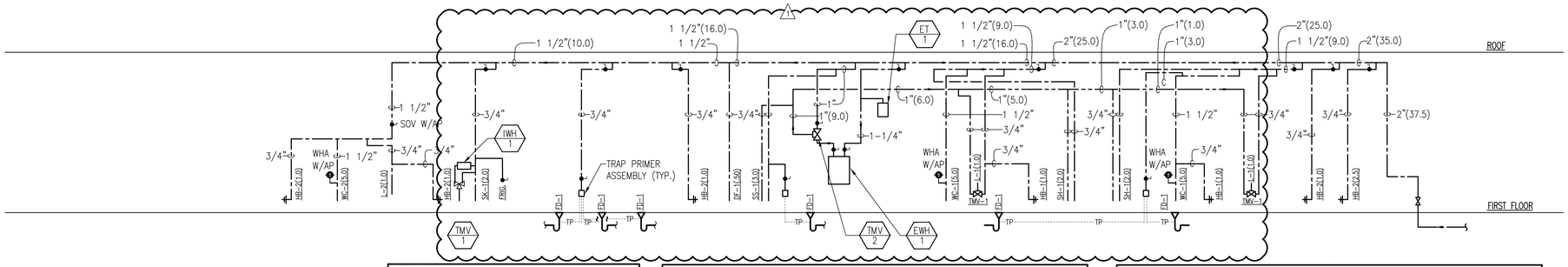
913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-P2.1.1



SANITARY WASTE & VENT RISER DIAGRAM

N.T.S. | 1



NOTES:

1. NUMBERS IN ( ) PARENTHESES INDICATES COLD WATER & HOT WATER FIXTURE UNITS.
2. REFER TO PLUMBING FIXTURE SCHEDULE ON DRAWING P0.0.2 FOR BRANCH CONNECTIONS FOR CW & HW SIZES TO EACH FIXTURE.
3. FIXTURE UNITS INDICATED ARE FOR PUBLIC USE, TABLE A-2, 2016 CALIFORNIA PLUMBING CODE.

POTABLE WATER CW PIPE SIZING CHART

TYPE "L" COPPER PIPE 8.0 PSI PER 100 FT. MAX. VEL. @ 8 FPS	MAXIMUM GPM/FU ALLOWABLE			TYPE "L" COPPER PIPE 8.0 PSI PER 100 FT. MAX. VEL. @ 8 FPS	MAXIMUM GPM/FU ALLOWABLE		
SIZE	GPM	FLUSH TANK FU	FLUSH VALVE FU	SIZE	GPM	FLUSH TANK FU	FLUSH VALVE FU
1/2"	3	3	0	2"	77	260	136
3/4"	8	11	0	2-1/2"	117	474	358
1"	16	23	0	3"	170	747	699
1-1/4"	30	54	13	–	–	–	–
1-1/2"	44	104	35	–	–	–	–

POTABLE WATER HW PIPE SIZING CHART

TYPE "L" COPPER PIPE 8.0 PSI PER 100 FT. MAX. VEL. @ 5 FPS	MAXIMUM GPM/FU ALLOWABLE			TYPE "L" COPPER PIPE 8.0 PSI PER 100 FT. MAX. VEL. @ 5 FPS	MAXIMUM GPM/FU ALLOWABLE		
SIZE	GPM	FLUSH TANK FU		SIZE	GPM	FLUSH TANK FU	
1/2"	3	3		2"	48	120	
3/4"	8	9		2-1/2"	74	246	
1"	12	17		3"	105	412	
1-1/4"	19	29		–	–	–	
1-1/2"	27	48		–	–	–	

DOMESTIC WATER RISER DIAGRAM

N.T.S. | 2

N.T.S. | 3

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CLIENT NAME
COMPTON CCD

PROJECT NAME
CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC_____ FLS_____ SS_____
DATE_____

CONSULTANT
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150 S. ARROYO PARKWAY
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PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

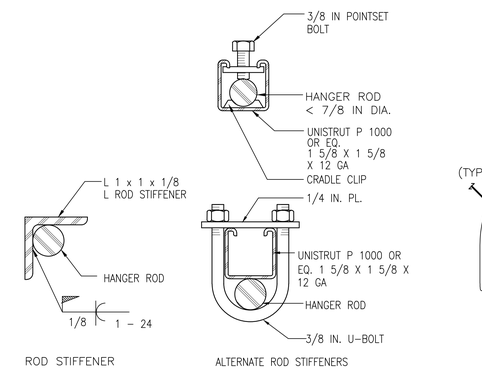
REGISTERED PROFESSIONAL ENGINEER
KEVIN S. CHEN
M-31154
Exp. 12/31/19
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
PLUMBING - RISER DIAGRAMS

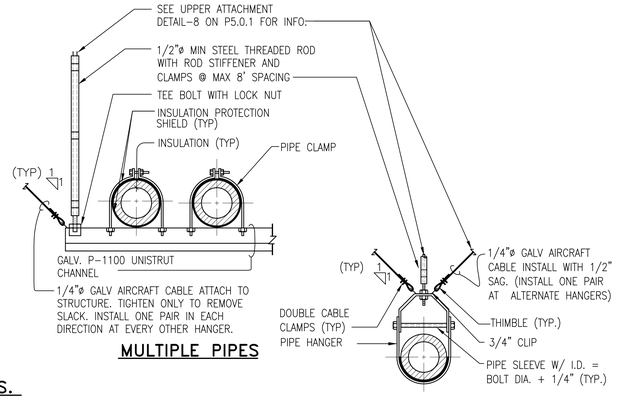
PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-P4.0.1



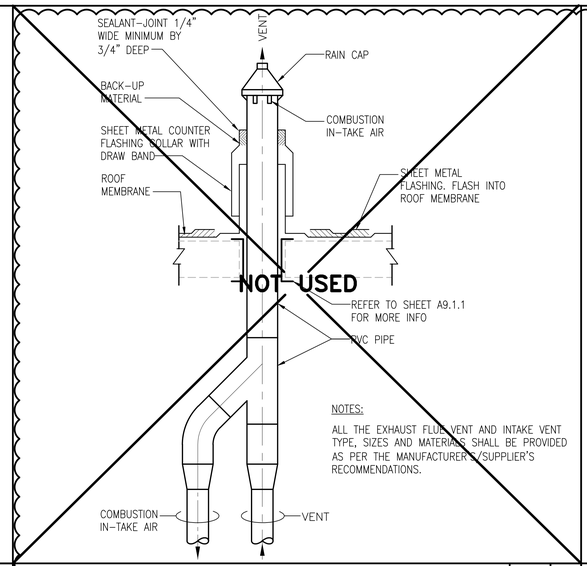
METHODS FOR TYING RODS AND ROD STIFFENERS.

NOTES:
1. COORDINATE PIPE SUPPORT SYSTEM WITH STRUCTURAL.
2. SEE SEISMIC RESTRAINT MANUAL GUIDELINES AS INDICATED ON M0.1 SEISMIC BRACING NOTES FOR MECHANICAL SYSTEMS FOR OTHER HANGER ROD AND BRACING INFORMATION.

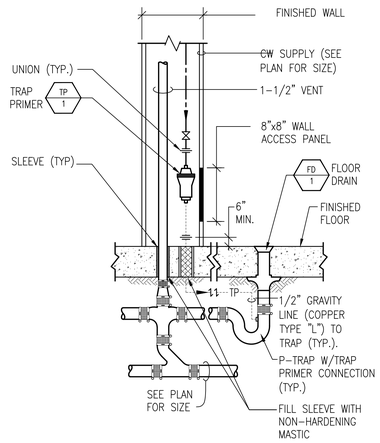


(300 LBS MAX. TOTAL WEIGHT)

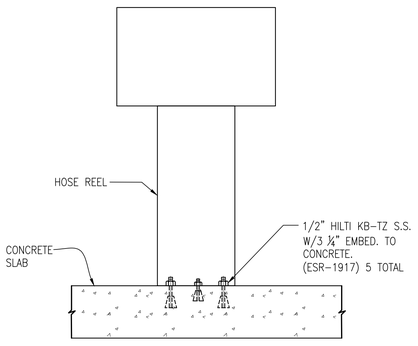
PIPE SUPPORT ABOVE CEILING — N.T.S. 7



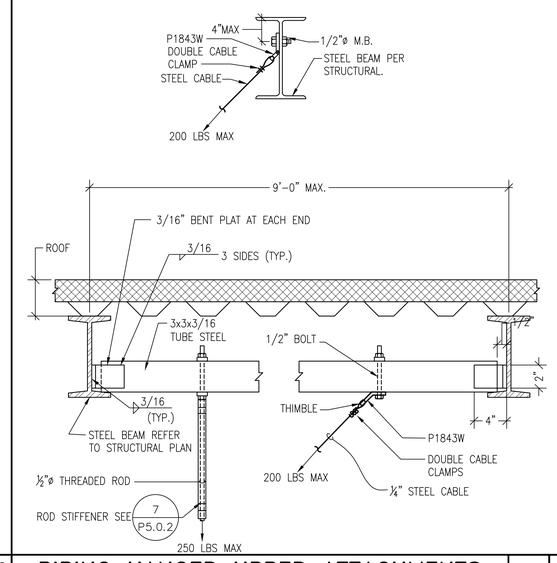
PVC SEALED DIRECT VENT W/CONCENTRIC VENT VERTICAL TERMINATION — N.T.S. 4



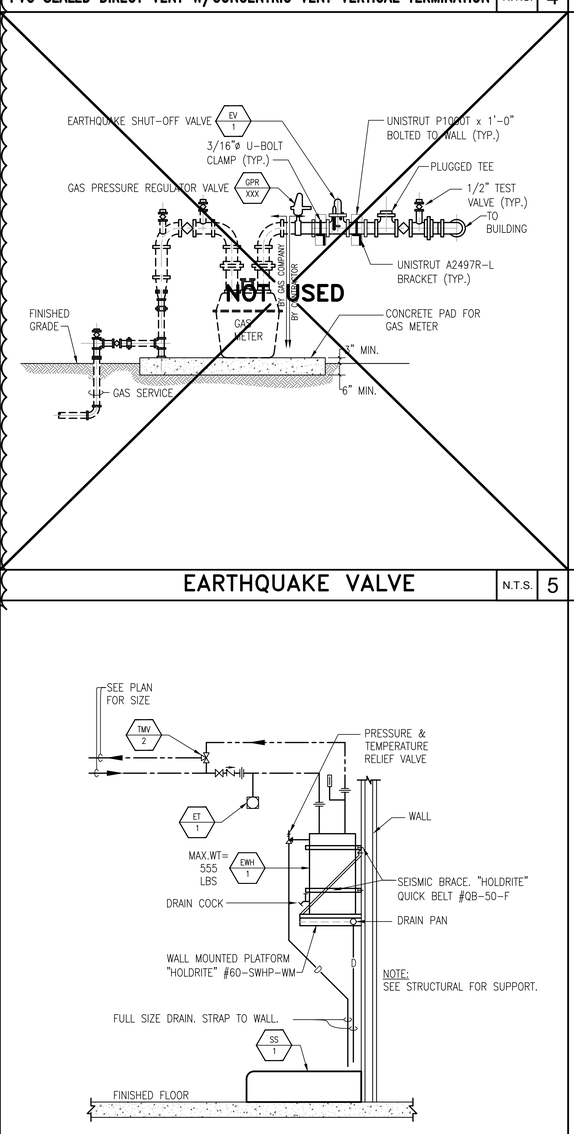
TRAP PRIMER ASSEMBLY — N.T.S. 1



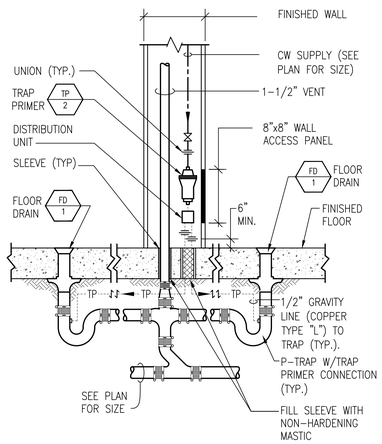
AIR COMPRESSOR — N.T.S. 10



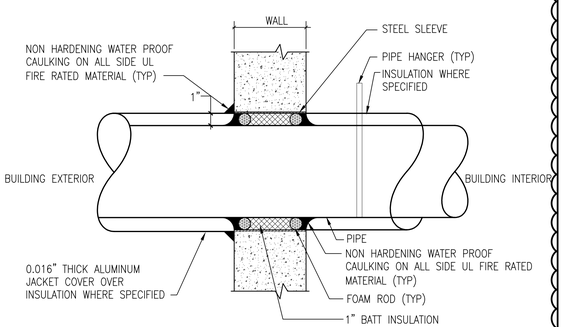
PIPING HANGER UPPER ATTACHMENTS — N.T.S. 8



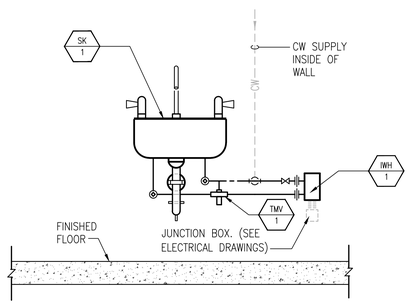
EARTHQUAKE VALVE — N.T.S. 5



TRAP PRIMER ASSEMBLY — N.T.S. 2

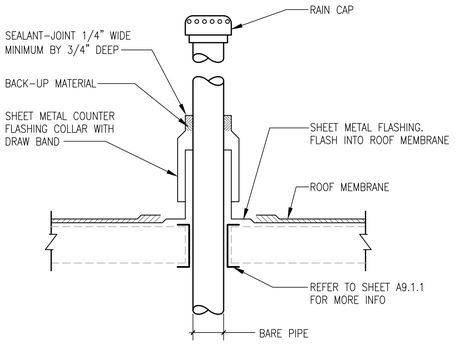


PIPE PENETRATION THRU EXTERIOR WALL — N.T.S. 11



ELECTRICAL INSTANTANEOUS HOT WATER HEATER — N.T.S. 9

ELECTRIC WATER HEATER — N.T.S. 6



VENT PIPE THRU ROOF — N.T.S. 3

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PROJECT TEAM
PRINCIPAL IN CHARGE
KEVIN CHEN
PROJECT MANAGER
-
DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER KEVIN S. CHEN M–31154 EXP. 12/31/18 CIVIL STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
PLUMBING - DETAILS

PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/2017
SHEET NO. AD1-P5.0.1

DEMOLITION & ALTERATION NOTES

1. CONTRACTOR SHALL VISIT THE SITE AND MAKE HIMSELF THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS.
2. ALL WORK SHALL BE PERFORMED TO CHANGE THE EXISTING ELECTRICAL INSTALLATION AS INDICATED OR AS REQUIRED TO PERFORM THE NEW WORK, IN ACCORDANCE WITH ARCHITECTURAL DEMOLITION PLAN.
3. REMOVE ALL LIGHT FIXTURES, SWITCHES, SPEAKERS, TELEPHONE OUTLETS, RECEPTACLES, MISCELLANEOUS CONDUIT, WIRE, ETC. THAT INTERFERES WITH NEW CONSTRUCTION. EXTEND ANY INTERRUPTED CIRCUITS. PROVIDE BLANK COVER PLATES AS REQUIRED IN FINISHED AREAS, COVER PLATES SHALL MATCH THE WALL SURFACE.
4. INFORMATION GIVEN ON THE DRAWINGS ABOUT EXISTING INSTALLATIONS HAS BEEN OBTAINED FROM THE BEST SOURCES AVAILABLE BUT CANNOT BE GUARANTEED ACCURATE IN ALL RESPECTS. VERIFY ALL SUCH INFORMATION BEFORE PROCEEDING WITH ANY NEW WORK THAT MAY BE AFFECTED. INCLUDE AS A PART OF THE CONTRACT ALL WORK REQUIRED TO PRODUCE THE INDICATED RESULT.
5. EXCEPT AS MAY BE SPECIFICALLY INDICATED OTHERWISE, ALL ELECTRICAL MATERIALS AND EQUIPMENT REMOVED FROM THE EXISTING INSTALLATION IN THE COURSE OF PERFORMING THE INDICATED WORK AND NOT INDICATED TO BE REUSED SHALL BE TREATED AS FOLLOWS:
   A. ALL CONDUITS, CONDUCTORS, OUTLET BOXES AND FITTINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
   B. ALL OTHER REMOVED ITEMS (PANELS, TRANSFORMERS, DISCONNECT SWITCHES, LIGHT FIXTURES, AND OTHER ELECTRICAL EQUIPMENT) SHALL BE TURNED OVER TO THE OWNER AND DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
6. CLEAN ALL REMOVED ITEMS THAT ARE TO BE REUSED, EQUIPMENT THAT IS INDICATED TO BE REUSED SHALL BE PROTECTED DURING CONSTRUCTION, CLEANED AND TESTED BEFORE RE-INSTALLATION IN A NEW PERMANENT LOCATION.
7. UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL EXISTING WIRING, CONDUITS, JUNCTION BOXES AND OTHER ELECTRICAL DEVICES IN AREAS WHERE NEW WORK OCCURS, SHALL BE REMOVED EXCEPT WHEN SUCH DEVICES ARE REQUIRED TO MAINTAIN SERVICES TO OTHER AREAS. IN SUCH CASES, CONTRACTOR SHALL RELOCATE THESE DEVICES WHERE REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR REMOVE ANY OF THE EXISTING ITEMS WHEN SUCH ITEMS ARE CONCEALED AND DO NOT INTERFERE WITH THE NEW WORK OF ALL TRADES.
8. NUMBER OF CONDUCTORS SHOWN ON EXISTING CONDUITS REPRESENT THOSE REQUIRED TO PERFORM THE WORK. WHEN NUMBER OF EXISTING IS INADEQUATE, CONTRACTOR SHALL PROVIDE ADDITIONAL WIRES AND ALL NECESSARY WORK AND ACCESSORIES REQUIRED TO CONFORM TO THE NUMBER OF CONDUCTORS SHOWN ON THE DRAWINGS. ALL EXTRA EXISTING WIRES SHALL BE TAPED, COILED AND TAGGED AS "NOT-USED" AT BOTH ENDS IN JUNCTION BOXES. CONTRACTOR SHALL EXAMINE AND REPLACE ALL EXISTING WIRES IN BAD CONDITION WITH EQUIVALENT NEW ONES.
9. CONTRACTOR TO COORDINATE WITH UTILITY POWER COMPANY FOR ANY TEMPORARY SHUT-DOWN AND/OR TO PROVIDE TEMPORARY POWER AS REQUIRED DURING DEMOLITION AND CONSTRUCTION PHASE OF WORKS.
10. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

DEMOLITION/REMODEL:

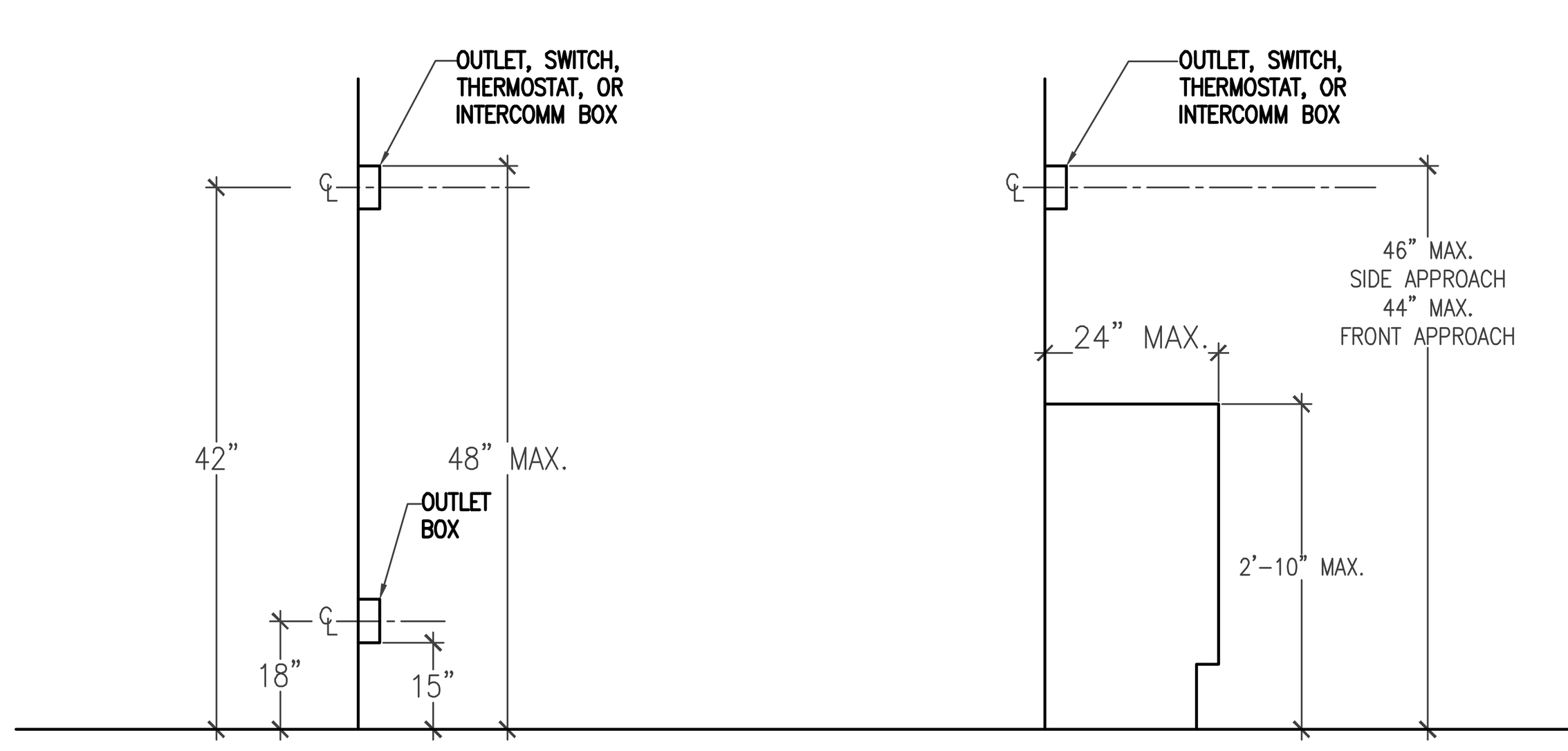
(E)	WHEN SHOWN ADJACENT TO LIGHTING FIXTURE, OUTLETS, PANELS, IN CONDUIT RUNS, ETC., DENOTES EXISTING TO REMAIN.
(EA)	WHEN SHOWN ADJACENT TO ELECTRICAL EQUIPMENT DENOTES EXISTING EQUIPMENT TO BE ABANDONED.
(ER)	WHEN SHOWN ADJACENT TO LIGHTING FIXTURE, OUTLETS, PANELS, IN CONDUIT RUNS, ETC., DENOTES EXISTING TO BE DISCONNECTED AND RELOCATED.
(RE)	WHEN SHOWN ADJACENT TO ELECTRICAL EQUIPMENT DENOTES NEW LOCATION OF RELOCATED EQUIPMENT.
(R)	WHEN SHOWN ADJACENT TO ELECTRICAL EQUIPMENT DENOTES DISCONNECT AND REMOVE EQUIPMENT WITH ASSOCIATED CONDUIT AND WIRING U.O.N.

SCOPE OF WORK

IN SUMMARY THE ELECTRICAL SYSTEM SCOPE OF WORK NOT LIMITED TO THE ABOVE DESCRIPTION BUT ALSO INCLUDES THE FOLLOWING:

1. PROVIDE NEW 150KVA – 5KV SUBSTATATION IN NEMA 3R ENCLOSURE AND 5KV UNDERGROUND FEEDER CONNECTION TO EXISTING 5KV SWITCHBOARD PMS-6.
2. PROVIDE NEW MAIN SERVICE SWITCHBOARD FOR 208Y/120V. 3PH-4W SERVICE, DISTRIBUTION TRANSFORMERS AND SYSTEM WITH THE NEW BRANCH CIRCUIT PANEL BOARDS.
3. PROVIDE NEW LED SUSPENDED LINEAR LIGHT FIXTURES WITH SEPARATE OCCUPANCY SENSORS AND PHOTO-CONTROL.
4. PROVIDE NEW DIGITAL WALL DIMMER SWITCHES AND LIGHTING CONTROL SYSTEM IN ACCORDANCE WITH 2013 CEC REQUIREMENTS.
5. PROVIDE NEW POWER, VOICE/DATA, AND COMMUNICATION OUTLETS PER-DISTRICT REQUIREMENTS.
6. PROVIDE NEW FIRE ALARM SYSTEM. COMPLETE WITH CONTROL PANEL AND PERIPHERAL DEVICES.

ACCESSIBLE MOUNTING HEIGHTS



FRONT APPROACH

PER 11B – 308.2.1 & 11B– 308.3.1

REACH REQUIRED OVER OBSTRUCTION

PER 11B – 308.2.2 & 11B– 308.3.2

SHEET LIST

SYMBOL LIST

GENERAL:

- NEMA 5-20R DUPLEX WHITE RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE PASS AND SEYMOUR # 5362W OR EQUAL
- QUADPLEX NEMA 5-20R WHITE RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE (2) PASS AND SEYMOUR # 5362W OR EQUAL
- GFI — NEMA 5-20R GFCI-ILLUMINATED TYPE WHITE RECEPTACLE AT +48"A.F.F (U.N.O) AND 302S/S COVER PLATE. PASS AND SEYMOUR # 2095WL OR EQUAL
- NEMA 5-20R GREY RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE. PASS AND SEYMOUR # 5362GRY OR EQUAL
- QUADPLEX NEMA 5-20R GREY RECEPTACLE AT + 15"A.F.F (U.N.O) AND 302S/S COVER PLATE. (2) PASS AND SEYMOUR # 5362GRY OR EQUAL
- THERMOSTAT AT +48" A.F.F (U.N.O)
- JUNCTION BOX.
- JUNCTION BOX WALL MOUNTED.
- C — NEMA 5-20R DUPLEX WHITE RECEPTACLE ON CEILING W/ WHITE NYLON COVER PLATE FOR VIDEO PROJECTOR
- BY-PASS TIMER 0-6 HOUR – MARKTIME #9007 AT +4'-0" (MOUNT ADJACENT TO THERMOSTAT).
- MOTOR CONNECTION.
- S_M — MANUAL MOTOR STARTER WITH, 16A -2POLES WITH GREEN PILOT LIGHTS SIMILAR TO SQUARE D, CLASS 2510, TYPE FG2PG.
- "1" — MAGNETIC MOTOR STARTER. NEMA SIZE AS INDICATED.
- "1" 30A — COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT SWITCH, SIZE AS INDICATED.
- DISCONNECT SWITCH, 30 AMP, 3 POLE, NON-FUSED U.O.N..
- 60A 50A — DISCONNECT SWITCH, 60 AMP, 3 POLE WITH 50 AMP TIME DELAY REJECTION TYPE FUSES.
- TERMINAL CABINET AS NOTED.
- SURFACE MOUNTED LIGHTING AND RECEPTACLE PANELBOARD.
- FLUSH/RECESSED MOUNTED LIGHTING AND RECEPTACLE PANELBOARD.
- SWITCHBOARD OR POWER PANELBOARD.
- PUSH-BUTTON, +48" A.F.F., U.O.N..
- CONNECTION TO EQUIPMENT.
- T — TRANSFORMER.
- 2LA — PANEL, SWITCHBOARD, TRANSFORMER OR TERMINAL CABINET DESIGNATION.
- 2 — DEMO REFERENCE NOTE.
- 2 — REFERENCE NOTE ON ELECTRICAL PLAN.
- ELECTRICAL DEVICE AS NOTED (I.E. RELAY, TIME CLOCK).
- FLUSH FLOOR COUPLING.
- CONDUIT CONCEALED IN CEILING OR WALL.
- EXPOSED CONDUIT.
- CONDUIT CONCEALED BELOW FLOOR SLAB OR UNDERGROUND.
- CONDUIT TURNING UP. — CONDUIT TURNING DOWN.
- 3/4"C.-2#12&1#12EG
- 3/4"C.-3#12&1#12EG
- 3/4"C.-4#12&1#12EG
- #6 — CONDUCTORS OTHER THAN #12 AWG AS INDICATED (3#6 AWG & 1#6 EG) SIZE CONDUIT PER APPLICABLE CODES.
- 2LA-1&3&5 — HOMERUN TO PANEL "2LA" CIRCUITS 1,3,5, 3#12 & 1#12EG (3-POLE CIRCUIT BREAKER).
- 2LA-2,4,6 — HOMERUN TO PANEL "2LA" CIRCUITS 2,4,6 WITH COMMON NEUTRAL, 4#12 & 1#12EG (3 SINGLE POLE BREAKERS) – PROVIDE TIE-BRANCH CIRCUIT BREAKER HANDLE FOR CIRCUIT 2,4,6 (TO SIMULTANEOUSLY DISCONNECT CIRCUITS WITH SHARED NEUTRAL)
- CONDUIT STUB WITH CAP. (WITH POLY-PROPYLENE PULL WIRE).
- CONDUIT SEAL.
- WIREMOLD 5400 WITH DIVIDER FOR POWER AND DATA AT EACH RECEPTACLE INDICATED, PROVIDE A #5407 DEVICE BRACKET. PROVIDE A NEMA 5-20R DUPLEX RECEPTACLE AND A WIREMOLD 5407D PLATE FOR POWER; A #5407RJ COVER FOR DATA. SPECIAL NON-STANDARD COLOR IS REQUIRED, TO BE SELECTED BY ARCHITECT U.O.N.
- VERTICAL SURFACE MOUNTED WIREMOLD 5400 DROP TO HORIZONTAL RACEWAY U.O.N.

SINGLE LINE DIAGRAM:

- 150A 3P — CIRCUIT BREAKER, MOLDED CASE, 3 POLE, 150 AMP TRIP.
- 100A 70A 3P — SWITCH AND FUSE, 3 POLE, 100 AMP WITH (3) 70 AMP FUSES.
- M — METERING AND CURRENT/POTENTIAL TRANSFORMER AS REQUIRED.
- G — GROUND FAULT SENSOR.
- TRANSFORMER WITH SECONDARY GROUND.
- FDR-6 — FEEDER NO. 6 – SEE FEEDER SCHEDULE.
- GROUND WELL WITH ROD.
- GROUND TO COLD WATER PIPE, U.O.N.
- G — UFER GROUND.
- N — NEUTRAL BUS.
- G — EQUIPMENT GROUND BUS.

LIGHTING:

CLG. / WALL

- 6a — LIGHTING FIXTURE, "6" DENOTES CIRCUIT NUMBER, "a" DENOTES CONTROLLING SWITCH.
- LED LIGHTING FIXTURE.
- LED STRIP LIGHTING FIXTURE.
- SINGLE FACE EXIT LIGHT WITH DIRECTIONAL ARROWS IF INDICATED. WALL MOUNTED.
- DOUBLE FACE EXIT LIGHT FIXTURE WITH DIRECTIONAL ARROWS IF INDICATED. CEILING MOUNTED.
- LIGHT FIXTURE EQUIPPED WITH EMERGENCY BATTERY PACK.
- A 100 — FIXTURE TYPE "A", INPUT POWER OF 100 VOLT-AMPERE EACH, INCLUDING BALLAST LOSS IF ANY – TYPICAL IN ROOM OR AREA U.O.N.
- 2'x4' FIXTURE RECESSED IN "T" BAR CEILING SYSTEM
- S_a^3 — SINGLE POLE TOGGLE SWITCH, +42" A.F.F., U.O.N.. SUBSCRIPTS INDICATE THE FOLLOWING:
  - a – OUTLETS CONTROLLED.
  - 2 – TWO POLE.
  - 3 – THREE WAY.
  - 4 – FOUR WAY.
  - K – KEYED.
  - P – PILOT LIGHT.
  - M – MANUAL MOTOR STARTER.
  - D – DIMMER.
  - R – REMOTE CONTROL, MOMENTARY CONTACT.
  - F – FLY FAN DOOR SWITCH.

WALL MOUNTED OCCUPANCY SENSOR SWITCH, +42" A.F.F., U.O.N., GREENGATE #OSW-P-0451-DMV-DUAL LEVEL

OCCUPANCY SENSOR FOR LIGHTING CONTROL SYSTEM NOTES:

OCCUPANCY SENSOR (NOT PART OF LIGHTING CONTROL PANEL) FOR LIGHTING CONTROL SYSTEM SHALL BE BY "GREENGATE'" (COOPER CONTROLS), WITH THE FOLLOWING PRODUCT NUMBERS:

1. WALL MOUNTED SENSOR;
   PIR TECHNOLOGY, AUTO OR MANUAL ON FOR PRIVATE/SMALL OFFICE, CONFERENCE ROOM AND STORAGE:
   a– DUAL LEVEL, GREENGATE #OSW-P-0451-DMV (COVERAGE >100-300 SQUARE FEET)
   b– SINGLE LEVEL, GREENGATE #OSW-P-0451-MV (COVERAGE >100-SQUARE FEET)
2. CEILING MOUNTED SENSOR:
   ULTRASONIC SENSOR TECHNOLOGY, TO BE INSTALLED WITH SWITCH PACK, GREENGATE #SP20-MV AND MANUAL WALL MOUNTED SWITCH:
   a– SMALL OFFICE, <1270 S.F., GREENGATE #OMC-U-1001 ONE WAY COVERAGE.
   b– OPEN OFFICE OR RESTROOM <2500 S.F.,GREENGATE #OMC-U-2000 TWO WAY COVERAGE.
   c– CORRIDORS OR NARROW HALLWAYS, 13 FT.x 100 FT. COVERAGE, GREENGATE #ODC-U-0100-H, TWO WAY COVERAGE.
3. WALL OR CEILING DAYLIGHT SENSOR FOR LIGHT WELL LOCATIONS:
   a– AUTO. ADJUSTING, GREENGATE #DSRC-FMOIR, MULTI-ZONE SENSOR.
   b– MOUNTING BRACKET, GREENGATE #DSCM-MT.

EACH SENSOR TIME DELAY SHALL BE SET AT 8 MINUTES.

CONTRACTOR TO COORDINATE WITH MANUFACTURER REPRESENTATIVE FOR THE BEST PLACEMENT AND QUANTITY OF THE CEILING MOUNTED SENSORS, AND ADDITIONAL ACCESSORIES FOR COMPLETE AND OPERABLE LIGHTING CONTROL SYSTEM.

COMMUNICATION SYSTEMS SYMBOL:

- WALL PHONE OUTLET WITH COVER PLATE, AT +48"A.F.F (U.N.O), ONE CAT6 CABLE DROP – PROVIDE SINGLE GANG BOX WITH 1G FACE PLATE AND 3/4"C STUB-UP INTO ACCESSIBLE CEILING SPACE U.O.N.
- 2 — DATA OUTLET WITH COVER PLATE, AT +15"A.F.F (U.N.O), SUBSCRIPT INDICATES NUMBER OF DATA DROPS (CAT-6) – PROVIDE 4S J-BOX WITH 1G FACE PLATE AND 3/4"C STUB-UP INTO ACCESSIBLE CEILING SPACE U.O.N.
- DATA OUTLET WITH COVER PLATE, AT +96"A.F.F (U.N.O) FOR TV/LED MONITOR, SUBSCRIPT INDICATES NUMBER OF DATA DROPS (SHIELDED CAT-6) – PROVIDE 4S J-BOX WITH 1G FACE PLATE AND 3/4"C TO TERMINATE IN THE LOCAL MEDIA HUB IN THE CLASSROOM
- AV — MEDIA HUB OUTLET WITH COVER PLATE, AT +15"A.F.F (U.N.O) AT THE MEDIA CABINET LOCATION ADJACENT TO TEACHER'S DESK, TERMINATE ALL OF THE SHIELDED CAT6 CABLE RUNS (FROM TV'S AND CEILING PROJECTOR SCREEN) IN THE CLASSROOM (SHIELDED CAT-6) – PROVIDE 5S J-BOX WITH GROMETTED 1-1/4"DIA S/S FACE PLATE.
- WAP 2 — WALL MOUNT WIRELESS ACCESS POINT. PROVIDE SURFACE MOUNTED 4S-BOX AS REQUIRED WITH 3/4"C RUN WITH CAT6 CABLE TO IDF OR MDF LOCATION OF BUILDING, COORDINATE/VERIFY WITH DISTRICT IT ENGINEER FOR LOCATION PRIOR TO ROUGH-IN.

LOW VOLTAGE SYSTEMS SYMBOL:

- SECURITY SYSTEM CAMERA. PROVIDE/INSTALL FLUSH 4S BOX (WP FOR EXTERIOR LOCATIONS) WITH SEALTITE CONDUIT WHIP TO CAMERA.
- KP — SECURITY/INTRUSION SYSTEM CARD READER/KEY PAD. PROVIDE/INSTALL FLUSH 4S OUTLET BOX. MOUNT AT +48" TO CENTER. (1)
- S — ATLAS PA SPEAKER (WP TYPE). PROVIDE BACK BOX AT 9-6" AFF. 3/4"C. BACK TO PA AMPLIFIER IN THE MDF ROOM.

LOW VOLTAGE/COMMUNICATION CABLE LEGEND:

REFER TO SPECIFICATION DIVISION 27 & 28 FOR LOW VOLTAGE CABLE REQUIREMENT. PROVIDE IN MINIMUM 3/4"C U.N.O.

ALL LISTED CABLES BELOW SHALL BE CONTRACTOR FURNISHED, CONTRACTOR INSTALLED, U.N.O.

- FO – FIBER OPTIC CABLE.
- C – COMPUTER CABLE (CAT-6)
- S/I – SECURITY AND INTRUSION CABLING.

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2013 CALIFORNIA ELECTRICAL CODE (CEC) AND ALL APPLICABLE LOCAL CODES AND REGULATIONS:
   2013 CALIFORNIA ELECTRICAL CODE
   2013 CALIFORNIA FIRE CODE
   2013 CALIFORNIA BUILDING CODE
   2013 CALIFORNIA MECHANICAL CODE
   2013 CALIFORNIA PLUMBING CODE
   2013 CALIFORNIA ENERGY CODE
2. MINIMUM SIZE OF CONDUIT SHALL BE 3/4", MINIMUM SIZE OF CONDUCTOR SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
3. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE CONDUCTORS SHOWN.
4. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
5. ALL JUNCTION BOXES AND PULL BOXES SHALL BE OF CODE GAUGE AND OF THE REQUIRED SIZE TO ACCOMMODATE NUMBER OF CONDUCTORS SHOWN.
6. ALL PULL BOXES IN FINISHED AREAS SHALL HAVE FACTORY APPLIED PRIME COAT OF PAINT.
7. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL MECHANICAL, PLUMBING, AND ALL OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
8. DOORS SHALL BE EQUIPPED WITH FLUSH TYPE, SPRING-LATCHING, CORBIN LOCKS FOR METAL DOORS, KEYED TO CORBIN NO. 60 KEYS. UNLESS OTHERWISE NOTED.
9. STUB OUT (2) 1" CONDUITS FROM ALL FLUSH MOUNTED PANELBOARDS INTO ACCESSIBLE CEILING SPACE AND CAP FOR FUTURE USE.
10. ELECTRICAL CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
11. ALL MOUNTING HEIGHTS SHOWN ARE TO CENTER LINE OF OUTLET OR DEVICE AND SHALL APPLY UNLESS INDICATED OTHERWISE.
12. DRAWINGS ARE DIAGRAMMATIC AND INDICATED GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND SPACE CONDITIONS AT ALL TIMES.
13. LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOOR, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGE. VERIFY FINAL HINGE LOCATION IN FIELD PRIOR TO ANY WORK.
14. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR CLOCKS, SWITCHES, HORNS FIRE ALARM MANUAL PULL STATIONS, SPEAKERS, RECEPTACLES ETC.
15. WHERE ELECTRONIC MOTORS OR HEATERS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT.
16. EXPOSED RACEWAYS (WHEN INDICATED ON DRAWINGS) SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
17. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
18. FURNISH FISH WIRE IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
19. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, UNLESS OTHERWISE INDICATED.
20. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT.
21. SUPPORT PANELBOARDS, JUNCTION AND PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
22. OUTLET BOXES FOR FIXTURES RECESSED IN HARD LID/GYP BOARD CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
23. SEE MECHANICAL, PLUMBING DRAWINGS FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS AND TRANSFORMERS, SWITCHES, TIME CLOCKS, VALVES, STATS, RELAYS, ETC. INDICATED ON CONTROL WIRING DIAGRAMS. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
24. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT SHALL BE WEATHERPROOF TYPE.
25. NO CONDUIT RUNS WILL BE ALLOWED IN CONCRETE SLAB. ALL CONDUITS WILL BE PLACED IN THE HUNG CEILING UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
26. LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK TO BACK.
27. WHERE MORE THAN (1) ONE LIGHT SWITCH OCCURS AT SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE.
28. WHERE MOUNTING HEIGHTS OR DIMENSIONS OF DEVICE LOCATIONS ARE SHOWN, CONTRACTOR SHALL CONFIRM SUCH DIMENSIONS WITH ARCHITECTURAL DRAWINGS. WHERE CONFLICT IN DIMENSIONS OCCUR BETWEEN DRAWINGS, OR WHERE NO DIMENSIONS OR MOUNTING HEIGHTS ARE INDICATED ON EITHER SET OF DRAWINGS, CONTRACTOR SHALL VERIFY THESE ITEMS WITH ARCHITECT IN FIELD PRIOR TO ROUGH-IN.
29. 30. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROTECTED BY MATERIALS TESTED IN ACCORDANCE WITH UL1479/ASTM E-814. INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS AND MAINTAIN THE FIRE RATING OF WALLS AND/OR FLOORS AFFECTED. PROVIDE HILTI C5240 FIRESTOP SEALANT, CSFM LISTING NO. 4060-1200:100, OR EQUIVALENT STATE FIRE MARSHALL APPROVED AND LISTED MATERIAL.
30. WHERE LIGHTING FIXTURES ARE FOR LAY-IN MOUNTING IN AN EXPOSED RUNNER TYPE OF CEILING, PROVIDE EACH FIXTURE WITH CLIPS (4 REQUIRED) OR EQUIVALENT MEANS TO PREVENT THE ACCIDENTAL DISENGAGEMENT OF THE FIXTURE FROM THE CEILING. WHERE FIXTURES IN SUCH CEILINGS ARE SQUARE OR RECTANGULAR IN SHAPE, PROVIDE EACH FIXTURE WITH FOUR (4) #12 AWG GALVANIZED STEEL WIRES WITHIN 3 INCHES OF EACH OF THE CORNERS.
31. THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO ASCE 7-10, CHAPTER 13.
32. ALL CONDUCTORS SHALL BE COPPER, TYPE THHN/THWN, U.O.N. CONDUCTORS IN CONDUIT EXPOSED ON THE ROOF SHALL HAVE 90° NSULATION (THHN), #12 AND SMALLER SHALL BE SOLID TYPE, AND #10 AWG AND LARGER SHALL BE STRANDED.
33. TRANSFORMERS SHALL BE NEMA TP-1 ENERGY EFFICIENT TYPE WITH INSULATION SUITABLE FOR 150° AVERAGE TEMPERATURE RISE. SEE SPECIFICATIONS FOR DETAILS.
34. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT THREADED TYPE ALUMINUM OR STEEL. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE. FLEXIBLE STEEL CONDUIT MAY BE USED AT FIXTURE AND OUTLET CONNECTIONS WITH NO RUNS LONGER THAN SIX FEET. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL CONDUIT RUNS.
35. RIGID GALVANIZED STEEL CONDUIT FITTINGS SHALL BE THREADED AND THOROUGHLY GALVANIZED. ELECTRICAL METALLIC TUBING (EMT) CONDUIT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLESS COMPRESSION TYPE. DIE CAST, SET SCREW, OR INDENTER TYPES ARE NOT ACCEPTABLE. FLEXIBLE STEEL CONDUIT FITTINGS SHALL BE MALLEABLE IRON CLAMP, SQUEEZE TYPE OR STEEL TWIST-IN TYPE WITH INSULTED THROAT. SET SCREW TYPE IS NOT ACCEPTABLE.
36. RECESSED FIXTURE IN FIRE RATED ASSEMBLY SHALL BE APPROVED BY AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION PER 2010 CBC-SECTION 713.3. AND 713.4.
37. BOXES SHALL BE SECURED AS PER 2013 CEC ARTICLE 314.23.
38. 39. ALL U.L. LISTED EQUIPMENT SHALL BE INSTALLED AS PER LISTING OR LABELING (i.e. MAX. FUSE SIZE MEANS FUSE PROTECTION REQUIRED), AND SHALL BE INSTALLED AS APPROVED.
39. ALL EQUIPMENT SHALL BE LISTED BY AN ACCEPTED TESTING LAB AND BEAR THE LISTING STICKER IN AN ACCESSIBLE LOCATION.
40. SUBMIT TORQUE CERTIFICATE FOR ALL ELECTRICAL EQUIPMENT/CONNECTIONS PRIOR TO CERTIFICATE OF OCCUPANCY ISSUANCE.
41. CONSULT WITH THE DISTRICT INSPECTOR BEFORE STARTING WORK.
42. ALL FEEDERS AND BRANCH CIRCUITS SHALL CARRY A GROUND WIRE, SIZED AS PER N.E.C. ARTICLE 250.
43. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.

MEP COMPONENT ANCHORAGE NOTES

1. MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN 2013 CALIFORNIA BUILDING CODE, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 6 AND 30.
   A. PERMANENT EQUIPMENT AND COMPONENTS.
   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS, OR WATER.
   C. MOVEABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8-HOURS AND HEAVIER THAN 400-POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
2. THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
   A. COMPONENTS WEIGHING LESS THAN 400-POUNDS AND HAVE A CENTER OF MASS LOCATED 4-FOOT OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
   B. COMPONENTS WEIGHING LESS THAN 20-POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5-POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.
3. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

SIESMIC BRACING NOTES

1. SEISMIC BRACING AND ANCHORAGE OF PIPING, DUCTWORK, AND SUSPENDED EQUIPMENT SHALL BE PROVIDED USING A SEISMIC RESTRAINT MANUAL THAT BEARS AN OSHPD ANCHORAGE PRE-APPROVAL NUMBER: OPA-0349 MASON INDUSTRIES "SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED PIPING, DUCTWORK, AND ELECTRICAL SYSTEMS", NO. OPA-0485 I.S.A.T. "ENGINEERED SEISMIC BRACING OF SUSPENDED UTILITIES", OR APPROVED EQUAL.
   A. A COPY OF OSHPD PRE-APPROVED SYSTEMS INSTALLATION GUIDE/MANUAL SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO STARTING INSTALLATION AND KEPT ON THE JOB SITE.
   B. PROVIDE SHOP DRAWINGS SHOWING HOW PRE-APPROVED SYSTEM WILL BE APPLIED TO EACH PIPE AND DUCT SYSTEM. STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF SUPPORTING STRUCTURE TO SUPPORT LOADS OF ANCHORAGE AND BRACING SYSTEM BASED ON SHOP DRAWINGS. STRUCTURAL ENGINEER OF RECORD SHALL REVIEW SHOP DRAWINGS.
   C. SHOP DRAWING SHALL BE STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
   D. SHOP DRAWINGS OF SEISMIC BRACING SHALL BE AVAILABLE TO THE INSPECTOR OF RECORD TO VERIFY THE INSTALLATION OF THE SEISMIC BRACING.
2. REFER TO STRUCTURAL DRAWINGS FOR CONCRETE ANCHOR TYPE AND INSTALLATION REQUIREMENTS.
3. PIPING, DUCTWORK AND CONDUIT CROSSING BUILDING SEISMIC SEPARATIONS SHALL BE PROVIDED WITH APPROVED FLEXIBLE CONNECTORS.

ABBREVIATIONS

A	AMPERES.
A/C	AIR CONDITIONING.
AFF	ABOVE FINISHED FLOOR.
AFG	ABOVE FINISHED GRADE.
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
ARCH	ARCHITECTURAL
ATS	AUTOMATIC TRANSFER SWITCH
BKBD	BACKBOARD.
C	CONDUIT WITH WIRES.
CATV	CABLE TELEVISION
C/B	CIRCUIT BREAKER.
CKT	CIRCUIT.
CLDC	CLASSROOM LIMITED DISTRIBUTION CABINET.
CLG	CEILING.
CO	CONDUIT ONLY WITH PULL WIRE.
CU	COPPER
DE	DUAL ELEMENT FUSES.
DISC	DISCONNECT.
DIST	DISTRIBUTION.
DWG	DRAWING.
DDC	DIRECT DIGITAL CONTROL
EA	EACH.
EG	EQUIPMENT/GREEN GROUND
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL.
EM	EMERGENCY
EMT	ELECTRICAL METALLIC
EQUIP	EQUIPMENT.
EXIST	EXISTING.
F	FUSE.
FA	FIRE ALARM
FIXT	FIXTURE.
FLUOR	FLUORESCENT.
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER.
GND	GROUND.
HOA	HAND-OFF-AUTOMATIC.
HP	HORSEPOWER.
Isc	SHORT CIRCUIT CURRENT
IC	INTERCOM.
IDF	INTERMEDIATE DISTRIBUTION FRAME
J	JUNCTION.
LCL	LONG CONTINUOUS LOAD.
LTG	LIGHTING.
MAX	MAXIMUM.
MIN	MINIMUM.
MTG	MOUNTING.
NF	NON-FUSED.
NIC	NOT IN CONTRACT.
NL	NIGHT LIGHT.
NTS	NOT TO SCALE.
OFCI	OWNER FURNISH CONTRACTOR INSTALL
OFOI	OWNER FURNISH OWNER INSTALL
P	POLE.
PA	PUBLIC ADDRESS.
PB	PULL BOX.
PC	PHOTO CELL
PH	PHASE
PNL	PANEL.
PWR	POWER.
RECEPT	RECEPTACLE
REQ'D	REQUIRED.
RM	ROOM
SC	SEPARATE CIRCUIT
SHT	SHEET.
SPST	SINGLE POLE, SINGLE THROW.
SURF	SURFACE.
SW	SWITCH.
SWGR	SWITCHGEAR
TC	TIME CLOCK.
TERM	TERMINAL.
TEL	TELEPHONE
TV	TELEVISION.
TYP	TYPICAL.
UG	UNDERGROUND.
UGPS	UNDERGROUND PULL SECTION
UON	UNLESS OTHERWISE NOTED.
V	VOLTS.
W/	WITH.
WCR	WITHSTAND AND CLOSING RATING
WP	WEATHERPROOF.
XFMR	TRANSFORMER
4/S	JUNCTION BOX 4" SQUARE.
5/S	JUNCTION BOX 4-11/16".

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CLIENT NAME

COMPTON CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES

FILE NO: 19-C1
A#: 03-117673

AC____ FLS____ SS____
DATE________

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PROJECT TEAM

PRINCIPAL IN CHARGE
KEVIN CHEN

PROJECT MANAGER
-

DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. INJO
E-13884
Exp. 06/30/18
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

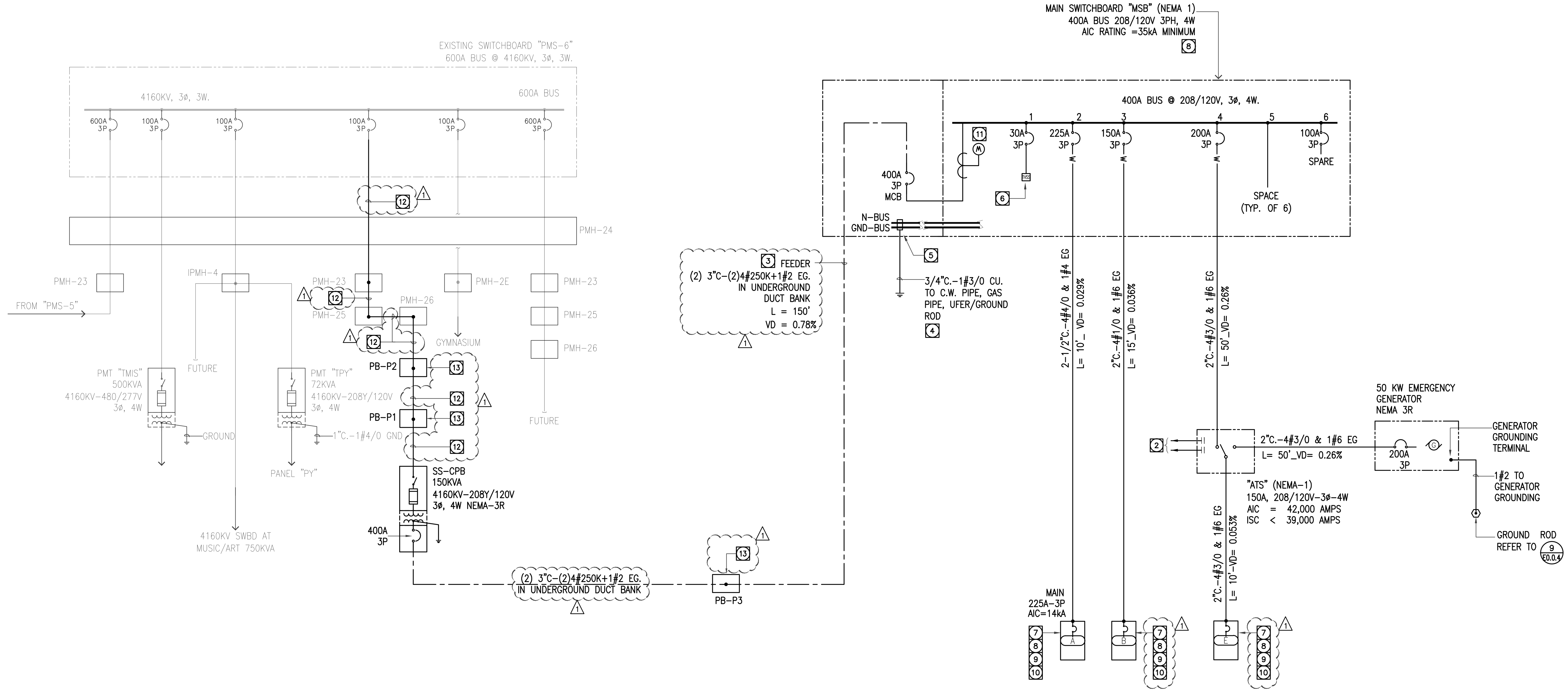
SHEET TITLE

ELECTRICAL LEGEND AND NOTES

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-E0.0.1



CK NO	DESCRIPTION	LTG	REC	MTR	HTG	MIS	CIRCUIT BREAKER	A	B	C	CK NO
PANEL : A											
VOLTAGE : 208 / 120	LOCATION : ELECT. RM. 105										
BUS AMPERE : 225 AMP	FED FROM : MSB-2										
MAIN C/B : 225 AMP	MAIN TYPE : AUTO C/B										
PHASE : 3	WIRE : 4										
MOUNTING : SURFACE	DISTANCE : FT										
POLES : 42	SPARE CAP : 0 %										
1	LTS-RMS. A103-A106,A111,A119-A127,A129,A130	47					20 / 1	1.25			1
2	SPARE						20 / 1	0.00			2
3	LTS-RMS. A108-A110,COR,A112,COR,A114-A118,A128,	55					20 / 1		1.30		3
4	SPARE						20 / 1		0.00		4
5	LIGHTS - COVE - RMS. A107,A109	24					20 / 1			0.72	5
6	SPARE						20 / 1			0.00	6
7	PARKING LOT LIGHTS					3	20 / 1	0.50			7
8	RECEPTS. - RMS. A121,A122		5				20 / 1	0.90			8
9	SPARE						20 / 1		0.00		9
10	RECEPTS. - RMS. A119,A123 & EXT.		6				20 / 1		1.08		10
11	SPARE						20 / 1			0.00	11
12	SPARE						20 / 1			0.00	12
13	SPARE						20 / 1	0.00			13
14	RECEPTS. - RMS. A110,A112,A113		9				20 / 1	1.62			14
15	RECEPTS. - RMS. A116,A128		6				20 / 1		1.08		15
16	RECEPTS. - RM. A110 (REFRIG.)					1	20 / 1		0.80		16
17	RECEPTS. - RMS. A114 - A116,CORR.		6				20 / 1			1.08	17
18	RECEPTS. - RM. A110		2				20 / 1			0.36	18
19	RECEPTS. - RMS. A121,A120,A126,CORR.		5				20 / 1	0.90			19
20	RECEPTS. - RM. A111		4				20 / 1	0.72			20
21	RECEPTS. - RMS. A119,A122,A123,A127		5				20 / 1		0.90		21
22	RECEPTS. - RM. A111		5			1	20 / 1		1.28		22
23	RECEPTS. - RMS. A106,A109		5				20 / 1			0.90	23
24	RECEPTS. - RMS. A104,A124,A125,CORR.		6				20 / 1			1.08	24
25	RECEPTS. - RM. A130		4				20 / 1	0.72			25
26	RECEPTS. - RM. A108		5				20 / 1	0.90			26
27	RECEPTS. - RMS. A103,A129		8				20 / 1		1.44		27
28	RECEPTS. - RM. A108 (TV MONITOR)					1	20 / 1		0.20		28
29	CUBICLE WORK STATION - RM. A109					1	20 / 1			0.54	29
30	SPARE						20 / 1			0.00	30
31	CUBICLE WORK STATION - RM. A109					1	20 / 1	0.54			31
32	WP RECEPT. - GOLF CART CHARGING					1	20 / 1	1.20			32
33	SPARE						20 / 1		0.00		33
34	WP RECEPT. - GOLF CART CHARGING					1	20 / 1		1.20		34
35	SPARE						20 / 1			0.00	35
36	WP RECEPT. - GOLF CART CHARGING					1	20 / 1			1.20	36
37	SPARE						20 / 1	0.00			37
38	WP RECEPT. - GOLF CART CHARGING					1	20 / 1	1.20			38
39	SPARE						20 / 1		0.00		39
40	SPARE						20 / 1		0.00		40
41	SPARE						20 / 1			0.00	41
42	SPARE						20 / 1			0.00	42
CONN LOAD = 25.61 KVA	TOTAL BY PHASE (KVA) =							10.46	9.27	5.88	
MIN FDR = 73 AMP	MIN C/B = 73 AMP						LGST MTR = 0 AMP		SPARE =	0.00 KVA	
LCL(LTG+HTG) = 3.27 KVA	25% LCL = 0.82 KVA						CONN LOAD + 25% LCL =			26.43 KVA	

CK NO	DESCRIPTION	LTG	REC	MTR	HTG	MIS	CIRCUIT BREAKER	A	B	C	CK NO
PANEL : B											
VOLTAGE : 208 / 120	LOCATION : ELECT. RM. 105										
BUS AMPERE : 225 AMP	FED FROM : MSB-3										
MAIN C/B : 150 AMP	MAIN TYPE : AUTO C/B										
PHASE : 3	WIRE : 4										
MOUNTING : SUFACE	DISTANCE : FT										
POLES : 42	SPARE CAP : 0 %										
1	FAN COIL UNIT "FC-1" - RM. 108					1	20 / 2	0.26			1
2	FAN COIL UNIT "FC-1" - RM. 110					1	20 / 2	0.26			2
3	W/CKT 1						------ / ---		0.26		3
4	W/CKT 2						------ / ---		0.26		4
5	FAN COIL UNIT "FC-4" - RM. 109					1	20 / 2			0.34	5
6	FAN COIL UNIT "FC-5" - RM. 111					1	20 / 2			0.34	6
7	W/CKT 5						------ / ---	0.34			7
8	W/CKT 6						------ / ---	0.34			8
9	FAN COIL UNIT "FC-6" - CORRIDOR					1	20 / 2		0.46		9
10	FAN COIL UNIT "FC-7 - RM. 112					1	20 / 2		0.34		10
11	W/CKT 9						------ / ---			0.46	11
12	W/CKT 10						------ / ---			0.34	12
13	FAN COIL UNIT "FC-8" - CORRIDOR					1	20 / 2	0.34			13
14	FAN COIL UNIT "FC-9" - RM. 104					1	20 / 2	0.34			14
15	W/CKT 13						------ / ---		0.34		15
16	W/CKT 14						------ / ---		0.34		16
17	FAN COIL UNIT "FC-10" - RM. 109					1	20 / 2			0.34	17
18	SPARE						20 / 1			0.00	18
19	W/CKT 17						------ / ---	0.34			19
20	TRAP PRIMER "TP-1" - RMS. 122,134					2	20 / 1	0.02			20
21	"VF-1" - ROOF					1	15 / 2		0.61		21
22	DDC CONTROL PANEL					1	20 / 1		0.50		22
23	W/CKT 21						------ / ---			0.61	23
24	"EF-1" (1/2HP) - ROOF					1	15 / 2			0.52	24
25	AIR COMPRESSOR					1	20 / 1	1.66			25
26	W/CKT 24						------ / ---	0.52			26
27	"HRU-1" - RM. 103					1	20 / 2		0.02		27
28	RECEPT. - ROOF		1				20 / 1		0.18		28
29	W/CKT 27						------ / ---			0.02	29
30	"HRU-2" - RM. 103					1	20 / 2			0.02	30
31	"HRU-3" - RM. 112					1	20 / 2	0.02			31
32	W/CKT 30						------ / ---	0.02			32
33	W/CKT 31						------ / ---		0.02		33
34	IWH - 6.2 KW BREAK RM 114				1		40 / 2		3.10		34
35	SPARE						20 / 1			0.00	35
36	W/ CKT #34						------ / ---			3.10	36
37	ELEC WATER HTR. "EWH-1"				1		35 / 3	3.00			37
38	SPARE						20 / 1	0.00			38
39	W/ CKT #37						------ / ---		3.00		39
40	SPACE						------ / 1		0.00		40
41	W/ CKT #37						------ / ---			3.00	41
42	SPACE						------ / 1			0.00	42
CONN LOAD = 25.98 KVA	TOTAL BY PHASE (KVA) =							7.46	9.43	9.09	
MIN FDR = 76 AMP	MIN C/B = 76 AMP						LGST MTR = 0 AMP		SPARE =	0.00 KVA	
LCL(LTG+HTG) = 6.10 KVA	25% LCL = 1.53 KVA						CONN LOAD + 25% LCL =			27.51 KVA	

CK NO	DESCRIPTION	LTG	REC	MTR	HTG	MIS	CIRCUIT BREAKER	A	B	C	CK NO
PANEL : E (EMERGENCY)											
VOLTAGE : 208 / 120	LOCATION : ELECT. RM. 105										
BUS AMPERE : 225 AMP	FED FROM : ATS										
MAIN C/B : 200 AMP	MAIN TYPE : AUTO C/B										
PHASE : 3	WIRE : 4										
MOUNTING : SURFACE	DISTANCE : FT										
POLES : 42	SPARE CAP : 0 %										
1	LTS-RMS. A105,A107-A109,A111-A113,COR,A116,COR	44					20 / 1	0.91			1
2	EMERGENCY CODE BLUE PANEL					1	20 / 1	0.20			2
3	LIGHTS - EXTERIOR & FRONT ENTRY	6					20 / 1		0.13		3
4	SPARE						20 / 1		0.00		4
5	SPARE						20 / 1			0.00	5
6	AUTO. DOOR OPERATOR - LOBBY A108					1	20 / 1			0.30	6
7	PARKING LOT LIGHTS					3	20 / 1	0.50			7
8	SPARE						20 / 1	0.00			8
9	SPARE						20 / 1		0.00		9
10	BLOCK HEATER - EMERG. GEN.					1	20 / 1		1.50		10
11	SEC. CAMERA CONTR. - IDF RM. 131					1	20 / 1			0.10	11
12	BATTERY CHARGER - EMERG. GEN.					1	20 / 1			1.80	12
13	RECEPTS. - DISPATCH		1				20 / 1	0.18			13
14	RECEPTS. (MONITORS) - DISPATCH					6	20 / 1	1.80			14
15	RECEPTS. - DISPATCH		1				20 / 1		0.18		15
16	RECEPTS. (MONITORS) - DISPATCH					6	20 / 1		1.80		16
17	RECEPTS. - DISPATCH		1				20 / 1			0.18	17
18	SPARE						20 / 1			0.00	18
19	RECEPTS. - ELEC. RM. 105,IDF RM. 131		4				20 / 1	0.72			19
20	CONDENSING UNIT "CU-1A" - EXTERIOR					1	60 / 3	3.29			20
21	RECEPTS. - IT RM. (IDF CABINET)					1	20 / 1		0.50		21
22	W/CKT 20						------ / ---		3.29		22
23	SPARE						20 / 1			0.00	23
24	W/CKT 20						------ / ---			3.29	24
25	MOTORIZED GATE CONTROLLER					1	20 / 1	0.50			25
26	SPARE						20 / 1	0.00			26
27	SPARE						20 / 1		0.00		27
28	ELEC. DOOR LATCH - RMS. 107,108,CORR.,128,CORR.					7	20 / 1		0.07		28
29	REMOTE GEN. CONTROLLER - DISPATCH					1	20 / 1			0.01	29
30	FACP - ELEC. RM.					1	20 / 1			0.25	30
31	CONDENSING UNIT "CU-1B" - EXTERIOR					1	40 / 3	2.04			31
32	FAN COIL UNIT "FC-2" - DISPATCH					1	20 / 2	0.34			32
33	W/CKT 31						------ / ---		2.04		33
34	W/CKT 32						------ / ---		0.34		34
35	W/CKT 31						------ / ---			2.04	35
36	FAN COIL UNIT "FC-11" - IT RM.					1	20 / 2			0.02	36
37	FAN COIL UNIT "FC-12" - ELEC. RM.					1	20 / 2	0.02			37
38	W/CKT 36						------ / ---	0.02			38
39	W/CKT 37						------ / ---		0.02		39
40	SPARE						20 / 1		0.00		40
41	SPARE						20 / 1			0.00	41
42	SPARE						20 / 1			0.00	42
CONN LOAD = 28.40 KVA	TOTAL BY PHASE (KVA) =							10.53	9.88	7.99	
MIN FDR = 80 AMP	MIN C/B = 80 AMP						LGST MTR = 0 AMP		SPARE =	0.00 KVA	
LCL(LTG+HTG) = 1.05 KVA	25% LCL = 0.26 KVA						CONN LOAD + 25% LCL =			28.66 KVA	

Compton Community College - Public Safety Building
1111 East Artesia Boulevard, Compton California 90221

Electrical Load Information

1. Main Switchboard:
New Main Switchboard to be 400amp 208/120 volt 3 Phase, 4 Wire

New Electrical Load Calculations

Description	Unit Load	Connected KVA Loads
A. Office Building		
Single Story (5,400 SF)		
Lighting	3.5 VA/SF	18.9
Power	3.0 VA/SF	16.2
HVAC	4.5 VA/SF	24.30
B. Parking Lot/Site		
Driveway/Parking Lighting		1.50
Motorized Gate Power		5.00
Security Equipment		5.00
Misc		10.00
	Connected Totals =	80.90
Future Building Growth	20%	16.18
	Total Connected Load =	96.18

= 267.166 Amp at 208Y/120V-3Phase, 4W

SWITCHGEAR SCHEDULE

ID #	DESCRIPTION	MTG.	DIMENSIONS (L x W x H)	WEIGHT (LBS)
SS - CPF	150Kva SUB STATION	PAD MOUNTED		
SECTION 1	HV FUSED SWITCH	PAD MOUNTED	41" x 55" x 95"	800
SECTION 2	XFRMR SECTION	PAD MOUNTED	84" x 66" x 102"	1500
SECTION 3	XFRMR CB SECTION	PAD MOUNTED	55" x 61" x 90"	800
MS	MAIN SWITCHBOARD			
SECTION 1	(MAIN & DIST. CB'S)	FLOOR STANDING	45" x 18" x 90"	771
ATS	TRANSFER SWITCH	WALL MOUNTED	18" x 13" x 38"	164
		+60" AFG TO TOP		
GCC	PANEL BOARD	WALL MOUNTED	30" x 10" x 36"	90
		+60" AFG TO TOP		

SHEET NOTES:

1. SCREENED ITEMS DENOTES ON SINGLE LINE EXISTING EQUIPMENT TO REMAIN IN PLACE U.O.N.
2. BOLD ITEMS DENOTES NEW WORK.

GENERAL NOTES:

1. SWITCHGEAR SHOP DRAWING SUBMITTAL SHALL INCLUDE SAMPLE OF ARC-FLASH LABEL, ARC-FLASH LABEL SHALL BE PROVIDED BY SWITCHGEAR MANUFACTURER AND INCLUDE NOMINAL SYSTEM VOLTAGE, ARC-FLASH BOUNDARY AND SPECIFIC LEVEL PPE/ ARC-FLASH PPE CATEGORY.
2. SWITCHBOARD, DISTRIBUTION PANELS, FEEDERS, CIRCUIT BREAKERS, DISCONNECT SWITCH AND FUSES (SHOWN IN SCREENED) ARE EXISTING TO REMAIN, UNLESS OTHERWISE NOTED.
3. PROVIDE NAME PLATE FOR THE NEW EQUIPMENT, NAME PLATE SHALL BE ATTACHED WITH SHEET METAL SCREWS, GLUE ON ADHESIVES NOT ACCEPTABLE. SAMPLE PANELBOARD NAME PLATE SHALL INCLUDE THE FOLLOWING INFORMATION:
   PANEL "LD"
   600A MAIN, 208Y/120V-3PH-4W
   FED FROM "1MS"
4. ALL CIRCUIT BREAKERS SHALL BE 3 POLES - MCCB TYPE CIRCUIT BREAKER, UNLESS OTHERWISE NOTED.
5. MINIMUM CIRCUIT BREAKER AMPERE INTERRUPTING CAPACITY SHALL BE 10,000 AMPS FOR 208/120V-3PH-4W BRANCH CIRCUIT PANEL BOARD.
6. FEEDER LENGTHS ARE SHOWN FOR CALCULATION PURPOSES ONLY AND SHALL NOT BE USED FOR BIDDING/MATERIAL TAKE-OFF.
7. FUSES FOR MOTOR SERVICE DISCONNECT SWITCH SHALL BE TIME DELAY AND DUAL ELEMENT TYPE.
8. SINGLE LINE DIAGRAM SHOWN IS ENGINEERED BASED ON "EATON" SWITCHGEAR & IFS SWITCHBOARD WITH CU-BUS AS BASIS OF DESIGN, ADDITIONAL ENGINEERING SERVICES REQUIRED ON THE IMPLEMENTATION OF THE ALTERNATE QUALIFIED SWITCHGEAR SHALL BE CONTRACTOR'S RESPONSIBILITY.
9. ALL ELECTRICAL FACILITIES REQUIRED FOR ELECTRICAL SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH THE SCE ELECTRICAL SERVICE REQUIREMENTS AND SCE PROPOSED ELECTRIC UNDERGROUND LAYOUT PLAN FOR CUSTOMER INSTALLATION (DWG # 16P0315).
10. MAIL FOUR COPIES OF SHOP DRAWINGS SHOWING PROPOSED SERVICE AND METERING FACILITIES PRIOR TO FABRICATION OF THE SERVICE SWITCHBOARD, AND OBTAIN APPROVAL FROM : SCE - COMPTON SERVICE CENTER, ATTENTION: DWAYNE HORTEN

REFERENCE NOTES

1. NOT USED.
2. PROVIDE/INSTALL 1"C.-4#12 TO EMERGENCY GENERATOR CONTROL PANEL, FOR ENGINE START. VERIFY EXACT P.O.C. IN FIELD PRIOR TO INSTALLATION.
3. COORDINATE WITH SITE PLAN FOR EXACT LOCATION OF SUB-STATION.
4. PROVIDE (2) 3/4" DIA. x 10'-0" COPPER-CLAD STEEL GROUND RODS, MINIMUM 6'-0" APART, FACILITY COLD WATER PIPE, GAS PIPE AND UFER GROUND CONNECTIONS. EACH GROUND ROD SHALL BE IN PRECAST GROUND ELECTRODE ENCLOSURE WITH TRAFFIC COVER (GROUND WELL) AND CONNECT WITH 3/4"C.-1#3/0 CU. TO SERVICE SWITCHBOARD GROUND BUS.
5. PROVIDE BONDING JUMPER REQUIRED AT THE SERVICE SWITCHBOARD "MSB" GROUND BUS.
6. INTEGRATED INTO DISTRIBUTION SECTION. 200KA-208Y/120VAC, 3Ø, 4W.
7. PROVIDE "HACR" TYPE BRANCH CIRCUIT BREAKER IN THE PANELBOARD FOR BREAKERS SERVING HVAC UNITS.
8. PROVIDE ARC FLASH LABEL AND ARC FLASH WARNING.
9. FURNISH GROUND BUS IN EACH BRANCH CIRCUIT PANEL. ALL PANELS 208/120 VOLT, SHALL HAVE THE FEEDER EQUIPMENT GROUNDING CONDUCTOR AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR CONNECTED TO GROUND BUS. FURNISH EQUIPMENT GROUNDING CONDUCTOR IN EVERY FEEDER AND BRANCH CIRCUIT, RUN TO LAST OUTLET AND CONNECT TO BUS. CONDUIT GROUND IS NOT ACCEPTABLE AS A SUBSTITUTE. TYPICAL ALL PANELS, SWITCHBOARDS, DISTRIBUTION PANELBOARDS, AND SWITCHGEAR.
10. FURNISH AND INSTALL POWER DISTRIBUTION PANELBOARDS AS INDICATED ON THIS SHEET.
11. EATON'S PX-MULTIPOINT METER (PXMP) WITH COLOR TOUCH SCREEN, ENERGY PORTAL MODULE (EPM) WITH ETHERNET CAPABILITY - TO MONITOR EACH DOWN STREAM FEEDER BREAKER POWER AND ENERGY. REFER TO DETAIL #5/E0.06.
12. FURNISH AND INSTALL TYPE MV-105, EPR SHIELDED 3#2-5KV POWER CABLE WITH 1#6 THHN FOR FEEDER OF NEW SUBSTATION FROM EXISTING SWITCHBOARD "PMS-6", REFER TO SHEET E1.1.0 FOR UNDERGROUND ROUTING.
13. REFER TO SHEET E1.1.0 & E1.1.1 FOR PULLBOX REQUIREMENTS.

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CLIENT NAME: COMPTON CCD

PROJECT NAME: CAMPUS PUBLIC SAFETY BUILDING
1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW:
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
FILE NO: 19-C1
A#: 03-117673
AC____ FLS____ SS____
DATE____

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PROJECT TEAM
PRINCIPAL IN CHARGE: KEVIN CHEN
PROJECT MANAGER: -
DRAWN BY: dHA+CALPEC

REVISIONS

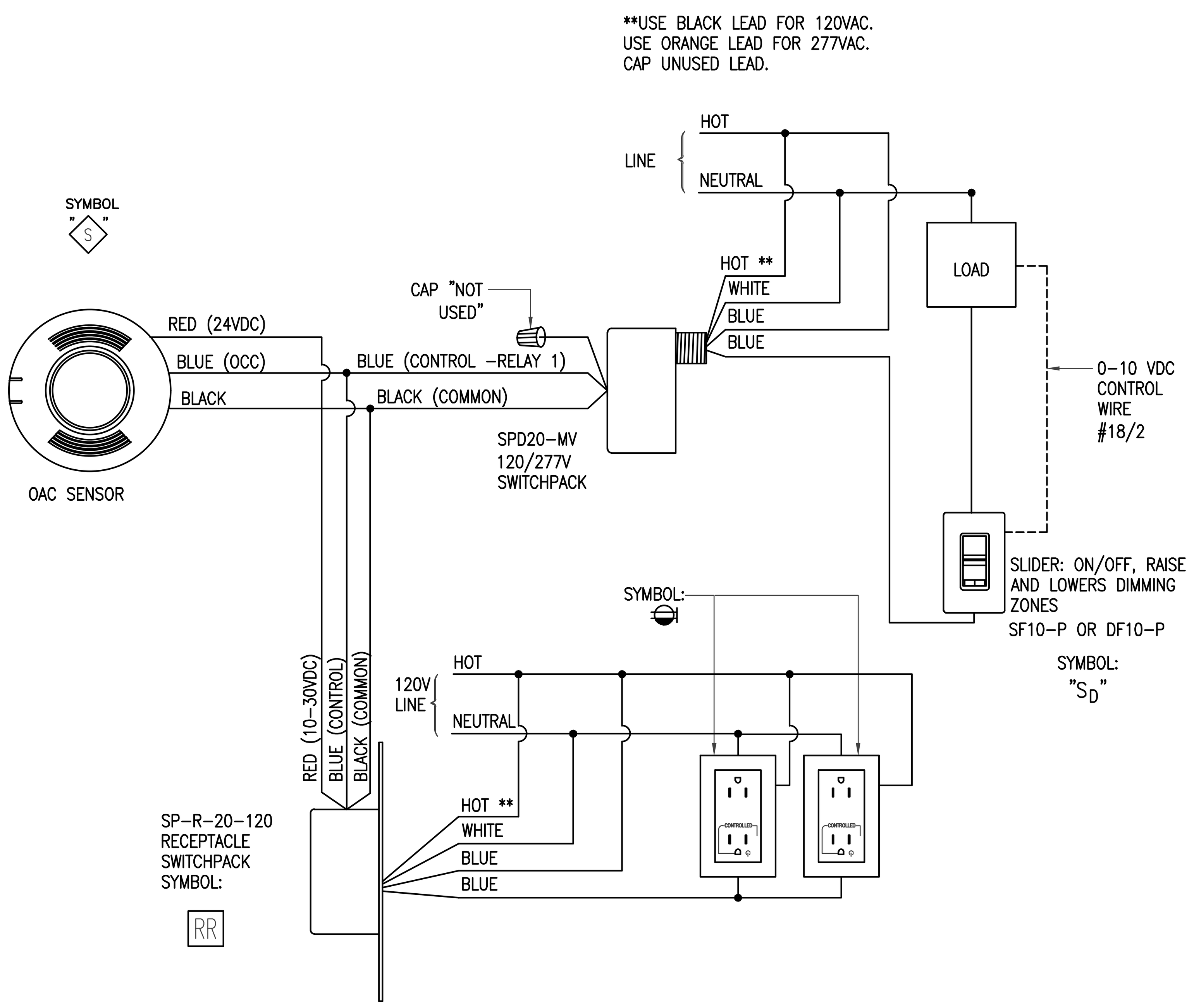
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE: SINGLE LINE DIAGRAM & SCHEDULES

PROJECT NUMBER: 913-4675-01

ISSUE DATE: 11/21/2017
SHEET NO.: AD1-E0.0.2



2 LIGHTING AND RECEPTACLE CONTROL WIRING DETAIL

GENERAL NOTES:

1. SEE LIGHTING AND POWER PLAN E2.1.1 & E2.1.2 FOR DEVICE REQUIREMENTS IN EACH ROOM.
2. LIGHTING: COOPER SPD20-MV-NO SWITCH PACK. 120/277VAC,
   RECEPTACLE: SP-R-20-120 SWTCH PACK OR EQUAL 20AMP RATING PER RELAY.
3. BLUE AND RED WIRE LEADS ARE NON-POLARITY SENSITIVE.
4. COOPER OAC-P-500 CEILING OCCUPANCY SENSOR OR EQUAL SHOWN.

ROOM CONTROLLER AND SMART DEVICES USE CLICK & GO TECHNOLOGY:

THE RC3DE WILL AUTOMTICALLY RECOGNIZE ANY SMART DEVICE CONNECTED WITH THE QUICK CONNECT CABLE (PROVIDED) AND START WORKING IMMEDIATELY UPON POWER UP WITH NO PROGRAMMING REQUIRED.
THE RC3DE DEFAULTS TO MANUAL ON/AUTOMATIC OFF VACANCY SENSOR MODE FOR MAXIMUM ENERGY SAVINGS. OFFICE WALLSTATIONS WILL PROVIDE ON/OFF/PRESET/RAISE/LOWER CONTROL OF THE LIGHTING LOADS AND DIMMERS.
THE DAYLIGHT SENSOR WILL AUTOMATICALLY ON POWER UP PROVIDE MULTI-ZONE DAYLIGHT DIMMING IN THE SPACE. (REMOTE ADJUSTMENTS CAN BE MADE LATER)

EMERGENCY NOTE:

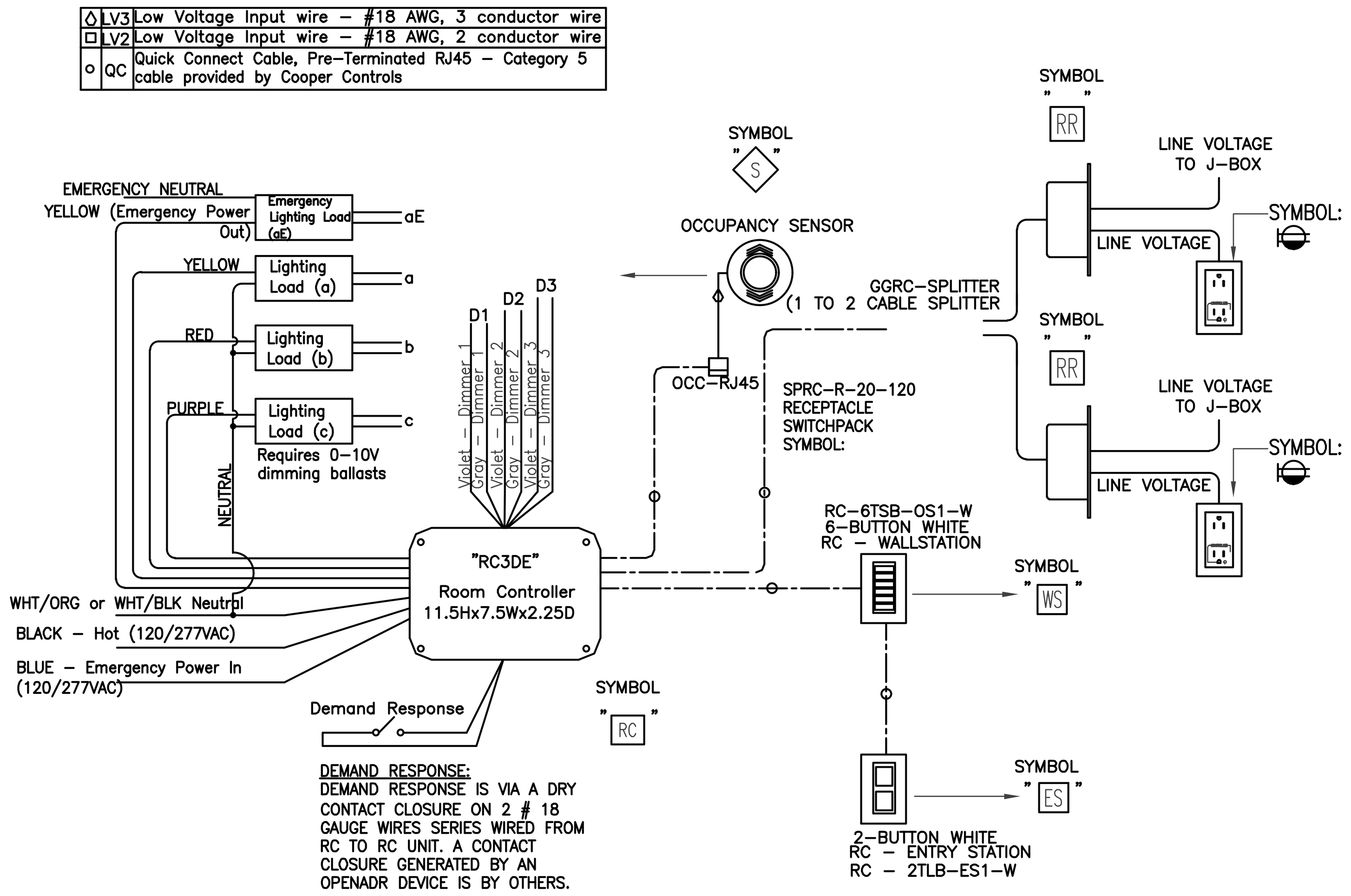
EMERGENCY LOAD TRACKS WITH NORMAL LIGHTING YELLOW LOAD FOR ON/OFF.
IF DIMMING IT WILL BE ADJUSTED WITH THE DIMMING ZONE IT IS CONNECTED TO.
UPON LOSS OF NORMAL POWER TO THE RC3DE, THE EMERGENCY LOAD WILL BE FORCED ON AND FULL BRIGHT TO 100%.
EMERGENCY RELAYS ARE ONLY AVAILABLE WITH THE RC3DE MODEL.
RC3DE IS UL924 LISTED.
0-10V DIMMING CONNECTION
0-10V DIMMING ZONE NOTE:
THE 0-10V DIMMING ZONES WITHIN THE ROOM CONTROLLER CAN BE WIRED AND CONTROLLED INDEPENDENT OF THE CONNECTED LOADS. THIS ALLOWS EACH LOAD TO HAVE A DEDICATED 0-10V DIMMING ZONE OR A SINGLE LOAD TO HAVE UP TO THREE 0-10V DIMMING ZONES.

NOTES

1	Refer to plans for locations and quantity.
2	Refer to all manufacturers installation instructions for correct wiring information
3	Each Occupancy sensors and BMS output requires an OCC-RJ45
4	Each Room Controller can power up to 4 Wallstations and 5 Receptacle Controls
5	Each Room Controller can power up to 2 Occupancy sensors and 1 Daylight sensor
6	Daylight sensors can only be used for Room Controllers with dimming capability

CABLE

◊	LV3	Low Voltage Input wire – #18 AWG, 3 conductor wire
□	LV2	Low Voltage Input wire – #18 AWG, 2 conductor wire
o	QC	Quick Connect Cable, Pre-Terminated RJ45 – Category 5 cable provided by Cooper Controls



3 ROOM CONTROLLER WIRING DETAIL

FIXTURE SCHEDULE

FIXTURE SYMBOL	FIXTURE DESCRIPTION	DIMMING SPEC'D	PRODUCT ID#	LAMPS, LUMENS, KELVIN, CRI, BUG	VOLT	WATTS	MOUTING, LOCATION
A / 16	4" ROUND LED RECESSED DOWNLIGHT, SELF FLANGED WITH LENS AND 0-10V DIMMING DRIVER. UL STDS 1598/8750	0-10V	SPECTRUM LIGHTING, INC. INFINIUM SGE4LEDOS-10L-35K-DS101 -BH27-AR42230S-SG-SO	LEDM OSRAM, 1100LM, 3500K, 84 CRI	120	16	LOBBY, SERVICE WINDOW & DISPATCH AREA, RECESSED, 9'0" OR 8'0" AT HALLWAY
D / 16	12" ROUND LED RECESSED DOWNLIGHT. SELF FLANGED, WITH LENS AND 0-10V DIMMING DRIVER. UL STDS 1598/8750	0-10V	SPECTRUM LIGHTING, INC. SGE12LEDOS-10L-35K-DS101 -BH27-AR12230S-SG-FG	LEDM OSRAM, 1100LM, 3500K, 84 CRI	120	16	HALLWAYS, WATCH STATION & BREAK, RECESSED ACT CEILING
B4 / 29	2X4 CENTER BASKET LED LENSED TROFFER, RECESSED ACT CEILING, 35K, 0-10V DIMMING DRIVER, UL RECOGNIZED COMPONENTS	0-10V	METALUX 24CZ-LD5-40-UNV -L835-CD1-U	LEDM EATON, 3964LM, 3500K, 80 CRI	UNV	29	PRIVATE/OPEN OFFICES, MAIL ROOM, MEETING ROOM RECESSED ACT CEILING
B4F / 29	SAME AS TYPE B BUT W/FLANGE KIT FOR RECESSED HARD CEILING MOUNTED	0-10V	METALUX 24CZ-LD5-40-UNV -L835-CD1-U-DF-24-W	LEDM EATON, 3964LM, 3500K, 80 CRI	UNV	29	INTERVIEW ROOMS, DRUG STORAGE & SECURE EVIDENCE, RECESSED IN SHEETROCK AT 9'0"
C / 31	2X4 LED RECESSED LENSED TROFFER, RECESSED HARD CEILING, 35K, 0-10V DIMMING DRIVER, UL RECOGNIZED COMPONENTS	0-10V	METALUX 24GR-LD5-38-A125 -L835-CD1-U-DF-24-W	LEDM EATON, 3880LM, 3500K, 80 CRI	UNV	30.6	ARMORY, RECESSED IN SHEETROCK AT 8"-0'
E / 40	ALUMINUM NARROW LED LINEAR 2" WIDE STRIP, SURFACE OR SUSPENDED WITH CLEAR LENS.	0-10V	LAMAR ALN-48-C-40	LEDM LAMAR, 3898LM, 3500K, 80 CRI	UNV	40	STORAGE, SUPENDED IN OPEN CEILING & TOILETS, LOCKERS, CUSTODIAL, SURFACE CEILING MOUNTED
EE / 80	SAME AS TYPE E BUT TWO ROW TOGETHER, PROVIDE WITH ALL REQUIRED PARTS FOR COMPLETE ASSEMBLY	0-10V	LAMAR (2) ALN-48-C-40	LEDM LAMAR, (2)3898LM, 3500K, 80 CRI	UNV	80	GUNS CLEANING, SUSPENDED, OPEN CEILING
F / 11	6" RECESSED ROUND DOWNLIGHT, GLASS LENS, WET LOCATION, UL STDS 1598/8750	0-10V	SPECTRUM LIGHTING, INC. SGE6LEDOS-10L-35K-DS101 -BH27-AR62230S-SG-SO-WL	LEDM OSRAM, 1100LM, 3500K, 84 CRI	120	11	RECESSED IN SHOWERS
G / 9	6"DIA x 6"H CYLINDER LED DOWN LIGHT, WALL MOUNTED, EXTERIOR RATED, BLACK FINISH COLOR.	120V	SPECTRUM LIGHTING INC. SPC0606LEDGV-15L-35K-E1 6020GV-SG-SO-WL-WM-MB	SAMSUNG LED, 1500LM, 3500K, 84CRI	120	9	OVER SIDE & REAR CORRIDOR ENTRANCES
GF / 9	SAME AS G BUT CEILING SURFACE MOUNTED AND SILVER FINISH COLOR	120V	SPECTRUM LIGHTING INC. SPC0606LEDGV-15L-35K-E1 6020GV-SG-SO-WL-SM-MT	SAMSUNG LED, 1500LM, 3500K, 84CRI	120	9	SURFACE MT AT ENTRANCE & NORTH EXTERIOR CANOPY
H / 3	4" IN-GROUND LIGHT, STAINLESS STEEL COMPLETE WITH 120/12V XFMR	120V	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBH	LEDM, 250LM, 3500K	12V	3	RECESSED AT FAÇADE LOBBY WINDOWS
J / 16	4" ROUND LED RECESSED WALL WASH, SELF FLANGED, 0-10V DIMMING DRIVER, UL STDS 1598/8750	0-10V	SPECTRUM LIGHTING, INC. SGW4LEDOS-10L-35K-DS101 -BH27-AR49230S-SG-SK-WL	LEDM OSRAM, 1100LM, 3500K, 84 CRI	120	16	RECESSED AT LOBBY, OPEN OFFICE & MEETING ROOM
L1 / 48	4' LED LINEAR COVE, OPTICS 30X60 WITH ADJUSTABLE BRACKETS	0-10V	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBL1	LEDM, 4000LM, 3500K	UNV	48	SURFACE MT AT SKYLIGHT WELLS
L2 / 12	1' LED LINEAR COVE, OPTICS 30X60 WITH ADJUSTABLE BRACKETS – SAME AS TYPE L1	0-10V	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBL2	LEDM, 1000LM, 3500K	UNV	12	SURFACE MT AT SKYLIGHT WELLS
L3 / 4.4/ft	LED STRIPLIGHTING, 1/2 WIDE, FIELD CUTTABLE EVERY 2", MAX RUN 16', WITH CHANNEL & 0-10V DIMMING DRIVER – IP66 WET LOCATION	0-10V	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBL3	LEDM, 370LM/FT, 3500K 90CRI	120/24	4.4W/FT	SURFACE MT AT ENTRANCE
L4 / 4/FT	EXTERIOR BLUE LED ROOF TUBE LIGHTING, WITH EXTRUSION, DRIVERS AND ACCESSORIES – FOR OUTDOOR USE.	NON	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBL4	SMD LED CHIP, 40LM/M 12W/M	120	3.7W/FT	ALONG EXTERIOR CANOPY PERIMETER, SEE NOTE #6.
L5 / 8.8/ft	LED STRIPLIGHTING, 1/2 WIDE, FIELD CUTTABLE EVERY 2", MAX RUN 16', WITH CHANNEL & 0-10V DIMMABLE DRIVER, INDOOR USE	0-10V	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBL5	LEDM, 700LM/FT, 3500K	120/24	8.8W/FT	SURFACE MT AT LOBBY SOFFIT COVE
SL1 / 74	49"L – WITH TWO ADJUSTABLE SWIVEL BRACKET MOUNT, FOR UPLIGHTING SIGNAGE (OPTION 1)	NON	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBSL1	LEDM, 3959LM, 4200K 90CRI	UNV	74	MOUNTED TO THE CANOPY OVERHANG EDGE TO UPLIGHT SIGNAGE
SL2 / 4/ft	INTEGRAL SIGNAGE LIGHT STRIP, COMPLETE WITH 120/12DC POWER SUPPLY (OPTION 2)	NON	COMMERCIAL LIGHTING INDUSTRIES CLI-NACSBSL2	LEDM, 360LM/FT, 4000K 90CRI	120/12	4W/FT	MOUNTED WITHIN THE SIGNAGE TO BACKLIGHT ACRYLIC PANELS
ST2 / 26	SOLATUBE 14", ACRYLIC DOME, 6" FLAT/NO PITCH METAL, SELF MOUNTED, 2 EXTENSION TUBES MAX60", CLASSIC DIFFUSER, NATURAL EFFECT LENS, W/CF LIGHT KIT	NON	SOLATUBE S290DS-DA-F6-E2-L4-LN -CFL-I	3500LM, 6430K AT FULL SUNLIGHT + CF26DD/E	N/A	26	TOILET & SHOWER, CORRIDORS, WATCH STATION & BREAK
ST3 / –	SOLATUBE 21" CLOSED CEILING, ACRYLIC DOME, 8" SELF MOUNTED, 1 EXTENSION TUBE MAX60", PRISMATIC DIFFUSER	NON	SOLATUBE S330DS-C-F8-AK-E1 -L2-I	3500LM, 6430K AT FULL SUNLIGHT	N/A	N/A	LOCKERS AREAS
S / 193	PARKING LOT POLE LIGHT, TYPE III DISTRIBUTION WITH PHOTOCELL SENSOR, DARK BRONZE, 25' LONG 5" SQUARE STRAIGHT STEEL POLE, 11GA	NON	McGRAW EDISON GLEON-AF-06-LED E1-T3-BZ-600- P120 SEE NOTE #5	LED 23461LM, 4000K LED, B3/U0/G4 DRIVER (120VAC) WITH PHOTO CELL CONTROL	120-277	193	MOUNT ON 24" DIA-2.5'H CONCRETE BASE WITH MIN 6FT EMBEDMENT
XU / 2	EXIT SIGN, EDGE-LIT LED, GREEN ON CLEAR FOR SINGLE FACE OR GREEN ON MIRROR FOR DUAL FACE, BRUSHED ALUMINUM, DUAL CIRCUIT	NON	ISOLITE ELITE SERIES ELT-AC-G-1C(2M)-BA RC(SW)-X-2C "X"-CHEVRON AS REQUIRED	STD FACTORY LONG LIFE-LED	120-277	2.3	RECESSED CEILING OR SURFACE WALL
T / 28	4FT-NARROW LED LENSED STRIPLIGHT. FULL FROST LENS FOR WIDE DISTRIBUTION.	0-10V	METALUX 4SNLED-LD4-30SL-LW- UNV-L835-CD1-U	LED 3500K 3062 LM	120-277	28	SURFACE CEILING IDF/UTILITY RMS.

FIXTURE SCHEDULE NOTES:

1. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTIONS OF LIGHTING FIXTURE AND SPECIFIC MANUFACTURER CATALOG NUMBERS. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY EACH FIXTURE'S EXACT LOCATION AND PROVIDE WITH NECESSARY TRIMS AND MOUNTING HARDWARE MATCHING REFLECTED CEILING PLAN AND CEILING SYSTEM PER-ARCHITECTURAL DRAWINGS.
2. WHERE ONLY ONE FIXTURE TAG SHOWN IN AN AREA OR ROOM ON THE LIGHTING PLAN, THE TAG SHALL APPLY TO ALL FIXTURES IN THAT AREA OR ROOM, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE IN THE SHOP DRAWING SUBMITTAL ALL CUT-SHEETS OF THE SPECIFIED LIGHTING FIXTURES WITH SPECIFIED LED CHARACTERISTIC AND DRIVER INDICATED ON SCHEDULE, INCOMPLETE SUBMITTAL WILL NOT BE REVIEWED AND RETURNED FOR COMPLETE RE-SUBMITTAL.
4. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE INSTALATION OF LIGHT FIXTURE LOCATION IN MECHANICAL, ELECTRICAL AND OTHER EQUIPMENT ROOMS WHERE CONDUITS, DUCT WORKS, PIPINGS AND ETC. ARE PRESENT TO AVOID CONFLICT AND ENABLE PROPER ILLUMINATION DISTRIBUTION IN THE ROOM.
5. PROVIDE 25FT – 5" SQUARE STEEL POLE, VALMONT DS330-S500Q250-D1-GF(DB) WITH HANDHOLE, GROUNDING AND FULL BASE COVER.
6. PROVIDE ALL REQUIRED ACCESSORIES AND HARDWARES FOR COMPLETE INSTALLATION OF THE LIGHTING SYSTEM RATED FOR ITS INTENDED APPLICATION.

LIGHTING CONTROL BASIS OF DESIGN:

1. LIGHTING CONTROL SYSTEM SHALL BE 2016 CALIFORNIA ENERGY CODE COMPLIANCE (TITLE 24), MEETING ALL THE MANDATORY LIGHTING CONTROLS REQUIREMENTS.
2. FACILITY LIGHTING CONTROL SYSTEM DESIGN INTENT SHALL BE ON THE FOLLOWING:
   A. ALL INTERIOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR FOR AUTOMATIC SHUT-OFF; PHOTO-SENSOR FOR DAYLIGHT HARVESTING /DIMMING; ON/OFF, RAISE/LOWER WALL DIMMER STATION FOR MULTI-LEVEL MANUAL AREA CONTROL.
   B. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTO-SENSOR FOR ON/OFF FROM DUSK TO DAWN.
   C. DAYLIGHT HARVESTING/DIMMING SHALL BE PROVIDED IN THE FOLLOWING AREA;
      - MAIN HALLWAY 125
      - BREAK ROOM 114
      - HALLWAY 117 & 121
   D. SOLA TUBE EQUIPPED WITH COMPACT FLUORESCENT/ARTIFICIAL LIGHTING SHALL BE ON OCCUPANCY SENSOR CONTROLLED, NON-DIMMING AND WITH MANUAL AREA CONTROL WALL SWITCH.
   E. LIGHTING CONTROL SYSTEM SHALL BE DEMAND RESPONSE CAPABLE.

1 LIGHTING FIXTURE SCHEDULE & NOTES

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CLIENT NAME
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A#: 03-117673
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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

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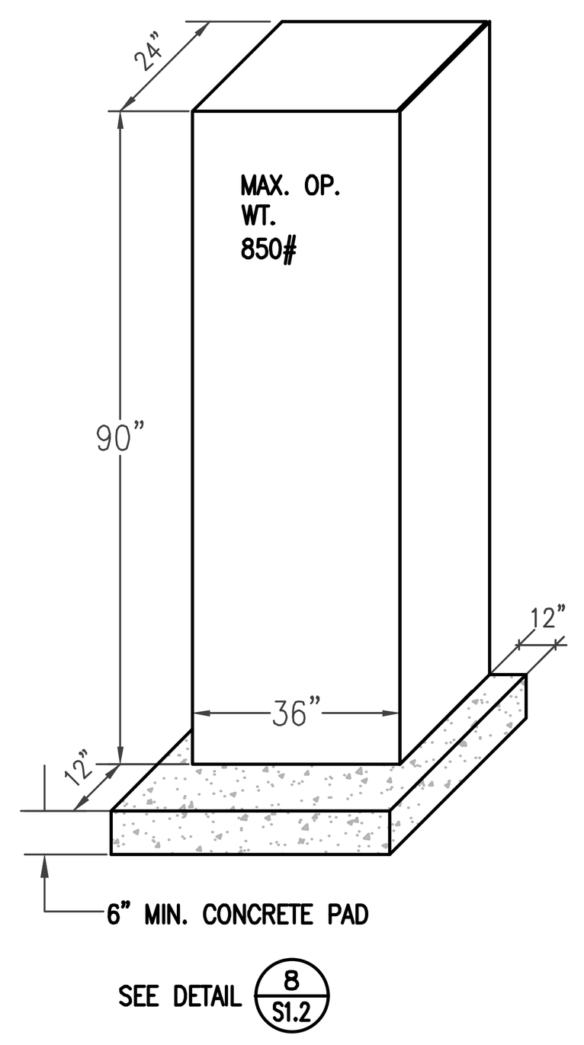
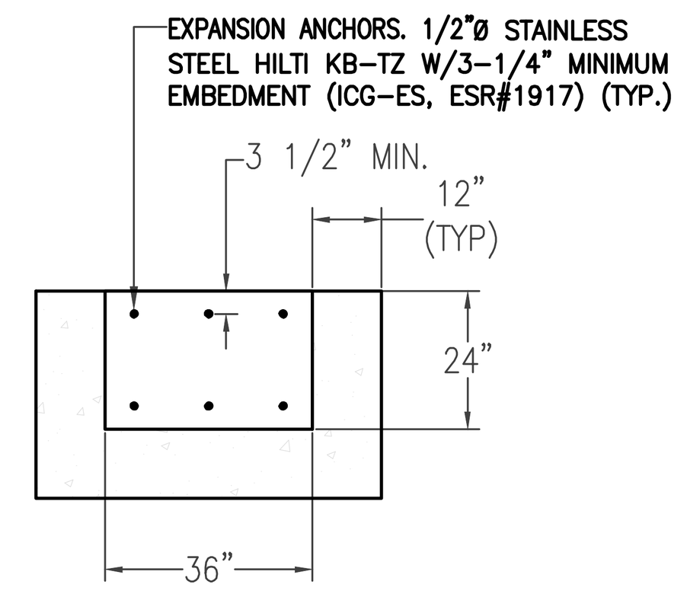
SHEET TITLE
LIGHTING FI□TURE SCHEDULE

PROJECT NUMBER
913-4675-01

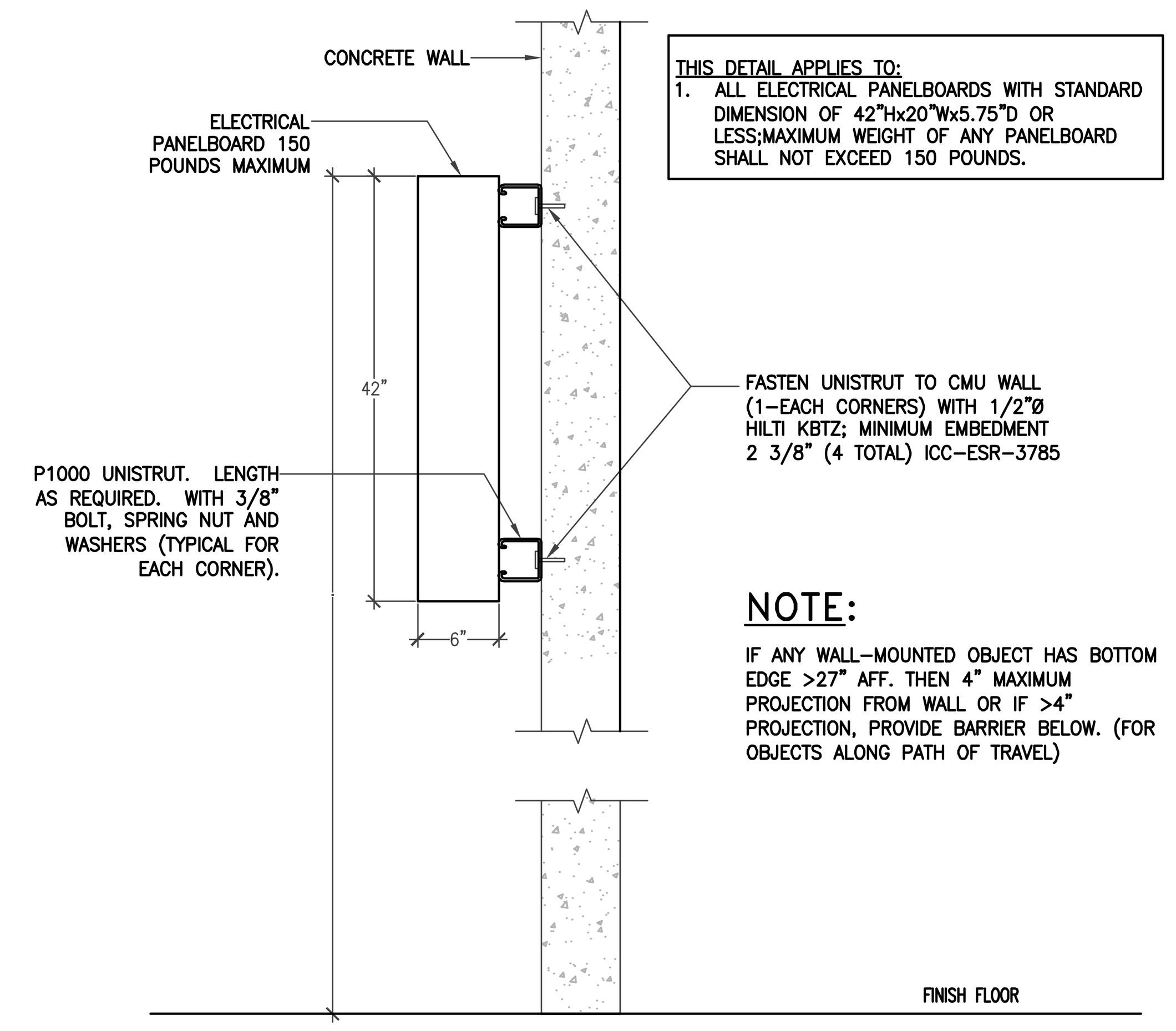
ISSUE DATE: 11/21/2017
SHEET NO.: AD1-E0.0.3



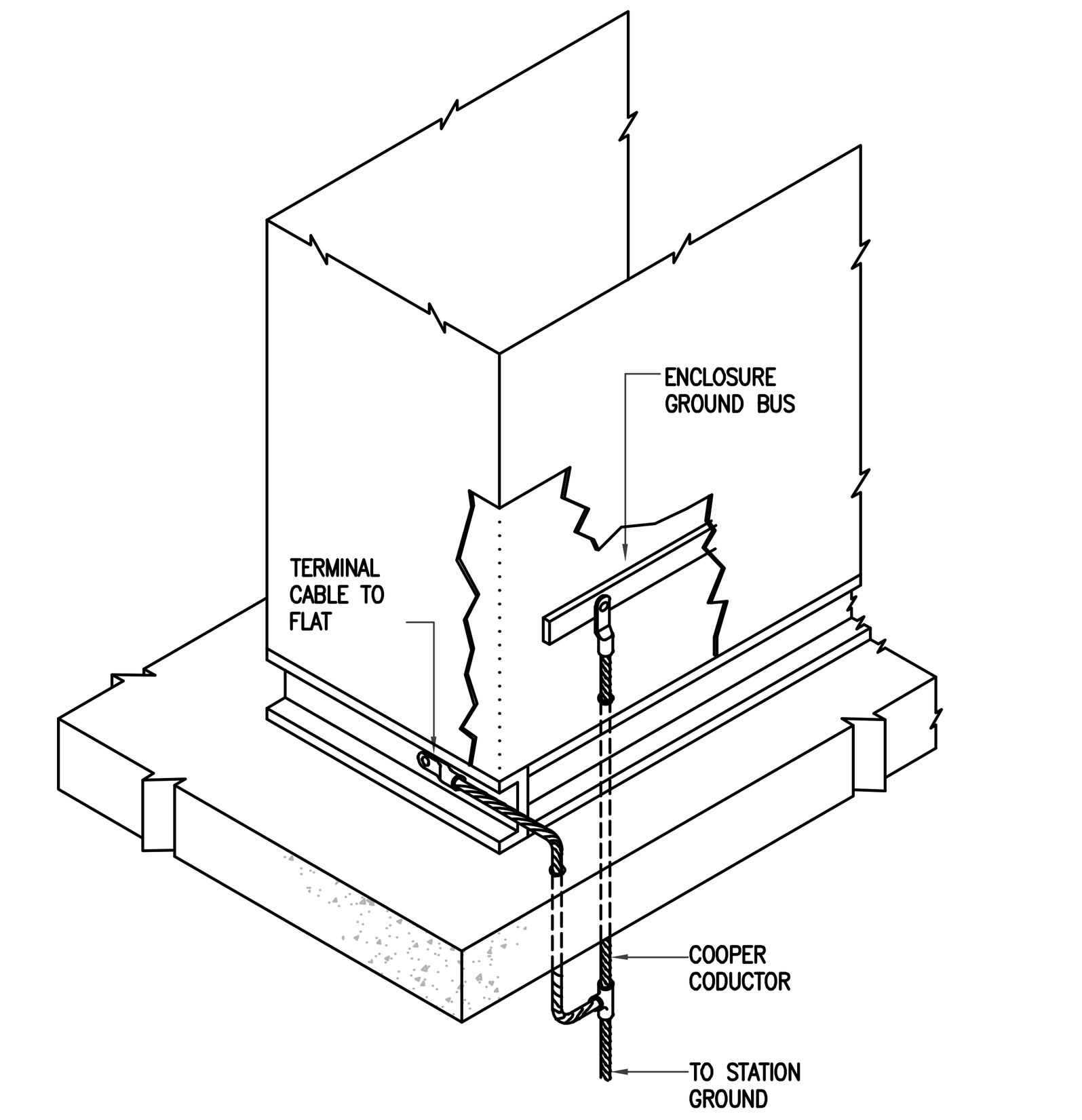
SWITCHBOARD "MSB" – ELEVATION | N.T.S. | 1



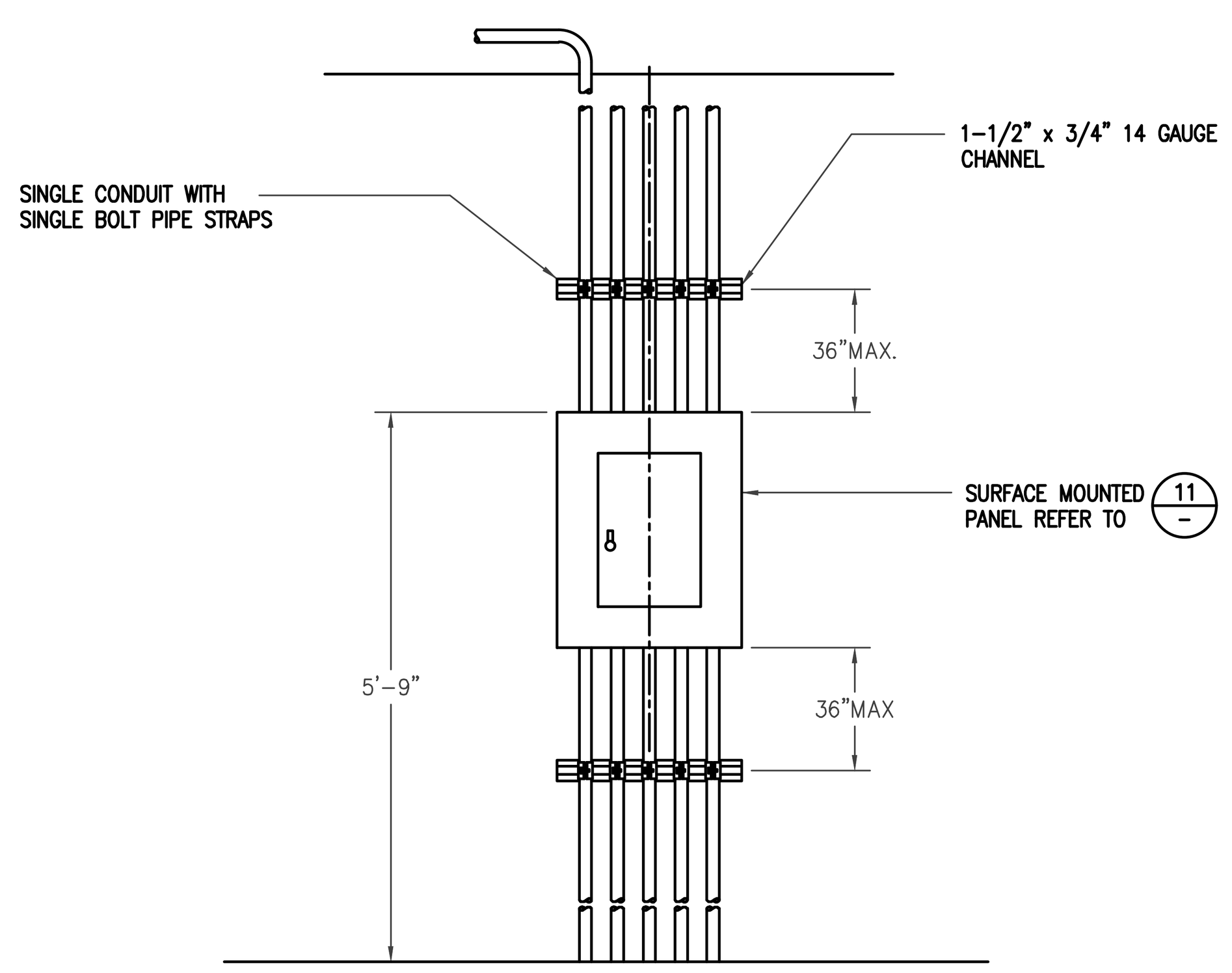
SWITCHBOARD "MSB" ANCHORAGE | N.T.S. | 2



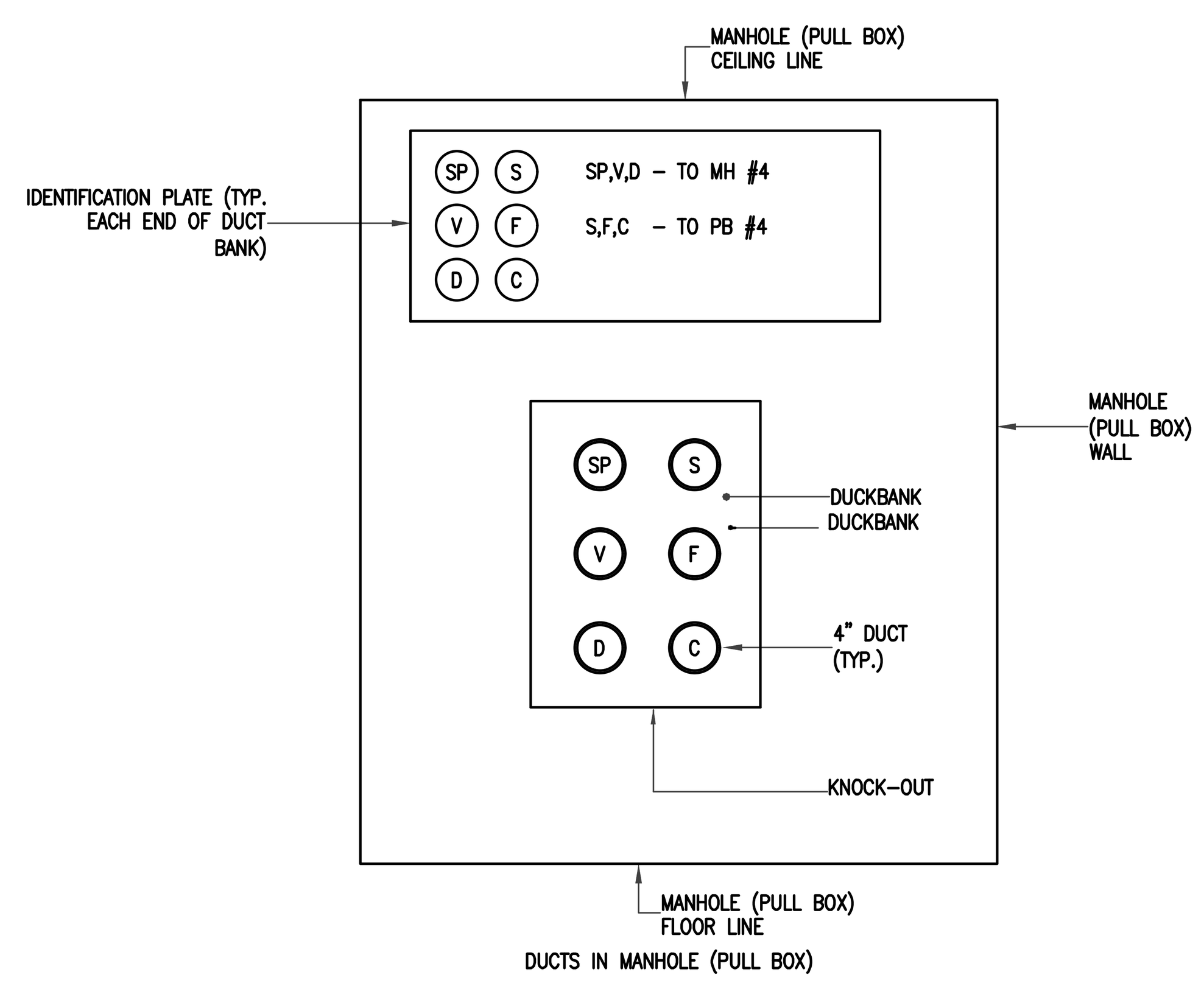
SURFACE MOUNTED PANELBOARD ON CONCRETE WALL DETAIL | N.T.S. | 3



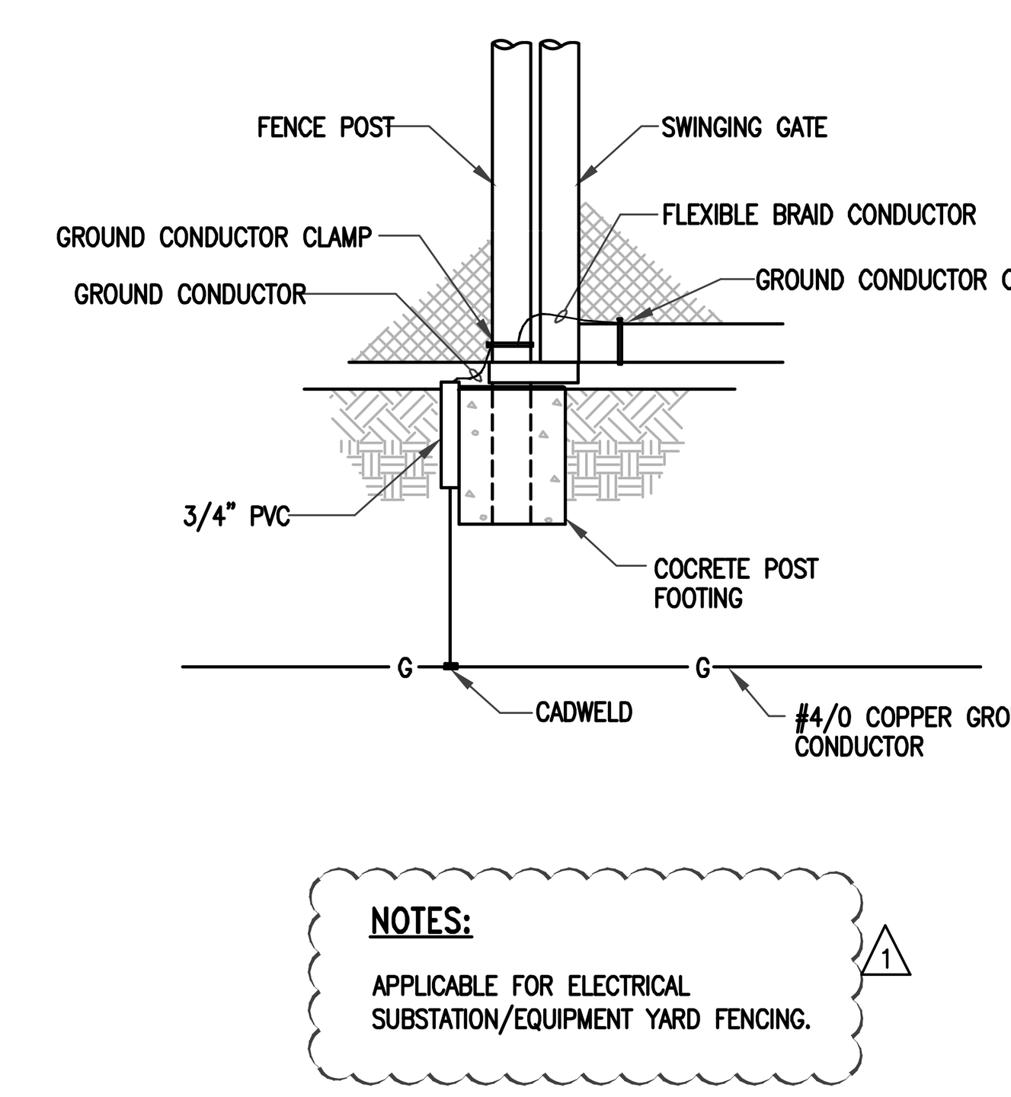
MAIN SWITCHBOARD GROUNDING | N.T.S. | 4



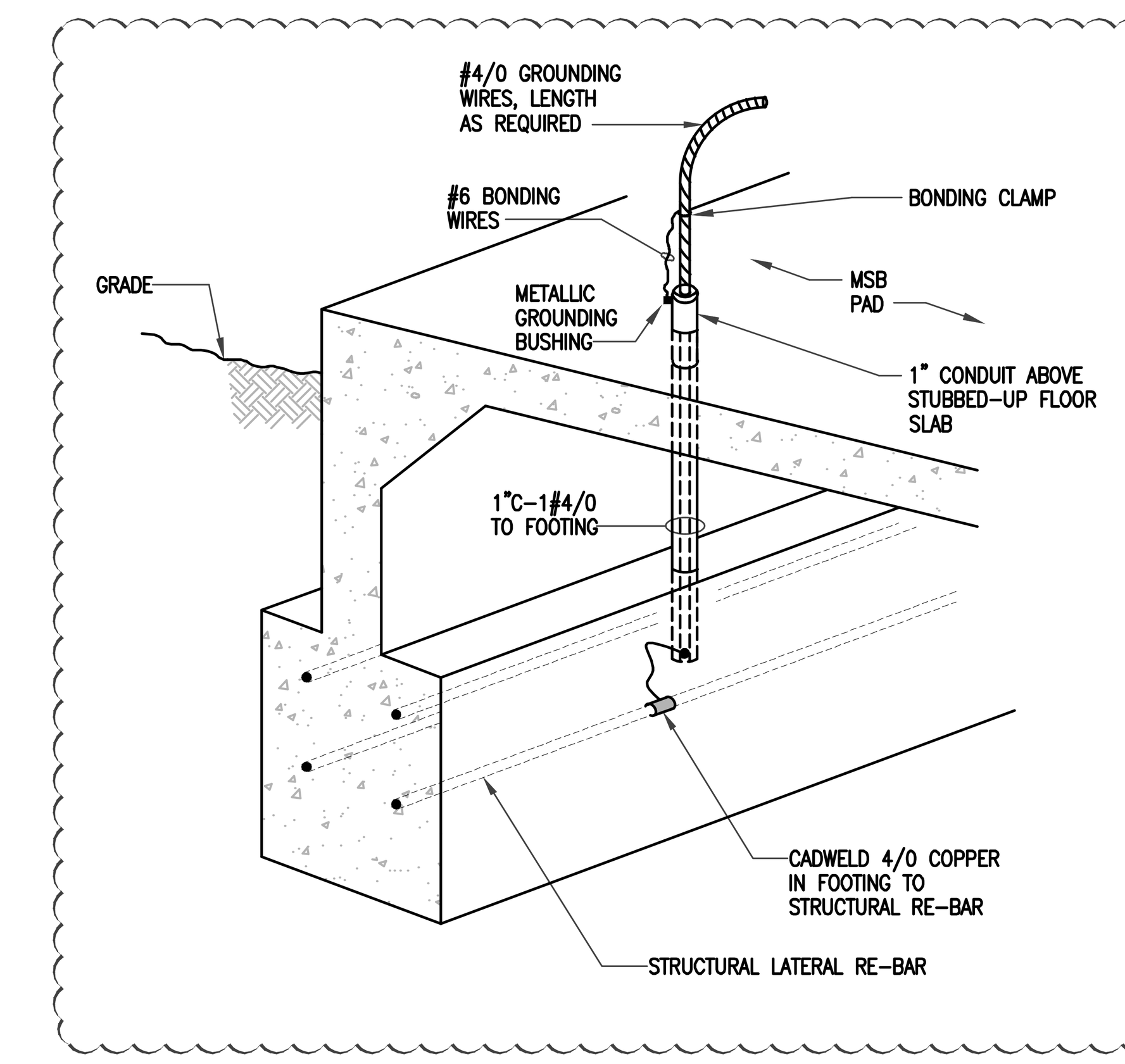
CONDUIT SUPPORT DETAIL | N.T.S. | 5



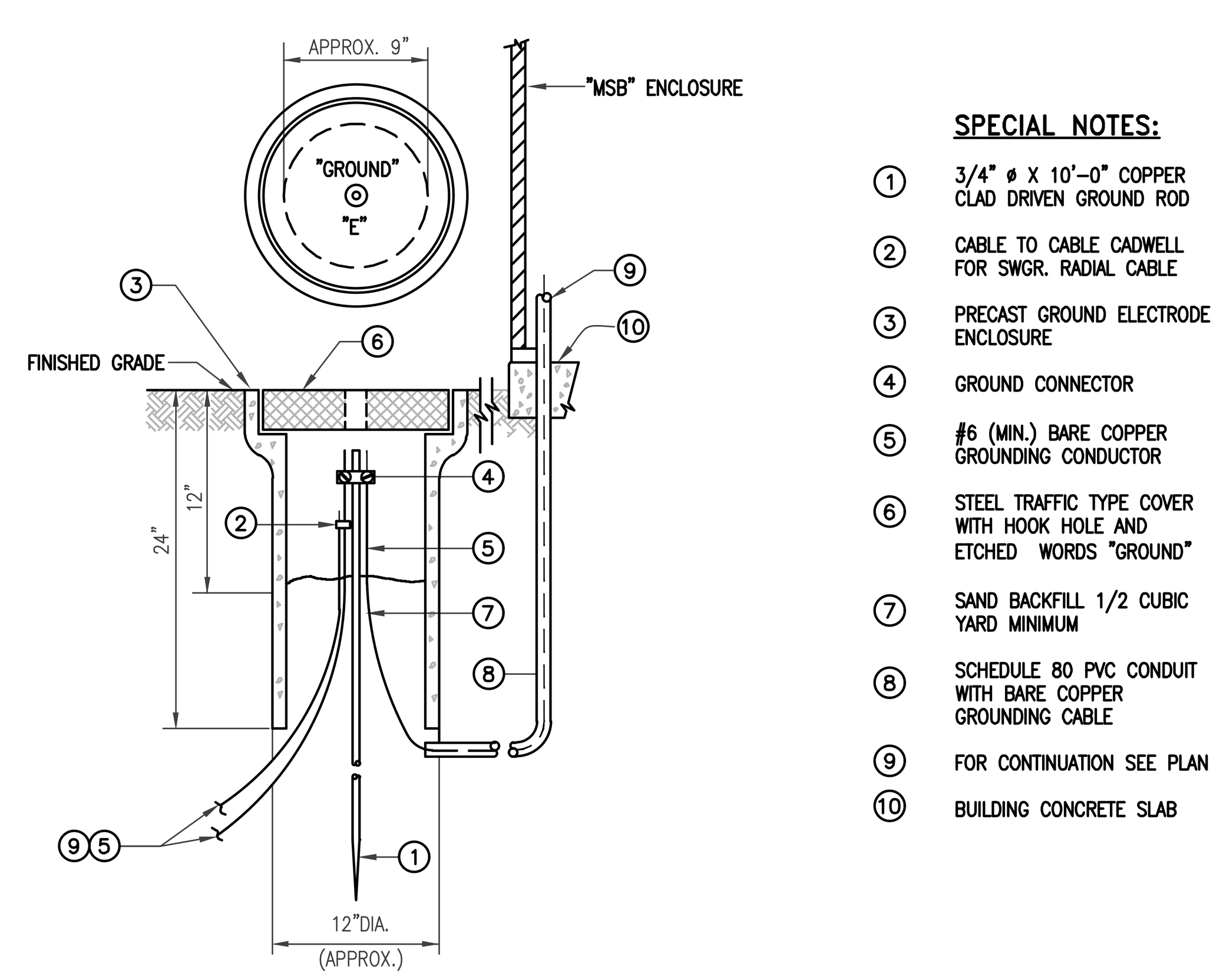
TYPICAL IDENTIFICATION PLATE | N.T.S. | 6



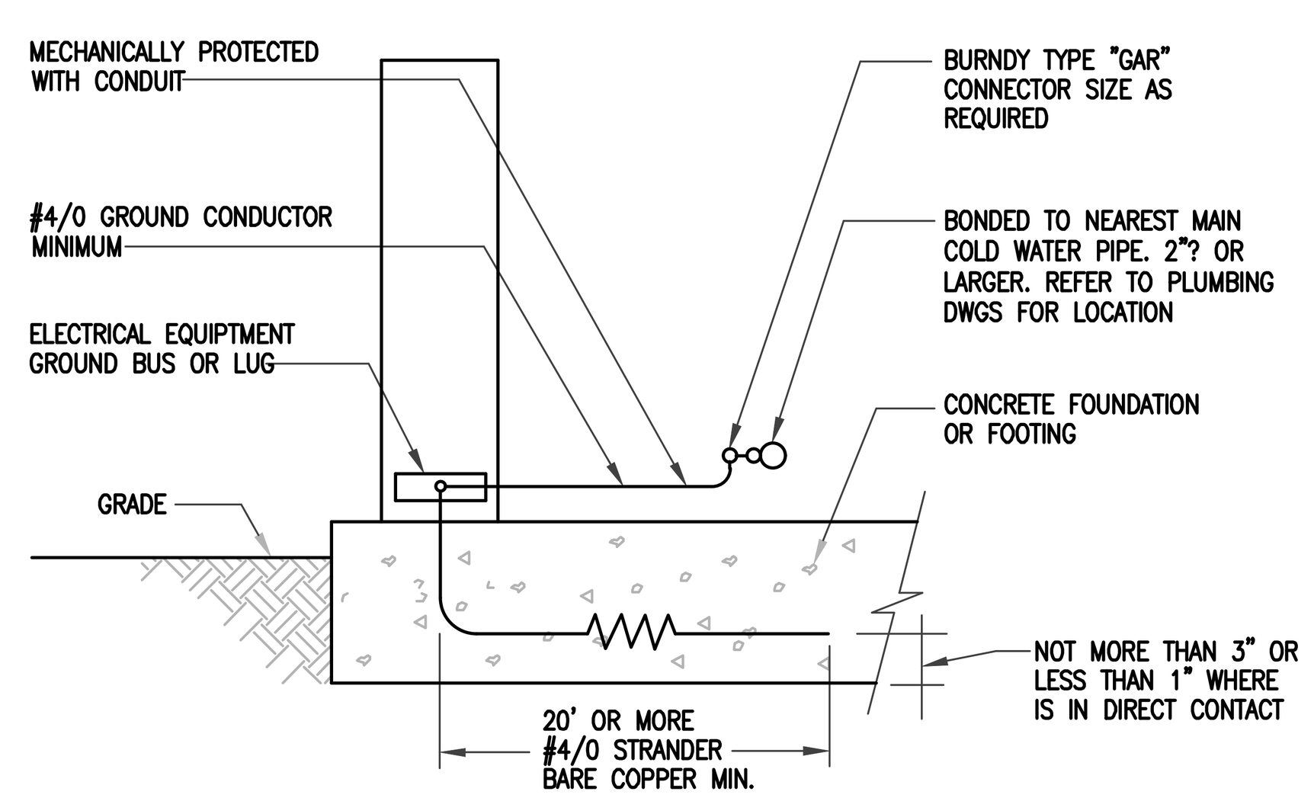
FENCE GATE GROUNDING DETAIL | N.T.S. | 7



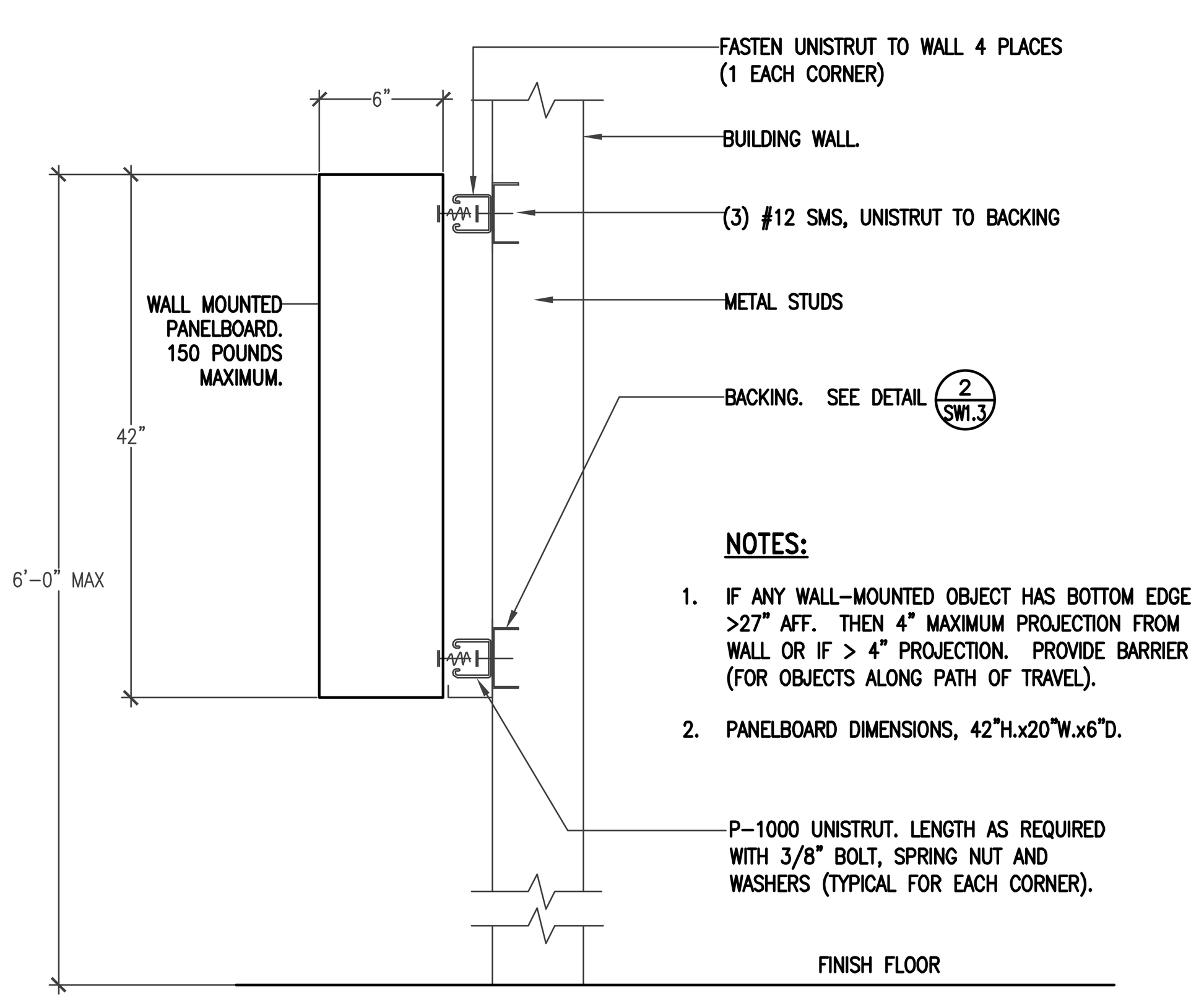
UFER GROUNDING DETAIL | N.T.S. | 8



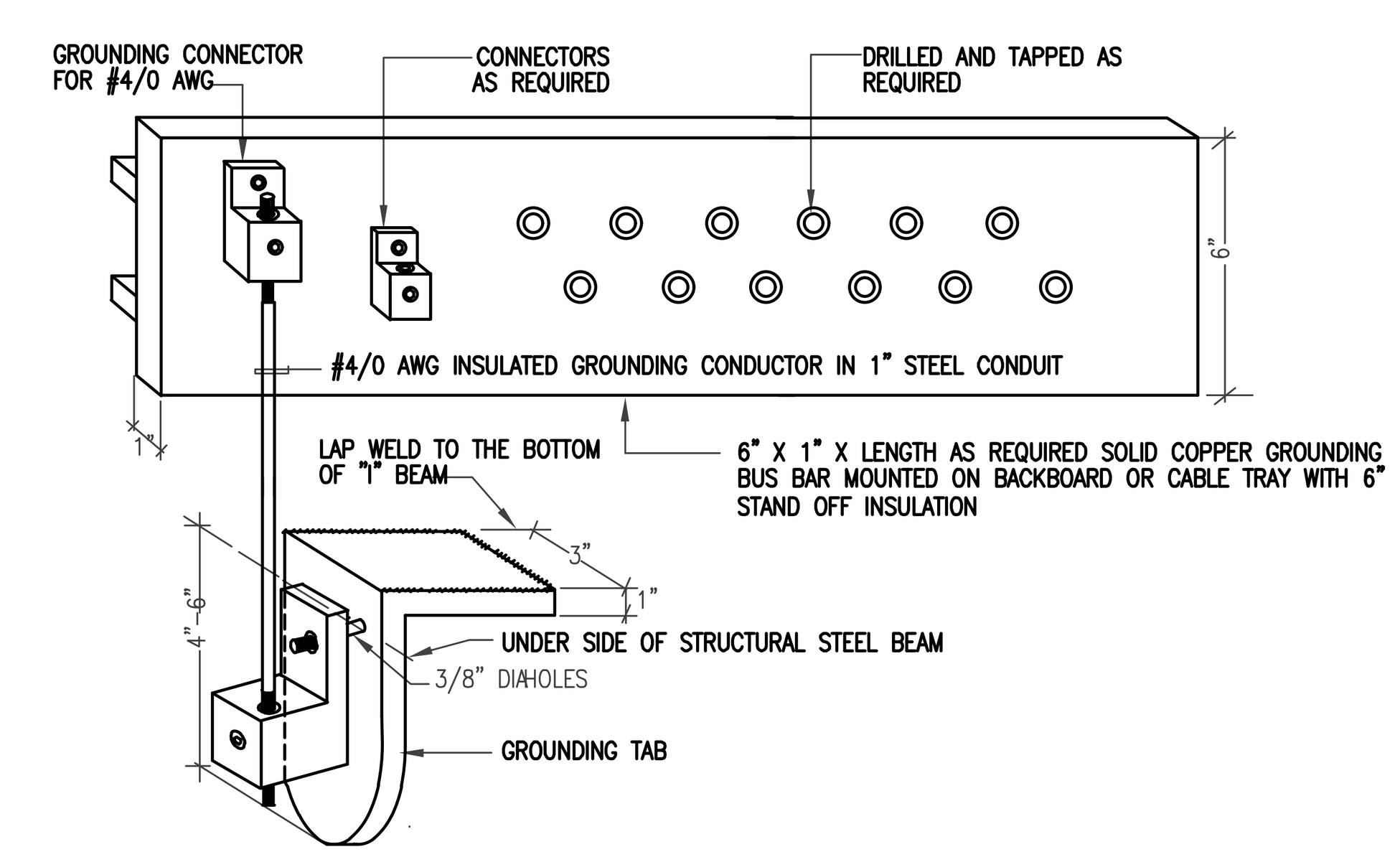
GROUND WELL | N.T.S. | 9



SWITCHBOARD GROUND | N.T.S. | 10



SURFACE MOUNTED PANEL DETAIL | N.T.S. | 11



TYPICAL GROUNDING DETAIL | N.T.S. | 12

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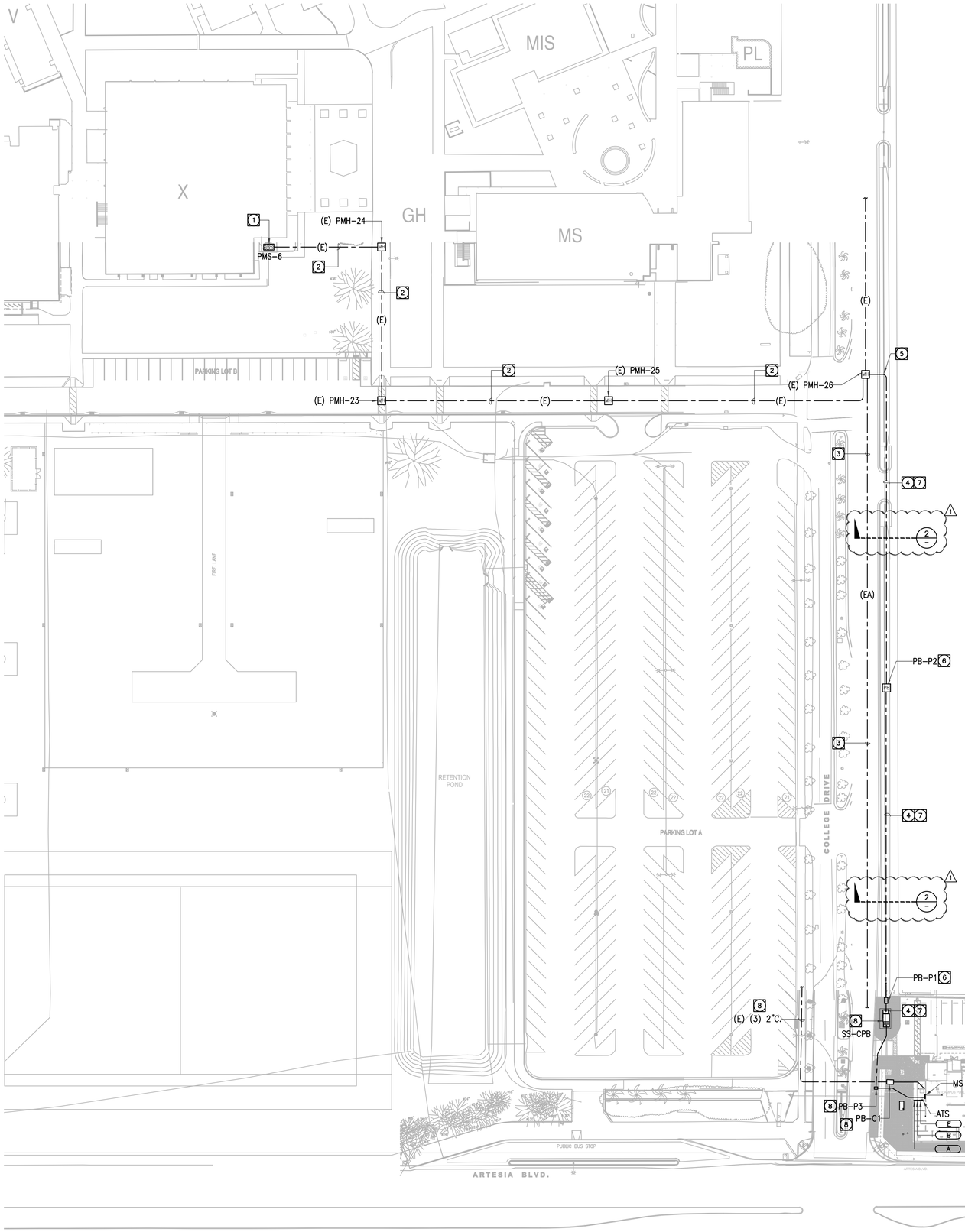
REVISIONS
NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
ELECTRICAL DETAILS

PROJECT NUMBER
913-4675-01

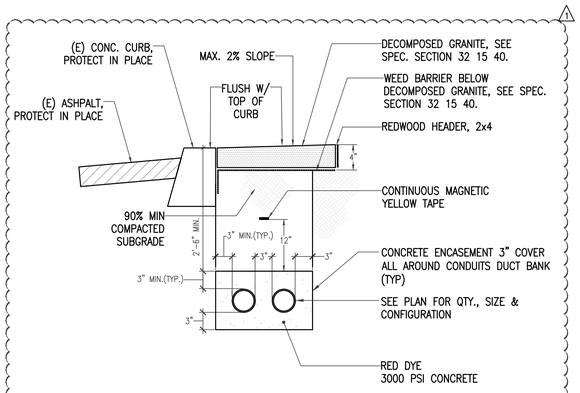
ISSUE DATE: 11/21/2017
SHEET NO.: AD1-E0.0.4



REFERENCE NOTES

1. EXISTING 5KV POWER SWITCHBOARD "PMS-6". VERIFY EXACT LOCATION IN FIELD. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR ELECTRICAL SCOPE.
2. EXISTING 5KV INFRASTRUCTURE UNDERGROUND DUCT BANK, INCLUDING EXISTING 5" SPARE CONDUIT TO BE UTILIZED FOR THE NEW 5KV FEEDER, REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR 5KV CABLE REQUIREMENTS.
3. EXISTING 5" SPARE CONDUIT 5KV UNDERGROUND INFRASTRUCTURE DUCT BANK WHICH HAS BEEN DETERMINED UNUSABLE (VERIFIED AND TRACED ON SITE) TO BE ABANDONED IN PLACE.
4. FURNISH AND INSTALL NEW UNDERGROUND 5KV DUCT BANK, (2) 5"C IN CONCRETE ENCASEMENT, FROM THE EXISTING MANHOLE PMH-26 TO NEW SUBSTATION SS-CPB, REFER TO DETAIL #2 ON THIS SHEET.
5. PROVIDE 90°-LONG SWEEP 5"CONDUIT CONNECTION TO THE EXISTING MANHOLE, CORE EXISTING SIDE WALL OF THE PRECAST CONCRETE BOX, INSTALL BELL ENDS INTO MANHOLE WALL, PATCH/GROUTING AND SEAL OPENING VOID AS REQUIRED FOR COMPLETE INSTALLATION.
6. FURNISH AND INSTALL PRE-CAST CONCRETE PULLBOX 3'x5' MIN. DEPTH AS REQUIRED, COMPLETE WITH HEAVY DUTY BOLT DOWN TRAFFIC COVER MARKED "5KV ELECTRIC" - TYPICAL FOR PB-P1 AND PB-P2. THE PULLBOX SHALL MEET SIZE REQUIREMENTS IN COMPLIANCE WITH CEC 314.71.
7. PROVIDE NEW 5KV CONDUCTOR IN THE NEW & EXISTING 5" DUCT BANK FOR FEEDER OF THE SUBSTATION "SS-CPB" FROM THE EXISTING 5KV SWITCHBOARD "PMS-6", REFER TO SINGLE LINE DIAGRAM SHEET E-0.0.2 FOR REQUIREMENTS
8. REFER TO SHEET E1.1.1. FOR DETAILS

EXISTING INFORMATION OBTAINED FROM CAMPUS-WIDE U.G. UTILITY INFRASTRUCTURE - PHASE 1
A#03-113780



NOTES:
1. FENCING AND PLANTING ALONG FENCING TO BE PROTECTED IN PLACE.

2 TYPICAL DUCT BANK SECTION
N.T.S.

1 ELECTRICAL OVERALL SITE PLAN
1" = 40'-0" 5KV FEEDER SCOPE OF WORK

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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

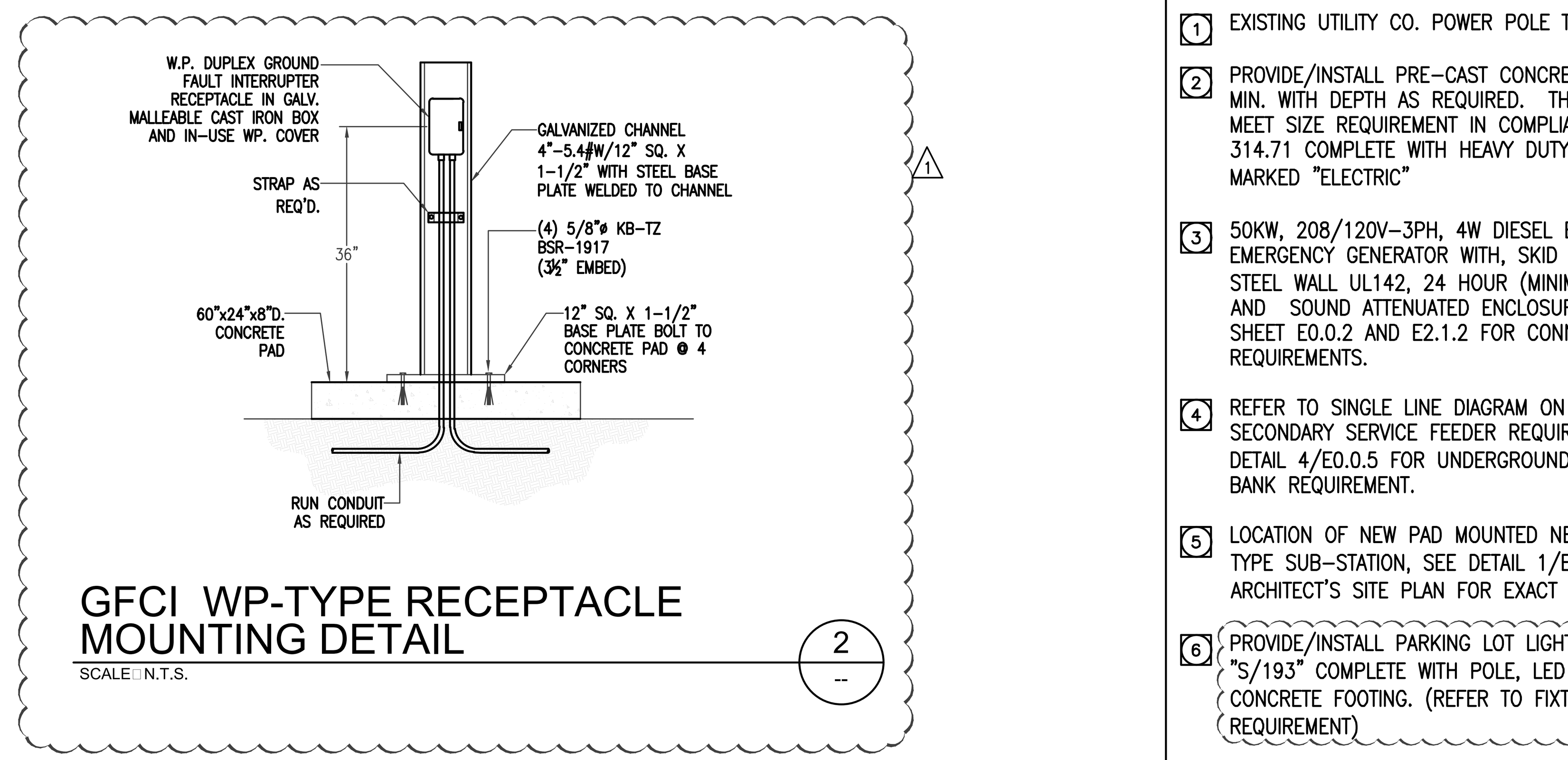
REGISTERED PROFESSIONAL ENGINEER
ANDREW H. IKUJI
E-13884
RE 06/30/19
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
ELECTRICAL OVERALL SITE PLAN

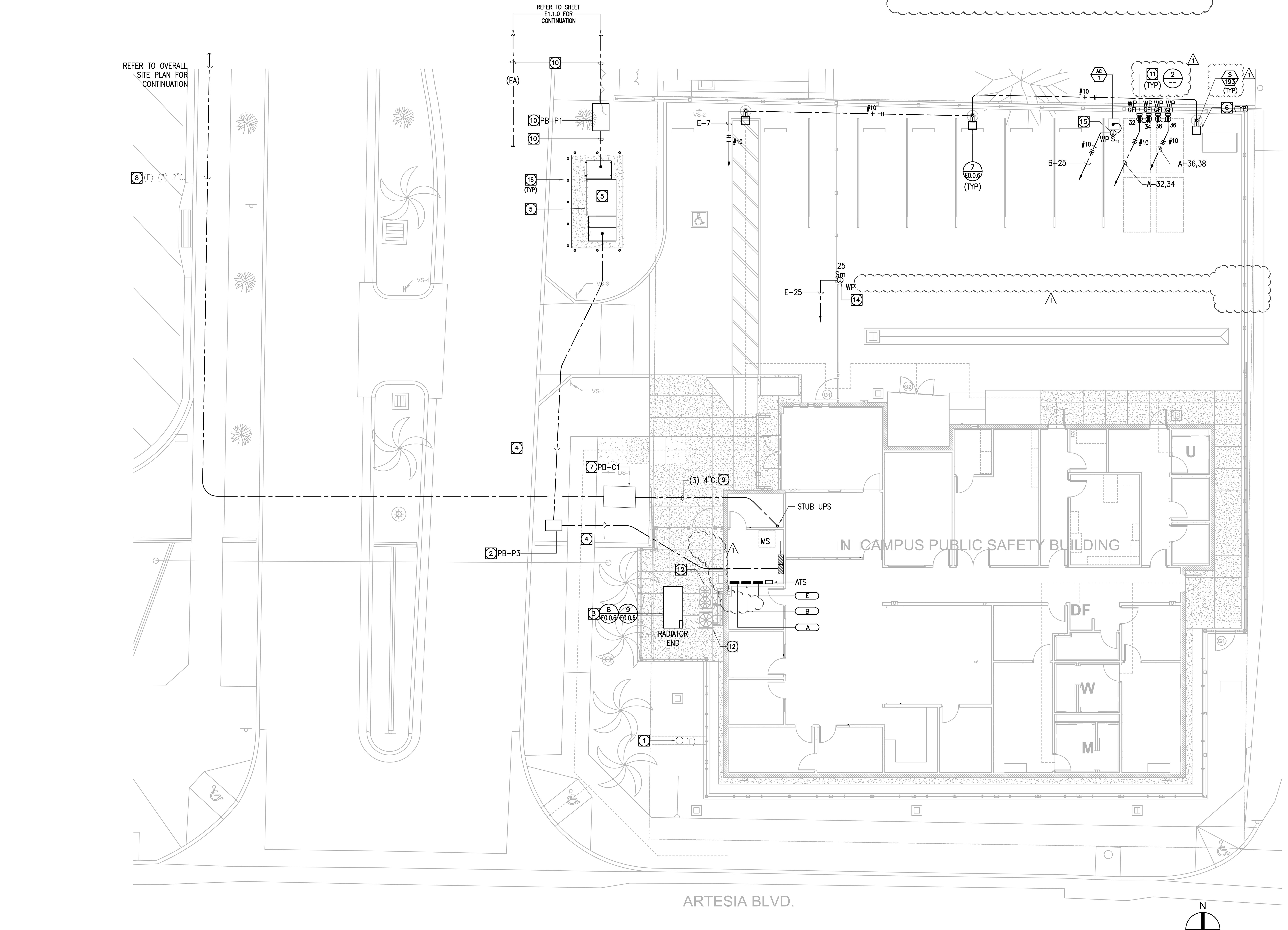
PROJECT NUMBER
913-4675-01

ISSUE DATE 11/21/2017
SHEET NO. AD1-E1.1.0



GFCI WP-TYPE RECEPTACLE MOUNTING DETAIL 2

SCALE: N.T.S.



ELECTRICAL SITE PLAN

1/8" = 1'-0"

REFERENCE NOTES

1. EXISTING UTILITY CO. POWER POLE TO REMAIN.
2. PROVIDE/INSTALL PRE-CAST CONCRETE PULLBOX 3'x5' MIN. WITH DEPTH AS REQUIRED. THE PULLBOX SHALL MEET SIZE REQUIREMENT IN COMPLIANCE WITH CEC 314.71 COMPLETE WITH HEAVY DUTY TRAFFIC COVER MARKED "ELECTRIC"
3. 50KW, 208/120V-3PH, 4W DIESEL ENGINE POWERED EMERGENCY GENERATOR WITH, SKID MOUNTED DOUBLE STEEL WALL UL142, 24 HOUR (MINIMUM) FUEL TANK AND SOUND ATTENUATED ENCLOSURE. REFER TO SHEET E0.0.2 AND E2.1.2 FOR CONNECTION REQUIREMENTS.
4. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR SECONDARY SERVICE FEEDER REQUIREMENTS. REFER TO DETAIL 4/E0.0.5 FOR UNDERGROUND SERVICE DUCT BANK REQUIREMENT.
5. LOCATION OF NEW PAD MOUNTED NEMA 3R, VPI DRY TYPE SUB-STATION, SEE DETAIL 1/E0.0.7. REFER TO ARCHITECT'S SITE PLAN FOR EXACT LOCATION.
6. PROVIDE/INSTALL PARKING LOT LIGHT STANDARD, TYPE "S/193" COMPLETE WITH POLE, LED LUMINAIRE AND CONCRETE FOOTING. (REFER TO FIXTURE SCHEDULE FOR REQUIREMENT)
7. EXISTING U.G. CONCRETE PULLBOX WITH HEAVY DUTY TRAFFIC COVER MARKED "COMMUNICATIONS". EXISTING 12/12 SINGLE MODE/MULTIMODE HYBRID FIBER OPTIC CABLING TO BE EXTENDED TO IDF ROOM AT NEW BUILDING.
8. EXISTING UNDERGROUND TELECOMMUNICATION DUCT BANK WITH EXISTING FIBER OPTIC CABLE TO CAMPUS MAIN I.T. ROOM.
9. PROVIDE/INSTALL (3) 4"C UNDERGROUND DUCT BANK. EXISTING MULTI-MODE FIBER OPTIC CABLING TO BE EXTENDED TO IDF ROOM 104.
10. REFER TO ELECTRICAL OVERALL SITE PLAN SHEET E1.1.0 FOR ADDITIONAL INFORMATION.
11. NEMA 5-20R GFCI WP-TYPE RECEPTACLE FOR GOLF CART CHARGING. RECEPTACLES SHALL BE MOUNTED ON PEDESTAL. REFER TO DETAIL 2, THIS SHEET.
12. CONDENSER UNIT TO BE PROVIDED WITH EMERGENCY BACKUP POWER PROVISION, REFER TO SHEET E2.1.3 FOR POWER CONNECTION REQUIREMENTS.
13. NOT USED.
14. CONNECT TO AUTOMATIC GATE CONTROLLER, PROVIDE 20A/2P DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. VERIFY EXACT LOCATION OF JUNCTION BOX AND P.O.C. IN FIELD PRIOR TO INSTALLATION.
15. PROVIDE MANUAL MOTOR STARTER 20A/2P IN NEMA 3R ENCLOSURE AND CONNECTION TO AIR COMPRESSOR.
16. PROVIDE/INSTALL STEEL PROTECTIVE BOLLARDS. REFER TO DETAIL 3/E0.0.7.

SITE UTILITY NOTES

1. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT @ (800) 642-2444 48 HOURS PRIOR TO EXCAVATION.
2. CONTRACTOR SHALL INCLUDE AS A PART OF THE BID PROPOSAL THE FOLLOWING:
   - A. PROVIDE REQUIRED MATERIAL AND LABOR FOR REFURBISHING THE FINISH GRADE TO MATCH EXISTING CONDITIONS, IMPACTED BY NEW UNDERGROUND CONDUIT INSTALLATION.
   - B. PROVIDE UTILITY LOCATING EQUIPMENT FOR TRACING EXISTING UNDERGROUND CABLE, CONDUIT, AND PIPING. CONTACT ACCURATE LOCATORS @ (866) 369-1975 FOR EQUIPMENT QUOTATIONS.
   - C. CONTRACTOR SHALL FIELD VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING NEW UNDERGROUND CONDUITS.
   - D. CONTRACTOR SHALL REPAIR DAMAGED UNDERGROUND UTILITIES IF NECESSARY IMPACTED BY THE NEW UNDERGROUND CONDUIT SYSTEM. THE COST OF REPAIRING DAMAGED OF EXISTING UNDERGROUND UTILITIES SHALL BE BORNE BY THE CONTRACTOR.

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NO	REASON	DATE
3	ADDENDUM #3	02/08/2018

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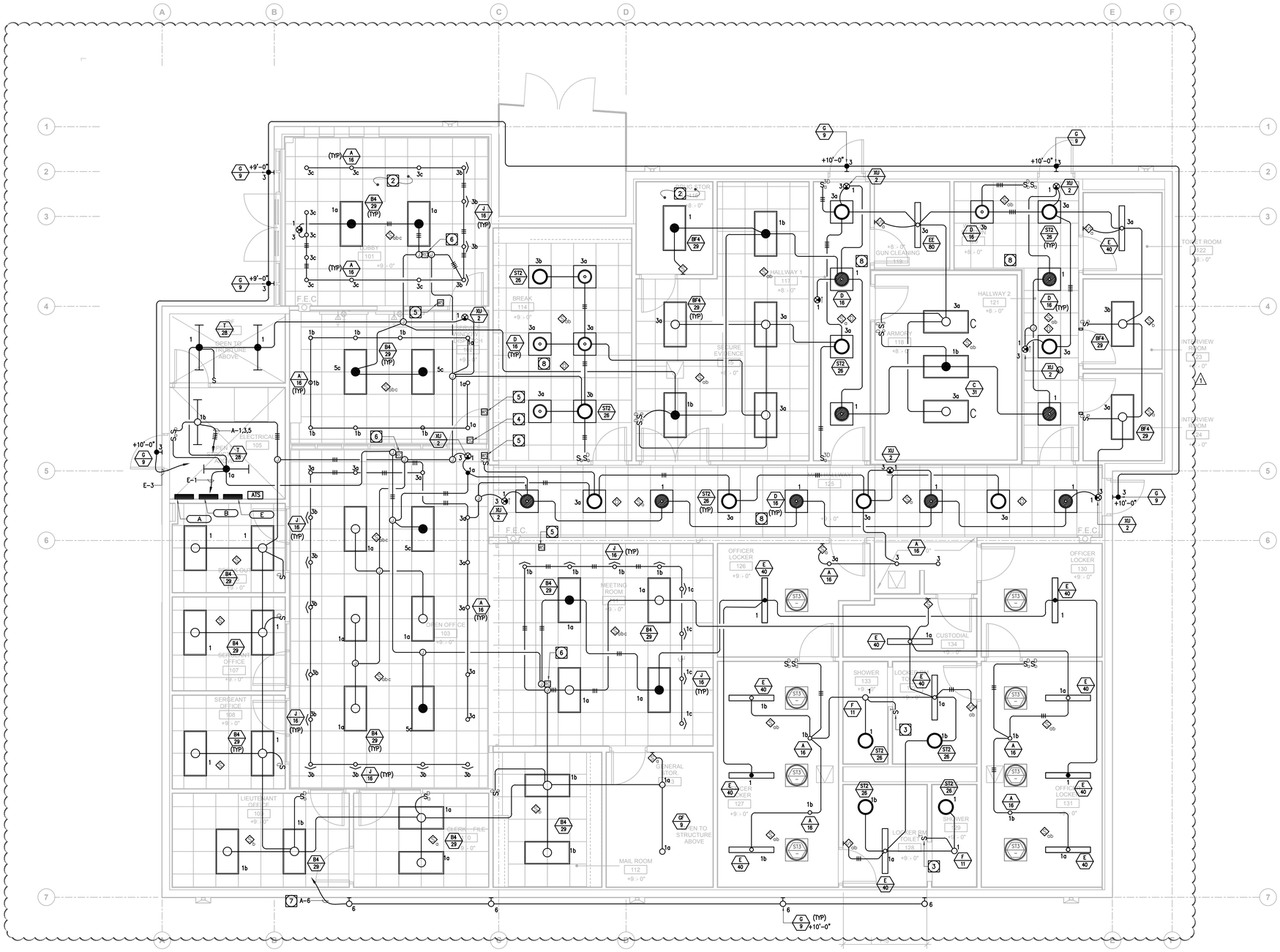
SHEET TITLE

ELECTRICAL SITE PLAN

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-E1.1.1



1 LIGHTING PLAN

1/4" = 1'-0"

N

GENERAL NOTES

1. AUTOMATIC DAYLIGHTING CONTROLS EXCEPTION 1 OF SECTION 130.1(d)2: ROOMS IN WHICH THE COMBINED TOTAL INSTALLED GENERAL LIGHTING POWER IN THE SKYLIT DAYLIT ZONE AND PRIMARY SIDELIT DAYLIT ZONE IS LESS THAN 120 WATTS.
2. SECTION 130.1(d)(2)(D)(iv): IN AREAS SERVED BY LIGHTING THAT IS DAYLIGHT CONTROLLED, WHEN THE ILLUMINANCE RECEIVED FROM THE DAYLIGHT IS GREATER THAT 150 PERCENT OF THE DESIGNED ILLUMINANCE RECEIVED FROM THE GENERAL LIGHTING SYSTEM AT FULL POWER, THE GENERAL LIGHTING POWER IN THAT DAYLIGHT ZONE SHALL BE REDUCED BY A MINIMUM OF 65 PERCENT.
3. SECTION 130.1 (b) MULTILEVEL LIGHTING CONTROLS: GENERAL LIGHTING OF ANY ENCLOSED AREA 100 SQUARE FEET OR LARGER, WITH A CONNECTED LIGHTING LOAD THAT EXCEEDS 0.5 WATTS PER SQUARE FOOT SHALL MEET REQUIREMENTS 130.1(b)(1–3).
4. MULTILEVEL LIGHTING CONTROLS EXCEPTION 2 OF SECTION 130.1(b): AN AREA ENCLOSED BY CEILING HEIGHT PARTITIONS THAT HAS ONLY ONE LUMINAIRE WITH NO MORE THAN TWO LAMPS.
5. DEMAND RESPONSE NOT REQUIRED PER SECTION 130.1 (e) DEMAND RESPONSE CONTROLS: SPACES THAT ARE NONHABITABLE SHALL NOT BE USED TO COMPLY WITH THIS REQUIREMENT, AND SPACES WITH A LIGHTING POWER DENSITY OF LESS THAN 0.5 WATTS PER SQUARE FOOT SHALL NOT BE COUNTED TOWARDS THE BUILDING'S TOTAL LIGHTING POWER.
6. MC CABLES MAY BE UTILIZED FOR BRANCH CIRCUIT LIGHTING SYSTEM, BETWEEN LIGHTING FIXTURES ABOVE CEILING SPACE, ANY JUNCTION BOX REQUIRED SHALL BE INSTALLED IN ACCESSIBLE CEILING SPACE. /1

REFERENCE NOTES

1. INSTALL DAYLIGHT SENSOR IN SKYLIGHT WELL. VERIFY EXACT LOCATION IN FIELD PRIOR TO ROUGH–IN.
2. DAYLIGHTING CONTROLS IN THIS AREA NOT REQUIRED. TOTAL WATTAGE OF LIGHTING IN THE PRIMARY DAYLIGHT AREA IS LESS THAN 120 WATTS. /1
3. FURNISH AND INSTALL DIGITAL WALL SWITCH TIMER, EQUAL TO GREENGATE #TSW–MV
4. PROVIDE ROOM CONTROLLER, GREENGATE "RC3DE", HOWEVER CONNECT TO EMERGENCY BACK UP POWER INSTEAD OF NORMAL POWER, PROVIDE DAYLIT SENSOR FOR DIMMING CIRCUIT AS REQUIRED. REFER TO DETAIL 3/E0.0.3 FOR WIRING DIAGRAM.
5. PROVIDE 6–BUTTON GREENGATE RC– DIGITAL WALL STATION WITH ON/OFF/PRE–SETS/RAISE/LOWER FUNCTIONS, COORDINATE WITH USER FOR PRE–SETS PREFERENCE SET UP.
6. PROVIDE ROOM CONTROLLER GREENGATE "RC3DE". FIELD COORDINATE FOR EXACT LOCATION IN ACCESSIBLE CEILING SPACE. REFER TO DETAIL3/E.0.0.3 FOR WIRING DIAGRAM.
7. EXTERIOR LIGHTING CIRCUIT SHALL BE PROVIDED WITH PHOTO–CELL CONTROL, EQUAL TO NSI INDUSTRIES PHOTO–CONTROL #3000, FIELD COORDINATE FOR BACK–BOX EXACT LOCATION.
8. PROVIDE DAYLIGHT HARVESTING CONTROL FOR FIXTURE TYPE "D" IN THE HALLWAYS 117, 121, 125 AND BREAK ROOM 114.

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REVISIONS

NO	REASON	DATE
/1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. INUI
E–13884
Exp. 06/30/19
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE
LIGHTING PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
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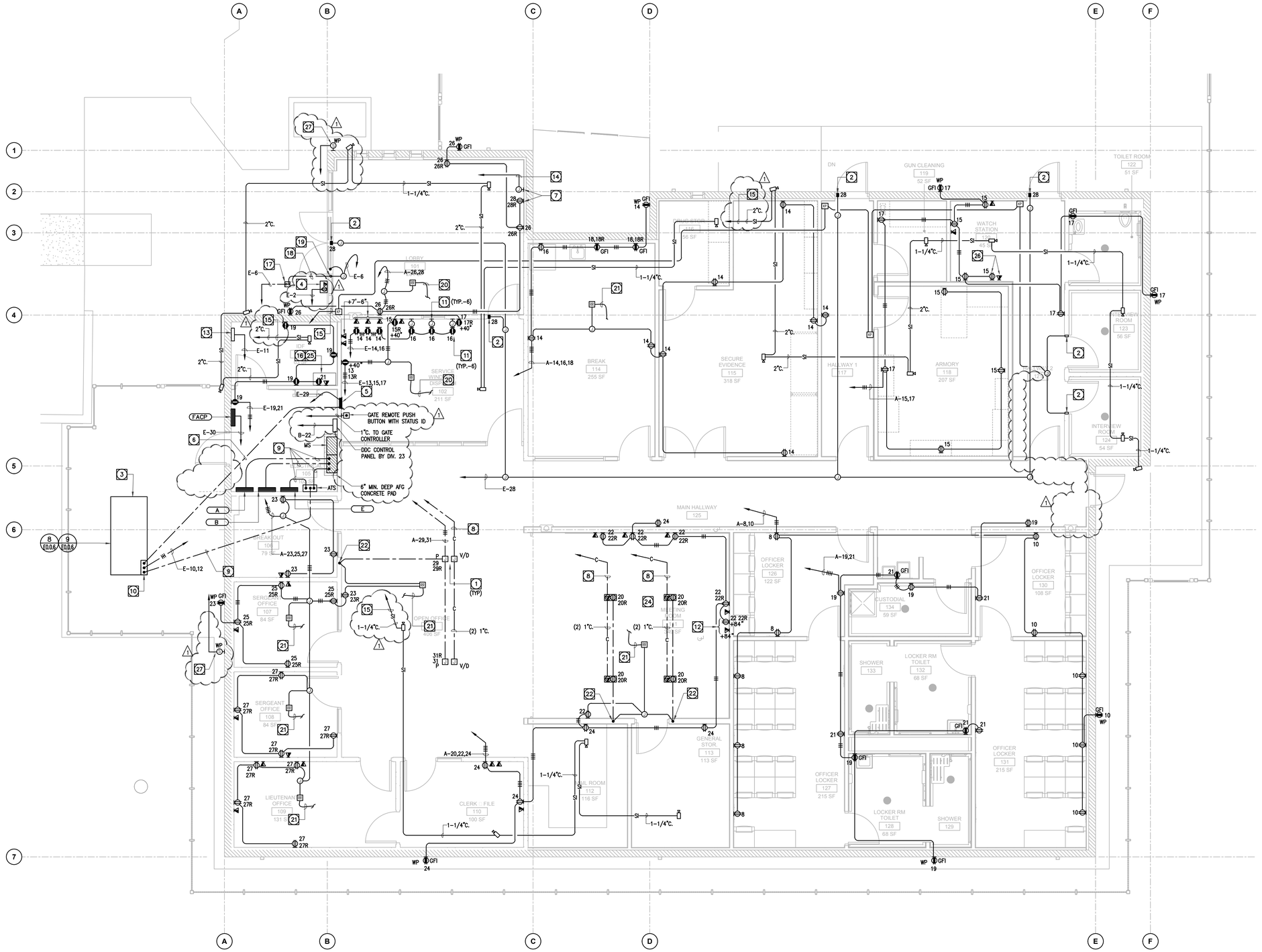

1 POWER □ SIGNAL PLAN

1/4" □ 1'-0"

REFERENCE NOTES

1. FLOOR OUTLETS FOR MODULAR FURNITURE.
2. ELECTRIC DOOR STRIKE TO BE PROVIDED WITH EMERGENCY POWER PROVISION.
3. 50KW EMERGENCY GENERATOR. REFER TO DETAILS 8 & 9 ON SHEET E0.0.6.
4. PROVIDE CONNECTION TO EMERGENCY CODE BLUE WALL MOUNTED PANEL, SITE COORDINATE FOR EXACT LOCATION. (1)
5. REMOTE GENERATOR CONTROLLER.
6. 1"C. WITH (2) PAIRS 2#12 (THHN) AND (1) BELDEN 9841 STRANDED..
7. FOR TV MONITOR. MOUNT AT +7'-0".
8. ROUTE (2) 1"C. TO IDF ROOM 131. STUB UP CONDUITS AT EQUIPMENT RACK LOCATION. VERIFY EXACT STUB-UP LOCATIONS IN FIELD WITH CAMPUS IT SERVICES PRIOR TO INSTALLATION.
9. REFER TO SINGLE LINE DIAGRAM ON SHEET E0.0.2 FOR FEEDER SIZE.
10. PROVIDE STUB-UPS AND CONNECTIONS TO GENERATOR CONTROL PANEL. VERIFY EXACT STUB-UP LOCATIONS AND P.O.C. IN FIELD PRIOR TO INSTALLATION.
11. FOR SURVEILLANCE MONITORS. MOUNT AT +7'-6".
12. FOR WALL MOUNTED PROJECTOR. MOUNT RECEPT./DATA OUTLET AT +7'-0" AFF.
13. SECURITY CAMERA CONTROLLER.
14. ROUTE 3/4"C. TO MAIN MONITORING CONTROL PANEL.
15. ROUTE INDICATED CONDUITS TO SECURITY SYSTEM CONTROL PANEL LOCATED IN IDF ROOM. (1)
16. IDF RACK.
17. STEEL BOLLARD TO HOUSE CARD READER FOR DOUBLE ENTRY DOORS. REFER TO DETAIL-3/A1.3.3 FOR CONDUIT REQUIREMENTS. VERIFY EXACT CONDUIT STUB-UPS AND P.O.C.'S IN FIELD PRIOR TO ROUGH-IN. PROVIDE/INSTALL OUTLET BOX FOR CARD READER.
18. ROUTE 1"C.-2#12x1#12 EG. TO AUTO. DOOR CONTROLLER.
19. ROUTE UP INSIDE MULLION AND CONNECT TO AUTO. DOOR CONTROLLER.
20. CONNECT TO RECEPTACLE POWER PACK. REFER TO DETAIL 2/E0.0.3.
21. CONNECT TO OCCUPANCY SENSOR FOR RECEPTACLE POWER PACK CONTROL. REFER TO DETAIL 3/E0.0.3. (1)
22. ROUTE CONDUIT INSIDE WALL DOWN TO U.G. CONDUIT. (1)
23. NOT USED.
24. PROVIDE/INSTALL EN INFRARED "ASSISTIVE LISTENING SYSTEM" (ALS). COMPLETE WITH AMPLIFIER, RECEIVER, HEADSETS AND ALL RELATED COMPONENTS REQUIRED FOR A CODE COMPLIANT, COMPLETE/OPERABLE SYSTEM. REFER TO SPEC. SECTION FOR REQUIREMENTS.
25. ASSISTIVE LISTENING SYSTEM (ALS) AMPLIFIER TO BE LOCATED IN IDF RACK.
26. FOR LIFE-SCAN MACHINE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.
27. PROVIDE BACK BOX & 3/4"C.O. BACK TO PA AMPLIFIER IN MDF ROOM, COORDINATE WITH LV - CONTRACTOR FOR REQUIREMENTS. (1)

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CLIENT NAME

COMPTON CCD

PROJECT NAME

CAMPUS PUBLIC SAFETY BUILDING

1111 EAST ARTESIA BOULEVARD, COMPTON CALIFORNIA 90221

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES

FILE NO: **19-C1**
AR: **03-117673**
AC_____ FLS_____ SS_____
DATE_____

CONSULTANT

16516

dHA + CALPEC
150 S. ARROYO PARKWAY
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PASADENA, CA. 91105
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PROJECT TEAM:

PRINCIPAL IN CHARGE
KEVIN CHEN

PROJECT MANAGER
-

DRAWN BY
dHA+CALPEC

REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER
ANDREW H. INLO
E-13884
RENEWAL 08/31/2019
ELECTRICAL
STATE OF CALIFORNIA

SEAL / SIGNATURE

SHEET TITLE

POWER □ SIGNAL PLAN

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-E2.1.2

1 ELECTRICAL MECHANICAL POWER PLAN

1/4" = 1'-0"

REFERENCE NOTES

1. VERIFY EXACT LOCATION OF DISCONNECT SWITCH AND P.O.C. IN FIELD WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
2. VERIFY EXACT LOCATION OF P.O.C. IN FIELD WITH PLUMBING CONTRACTOR PRIOR TO INSTALLATION.
3. FURNISH AND INSTALL 30A/3P-600VAC NON-FUSE SERVICE DISCONNECT SWITCH IN NEMA 1 ENCLOSURE AT 48" AFF, EQUAL TO LEVITON #DS30-AX AND PROVIDE 3/4"C.-3#8+1#10 EG. CONNECTION TO ELECTRIC WATER HEATER (9KW, 208V-3PH).
4. FURNISH AND INSTALL 40A/2P-600VAC NON-FUSE SERVICE DISCONNECT SWITCH IN NEMA 1 ENCLOSURE AT 18" AFF (BELOW COUNTER), EQUAL TO LEVITON #MS4X-402 AND PROVIDE FLEX 3/4"C.-2#8+1#10 EG. CONNECTION TO INSTA HOT WATER HEATER (6.2KW, 208V-1PH).

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CLIENT NAME

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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

REGISTERED PROFESSIONAL ENGINEER
ANDREW N. WILD
E-13864
ELECTRICAL
STATE OF CALIFORNIA
04/30/18

SEAL / SIGNATURE

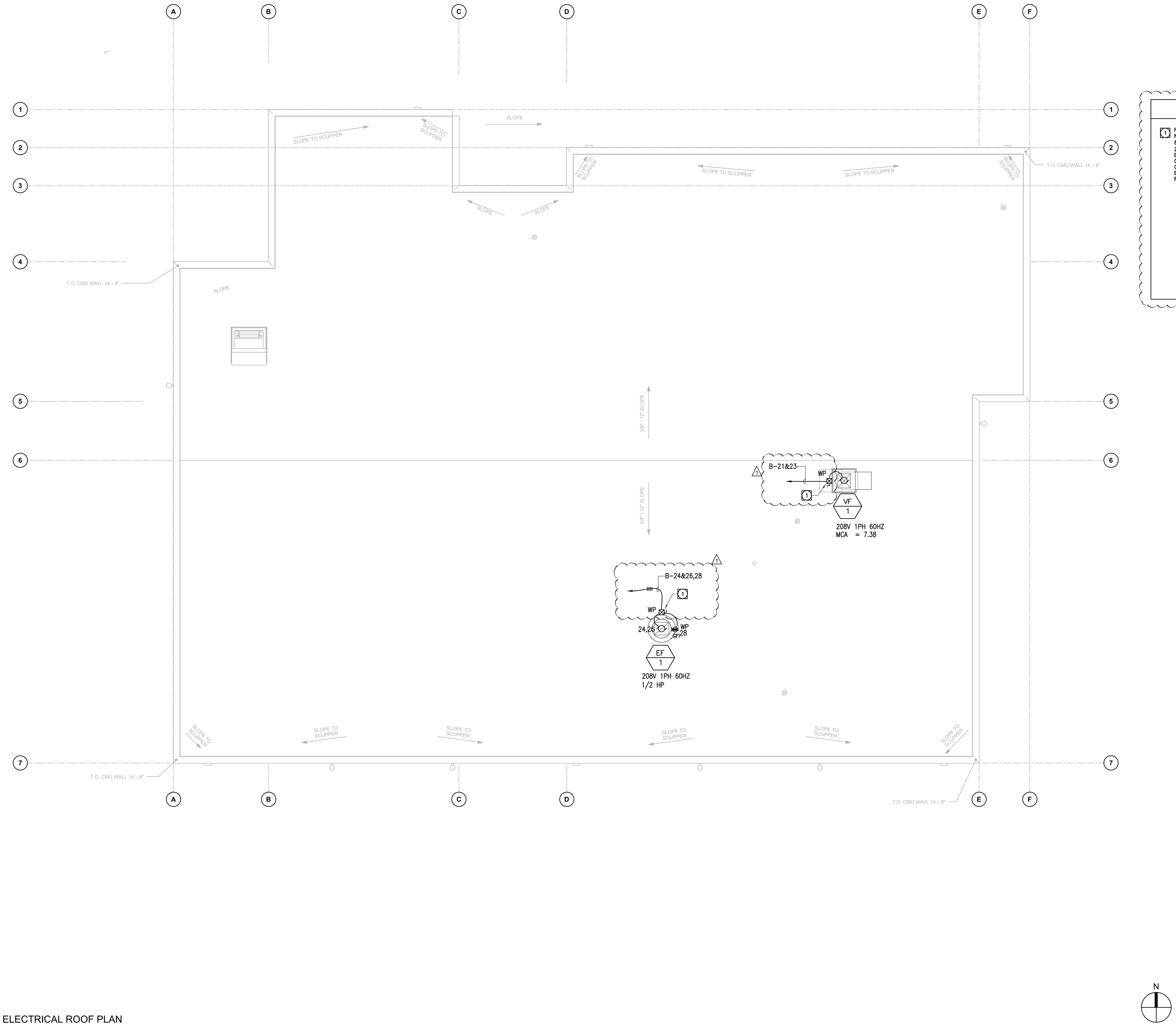
SHEET TITLE

ELECTRICAL MECHANICAL POWER PLAN

PROJECT NUMBER

913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-E2.1.3



1 ELECTRICAL ROOF PLAN
1/4" = 1'-0"

REFERENCE NOTES

1. FURNISH AND INSTALL COMBINATION STARTER & DISCONNECT SWITCH, NON-REVERSING THERMAL OVERLOAD RELAY EQUAL TO SQUARE D CLASS 8536 COMBINATION STARTER (SBW11-V02-B5.5) NEMA SIZE "0" (1/2HP., 208V - 1PH, 60HZ) IN NEMA 3R/12 ENCLOSURE WITH START/STOP PUSH BUTTON, HOA SELECTOR SWITCH & EXTERNAL RESET BUTTON. RED - OFF & GREEN - ON PUSH TO TEST PILOT LIGHTS 120V COIL VOLTAGE & CONTROL TRANSFORMER. CONTRACTOR TO PROVIDE UNISTRUT STAND-OF BACK UP STRUCTURE FOR STARTER, STRUCTURAL SUPPORT SHALL BE REVIEWED AND APPROVED BY STRUCTURAL ENGINEER OF RECORD.

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REVISIONS

NO	REASON	DATE
1	ADDENDUM #1	04/20/2018

SEAL / SIGNATURE

SHEET TITLE
ELECTRICAL ROOF PLAN

PROJECT NUMBER
913-4675-01

ISSUE DATE	SHEET NO.
11/21/2017	AD1-E3.1.1