LONG BEACH CITY COLLEGE DISTRICT
CONTRACTS MANAGEMENT DEPARTMENT

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BID C2194 BUILDING MM CONSTRUCTION TRADES 1 MODERNIZATION PROJECT AT THE PACIFIC COAST CAMPUS

ADDENDUM NO # 1

JULY 6, 2020

This Addendum forms a part of the Contract Documents and modifies the original Contract Documents. Acknowledge receipt of the Addendum on Section 1.2 of the Bid Proposal. Failure to do so may result in the bid being deemed non-responsive.

Note: It is the responsibility of all bidders to notify all subcontractors from whom they request bids and from whom they accept bids of all changes contained in this addendum.

ADDENDUM NO. 1 CONTENTS

I. SPECIFICATION REVISIONS
II. DRAWING REVISIONS
III. ATTACHMENTS

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I. SPECIFICATION REVISIONS

ITEM #	CATEGORY	REVISION NARRATIVE
1.	Mechanical	Added 'SECTION 232113.13 – UNDERGROUND HYDRONIC PIPING'
2.	Electrical	- Added 'SECTION 260513 – MEDIUM-VOLTAGE CABLES' - Added 'SECTION 261310 – MEDIUM VOLTAGE SOLID DIELECTRIC SWITCH'

II. DRAWING REVISIONS

ITEM #	CATEGORY	SHEET #	REVISION NARRATIVE	REVISED SHEET ATTATCHED
1.	General	G1.10	- Rename sheet A8.40 to 'EXTERIOR & INTERIOR STOREFRONT TYPES' - Remove sheet C8.00 EROSION CONTROL PLAN and update civil sheet count to 20.	No

			- Add sheets E5.11 MEDIUM VOLTAGE SINGLE LINE DIAGRAM and E6.6 DETAILS and update electrical sheet count to 31. - Update total sheet count to 228.	
2.	General	G1.11	General note #41: Revise struct. detail reference from 9/S601 to 8/S8.0.	No
3.	General	G1.20	Building Code Analysis column: Revise construction type of (N) Storage Building from III-A to V-B.	No
4.	General	G2.10	- Signage-Legend '14': Revise to 'DIE CUT VINYL GRAPHICS' - Signage-Legend: Add '15' - 'FIRE ALARM SIGNAGE'- '18/G3.11'. Locate at door MM 151. - Legend @ GL B/11 should say '26G/G3.10' - Relocate drinking fountain legend (GL H.5/12) & keynote (GL H.4/13) to new location @ GL H/10. - Revise keynote '1' @ GL G/7 to '2' - Remove keynote tag '2' pointing on wall between GL G & L @ existing building. - Tag FEC in room MM 145 with keynote '1'.	No
5.	General	G2.11	Signage-Legend '10': Revise to 'NEW FREE-STANDING BUILDING SIGNAGE (VERIFY LOCATION W/ ARCHITECT & DISTRICT)'. Detail ref to be 20/G3.10	No
6.	General	G3.11	- Detail 11 & 16: Revise backing reference to 8/S8.0 - Detail 21: Not used	No
7.	General	G3.12	- Detail 3: Not used	No
8.	Civil	C1.00	Remove sheet C8.00 EROSION CONTROL PLAN from sheet index and civil set.	No
9.	Civil	C3.10	- Provided additional keynotes - Added legend for sawcut. Note that sawcut shall be made at all building faces and paving along the limit of work - Fixed misc. callouts.	Yes
10.	Civil	C4.00	- Area of temp trash compactor added to scope of work. - Fixed and added additional keynotes and dimensions - Provided building location dims - Revised footprint of new storage building.	Yes
11.	Civil	C5.00	- Revised footprint of new storage building.	Yes
12.	Civil	C5.10	- Revised footprint of new storage building - Added gas cylinder cabinets next to trash enclosure. - Added and fixed misc. elevations (not clouded for plan clarity)	Yes
13.	Civil	C5.20	Added and fixed misc. elevations (not clouded for plan clarity)	Yes
14.	Civil	C5.30	Added and fixed misc. elevations.	Yes
15.	Civil	C6.00	- Added downspout locations. - Added and fixed misc. elevations (not clouded for plan clarity) - Coordinated inlets of Contech per C1/C9.10 (not clouded	Yes

			for plan clarity)	
16.	Civil	C7.00	Revised footprint of new storage building.	Yes
17.	Civil	C7.10	- Revised footprint of new storage building. - All utilities not related to civil unreferenced on the plans except for structures that can be seen on the surface (i.e. lights, pull boxes, vaults, etc.) (not clouded for plan clarity) - Fixed and added to keynote 76.	Yes
18.	Civil	C7.20	All utilities not related to civil unreferenced on the plans except for structures that can be seen on the surface (i.e. lights, pull boxes, vaults, etc.) (not clouded for plan clarity)	Yes
19.	Civil	C8.00	Removed EROSION CONTROL plan.	No
20.	Civil	C9.00	Water connection detail provided.	Yes
21.	Civil	C9.20	Details 1 & 2 have been adjusted to reflect correct site elevations.	Yes
22.	Civil	C9.30	Sewer connection detail provided.	Yes
23.	Civil	C9.40	Pump detail revised to reflect correct site elevations.	Yes
24.	Civil	C9.50	Provided additional notes.	Yes
25.	Landscape	L1.10	- Added detail references to Hardscape Legend - Revised Fence layout at equipment yard - Revised hardscape layout at storage area - Clarified hardscape material at concrete connection at equipment pads.	Yes
26.	Landscape	L2.10	- Added detail references to Hardscape Legend - Added notes regarding Isolation joints at building - Added edging notes at South plaza	Yes
27.	Landscape	L3.10	Revised misc. dimensions around the site.	Yes
28.	Landscape	L4.10	- Detail J: Added notes about anchor bolt spacing - Detail K: Added notes about anchor bolt spacing	Yes
29.	Landscape	L5.10	Added irrigation to revised planter at north of site	Yes
30.	Landscape	L6.10	Revised detail references	Yes
31.	Landscape	L6.20	Revised detail reference	Yes
32.	Landscape	L7.10	- Detail D: Corrected keynote - Detail J: Added bolt quantity - Detail K: Added bolt quantity	Yes
33.	Landscape	L7.20	Detail O: Corrected keynotes	Yes
34.	Landscape	L7.30	Detail DD: Added missing keynote	Yes
35.	Landscape	L8.10	Added planting to revised planter at north of site	Yes
36.	Arch. Demo	AD2.0	- Delete keynote '30 typ' @ ALAMITOS AVE. - Revise keynote '4' @ PARKING LOT 9 to '7'. - Revise keynote '7' @ (E) FIRE DEPARTMENT CONNECTION to '19'. - Revise keynote '8' to 'EXISTING ELECTRICAL YARD 12' CHAINLINK FENCE IS TO BE PROTECTED IN PLACE, REMOVE/REPLACE WHERE ACCESS IS REQUIRED TO REMOVE AND REPLACE ELECTRICAL GEAR, MEANS AND METHOD IS REQUIRED FOR CHAINLINK PANELS THAT WILL	No

			BE REMOVED AND/OR REPLACED BACK TO NEXT PANEL AND REPAIRED' - Add to keynote '29': 'ASPHALT AREA TO BE RENEWED AFTER CONSTRUCTION. SEE CIVIL' - Note on PARKING LOT 2: The temporary power pole w/ parking lot lighting and the (2) surface mounted bollards are to be in the scope of the GC's mobilization - Dims for temp. chain link enclosure at PARKING LOT 2 to be 40' (E-W) x 36' (N-S). Double swing gate to be 32' (16' each gate)	
37.	Arch. Demo.	AD2.1	- Removed and revised notes/callouts. - Removed and revised note at existing pit (GL L/1)	Yes
38.	Arch. Demo	AD4.1	- 2/AD4.1: 9'-10 7/8" dimension between GL M & L to be 9'-11"	No
39.	Arch. Demo	AD5.1	New 2x fascia at demolished canopy to be installed against existing structure per detail 2/A9.40	No
40.	Architectural	A1.01	- Revised footprint of new storage building. - Tagged sliding gate w/ keynote '13'. - Keynote '1': Added detail reference 30/A9.80 - Keynotes '8','14','23' to '27': Not used - Keynote '17': Revised to 'EXISTING ELECTRICAL YARD 12' CHAINLINK FENCE IS TO BE PROTECTED IN PLACE, REMOVE/REPLACE WHERE ACCESS IS REQUIRED TO REMOVE AND REPLACE ELECTRICAL GEAR, MEANS AND METHOD IS REQUIRED FOR CHAINLINK PANELS THAT WILL BE REMOVED AND/OR REPLACED BACK TO NEXT PANEL AND REPAIRED' - Keynote '21': See 20/G3.10 - Keynote '36': Added 'See civil' - Keynote '42': Added detail reference 4/A1.02	Yes
41.	Architectural	A1.02	- 1/A1.02: Added dims and revised note at existing chain link fence. - 2 & 18/A1.02: Revised CMU cap detail. - 4/A1.02: Added dims for concrete pad and specified anchors for gas cylinder cabinets. - 5/A1.02: Provided heavy duty casters for swing gates.	Yes
42.	Architectural	A1.04	1 & 2/A1.04: Not used	No
43.	Architectural	A2.01	- Revised and added housekeeping concrete pads - Revised concrete curbs due to acoustical wall revisions. See A2.11. - Revised legend notes at existing pit. - Revised dims at lobby entry.	Yes
44.	Architectural	A2.02	- Revised housekeeping pads. - Added HSS post per struct @ GL B/10.3.	Yes

			- Called out locations where custom CMU sizes occur. - Revised dims due to acoustical wall and block module review (not clouded for plan clarity)	
45.	Architectural	A2.10	- Adjusted walls due to revisions on A2.11	Yes
46.	Architectural	A2.11	- Relocated interior walls and revised interior wall types to achieve higher STC ratings. - Revised housekeeping pads. - Called out detail 24/A9.20. - Revised keynote '31'. - Deleted keynotes '32' & '33'. - Revised locations of and added downspouts.	Yes
47.	Architectural	A2.12	- Revised keynote '31'. - Deleted keynotes '32' & '33'. - Revised housekeeping pads. - Added HSS post per struct @ GL B/10.3. - Shifted MM163 north wall 2" north due to FPP square footage adjustment. - Revised dims t/m block module (not clouded for plan clarity) - Revised locations of and added downspouts.	Yes
48.	Architectural	A2.13	Provided roof dims and revised dims.	Yes
49.	Architectural	A2.21	- 1/A2.21: Revise note at heavy duty racks to 'HEAVY DUTY METAL RACKS, CFCI, DEFERRED APPROVAL' - Bottom drawing's title to be 'EQUIPMENT PLAN - MACHINE TOOLING MM140', ¼" = 1'-0", 3/A2.21 - 3/A2.21: Revise note at heavy duty racks to 'HEAVY DUTY METAL RACKS, CFCI, DEFERRED APPROVAL'.	No
50.	Architectural	A2.30	- Added and called out parapet detail 2/A9.30. - Revised roof drainage at GL B.3/5 - Added downspouts, high points & low points at canopy gutter. - Relocated entry opening of mechanical screen, and revised walk pad route.	Yes
51.	Architectural	A2.31	- Revised TOR dims. - Revised walk pad route. - Revised roof drainage at GL B/12 - Added downspouts, high points & low points at canopy gutter. - Added 10 & 25/A2.31 (enlarged canopy plans)	Yes
52.	Architectural	A3.10	- Adjusted RCP due to revisions on A2.11 - Called out motorized shades MS - Added window well dims - Overall plan clean-up and addition of more info.	Yes
53.	Architectural	A3.11	- Adjusted RCP due to revisions on A2.12	Yes

			- Called out motorized shades MS - Added window well dims - Overall plan clean-up and addition of more info.	
54.	Architectural	A4.01	- Relocated roof overflow @ GL 4 to GL 5.3, and added scupper and downspout - Revised locations of and added additional downspouts. - Callouts for motorized shades relocated to RCPs. - Called out details.	Yes
55.	Architectural	A4.02	- 3/A4.02: Added roof drain/overflow wall outlet. - Called out details - Revised locations of and added additional downspouts. - Callouts for motorized shades relocated to RCPs.	Yes
56.	Architectural	A5.01	- 4/A5.01: Revised dims and called out details. - 5/A5.01: Revised dims and called out details.	Yes
57.	Architectural	A5.02	Cleaned up sections, added more info, and called out more details.	Yes
58.	Architectural	A5.10	Cleaned up sections, added more info, and called out more details.	Yes
59.	Architectural	A5.11	Cleaned up sections, added more info, and called out more details.	Yes
60.	Architectural	A5.12	Cleaned up sections, added more info, and called out more details.	Yes
61.	Architectural	A5.20	- 1/A5.20: Added dims, located drains, gutter high & low points, etc. - 3/A5.20: Relocated entry opening of mechanical screen, added dims, and walk pad.	Yes
62.	Architectural	A7.01	- Added UPTN (urinal partition panels) - Removed accessory CVR-2 - Revised basis of design for TWL - Updated elevations due to accessory revisions.	Yes
63.	Architectural	A7.10	1 & 2/A7.10: Revised walls due to acoustical wall revisions.	Yes
64.	Architectural	A7.11	- 1/A7.11: Added dims. - 2/A7.11: Added dims, revised detail callout, and called out 3x3 HSS above. - 3/A7.11: Revised dims due to acoustical wall revisions, clean up keynotes & graphics - 6/A7.11: Added chain link gate and revised detail callout - 12/7.11: Revised note for horizontal HSS 3x3 support - 13/7.11: Added framing angles w/ wood screws. - 15/7.11: Added chain link ceiling mesh.	Yes
65.	Architectural	A7.12	- Clean up legend/keynote column. - 22/A7.12: Revised roll up door. - 24/A7.12: Revised dims due to acoustical wall revisions.	Yes
66.	Architectural	A8.01	- Revised graphics and LT-1 dims.	Yes

67.	Architectural	A8.02	- Revised graphics and LT-2 dims.	Yes
68.	Architectural	A8.20	- Updated material, color, and room finish schedule to match material finish board. - Added general note #12 for FRP location.	Yes
69.	Architectural	A8.30	- Revised bi-fold garage door to reflect 50% solid panels and tempered glazing. - Added hardware set to gate schedule - Revised G114 - Cleaned up door schedule data, and detail refs.	Yes
70.	Architectural	A8.40	- Added window type W6 - Revised interior glazing type '2' to laminated glass - Fixed detail callouts, dims, tags, and added window type quantities. - Renamed sheet title. - Added storefront type C6	Yes
71.	Architectural	A9.10	- 3/A9.10: Not used - 9 & 13/A9.10: Add fully mortised drop-bottom acoustical door seal, similar to 4/A9.10. - 24/A9.10: Revise struct dtl reference from 6/S404 to 6/S4.3.	No
72.	Architectural	A9.11	- Update parapet wood blocking to be pressure treated throughout project. Parapet wood blocking only to be fire retardant treated when adjacent to existing structure/building (e.g. 3/A9.31& 23/A9.32). - Provide shims as needed at openings throughout project (e.g. 19/A9.10) - Joint size at all openings to be ¼" throughout project (e.g. 19/A9.10) - 21/A9.11: Remove anchor call out '1" DIA, X5" BOLTS GALV. @32" OC' - 27/A9.11: Dim from concrete sawcut to top of roofing to be 8" min.	No

			- 20/A9.11: Remove (2) HSS bolt connection, and revise (2) HSS connection to '(2) HSS WELDED PER STRUCT, SEE 16/S4.3' - 22/A9.11: At concrete header opening condition: Wrap WRB and sheet mtl flashing over entire header (concrete and mtl stud wall), and fasten sheet mtl flashing on interior side of concrete header.	
73.	Architectural	A9.20	- 5/A9.20: Window well depth per RCPs - 9/A9.20: Removed self-drilling screw from top of sheet mtl flashing (@ 11'-0" elevation) - 10/A9.20: See 15/S4.1 for curb reinforcing - 23/A9.20: Revised storefront profile - 17/A9.20: Added motorized window shade.	Yes
74.	Architectural	A9.30	- Added detail 2/A9.30 - Added detail 17/A9.30 - 5/A9.30: Revised TO existing sheathing (field vfy) - 15/A9.30: Provided SBS boot at each post - 20/A9.30: Provided SBS boot at post and revised structural detail reference from 7/S7.2 to 12/S7.2 - 24/A9.30: Provided caulk @ grout joint @ masonry reglet - 29/A9.30: Coping height to be 3" and refer 16/A9.30 for coping joint - 30/A9.30: Provided sealant @ grout joint @ counter flashing	Yes
75.	Architectural	A9.31	- 6/A9.31: Revised dims and ladder specs.	Yes
76.	Architectural	A9.32	- 2 & 3/A9.32: Revised flashings and added HP & LP of gutter. - 5/A9.32: Revised ladder specs.	Yes
77.	Architectural	A9.35	- 2 & 14/A9.35: Revised flashings, added dims, added HP & LP of gutter, and specified soffit panel fastener. - 30/A9.35: Added elevation 16'-4".	Yes
78.	Architectural	A9.36	Revised flashings, added dims, added HP & LP of gutter, specified soffit panel fastener, and added note for structural embed location	Yes
79.	Architectural	A9.37	- 2/A9.37: Revised flashings, added dims, added HP & LP of gutter. - 27/A9.37: Added additional notes for mtl panel.	Yes
80.	Architectural	A9.40	- 15/A9.40: Not used. - 25/A9.40: Provided neoprene washers for downspout anchors. - 28/A9.40: Added dims for sheet mtl coping. - 29/A9.40: Revised profile of sheet mtl cap	Yes
81.	Architectural	A9.41	- 2/A9.41: Revised soffit and canopy detail. - 30/A9.41: Provided weep holes at bottom angle clip	Yes
82.	Architectural	A9.42	- Added detail 2/A9.42 - Added detail 25/A9.42 - Added detail 30/A9.42	Yes
83.	Architectural	A9.43	- Added detail 15/A9.43 - Added detail 22/A9.43	Yes

			- Added detail 25/A9.43 - 7/A9.43: Revised to show corrugated metal panel. - 8/A9.43: Revised to reflect 2" expansion joint per struct	
84.	Architectural	A9.51	Provided dims, diagonal bracing, and detail reference.	Yes
85.	Architectural	A9.61	- 28/A9.61 ("A"): Revise structural attachment reference from 13/S6.11 to 6/S8.2 & 2/S8.2	No
86.	Architectural	A9.80	- 1, 2 & 5/A9.80: Revised mtl stud backing reference to 8/S8.0. - 3/A9.80: Added note. - 12/A9.80: Removed struct backing detail reference and revised soffit depth. - 13/A9.80: Revised locker height to 36" and depth to 18" at 'BASIS OF DESIGN' note. - 26/A9.80: Ref 8/S8.0 & 8/G3.11 for wall anchorage. Ref 24/A9.80 for floor anchorage. - 15/A9.80: Added grab bar. - Added detail 30/A9.80 for utility bollard.	Yes
87.	Architectural	A9.90	- 2, 3, 5, 7, 10, 15 & 18/A9.90: Not used. - 9/A9.90: Revised counter detail and added dims. - 12/A9.90: Revised drawers to be lockable and added note to see finish schedule for panel colors. - 19/A9.90: Mtl stud backing per 8/S8.0. - 20/A9.90: Revised counter detail.	Yes
88.	Structural	S2.1	Added selector switch anchorage detail.	Yes
89.	Structural	S2.2	Clarified pipe/HVAC penetration locations	Yes
90.	Structural	S2.3	Clarified pipe/HVAC penetration locations	Yes
91.	Structural	S2.4	- Clarified pipe/HVAC penetration locations - Revised roof screen layout	Yes
92.	Structural	S2.5	Clarified expansion joint between site wall and building	Yes
93.	Structural	S3.1	Revised opening dimensions	Yes
94.	Structural	S3.2	Clarified strongback reference callouts	Yes
95.	Structural	S4.3	Revised curb width on detail 7/S4.3	Yes
96.	Structural	S5.1	Added recessed receptacle locations detail	Yes
97.	Structural	S6.1	Added Wx beam to channel connection detail	Yes
98.	Structural	S6.2	Revised top of wall condition on details 13, 14, 17	Yes
99.	Structural	S7.2	- Revised top of wall condition on detail 3 - Clarified steel plate size on details 14 and 15	Yes
100.	Structural	S9.1	Clarified door opening details 13 and 14	Yes
101.	Mechanical	M0.2	- Added definition for EG-2 shown on plans. - Revised AHU Control Diagram References	Yes
102.	Mechanical	M1.1	- Revised underground pipe sizes - Added preliminary underground valve, air vent, expansion loop, and anchor layouts and referenced delegated design requirements in project specifications requiring contractor to provide complete layouts based on field conditions. - Shifted pipe segments to avoid conflict with site lighting.	Yes
103.	Mechanical	M6.2	- Keynote 5 shown on Detail 5/M6.2 shall be changed to read 4.	No

			- Revise Keynote 3 shown on Detail 6/M6.2 to read "VARIABLE AIR VOLUME BOX (VAV) SUPPORTED TO STRUCTURE ABOVE PER 5/S9.1. REFER TO SMACNA SEISMIC RESTRAINT GUIDELINES FOR ADDITIONAL REQUIREMENTS. SUBMIT FOR APPROVAL."	
104.	Plumbing	P0.2	Added Earthquake Valve (EQV-1) to Plumbing Fixture Schedule.	Yes
105.	Plumbing	P2.0	Added General Note Clarifying that Elevations on Sheet are taken from Finished Floor.	Yes
106.	Plumbing	P2.1	- Updated Compressed Air detail references. - Updated Canopy Gutter and Downspout references. - Updated hose bibb on exterior west building to HB-3.	Yes
107.	Plumbing	P2.2	Revised keynote detail references.	Yes
108.	Plumbing	P3.2	Added keynote 18.	Yes
109.	Plumbing	P6.5	Removed Compressed Air details.	Yes
110.	Electrical	E0.1	Sheet index updated.	Yes
111.	Electrical	E0.4	Circuits/Breakers updated for roll up doors, motorized shades, rollup and bifold doors.	Yes
112.	Electrical	E0.5	Flat panel display breaker/circuit updated.	Yes
113.	Electrical	E1.1	Selector switch added to scope.	Yes
114.	Electrical	E1.2	Detail callout added for mounting of temp panel. Added mounting detail 5/E6.5.	Yes
115.	Electrical	E2.2	- Lighting at Air Compressor MM 158 updated. - Lighting at canopy south or MM140 updated. - Lighting at canopy south of MM 163 updated. - Lighting keynote clarified.	Yes
116.	Electrical	E2.4	- Drinking fountain relocated to West wall of (N) MM workshop. - Bi-fold doors updated from 208V to 120V connections. - Motorized shades added. - Circuits serving rollup doors (MM140, 146, 147, 149) updated to 2P1A panel. - Additional plumbing circuits/connections added at restrooms to serve plumbing sensor transformers.	Yes
117.	Electrical	E3.2	Projector removed; flat panel displays added.	Yes
118.	Electrical	E3.3	Flat panel display added.	Yes
119.	Electrical	E5.1	MV single line updated to include removal of existing selector switch.	Yes
120.	Electrical	E5.11	Sheet added. MV reno single line added to include new selector switch.	Yes
121.	Electrical	E6.5	Panel mounting detail added for site temporary power panel 'TP'.	Yes
122.	Electrical	E6.6	Sheet added. Details pertaining to selector switch/MV conductors added.	Yes
123.	Electrical	ED1.1	Notes to disconnect and remove existing selector switch added.	Yes

124.	Fire Sprinkler	F3.12	Revised sprinkler lines at canopy.	Yes
125.	Telecom	T0.2	Added Heights for Cameras, WAPS, and Access control to the schedules.	Yes
126.	Telecom	T1.1	Added note for irrigation controls to building II. Added existing PB	Yes
127.	Telecom	T2.1	Added Camera and WAP heights. Changed ceiling mounted Data outlets to Wall mounted for OMNI locks. Added heights to TV Data outlets.	Yes
128.	Telecom	T2.2	Added height for cable tray. Removed ceiling outlets from RCP.	Yes
129.	Telecom	T3.1	Added height and reference to details for mounting.	Yes
130.	Telecom	T5.1	Adjusted room numbers to current IDFs and corrected referencing to notes.	Yes
131.	Telecom	T6.5	Removed notes from detail #1/T6.5	Yes
132.	Telecom	T6.8	Added note #6/T6.8 for AV Speaker	Yes
133.	Telecom	TAV3.1	Added conduits and size to AV3 for speakers. Added referencing and details to notes #1, 4, 6.	Yes
134.	Telecom	TAV3.2	Adjusted note #1. Added callout to elevation.	Yes
135.	Telecom	TAV3.3	Adjusted note #1.	Yes
136.	Telecom	TAV3.4	Added note #7, and adjusted note #4	Yes
137.	Telecom	TAV6.1	Added structural reference to details #1,5. Adjustments to detail #4.	Yes

III. ATTACHMEMTS

1. Addendum No. 1 Specification Sections (Additional Sections)
2. Addendum No. 1 Drawings (Revised Sheets)

*****END OF ADDENDUM NO. 1*****

LONG BEACH CITY COLLEGE DISTRICT

Alan Moloney

Alan Moloney
Deputy Director Purchasing & Contracts

SECTION 232113.13 - UNDERGROUND HYDRONIC PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
1. Underground pre-insulated copper pipes and fittings.
2. Underground pre-insulated steel pipes and fittings.
3. Underground pre-insulated plastic pipes and fittings.

1.3 ACTION SUBMITTALS

A. Submittals shall be formatted per Section 230000 “General Mechanical Requirements”.

B. Product Data: For the following:
1. All piping data. Submit data indicating that pipe, tube and fittings are manufactured exclusively in North America, Germany or Italy.

C. Shop Drawings: For underground heating hot water hydronic piping. Signed and sealed by a professional engineer.
1. Calculate requirements for expansion compensation for underground piping.
2. Show expansion compensators, offsets, and loops with appropriate materials to allow piping movement in the required locations. Show anchors and guides that restrain piping movement with calculated loads.
3. Show pipe sizes, locations, and elevations. Show piping in trench, conduit, and cased pipe with details showing clearances between piping, and show insulation thickness.
4. Design calculations and detailed fabrication and assembly of pipe anchors and alignment guides, hangers and supports for multiple pipes, expansion joints and loops, and attachments of the same to the pipe vault structure.
5. Show locations of pipe anchors and alignment guides and expansion joints and loops.
6. Coordinate air vent locations based on field locations and elevations identifying system high points.

D. Shop Drawings: For underground chilled water hydronic piping.
1. Show pipe sizes and locations.
2. Coordinate air vent locations based on field locations and elevations identifying system high points.

1.4 INFORMATIONAL SUBMITTALS

A. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1 inch equals 50 feet and at vertical scale of not less than 1 inch equals 5 feet. Indicate

manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing hydronic piping.

B. Qualification Data: For qualified Installer.

C. Welding certificates.

D. Material Test Reports: For piping.

E. Source quality-control reports.

F. Field quality-control reports.

G. Butt fusion welding joint reports.

H. HDPE fusion welded joint kit reports.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to ASME Boiler and Pressure Vessel Code: Section IX.
   1. Comply with provisions in ASME B31.9, "Building Services Piping."
   2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.

B. ASME Compliance: Comply with ASME B31.9, "Building Services Piping," for materials, products, and installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. For copper, steel, and HDPE piping provide components and installation capable of producing hydronic piping systems with the following minimum working-pressure ratings:
   1. Heating Hot Water Piping: 150 psig at 200 deg F.
   2. Chilled Water Piping: 150 psig at 100 deg F.
   3. Air-vent piping: match performance of connected pipe.

2.2 COPPER PIPES AND FITTINGS

A. Copper Pipe: ASTM B-88, Type K Copper tube; type, grade, and wall thickness as indicated in "Piping Application" Article.

B. Wrought-Copper Fittings: ASME B16.22, wall thickness to match adjoining pipe.

C. Copper or Bronze Pressure-Seal Fittings:
   1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. Viega, LLC.
      b. NIBCO, INC.
   2. Housing: Copper.

3. O-Rings and Pipe Stops: EPDM.
4. Tools: Manufacturer's special tools.
5. Minimum 200-psig working-pressure rating at 250 deg F

2.3 UNDERGROUND PRE-INSULATED STEEL PIPES AND FITTINGS

A. Description: Factory-fabricated piping with carrier pipe, insulation, and casing. All pre-insulated pipe, fittings, insulating materials, and technical support shall be provided by the pre-insulated piping system manufacturer.

B. Manufacturers:
1. Thermacor Process Inc.
2. Or approved equal.

C. Carrier Pipe: Ferro-Therm PTS, ASTM A 53 ERW Grade B, Standard Weight, Black Steel.

D. Carrier Pipe Insulation:
1. Polyurethane Foam Pipe Insulation: Rigid, cellular, spray applied to the carrier pipe.
   a. Comply with ASTM C 591; thermal conductivity (k-value) shall not exceed 0.16 BTU x in/h x sq. ft. x deg F at 75 deg F after 180 days of aging aging or to EN253 with lambda value not exceeding 0.0241W/m*K
   b. Insulation shall have a minimum density of 2lb/ft3 and shall be a minimum 90% closed cell in structure.

E. Insulating Diffusion Barrier:
1. A diffusion barrier shall be applied on the outside of the insulation before application of the outer jacket. The barrier shall prevent the diffusion of the blowing agent out of the foam to prevent the foam from aging.
   a. Said diffusion barrier shall be applied to all joint closure kits as well to ensure continuity of the barrier.

F. Casing: HDPE having a wall thickness not less than 125 mils for pipe sizes less than or equal to 12” and shall be extruded onto the Polyurethane foam. No tape jacket allowed. A corona treated boding layer shall be applied onto the Polyurethane foam to ensure a secure bond between the jacket and foam insulation preventing any ingression of water at the jacket / foam interface.

G. Casing accessories shall include the following:
1. Joint Kit: Pressure-testable. Exterior jacket shall be high strength polyethylene sleeve that is electro-fusion welded and field insulated using pourable urethane foam to the thickness specified, preformed split insulation will not be acceptable.
   a. Fusion welding shall be done using split sleeves with embedded wires or mesh that is heated with an electro-fusion welder.
   b. Joint kit shall be pressure testable to 5psi.
   c. Fusion welder shall have archiving capability.
   d. A report showing the temperatures, times and pressure testing of each joint and its location shall be submitted at the end of the job.
2. Expansion Blanket: Elastomeric foam, formed to fit over piping.
3. End Seals: Shrink wrap the casing material to seal watertight around casing and carrier pipe. This includes each end of all factory fabricated fittings.

H. Straight Run Joints: Shall be insulated to the same thickness as the pipe and jacketed with an electro-fusion welded split sleeve.
1. The manufacturer shall provide the fusion machine, straps, bands, pressure gauges and closure patches for the pressure testable joint cover.

a. 20 extra straps and pressure testing caps shall be provided to the campus as well as an extra electro fusion welder for future repairs on the system. All sleeves shall be sized for 8” diameter piping.

2. Heat shrink materials will not be accepted for field joints or the repair of the field joints that do not pass the pressure tests
3. All field joints shall be pressure tested to ensure air tightness at 5psi for 5 minutes while being soap tested for leaks.
4. Joint closure kits shall occur at straight runs only. All fittings shall be pre-manufactured.

I. Fittings: Shall be factory pre-fabricated and pre-insulated fittings with polyurethane foam and jacketed with a butt fusion welded, or an extrusion welded and mitered HDPE jacket. Carrier pipe fittings shall be butt-welded. Fittings include expansion loops, elbows, tees, reducers, and anchors. Elbows, loops, or any other direction changes shall conform to the standards set by ASME B31.1, Code for Power Piping.

J. Expansion / Contraction Compensation: Shall be accomplished utilizing factory pre-fabricated and pre-insulated expansion elbows, Z-bends, expansion loops, and anchors specifically designed for the intended application. External expansion compensation utilizing flexible expansion pads (minimum one inch thickness), extending on either side, both inside and outside the radius of the fittings used with all fittings having expansion in excess of ½”.

K. Steel Welding Fittings: ASTM A 234/A 234M, seamless or welded.
1. ASME B31.1; Class 125.
2. Welding Filler Metals: Comply with AWS D10.12M/D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

L. Leak Detection (wire and ancillary TDR device only):
1. The system shall include two wires between the carrier pipe and the HDPE jacket. The piping system manufacturer shall install the wire in a manner that has the wire embedded in the foam insulation and incorporated into each piece of pre-insulated pipe and fittings. This wire is to be capable of detection through the entire run including field joints and fittings.
2. The system shall be capable of alarming based upon impedance when a TDR device is hooked up to it and shall consist of two wires for detection.
3. A Cablescout TV220 TDR device and its associated software shall be provided to campus.

2.4 HIGH DENSITY POLYETHYLENE (HDPE) PIPE AND FITTINGS

A. Pipe:
1. The pipe and fittings shall be made Extra High Molecular Weight (EHMW) high-density polyethylene with a standard thermoplastic material designation code of PE4710 and having a cell classification of 445474 per ASTM D3350.
2. Materials used to manufacture pipe and fittings shall be listed under the Manufacturer’s name in the Plastics Pipe Institute (PPI) TR-4, “PPI Listing of Hydrostatic Design Basis (HDB), Strength Design Basis (SDB), Pressure Design Basis (PDB) and Minimum Required Strength (MRS) Ratings for Thermoplastic Piping Materials or Pipe.” The Manufacturer shall supply a product with a standard grade HDB rating of 1600 psi (minimum) at 73 deg F and 800 psi (minimum) for 140 deg F. Upon request, the Manufacturer shall supply certification that the materials used to manufacture the pipe and fittings meet the above requirements.
3. All materials, which come in contact with water, including lubricants, shall be evaluated, tested and certified for conformance with ANSI/NSF Standard 61.
4. The dimensional and performance characteristics shall conform to the requirements of the most current version of AWWA C-901 (1/2” through 3”) or C-906 (4” through 65”). Each lot of material shall be tested for melt index, density and % carbon.

5. The pipe Manufacturer's Quality system shall be certified to be in accordance with ISO 9001.
6. Method of Pipe Connection: Fusion-welded HDPE.

B. Fittings:
1. Shall be butt fusion-welded to adjacent pipe sections and shall be constructed to meet AWWA C901 or AWWA C906.
2. Molded and fabricated fittings shall have a pressure rating equal to the pipe.
3. Fittings that are butt fusion welded in the field shall be insulated. End seals at uninsulated fittings shall be field-applied mastic moisture barriers. Factory manufactured fittings shall be pre-insulated using factory PE fitting covers welded to the jackets.
4. The critical parameters of each fusion joint shall be recorded by an electronic data logging device and included in a report at the end of the job.

C. Plastic, Pipe-Flange Gasket, Bolts, and Nuts:
1. Flanges and Mechanical Joint Adapters shall have a material designation code of PE3608 or higher. Flanged and Mechanical Joint Adapters can be made to ASTM D3261 or if machined, must meet the requirements of ASTM F2206. Flanges and MJ Adapters shall have a pressure rating equal to the pipe.
2. Van-Stone style, metallic, convoluted or flat-plate, back-up rings and bolt materials shall have bolt holes and bolt circles conforming to AME B-16.1 Class 125. The back-up ring shall provide a long term pressure rating equal to or greater than the pressure-class of the pipe with which the flange adapter assembly will be used.

2.5 CASED PIPING SYSTEM

A. Description: Factory-fabricated piping with carrier pipe, insulation, and casing.
1. Thermacor Process Inc.
2. Perma-Pipe Inc.
3. Urecon/Logstor

B. Carrier Pipe: As indicated in Part 3 – Application Schedule.

C. Carrier Pipe Insulation:
1. Polyurethane Foam Pipe Insulation: Rigid, cellular, high-pressure injected between carrier pipe and jacket.
   a. Comply with ASTM C 591; thermal conductivity (k-value) shall not exceed 0.16 Btu x in./h x sq. ft. x deg F at 75 deg F after 180 days of aging or to EN253 with lambda value not exceeding 0.0241W/m*K
   b. Insulation shall have a minimum density of 2lb/ft^3 and shall be a minimum 90% closed cell in structure.
2. A diffusion barrier shall be applied on the outside of the insulation before application of the outer jacket. The barrier shall prevent the diffusion of the blowing agent out of the foam to prevent the foam from aging. Said diffusion barrier shall be applied to all joint closure kits as well to ensure continuity of the barrier.

D. Casing: LDPE or HDPE having a wall thickness not less than 100 mils for pipe sizes less than or equal to 12" and shall be extruded onto the Polyurethane foam. No tape jacket allowed. A corona treated boding layer shall be applied onto the Polyurethane foam to ensure a secure bond between the jacket and foam insulation preventing any ingression of water at the jacket / foam interface. Markings: The outer casing shall be marked with the following information, repeated no less than every 20 feet with carrier pipe nominal size, SDR, temperature and pressure rating.

E. Casing accessories shall include the following:

1. Joint Kit: Pressure-testable. Exterior jacket shall be high strength polyethylene sleeve that is electro-fusion welded and field insulated using pourable urethane foam to the thickness specified, preformed split insulation will not be acceptable.
    a. Fusion welding shall be done using split sleeves with embedded wires or mesh that is heated with an electro-fusion welder.
    b. Joint kit shall be pressure testable to 5psi.
    c. Fusion welder shall have archiving capability.
    d. A report showing the temperatures, times and pressure testing of each joint and its location shall be submitted at the end of the job.
2. Expansion Blanket: Elastomeric foam, formed to fit over piping.
3. End Seals: Shrink wrap the casing material to seal watertight around casing and carrier pipe. This includes each end of all factory fabricated fittings.

F. Straight Run Joints: Shall be insulated to the same thickness as the pipe and jacketed with an electro-fusion welded split sleeve.
1. The manufacturer shall provide the fusion machine, straps, bands, pressure gauges and closure patches for the pressure testable joint cover.
    a. 20 extra straps and pressure testing caps shall be provided to the Owner as well as an extra electro fusion welder for future repairs on the system. All sleeves shall be sized for 8” diameter piping.
2. Heat shrink materials will not be accepted for field joints or the repair of the field joints that do not pass the pressure tests
3. All field joints shall be pressure tested to ensure air tightness at 5 psig for 5 minutes while being soap tested for leaks.
4. The critical parameters of each fusion joint shall be recorded by an electronic data logging device and included in a report at the end of the job. Images or recordings shall be taken of each joint closure kit, with some indication of the joint number and location being recorded. Recordings of pressure testing, completed joint, and Inspector-of-Record sign off for each joint shall be provided in a report at the end of the project.
5. Joint closure kits shall occur at straight runs only. All fittings shall be pre-manufactured.

G. Fittings: Shall be factory pre-fabricated and pre-insulated fittings with polyurethane foam and jacketed with a butt fusion welded, or an extrusion welded and mitered HDPE jacket.

H. Source Quality Control: Factory test the carrier pipe to 150 percent of the operating pressure of system. Furnish test certificates.

2.6 DIRECT BURIED GATE VALVES

1. Nonrising-Stem, Resilient-Seated Gate Valves:
    a. Description: Gray- or ductile-iron body and bonnet; with bronze or gray- or ductile-iron gate, resilient seats, bronze stem, and stem nut.
        1) Standard: AWWA C509.
        2) Minimum Pressure Rating: 200 psig
        3) End Connections: Mechanical joint.
        4) Interior Coating: Complying with AWWA C550.
        5) Interior Coating: Complying with AWWA C550.

2.7 DIRECT BURIED GATE VALVE ACCESSORIES AND SPECIALTIES

A. Tapping-Sleeve Assemblies:
1. Description: Sleeve and valve compatible with drilling machine.
    a. Standard: MSS SP-60.
    b. Tapping Sleeve: Cast- or ductile-iron or stainless-steel, two-piece bolted sleeve with flanged outlet for new branch connection. Include sleeve matching size and type of pipe material being tapped and with recessed flange for branch valve.

c. Valve: AWWA, cast-iron, nonrising-stem, resilient-seated gate valve with one raised face flange mating tapping-sleeve flange.

B. Valve Boxes: Comply with AWWA M44 for cast-iron valve boxes. Include top section, adjustable extension of length required for depth of burial of valve, plug with lettering "WATER," and bottom section with base that fits over valve and with a barrel approximately 5 inches in diameter.
1. Operating Wrenches: Steel, tee-handle with one pointed end, stem of length to operate deepest buried valve, and socket matching valve operating nut.

C. Indicator Posts: UL 789, FMG-approved, vertical-type, cast-iron body with operating wrench, extension rod, and adjustable cast-iron barrel of length required for depth of burial of valve.

PART 3 - EXECUTION

3.1 EARTHWORK

A. See Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

3.2 PIPING APPLICATION

A. Hot-Water Heating Piping (NPS 2 and smaller):
1. Underground pre-insulated factory pre-insulated copper piping system with 2-inch insulation.

B. Hot-Water Heating Piping (NPS 2-1/2 and larger):
1. Underground pre-insulated factory pre-insulated steel piping system with 2-inch insulation.

C. Chilled-Water Piping:
1. HDPE SDR 11 factory pre-insulated with 1-inch polyurethane carrier-pipe insulation.
a. Buried chilled water return piping shall be uninsulated HDPE SDR 11.

3.3 SPARE PARTS

A. As it is anticipated that rerouting will be required on the project the procurement of piping above and beyond the quantities required to perform the project according to the Drawings is required. The following quantities of spare parts for chilled water and heating hot water piping shall be provided (all piping sizes shall to match the system being installed):
1. (2) 10-feet straight pieces of piping.
2. (8) 45 degree fittings.
3. (4) 90 degree fittings.
4. (6) Joint closure kits.

3.4 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicate piping locations and arrangements if such were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Coordination Drawings.

B. Remove standing water in the bottom of trench.

C. Do not backfill piping trench until field quality-control testing has been completed and results approved.

D. Install piping at uniform grade of 0.2 percent. Install drains, consisting of a tee fitting, NPS 3/4 ball valve, and short NPS 3/4 threaded nipple with cap, at low points and elsewhere as required for system drainage. Install manual air vents at high points.

E. In conduits, install drain valves at low points and manual air vents at high points.

F. Install components with pressure rating equal to or greater than system operating pressure.

G. Install piping free of sags and bends.

H. Install fittings for changes in direction and branch connections.

I. See Section 230517 "Sleeves and Sleeve Seals for HVAC Piping" for sleeves and mechanical sleeve seals through exterior building walls.

J. Secure anchors with concrete thrust blocks. Concrete is specified in Section 033000 "Cast-in-Place Concrete."

3.5 JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs for HDPE and copper pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
   1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
   2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

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

E. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

F. Pressure-Sealed Joints: Use manufacturer-recommended tool and procedure. Leave insertion marks on pipe after assembly.

G. Conduit and Cased Piping Joints: Assemble sections and finish joints with pourable insulation and exterior jacket sleeve, and apply fusion welded seals (shrink-wrap seals are allowable where dictated in Chapter 2).

H. Butt Fusion: The pipe shall be joined by the butt fusion process outlined in ASTM F2620 or PPI TR-33. All fusion joints shall be made in compliance with the pipe or fitting manufacturer’s recommendations. Fusion joints shall be made per qualified technicians per PPI TN-42.

I. Butt Fusion joint recording: The critical parameters of each fusion joint shall be recorded by an electronic data logging device. All fusion joint data shall be included in a Fusion Technician's joint report.

3.6 VALVE APPLICATIONS

A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
   1. Direct Buried Underground Valves: AWWA, cast-iron, nonrising-stem, resilient-seated gate valves with valve box.
   2. Above ground valves in vaults or manholes shall be installed per Section 230523 General Duty Valves.

3.7 IDENTIFICATION

A. Install continuous plastic underground warning tapes during back filling of trenches for underground hydronic piping. Locate tapes 6 to 8 inches below finished grade, directly over piping. See Section 312000 "Earth Moving" for warning-tape materials and devices and their installation.

3.8 FIELD QUALITY CONTROL

A. Perform tests and inspections.
   1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

B. Tests and Inspections:
   1. Prepare hydronic piping for testing according to ASME B31.9 and as follows:
      a. Leave joints, including welds, uninsulated and exposed for examination during test.
      b. Fill system with water. Where there is risk of freezing, air or a safe, compatible liquid may be used.
      c. Use vents installed at high points to release trapped air while filling system.
   2. Test hydronic piping as follows:
      a. Subject hydronic piping to hydrostatic test pressure that is not less than 100 PSI for chilled water and 150 PSI for heating hot water.
      b. After hydrostatic test pressure has been applied for 10 minutes, examine joints for leakage. Remake leaking joints using new materials and repeat hydrostatic test until no leaks exist.
   3. Test conduit as follows:
      a. Seal vents and drains and subject conduit to 15 psig for four hours with no loss of pressure. Repair leaks and retest as required.

C. Prepare test and inspection reports.

END OF SECTION 23 21 13.13

SECTION 260513 - MEDIUM-VOLTAGE CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes cables and related splices, terminations, and accessories for medium-voltage (2,001 to 35,000 V) electrical distribution systems.

1.3 DEFINITIONS

A. Jacket: A continuous nonmetallic outer covering for conductors or cables.

B. NETA ATS: InterNational Electrical Testing Association - Acceptance Testing Specification.

C. Sheath: A continuous metallic covering for conductors or cables.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of cable-include cable manufacturer’s complete technical data indicating cable construction, shielding, insulation material, thickness of insulation, jacket, cable stranding, and voltage rating of each type of cable specified, splices and terminations. Indicate place and date of manufacture for each cable, cable accessory, splice and termination.

B. Samples: 16-inch lengths for each type of cable specified. Submit samples of cable, splice and termination kit for review minimum fourteen (14) days prior to shipment of cable and splice and termination kits to job site.

C. Inline Splice Kits. Include warranty with product data submittal.

D. Terminations-include 20 year warranty with product data submittal.

E. Product data for Fireproofing and Glass Cloth Tape.

1.5 SUBMITTALS

A. Qualification Data: For installer, cable splicer and terminator, testing agency. Submit complete documents for each for the approval by the University's Representative. Documents shall include the names, qualifications, experience, training certificates of each person intended to perform the splicing, termination and field testing of medium voltage cables approved for installation. Each splicer and terminator shall have minimum ten (10) years’ recent experience in installation, splicing and terminating of medium voltage cables similar to those specified on this project. Refer to para 1.6 for additional information.

B. Material Certificates: For each type of cable, cable accessory, splicer and termination, signed by manufacturers.

C. Source quality-control test reports: Certified test reports for:

1. Sample test on insulation: Test shall be done at the factory to verify physical properties, heat distortion, and accelerated water absorption in accordance with ICEA S-93-639.
2. Factory Tests: Complete tests shall be done on each length of cable at the cable by the manufacturer's trained testing engineer/technician at the manufacturer's testing facility at the factory in accordance with ICEA S-93-639, and UL-1072. Tests shall include Insulation resistance, power factor, corona level, AC dielectric. Corona test shall be done per AEIC CS8; Section E. Recordings of the tests shall be made on X-Y graph.
3. Furnish six (6) copies of the certified factory test reports to the University's Representative complete with X-Y recordings showing the corona test results for review two weeks prior to shipment of cables. Test Report shall include the results of the tests, cable identification, reel number, factory order number, cable length and all cable specifications. Each test report shall be signed by the manufacturer's testing engineer and include the name of the testing engineer/technician, location and date of testing.

D. Submit test reports minimum two (2) weeks prior to shipment of cables to the job site. Cable shall not be installed in any duct or conduit until related all test reports have been reviewed and accepted by the University's Representative. Field quality-control test reports: Perform field testing of cables per para 3.2. Submit field test report to University's representative within two (2) weeks of completion of test.

E. Cable Pull Tension: Under separate submission, the contractor shall submit cable pulling criteria and calculations for approval prior to work. Include cable pull tension reports from the cable manufacturer.

F. Refer to section '013110 Prolog EPM System' for additional submittal requirements.

1.6 QUALITY ASSURANCE

A. General Requirements: The cable shall be copper, 15kV, 133 percent rated, shielded. Aluminum cable will not be accepted.

B. Materials and installation shall meet or exceed requirements in the following referenced standards.

1. ICEA S-93-639/ NEMA WC 74.
2. AEIC CS8.
3. UL 1072.
4. IEEE.
5. ASTM.
6. NEMA.

C. The manufacturer shall have a minimum of ten (10) years of experience in manufacturing medium voltage EPR power cables and shall submit a certified copy of its AEIC CS 6 qualification.

D. Manufacturer shall have ISO 9001 and 9002 Certification. The cable manufacturer shall compound the insulation in its own facility using a closed system to ensure maximum cleanliness. The complete cable shall be manufactured in same manufacturer's manufacturer facility.

E. American made cable has been acceptable. If non-domestic cabling is submitted, notice is hereby given that extensive testing shall be required to insure quality and conformance to the Specifications. All testing procedures and results shall be satisfactory to the University's Representative. The Contractor shall bear all costs for testing and shall be responsible for all costs associated with travel, lodging, etc. for (1) University's Representative to witness the test at the manufacturer's testing facility. The Contractor shall reimburse the Owner at $1,200 per man day or part thereof for the time required to witness the testing. Include all costs for the above in the bid.

F. Testing: Provide the services of a qualified independent testing laboratory to perform the specified field tests. Notify the University's Representative fourteen (14) days in advance of performance of work requiring testing.

G. Cables, splices and terminations shall be manufactured within twelve (12) months of installation. Each item shall have a permanent marking on the product or the original manufacturers' package indicating the date of manufacture unless otherwise noted. Cables shall have the dates marked on the outer jacket.

H. Cable, splices and terminations shall be manufactured under a single batch. Furnish a letter from each manufacturer to confirm it.

I. Cable including insulation, shielding tape shall be clean with smooth surface and does not have any surface abnormalities or ridges.

J. Installer: Contractor shall engage cable splicers and terminators, trained and certified by splice/termination material manufacturer, to install, splice, and terminate medium-voltage cable of type and rating specified on this project. Training and certification shall be within the last three (3) years from the date of installation.

K. Testing Agency Qualifications:

1. Testing agency shall be an independent company; shall have been a member of NETA for a minimum of ten (10) years and has permanent in-house testing engineers and technicians involved with testing of medium voltage cables similar to those specified on this project.
2. Testing company shall be located with 50 miles radius of the project.
3. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.
4. Field Testing technician and supervisor shall have minimum ten (10) years' experience in field testing of medium voltage cables of the type and rating similar to the cables to be tested on this project.

L. Source Limitations: Obtain cables and accessories through one source from a single manufacturer through their local authorized distributor.

M. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

N. Comply with IEEE C2 and NFPA 70.

1.7 FIELD CONDITIONS

A. Interruption of Existing Electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Construction Manager and University's Representative no fewer than fourteen (14) days in advance of proposed interruption of electric service.
2. Do not proceed with interruption of electric service without University Representative's written permission.
3. Provide temporary standby power through a standby diesel quiet type back-up generator complete with fuel and 7/24 monitoring if the power interruption exceeds 2 hours. Coordinate additional requirements with University minimum fourteen days in advance.
4. All utility shutdowns will be done by University's Representative unless otherwise noted.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Cables:

   a. General Cable Technologies Corporation.
   b. Okonite Company (The).
   c. Kerite Company.

2. Arc- and Fireproofing Tape:

   a. Bishop; Model 43A.
   b. 3M; Model 7700

3. Shield Adapter/Grounding Kits:

   a. Manufacturers: 3M, 8460 series.

4. Cable Splicing and Terminating Products and Accessories:

   a. Raychem Corp.; Telephone Energy and Industrial Division; Tyco International Ltd.
   b. Thomas & Betts Corporation/Elastimold.
   c. 3M; Electrical Products Division.

2.2 CABLES

A. Cable Type: MV105.

1. Suitable for installation in conduit, subject to alternately wet and dry conditions.
2. To operate satisfactorily, both electrically and mechanically, at conductor temperatures not exceed 105°C continuous for normal loading; 130°C for emergency loading, emergency of 36 hours, 250°C for short circuit loading assuming short circuit duration of two seconds. Emergency overload operation may occur for periods up to 100 hours per year and with as many as five (5) such 100 hour periods within the lifetime of the cable.

B. Comply with UL 1072, AEIC CS 8, ICEA S-93-639/NEMA WC-74, and ICEA S-97-682 and ICEA S-94-649.

C. Conductor: Soft annealed Copper

D. Conductor Stranding: Compact round, concentric lay, Class B per ASTM-B or compact round per ASTM B496

E. Strand Shielding: Thermoset EPR based material or a material extruded over the conductors with thermal characteristics equal to or better than those of the insulation; chemically compatible with the conductor and the cable insulation; firmly and continuously bonded to the overlying insulation; easily removable from the conductors; not less than 20 mils (nominal) for compact round and 25 mils (nominal) for compressed conductor, or more than 50 mils thick. Compatibility of material shall be demonstrated by laboratory test results.

F. Conductor Insulation: Ethylene-propylene rubber (EPR). Insulation: High quality, ethylene-propylene base, thermosetting compound of high dielectric strength with heat, moisture, ozone, and corona resistant properties, homogenous, solid, and applied with good workmanship. Insulation thickness shall be 220 mils minimum average, and 200 mils minimum at any point; meet or exceed the latest editions of Standards ICEA S-93-639, AEIC CS-8 for 133 percent insulation lever. EPR insulation compound shall be free from polyethylene.

1. Voltage Rating: 15 kV.
2. Insulation Thickness: 133 percent insulation level.

G. Semi-Conducting Shield: Insulated conductor to have a suitable layer of semi-conducting, extruded, thermosetting, EPR shielding applied directly over the insulation; 32 mils (nominal) thickness; impervious to sunlight, the elements and acid or alkaline soils.

H. Shielding: Uncoated copper tape, helically applied over insulation .005 inch thick with minimum 25 percent overlap.

I. Cable Jacket: Sunlight-resistant PVC. Jacket shall be 80 mil, minimum average thickness polyvinyl chloride jacket extruded over the shielding tape; smooth, of uniform composition and free of holes, cracks and imperfections; longitudinal shrinkage relative to the insulation less than five percent.

J. Identification: Provide durable lifetime identification printed, embossed, or engraved on outer surface of the jacket including manufacturer's name, month and year of manufacture, place of manufacture, conductor type and size, insulation thickness in mils, and the rated voltage, all on 3-foot center maximum spacing.

K. Sealing: Manufacturer shall seal ends of cable with mastic material and tight fitting plastic end cap to prevent entrance of moisture.

2.3 CONNECTORS

A. Manufacturers:

1. 3M; Electrical Markets Division.
2. G&W Electric Company.
3. Thomas & Betts Corporation/Elastimold.
4. Tyco Electronics; Raychem Product
5. Or Equal

B. Comply with ANSI C119.4 for connectors between aluminum conductors or for connections between aluminum to copper conductors.

C. Copper-Conductor Connectors: Copper barrel crimped connectors.

D. Grounding Connectors: Grounding connectors shall be of bronze type.

2.4 SOLID TERMINATIONS

A. Manufacturers:

1. 3M; Electrical Markets Division.
2. G&W Electric Company.
3. Thomas & Betts Corporation/Elastimold
4. Tyco Electronic; Raychem Product.
5. Or Equal

B. Shielded-Cable Terminations: Comply with the following classes of IEEE 48. Insulation class shall be suitable for 15KV cable. Maximum continuous operating temperature rating shall be 105 deg C with an emergency overload rating shall be capacitive and constructed of stress control compound and a Hi-K EPDM rubber tube. Include shield ground strap for shielded cable terminations.

1. Class 1 Terminations: Modular type, furnished as a kit, with stress-relief tube; multiple, molded-silicone-rubber, insulator modules; shield ground strap; and compression-type connector. The termination insulator shall be of a skirted design, constructed of tracking resistant silicon rubber. Termination shall be of a prestretched Cold Shrink design, installed without the application of a heat source.

2. Class 2 Terminations, Indoors: Kit with stress-relief tube, non-tracking insulator tube, shield ground strap, and compression-type connector. Include silicone-rubber tape; cold-shrink-rubber sleeve; or heat-shrink, plastic-sleeve moisture seal for end of insulation whether or not supplied with kits.

2.5 SPLICE KITS

A. Manufacturer:

1. 3M QS4 Series with copper connector.
2. G&W Electric Company.
3. Thomas & Betts Corporation/Elastimold.
4. Tyco Electronic; Raychem Product.
5. Or Equal

B. Splice Kits: Comply with IEEE 404; type as recommended by cable or splicing kit manufacturer for the application.

C. Splicing Products: As recommended, in writing, by splicing kit manufacturer for specific sizes, ratings, and configurations of cable conductors. Include all components required for complete splice, with detailed instructions.

1. Combination tape and cold-shrink-rubber sleeve kit with rejacketing by cast-epoxy-resin encasement or other waterproof, abrasion-resistant material.
2. Premolded, cold-shrink-rubber, in-line splicing kit.
3. Premolded, EPDM splicing body kit with cable joint sealed by interference fit of mating parts and cable.

4. Separable multiway-splice system with all components for the required splice configuration.

D. Shield Adapter/Grounding Kits and Jacket Seals:

1. Provide kits consisting of a cold shrink tube, mastic seal strips, constant force spring, preformed ground braid with solder tinned moisture dam and semi-conducting tape. Application and installation shall adhere to manufacturer's instruction information packaged with kit. Alternate materials not provided as part of kit shall not be substituted without written approval from the University Representative. Any other method of building shield grounding and jacket seal (e.g. hand-taped method) shall require written approval including witnessing a sample by the University's Representative. See Division 01 for more information on substitutions.

2.6 SEPARABLE INSULATED CONNECTORS

A. Manufacturers:

1. 3M; Electrical Markets Division.
2. G&W Electric Company.
3. Thomas & Betts Corporation/Elastimold
4. Tyco Electronic; Raychem Product.

B. Description: Modular system, complying with IEEE 386, with disconnecting, single-pole, cable terminators and with matching, stationary, plug-in, dead-front terminals designed for cable voltage and for sealing against moisture. Minimum rating 15KV for 15KV rated cables. Basic insulation level (BIL) shall be 110KV minimum.

C. Terminations at Distribution Points: Modular type, consisting of terminators installed on cables and modular, dead-front, terminal junctions for interconnecting cables.

D. Load-Break Cable Terminators: Elbow-type units with 600-A load make/break and continuous-current rating; coordinated with insulation diameter, conductor size, and material of cable being terminated. Include test point on terminator body that is capacitance coupled.

E. Dead-Break Cable Terminators: Elbow-type unit with 600-A continuous-current rating; designed for de-energized disconnecting and connecting; coordinated with insulation diameter, conductor size, and material of cable being terminated. Include test point on terminator body that is capacitance coupled.

F. Tool Set: Shotgun hot stick with energized terminal indicator, fault-indicator test tool, and carrying case.

G. Test-Point Fault Indicators: Applicable current-trip ratings and arranged for installation in test points of load-break separable connectors, and complete with self-resetting indicators capable of being installed with shotgun hot stick and tested with test tool.

H. Provide neon voltage indicator on each splice above grade. The indicator shall provide a flashing signal when the conductor is energized. Indicators shall be replaceable in the field using a high voltage hook stick.

2.7 MEDIUM-VOLTAGE TAPES

A. Manufacturers:

1. 3M; Electrical Markets Division.
2. G&W Electric Company.
3. Thomas & Betts Corporation/Elastimold
4. Tyco Electronic; Raychem Product.
5. Or Equal

B. Ethylene/propylene rubber-based, 30-mil splicing tape, rated for 130 deg C operation. Minimum 3/4 inch wide.

C. Silicone rubber-based, 12-mil self-fusing tape, rated for 130 deg C operation. Minimum 1-1/2 inches (38 mm) wide.

D. Insulating-putty, 125-mil elastic filler tape. Minimum 1-1/2 inches wide.

2.8 ARC-PROOFING MATERIALS

A. Tape Manufacturers:

1. 3M
2. Bishop
3. Or Equal

B. Tape for First Course on Metal Objects: 10-mil- thick, corrosion-protective, moisture-resistant, PVC pipe-wrapping tape.

C. Arc-Proofing Tape: Fireproof tape, flexible, conformable, intumescent to 0.3 inch thick, compatible with cable jacket.

D. Glass-Cloth Tape: Pressure-sensitive adhesive type, 1 inch wide.

2.9 SOURCE QUALITY CONTROL

A. Test and inspect cables according to ICEA S-97-682 before shipping.

B. Test strand-filled cables for water-penetration resistance according to ICEA T-31-610, using a test pressure of 5 psig.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install cables according to IEEE 576. Cables shall not be installed more than 60 days prior to energization.

B. Proof conduits prior to conductor installation by passing a wire brush mandrel and then a rubber duct swab through the conduit. Separate the wire brush and the rubber swab by 48 to 72 inches on the pull rope.

1. Wire Brush Mandrel: Consists of a length of brush approximately the size of the conduit inner diameter with stiff steel bristles and an eye on each end for attaching the pull ropes. If an obstruction is felt, pull the brush back and forth repeatedly to break up the obstruction.
2. Rubber Duct Swab: Consists of a series of rubber discs approximately the size of the conduit inner diameter on a length of steel cable with an eye on each end for attaching the pull ropes. Pull the rubber duct swab through the duct to extract loose debris from the duct.

C. Pull Conductors: Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

1. Where necessary, use manufacturer-approved pulling compound or lubricant that does not deteriorate conductor or insulation.
2. Use pulling means, including fish tape, cable, rope, and basket-weave cable grips, that do not damage cables and raceways. Do not use rope hitches for pulling attachment to cable.
3. Use pull-in guides, cable feeders, and draw-in protectors as required to protect cables during installation.
4. Do not pull cables with ends unsealed. Seal cable ends with rubber tape.

D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.

E. Support cables according to Section 260529 "Hangers and Supports for Electrical Systems."

F. Install "buried-cable" warning tape 12 inches below finished grade above the underground duct banks carrying cables.

G. In manholes, handholes, pull boxes, junction boxes, and cable vaults, train cables around walls by the longest route from entry to exit; support cables at intervals adequate to prevent sag.

H. Install sufficient cable length to remove cable ends under pulling grips. Remove length of conductor damaged during pulling.

I. Install cable splices at pull points and elsewhere as indicated; use standard kits. Use dead-front separable watertight connectors in manholes and other locations subject to water infiltration.

J. Install terminations at ends of conductors, and seal multi-conductor cable ends with standard kits.

K. Install separable insulated-connector components as follows:

1. Protective Cap: At each terminal junction, with one on each terminal to which no feeder is indicated to be connected.
2. Portable Feed-Through Accessory: At each terminal junction, with one on each terminal.
3. Standoff Insulator: At each terminal junction, with one on each terminal.

L. Arc Proofing: Unless otherwise indicated, arc proof medium-voltage cable at locations not protected by conduit, cable tray, direct burial, or termination materials. In addition to arc-proofing tape manufacturer's written instructions, apply arc proofing as follows:

1. Clean cable sheath.
2. Wrap metallic cable components with 10-mil pipe-wrapping tape.
3. Smooth surface contours with electrical insulation putty.
4. Apply arc-proofing tape in one half-lapped layer with coated side toward cable.
5. Band arc-proofing tape with two layers of 1-inch- wide half-lapped, adhesive, glass-cloth tape at each end of the arc-proof tape.

M. Seal around cables passing through fire-rated elements.

N. Ground shields of shielded cable at terminations, splices, and separable insulated connectors. Ground metal bodies of terminators, splices, cable and separable insulated-connector fittings, and hardware.

O. Ground shields of shielded cable at one point only. Maintain shield continuity and connections to metal connection hardware at all connection points.

P. Identify cables according to Section 260553 "Identification for Electrical Systems." Identify phase and circuit number of each conductor at each splice, termination, pull point, and junction box. Arrange identification so that it is unnecessary to move the cable or conductor to read the identification.

3.2 FIELD QUALITY CONTROL

A. Testing Agency: Contractor shall engage an independent qualified testing agency to perform tests and inspections. All costs associated with testing shall be included in the bid. Testing shall be witnessed by University representative. Provide minimum fourteen (14) days advance notice.

B. Perform the following tests and inspections

1. Perform each visual and mechanical inspection and electrical test stated in latest NETA ATS. Certify compliance with test parameters.
2. After installing medium-voltage cables and before electrical circuitry has been energized, test each cable with connectors/terminations for compliance with requirements.
3. Perform direct-current High Potential test of each new conductor according to NETA ATS, Ch. 7.3.3. Do not exceed cable manufacturer's recommended maximum test voltage.
4. Perform Partial Discharge or VLF test of each existing conductor according to NETA ATS, Ch. 7.3.3 and to test equipment per manufacturer's and NETA recommendations.
5. Perform Dissipation Factor test of each new conductor according to NETA ATS, Ch. 7.3.3 and to test equipment manufacturer's recommendations.

C. Medium-voltage cables will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

3.3 PROTECTION

A. Protect installed cables from entrance of moisture. Provide heat shrink caps per cable manufacturer's written recommendations for cables to be energized later on.

END OF SECTION 260513

SECTION 261310 - MEDIUM VOLTAGE SOLID DIELECTRIC SWITCH

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section consists of medium voltage, solid dielectric insulated padmount switches with integral magnetic actuator--operated load break switches and resettable, electronically controlled vacuum fault interrupters for indoor or outdoor padmount applications.

B. Related Sections include the following:

1. 260513 "Medium-Voltage Cables" for requirements of terminating cables in incoming section of substation.
2. Section 260526 “Grounding and Bonding For Electrical Systems”.

C. References:

1. ANSI Standard C57.12.29 - Pad-Mounted Equipment – Enclosure Integrity

2. ANSI Standard C37.60 - Overhead, Pad Mounted, Dry Vault, and Submersible Automatic Circuit Reclosers
3. ANSI Standard C37.74 – Subsurface, Vault, and Pad Mounted Load Interrupter Switchgear and Fused Load Interrupter Switchgear
4. ANSI Standard C37.20.3-87 (R96) Metal Enclosed Interrupter Switchgear.
5. ANSI Standard C37.38-89 Gas-Insulated Metal-Enclosed Disconnecting, Interrupter, and Grounding Switches.

D. References:

1. Institute of Electrical and Electronic Engineers, Inc (IEEE) Publication:

   a. 48-90 Standard Test Procedures and Requirements for High Voltage Alternating Current Cable Terminations
   b. 386-85 Separable Insulated Connectors for Power Distribution Systems above 600 V

2. National Electrical Manufacturer’s Association (NEMA) Publication:

   a. SG6-2000 Power Switching Equipment
   b. National Fire Protection Association (NFPA) Publication:

3. State of California Code of Regulations: Title 24, Part 3, 2016 California Electrical Code with latest amendments.

1.3 DEFINITIONS

A. ATS: Acceptance Testing Specifications.

B. GFCI: Ground-Fault Circuit Interrupter.

C. NETA: National Electrical Testing Association.

1.4 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Switchgear shall withstand the effects of earthquake motions determined according to SEI/ASCE 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.5 SUBMITTALS

A. Product Data: Manufacturer's technical data sheets, catalog cuts for each type of switch and related equipment, include the following:

1. Rated capacities, operating characteristics, furnished accessories for load break and resettable vacuum fault interrupters.
2. Time-current characteristic curves for overcurrent protective devices.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection. Shop drawings shall be prepared by the factory engineer for each type of switch and related equipment, and include the following:

1. Dimensioned plans, elevations, sections, and details to include the following:

a. Bill of materials.
b. Bus ratings
c. Voltage & Current characteristics.
d. Indicate vacuum fault interrupter ampere interrupting capacity (kA sym.)
e. Indicate load break switch momentary and fault close rating.
f. Outline and general arrangement drawing showing dimensions, shipping weights of complete switch.
g. Indicate cable termination compartments showing preferred locations for conduits.
h. Short-time and short-circuit ratings of switch assembly.
i. Nameplate legends.
j. Three line diagram.

2. Catalog Cuts: Manufacturer's catalog cuts for switch to include, switch and vacuum interrupter components, relays, and options and accessories.
3. Seismic Anchor Calculations: Signed and sealed by a qualified California Registered Professional Engineer. Calculate requirements for selecting seismic anchors.

C. Installation instructions.

D. Factory Production test reports: Certified written reports signed by factory testing engineer or technician including their name and review comments from the testing engineer. Each report shall include date, location of tests and actual test data.

E. Manufacturer Seismic Qualification Certification: Submit certification that switchgear, accessories, and components will withstand seismic forces defined in Section 260548 "Vibration and Seismic Controls for Electrical Systems." Include the following:

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.

F. Field quality-control test reports. Submit within two (2) weeks of completion of field tests.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For each switch and accessories to include in emergency, operation, and maintenance manuals.

1.7 QUALITY ASSURANCE.

A. Regulatory Requirements: Construct equipment conforming to ANSI and NEMA standards.

B. If alternate manufacturer of products other than what are specified in this section are submitted, all necessary documents not limited to cut sheets, technical information, test reports from recognized testing labs and factory test reports shall be submitted to the satisfaction of the owner/engineer to ensure quality and conformance to the specifications. Additional testing shall be undertaken if it is concluded by the owner/engineer that the submitted test reports are either insufficient or do not include all tests necessary for product acceptance. The tests shall be conducted by a recognized lab acceptable to the owner/engineer and all tests shall be witnessed by owner’s/engineer’s personnel. All testing procedures and test results shall be satisfactory to the owner/engineer. Contractor shall be responsible for arranging the tests, for transportation, food and lodging for minimum of one owner’s/engineer’s representative to witness the test at the testing lab. Include all costs for the above in the bid.

C. Contractor shall ensure that the manufacturer has a minimum of 10 years’ experience in the production of solid dielectric insulated Medium Voltage Switches similar to the type and size specified in this project. The manufacturer shall be completely and solely responsible for the performance of the fault interrupter as rated.

D. The switch shall comply with requirements of the latest revisions of applicable industry standards, including: IEEE C57.12.28, IEEE C37.74, IEEE C37.60, ANSI/IEEE 386, IEC60529, IEEE 592

E. The switch shall be tested to IEC 60529 for submergibility. The switch shall be rated IP68 for 7 days with a 10 foot head of water.

F. Manufacturer shall have ISO 9001:2008 and ISO 14001:2004 Certification.

G. The switch shall be RUS approved.

H. Manufacturer shall have ability to readily provide replacement parts for a minimum period of ten years, from the date of completion of the project.

I. Materials and equipment shall be new, modern in design and shall not have been in prior service except as required by factory tests.

J. Field Testing Agency Qualifications:

1. Testing Agency Qualifications: Testing agency shall be an independent company with the experience and capability to conduct field testing indicated; and shall test in accordance with the International Testing Association (NETA) standards.
2. The company shall have permanent in-house testing engineers and technicians on its staff
3. Testing company shall be located with 50 miles radius of the project.
4. Field Testing technician and supervisor shall have minimum ten (10) years' experience in field testing of MV Switchgear similar to the type and rating specified on this project.

1.8 DELIVERY, STORAGE, AND HANDLING

A. The switch shall be shipped preassembled at the factory. No field assembly shall be required.

B. The contractor, if applicable, shall handle, transfer and move the switches in accordance with manufacturer's recommendations.

1.9 PROJECT CONDITIONS

A. Installation Pathway: Remove and replace building components and structures to provide pathway for moving switchgear into place.

B. Product Selection for Restricted Space: Drawings indicate maximum dimensions for switchgear, including clearances between switchgear and adjacent surfaces and other items. Comply with indicated maximum dimensions.

C. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by University or others unless permitted in writing under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify University's Representative no fewer than fourteen (14)-days in advance of proposed interruption of electrical service.
2. Do not proceed with interruption of electrical service without Construction Manager's written permission.
3. Comply with NFPA 70E.
4. Indicate method of providing temporary electric service.

1.10 COORDINATION

A. Coordinate layout and installation of switchgear and components with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required clearances for workspace and equipment access doors and panels.

B. Coordinate size and location of concrete bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

1.11 EXTRA MATERIALS

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

1. Touchup Paint: Two containers of spray paint to match enclosure finish.

1.12 WARRANTY

A. The Contractor shall provide a complete 1 year warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. G&W Electric Company
2. Or equal

2.2 MANUFACTURED UNITS

A. Description: Factory assembled and tested, and complying with IEEE C37.74 as well as IEEE C37.60.

B. Ratings: Suitable for application in 3-phase, 60-Hz, solidly grounded-neutral system.

C. System Voltage: 12 kV nominal; 15 kV equipment rating maximum

2.3 MEDIUM VOLTAGE SOLID DIELECTRIC SWITCH

A. Manufacturers:

1. G&W Electric Company
2. Or equal

B. Comply with IEEE C37.60, C37.74, C57.12.29

2.4 SWITCH CONFIGURATION

A. Each switch shall be equipped with 3-phase Trident-SR load break switch ways and 3-phase Trident-S fault interrupter ways, as indicated on the one-line diagram

B. The switch shall be designed for front access to cables and operators

2.5 SWITCH CONSTRUCTION

A. The switch shall be a dead-front design. The operating mechanism housing shall be stainless steel with a viewing window for verification of vacuum interrupter contact position. The mechanism housing shall be painted ANSI 70 light gray using corrosion-resistant epoxy paint. Operating handles shall be pad lockable and adaptable to keylock schemes. The operating shaft shall be stainless steel providing maximum corrosion resistance. A double "O" ring shaft seal shall be used for a leak resistant, long life seal.

B. The solid dielectric modules must be coated with a semi-conductive layer of epoxy, providing a completely dead front device. The semi-conductive layer must be tested to IEEE 592 to ensure it can carry fault current to ground so as to ensure operator safety.

C. The switch shall be designed for long term operation in the harshest environments. The interrupter design must be tested to IEC60529 and achieve a protection rating of IP68, subjected to a 10’ head of water pressure for 7 days.

D. The switch shall interrupt all load and fault currents within the vacuum bottle.

E. Each switch mechanism shall consist of three individual vacuum bottle assemblies mechanically linked to a single spring-assisted operating mechanism. Manual opening and closing of each way shall be via an operating handle.

F. The load break ways shall be G&W Trident-SR 3-phase switch

G. The fault interrupter ways shall be G&W Trident-S for 3-phase trip and reset

2.6 DESIGN RATINGS

A. Switch Ratings

SELECTION OF RATINGS (IEEE/IEC)	
Maximum Design Voltage, kV	15.5
Impulse Level (BIL) Voltage, kV	110
Continuous Current, Amperes	630
Load break Current, Amperes	630
One Minute Withstand (dry), AC kV	35
Production Test Rating	34
15 Minute Withstand, DC kV	53
Momentary Current, kA asymmetrical	20
Fault Close Current, kA asymmetrical	20
Fault Interrupter rating, kA asymmetrical	20
Fault Interrupter rating, kA symmetrical	12.5
Mechanical Endurance, Operations	2000

IEEE C37.60 Fault Interrupting Duty for 12.5kA rated switches

Percent of Maximum Interrupting Rating	Approximate Interrupting: Current, Amps	No. of Fault: Interruptions
15-20%	2000	44
45-55%	6000	56
90-100%	12500	16
Total Number of Fault Interruptions: 116		

2.7 CABLE ENTRANCES

A. Load Break Switches :

B. Cable entrances shall be tested to IEEE 386 and be, as indicated on the switch drawing:

C. __X__15.5KV 110KV BIL 600A/800A (as shown on plans) Dead break Apparatus Bushings per IEEE 386 Figure 11

D. ____15.5KV 110KV BIL 200A Bushing Well per IEEE 386 Figure 3

E. Load Break Switches :

F. Cable entrances shall be tested to IEEE 386 and be, as indicated on the switch drawing:

G. __X__15.5KV 110KV BIL 600A/800A (as shown on plans) Dead break Apparatus Bushings per IEEE 386 Figure 11

H. ____15.5KV 110KV BIL 200A Bushing Well per IEEE 386 Figure 3

I. Bus Connections:

J. Switch shall be equipped with two (2) 200A Deep well Bushings, connected directly to the main bus, for bus connected control power transformer (CPT). One ABB VIL style (or approved equal) solid dielectric dead-front control power transformer (CPT) shall be provided for control power. CPT shall be suitable for phase to phase connection on a 15kV class system. CPT shall be located in the high voltage compartment. Primary cables, elbows, and accessories for connection of CPT primary shall be included.

2.8 PAD MOUNT ENCLOSURE

A. The high voltage enclosure shall be fabricated of 12 gauge 304 stainless steel and manufactured to ANSI C37.72 and C57.12.29 standards. The enclosure shall be tamper resistant incorporating hinged access doors with pentahead locking bolts and provisions for padlocking. The enclosure shall be provided with lifting provisions and painted with a Munsell 7.0GY3.29/1.5 green finish.

B. A low voltage enclosure shall be mounted to the side of the high voltage enclosure. The low voltage enclosure shall be fabricated of 12 gauge 304 stainless steel.

C. Enclosure and switch stand shall be of raised height to enable ample sufficient bending space for incoming cable.

2.9 FACTORY PRODUCTION TESTS

A. Each interrupter shall undergo the following production testing. Test reports must be available upon request.

B. A mechanical operation check.

C. AC hi-pot tested one minute phase-to-phase, phase-to-ground and across the open contacts.

D. Circuit resistance shall be checked.

E. Each solid dielectric module shall undergo an X-ray inspection and a partial discharge test to ensure void-free construction.

F. Leak test to insure the integrity of all seals and gaskets.

G. Primary current injection test to test CTs, trip mechanism, and electronic control.

2.10 STANDARD COMPONENTS

A. The following shall be included as standard:

B. Welded stainless steel mechanism housing painted light gray (ANSI 70) with stainless steel and brass fasteners.

C. Lifting provisions

D. ½”-13 nuts to provide sufficient grounding provisions for interrupter and all cable entrances.

E. Stainless steel three-line diagram and corrosion-resistant nameplates.

F. Switch operating handle with padlock provision.

G. Removable parking stands

H. Mounting bracket

I. Operating handle

2.11 OPTIONS

A. The following options shall be supplied:

B. 4/0 brass ground lugs

C. All ways shall be equipped with 1000:1 internally mounted current transformers.

D. Fault Interrupting ways shall be equipped with two (2) Form C contacts for remote monitoring of the position of the vacuum bottle contacts.

E. Load Break ways shall be equipped with capacitively coupled integral voltage sensors.

2.12 LABELING

A. Hazard Alerting Signs

1. The exterior of the pad mount enclosure shall be provided with “Warning--Keep Out--Hazardous Voltage Inside--Can Shock, Burn, or Cause Death” signs. Each unit of switchgear shall be provided with a “Danger--Hazardous Voltage--Failure to Follow These Instructions Will Likely Cause Shock, Burn, or Death” sign. The text shall further indicate that operating personnel must know and obey the employer’s work rules, know the hazards involved, and use proper protective equipment and tools to work on this equipment. Each unit of switchgear shall be provided with a “Danger--Keep Away--Hazardous Voltage--Will Shock, Burn, or Cause Death” sign.

B. Nameplates, Ratings Labels, and Connection Diagrams

1. Each unit of switchgear shall be provided with a nameplate indicating the manufacturer’s name, catalog number, model number, date of manufacture, and serial number. Each unit of switchgear shall be provided with a ratings label indicating the following: voltage rating; main bus continuous rating; short-circuit rating; fault interrupter ratings including interrupting and duty-cycle fault-closing; and fault interrupter switch ratings including duty-cycle fault-closing and short-time.

2.13 SOURCE QUALITY CONTROL

A. Before shipment of equipment, perform the following tests and prepare test reports:

1. Production tests on completed switch assembly according to IEEE C37.60 & C37.74.

B. Assemble switchgear and equipment in manufacturer's plant.

C. Prepare equipment for shipment.

1. Provide suitable crating, blocking, and supports so equipment will withstand expected domestic shipping and handling shocks and vibration.
2. Weatherproof equipment for shipment. Close connection openings to prevent entrance of foreign material during shipment and storage.

2.14 FACTORY FINISHES

A. Munsell 7.0GY3.29/15 green finish. Enclosure shall be painted with powder coated paint of minimum 2 mil thickness. Finish shall carry minimum five (5) year warranty from the manufacturer.

2.15 IDENTIFICATION

A. Switch identification labels shall be as specified below:

1. Engraved, Laminated Acrylic or Melamine Label: Punched or drilled for screw mounting. White letters on a dark-gray background. Minimum letter height shall be 3/8 inch.
2. Adhesive labels and nameplates are not acceptable.

B. Mimic Bus: Continuous mimic bus applied to front of switch, arranged in single-line diagram format, using symbols and lettered designations consistent with approved final mimic-bus diagram.

1. Mimic-bus segments coordinated with devices in switch to which applied, to produce a concise visual presentation of principal switch components and connections.
2. Medium: Painted graphics, as approved.
3. Color: Contrasting with factory-finish background; selected by University.

2.16 ELECTRONIC CONTROLS

A. Construction

1. All components shall be housed in one (1) control cabinet. Control cabinet shall be fabricated of NEMA 4X stainless steel. Control cabinet shall be mounted inside the low voltage enclosure, shall provide a document holder, and shall have provisions for padlocking. 120 VAC control power shall be supplied to control cabinet via Control Power Transformer (CPT).
2. All accessories and components shall be included for integration of control cabinet with the switch, if control cabinet is to be remote mounted as indicated on drawings.
3. Control cabinet shall include one (1) single microprocessor-based relay to provide overcurrent protection, three-phase current and voltage sensing, local/remote apparatus control, and local/remote position monitoring for all ways. Relay shall handle up to six (6) switched ways and provide inputs for at least four (4) 3-phase currents and four (4) 3-phase voltages. Currents, voltages, and a single line diagram of all switched way including position indication shall be accessible via front display. Push buttons shall be programmable to operate (open/close/trip) each way. The relay shall include at least one (1) 10/100Base-T copper Ethernet communication port and one (1) 100Base-FX fiber Ethernet communication ports. The relay shall also provide a input for IRIG-B time synchronization. Relay shall be capable of Ethernet communication and support a variety of industry standard open (non-proprietary) protocols, including DNP3.0 and IEC 61850.
4. Control cabinet shall include one (1) 10-port managed Ethernet switch. Ethernet switch shall be DIN-rail mounted and support SFP connectors to accommodate copper and fiber optic connections.
5. Control cabinet shall include two (2) fiber patch panels to terminate bulk fiber optic cables.
6. Control cabinet shall include test switches with terminations for internal current transformers, voltage sensors, open/close/trip, and auxiliary contacts. Test switches to be used for isolating current transformers and voltage sensors from the relay and allow for relay protection testing without making wiring changes.
7. Control cabinet shall include exhaust fan and exhaust grill, located on the control enclosure side wall, rated 24VDC, and controlled by an external thermostat. The fan and grill shall allow NEMA rating of the enclosure to be maintained.
8. Control cabinet shall include 120 VAC power supply and battery charger.
9. Control cabinet shall include two (2) 12 VDC, 12Ah batteries for 24 VDC battery backup.
10. Control cabinet shall include a 120 VAC convenience outlet.

B. Manufactures

1. Control Cabinet: NEMA or approved equal
2. Microprocessor-based Relay: ABB. or approved equal
3. Ethernet Switch: iS5Com or approved equal
4. Fiber Patch Panels: Hirschmann or approved equal
5. Test Switches: SecuControl or approved equal

C. Automation Design

1. The relays at the padmount switches in the field shall be capable to participate in a future Fault Location, Isolation, Service Restoration (FLISR) and Loss of Voltage (LOV) automation scheme.
2. The logic to perform FLISR/LOV operations shall reside in the multifunction relays associated with each padmount switch.
3. The FLISR/LOV automation scheme operates in an open loop configuration. It shall reconfigure the loop in the event of a fault or loss of voltage.
4. All multifunction relays at the padmount switches shall be capable to communicate with each other and future centralized HMI over a fiber optic communication loop utilizing Ethernet switches.
5. Each padmount switch shall include an Ethernet switch connected to the respective multifunction relay via a fiber optic Ethernet cable. Each Ethernet switch shall be connected to its neighboring Ethernet switch to create a fiber optic loop.

D. Automation Functionality

1. The multifunction relays shall be capable to obtain status information on the loop and switchgear via voltage sensors and provide fault location utilizing internal current transformers.
2. The multifunction relays shall be capable to issue commands to isolate faults and reconfigure the loop in order to restore as much of the loop as possible.
3. When any local/remote switch is in the local position, commands issued from the automation system shall not operate any switch, fault-interrupter, or circuit breaker.
4. The FLISR/LOV protection shall be based on an open loop scheme where the upstream circuit breaker is responsible for interrupting the initial fault or subsequent faults.
5. Current transformers and voltage sensors on the downstream padmount switches shall be used to identify the location of the fault and a loss of voltage condition.
6. Each downstream padmount switch shall have capability to confirm if it has experienced a loss of voltage and shall identify if the fault is upstream, internal or downstream.
7. The load ways of the padmount switches shall be time coordinated with the feeder breakers of the metal-clad switchgear so that only the load ways trip for a load fault. This shall prevent a FLISR operation for a faulted load way.
8. In the event of a loss of communication, all protective functions locally at the padmount switch shall be maintained. Line fault interrupters (upstream metal-clad breakers and fault interrupting padmount switch ways) shall open on coordinated tripping.
9. System shall be capable of compensating for a single multifunction relay failure while maintaining the FLISR and LOV functionality.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspect installation for dimensions, physical damage, proper alignment, anchorage, grounding, and completeness.

B. The contractor shall protect all equipment during delivery, storage, installation and at all times during construction.

C. Examine elements and surfaces to receive switch for compliance with the requirements for installation tolerances, required clearances and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Installation shall conform to requirements of NFPA 70, state codes, and to requirements specified herein.

B. Prior to submitting shop drawings and releasing order for equipment, Contractor shall verify dimensions of the available space where equipment will be installed.

C. Install switch on concrete pad as indicated on drawings.

D. Provide 15KV insulated caps on spare positions and lock in open position.

E. Anchor switch assembly to 4-inch, channel-iron sill embedded in concrete base and attach by bolting.

1. Sills: Select to suit switch; level and grout flush into concrete base.
2. Design each fastener and support to carry load indicated by seismic requirements and according to seismic-restraint details. See Section 260548 "Vibration and Seismic Controls for Electrical Systems" for seismic-restraint requirements.
3. Concrete Bases: 6 inches high, reinforced, with chamfered edges. Extend base no less than 6 inches in all directions beyond the maximum dimensions of switchgear, unless otherwise indicated or unless required for seismic anchor support. Construct concrete bases according to Section 260529 "Hangers and Supports for Electrical Systems."

F. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switch and components.

G. Mounting heights shall be as follows:

1. Control Device including switches, circuit breakers: Maximum mounting height above finished floor to the center of grip of device operating handle in its highest position shall be 6’-6” unless a lower height is required by ANSI or code.

3.3 IDENTIFICATION

A. Verify identity of each item before installing identification products.

B. Location: Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment.

C. Apply identification devices to surfaces that require finish after completing finish work.

D. Attach signs and plastic labels that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.

E. Equipment Identification Labels: On each unit of equipment, install unique designation label that is consistent with wiring diagrams, schedules, and the Operation and Maintenance Manual. Apply labels to disconnect switches and protection equipment, central or master units, control panels, control stations, terminal cabinets, and racks of each system. Systems include power, lighting, control, communication, signal, monitoring, and alarm systems unless equipment is provided with its own identification. Verify requirements with University’s representative.

1. Labeling Instructions:

a. Outdoor Equipment: Engraved, laminated acrylic or melamine label.
b. Elevated Components: Increase sizes of labels and letters to those appropriate for viewing from the floor.
c. Fasten labels with appropriate mechanical fasteners that do not change the NEMA or NRTL rating of the enclosure.

2. Equipment to Be Labeled:

a. Medium Voltage Solid Dielectric Switches.

3.4 CONNECTIONS

A. Cable terminations at switch shall match existing.

B. Tighten bus joints, electrical connectors, and terminals according to manufacturer's published torque-tightening values.

C. Ground equipment shall match existing.

3.5 FIELD QUALITY CONTROL

A. Prepare for acceptance tests as follows:

1. Test insulation resistance for each way of the switch.
2. Test continuity of each circuit.

B. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

C. Perform the following field tests and inspections and prepare test reports:

1. Perform each electrical test and visual and mechanical inspection stated in latest edition of NETA ATS, ANSI C37.74, ANSI C37.60, and IEEE 48. Certify compliance with test parameters. Perform NETA tests and inspections for each of the following NETA categories:

a. Switch.
b. Fuses and relays.

D. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform infrared scan of each switch. Open front door so that connections are accessible to portable scanner.

1. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switch 11 months after date of Substantial Completion.
2. Instrument: Use an infrared-scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
3. Record of Infrared Scanning: Prepare a certified report that identifies switch checked and that describes infrared-scanning results. Include scanned photos, notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.6 ADJUSTING

A. Set field-adjustable, protective-relay trip characteristics.

3.7 CLEANING

A. On completion of installation, inspect interior and exterior of switchgear. Vacuum dirt and debris; do not use compressed air to assist in cleaning. Repair damaged finishes.

3.8 DEMONSTRATION

A. Engage a factory representative to train University's maintenance personnel to adjust, operate, and maintain switch if requested by end user. Refer to Section 017900 "Demonstration and Training." Training shall be held on site after complete installation and testing of each switch.

3.9 START UP AND TESTING

A. The manufacturer of the switching equipment shall provide personnel, testing procedures, and the necessary test equipment to assist in control system start up and testing. Written notification of planned start up and testing shall be provided at least 30 days prior to commissioning or testing and in no case shall notice be given until written approval of the test procedures has been received. Start up or testing that requires interruption of normal power to served facilities shall be coordinated with the customer.

B. Startup shall include:

1. System and component inspection prior to energization
2. Field adjustments
3. Calibration and programming
4. Start-up of equipment
5. System evaluation to ensure conformance to performance specification

C. Factory Acceptance Testing (FAT)

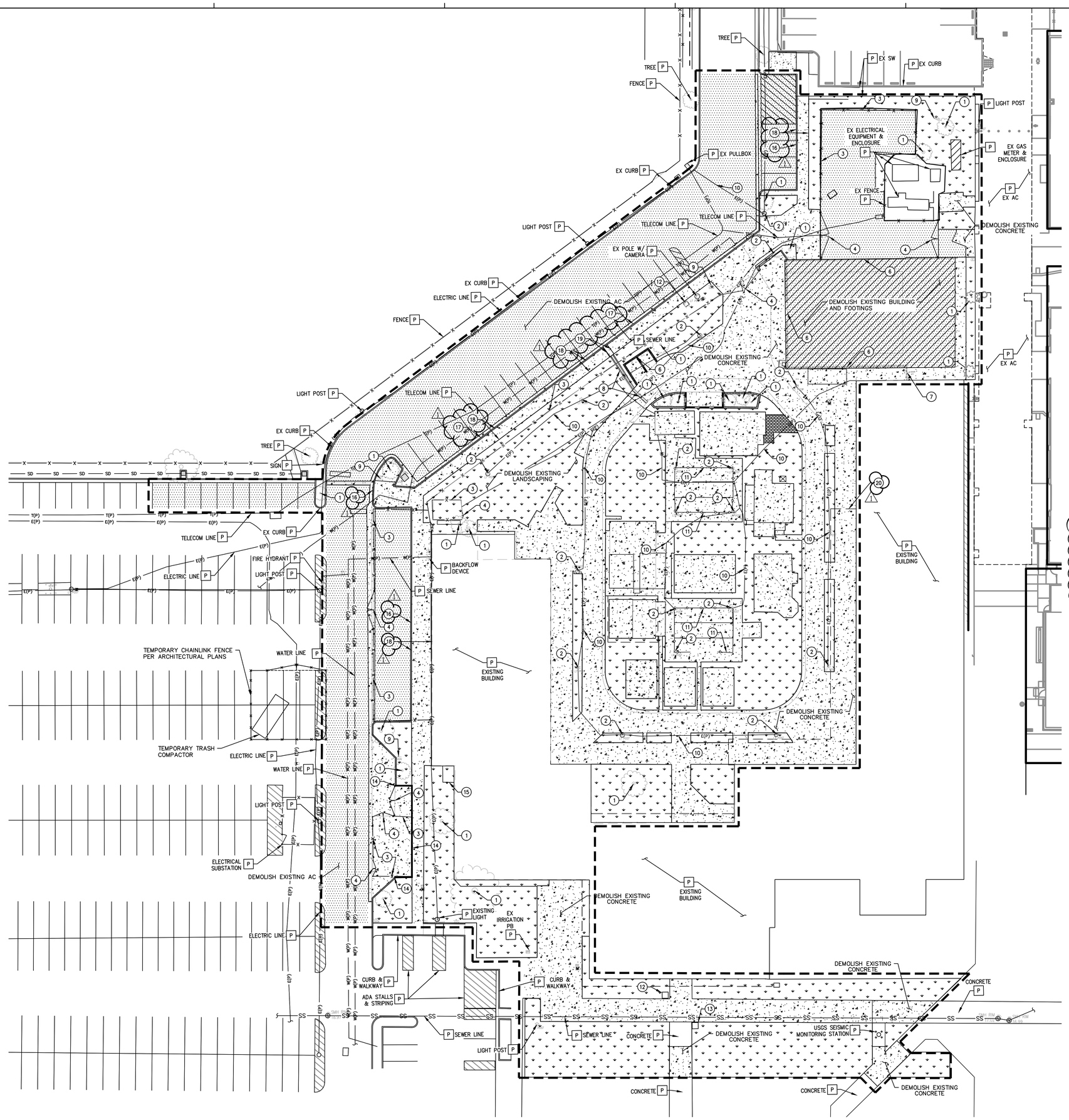
1. Entire system, including pad mount switches, controls, and communications components, shall be tested as a complete system at the manufacturer's facility before shipment.
2. All tests shall be performed with actual equipment to be supplied.
3. FAT shall show in detail how the automation solution functions and how the system responds to various fault and LOV scenarios.
4. FAT shall confirm that the automation solution performs as intended prior to shipment, serving as a proof of concept and stress test for the entire system.
5. 30 days notice of the schedule for this testing shall be provided.
6. A customized FAT plan shall be developed prior to the actual FAT. This plan shall include all scenarios to be tested during the FAT.
7. All tests shall be recorded in event log files. These files shall be used to create an operation summary report.
8. The FAT shall allow for last minute programming changes.

D. Test Procedure

1. Test procedures shall define the tests required to ensure that the system meets technical, operational, and the functional performance requirements.

2. The test procedures shall define location of tests, milestones for the tests, and identify simulation programs, equipment, personnel, facilities, and supplies required.
3. The test procedures shall provide for testing all control system capabilities and functions specified and shown.
4. The procedures shall cover actual equipment and sequences to be used for the specified project and shall consist of detailed instructions for test setup, execution, and evaluation of test results.
5. The test reports shall document results of the tests. Reports shall be delivered to the customer within 14 days after completion of each test.

END OF SECTION 261310



DEMOLITION CONSTRUCTION NOTES

- P PROTECT IN PLACE
- 1 REMOVE EXISTING TREE
- 2 REMOVE EXISTING LIGHT POST
- 3 REMOVE EXISTING FENCE
- 4 REMOVE EXISTING GATE
- 5 REMOVE EXISTING CURB STOP
- 6 REMOVE EXISTING WALL
- 7 REMOVE EXISTING DOOR
- 8 REMOVE EXISTING STORM DRAIN
- 9 REMOVE EXISTING SIGN
- 10 REMOVE EXISTING ELECTRICAL
- 11 REMOVE EXISTING IRON FENCE
- 12 REMOVE EXISTING SIGN, NEW SIGN TO BE RELOCATED
- 13 REMOVE DIRECTIONAL SIGN
- 14 REMOVE EXISTING CMU WALL AND FOOTINGS
- 15 REMOVE COMPRESSOR EQUIPMENT PER ARCHITECTURAL PLANS (AD2.0)
- 16 REMOVE EXISTING CURB
- 17 REMOVE EXISTING CURB AND GUTTER
- 18 REMOVE EXISTING SIDEWALK
- 19 REMOVE EXISTING PARKWAY CULVERT
- 20 REMOVE EXISTING CANOPY

1

DEMOLITION GENERAL NOTES:

1. ALL DIMENSIONS ON THE PLANS ARE IN FEET OR DECIMALS THEREOF UNLESS SPECIFICALLY CALLED OUT AS FEET AND INCHES.
2. THIS IS NOT A STAKING PLAN BUT A CHECK AND VERIFICATION OF THE MAJOR DIMENSIONS AS SHOWN ON THE ARCHITECTURAL SITE PLAN.
3. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB, FACE OF WALL, PROPERTY OR RIGHT-OF-WAY LINE, OR CENTER OF DRIVEWAYS.
4. SEE INDIVIDUAL FOUNDATION PLANS FOR ALL BUILDING DIMENSIONS.
5. THE CONSTRUCTION SURVEYOR IS RESPONSIBLE TO REPORT ANY AND ALL DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.
6. CAD FILES ARE AVAILABLE UPON REQUEST FOR CONSTRUCTION STAKING.
7. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS

DEMOLITION GENERAL NOTES:

- REMOVE EXISTING BUILDING/STRUCTURE. CHECK WITH BMT FOR ITEMS TO BE SALVAGED
- REMOVE EXISTING LANDSCAPING AND IRRIGATION
- REMOVE EXISTING CONCRETE
- REMOVE EXISTING AC PAVEMENT
- REMOVE EXISTING BRICK
- LIMIT OF DEMOLITION. SAWCUT EXISTING

1

NOTE:
EXISTING ELECTRICAL YARD 12' FENCE IS TO BE PROTECTED IN PLACE, REMOVE/REPLACE WHERE ACCESS IS REQUIRED TO REMOVE AND REPLACE GEAR, MEANS AND METHOD IS REQUIRED ON IF CHAINLINK PANELS WILL BE REMOVED AND REPLACED OR CUT AT BASE BACK TO NEXT PANEL AND REPAIRED

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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LONG BEACH CITY COLLEGE

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SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
C3.10 1

ADDENDUM#1

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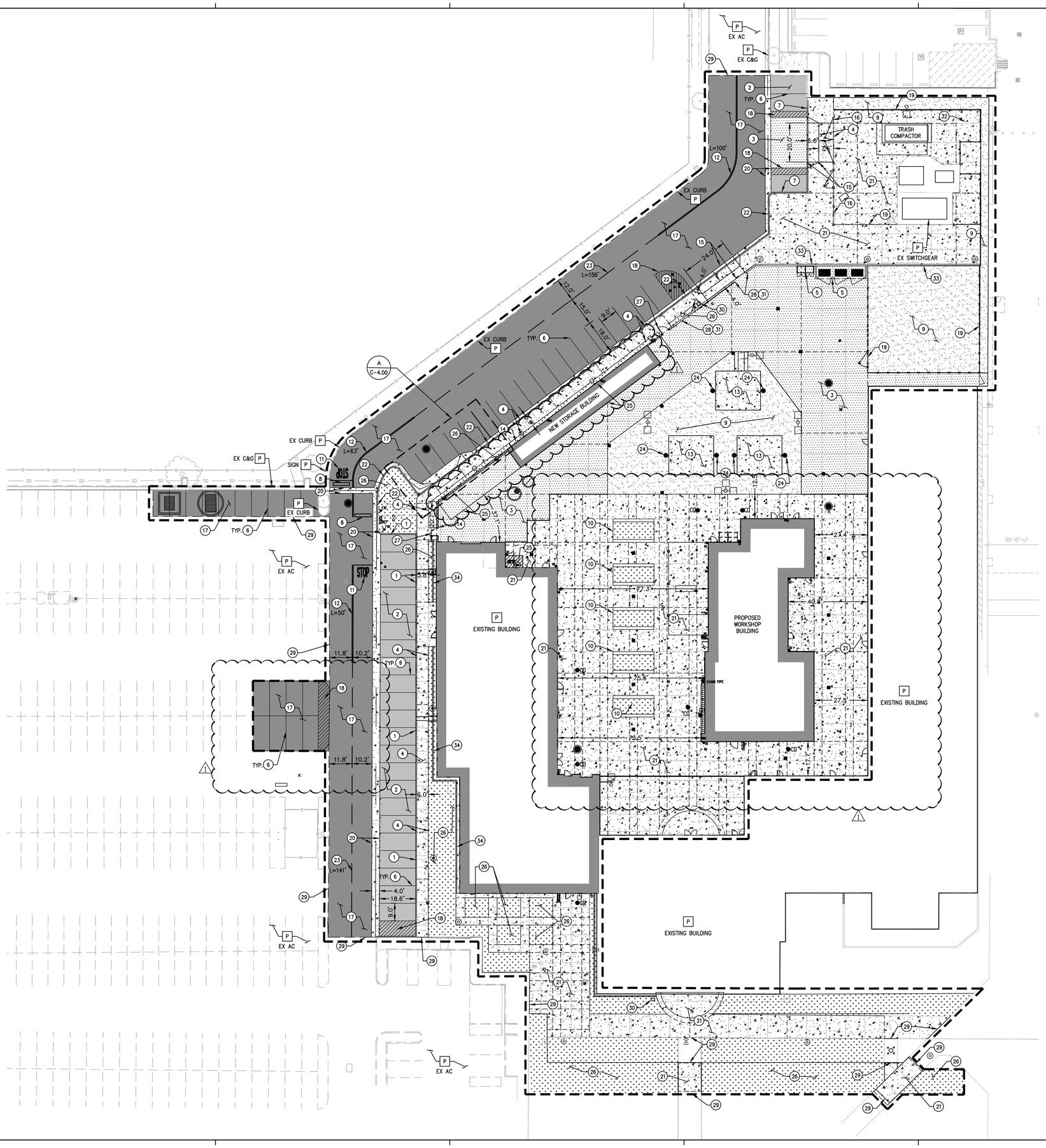

HORIZONTAL CONTROL NOTES

- P PROTECT IN PLACE
- (1) CONSTRUCT 6" CURB PER CITY OF LONG BEACH STD PLAN 116.
- (2) CONSTRUCT 3" AC OVER 7" CAB PER DETAIL 1/C9.00
- (3) CONSTRUCT 7.5" THICK OVER 6" CAB PCC PAVEMENT PER DETAIL 3/C9.00 FINISH AND COLOR PER LANDSCAPE PLANS.
- (4) CONSTRUCT CONCRETE SIDEWALK PER CITY OF LONG BEACH STD PLAN 116.
- (5) CONSTRUCT TRASH ENCLOSURE PER ARCHITECTURAL PLANS.
- (6) INSTALL WHITE PARKING STALL STRIPING PER CITY OF LONG BEACH STD PLAN NO. 312.
- (7) CONSTRUCT 4" CURB PER CITY OF LONG BEACH STD PLAN 116.
- (8) NEW SPEED BUMP PER DETAIL 3/C9.50
- (9) NEW DECOMPOSED GRANITE PER LANDSCAPE PLANS.
- (10) NEW PLANTER AND LANDSCAPING PER LANDSCAPE PLANS
- (11) "STOP" PAVEMENT MARKING AND 12" STOP BAR PER CA MUTCD A24D
- (12) DOUBLE YELLOW STRIPING PER CA MUTCD DETAIL 21 SHEET A20A
- (13) CONSTRUCT CONCRETE PADS PER DETAIL 5/C9.00
- (14) NEW WALL PER STRUCTURAL PLANS.
- (15) CONSTRUCT TYPE 1 DRIVEWAY PER CITY OF LONG BEACH STD PLAN 105.
- (16) NEW CHAIN LINK GATE PER ARCHITECTURAL PLANS.
- (17) CONSTRUCT 4" AC OVER 12" CAB PER DETAIL 2/C9.00
- (18) NEW DIAGONAL WHITE STRIPING PER LATEST CA MUTCD.
- (19) NEW CHAINLINK FENCE PER ARCHITECTURAL PLANS. 1
- (20) CONSTRUCT 4' WIDE VALLEY GUTTER PER DETAIL 7/C9.00
- (21) CONSTRUCT 6.5" THICK OVER 6" CAB PCC PAVEMENT PER DETAIL 4/C9.00 FINISH AND COLOR PER LANDSCAPE PLANS.
- (22) CONSTRUCT 6" CURB WITH 18" GUTTER PER CITY OF LONG BEACH STD PLAN 116.
- (23) DASHED YELLOW STRIPING PER CA MUTCD DETAIL 1 SHEET A20A
- (24) NEW MONUMENT W/ COMPRESSED AIR AND ELECTRICAL PER LANDSCAPE AND ELECTRICAL PLANS.
- (25) CONSTRUCT 6" PAD PER DETAIL 4/C9.50
- (26) NEW LANDSCAPING PER LANDSCAPE PLANS.
- (27) NEW GATE PER ARCHITECTURAL PLANS
- (28) NEW SLIDING DRIVE GATE PER ARCHITECTURAL PLANS.
- (29) SAWCUT AND MATCH EXISTING PAVEMENT.
- (30) NEW BUILDING SIGNAGE. SEE SHEET G3.10
- (31) CONSTRUCT THICKENED SLAB AT GATE PER DETAIL 13/C9.00
- (32) RELOCATED CAT CONDO PER ARCHITECTURAL PLANS
- (33) NEW CMU WALL PER ARCHITECTURAL PLANS
- (34) COBBLE MAINTENANCE BAND PER LANDSCAPE ARCHITECT 1
- (35) GAS CYLINDER CABINETS PER ARCHITECTURAL PLANS

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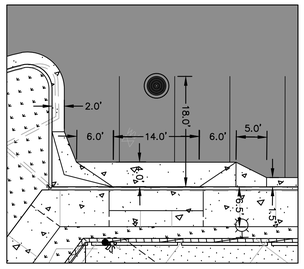

A C4.00 **CURB OPENING CATCH BASIN DETAIL**
SCALE: 1" = 10'

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

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REGISTERED PROFESSIONAL ARCHITECT MICHAEL BALTAZAR No. C-11360 STATE OF CALIFORNIA

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SHEET TITLE
SITE IMPROVEMENT & HORIZONTAL CONTROL PLAN

SHEET NUMBER
C4.00

ADDENDUM#1

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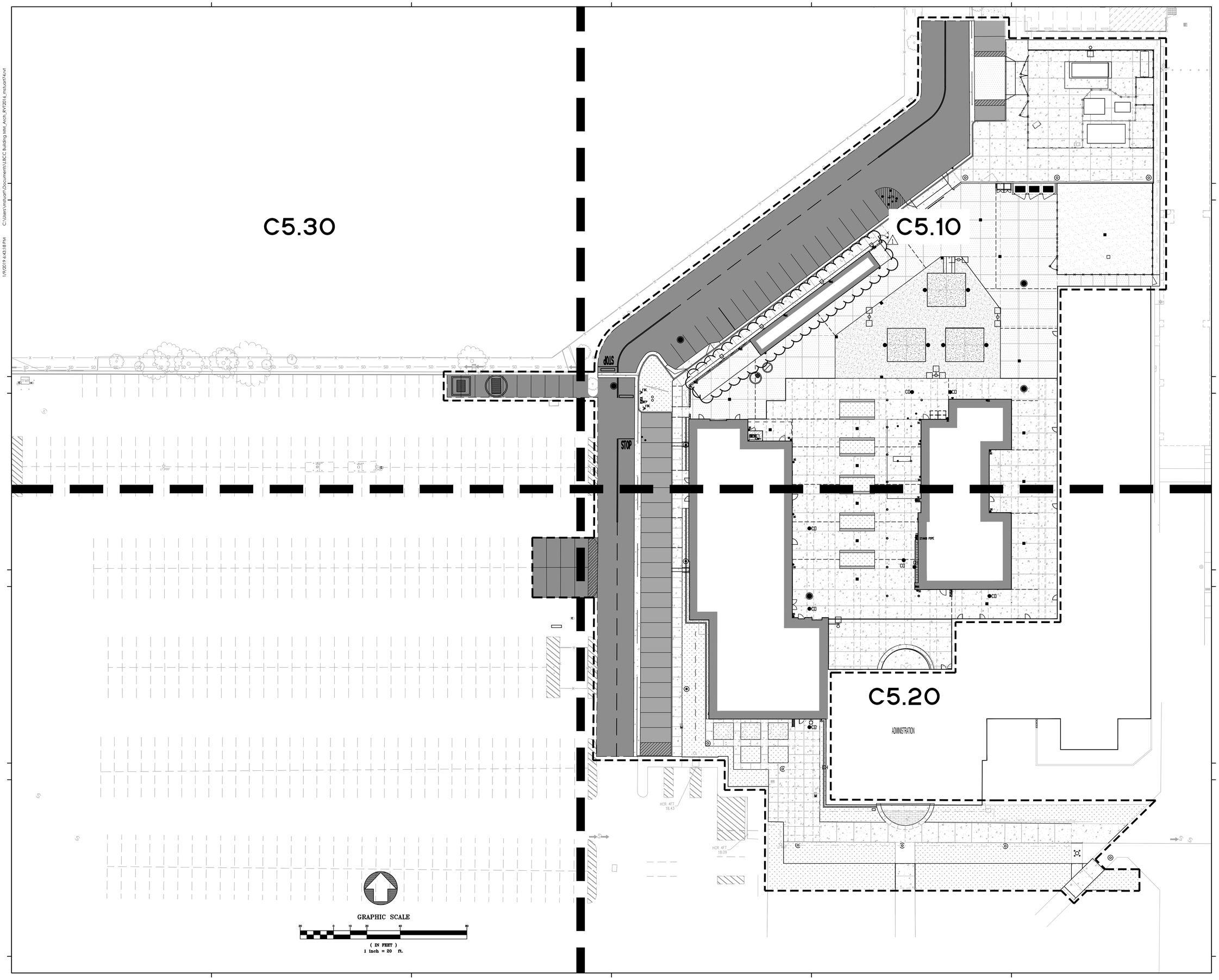

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SHEET TITLE

GRADING & DRAINAGE INDEX MAP

SHEET NUMBER

C5.00

ADDENDUM#1

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GRAPHIC SCALE

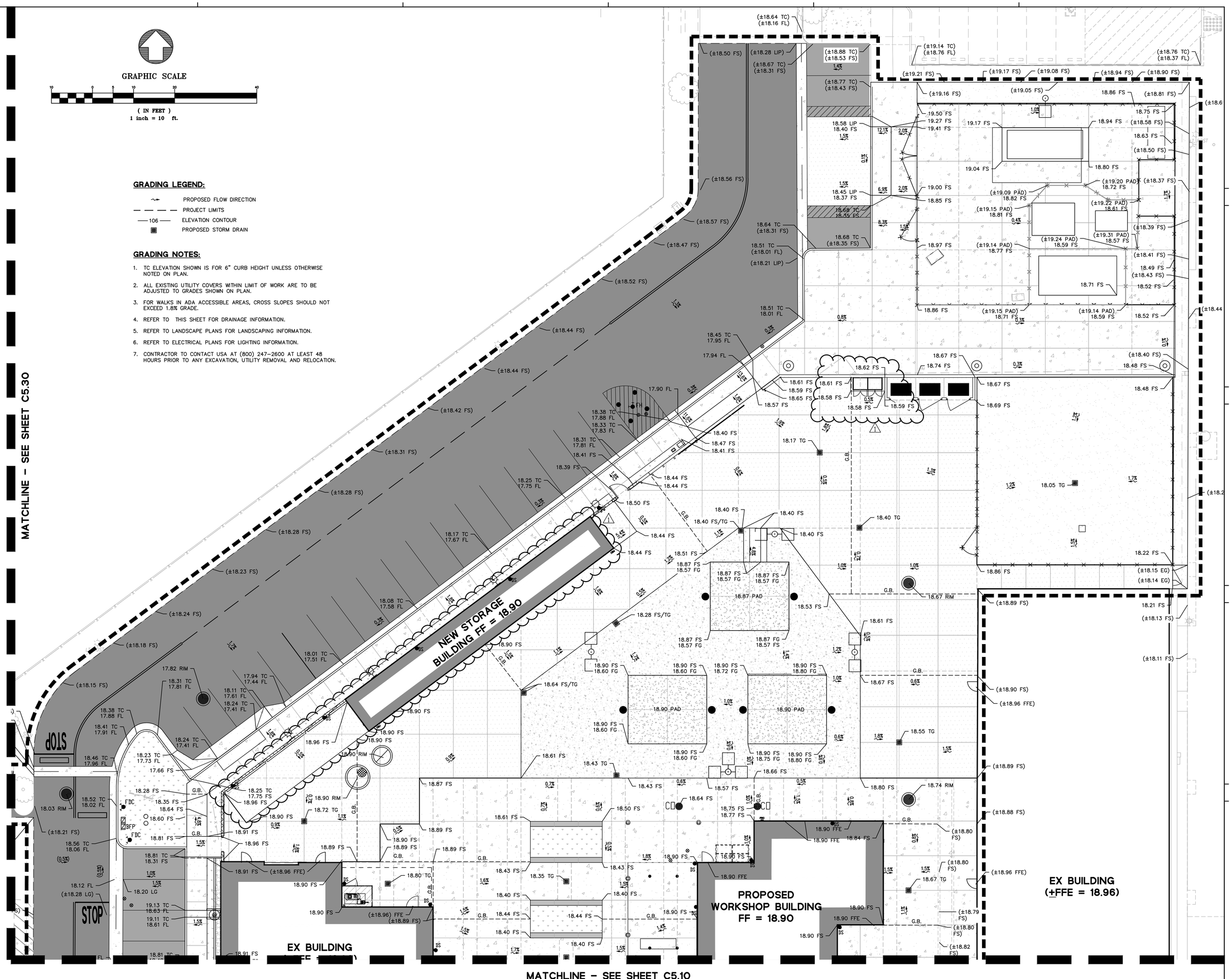
(IN FEET)
1 inch = 10 ft.

GRADING LEGEND:

- PROPOSED FLOW DIRECTION
- PROJECT LIMITS
- 106 ELEVATION CONTOUR
- PROPOSED STORM DRAIN

GRADING NOTES:

1. TC ELEVATION SHOWN IS FOR 6" CURB HEIGHT UNLESS OTHERWISE NOTED ON PLAN.
2. ALL EXISTING UTILITY COVERS WITHIN LIMIT OF WORK ARE TO BE ADJUSTED TO GRADES SHOWN ON PLAN.
3. FOR WALKS IN ADA ACCESSIBLE AREAS, CROSS SLOPES SHOULD NOT EXCEED 1.8% GRADE.
4. REFER TO THIS SHEET FOR DRAINAGE INFORMATION.
5. REFER TO LANDSCAPE PLANS FOR LANDSCAPING INFORMATION.
6. REFER TO ELECTRICAL PLANS FOR LIGHTING INFORMATION.
7. CONTRACTOR TO CONTACT USA AT (800) 247-2600 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, UTILITY REMOVAL AND RELOCATION.



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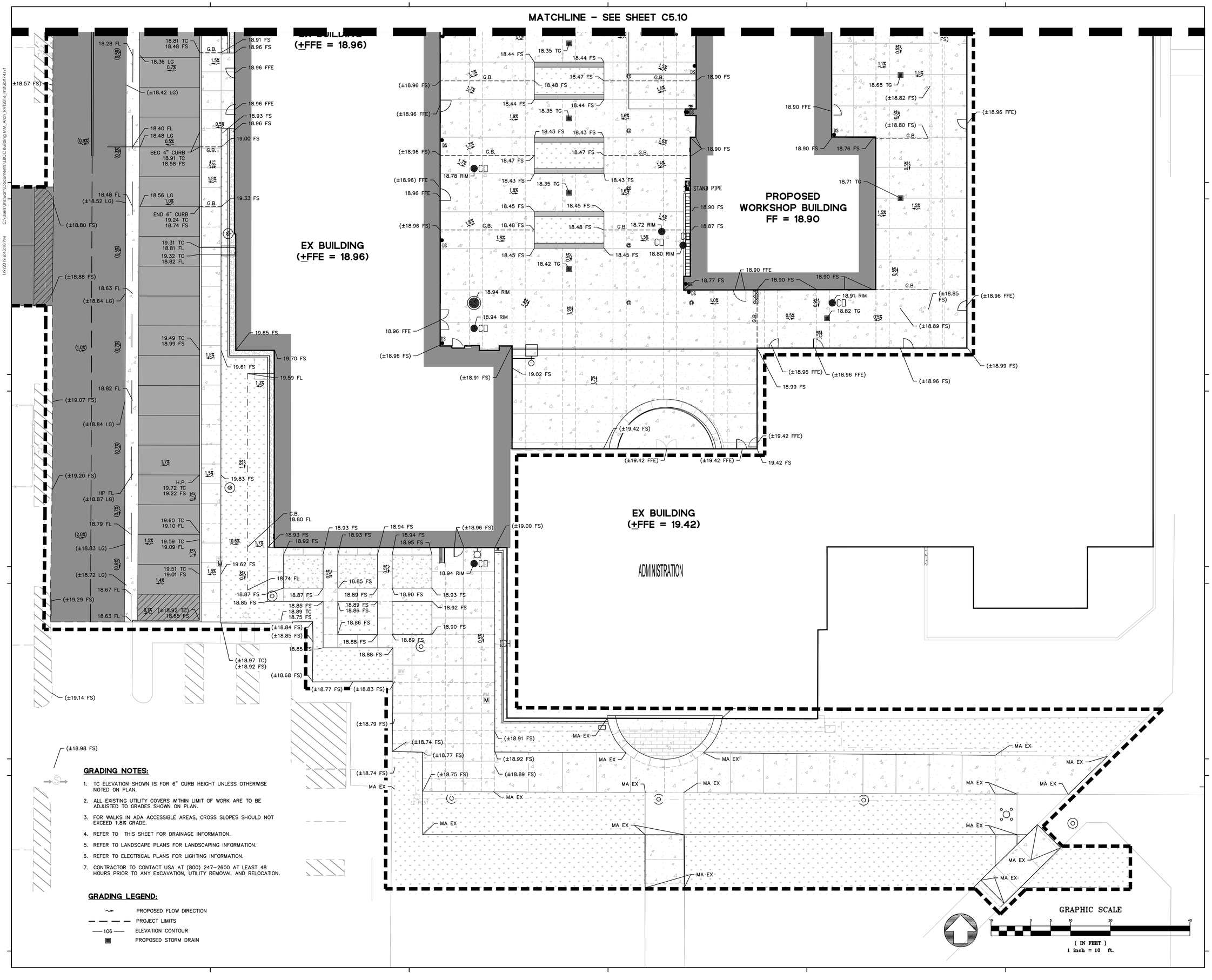
SHEET TITLE

ENLARGED GRADING & DRAINAGE PLAN

SHEET NUMBER

C5.10

ADDENDUM#1



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- PROJECT LIMITS
- 106 — ELEVATION CONTOUR
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SHEET TITLE
ENLARGED GRADING & DRAINAGE PLAN

SHEET NUMBER
C5.20 1

ADDENDUM#1

GRADING LEGEND:

- PROPOSED FLOW DIRECTION
- PROJECT LIMITS
- 106 ELEVATION CONTOUR
- PROPOSED STORM DRAIN

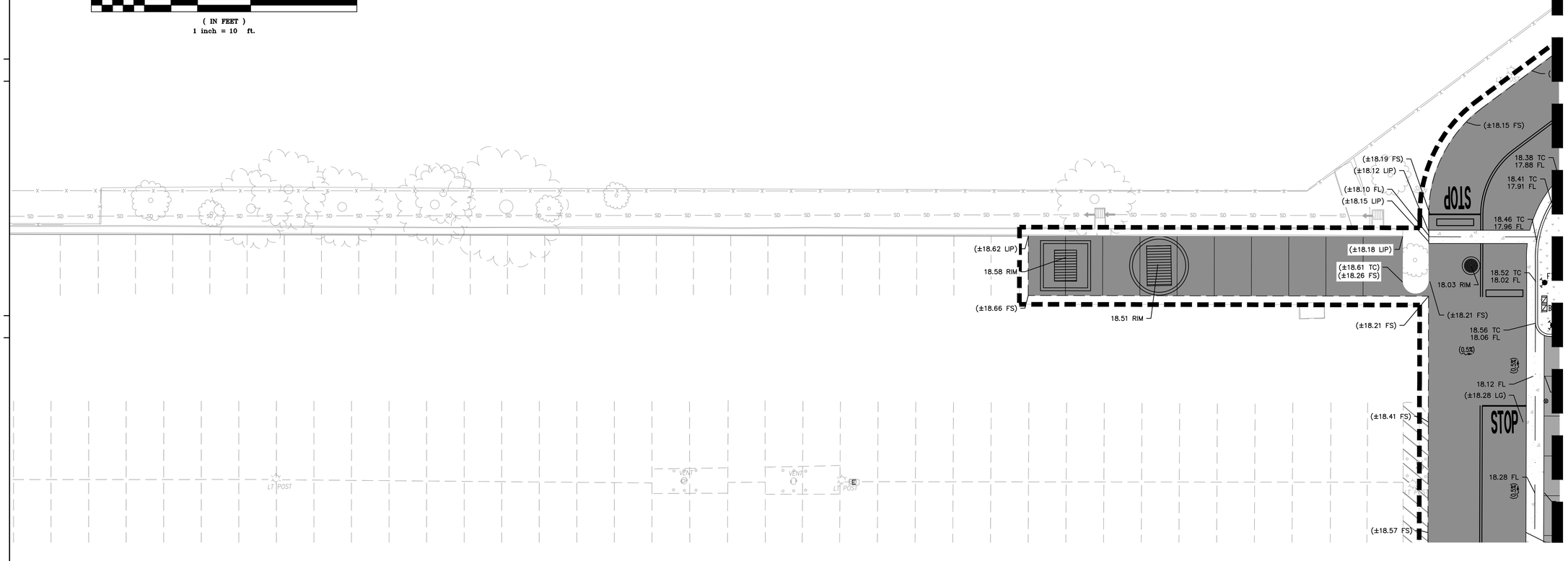
GRADING NOTES:

1. TC ELEVATION SHOWN IS FOR 6" CURB HEIGHT UNLESS OTHERWISE NOTED ON PLAN.
2. ALL EXISTING UTILITY COVERS WITHIN LIMIT OF WORK ARE TO BE ADJUSTED TO GRADES SHOWN ON PLAN.
3. FOR WALKS IN ADA ACCESSIBLE AREAS, CROSS SLOPES SHOULD NOT EXCEED 1.8% GRADE.
4. REFER TO THIS SHEET FOR DRAINAGE INFORMATION.
5. REFER TO LANDSCAPE PLANS FOR LANDSCAPING INFORMATION.
6. REFER TO ELECTRICAL PLANS FOR LIGHTING INFORMATION.
7. CONTRACTOR TO CONTACT USA AT (800) 247-2600 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, UTILITY REMOVAL AND RELOCATION.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.



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REGISTERED PROFESSIONAL ENGINEER
BRUCE W. KIRBY
No. C 42393
CIVIL
STATE OF CALIFORNIA

SEALS / APPROVALS

LICENSED ARCHITECT
NO. C 11360
STATE OF CALIFORNIA

PROJECT TITLE

BUILDING MM - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL

REVISIONS

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1	05/22/2020	ADDENDUM NO. 1

PROJECT IDENTIFICATION 20172114

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SHEET TITLE

ENLARGED GRADING & DRAINAGE PLAN

SHEET NUMBER

C5.30 1

ADDENDUM#1

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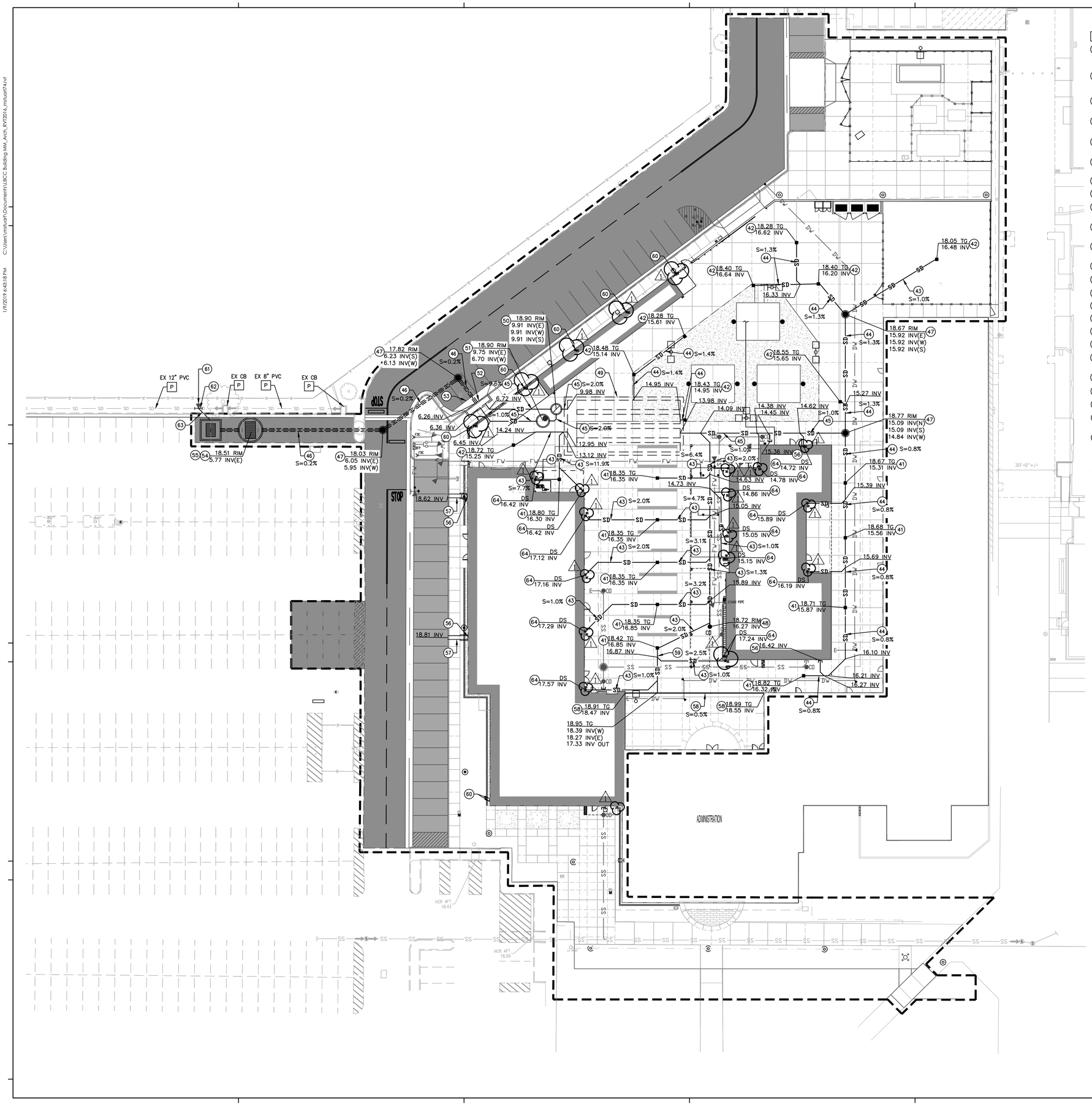

STORM DRAIN CONSTRUCTION NOTES:

- P — PROTECT IN PLACE EXISTING IMPROVEMENT
- 41 — CONSTRUCT 12"X12" PRECAST CONCRETE BOX WITH PEDESTRIAN RATED STEEL GRATE. COORDINATE WITH LANDSCAPE ARCHITECT FOR COLOR AND GRATE TYPE.
- 42 — CONSTRUCT 12"X12" PRECAST CONCRETE BOX WITH VEHICLE RATED STEEL GRATE. COORDINATE WITH LANDSCAPE ARCHITECT FOR COLOR AND GRATE TYPE.
- 43 — CONSTRUCT 6" SDR-35 PVC PIPE AND FITTINGS. PIPE TRENCHING PER DETAIL 8/C9.00
- 44 — CONSTRUCT 8" SDR-35 PVC PIPE AND FITTINGS. PIPE TRENCHING PER DETAIL 8/C9.00
- 45 — CONSTRUCT 12" SDR-35 PVC PIPE AND FITTINGS. PIPE TRENCHING PER DETAIL 8/C9.00
- 46 — CONSTRUCT 21" RCP PIPE. PIPE TRENCHING PER CITY OF LONG BEACH STD PLAN NO. 127
- 47 — CONSTRUCT STORM DRAIN MANHOLE PER SPPWC STD PLAN NO. 321-2
- 48 — CONSTRUCT STORM DRAIN CLEANOUT PER DETAIL 9/C9.00
- 49 — FURNISH AND INSTALL 60" DIAMETER CONTECH CMP DETENTION SYSTEM OR APPROVED EQUAL. SEE DETAIL 1/C9.10
- 50 — FURNISH AND INSTALL CONTECH STORMGATE OR APPROVED EQUAL. SEE DETAIL 1/C9.20
- 51 — FURNISH AND INSTALL CONTECH STORMFILTER OR APPROVED EQUAL. SEE DETAIL 2/C9.20
- 52 — CONSTRUCT CURB OPENING CATCH BASIN (W=14', V=12') PER DETAIL 5/C9.20
- 53 — CONSTRUCT LOCAL DEPRESSION (CASE B) PER SPPWC STD PLAN 313-3.
- 54 — CONSTRUCT 144" DIAMETER MANHOLE PER DETAIL 1/C9.40
- 55 — FURNISH AND INSTALL DUPLEX PUMPS DETAIL 1/C9.40
- 56 — STORM DRAIN POC. SEE PLUMBING PLANS FOR CONTINUATION.
- 57 — CONSTRUCT CONCRETE PARKWAY DRAIN PER DETAIL 1/C9.50
- 58 — CONSTRUCT 4" TRENCH DRAIN PER DETAIL 2/C9.50
- 59 — CONSTRUCT 4" SDR-35 PVC PIPE AND FITTINGS. PIPE TRENCHING PER DETAIL 8/C9.00
- 60 — STORM DRAIN TO DAYLIGHT AT SURFACE GRADE.
- 61 — CONSTRUCT THRUST BLOCK PER DETAIL 3/ C-9.20
- 62 — CONSTRUCT 12"X12"X10" DUCTILE IRON WYE FITTING WITH RESTRAINED JOINTS
- 63 — CONSTRUCT 10" DUCTILE IRON PIPE (D.I.P) FOR SUMP PUMP DISCHARGE, PER DETAIL 1/C-9.40
- 64 — SCUPPER ROOF DRAIN DOWNSPOUT TO CONNECT TO SITE STORM DRAIN

COMPOSITE UTILITY LEGEND:

DW	EXISTING DOMESTIC WATER
FM	EXISTING FIRE WATER
RW	EXISTING RECLAIMED WATER
S	EXISTING SANITARY SEWER
X" SD	EXISTING STORM DRAIN
E	EXISTING ELECTRICAL CONDUIT
	EXISTING LIGHT
S	EXISTING SEWER MANHOLE
D	EXISTING STORM DRAIN MANHOLE
DW DW	PROPOSED DOMESTIC WATER LINE
SD SD	PROPOSED STORM DRAIN LINE
SS SS	PROPOSED SEWER LATERAL
FW FW	PROPOSED FIRE WATER
	PROPOSED FIRE DEPARTMENT CONNECTION
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED THRUST BLOCK
	PROPOSED SCUPPER DOWNSPOUT

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

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SEALS / APPROVALS

REGISTERED PROFESSIONAL ENGINEER — LEE D. BALTHER — STATE OF CALIFORNIA

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SHEET TITLE
STORM DRAIN PLAN

SHEET NUMBER
C6.00 1

ADDENDUM#1

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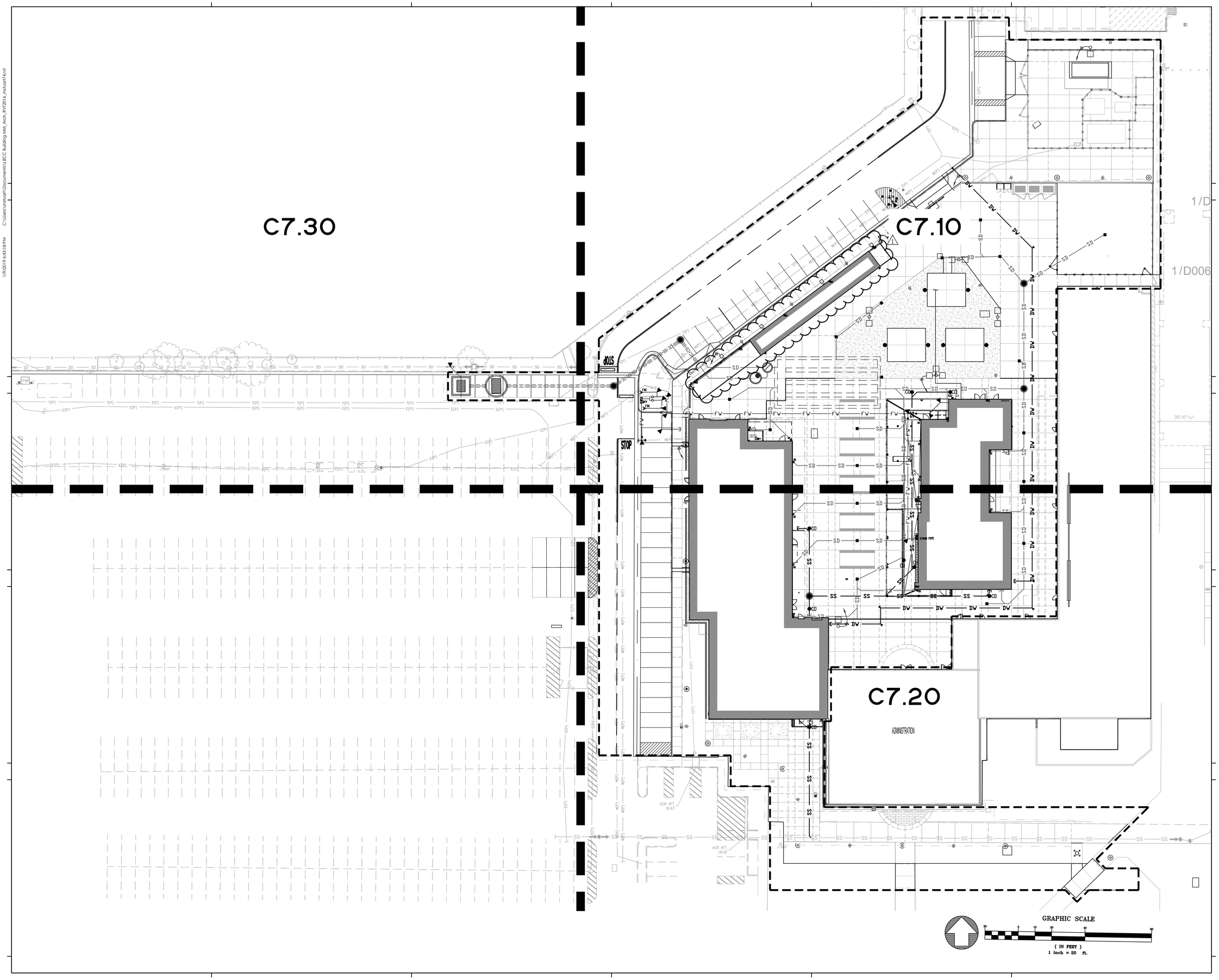

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SHEET TITLE

COMPOSITE UTILITY INDEX MAP

SHEET NUMBER

C7.00

ADDENDUM#1

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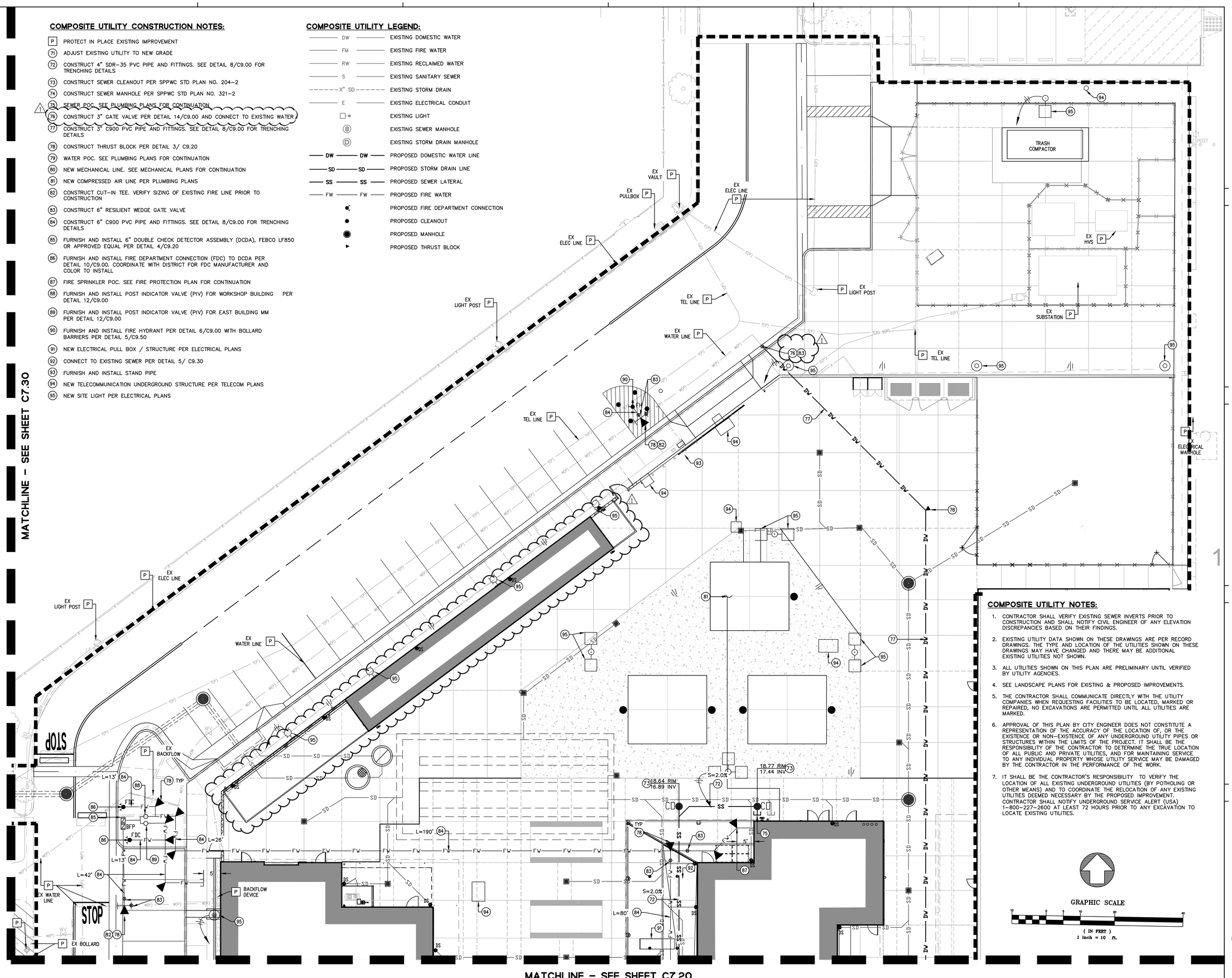
COMPOSITE UTILITY CONSTRUCTION NOTES:

- P — PROTECT IN PLACE EXISTING IMPROVEMENT
- 71 — ADJUST EXISTING UTILITY TO NEW GRADE
- 72 — CONSTRUCT 4" SDR-35 PVC PIPE AND FITTINGS. SEE DETAIL 8/C9.00 FOR TRENCHING DETAILS
- 73 — CONSTRUCT SEWER CLEANOUT PER SPPWC STD PLAN NO. 204-2
- 74 — CONSTRUCT SEWER MANHOLE PER SPPWC STD PLAN NO. 321-2
- 75 — SEWER POC. SEE PLUMBING PLANS FOR CONTINUATION
- 76 — CONSTRUCT 3" GATE VALVE PER DETAIL 14/C9.00 AND CONNECT TO EXISTING WATER
- 77 — CONSTRUCT 3" C900 PVC PIPE AND FITTINGS. SEE DETAIL 8/C9.00 FOR TRENCHING DETAILS
- 78 — CONSTRUCT THRUST BLOCK PER DETAIL 3/ C9.20
- 79 — WATER POC. SEE PLUMBING PLANS FOR CONTINUATION
- 80 — NEW MECHANICAL LINE. SEE MECHANICAL PLANS FOR CONTINUATION
- 81 — NEW COMPRESSED AIR LINE PER PLUMBING PLANS
- 82 — CONSTRUCT CUT-IN TEE. VERIFY SIZING OF EXISTING FIRE LINE PRIOR TO CONSTRUCTION
- 83 — CONSTRUCT 6" RESILIENT WEDGE GATE VALVE
- 84 — CONSTRUCT 6" C900 PVC PIPE AND FITTINGS. SEE DETAIL 8/C9.00 FOR TRENCHING DETAILS
- 85 — FURNISH AND INSTALL 6" DOUBLE CHECK DETECTOR ASSEMBLY (DCDA), FEBCO LF850 OR APPROVED EQUAL PER DETAIL 4/C9.20
- 86 — FURNISH AND INSTALL FIRE DEPARTMENT CONNECTION (FDC) TO DCDA PER DETAIL 10/C9.00. COORDINATE WITH DISTRICT FOR FDC MANUFACTURER AND COLOR TO INSTALL
- 87 — FIRE SPRINKLER POC. SEE FIRE PROTECTION PLAN FOR CONTINUATION
- 88 — FURNISH AND INSTALL POST INDICATOR VALVE (PIV) FOR WORKSHOP BUILDING PER DETAIL 12/C9.00
- 89 — FURNISH AND INSTALL POST INDICATOR VALVE (PIV) FOR EAST BUILDING MM PER DETAIL 12/C9.00
- 90 — FURNISH AND INSTALL FIRE HYDRANT PER DETAIL 6/C9.00 WITH BOLLARD BARRIERS PER DETAIL 5/C9.50
- 91 — NEW ELECTRICAL PULL BOX / STRUCTURE PER ELECTRICAL PLANS
- 92 — CONNECT TO EXISTING SEWER PER DETAIL 5/ C9.30
- 93 — FURNISH AND INSTALL STAND PIPE
- 94 — NEW TELECOMMUNICATION UNDERGROUND STRUCTURE PER TELECOM PLANS
- 95 — NEW SITE LIGHT PER ELECTRICAL PLANS

COMPOSITE UTILITY LEGEND:

DW	EXISTING DOMESTIC WATER
FM	EXISTING FIRE WATER
RW	EXISTING RECLAIMED WATER
S	EXISTING SANITARY SEWER
X" SD	EXISTING STORM DRAIN
E	EXISTING ELECTRICAL CONDUIT
	EXISTING LIGHT
S	EXISTING SEWER MANHOLE
D	EXISTING STORM DRAIN MANHOLE
DW	PROPOSED DOMESTIC WATER LINE
SD	PROPOSED STORM DRAIN LINE
SS	PROPOSED SEWER LATERAL
FW	PROPOSED FIRE WATER
	PROPOSED FIRE DEPARTMENT CONNECTION
	PROPOSED CLEANOUT
	PROPOSED MANHOLE
	PROPOSED THRUST BLOCK



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SHEET TITLE
ENLARGED COMPOSITE UTILITY PLAN

SHEET NUMBER
C7.10

ADDENDUM#1

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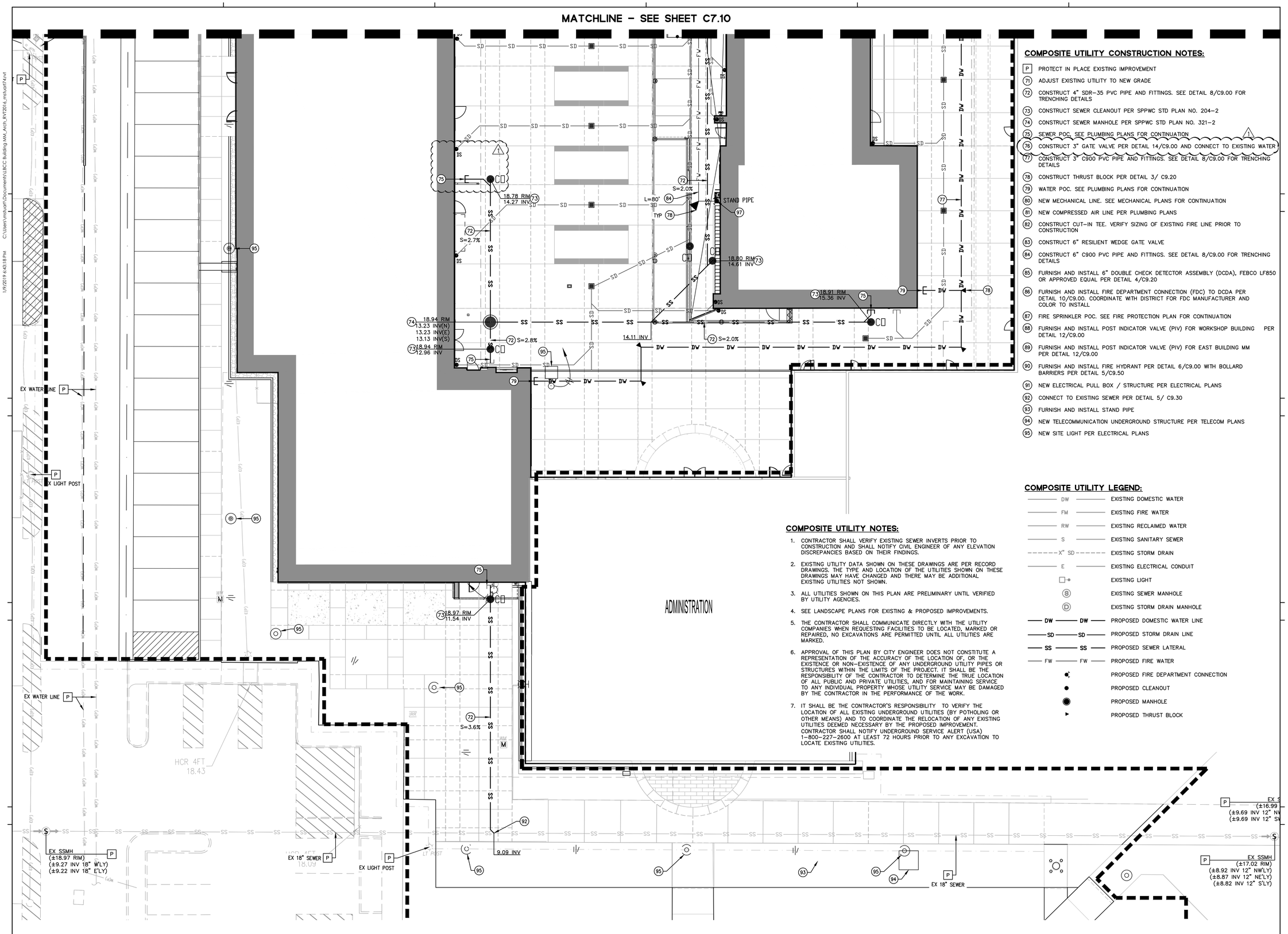

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- 95 NEW SITE LIGHT PER ELECTRICAL PLANS

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	PROPOSED THRUST BLOCK

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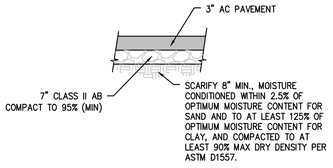
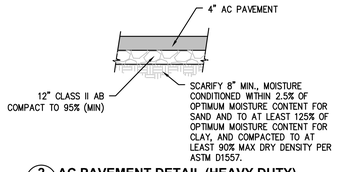
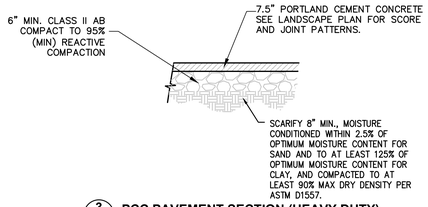


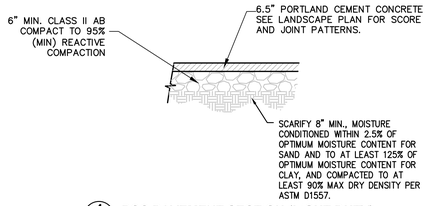
1 AC PAVEMENT DETAIL (LIGHT DUTY)
NTS



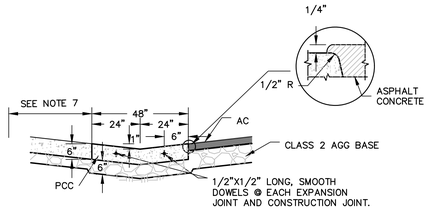
2 AC PAVEMENT DETAIL (HEAVY DUTY)
NTS



3 PCC PAVEMENT SECTION (HEAVY DUTY)
NTS

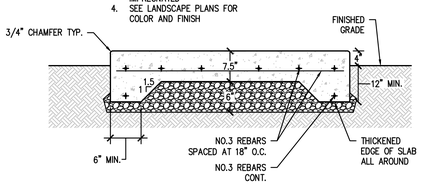


4 PCC PAVEMENT SECTION (LIGHT DUTY)
NTS

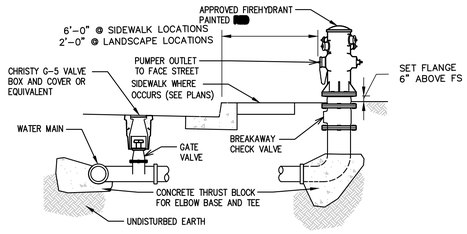


VALLEY GUTTER SECTION

NOTES:
1. SLOPE ALL CONCRETE AS SHOWN ON PLAN
2. EASE ALL EDGES R=3/4"
3. FELT SHALL BE NON-ASPHALTIC IMPREGNATED
4. SEE LANDSCAPE PLANS FOR COLOR AND FINISH



5 CONCRETE PAD DETAIL
NTS

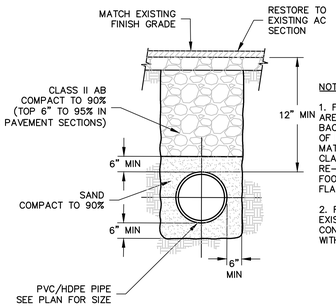


6 FIRE HYDRANT DETAIL
NTS

NOTES FOR VALLEY GUTTER:

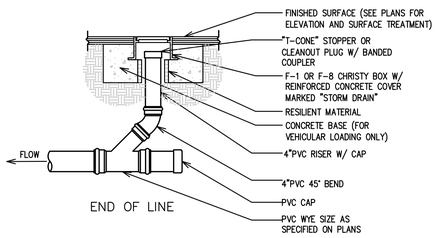
1. ALL CONCRETE SHALL BE CLASS A.
2. BASE ROCK TO BE EXTENDED A MINIMUM OF 2' BEYOND LIP OF GUTTER PRIOR TO POURING CONCRETE.
3. USE 1/2" WIDE EXPANSION JOINTS AT 20' CENTERS.
4. USE 1/2" DIAMETER x 12" LONG SMOOTH DOWELS AT EACH EXPANSION JOINT ANd CONSTRUCTION JOINT.
5. PROVIDE 1 1/2"-2" DEEP CONTRACTION JOINTS MIDWAY BETWEEN EXPANSION JOINTS.
6. SURFACE FINISH TO BE LIGHT BROOMING.
7. CONCRETE AT TRASH ENCLOSURE, SEE ARCHITECTURAL PLAN FOR TRASH ENCLOSURE DETAIL

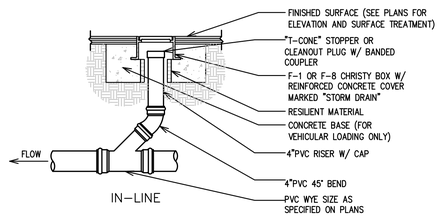
7 TYPICAL VALLEY GUTTER
NTS



NOTES:
1. FOR TRENCHES IN LANDSCAPE AREAS THAT CROSS HARDSCAPE, BACKFILL WITH NATIVE SOIL FREE OF DELETERIOUS AND OVERSIZE MATERIALS. ONSITE SHALLOW CLAY SOIL SHOULD NOT BE RE-USED WITHIN THE UPPER ONE FOOT BELOW CONCRETE FLATWORK.
2. FOR TRENCHES INSTALLED IN EXISTING CONCRETE, THE CONCRETE MUST BE RESTORED WITH DOWELS.

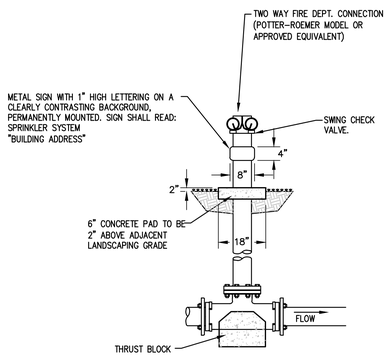
1 **8 PIPE TRENCH DETAILS**
NTS



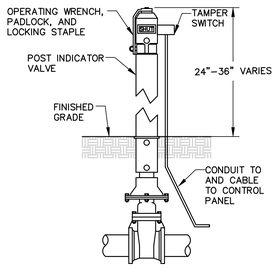


NOTE:
GLUED FITTINGS MAY BE SUBSTITUTED FOR GASKETED FITTINGS AT THE OPTION OF THE INSTALLATION CONTRACTOR.

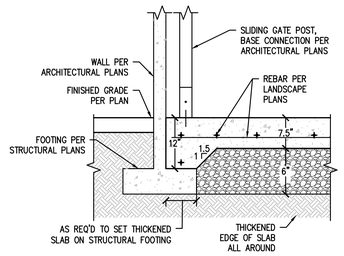
9 STORM DRAIN CLEANOUT DETAIL
NTS



10 FIRE DEPARTMENT CONNECTION (FDC)
NTS

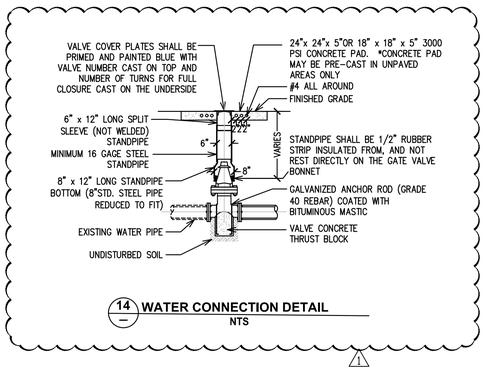


12 POST INDICATOR VALVE DETAIL
NTS



NOTES:
1. SLOPE ALL CONCRETE AS SHOWN ON PLAN.
2. FELT SHALL BE NON-ASPHALTIC IMPREGNATED
3. SEE LANDSCAPE PLANS FOR COLOR AND FINISH

13 THICKENED SLAB AT GATE DETAIL
NTS



14 WATER CONNECTION DETAIL
NTS

1

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www.hpiarchitecture.com
115 22nd street
Newport Beach, CA 92663
o: 949. 675. 6442

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL

REVISIONS

#	DATE	DESCRIPTION
1	05/22/2020	ADDENDUM NO. 1

PROJECT IDENTIFICATION 20172114
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY LB
CHECKED BY BK

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SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
C9.00 1

ADDENDUM#1

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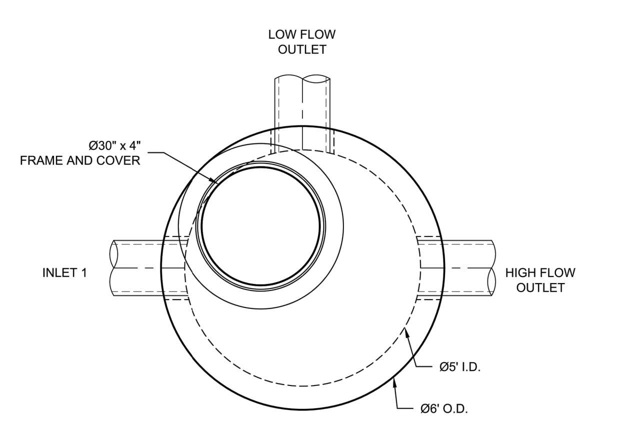
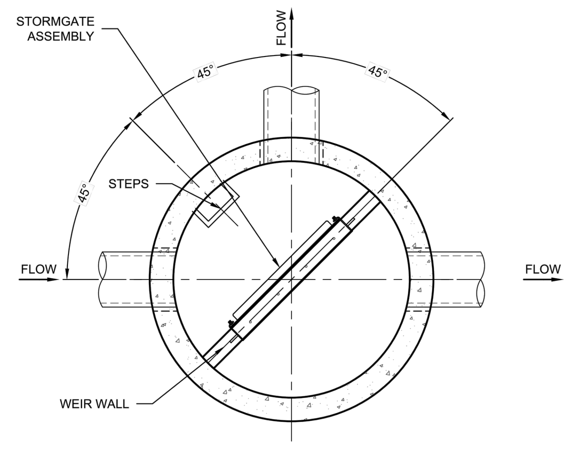
C:\Users\mstuart\Documents\LBCC Building MM_Arch_RVT2016_mstuart74.rvt
1/9/2019 6:43:18 PM

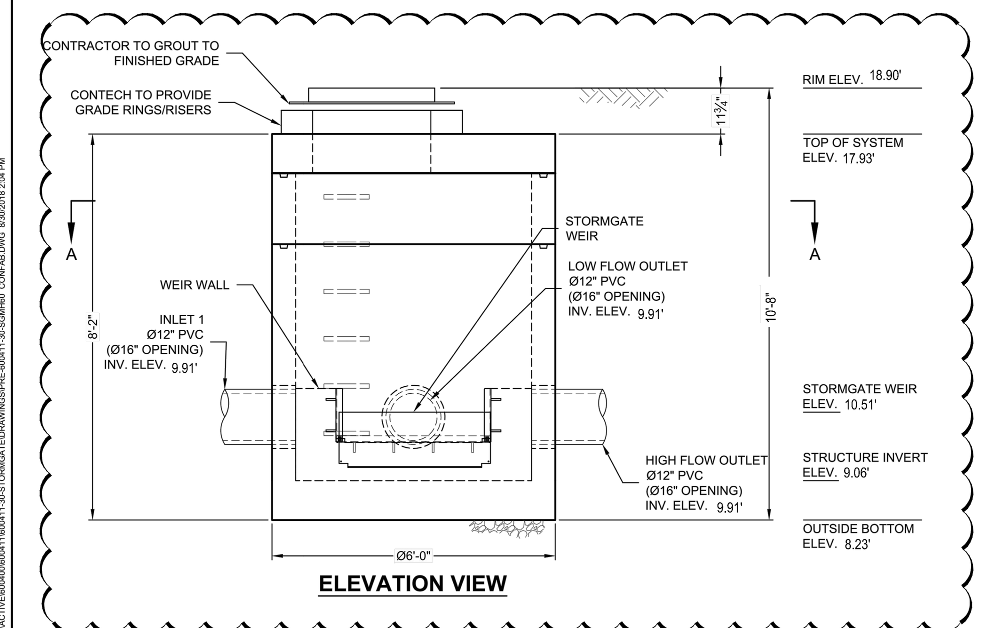
STORMGATE (1) — NTS



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	STORMGATE WEIR ASSEMBLY	CONTECH
6	STEPS, P10CTS, LANE LADDER, OR EQUIV.	CONTECH
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	Ø30" x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.28 CF
PEAK FLOW RATE	4.28 CFS
RETURN PERIOD OF PEAK FLOW	0 YRS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. BYPASS STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. BYPASS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S).
E. CONTRACTOR TO INSTALL GRADE RINGS/RISERS OR BLOCK REQUIRED BETWEEN THE TOP OF THE STRUCTURE AND THE BASE OF THE MANHOLE FRAMES.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 18000 LBS.
OF 3 PIECES

MAX FOOTPRINT = Ø6'

CONTECH **PROPOSAL** DRAWING — PR80127 LAYOUT 4A 5850 / PRECS 12.82T

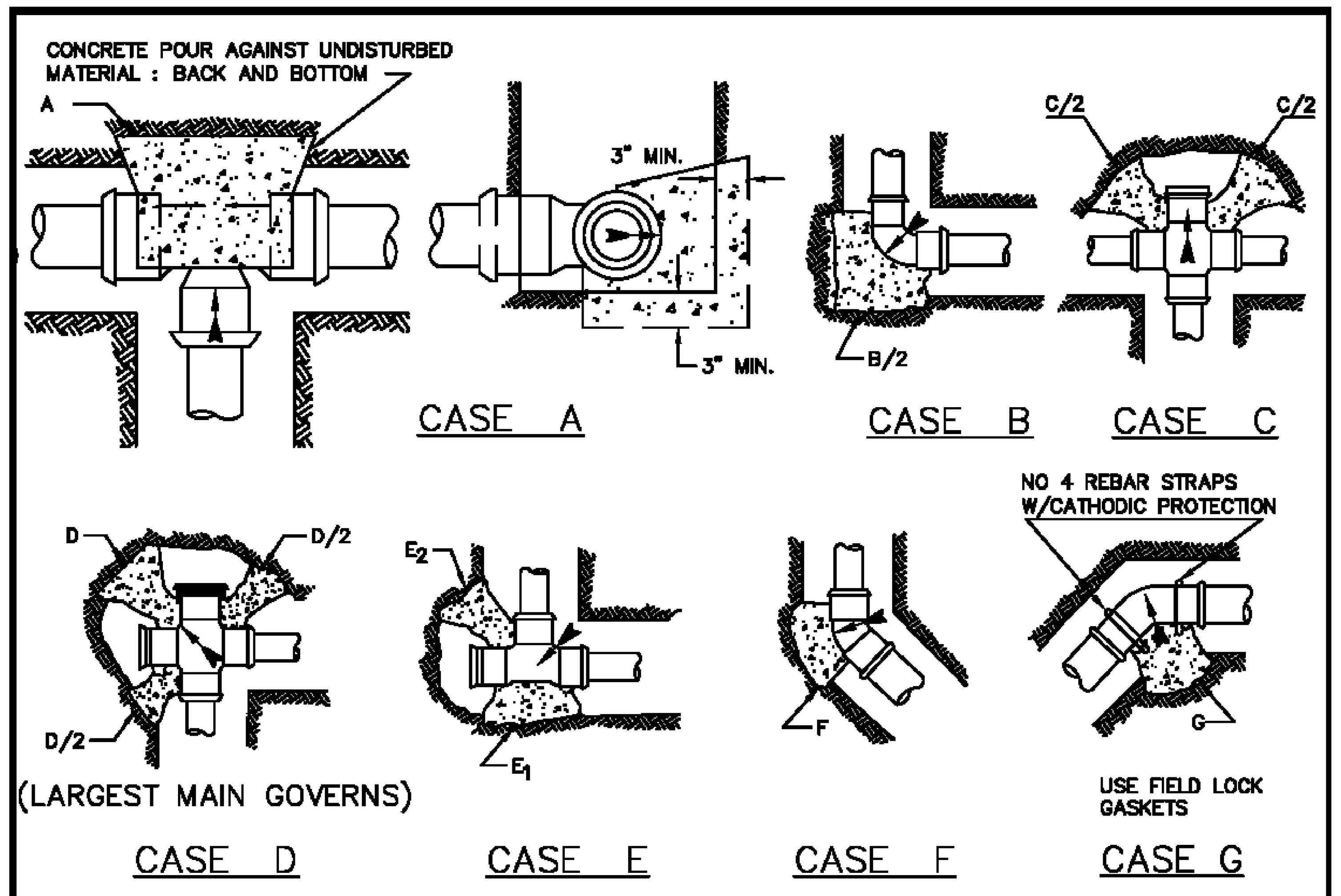
DIVERSION BYPASS SGMH60 - 600411-30
LBCC TRADES BUILDING
NEWPORT BEACH, CA

CONTECH ENGINEERED SOLUTIONS LLC — www.ContechES.com — StormGate™

DATE: 08/30/18 | SCALE: 3/8" = 1'-0" | DESIGNED: RLH | DRAWN: RLH | CHECKED: ### | APPROVED: ### | PROJECT No.: 600411 | SEQUENCE No.: 30 | SHEET: 1 OF 1

MARK | DATE | REVISION DESCRIPTION | BY

THRUST BLOCK DETAIL (3) — NTS

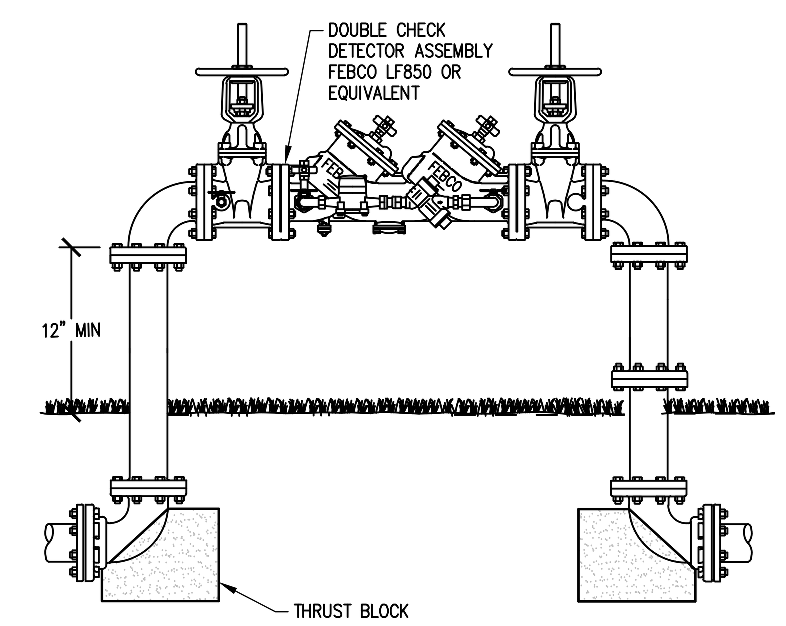


NOTES:
1. CASE "A" IS TYPICAL FOR ALL.
2. ALL BLOCKS TO BE KEPT CLEAR OF LUGS.
3. UNSUPPORTED SURFACES TO BE FORMED.
4. ARROWS ON CASE "A", "C" & "E" INDICATE MAINS WHICH DETERMINE BEARING AREA.
5. BASED ON 150 P.S.I. PRESSURE, 1500 P.S.F. SOIL BEARING.
6. RE-BAR STRAPS FOR CASE G SHALL HAVE CATHOTIC PROTECTION

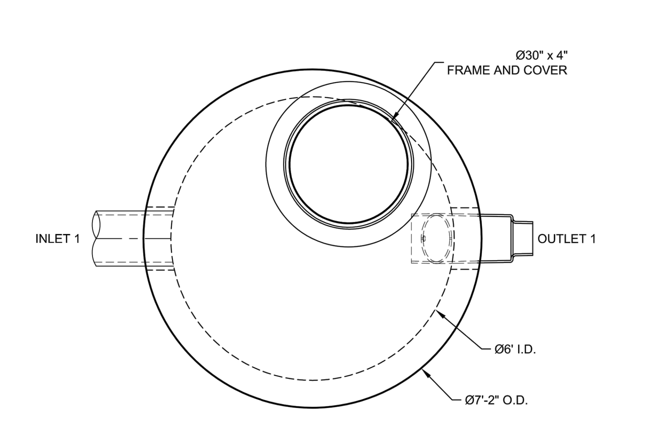
REQUIRED BEARING AREAS—SQ.FT.

PIPE SIZE	A	B	C	D	E_1	E_2	F	G
4"	2	3	3	3	2	3	2	2
6"	5	6	7	7	5	7	4	4
8"	8	12	11	11	8	11	6	6
10"	12	18	17	17	12	17	8	8
12"	17	24	24	24	17	24	12	12

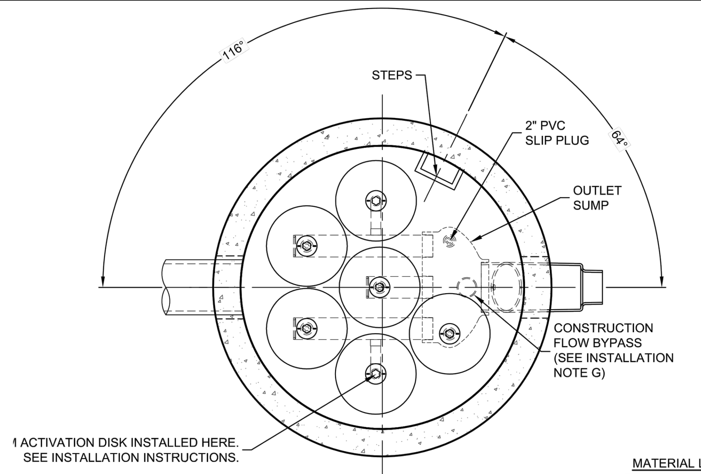
DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) (4) — NTS



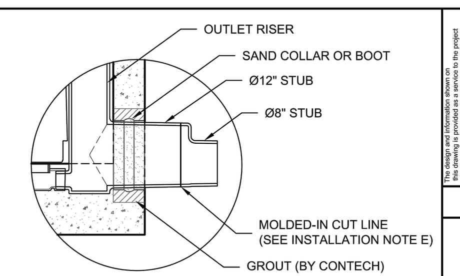
STORMFILTER (2) — NTS



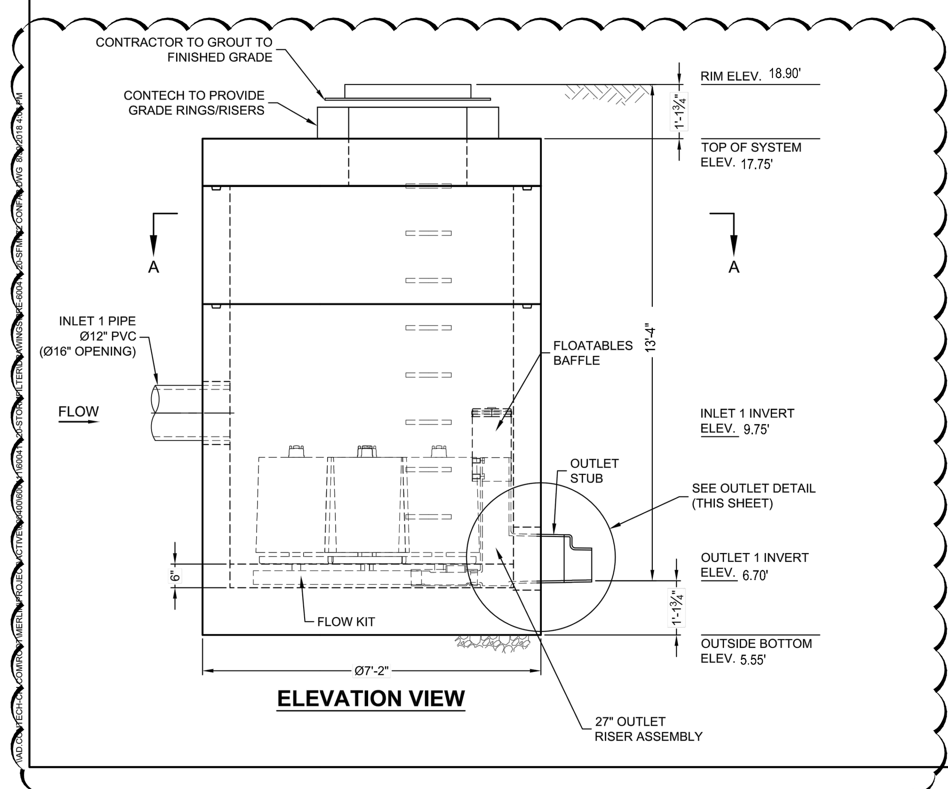
PLAN VIEW
CARTRIDGES AND FLOW KIT NOT SHOWN



SECTION A-A



OUTLET DETAIL
(ILLUSTRATION ONLY)



ELEVATION VIEW

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.28 CFS
PEAK FLOW RATE	OFFLINE
RETURN PERIOD OF PEAK FLOW	OFFLINE
FILTER MEDIA TYPE	ZPG

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
6	27" ZPG CARTRIDGE	CONTECH
7	22.5 GPM RESTRICTOR DISK (GLD)	CONTECH
1	2" PVC SLIP PLUG	CONTECH
1	42A FLOWKIT	CONTECH
1	27" OUTLET RISER ASSEMBLY	CONTECH
8	STEPS, P10CTS, LANE LADDER, OR EQUIV.	CONTECH
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	Ø30" x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTRACTOR

PERFORMANCE SPECIFICATION
FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. **RADIAL MEDIA DEPTH SHALL BE 7-INCHES.** FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **38 SECONDS**.
SPECIFIC FLOW RATE SHALL BE **2 GPM/SF (MAXIMUM).** SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM)**.

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
5. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S). ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB. IF OUTLET PIPE IS LARGER THAN 8 INCHES, CONTRACTOR TO REMOVE THE 8 INCH OUTLET STUB AT MOLDED IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
G. CONTRACTOR TO INSTALL SUPPLIED PLUG IN CONSTRUCTION FLOW BYPASS WHEN SYSTEM IS BROUGHT ON LINE (PRESSURE FIT ONLY, DO NOT GLUE).

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 24000 LBS. OF 3 PIECES
BASE SECTION SHIPPED WITH CARTRIDGES INSTALLED
MAX FOOTPRINT = Ø7'-2"

CONTECH **PROPOSAL** DRAWING — PR80127 LAYOUT 4A 5850 / PRECS 17.66T

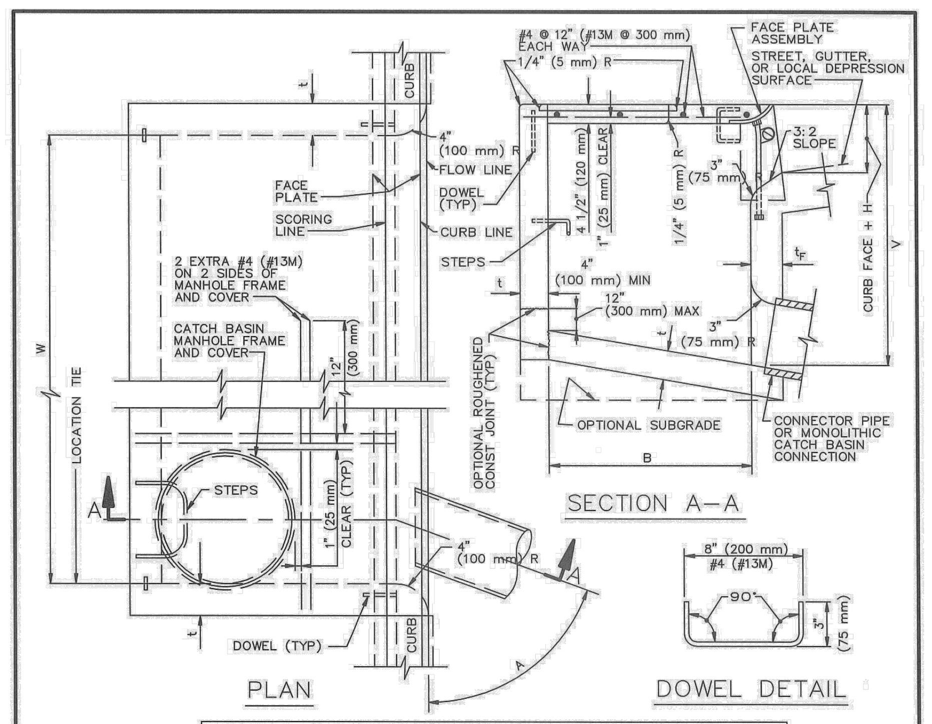
STORMFILTER SFMH72 - 600411-20
LBCC TRADES BUILDING
NEWPORT BEACH, CA

CONTECH ENGINEERED SOLUTIONS LLC — www.ContechES.com — The Stormwater Management StormFilter®

DATE: 08/30/18 | SCALE: 3/8" = 1'-0" | DESIGNED: RLH | DRAWN: RLH | CHECKED: ### | APPROVED: ### | PROJECT No.: 600411 | SEQUENCE No.: 20 | SHEET: 1 OF 1

MARK | DATE | REVISION DESCRIPTION | BY

CURB OPENING CATCH BASIN DETAIL (5) — NTS



STRUCTURAL DATA
WALL AND SLAB DIMENSIONS AND REINFORCEMENT REQUIREMENTS

MAX W	MAX V	t	t_F	REINFORCEMENT REQUIRED IN: FRONT WALL	REAR WALL	BOTTOM SLAB	END WALL
3.5' (1.0 m)	8' (2.4 m)	6" (150 mm)	6" (150 mm)	NO	REINFORCEMENT		REQUIRED
3.5' (1.0 m)	12' (3.5 m)	8" (200 mm)	8" (200 mm)				
7' (2.0 m)	6' (1.8 m)	6" (150 mm)	6" (150 mm)				
7' (2.0 m)	12' (3.5 m)	8" (200 mm)	8" (200 mm)				
14' (4.0 m)	4' (1.2 m)	6" (150 mm)	6" (150 mm)	REINFORCEMENT		REQUIRED	
	8' (2.4 m)	6" (150 mm)	8" (200 mm)				
14' (4.0 m)	12' (3.5 m)	8" (200 mm)	10" (250 mm)				
6 m (21') AND 9 m (28')	4' (1.2 m)	6" (150 mm)	6" (150 mm)				
	6' (1.8 m)	6" (150 mm)	8" (200 mm)				
	8' (2.4 m)	8" (200 mm)	8" (200 mm)				
	10' (3.0 m)	8" (200 mm)	10" (250 mm)				
	12' (3.5 m)	8" (200 mm)	10" (250 mm)				

FOR W > 28' (9 m), V > 12' (3.5 m) OR B > 4' (1.2 m) SEE PLANS

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
PROMULGATED BY THE PUBLIC WORKS STANDARDS, INC., GREENBOOK COMMITTEE 1984 REV. 1992, 1996, 2009
CURB OPENING CATCH BASIN
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STANDARD PLAN 300—3 SHEET 1 OF 2

NOTES:
1. WHERE THE BASIN IS TO BE CONSTRUCTED WITHIN THE LIMITS OF EXISTING OR PROPOSED SIDEWALK OR IS CONTIGUOUS TO SUCH SIDEWALK, THE TOP SLAB OF THE BASIN MAY BE POURED EITHER MONOLITHIC WITH THE SIDEWALK OR SEPARATELY, USING THE SAME CLASS OF CONCRETE AS IN THE BASIN. WHEN POURED MONOLITHICALLY, THE SIDEWALK SHALL BE PROVIDED WITH A WEAKENED PLANE OR A 1" (25 mm) DEEP SAWCUT CONTINUOUSLY AROUND THE EXTERNAL PERIMETER OF THE CATCH BASIN WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK. SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SLOPE, GRADE, COLOR, FINISH, AND SCORING TO EXISTING OR PROPOSED CURB AND WALK ADJACENT TO THE BASIN.
2. ALL CURVED CONCRETE SURFACES SHALL BE FORMED BY CURVED FORMS, AND SHALL NOT BE SHAPED BY PLASTERING.
3. FLOOR OF BASIN SHALL BE GIVEN A STEEL TROWEL FINISH AND SHALL HAVE A LONGITUDINAL AND LATERAL SLOPE OF 1:12 MINIMUM AND 1:3 MAXIMUM, EXCEPT WHERE THE GUTTER GRADE EXCEEDS 8%, IN WHICH CASE THE LONGITUDINAL SLOPE OF THE FLOOR SHALL BE THE SAME AS THE GUTTER GRADE. SLOPE FLOOR FROM ALL DIRECTIONS TO THE OUTLET.
4. DIMENSIONS:
   - B = 3'–2" (970 mm)
   - V = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT OF THE CATCH BASIN AT THE OUTLET = 4.5' (1.35 m).
   - V_U = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT AT THE UPSTREAM END OF THE BASIN, AND SHALL BE DETERMINED BY THE REQUIREMENTS OF NOTE 3, BUT SHALL NOT BE LESS THAN CURB FACE PLUS 12" (300 mm).
   - V_I = THE DIFFERENCE IN ELEVATION BETWEEN THE TOP OF THE CURB AND THE INVERT OF THE INLET, NOTED ON THE PLANS.
   - H = NOTED ON THE PLANS.
   - W = NOTED ON THE PLANS.
   - A = THE ANGLE, IN DEGREES, INTERCEPTED BY THE CENTERLINE OF THE CONNECTOR PIPE AND THE CATCH BASIN WALL TO WHICH THE CONNECTOR PIPE IS ATTACHED.
5. PLACE CONNECTOR PIPES AS INDICATED ON THE PLANS. UNLESS OTHERWISE SPECIFIED, THE CONNECTOR PIPE SHALL BE LOCATED AT THE DOWNSTREAM END OF THE BASIN. WHERE THE CONNECTOR PIPE IS SHOWN AT A CORNER, THE CENTERLINE OF THE PIPE SHALL INTERSECT THE INSIDE CORNER OF THE BASIN. THE PIPE MAY BE CUT AND TRIMMED AT A SKEW NECESSARY TO INSURE MINIMUM 3" (80 mm) PIPE EMBEDMENT, ALL AROUND, WITHIN THE CATCH BASIN WALL, AND 3" (75 mm) RADIUS OF ROUNDING OF STRUCTURE CONCRETE, ALL AROUND, ADJACENT TO PIPE ENDS. A MONOLITHIC CATCH BASIN CONNECTION SHALL BE USED TO JOIN THE CONNECTOR PIPE TO THE CATCH BASIN WHENEVER ANGLE "A" IS LESS THAN 70° OR GREATER THAN 110°, OR WHENEVER THE CONNECTOR PIPE IS LOCATED IN A CORNER. THE OPTIONAL USE OF A MONOLITHIC CATCH BASIN CONNECTION IN ANY CASE IS PERMITTED. MONOLITHIC CATCH BASIN CONNECTIONS MAY BE CONSTRUCTED TO AVOID CUTTING STANDARD LENGTHS OF PIPE.
6. STEPS SHALL BE LOCATED AS SHOWN. IF THE CONNECTOR PIPE INTERFERES WITH THE STEPS, THEY SHALL BE LOCATED AT THE CENTERLINE OF THE DOWNSTREAM END WALL. STEPS SHALL BE SPACED 12" (300 mm) APART. THE TOP STEP SHALL BE 7" (175 mm) BELOW THE TOP OF THE MANHOLE AND PROJECT 2–1/2" (65 mm). ALL OTHER STEPS SHALL PROJECT 5" (130 mm).
7. DOWELS ARE REQUIRED AT EACH CORNER AND AT 7' (2 m) ON CENTER (MAXIMUM) ALONG THE BACKWALL.
8. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:
   - 308 MONOLITHIC CATCH BASIN CONNECTION
   - 309 CATCH BASIN REINFORCEMENT
   - 310 CATCH BASIN FACE PLATE ASSEMBLY AND PROTECTION BAR
   - 312 CATCH BASIN MANHOLE FRAME AND COVER
   - 635 STEEL STEP
   - 636 POLYPROPYLENE PLASTIC STEP

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
CURB OPENING CATCH BASIN
STANDARD PLAN 300—3 SHEET 2 OF 2

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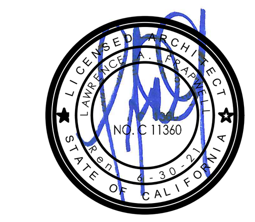

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL

REVISIONS

#	DATE	DESCRIPTION
1	05/22/2020	ADDENDUM NO. 1

PROJECT IDENTIFICATION 20172114
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SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
C9.20

ADDENDUM#1

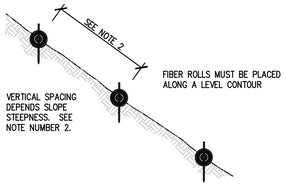
1/9/2019 6:43:18 PM C:\Users\mstuart\Documents\LBCC Building MM_Arch_RVT2016_mstuart74.rvt

Gravebags
2-bags high

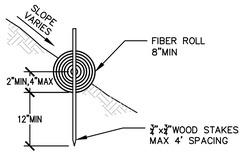
Gravebags
2-bags high

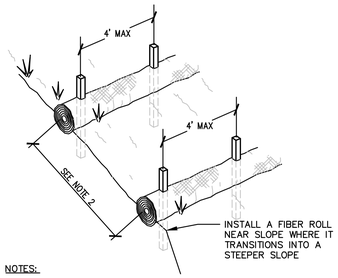
ADDITIONAL NOTE:
CONTRACTOR SHALL USE DI PROTECTION TYPE 1 AND 2 AS REQUIRED PER CURRENT PHASE OF CONSTRUCTION.

1 STORM DRAIN INLET PROTECTION
NTS



ENTRENCHMENT DETAIL
N.T.S.



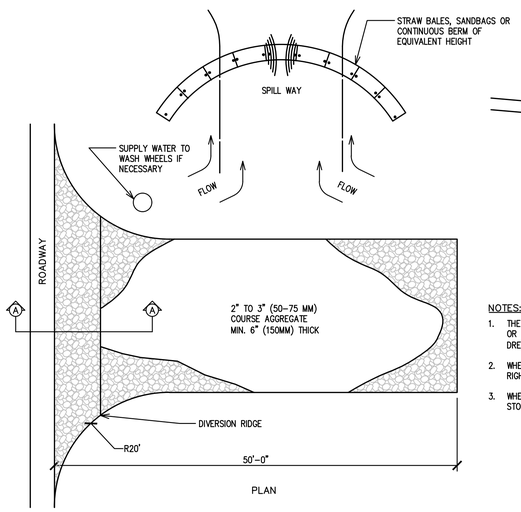


NOTES:

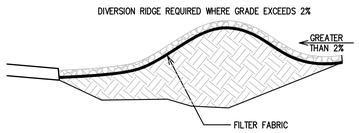
1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 1/4 TO 1/3 OF THE THICKNESS OF THE ROLL. 2"MIN OR 4"MAX.
2. VERTICAL SPACING FOR SLOPE INSTALLATIONS:

   SLOPE OF 2:1 OR GREATER = 10 FEET APART
   SLOPE BETWEEN 4:1 AND 2:1 = 15 FEET APART
   SLOPE OF 4:1 OR FLATTER = 20 FEET APART
3. INSTALL FIBER ROLL ALONG A LEVEL CONTOUR.
4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

2 FIBER ROLL
NTS



PLAN

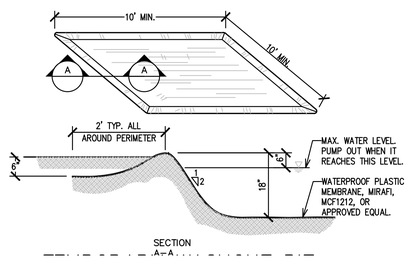


SECTION A-A

NOTES:

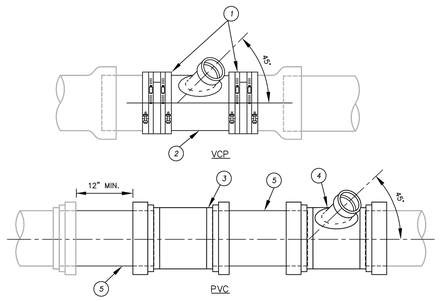
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAYS. THIS MAY REQUIRED TOP DRESSING, REPAIR AND / OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ONTO AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

3 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
NTS



SECTION
A-A

4 TEMPORARY WASHOUT PIT
NTS



ITEM	MATERIALS
1	BANDED RUBBER COUPLING WITH OUTSIDE TYPE 316 STAINLESS STEEL SHEAR RING
2	VCP WYE FITTING.
3	GASKETED PVC PIPE COUPLING, REPAIR STYLE.
4	GASKETED PVC WYE FITTING.
5	SDR-35 PVC PIPE (PUP), MIN. LENGTH: 12".

NOTES:

1. WHEN 12" MIN. SPACE BETWEEN EDGE OF COUPLING AND BELL CANNOT BE PROVIDED, CUT-OUT NEAREST BELL JOINT AND INSERT PLAIN-END PIPE.
2. ALL DEBRIS SHALL BE KEPT OUT OF THE SEWER. THE PIPE REACH CUT-INTO SHALL BE CLEANED AND BALLED, IF NECESSARY, AS DIRECTED BY THE DISTRICT REPRESENTATIVE.
3. DAMAGED PIPE SHALL BE REPLACED AS DIRECTED BY THE DISTRICT REPRESENTATIVE.
4. SADDLE-TYPE CONNECTIONS SHALL ONLY BE USED FOR SPECIAL SITUATIONS, AND SHALL NOT BE CONSTRUCTED WITHOUT PRIOR DISTRICT APPROVAL.
5. 8" AND LARGER DIA. LATERALS SHALL BE CONNECTED TO MAINLINE VIA MANHOLE ONLY

5 CUT IN WYE CONNECTION
NTS

1

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CIVIL
STATE OF CALIFORNIA

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LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

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REVISIONS

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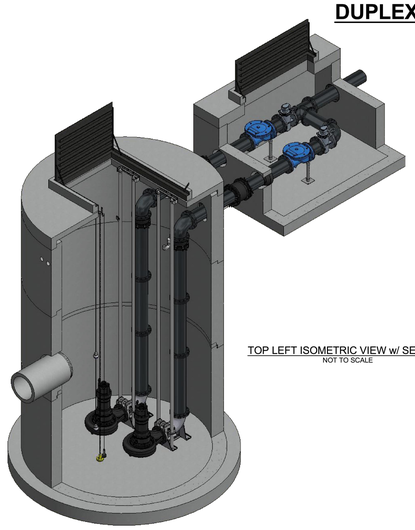
SHEET TITLE
CONSTRUCTION DETAILS

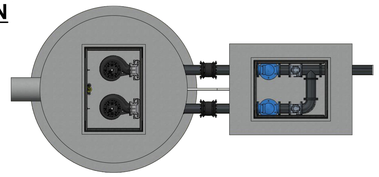
SHEET NUMBER
C9.30 1

ADDENDUM#1

LBCC TRADES BUILDING
DUPLEX PUMP STATION



TOP LEFT ISOMETRIC VIEW w/ SECTION
NOT TO SCALE



PLAN VIEW
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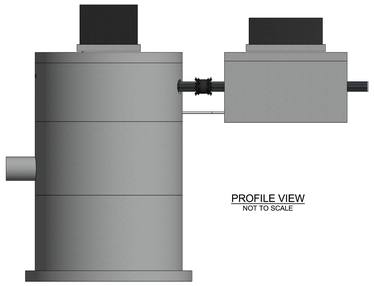

PROFILE VIEW
NOT TO SCALE

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4.) Foundation, subgrade, and backfill to be designed by others.

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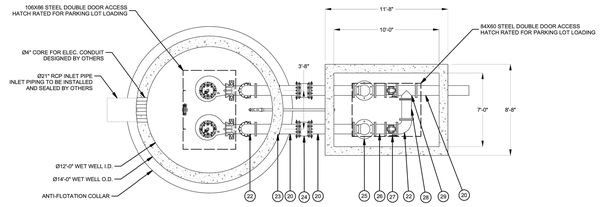
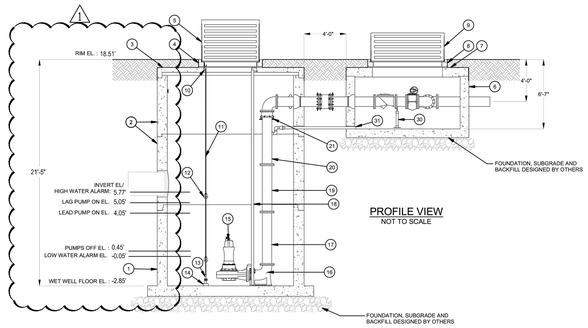
DESCRIPTION: LBCC TRADES BUILDING — TITLE SHEET			REV:
PART NUMBER: LBCC Trades Building Assembly	DRAWN BY: M. KRAJEWSKI		SHEET: 1 of 2
CREATED: 06/03/2019	MODIFIED: 06/20/2019		

LBCC Trades Building Assembly_10inch Spring.dwr



PLAN VIEW
NOT TO SCALE



PROFILE VIEW
NOT TO SCALE

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION
1	1	144IN DIA. JENSEN PRECAST CONCRETE MANHOLE BASE
2	2	144IN DIA. JENSEN PRECAST CONCRETE MANHOLE BARREL
3	1	144IN DIA. JENSEN PRECAST CONCRETE MANHOLE FLAT TOP
4	1	JENSEN PRECAST CONCRETE HATCH RISER 66IN X 108IN
5	1	STEEL DOUBLE DOOR HATCH WITH A CLEAR OPENING OF 108IN X 66IN
6	1	JENSEN PRECAST CONCRETE VAULT BASE 120IN X 120IN
7	1	JENSEN PRECAST VAULT FLAT TOP 120INX 84IN
8	1	JENSEN PRECAST CONCRETE HATCH RISER 78IN X 60IN X 8IN
9	1	STEEL DOUBLE DOOR HATCH WITH A CLEAR OPENING OF 84IN X 60IN
10	1	FLOAT BRACKET 3 HOOK TYPE 316SS
11	18 LF	CHAIN 3/16IN 316SS "LINEAR FEET"
12	2	OPTICAL FLOAT SWITCH
13	1	PRESSURE TRANSDUCER 15PSI 100FT CABLE
14	1	ANCHOR 15LB PVC COATED
15	2	SUBMERSIBLE PUMP HOMA AK1056-320/40F/C
16	2	HOMA AUTOCOUPLING 10IN
17	2	PIPE 10IN FLG X FLG DUCTILE IRON SPOOL 5FT
18	4	PIPE 2-1/2IN SCH40 GUIDE RAIL 304SS "20' STICKS CUT TO LENGTH"
19	2	PIPE 10IN FLG X FLG DUCTILE IRON SPOOL 4FT 8IN
20	7	PIPE 10IN FLG X PE DUCTILE IRON SPOOL 5FT
21	2	RFCA 10IN W/ SS HARDWARE ROMAC
22	3	90 DEG ELBOW 10IN DUCTILE IRON FLG
23	5	CONNECTOR BOOT S106-16AWS CORE-SEAL WEDGE-STEEL ASTM 16IN CORE DRILL FOR 12IN DIP
24	2	MJ SLEEVE 10IN WITH SS BOLT AND MJ GASKET
25	2	SWING CHECK VALVE 10IN
26	2	PIPE 10IN FLG X FLG DUCTILE IRON SPOOL 1FT
27	2	PLUG VALVE 10IN FLG W/ HANDWHEEL FBE INT AND EXT
28	1	PIPE 10IN FLG X FLG DUCTILE IRON SPOOL 2FT
29	1	TEE 10IN DUCTILE IRON
30	2	FLG PIPE SUPPORT 12IN STANDON
31	1	PVC VAULT DRAIN w/ TRAP

PUMP CHARACTERISTICS

DESCRIPTION	VALUE
DUTY POINT	1970 gpm @ 29.1' TDH
MANUFACTURER	HOMA
MODEL NUMBER	AK1056-320/40F/C
PUMP TYPE	SUBMERSIBLE, NON-CLOG
MOTOR SIZE	40.0 hp
MAX PUMP RUN SPEED	1160 rpm
AVAILABLE POWER	460 V / 3 Ph / 53.0 A
ACCESS HATCH LOADING CRITERIA	PARKING LOT LOADING

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DESCRIPTION: LBCC TRADES BUILDING — MECHANICAL DETAIL			REV:
PART NUMBER: LBCC Trades Building Assembly	DRAWN BY: M. KRAJEWSKI		SHEET: 2 of 2
CREATED: 06/03/2019	MODIFIED: 06/20/2019		

LBCC Trades Building Assembly_10inch Spring.dwr

1 — SUMP PUMP DETAIL
NTS

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SHEET TITLE
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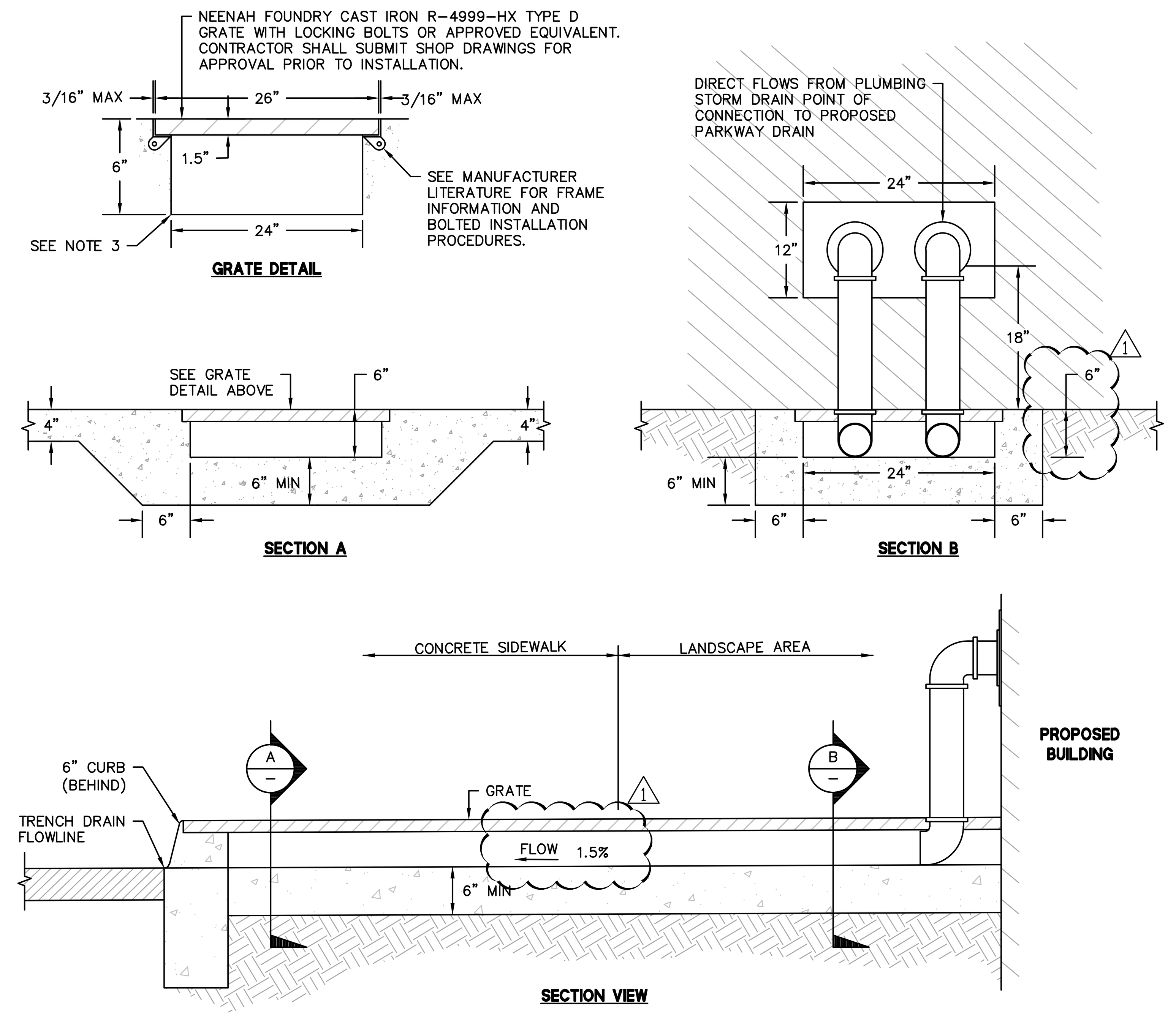
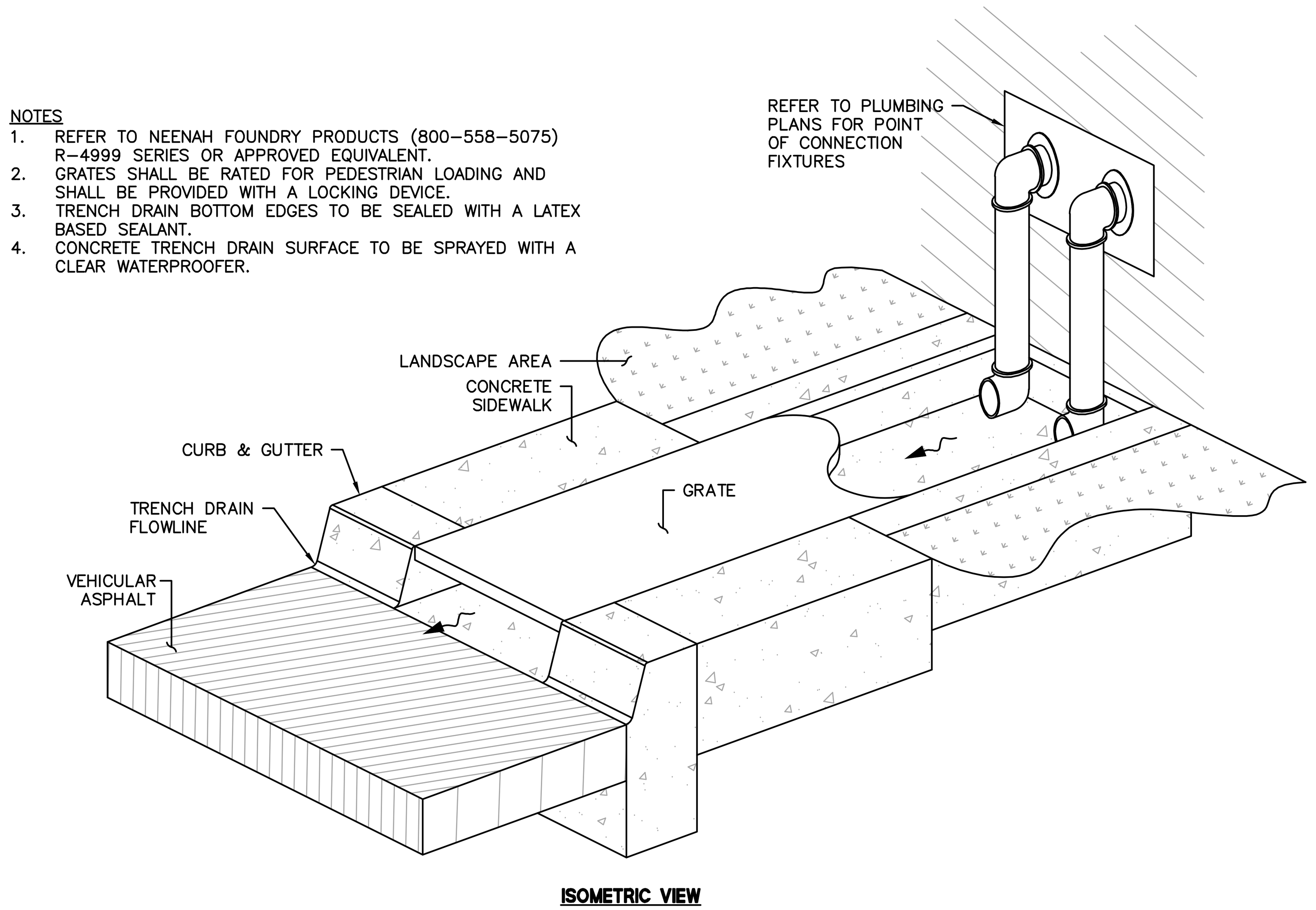
SHEET NUMBER
C9.40 1

ADDENDUM#1



NOTES
1. REFER TO NEENAH FOUNDRY PRODUCTS (800-558-5075) R-4999 SERIES OR APPROVED EQUIVALENT.
2. GRATES SHALL BE RATED FOR PEDESTRIAN LOADING AND SHALL BE PROVIDED WITH A LOCKING DEVICE.
3. TRENCH DRAIN BOTTOM EDGES TO BE SEALED WITH A LATEX BASED SEALANT.
4. CONCRETE TRENCH DRAIN SURFACE TO BE SPRAYED WITH A CLEAR WATERPROOFER.



1 — PARKWAY DRAIN & STORM DRAIN CONNECTION
NTS

FILCOTEN® Tec 100

FILCOTEN® Tec V 100 Trench Drain
4"/100mm wide channel body with galvanized rail, pre-sloped and neutral sections

FILCOTEN Tec 100

Item No.	Product Name	Slope	Length (in.)	Height at Channel End (in.)	Weight (lb.)
10410200	FILCOTEN Tec V 100 Channel 0 with Galvanized Rail - Neutral	0%	39.37	5.31	28.66
10410201	FILCOTEN Tec V 100 Channel 1 with Galvanized Rail	0.5%	39.37	5.31-5.51	29.54
10410202	FILCOTEN Tec V 100 Channel 2 with Galvanized Rail	0.5%	39.37	5.51-5.71	31.08
10410203	FILCOTEN Tec V 100 Channel 3 with Galvanized Rail	0.5%	39.37	5.71-5.91	32.63
10410204	FILCOTEN Tec V 100 Channel 4 with Galvanized Rail	0.5%	39.37	5.91-6.10	33.95
10410205	FILCOTEN Tec V 100 Channel 5 with Galvanized Rail	0.5%	39.37	6.10-6.30	35.05
10410261	FILCOTEN Tec V 100 Channel 5-0 with Galvanized Rail - Neutral	0%	39.37	6.30	35.49
10410206	FILCOTEN Tec V 100 Channel 6 with Galvanized Rail	0.5%	39.37	6.30-6.50	36.16
10410207	FILCOTEN Tec V 100 Channel 7 with Galvanized Rail	0.5%	39.37	6.50-6.69	37.04
10410208	FILCOTEN Tec V 100 Channel 8 with Galvanized Rail	0.5%	39.37	6.69-6.89	38.36
10410209	FILCOTEN Tec V 100 Channel 9 with Galvanized Rail	0.5%	39.37	6.89-7.09	39.68
10410210	FILCOTEN Tec V 100 Channel 10 with Galvanized Rail	0.5%	39.37	7.09-7.28	40.79
10410262	FILCOTEN Tec V 100 Channel 10-0 with Galvanized Rail - Neutral	0%	39.37	7.28	41.23

FILCOTEN® by NDS® slot top. When the design is as important as the function, FILCOTEN® slot top grates are the first choice. With a slot width of 0.5", it blends in with any design aesthetic. The high load rating, and sleek maintenance unit make this grate option versatile enough to be used in many applications.

FILCOTEN® Tec V 100 Slot Top Grates

17110243

Item No.	Product Name	Dimensions L x W x H (in.)	Load class per EN1433	Max Design Load (lb.)	Slot/mesh width	Weight (lb.)	Intake Area (sq. in./ft.)	Intake Area (cm²/m)
17110243	FILCOTEN 100 Galvanized Steel Asymmetrical Slot Top Grate Class C - 1m	39.37/4.84/5.24	Class C	56,200	0.5" (12.5mm)	11.90	5.91	125
17110244	FILCOTEN 100 Galvanized Steel Asymmetrical Slot Top Grate Class C - 1/2m	19.69/4.84/5.24	Class C	56,200	0.5" (12.5mm)	5.95	5.91	125
17110281	FILCOTEN 100 Galvanized Steel Maintenance Unit for Slot Top Grate Class C	19.69/4.84/5.20	Class C	56,200	0.5" (12.5mm)	11.02	5.91	125

4 FILCOTEN BY NDS

FILCOTEN® Tec 100

FILCOTEN® Tec V 100 Grates
with fix-connection self-locking system

17010204, 17010205, 17010228, 17010229
17010220 & 17010221
17010202, 17020203, 17010206, 17010207
17010402
17010106 (heelproof), 17010110 (not heelproof)
17010105

Item No.	Product Name	Dimensions L / W / H (in.) / (mm)	Load class per EN1433	Max. Design Load (lb.)	Slot/mesh width	Weight (lb.)	Weight (kg.)	Intake Area (in.²/ft.)	Intake Area (cm²/m)	Flow Rate Through Grate* (GPM)
17010202	FILCOTEN 100 Galvanized Steel Slotted Grate Class A - 1m	39.37"/4.80"/0.78" 1000/122/20	Class A	3,374	0.31" x 3.15" (8 x 80mm)	3.31	1.5	12.04	225	106.837
17010203	FILCOTEN 100 Galvanized Steel Slotted Grate Class A - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class A	3,374	0.31" x 3.15" (8 x 80mm)	1.76	0.8	12.04	255	106.837
17010204	FILCOTEN 100 Galvanized Steel Perforated Grate Class A - 1m	39.37"/4.80"/0.78" 1000/122/20	Class A	3,374	0.24" hole (6.5mm)	4.19	1.9	8.03	170	80.7217
17010205	FILCOTEN 100 Galvanized Steel Perforated Grate Class A - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class A	3,374	0.24" hole (6.5mm)	2.2	1.0	8.03	170	80.7217
17010220	FILCOTEN 100 Galvanized Steel Mesh Grate Class B - 1m	39.37"/4.80"/0.78" 1000/122/20	Class B	28,100	1.18" x 3.15" (30 x 80mm)	6.17	2.8	46.29	980	450.987
17010221	FILCOTEN 100 Galvanized Steel Mesh Grate Class B - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class B	28,100	1.18" x 3.15" (30 x 80mm)	3.09	1.4	44.88	950	450.987
17010206	FILCOTEN 100 Galvanized Steel Slotted Grate Class C - 1m	39.37"/4.80"/0.78" 1000/122/20	Class C	56,200	0.31" x 3.15" (8 x 80mm)	9.92	4.5	12.99	275	130.579
17010207	FILCOTEN 100 Galvanized Steel Slotted Grate Class C - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class C	56,200	0.31" x 3.15" (8 x 80mm)	4.85	2.2	12.99	275	130.579
17010228	FILCOTEN 100 Galvanized Steel Perforated Grate Class C - 1m	39.37"/4.80"/0.78" 1000/122/20	Class C	56,200	0.24" hole (6.5mm)	7.28	3.3	8.03	170	80.7217
17010229	FILCOTEN 100 Galvanized Steel Perforated Grate Class C - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class C	56,200	0.24" hole (6.5mm)	3.75	1.7	8.03	170	80.7217
17010402	FILCOTEN 100 Plastic Honeycomb Grate Class C - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class C	56,200	0.31" hole (8.0mm)	2.43	1.1	13.70	290	137.702
17010106	FILCOTEN 100 Ductile Iron Longitudinal Bar Grate Class C - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class C	56,200	0.24" x 1.14" (6 x 29mm)	7.94	3.6	15.12	320	151.947
17010110	FILCOTEN 100 Ductile Iron Reinforced Longitudinal Bar Grate Class D - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class D	89,920	0.35" x 1.14" 9 x 29mm)	7.50	3.2	25.98	550	225.546
17010105	FILCOTEN 100 Ductile Iron Slotted Class E - 1/2m	19.69"/4.80"/0.78" 500/122/20	Class E	134,800	0.55" x 3.94" (14 x 100mm)	8.37	3.8	21.54	456	220.788

*Calculated using simple orifice equation with 1/2 inch head

FILCOTEN® Tec V 100 Accessories

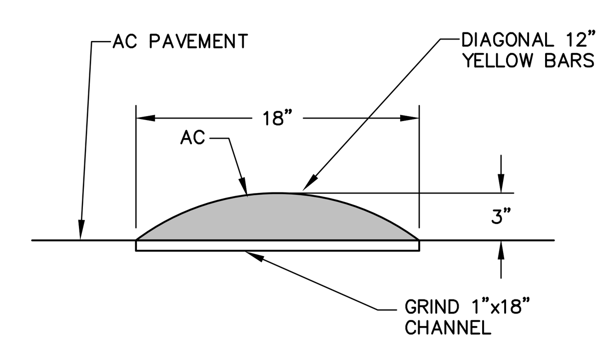
FILCOTEN Tec Sump Unit 100

Item No.	Product Name	Material	Weight (lb.)
10410291	FILCOTEN Tec 100 Sump	High-Performance Fiber-Reinforced Concrete	52.91
22515	FILCOTEN 100 Silt Bucket	Plastic	0.44
32087	FILCOTEN 100 Anti-Vandalism Locking Device	Stainless Steel	0.22
19010231	FILCOTEN 100 End Cap with 4 in. Outlet	Galvanized Steel	0.66
19010915	FILCOTEN 100 Rebar Support	Galvanized Steel	2.65
19011204	FILCOTEN 100 Bottom Outlet	Galvanized Steel	0.66
19010230	FILCOTEN 100 Closed End Cap	Galvanized Steel	0.66

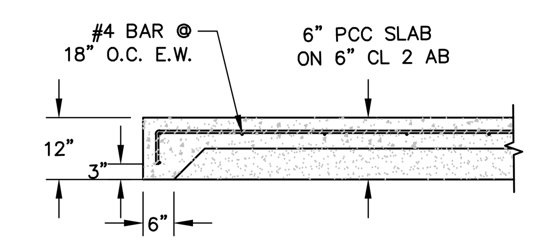
NOTE: Will accept 4" pipe

for videos, specs, detail drawings and case studies, visit ndspro.com 5

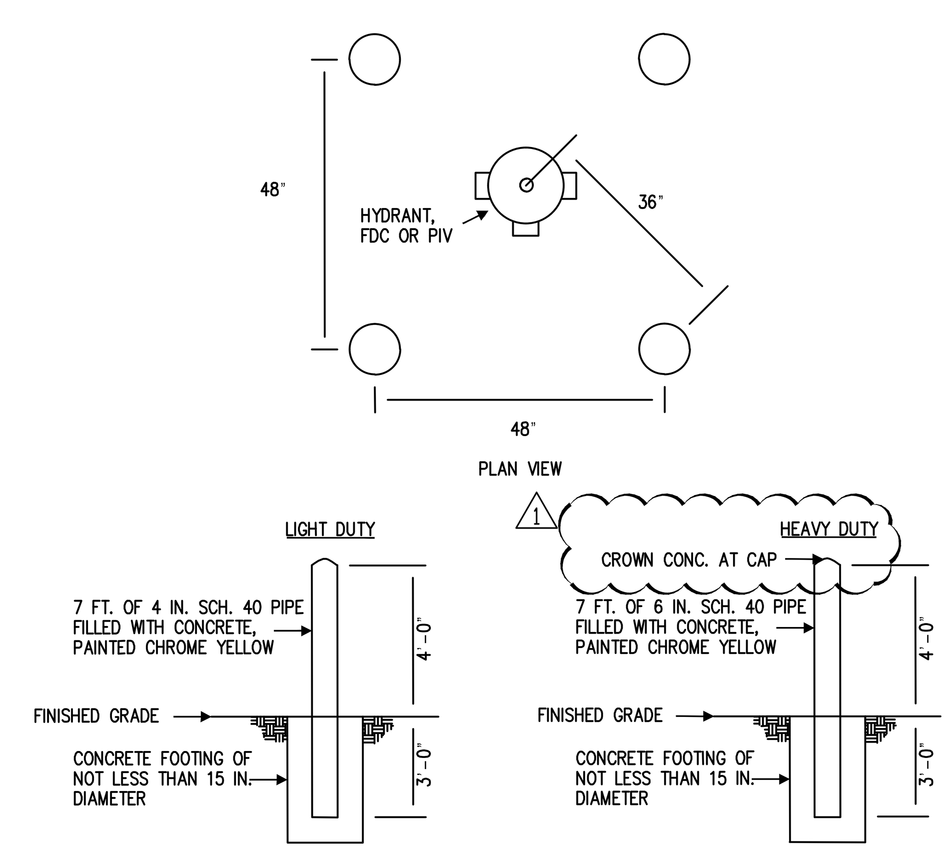
2 — 4" TRENCH DRAIN
NTS



3 — SPEED BUMP
NTS



4 — 6" CONCRETE PAD
NTS



5 — BOLLARD
NTS

1/9/2019 6:43:18 PM C:\Users\mstuart\Documents\LBCC Building MM_Arch_RVT2016_mstuart74.rvt

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
REVISIONS		
#	DATE	DESCRIPTION
1	05/22/2020	ADDENDUM NO. 1

PROJECT IDENTIFICATION 20172114
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42'.

DRAWN BY LB

CHECKED BY BK

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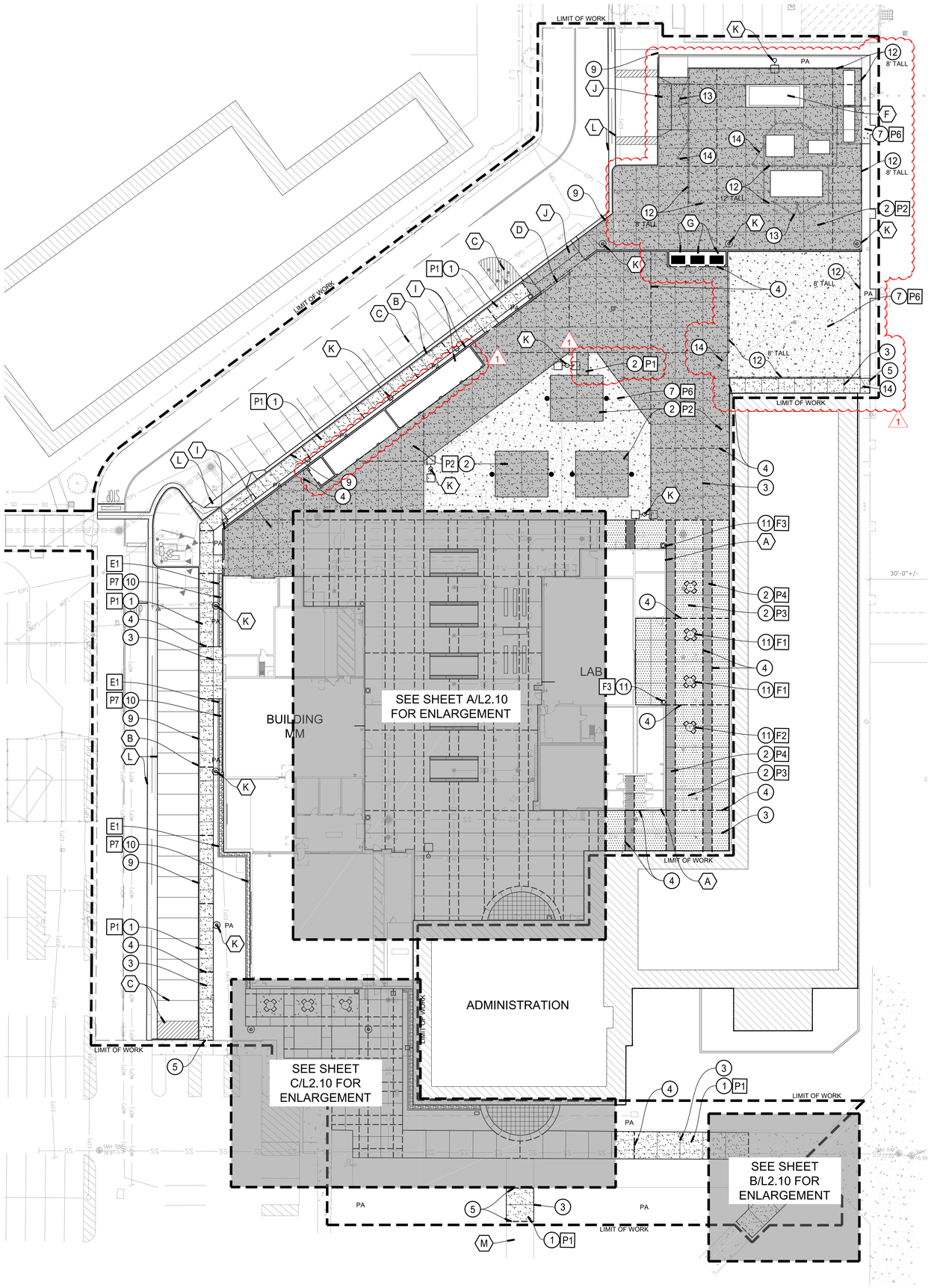
SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
C9.50

ADDENDUM#1



HARDSCAPE LEGEND

SYMBOL	DESCRIPTION
1	CONSTRUCT PEDESTRIAN RATED CONCRETE PAVING - A/L4.10
2	CONSTRUCT VEHICULAR RATED CONCRETE PAVING - A/L4.10
3	CONSTRUCT SAWCUT CONTRACTION JOINT - B/L4.10
4	CONSTRUCT DOWELLED CONSTRUCTION JOINT - B/L4.10
5	CONSTRUCT NEW TO EXISTING PAVING CONNECTION - B/L4.10
6	FURNISH AND INSTALL PEDESTRIAN RATED CONCRETE PAVERS - C/L4.10
7	FURNISH AND INSTALL DECOMPOSED GRANITE PAVING - D/L4.10
8	CONSTRUCT P.I.P. CONCRETE BAND AT PAVERS - C/L4.10
9	CONSTRUCT CONCRETE PAVING AT CURB CONNECTION - F/L4.10
10	CONSTRUCT COBBLE MAINTENANCE BAND - G/L4.10
11	FURNISH AND INSTALL SITE FURNISHINGS PER SITE FURNISHINGS SCHEDULE
12	FURNISH AND INSTALL CHAIN LINK FENCE - A/L4.20
13	FURNISH AND INSTALL DOUBLE CHAIN LINK GATE - C/L4.20
14	FURNISH AND INSTALL SINGLE CHAIN LINK GATE - B/L4.20

REFERENCE KEYNOTES

A	BUILDING - PER ARCHITECT'S PLANS
B	CONCRETE CURB - PER CIVIL ENGINEER'S PLANS
C	PARKING LOT STRIPING - PER ARCHITECT'S PLANS
D	SLIDING CHAIN LINK FENCE PER ARCHITECTURE DRAWINGS
E	EXISTING SEISMIC UTILITY - PROTECT IN PLACE
F	TRASH COMPACTOR - PER ARCHITECT'S PLANS
G	TRASH ENCLOSURE - PER ARCHITECT'S PLANS
H	NOT USED
I	CANOPY STRUCTURE - PER ARCHITECT'S PLANS
J	DRIVEWAY BIB - PER CIVIL ENGINEER'S PLANS
K	SITE LIGHTINGS - PER ARCHITECT'S PLANS
L	GUTTER - PER CIVIL ENGINEER'S PLANS
M	EXISTING CONCRETE WALKWAY TO BE PROTECTED IN PLACE

COLOR AND FINISH SCHEDULE

SYMBOL	KEY	DESCRIPTION	MANUFACTURER	COLOR	FINISH	COMMENTS	DETAILS
PAVING:							
	P1	CONCRETE PAVING (PEDESTRIAN)	--	NATURAL GRAY	MEDIUM BROOM	JOINTS: SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A:L4.10
	P2	CONCRETE PAVING (VEHICULAR)	--	NATURAL GRAY	MEDIUM BROOM	JOINTS: SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A:L4.10
	P3	INTEGRAL COLOR CONCRETE PAVING	L.M. SCOFIELD (800) 800-9900	LIMESTONE C-20	TOP CAST .05	JOINTS: SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A:L4.10
	P4	INTEGRAL COLOR CONCRETE BAND	L.M. SCOFIELD (800) 800-9900	SHADOW SLATE C-31	TOP CAST .05	JOINTS: SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A:L4.10
	P5	PRECAST CONCRETE PAVERS	ACKERSTONE (951) 674-0047	33: PEWTER 33: CHARCOAL 33: TAN	STANDARD THROUGH MIX COLOR WITH CHAMFER:	8 .4"x4" HOLLAND STONE 2: STACKED BOND PATTERN	C:L4.10
	P6	DECOMPOSED GRANITE PAVING	SOUTHWEST BOULDER & STONE OR APPROVED EQUAL	PALM SPRINGS GOLD FINES	--	STABILIZED	D:L4.10
	P7	COBBLE AT MAINTENANCE BAND	SOUTHWEST BOULDER & STONE OR APPROVED EQUAL	ARIZONA COBBLE	--	3/4" -1.5" DIA.	G:L4.10
NOTES: 1) CONTRACTOR SHALL PREPARE 4' SQ. AND 3' TALL AND LONG SAMPLES OF ALL PAVING AND WALL FINISHES: PER SPECIFICATIONS: AND MOCK UP REQUIREMENT NOTES ON SHEET L3.10: FOR REVIEW AND APPROVAL BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. 2) PROVIDE AN ISOLATION JOINT WHERE PAVING ABUTS VERTICAL SURFACES SUCH AS BUILDINGS: WALLS: STEPS: ETC.							
WALL							
	W1	P.I.P CONCRETE LOW WALL	--	NATURAL GRAY	LIGHT SAND BLAST	INSTALL SKATE DETERRENTS	E:L4.10
MOW CURB							
	E1	CONCRETE MOW CURB	--	NATURAL GRAY	SMOOTH HARD TROWEL FINISH TO MATCH EXISTING	JOINTS TO MATCH EXISTING	G:L4.10

SYMBOL LEGEND

- CONTROL JOINT
- HIDDEN EXPANSION JOINT
- LIMIT OF WORK
- PA PLANTER AREA

SITE FURNISHINGS LEGEND

	SYMBOL	KEY	DESCRIPTION	MANUFACTURER	MODEL	COLOR	FINISH	COMMENTS	QTY
SEE H:L4.10		F1	STANDARD (4) SEAT TABLE BUILT IN SEATS	QCP (866) 703-3434	QR-42FC STANDARD WITH UMBRELLA HOLE	LATTE	CRAFTSMAN ETCH	SURFACE MOUNTED PER MANUF. RECOMMENDATIONS	TABLE:5
SEE I:L4.10		F2	ACCESSIBLE (3) SEAT TABLE BUILT IN SEATS	QCP (866) 703-3434	QR-42FC3-ADA STANDARD WITH UMBRELLA HOLE	LATTE	CRAFTSMAN ETCH	SURFACE MOUNTED PER MANUF. RECOMMENDATIONS	TABLE:2
		F3	TRASH RECEPTACLE	TOTER (800) 424-0422	840SK W/ LBCC LOGO (40) GALLON	BROWN STONE	--	OWNER FURNISHED AND INSTALLED	7
SEE K:L4.10		F4	OUTDOOR CLASSROOM WORK TABLE	QCP (866) 703-3434	--	LATTE	CRAFTSMAN ETCH	CUSTOM TABLE - SEE DETAIL 'K' ON SHEET L4.10	1
SEE J:L4.10		F5	OUTDOOR CLASS ROOM BENCH	QCP (866) 703-3434	--	LATTE	CRAFTSMAN ETCH	CUSTOM BENCH - SEE DETAIL 'J' ON SHEET L4.10	6

ACCESSIBLE SEATING CALCULATIONS:
TOTAL SEATS: 28
REQUIRED ACCESSIBLE SEATS: 1.4 (5:)
PROVIDED ACCESSIBLE SEATS: 2

FOR HARDSCAPE ENLARGEMENT PLANS - SEE SHEET L2.10
FOR HARDSCAPE LAYOUT PLAN - SEE SHEET L3.10
FOR HARDSCAPE DETAILS - SEE SHEET L4.10
FOR SPECIFICATIONS - SEE BOOK SPECIFICATIONS

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42'.

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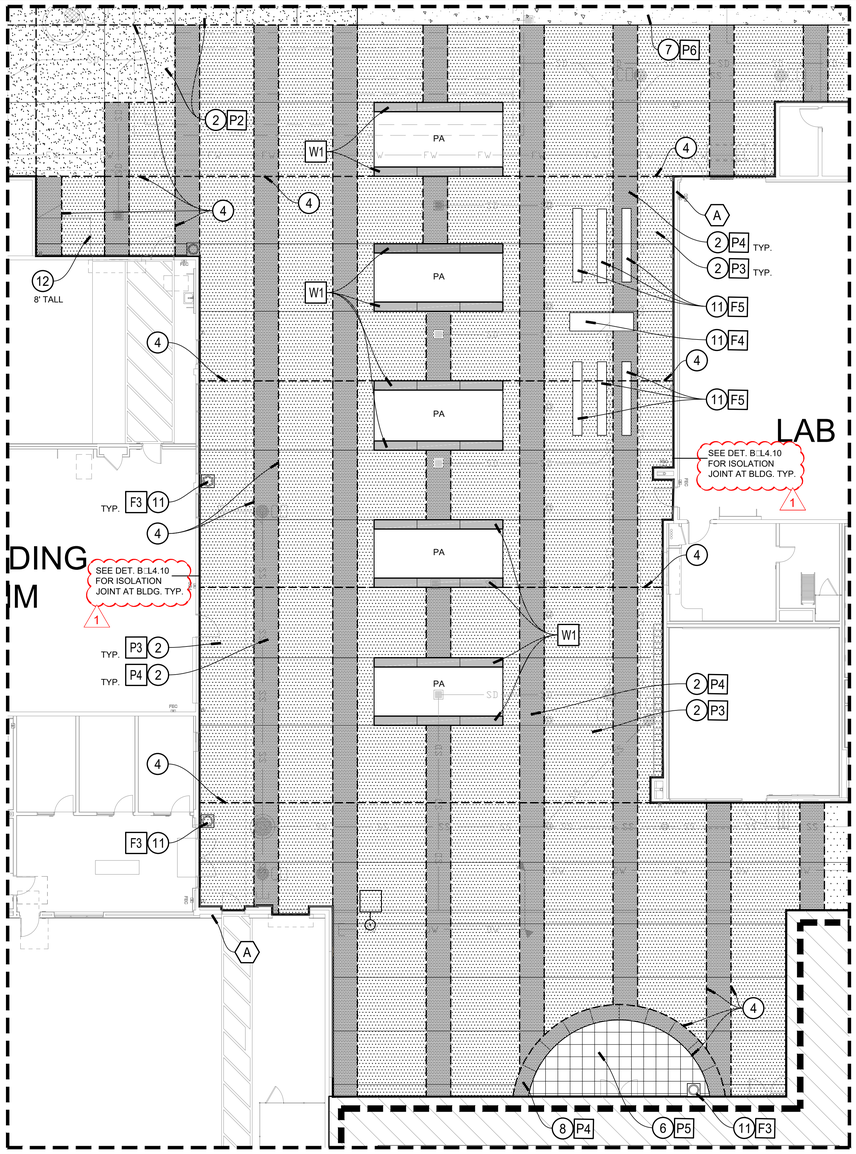
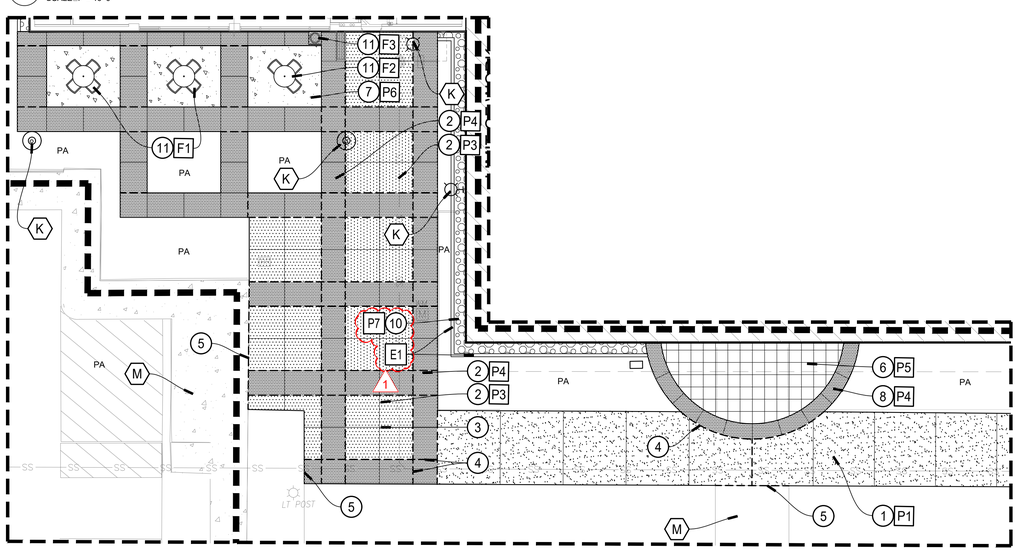
SHEET TITLE
HARDSCAPE PLAN

SHEET NUMBER
L1.10

ADDENDUM#1



A TRADES CLASS PATIO ENLARGEMENT
SCALE□1" = 10'-0"



C ARRIVAL PLAZA ENLARGEMENT
SCALE□1" = 10'-0"

HARDSCAPE LEGEND

SYMBOL	DESCRIPTION
1	CONSTRUCT PEDESTRIAN RATED CONCRETE PAVING - A/L4.10
2	CONSTRUCT VEHICULAR RATED CONCRETE PAVING - A/L4.10
3	CONSTRUCT SAWCUT CONTRACTION JOINT - B/L4.10
4	CONSTRUCT DOWELLED CONSTRUCTION JOINT - B/L4.10
5	CONSTRUCT NEW TO EXISTING PAVING CONNECTION - B/L4.10
6	FURNISH AND INSTALL PEDESTRIAN RATED CONCRETE PAVERS - C/L4.10
7	FURNISH AND INSTALL DECOMPOSED GRANITE PAVING - D/L4.10
8	CONSTRUCT P.I.P. CONCRETE BAND AT PAVERS - C/L4.10
9	CONSTRUCT CONCRETE PAVING AT CURB CONNECTION - F/L4.10
10	CONSTRUCT COBBLE MAINTENANCE BAND - G/L4.10
11	FURNISH AND INSTALL SITE FURNISHINGS PER SITE FURNISHINGS SCHEDULE
12	FURNISH AND INSTALL CHAIN LINK FENCE - A/L4.20
13	FURNISH AND INSTALL DOUBLE CHAIN LINK GATE - C/L4.20
14	FURNISH AND INSTALL SINGLE CHAIN LINK GATE - B/L4.20

REFERENCE KEYNOTES

A	BUILDING - PER ARCHITECT'S PLANS
B	CONCRETE CURB - PER CIVIL ENGINEER'S PLANS
C	PARKING LOT STRIPING - PER ARCHITECT'S PLANS
D	SLIDING CHAIN LINK FENCE PER ARCHITECTURE DRAWINGS
E	EXISTING SEISMIC UTILITY - PROTECT IN PLACE
F	TRASH COMPACTOR - PER ARCHITECT'S PLANS
G	TRASH ENCLOSURE - PER ARCHITECT'S PLANS
H	NOT USED
I	CANOPY STRUCTURE - PER ARCHITECT'S PLANS
J	DRIVEWAY BIB - PER CIVIL ENGINEER'S PLANS
K	SITE LIGHTINGS - PER ARCHITECT'S PLANS
L	GUTTER - PER CIVIL ENGINEER'S PLANS
M	EXISTING CONCRETE WALKWAY TO BE PROTECTED IN PLACE

COLOR AND FINISH SCHEDULE

SYMBOL	KEY	DESCRIPTION	MANUFACTURER	COLOR	FINISH	COMMENTS	DETAILS
PAVING:							
	P1	CONCRETE PAVING (PEDESTRIAN)	--	NATURAL GRAY	MEDIUM BROOM	JOINTS□ SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A□L4.10
	P2	CONCRETE PAVING (VEHICULAR)	--	NATURAL GRAY	MEDIUM BROOM	JOINTS□ SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A□L4.10
	P3	INTEGRAL COLOR CONCRETE PAVING	L.M. SCOFIELD (800) 800-9900	LIMESTONE C-20	TOP CAST □05	JOINTS□ SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A□L4.10
	P4	INTEGRAL COLOR CONCRETE BAND	L.M. SCOFIELD (800) 800-9900	SHADOW SLATE C-31	TOP CAST □05	JOINTS□ SAW CUT CONTRACTION & DOWELED CONSTRUCTION JOINTS	A□L4.10
	P5	PRECAST CONCRETE PAVERS	ACKERSTONE (951) 674-0047	33□ PEWTER 33□ CHARCOAL 33□ TAN	STANDARD THROUGH MIX COLOR WITH CHAMFER□	8 □□□ 4"□4" HOLLAND STONE 2□ STACKED BOND PATTERN	C□L4.10
	P6	DECOMPOSED GRANITE PAVING	SOUTHWEST BOULDER & STONE OR APPROVED EQUAL	PALM SPRINGS GOLD FINES	--	STABILIZED	D□L4.10
	P7	COBBLE AT MAINTENANCE BAND	SOUTHWEST BOULDER & STONE OR APPROVED EQUAL	ARIZONA COBBLE	--	3/4" -1.5" DIA.	G□L4.10

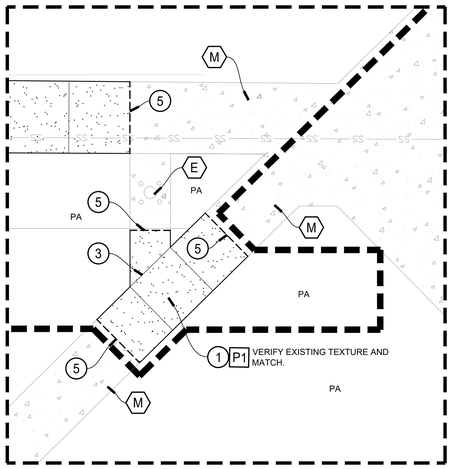
NOTES□
1) CONTRACTOR SHALL PREPARE 4' SQ. AND 3' TALL AND LONG SAMPLES OF ALL PAVING AND WALL FINISHES□PER SPECIFICATIONS□AND MOCK UP REQUIREMENT NOTES ON SHEET L3.10. FOR REVIEW AND APPROVAL BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2) PROVIDE AN ISOLATION JOINT WHERE PAVING ABUTS VERTICAL SURFACES SUCH AS BUILDINGS□WALLS□STEPS□ETC.

SYMBOL	KEY	DESCRIPTION	MANUFACTURER	COLOR	FINISH	COMMENTS	DETAILS
WALL							
	W1	P.I.P CONCRETE LOW WALL	--	NATURAL GRAY	LIGHT SAND BLAST	INSTALL SKATE DETERRENTS	E□L4.10
MOW CURB							
	E1	CONCRETE MOW CURB	--	NATURAL GRAY	SMOOTH HARD TROWEL FINISH TO MATCH EXISTING	JOINTS TO MATCH EXISTING	G□L4.10

SITE FURNISHINGS LEGEND

	SYMBOL	KEY	DESCRIPTION	MANUFACTURER	MODEL	COLOR	FINISH	COMMENTS	QTY
SEE H□L4.10		F1	STANDARD (4) SEAT TABLE □ BUILT IN SEATS	QCP (866) 703-3434	QR-42FC STANDARD WITH UMBRELLA HOLE	LATTE	CRAFTSMAN ETCH	SURFACE MOUNTED PER MANUF. RECOMMENDATIONS	TABLE□5
SEE I□L4.10		F2	ACCESSIBLE (3) SEAT TABLE □ BUILT IN SEATS	QCP (866) 703-3434	QR-42FC3-ADA STANDARD WITH UMBRELLA HOLE	LATTE	CRAFTSMAN ETCH	SURFACE MOUNTED PER MANUF. RECOMMENDATIONS	TABLE□2
		F3	TRASH RECEPTACLE	TOTER (800) 424-0422	□840SK W/ LBCC LOGO (40) GALLON	BROWN STONE	--	OWNER FURNISHED AND INSTALLED	7
SEE K□L4.10		F4	OUTDOOR CLASSROOM WORK TABLE	QCP (866) 703-3434	--	LATTE	CRAFTSMAN ETCH	CUSTOM TABLE - SEE DETAIL 'K' ON SHEET L4.10	1
SEE J□L4.10		F5	OUTDOOR CLASS ROOM BENCH	QCP (866) 703-3434	--	LATTE	CRAFTSMAN ETCH	CUSTOM BENCH - SEE DETAIL 'J' ON SHEET L4.10	6

ACCESSIBLE SEATING CALCULATIONS□
TOTAL SEATS□28
REQUIRED ACCESSIBLE SEATS□1.4 (5□)
PROVIDED ACCESSIBLE SEATS□2



B ENLARGEMENT AT SEISMIC EQUIPMENT
SCALE□1" = 10'-0"

FOR HARDSCAPE PLAN - SEE SHEET L1.10
FOR HARDSCAPE LAYOUT PLAN - SEE SHEET L3.10
FOR HARDSCAPE DETAILS - SEE SHEET L4.10
FOR SPECIFICATIONS - SEE BOOK SPECIFICATIONS

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION
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SHEET TITLE
HARDSCAPE ENLARGEMENT PLAN

SHEET NUMBER
L2.10

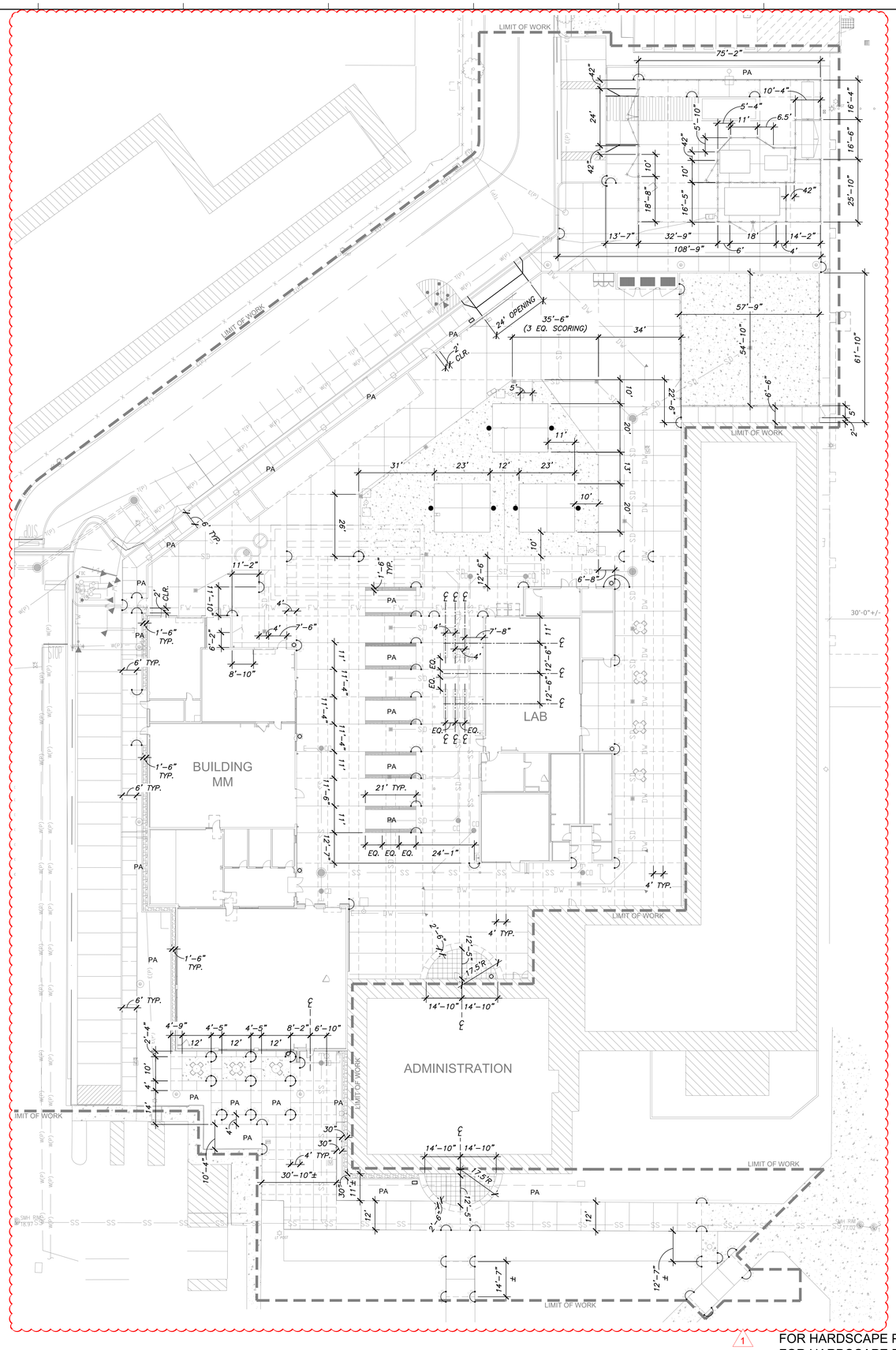
ADDENDUM#1

HARDSCAPE NOTES

1. VISIT THE SITE PRIOR TO SUBMITTING BIDS.
2. SUBMIT A UNIT COST FOR IMPORT SOIL IN-PLACE AND BE COMPLETELY AWARE OF THE AMOUNT OF SOIL NECESSARY TO REACH THE SATISFACTORY GROUND LEVEL.
3. VERIFY ALL PROPERTY LINES OR OTHER LIMIT OF WORK LINES PRIOR TO COMMENCING WORK.
4. CONCRETE PAVING JOINTS INCLUDE THREE BASIC JOINT TYPES:□CONTRACTION:□DOWELED CONSTRUCTION:□AND ISOLATION. SEE HARDSCAPE DETAILS FOR ADDITIONAL INFORMATION. PROVIDE DOWELED CONSTRUCTION JOINTS BETWEEN DIFFERENT PAVING TYPES:□CHANGES IN DIRECTION:□ 50-FEET ON-CENTER FOR LINEAR WALKS:□END OF DAY POURS:□OR WHERE SPECIFICALLY INDICATED ON THE PLANS.
5. PROVIDE AN ISOLATION JOINT WHERE CONCRETE PAVING ABUTS A VERTICAL SURFACE SUCH AS BUILDINGS:□WALLS:□STEPS:□ETC. SEE HARDSCAPE DETAILS FOR ADDITIONAL INFORMATION.
6. SUBMIT A "PAVING JOINT AND POUR SEQUENCE PLAN" TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLING CONCRETE PAVING. THIS PLAN SHOULD CLEARLY INDICATE CONTRACTOR'S PROPOSED CONCRETE POUR SEQUENCE WITH JOINT LOCATIONS TO INCLUDE CONTRACTION:□DOWELED CONSTRUCTION:□AND ISOLATION JOINTS. PLAN TO ALSO CONFIRM JOINT TYPE WHETHER HAND-TOOLED OR SAW CUT.
7. USE PIERI "FACE-OFF" BY WR GRACE:□OR APPROVED EQUAL:□TO PREVENT PERMANENT CEMENTITIOUS STAINING ON ADJACENT HARDSCAPE ELEMENTS WHEN PLACING CONCRETE.
8. REPAIR OR REPLACE ANY DAMAGE TO ADJACENT PROPERTIES:□CURBS:□WALKS:□PLANTING:□WALLS:□ ETC. AT NO ADDITIONAL COST TO THE OWNER.
9. VERIFY ALL EXISTING CONDITIONS:□DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLAN.
10. REPORT DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTIONS SHALL BE ISSUED PRIOR TO THE CONTINUATION OF THIS WORK. ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY CORRECTIONS DUE TO FAILURE TO REPORT KNOWN DISCREPANCIES.
11. LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY THE OWNER IMMEDIATELY IF DAMAGE OCCURS AND ASSUME FULL RESPONSIBILITY FOR EXPENSE OF REPAIR OR REPLACEMENT.
12. COMPLY WITH ALL PROVISIONS OF THE LATEST BUILDING CODE:□CURRENT EDITION OF THE ADA STANDARDS FOR ACCESSIBLE DESIGN:□AND WITH OTHER CURRENT RULES:□REGULATIONS AND ORDINANCES GOVERNING THE PLACE OF THE WORK. BUILDING CODE REQUIREMENTS TAKE PRECEDENCE OVER THE DRAWINGS AND IT SHALL BE THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR OR MATERIALS OR BOTH TO BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT ANY DISCREPANCIES OR CONFLICTS BETWEEN THE REQUIREMENTS OF THE CODE AND THE DRAWINGS.
13. LOCATIONS OF N.I.C. CONSTRUCTION ELEMENTS SUCH AS LIGHTS:□SIGNS:□VENTS:□HYDRANTS:□ TRANSFORMERS:□ETC.:□ARE APPROXIMATE. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD THE LOCATION OF THESE ITEMS INTERFERE WITH THE PROPER EXECUTION OF WORK.
14. VERIFY ALL PAVING AND HARDSCAPE CONSTRUCTION DRAWINGS WITH GEOTECHNICAL SOILS REPORT IN REGARD TO ITEMS SUCH AS SUB-BASE PREPARATION:□PRE-SATURATION:□SOIL COMPACTION:□REINFORCING:□SLAB THICKNESS:□SLAB JOINTING/DOWELING AND FOOTING REQUIREMENTS. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY IF GEOTECHNICAL SOILS REPORT RECOMMENDATIONS DIFFER FROM DRAWINGS. THE GEOTECHNICAL SOILS REPORT RECOMMENDATIONS:□IF MORE STRINGENT THAN THE DRAWINGS:□SHALL TAKE PRECEDENCE.
15. BE RESPONSIBLE FOR COORDINATION BETWEEN SUBCONTRACTORS FOR PROPER AND TIMELY PLACEMENT OF SLEEVING:□PIPING AND / OR CONDUIT INSTALLATION UNDER OR THROUGH LANDSCAPE ELEMENTS.
16. LANDSCAPE LIGHT FIXTURE LOCATIONS AS INDICATED ON THESE PLANS ARE APPROXIMATE. FINAL LOCATION TO BE VERIFIED BY LANDSCAPE ARCHITECT ON SITE.
17. DO NOT SCALE DRAWINGS.
18. PROVIDE A REPRESENTATIVE SAMPLE OF EACH PAINTED OR STAINED ELEMENT TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO APPLYING FINISH. REFER TO DETAILS AND SPECIFICATIONS FOR SPECIFIC SUBMITTAL REQUIREMENTS.
19. PROVIDE A MOCK-UP OF EACH HARDSCAPE ELEMENT. ITEMS TO INCLUDE:□BUT ARE NOT LIMITED TO PAVING AND WALL TYPES NOTED IN THE COLOR AND FINISH SCHEDULES. SAMPLES TO BE PLACED IN A LOCATION SPECIFIED BY THE OWNER'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND APPROVAL BY THE OWNER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. REFER TO MOCK-UP REQUIREMENTS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
20. WHERE PAVING AND FINISH GRADE MEET:□DEPRESS FINISH GRADE 1" IN TURF AREAS AND 1-1/2" IN GROUND COVER / SHRUB AREAS:□UNLESS OTHERWISE INDICATED.
21. PROJECT WALKS SHALL NOT EXCEED A SLOPE OF 1:20 (5:□ GRADIENT) UNLESS OTHERWISE INDICATED.
22. ACCESSIBLE RAMPS SHALL NOT EXCEED 1:12 OR 8.33:□.
23. PLANTER AREAS SHALL NOT EXCEED 2:1 SLOPE UNLESS OTHERWISE INDICATED.
24. HOLD FINISH GRADE A MINIMUM OF 6" BELOW FINISH FLOOR:□UNLESS OTHERWISE INDICATED.
25. CONSTRUCT ALL CURVE TO CURVE AND CURVE TO TANGENT LINES TO BE NEAT:□TRIM:□SMOOTH AND UNIFORM.
26. CONSTRUCT ALL CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI □ 28 DAYS:□ UNLESS OTHERWISE INDICATED.
27. ALL CONCRETE PAVING BANDS AND CONCRETE CAPS SHALL HAVE CONTROL JOINTS AT 5'-0" ON CENTER MAXIMUM UNLESS NOTED OTHERWISE ON THE PLANS. ALL WALLS SHALL HAVE CONTROL JOINTS AT 20'-0" O.C. MAXIMUM UNLESS NOTED OTHERWISE ON THE PLANS.
28. PROVIDE THE OWNER WITH ALL WARRANTIES:□GUARANTEES:□AND INSTRUCTION MANUALS FOR EQUIPMENT:□APPLIANCES:□FIXTURES:□ETC. AS DESCRIBED IN THE SPECIFICATIONS.
29. PRIOR TO INSTALLING ABOVE-GRADE DEVICES SUCH AS IRRIGATION VALVE BOXES:□GATE VALVES:□ BASKET STRAINERS:□FLOW SENSORS:□BACKFLOW ASSEMBLIES:□CONTROLLERS:□QUICK COUPLERS:□ JUNCTION/ PULL BOXES:□GFCI'S:□TRANSFORMERS:□SIGNS:□GAS METERS:□UTILITY VAULTS:□LIGHT FIXTURES:□CLEAN-OUTS:□DRAINS:□MANHOLES:□PIV'S:□FDC'S:□AND WATER METERS:□PLACE A WOOD STAKE IN PROPOSED LOCATIONS WITH DEVICE CLEARLY LABELED ON STAKE IN BLACK INK. OBTAIN LANDSCAPE ARCHITECT'S OR IRRIGATION DESIGNER'S APPROVAL OF STAKED LOCATIONS PRIOR TO INSTALLING DEVICES.
30. DO NOT INSTALL DEVICES SUCH AS CLEAN-OUTS:□VALVE BOXES:□GATE VALVES:□ETC. IN PAVED AREAS WHEN INSTALLING THEM IN AN ADJACENT PLANTER IS POSSIBLE. IF THIS CANNOT BE ACHIEVED:□ CONTACT LANDSCAPE ARCHITECT FOR RESOLUTION.
31. INSTALL INTERSECTING ELEMENT AT 90 DEGREES UNLESS NOTED OTHERWISE ON PLANS.

MOCK-UP REQUIREMENTS

1. HARDSCAPE PAVING - PROVIDE (1) 4' □4' SQUARE MOCK-UP FOR EACH PAVING TYPE NOTED IN THE COLOR AND FINISH SCHEDULE. EACH MOCK-UP TO INCLUDING THE SPECIFIED COLOR:□FINISH:□AN EXAMPLE OF EACH JOINTING TYPE NOTED IN THE CONSTRUCTION KEYNOTES AND DETAILS:□AND SPECIFIED SEALER. IN PLACE MOCK-UPS WILL NOT BE ACCEPTED.
2. MOCK-UP LEAD TIMES - BE AWARE OF POSSIBLE LEAD TIMES FOR ITEMS SUCH AS BUT NOT LIMITED TO PRE-CAST CONCRETE PAVERS. SIMILAR COLORS AND SIZES WILL NOT BE ACCEPTED AS A MOCK-UP REVIEW.
3. HARDSCAPE ELEMENTS - PROVIDE A PHYSICAL SAMPLE OF SPECIFIED MATERIALS (COLOR:□FINISH:□ AND SEALER) TO THE OWNER AND LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO PLACING ORDER. ITEMS SUCH AS BUT NOT LIMITED TO PRE-CAST CONCRETE ELEMENTS:□INDICATED WOOD SAMPLES:□AND OTHER SITE FURNISHING MATERIALS.
4. WALLS - PROVIDE (1) 3' TALL BY 3' LONG BY 8" WIDE MOCK-UP FOR EACH WALL TYPE NOTED IN THE WALL SCHEDULE. EACH MOCK-UP TO INCLUDING THE SPECIFIED COLOR:□FINISH:□JOINTING:□EDGING:□ CAP (AS NOTED IN CONSTRUCTION KEYNOTES AND DETAILS):□AND SPECIFIED SEALER.
5. MOCK-UPS TO BE PROTECTED ON-SITE THROUGHOUT THE DURATION OF THE CONSTRUCTION SCHEDULE.
6. REMOVE MOCK-UPS AT COMPLETION OF CONSTRUCTION WHEN DIRECTED BY THE OWNER OR LANDSCAPE ARCHITECT.
7. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



1 FOR HARDSCAPE PLAN - SEE SHEET L1.10
FOR HARDSCAPE ENLARGEMENT PLAN - SEE SHEET L2.10
FOR HARDSCAPE DETAILS - SEE SHEET L4.10
FOR SPECIFICATIONS - SEE BOOK SPECIFICATIONS

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2018 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42'.

DRAWN BY RLA

CHECKED BY RLA

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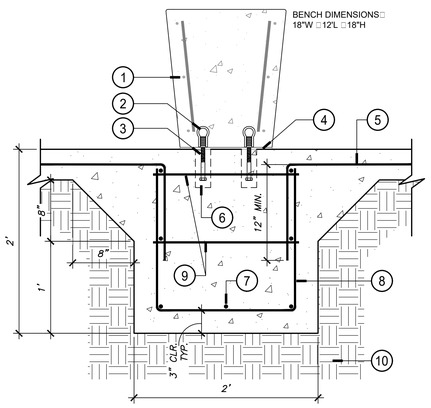
SHEET TITLE
HARDSCAPE LAYOUT PLAN

SHEET NUMBER
L3.10

ADDENDUM#1

LEGEND:
1. 3 REBARS AT 12" O.C. MAX EACH WAY
2. 1/2" DIA. FERRULE LOOP INSERTS (FX-5) FOR ANCHORING. (2) INSERTS EVERY 12" O.C. ALONG BASE.
3. 1/2" DIA. X 4-1/2" L. ANCHOR BOLD
4. SIKAFLEX
5. REBAR REINFORCING AT PAVING - SEE DETAIL 'A'. PROVIDE 12" LONG 90° HOOKS AT ENDS.
6. 2" DIA. X 5" DEEP NON-SHRINK GROUT POCKET.
7. (7) 4 CONTINUOUS BARS AS SHOWN. BARS TO BE EQUALLY SPACED.
8. 4 "U" BARS BARS AT 12" O.C.
9. 4 HORIZONTAL TIES. PROVIDE (2) TIES EVERY 12" O.C.
10. 90 COMPACTED SUBGRADE - VERIFY WITH REQUIREMENMTS NOTED IN THE GEOTECHNICAL SOILS REPORT.

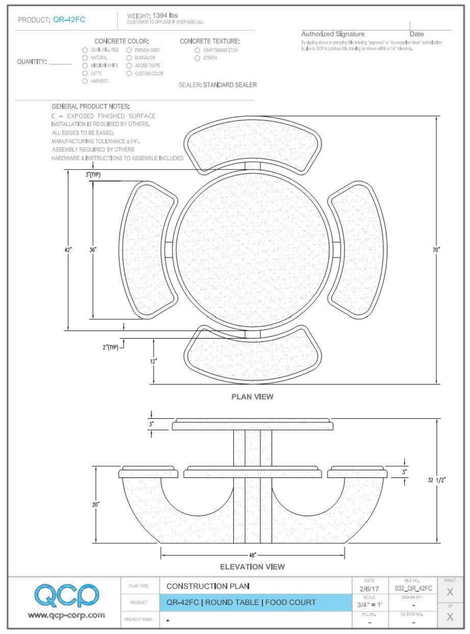


SECTION VIEW

QCP www.qcp-corp.com | INSTALLATION PLAN | BENCH CUSTOM

J CUSTOM BENCH

SCALE: N.T.S.

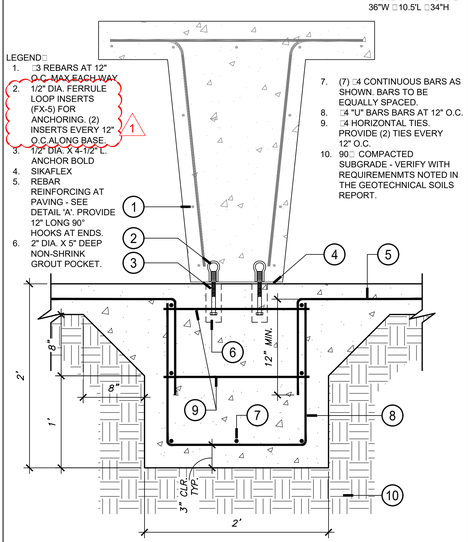


H F1 - 4 SEAT TABLE (NON-ACCESSIBLE)

SCALE: 3" = 1'-0"

TABLE DIMENSIONS:
36"W 10.5'L 34"H

LEGEND:
1. 3 REBARS AT 12" O.C. MAX EACH WAY
2. 1/2" DIA. FERRULE LOOP INSERTS (FX-5) FOR ANCHORING. (2) INSERTS EVERY 12" O.C. ALONG BASE.
3. 1/2" DIA. X 4-1/2" L. ANCHOR BOLD
4. SIKAFLEX
5. REBAR REINFORCING AT PAVING - SEE DETAIL 'A'. PROVIDE 12" LONG 90° HOOKS AT ENDS.
6. 2" DIA. X 5" DEEP NON-SHRINK GROUT POCKET.
7. (7) 4 CONTINUOUS BARS AS SHOWN. BARS TO BE EQUALLY SPACED.
8. 4 "U" BARS BARS AT 12" O.C.
9. 4 HORIZONTAL TIES. PROVIDE (2) TIES EVERY 12" O.C.
10. 90 COMPACTED SUBGRADE - VERIFY WITH REQUIREMENMTS NOTED IN THE GEOTECHNICAL SOILS REPORT.

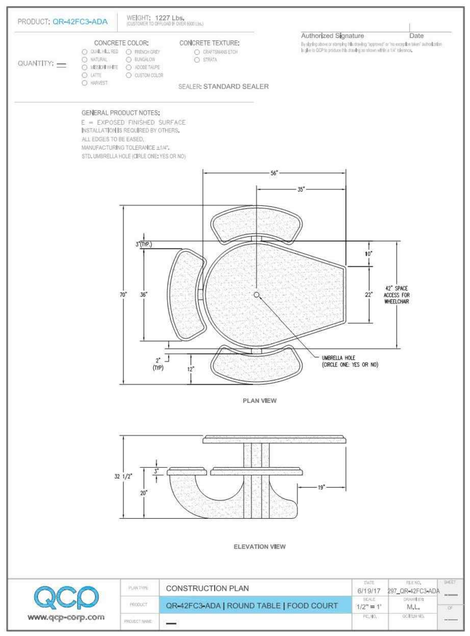


SECTION VIEW

QCP www.qcp-corp.com | INSTALLATION PLAN | TABLE CUSTOM

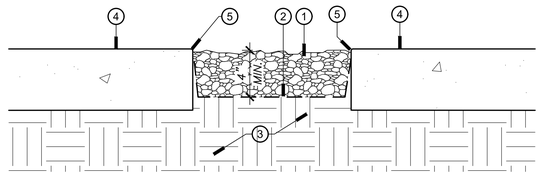
K CUSTOM WORK TABLE

SCALE: N.T.S.



I F2 - 3 SEAT TABLE (ACCESSIBLE)

SCALE: NTS.

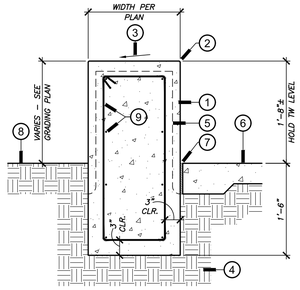


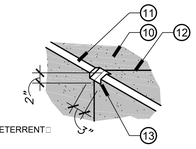
LEGEND:
1. DECOMPOSED GRANITE - SEE HARDSCAPE SHEETS FOR COLOR & SUPPLIER.
2. SINGLE LAYER OF MIRAFI 140N FILTER FABRIC SOIL SEPARATOR. WRAP FABRIC UP VERTICAL EDGES MINIMUM OF 2" AND SECURE WITH SOIL STAPLES AT 18" O.C. TO PREVENT VERTICAL MOVEMENT. OVERLAP SPLICES 12" MINIMUM.
3. 90 COMPACTED SUBGRADE - VERIFY WITH REQUIREMENMTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
4. FINISH SURFACE AT PAVING AREA.
5. PROVIDE 1/4" MAX. ELEVATION CHANGE BETWEEN PAVING AND D.G..

NOTES:
A. APPLY PRE-EMERGENT HERBICIDE PER MANUFACTURER'S SPECIFICATIONS TO SOIL SURFACE BELOW ALL AREAS TO RECEIVE D.G. PRIOR TO INSTALLATION OF FILTER FABRIC.
B. INSTALL D.G. IN LIFTS AND COMPACT PER MANUFACTURER'S SPECIFICATIONS.

D DECOMPOSED GRANITE PAVING

SCALE: 3" = 1'-0"





SKATEBOARD DETERRENT

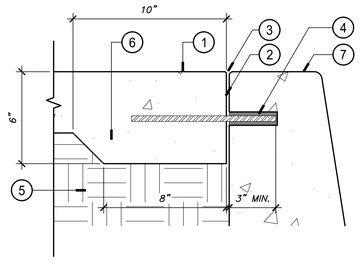
LEGEND:
1. P.I.P. CONCRETE LOW WALL - SEE WALL SCHEDULE FOR COLOR AND FINISH.
2. 1"x1" 45° CHAMFER. VERIFY AND MATCH EXISTING.
3. SLOPE TOP OF WALL AT 1 MIN.
4. 90 COMPACTED SUBGRADE - VERIFY REQUIREMENTS WITH GEOTECHNICAL SOILS REPORT.
5. 1/8" WIDE BY 2" DEEP SAWCUT CONTRACTION JOINT - SEE HARDSCAPE PLAN FOR LOCATION.
6. ADJACENT PAVING - SEE HARDSCAPE PLAN FOR COLOR AND FINISH.
7. ISOLATION JOINT
8. FINISH GRADE AT PLANTER AREA.
9. 4 AT 10" O.C. BOTH WAYS.

NOTES:
A. ENSURE THAT FORM SEAMS ARE NOT PRESENT ONCE FORMS ARE STRIPPED.
B. REINFORCING FOOTING DIMENSIONS AND BASE INFORMATION ARE SHOWN FOR BID PURPOSES ONLY. VERIFY AND COMPLY WITH REQUIREMENTS NOTED IN THE GEOTECHNICAL SOILS REPORT AND STRUCTURAL ENGINEER'S SHEETS.
C. PROVIDE MOCK-UP PER SPECIFICATIONS.

LEGEND:
10. C.I.P. CONCRETE FREESTANDING LOW WALL - SEE WALL SCHEDULE FOR COLOR AND FINISH.
11. 1"x1" 45° CHAMFER. VERIFY AND MATCH EXISTING.
12. 1/8" WIDE BY 2" DEEP CONTINUOUS SAWCUT CONTRACTION JOINT - SEE HARDSCAPE PLAN FOR LOCATION.
13. 2"x2" CAST IN SKATEBOARD DETERRENT.

E CONCRETE SEAT WALL

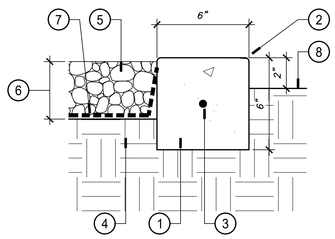
SCALE: 1" = 1'-0"



LEGEND:
1. CONCRETE PAVING - SEE HARDSCAPE SHEETS FOR COLOR AND FINISH.
2. COLD JOINT.
3. 1/8" TOOLED RADIUS ON EDGES.
4. 4 18" LONG SMOOTH STEEL DOWELS AT 30" O.C. DRILLED AND EPOXIED WITH SIMPSON "SET-XP ICC ESR-2508" EPOXY INTO EXISTING CONCRETE PAVING - MIN. 3" EMBED. STEEL DOWELS TO BE SAWCUT TO LENGTH NOT SHEARED.
5. 90 COMPACTED SUBGRADE - VERIFY REQUIREMENTS WITH GEOTECHNICAL SOILS REPORT.
6. CONTINUOUS THICKENED EDGE AT PAVING.
7. CONCRETE CURB.

F CONCRETE PAVING TO CURB CONNECTION

SCALE: 3" = 1'-0"

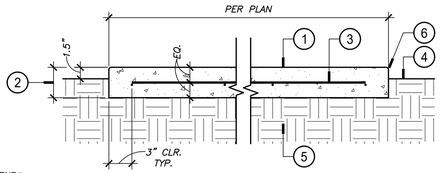


LEGEND:
1. CONCRETE MOW CURB - SEE HARDSCAPE SHEET FOR COLOR AND FINISH.
2. 1/4" RADIUS ON EDGES TYPICAL.
3. CONTINUOUS 4 REBAR CENTERED IN CURB.
4. 90 COMPACTED SUBGRADE - VERIFY WITH REQUIREMENTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
5. DECORATIVE COBBLE / DECOMPOSED GRANITE - SEE HARDSCAPE SHEETS FOR COLOR AND SUPPLIER.
6. PROVIDE MINIMUM 4" OF COVER OVER PROPOSED FINISH GRADE.
7. SINGLE LAYER OF MIRAFI 140N FILTER FABRIC SOIL SEPARATOR. WRAP FABRIC UP VERTICAL EDGES MINIMUM OF 2" AND SECURE WITH SOIL STAPLES AT 18" O.C. TO PREVENT VERTICAL MOVEMENT. OVERLAP SPLICES 12" MINIMUM.
8. FINISH GRADE OF SHRUB AREA.

NOTES:
A. PROVIDE 1/8" WIDE BY 1-1/2" DEEP SAWCUT CONTRACTION JOINTS AT /- 5' O.C. AND AT CHANGES OF DIRECTION. JOINT SPACING TO BE EQUAL THROUGHOUT.
B. PROVIDE MAXIMUM 1/4" ELEVATION CHANGE BETWEEN TOP OF CURB AND FINISH SURFACE OF D.G..

G COBBLE MAINTENANCE BAND W/ MOW CURB

SCALE: 3" = 1'-0"

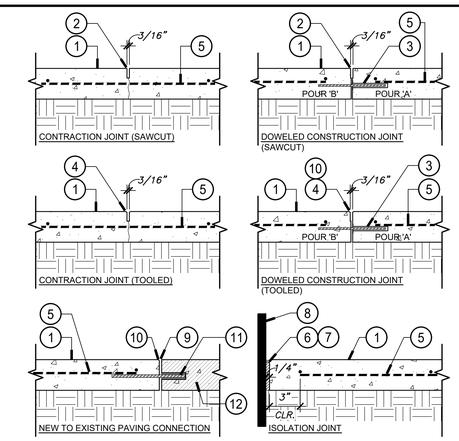


LEGEND:
1. CONCRETE PAVING - SEE HARDSCAPE SHEETS FOR COLOR AND FINISH.
2. PAVING THICKNESS:
   PEDESTRIAN RATED: SEE CIVIL DETAIL 4:C-9.0
   VEHICULAR RATED: SEE CIVIL DETAIL 4:C-9.0
3. REINFORCING AT PAVING:
   PEDESTRIAN RATED: PER GEOTECHNICAL SOILS REPORT
   VEHICULAR RATED: PER GEOTECHNICAL SOILS REPORT
4. FINISH GRADE.
5. 90 COMPACTED SUBGRADE - VERIFY WITH REQUIREMENTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
6. 1/4" TOOLED RADIUS ON EDGED TYPICAL.

NOTES:
A. PAVING THICKNESS: BASE PREPARATION: AND REINFORCING ARE SHOWN FOR BID PURPOSES ONLY. VERIFY WITH REQUIREMENTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
B. PROVIDE MOCK-UP PER MOCK-UP NOTES AND SPECIFICATIONS.
C. SEAL EXPOSED PORTIONS OF CONCRETE PAVING PER SPECIFICATIONS.
D. ENSURE THAT NO CONCRETE SLURRY STAINS BOND WITH EXISTING PAVING - USE PIERI "FACE-OFF": OR SIMILAR PRODUCT: TO ELIMINATE SLURRY STAINS ON ADJACENT SURFACES.

A CONCRETE PAVING

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

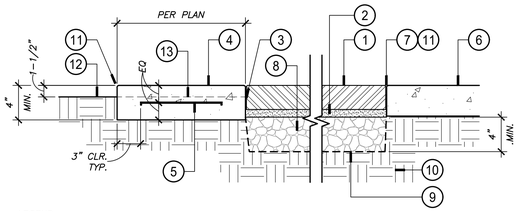


LEGEND:
1. CONCRETE PAVING - SEE HARDSCAPE SHEETS FOR COLOR AND FINISH.
2. 3/16" WIDE (MAX.) SAWCUT JOINT - CUT TO 1/4 THE DEPTH OF SLAB. PROVIDE 1/8" WIDE (MAX.) BY 1" DEEP TOOLED PRE-SCORE JOINT AT PAVING JOINTS BEFORE SAW CUTTING.
3. 9" LONG PLASTIC "SPEED DOWEL" WITH 5/8" DIAMETER BY 18" LONG SMOOTH STEEL DOWELS AT 30" O.C.
4. 3/16" WIDE (MAX.) TOOLED JOINT WITH 1/8" RADIUS ON EDGES - CUT TO 1/4 DEPTH OF SLAB.
5. REBAR - SEE DETAIL "A": THIS SHEET.
6. 2-PART COLORED POLYURETHANE SEALANT - SEE SPECIFICATIONS. APPLY SILICA 30 GRADE SAND TO SURFACE OF SEALANT WHILE STILL TACKY.
7. 1/4" THICK POLYFOAM BACKER MATERIAL WITH "ZIP-STRIP" TOP - SPRAY GLUE TO SIDE OF POUR.
8. FIXED VERTICAL EDGE: I.E. WALL: COLUMN: THRESHOLD: STEPS: CURB: OR BUILDING SLAB.
9. COLD JOINT.
10. 1/8" TOOLED RADIUS ON EDGES.
11. 4: 18" LONG SMOOTH STEEL DOWELS AT 30" O.C. DRILLED AND EPOXIED WITH SIMPSON "SET-XP ICC ESR-2508" EPOXY INTO EXISTING CONCRETE PAVING - MIN. 3" EMBED. STEEL DOWELS TO BE SAWCUT TO LENGTH NOT SHEARED.
12. EXISTING CONCRETE PAVING.

NOTES:
A. ENSURE THAT NO CONCRETE SLURRY STAINS BOND WITH EXISTING PAVING - USE PIERI "FACE-OFF": OR SIMILAR PRODUCT: TO ELIMINATE SLURRY STAINS ON ADJACENT SURFACES.
B. SUBMIT SEALANT COLOR SMAPLES FOR APPROVAL PRIOR TO INSTALLATION OF ISOLATION JOINT.
C. PRE-TOOL JOINTS AS SOON AS SLAB CAN BE TOOLED.
D. CLEAN AND SEAL CONCRETE PAVING PER SPECIFICATION PRIOR TO FINAL APPROVAL.

B CONCRETE PAVING JOINTS

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



LEGEND:
1. PEDESTRIAN RATED PRE-CAST CONCRETE PAVER - SEE HARDSCAPE PLAN FOR COLOR: FINISH: SUPPLIER: SIZES: THICKNESS: AND PATTERN.
2. 1" BEDDING COURSE OF SHARP NORMAL WEIGHT SCREENING SAND.
3. 1/8" MAXIMUM POLYMERIC SAND FILLED JOINT. SAND COLOR TO BE SELECTED BY LANDSCAPE ARCHITECT.
4. CONTINUOUS CONCRETE BAND ALONG PERIMETER PAVERS AT PLANTER AREAS.
5. 4 BARS 12" O.C. BOTH WAYS: CENTERED IN SLAB.
6. ADJACENT CONCRETE PAVING - SEE HARDSCAPE PLAN FOR COLOR: FINISH: AND THICKNESS.
7. TOP OF PAVER AND TOP OF FINISH SURFACE TO ULTIMATELY BE FLUSH. COORDINATE POTENTIAL SETTLEMENT OF PAVER SYSTEM PER MANUFACTURER'S RECOMMENDATION PRIOR TO STARTING WORK.
8. MINIMUM 4" THICK LAYER OF CLASS II AGGREGATE BASE: MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM OF 95 COMPACTION - VERIFY WITH GOETECHNICAL SOILS REPORT.
9. SINGLE CONTINUOUS LAYER OF MIRAFI FW402 GEOSYNTHETIC FABRIC UNDER ENTIRE CONCRETE PAVER AREA.
10. 90 COMPACTED SUBGRADE - VERIFY WITH REQUIREMENTS NOTED IN THE GEOTECHNICAL SOILS REPORT.
11. 1/4" RADIUS ON EDGES TYPICAL.
12. FINISH GRADE.
13. 1/8" WIDE BY 1-1/2" DEEP CONTRACTION JOINT - SEE HARDSCAPE PLAN FOR JOINT LAYOUT AND TYPE.

NOTES:
A. VERIFY PAVING THICKNESS: BASE PREPARATION: AND REINFORCING RECOMMENDATIONS WITH REQUIREMENTS NOTED IN THE GEOTECHNICAL SOILS REPORT PRIOR TO STARTING WORK.
B. PROVIDE PAVER SAMPLE TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PER SPECIFICATIONS.
C. AFTER LAYING CONCRETE PAVERS: PASS VIBRATOR PLATE OVER PAVERS CAUSING SAND TO FILL JOINTS AND LOCKING PAVERS INTO PLACE. THEN SWEEP SAND OVER THE PAVING STONES AND PASS VIBRATOR PLATE OVER A SECOND TIME: FORCING SAND INTO JOINTS FROM ABOVE.
D. SEAL PAVERS AFTER JOINTS HAVE BEEN FILLED AND PAVERS HAVE BEEN CLEANED. SEALER TO BE BP PRO ENHANCING STABILIZING SEALER.

C PRECAST CONCRETE PAVERS

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

DSA USE ONLY

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION
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THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY RLA
CHECKED BY RLA

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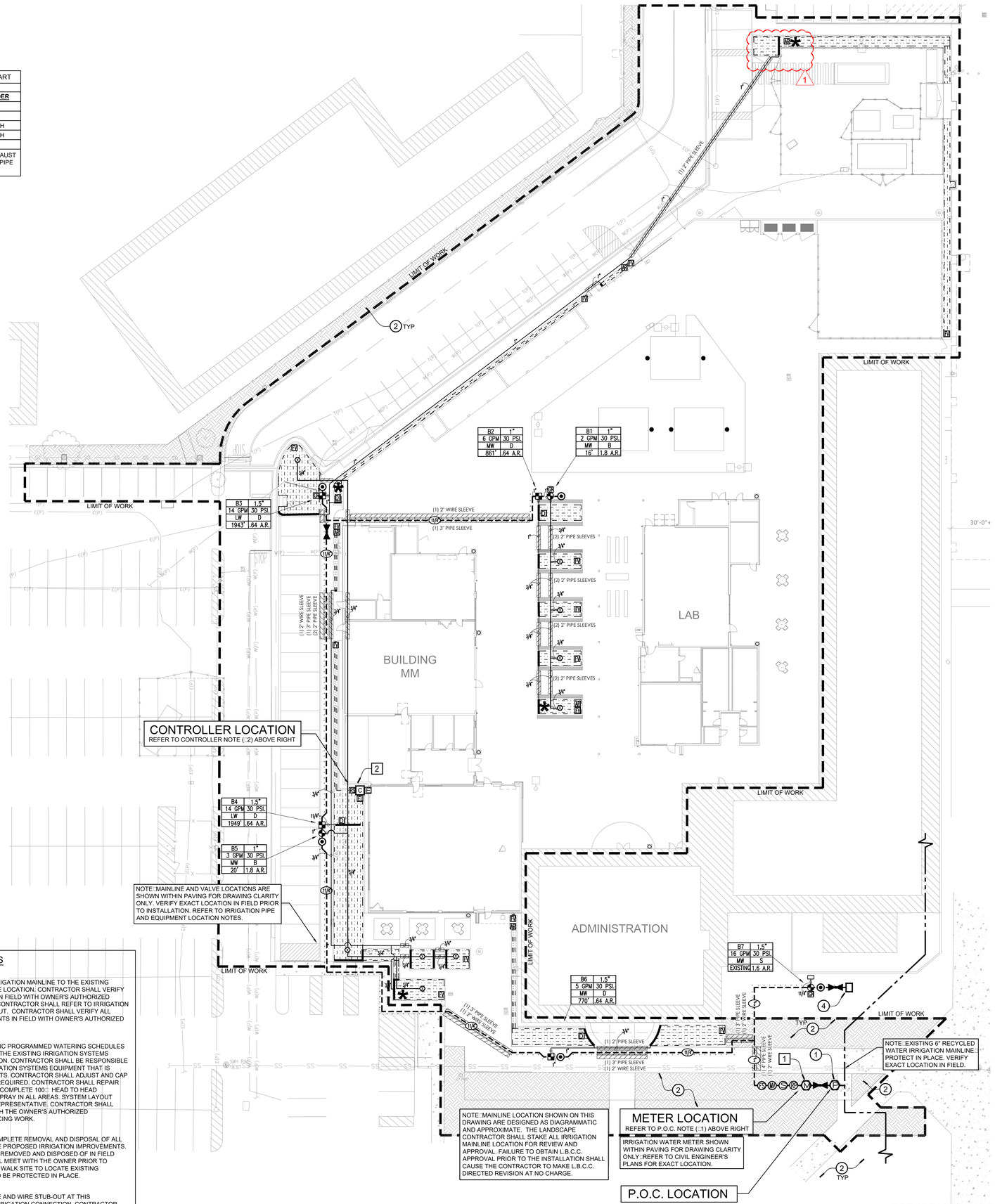
SHEET TITLE
HARDSCAPE DETAILS

SHEET NUMBER
L4.10

ADDENDUM#1

DRIPLINE INTAKE/EXHAUST HEADER PIPE SIZING CHART	
INTAKE/EXHAUST HEADER MINIMUM SIZE OF 3/4 INCH.	
FLOW RANGE	**MINIMUM SIZE OF EXHAUST HEADER**
0 THROUGH 5 GPM	MINIMUM SIZE SHALL BE 3/4 INCH
6 THROUGH 10 GPM	MINIMUM SIZE SHALL BE 1 INCH
11 THROUGH 15 GPM	MINIMUM SIZE SHALL BE 1-1/4 INCH
16 THROUGH 25 GPM	MINIMUM SIZE SHALL BE 1-1/2 INCH
26 THROUGH 50 GPM	MINIMUM SIZE SHALL BE 2 INCH
NOTE: CONTRACTOR SHALL SIZE ALL DRIPLINE INTAKE/EXHAUST HEADERS PER PIPE SIZING CHART. IN NO INSTANCE SHALL PIPE SIZE EXCEED DESIGNATED GPM RANGE.	



EXISTING IRRIGATION P.O.C. NOTES

1 **P.O.C. NOTE #1:**
POINT OF CONNECTION SHALL BE DOWNSTREAM OF EXISTING DOMESTIC WATER (FUTURE RECYCLED WATER) IRRIGATION P.O.C. EQUIPMENT AND NEW 1-1/2" IRRIGATION SUB-METER. VERIFY THE ACTUAL LOCATION: SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD: IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

(EXISTING) DOMESTIC (FUTURE RECYCLED) P.O.C. INFORMATION	
ADDRESS: 1305 E. PACIFIC COAST HIGHWAY LONG BEACH, CA.	WATER PURVEYOR: CITY OF LONG BEACH PH. 562-570-2328
SUB-METER SIZE	1-1/2"
STATIC PRESSURE	70 P.S.I. (LOW) 80 P.S.I. (HIGH)
SYSTEM DESIGN PRESSURE	58 PSI.
MAXIMUM SYSTEM DEMAND	16 GPM
REVISED LANDSCAPE AREA	4,943 SQ. FT.

CONTROLLER NOTES

2 **CONTROLLER NOTE #2:**
CONTROLLER LOCATION. REFER TO LEGEND FOR CONTROLLER MAKE AND MODEL NUMBER. CONTROLLER ASSEMBLY SHALL BE INSTALLED IN A STAINLESS STEEL ENCLOSURE. FINAL LOCATION OF CONTROLLER ASSEMBLY AND ELECTRICAL POC SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. THE 120 VOLT POWER SUPPLY HOOK-UP OF THE IRRIGATION CONTROLLER SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.

IRRIGATION PIPE AND EQUIPMENT LOCATION NOTES

1. ALL IRRIGATION EQUIPMENT: SPRINKLERS AND PIPE THAT ARE SHOWN IN PAVING IS FOR DRAWING CLARITY ONLY. ALL EQUIPMENT SHALL BE INSTALLED WITHIN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE.

2. MAINLINE AND VALVE LOCATIONS SHOWN ON THIS DRAWING ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE ALL IRRIGATION APPURTENANCE LOCATION FOR REVIEW AND APPROVAL. FINAL LOCATION AND EXACT POSITIONING OF ALL IRRIGATION APPURTENANCE SHALL BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. MINOR MODIFICATIONS OF ALL IRRIGATION APPURTENANCE AS REQUESTED BY THE OWNER SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. FAILURE TO OBTAIN OWNER'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE OWNER DIRECTED REVISION AT NO CHARGE.

IRRIGATION VALVE CALLOUT

CONTROLLER LETTER / VALVE NUMBER	B2	1.5" — VALVE SIZE
GALLONS PER MINUTE G.P.M.	16 GPM	30 PSI. — OPERATING PRESSURE (P.S.I.)
HYDROZONE PLANT FACTOR	LW	2-D — HYDROZONE NUMBER / IRRIGATION TYPE - SEE HYDROZONE LEGEND (BELOW)
LANDSCAPE HYDROZONE AREA SQUARE FOOTAGE	2000'	.64 A.R. — APPLICATION RATE IN INCHES PER HOUR

HYDROZONE LEGEND

H: dr□□□□□ N□□ b□r
(1) Dr□ - L□□ W□□r / Pl□□□
(2) Dr□ - M□d□r□□ W□□r / Pl□□□
(3) B□bbl□r - L□□ W□□r / Tr□□□
(4) B□bbl□r - M□d□r□□ W□□r / Tr□□□

Pl□□□F□□□r (W□□r U□□) - □□□ WUCOLS
S□l□□□d b□□d □□ □□□ □□□□□□□ □□ □dr□□□□□□
VLW = 0.1 - V□r□L□□ W□□r U□□ Pl□□□
LW = 0.1 - 0.3 - L□□ W□□r U□□ Pl□□□
MW = 0.4 - 0.6 - M□d□r□□ W□□r U□□ Pl□□□
HW = 0.7 - 0.9 - H□□ W□□r U□□ Pl□□□

IE - Irr□□□□□E□□□□□□
S = S□r□□.71
M = M□□□S□r□□.73
B = B□bbl□r .77
D = Dr□□ .81

IRRIGATION NOTE CALLOUT

1 — IRRIGATION CONSTRUCTION CALLOUT NUMBER.
1 — P.O.C. AND CONTROLLER CALLOUT NUMBER.

NOTE: FIELD VERIFY CONTROLLER LETTER AND VALVE NUMBER PRIOR TO HEAT BRANDING AND NUMBERING NEW VALVE BOXES.

UNIVERSITY NOTE
CONTRACTOR TO RUN FIBER TO CONTROLLER II FROM BDF LOCATED IN NEW CENTRAL YARD BLDG.

NOTE: FIELD VERIFY CONTROLLER LETTER AND VALVE NUMBER PRIOR TO HEAT BRANDING AND NUMBERING NEW VALVE BOXES.

NOTE: CONTRACTOR TO PERFORM PRESSURE TEST PRIOR TO START OF CONSTRUCTION.

IRRIGATION CONSTRUCTION NOTES

1 **MAINLINE CONNECTION NOTE:**
CONTRACTOR SHALL CONNECT PROPOSED NEW IRRIGATION MAINLINE TO THE EXISTING IRRIGATION SYSTEM LOCATED IN THIS APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY ACTUAL EXISTING IRRIGATION MAINLINE LOCATION IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. CONTRACTOR SHALL REFER TO IRRIGATION AS-BUILT'S FOR EXISTING IRRIGATION SYSTEM LAYOUT. CONTRACTOR SHALL VERIFY ALL IRRIGATION CONNECTION AND DISCONNECTION POINTS IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

2 **PERIMETER IRRIGATION NOTE:**
ALL ADJACENT SYSTEMS SHALL MAINTAIN AUTOMATIC PROGRAMMED WATERING SCHEDULES THROUGHOUT CONSTRUCTION. NO DISRUPTION OF THE EXISTING IRRIGATION SYSTEMS WATERING WILL BE ALLOWED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEMS EQUIPMENT THAT IS AFFECTED BY PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL ADJUST AND CAP OFF EXISTING ADJACENT IRRIGATION SYSTEMS AS REQUIRED. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING COMPLETE 100% HEAD TO HEAD COVERAGE WITH NO PONDING/RUNOFF OR OVER-SPRAY IN ALL AREAS. SYSTEM LAYOUT SHALL APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING AND COMMENCING WORK.

3 **REMOVAL AND DISPOSAL NOTE:**
CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO COMMENCING WORK. CONTRACTOR SHALL MEET WITH THE OWNER PRIOR TO BEGINNING DEMOLITION OR ANY OTHER WORK AND WALK SITE TO LOCATE EXISTING CONTROLLER AND LINES AND OTHER IRRIGATION TO BE PROTECTED IN PLACE.

4 **STUB-OUT NOTE:**
CONTRACTOR SHALL PROVIDE IRRIGATION MAINLINE AND WIRE STUB-OUT AT THIS APPROXIMATE LOCATION FOR FUTURE ADJACENT IRRIGATION CONNECTION. CONTRACTOR SHALL INSTALL STUB-OUT WITHIN A ROUND PLASTIC VALVE BOX. CONTRACTOR SHALL VERIFY EXACT STUB-OUT LOCATION IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

FOR IRRIGATION PLAN - SEE SHEETL5.10
FOR FOR IRRIGATION NOTES - SEE SHEET L6.20
FOR IRRIGATION DETAILS - SEE SHEETS L7.10 - L7.30

0 10 20 40 60

ADDENDUM#1

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LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

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SHEET TITLE
IRRIGATION PLAN

SHEET NUMBER
L5.10

Irrigation Pressure Calculation

Meter No:		1
Static Water Pressure PSI:	(LOW)	70 psi
Controller Letter:		B6
Valve No:		B6
Valve Demand		16 GPM
Maximum System Demand		16 GPM
Elevation Change P.O.C. to Highest Head:		0 Ft
Losses:		
1-1/2" Water Meter		1.0 psi
2" Service line		0.5 psi
1-1/2" RP Backflow Device		12.0 psi
2" Basket Strainer		1.0 psi
1-1/2" Master Valve		1.5 psi
1" Flow Sensor		1.0 psi
Isolation Valves		1.0 psi
1" R.C.V.		2.0 psi
150 Feet of 1-1/4" Mainline Sch. 40		2.5 psi
Fitting Loss 10%		2.3 psi
Lateral Line Loss 10%		3.0 psi
Loss to Highest Head		0.0 psi
Total Losses:		28 psi
Head Operating Pressure:		30 psi
Total Pressure Required:		58 psi
Static Pressure Available:		70 psi
Residual Pressure:		12 psi

CONTROLLER SCHEDULING NOTE:
THESE SUGGESTED RUN TIMES ARE FOR REFERENCE ONLY. ACTUAL RUN TIMES MAY DIFFER DUE TO VARYING SITE CONDITIONS. CONTRACTOR SHALL ADJUST RUN TIMES AS REQUIRED TO PROVIDE APPROPRIATE WATER FOR EACH VALVE CIRCUIT. MULTIPLE CYCLES MAY BE REQUIRED TO MINIMIZE PONDING AND RUNOFF ONTO NON-IRRIGATED AREAS.

SEASONAL IRRIGATION SCHEDULE

Project Name: Long Beach City College
Meter Number: #1 Controller Letter: "B"

Cycles Per Day: 1
Days Per Week: 6

Evapotranspiration Rates:				
Eto Historical:	49.56			
	Winter	Spring	Summer	Fall
Eto Per Day	0.08	0.19	0.22	0.14
Eto Per Season	6.3	15.1	17.2	10.9

Irrigation Efficiency (%):	
Rotors:	0.75
Spray Heads:	0.71
Bubbler Heads:	0.77
Drip Line:	0.81
Drip Emitter:	0.81
Stream Rotary:	0.75
Micro Spray	0.75

Precipitation Rate (in/hr)	
Rotors:	0.45
Spray Heads:	1.60
Tree Bubbler:	1.80
Drip Line:	0.73
Vine Bubbler:	1.40
Stream Rotary:	0.45
Micro Spray:	0.61

Run Times (Minutes per Day) = (60 x Eto x PF) ÷ (PR x IE) x (RD) ÷ (C)
Eto = Daily Evapotranspiration Rate
IE = Irrigation Efficiency
PR = Precipitation Rate (Inches per Hour)
RD = Run days (Seasonal Total)
C = Cycles per Day
PF = Plant Factor (Kc)
60 = Conversion to minutes

Valve Quantity	Planting	Irrigation Type	Kc	PR	IE	Winter (Dec, Jan, Feb)	Spring (Mar, Apr, May)	Summer (Jun, Jul, Aug)	Fall (Sep, Oct, Nov)	
2	Shrub	Drip Line	0.20	0.73	0.81	2	4	4	3	Min. Per Day
2	Shrub	Drip Line	0.40	0.73	0.81	3	8	9	6	Min. Per Day
2	Tree	Bubbler	0.50	1.80	0.77	2	4	5	3	Min. Per Day
Total Valves	6	Total Hour Run Times @ 6 Days Per Week				0.2	0.5	0.6	0.4	Hours Per Day

FOR REFERENCE ONLY
AB1881 WATER BUDGET CALCULATIONS SHOWN FOR REVISED LANDSCAPE AREA ONLY.
(CALCULATIONS SHOW THIS PROJECT TO BE IN COMPLIANCE WITH STATE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE "MWELO")

California Water Efficient Landscape Worksheet

Reference Evapotranspiration (ET_o)			49.56	Project Type	Non-Residential		0.45
Hydrozone # / Planting Description		Plant Factor (PF)	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (Sq. Ft.)	ETAF x Area	Estimated Total Water Use (ETWU)[d]
Regular Landscape Areas								
1 - Shrub Drip	(LOW)	0.2	Drip	0.81	0.25	3276	809	24855
2 - Shrub Drip	(MODERATE)	0.4	Drip	0.81	0.49	1631	805	24749
3 - Tree Bubbler	(MODERATE)	0.5	Bubbler	0.77	0.65	36	23	718
					Totals	4943	1638	50322
Special Landscape Areas								
					1	0	0	0
					Totals	0	0	0
						ETWU Total		50,322
						Maximum Allowed Water Allowance (MAWA)[e]		68,348

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	1638
Total Area	4943
Average ETAF	0.33

All Landscape Areas

Total ETAF x Area	1638
Total Area	4943
Average ETAF	0.33

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

[a] Hydrozone # / Planting Description e.g.
1.) Shrub Drip (Low Water Use Planting)
2.) Shrub Spray (Low Water Use Planting)
3.) Shrub Rotor (Moderate Water Use Planting)

[b] Irrigation Method
1.) Overhead Spray
2.) Drip

[c] Irrigation Efficiency
1.) 0.81 Drip
2.) 0.71 Spray
3.) 0.73 Micro Spray
4.) 0.73 Rotary
5.) 0.73 Rotor
6.) 0.77 Bubbler

[d] ETWU (Annual Gallons Required) =
Eto x 0.62 x ETAF x Area
Where 0.62 is a conversion factor to change acre-inches per acre per year to gallons per square foot per year

[e] MAWA (Annual Gallons Allowed) =
(Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
Where 0.62 is a conversion factor to change acre-inches per acre per year to gallons per square foot per year, LA is the total regular landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is 0.55 for residential areas and 0.45 for non-residential areas

IRRIGATION CONTROLLER EQUIPMENT LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
C	CALSENSE CONTROLLER ASSEMBLIES - CONTROLLER "A" MODEL CS3-2W-WM/CS3-EN /CS-2W-2ST(QTY TBD)/CS-2W-POC(1)/TP-110/FM1.5B DATA CONNECTION NOTES: PENETRATE THROUGH EXTERIOR WALL AND PIPE UP WALL TO OPEN DATA RACK AND FOLLOW TO DATA CABINET IN IRRIGATION STORAGE /DATA ROOM . DATA TO BE COMMSCOPE WITH (2) CIRCUITS RAN WITH (1) CIRCUIT TERMINATED AND ATTACHED. OTHER CIRCUIT TO LEFT FOR SPARE DATA TO BE LANDED ON PORT 16 CONTROLLER OPTIONS: CS3-2W-WM = 128 STATION 2-WIRE HYBRID VERSION WALL MOUNT CONTROLLER. CS3-48-WM - CS3000 48 STATION BASE MODEL WALL MOUNT CONTROLLER. CS3-EN = ETHERNET DEVICE. CS3-2WIRE-OPT = 2-WIRE OPTION TO MAKE BASE MODEL CONTROLLER A HYBRID. CS-2W-2ST = TWO STATION DECODERS, ORDER QTY AS NEEDED, GROUP VALVES IN PAIRS WHEN POSSIBLE AS THIS IS A 2 STATION DECODER - QTY TBD IN FIELD. CS-2W-POC = DECODER FOR MASTER VALVE AND FLOW METER. TP-110 = AC LINE PROTECTION. FM1.5B = 1.5" BRASS TEE-MOUNTED FLOW METER. NOTE: THE INSTALLATION OF CONTROLLERS MUST BE APPROVED AND CERTIFIED BY CALSENSE PRODUCT REPRESENTATIVE. CONTROLLER MUST BE CERTIFIED BY CALSENSE AND CONNECTED TO THE ETHERNET BEFORE FINAL JOB WALK. PROVIDE COPIES OF CERTIFICATION TO LBCC'S AUTHORIZED REPRESENTATIVE AND LANDSCAPE ARCHITECT. REVIEW THE IRRIGATION COMMUNICATION OPERATIONAL INTENT WITH THE AUTHORIZED REPRESENTATIVE PRIOR TO ORDERING IRRIGATION CONTROLLER ASSEMBLY TO ENSURE THE APPROPRIATE EQUIPMENT/OPTIONS AND CONFIGURATIONS ARE INCLUDED. VERIFY EXACT LOCATION IN FIELD WITH LBCC'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.	DD:EE: FF:	L7.30
RS	CALSENSE - RAIN BUCKET. MOUNT SENSOR ON 2" GALVANIZED PIPE CLEAR OF ANY OBSTRUCTIONS AND WIRE TO CONTROLLER. VERIFY EXACT LOCATION IN FIELD WITH LBCC AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK. INSTALL PER MANUFACTURES RECOMMENDATIONS.	EE	L7.30
EL	120 VOLT ELECTRICAL POWER PROVIDED BY ELECTRICIAN:VERIFY ACTUAL LOCATION IN FIELD. THE COORDINATION OF POWER AND CONNECTION OF CONTROLLER SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.	N/A	N/A
E	ETHERNET DEVICE CABLE CONNECTION FOR CENTRAL CONTROL COMMUNICATION. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION:CONNECTION AND THE COMPLETE SET-UP OF PROPER COMMUNICATION WITH THE CENTRAL CONTROL COMPUTER SYSTEM. PROVIDE PLENUM CAT6E CABLE BY UNIPRISE SOLUTIONS - CATEGORY 6E "ULTRAMEDIA®" 400MHZ, U/UTP, 4-PAIR, 1000 FT, BLUE - CMP - CS37P BLU C6 4/23 U/UTP CPK 1KFT WITH A RJ-45 JACK FROM THE NEAREST ROUTER CABLE TO BE INSTALLED IN 3/4" CONDUIT. INSTALLER TO BE CERTIFIED BY COMMSCOPE.	N/A	N/A
NO SYMBOL	PAIGE ELECTRIC - CONTROLLER GROUNDING:CONTRACTOR SHALL GROUND CONTROLLER AT MINIMUM USING ONE 5/8-INCH X 8-FOOT COPPER GROUNDING ROD:BUT NOT LESS THAN PER LOCAL AND NATIONAL ELECTRICAL CODE. GROUND WIRE AND ROD CONNECTIONS SHALL BE BY CADWELD PROCESS ONLY:CLAMPS ARE NOT AN ACCEPTABLE SUBSTITUTE. MAXIMUM GROUND RESISTANCE SHALL BE NO MORE THAN 10 OHM:REGARDLESS OF MANUFACTURER'S STATED NUMBER. CONTRACTOR SHALL PROVIDE PROOF OF MEASURED RESISTANCE TO COLLEGE'S AUTHORIZED REPRESENTATIVE BEFORE MAINTENANCE PERIOD BEGINS AND INCLUDE DOCUMENT WITHIN SUBMITTED OPERATIONS AND MAINTENANCE MANUAL.	FF:GG	L7.30
GE	PAIGE ELECTRIC - GROUNDING EQUIPMENT:5/8-INCH X 8-FOOT COPPER GROUNDING ROD. INSTALL ONE (1) GROUNDING ROD AT THE FIRST "RCV" AND LAST "RCV" ON ALL MAINLINE END RUNS AND EVERY 300 FEET ALONG 2-WIRE PATH PLACED AT CONTROL VALVE WITHIN VALVE BOX CONNECTED TO "RCV" DECODER. DO NOT SPLICE 2-WIRE PATH FOR GROUNDING. USE :6 AWG SOLID COPPER WIRE FROM THE COPPER ROD TO THE FIELD COMMON (WHITE WIRES IN THE BLACK HARNESS) OF THE DECODER. ALL GROUNDING TO BE PER CALSENSE SPECIFICATIONS. CONTACT ERIN HAGEN: CALSENSE:(760) 580-1835:FOR INSTALLATION INFORMATION AND PROCEDURE.	P:S:U	L7.20 1
NO SYMBOL	CALSENSE - 2 STATION RCV DECODER:MODEL CS-2W-2ST. INSTALL AT RCV MANIFOLD LOCATIONS. CONNECT TO CONTROLLER VIA 2-WIRE CABLE. A DECODER SHALL BE LOCATED NO FURTHER THAN 100' FROM THE RCV IT OPERATES. ASSIGN DECODERS AT CONTROLLER USING THE SERIAL NUMBER OF THE DECODER AND OUTPUT COLORED WIRES. LINE SURGE PROTECTION:GROUND WIRE INCLUDED WITH EACH DECODER. SEE SYSTEM GROUNDING PROTECTION GROUNDING DETAILS. P.O.C DECODER:MODEL CS-2W-POC. INSTALL ON FLOW METER AND MASTER VALVE. CONNECT TO CONTROLLER VIA 2-WIRE CABLE.	P:Q: R:S: T	L7.20 1

RECYCLED WATER IRRIGATION LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
*	RECYCLED WATER SIGNS:INSTALL QUANTITY AND LOCATIONS PER THE LONG BEACH CITY COLLEGE RECYCLING WATER REQUIREMENTS AND THE LOS ANGELES DEPARTMENT OF ENVIRONMENTAL HEALTH (LAC DEH) WATER RECYCLING REQUIREMENTS.	HH	L7.30
NO SYMBOL	AS APPROVED - CONTROLLER SHALL HAVE RECYCLED WATER PLACARD INSTALLED AS REQUIRED.		
NO SYMBOL	T. CHRISTY'S - (PURPLE) "RECYCLED WATER" VALVE I.D. TAG INSTALL WITHIN EACH VALVE BOX TYP.		
NO SYMBOL	AS APPROVED - ALL VALVE BOXES SHALL BE (PURPLE) "RECYCLED WATER" AND MARKED AS REQUIRED FOR RECYCLED WATER USE.		
	NOTE:ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE RECLAIMED WATER IRRIGATION SYSTEM REQUIREMENTS SET FOR BY (LAC DEH) LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH. NOTE:ALL EQUIPMENT SHALL COMPLY WITH CITY OF LONG BEACH WATER DISTRICT AND LONG BEACH CITY COLLEGE RECYCLED WATER REQUIREMENTS.		

EXISTING EQUIPMENT LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION
	(EXISTING) 6" RECYCLED WATER IRRIGATION MAINLINE:PROTECT IN PLACE:REPAIR ANY DAMAGE DUE TO CONSTRUCTION. VERIFY SIZE:TYPE:AND EXACT LOCATION IN FIELD.
	(EXISTING) IRRIGATION TO REMAIN:PROTECT IN PLACE. VERIFY AND TEST OFF-SITE SYSTEM FOR PROPER OPERATION PRIOR TO CONSTRUCTION:REPAIR OR REPLACE IF DAMAGED. PROVIDE 100: COVERAGE WITH NO PONDING:RUNOFF OR OVER SPRAY. THE "LBCC" AUTHORIZED REPRESENTATIVE MUST REVIEW ANY REQUIRED MODIFICATIONS TO THESE AREAS PRIOR TO COMMENCING WORK. THE CONTRACTOR MUST NOTIFY THE "LBCC" REPRESENTATIVE OF THESE CONDITIONS OR ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
	(EXISTING) PVC PIPE AS LATERAL LINES SHOWN FOR REFERENCE ONLY. VERIFY EXACT LOCATION IN FIELD. PROTECT IN PLACE:REPAIR ANY DAMAGE DUE TO CONSTRUCTION.
	IRRIGATION TIE-IN CONNECTION OF NEW LATERAL LINE TO EXISTING SYSTEM LATERAL LINE. VERIFY SIZE:LOCATION AND CONNECTION POINTS IN FIELD.

NOTE:ALL MATERIALS AND INSTALLATION TO BE PER DISTRICT STANDARDS.

DRIP IRRIGATION LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPH	PSI	RADIUS	PREC. RATE	DETAIL	SHEET
	NETAFIM - TLHCVXR-RW-5-12:TECHLINE "HCVXR - RWP" SERIES 17:: "RECYCLED WATER" PURPLE DRIPLINE WITH PRESSURE COMPENSATING:: ANTI SIPHON CHECK VALVE AND COPPER INFUSED ROOT INTRUSION PROTECTION EMITTERS. INSTALL DRIP TUBING : 16" MAXIMUM ROW SPACING WITH TRIANGULAR SPACED EMITTER LAYOUT.	0.53	30	N/A	0.64	A:B:C: D	L7.10
	NETAFIM - DRIP TUBING CONNECTIONS SHALL BE MADE USING NETAFIM 17:: DRIPLINE INSERT FITTINGS.					E	L7.10
D	RAIN BIRD - 1812-NP::12" POP-UP DRIP SYSTEM COMBINATION FLUSH VALVE / DRIP INDICATOR. INSTALL WITH "GPH" IRRIGATION PRODUCTS MODEL :GDFN-R::SERIES "PURPLE" FLUSH VALVE.					F	L7.10
AV	NETAFIM - TLAVRV:AIR / VACUUM RELIEF VALVE. INSTALL AT HIGHEST POINT OF DRIP ZONE.					G	L7.10
MV	SPEARS - 2621-005G:½" SCH 80 THREADED PVC GRAY BALL VALVE. DRIP SYSTEM MANUAL SHUT-OFF/FLUSH VALVE FOR FLUSHING EXHAUST MANIFOLD. LOCATE AT END OF DRIPZONE. INSTALL FLUSH VALVE INSIDE A 10" ROUND VALVE BOX 18" FROM PAVING.					H	L7.10
	NOTE:ALL SUB-SURFACE TUBING SHALL BE INSTALLED 2" BELOW FINISH SOIL GRADE ANCHORED WITH RAIN BIRD 6" GALVANIZED WIRE STAKES:MODEL TDS-050 BEND:INSTALLED FOUR (4) FEET ON CENTER.						

IRRIGATION TREE BUBBLER LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPM	PSI	RADIUS	PREC. RATE	DETAIL	SHEET
B	RAIN BIRD - RD-06-S-P30-F-NP, 6" POP-UP BUBBLER HEAD W/ RAIN BIRD 5H-B-PCS-040. EACH SYMBOL REPRESENTS MINIMUM TWO BUBBLERS PER TREE, SEE NOTE BELOW.	.40 (.80)	30	1 FT	1.8	I	L7.10
	NOTE: SINGLE SYMBOL ON PLANS REPRESENTS MINIMUM TWO (2) BUBBLERS PER TREE. (2) BUBBLERS REQUIRED FOR 24" BOX TREES AND SMALLER. (3) BUBBLERS REQUIRED FOR 36" BOX TREES. (4) BUBBLERS REQUIRED FOR 48" BOX AND LARGER TREES. PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE WITHIN TREE WELL TYPICAL.						

IRRIGATION EQUIPMENT LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
P	AS APPROVED - (P.O.C.) FUTURE RECYCLED WATER IRRIGATION POINT OF CONNECTION. VERIFY EXACT LOCATION IN FIELD.	N/A	N/A
M	NETAFIM - MODEL WM-150-1.0-RS-M::1-1/2" "M" SERIES DOMESTIC WATER (FUTURE RECYCLED WATER) IRRIGATION WATER METER. INSTALLED AS SUB-METER TO MONITOR IRRIGATION FLOW AND WATER USEAGE. VERIFY EXACT LOCATION:AND STATIC WATER PRESSURE IN FIELD.	J:J	L7.30
RP	FEBCO - 825YA::1-1/2" R/P BACKFLOW PREVENTION DEVICE INSTALLED WITH MODEL 650A WYE STRAINER WITH PLUG AND PIPE NIPPLE STRAINER KIT OPTION. R/P ASSEMBLY SHALL BE INSTALLED WITHIN A V.I.T. STRONG BOX SBBC-30SS:STAINLESS STEEL:BACKFLOW DEVICE ENCLOSURE INSTALLED ON A POURED IN PLACE CONCRETE PAD. IF STATIC WATER PRESSURE IS GREATER THAN 80 P.S.I. CONTRACTOR SHALL INSTALL A NEW WILKINS "NR3" PRESSURE REGULATOR AS PART OF BACKFLOW ASSEMBLY.	J	L7.10
S	YARDNEY - SB2-P-F-80::2" (PURPLE) BASKET STRAINER WITH FLANGED CONNECTIONS AND 80 MESH FILTER ELEMENT. STRAINER ASSEMBLY SHALL BE INSTALLED WITHIN A V.I.T. STRONG BOX SBBC-30CR SMOOTH TOUCH ENCLOSURE INSTALLED ON A POURED IN PLACE CONCRETE PAD.	K	L7.10
W	GRISWOLD - MODEL 150DW-PRV-R::1-1/2" NORMALLY CLOSED:RECYCLED WATER::PRESSURE REDUCING::MASTER CONTROL VALVE. INSTALL WITH 2-WIRE DECODER. INSTALL PER MANUFACTURERS RECOMMENDATIONS. CONNECT MV WIRES VIA POC DECODER TO THE 2-WIRE DECODER CABLE.	L	L7.10
FS	CALSENSE - FM-1B::1" BRASS FLOW SENSOR INSTALL WITH 2-WIRE P.O.C. DECODER::PER MANUFACTURER'S RECOMMENDATIONS. WIRE TO CONTROLLER FLOW SENSOR COMUNICATION CABLE::2 CONDUCTOR::SHEILDED 16 AWG SOLID COPPER INSTALLED WITHIN 1-1/4" PVC CONDUIT.	M	L7.20
FZ	EZ-FLO SYSTEMS - EZ-001-CX-CBV-200-FERTI-MAXX STARTER-25::1.5 GALLON FERTILIZING SYSTEM WITH ONE YEAR SUPPLY FERTILIZER BASED ON MANUFACTURE SUGGESTION RATE AND PRODUCT.	N	L7.20
	NIBCO - T-580-70-66::BRONZE BALL VALVE WITH STAINLESS STEEL STEM AND HANDLE NUT: LINE SIZE UP TO 2-1/2"	O	L7.20
	RAIN BIRD - PESB-R-PRS-D (1" OR 1-1/2") SERIES PLASTIC::RECYCLED WATER::PRESSURE REGULATING::REMOTE CONTROL VALVE WITH PURPLE HANDLE::SIZE AS SHOWN. INSTALL WITH 2-WIRE DECODER.	P: II	L7.20
	RAIN BIRD - XCZ-PRB-1XO-COM::SERIES (1" OR 1-1/2") DRIP VALVE CONTROL ZONE KIT WITH PRESSURE REGULATING::QUICK-CHECK BASKET FILTER(S)::SIZE AS SHOWN. INSTALL WITH PURPLE HANDLE AND 2- WIRE DECODER. FOR DEMANDS (1 - 13) GPM. INSTALL XCZ-PRB-100-COM::1" DRIP VALVE ASSEMBLY. FOR DEMANDS (14 - 35) GPM. INSTALL XCZ-PRB-150-COM::1-1/2" DRIP VALVE ASSEMBLY.	Q: II	L7.20 L7.30 1
	RAIN BIRD - 33DNP::3/4" QUICK COUPLER VALVE WITH PURPLE LOCKING COVER MARKED FOR RECYCLED WATER USE.	V: II	L7.20 L7.30 1

IRRIGATION PIPE & WIRE LEGEND

SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
	AS APPROVED - NON-PRESSURE LATERAL LINE:SCH. 40 (3/4" - 2") PURPLE "RECYCLED WATER" PVC PIPE WITH WORDS "RECYCLED WATER-DO NOT DRINK" INSTALLED 12" BELOW GRADE. INSTALL WITH :14 GAUGE "GREEN COLOR" TRACER WIRE ADJACENT TO LATERAL LINE WITH WIRE IDENTIFICATION TAGS IN EACH VALVE BOX. TAPE AND BUNDLE TO LATERAL LINE : 10' O.C.	W:Z	L7.20 L7.30
	AS APPROVED - PRESSURE MAINLINE::CLASS 315 (2" - 3") PURPLE "RECYCLED WATER" PVC PIPE WITH WORDS "RECYCLED WATER-DO NOT DRINK" INSTALLED 18" BELOW GRADE. INSTALL WITH 3" WIDE "RECYCLED WATER" METALLIC DETECTABLE WARNING TAPES. ENSURE 10' SEPARATION BETWEEN RECLAIMED AND DOMESTIC LINES. INSTALL :14 GAUGE "PURPLE COLOR" TRACER WIRE ADJACENT TO MAINLINE WITH WIRE IDENTIFICATION TAGS IN EACH VALVE BOX. TAPE AND BUNDLE TO MAINLINE : 5' INTERVALS.	W:Z:AA	L7.20 L7.30
NO SYMBOL	T. CHRISTY - TA-DT-3-PRW::3" WIDE DETECTABLE PURPLE "RECYCLED WATER" METALLIC BACKED UNDERGROUND WARNING TAPE. INSTALL WARNING TAPE CONTINUOUSLY ALONG MAINLINE ROUTING::ONE (1) LOCATED IMMEDIATELY ON TOP OF MAINLINE ATTACHED EVERY 5' AND ONE (1) LOCATED 12" ABOVE MAINLINE.	W:Y:Z:	L7.20 L7.30
	PURPLE "RECYCLED WATER" AS SLEEVING - SCH 40 PVC PIPE WITH WORDS "RECYCLED WATER-DO NOT DRINK". EXTEND 12" BEYOND EDGE OF HARDSCAPE. SLEEVE SHALL BE MINIMUM TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED::MINIMUM 2" SIZE. CONTRACTOR SHALL SAWCUT PAVING/CONCRETE OR BORE UNDER AND INSTALL NEW PIPE AND OR CONTROL WIRES PLACED IN NEW SLEEVE FOR CONNECTION TO IRRIGATION SYSTEM. BACKFILL AND INSTALL ASPHALT SLURRY MIX OR CONCRETE TO MATCH EXISTING CONDITIONS::AS APPROVED BY COLLEGE.	Y:Z:	L7.20 L7.30
NO SYMBOL	CONTRACTOR SHALL COORDINATE ALL CONDUITS::SLEEVES:AND CABLE ROUTING WITH GENERAL CONTRACTOR AND ANY AFFECTED ON-SITE TRADES AS REQUIRED THROUGHOUT PROJECT.	Y:Z:	L7.20 L7.30
	PAIGE ELECTRIC - MODEL P7354-D::"PURPLE" JACKETED 2 CONDUCTOR::14/2 AWG.:14 GAUGE 2-WIRE CABLE. INSTALL ALL WIRE WITHIN 1-1/4" ELECTRICAL CONDUIT WITH SWEEP ELLS AT EACH "RCV" BOX AND PULL BOXES LOCATED AT ALL CROSSINGS. CONNECT TO CONTROLLER PER MANUFACTURER'S SPECIFICATIONS.	R:S:T: U:W:Y	L7.20
NO SYMBOL	3M - SCOTCHCAST::CONNECTOR SEALING PACK::MODEL 3570G-N::"EPOXY RESIN" WIRE SPLICE CONNECTORS FOR ALL 2-WIRE DECODER/RCV CONNECTIONS AND SPLICES. THE 3570G-N SEALING PACK WILL ACCOMMODATE ONE 3M™ PERFORMANCE PLUS WIRE CONNECTOR O/B +, R/Y+, T/R+, T/Y+ OR ONE 3M™ ELECTRICAL SPRING AND GROUNDING CONNECTOR 312 OR 512. INSTALL PER MANUFACTURE RECOMMENDATIONS.	BB	L7.30
	AS APPROVED - MAINLINE STUB-OUT WITH SPARE CONTROLLER WIRES FOR FUTURE ADJACENT IRRIGATION IMPROVEMENTS CONNECTION LOCATED WITHIN A PLASTIC RECTANGULAR VALVE BOX: LABEL LID "SW". CONFIRM EXACT LOCATION IN FIELD WITH LBCC'S AUTHORIZED REPRESENTATIVE. INSTALL CONTROL WIRES WITH 36" MINIMUM LENGTH COILED EXPANSION WIRE LOOP.	CC	L7.30
	NOTE: ALL WIRE SPLICES SHALL BE PLACED WITHIN PLASTIC VALVE BOX OR WIRE PULL BOX. WIRE SPLICES MUST BE TWISTED WITH WIRE TWISTING TOOL WITH A MAXIMUM OF TWO WIRES PER TWIST. REFER TO MANUFACTURE RECOMMENDATION FOR PROPER WIRE CONNECTIONS. SPLICING RECOMMENDATIONS: WIRE SPLICES ARE THE WEAK LINK OF ANY ELECTRICAL CIRCUIT. IT IS ESPECIALLY IMPORTANT TO MAKE PROPER JOINTS IN IRRIGATION SYSTEMS BECAUSE THE JOINTS ARE EXPOSED TO WET AND DAMP ENVIRONMENTS THAT CAN CAUSE CORROSION OF THE COPPER CONDUCTOR:AND PREMATURE FAILURE. CALSENSE REQUIRES THE STRICT USE OF MODEL 3M - SCOTCHCAST: CONNECTOR SEALING PACK::MODEL 3570G-N.		

NOTE:CONTRACTOR TO PERFORM PRESSURE TEST PRIOR TO START OF CONSTRUCTION.

FOR IRRIGATION PLAN - SEE SHEETL5.10
FOR FOR IRRIGATION NOTES - SEE SHEET L6.20
FOR IRRIGATION DETAILS - SEE SHEETS L7.10 - L7.30

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION
THE DRAWINGS IN THIS SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42'.

DRAWN BY RLA
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SHEET TITLE
IRRIGATION LEGENDS & CALCULATIONS

SHEET NUMBER
L6.10

ADDENDUM#1

RECYCLED AND POTABLE WATER NOTES

A. THE INSTALLATION OF THE IRRIGATION WATER SYSTEM SHALL CONFORM TO THE REGULATIONS FOR THE CONSTRUCTION OF IRRIGATION WATER SYSTEMS WITHIN THE WATER DISTRICT AND THE ACCOMPANYING PLANS AND SPECIFICATIONS.

B. ALL ONSITE RECYCLED AND POTABLE WATER PIPING INSTALLED ON THIS PROJECT SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY REGULATIONS AND THE IRRIGATION SPECIFICATIONS.

C. RECYCLED WATER PIPING SHALL BE PURPLE PVC MANUFACTURED FOR RECYCLED (RECLAIMED) WATER SYSTEMS.

D. MARKING ON THE PURPLE PVC PIPE SHALL INCLUDE THE FOLLOWING□

CAUTION RECYCLED (OR RECLAIMED) WATER□NOMINAL PIPE SIZE□PVC-1120□PRESSURE RATING IN POUNDS PER SQUARE INCH AT 73 DEGREES□ASTM DESIGNATIONS SUCH AS 1785□2241□2672□3139. PRINTING SHALL BE PLACED CONTINUOUSLY ON TWO SIDES OF THE PIPE.

E. ALL RECYCLED WATER SPRINKLER BOX COVERS AND CONTROL VALVES□ISOLATION VALVES□QUICK COUPLERS□AND ALL APPURTENANCES SHALL BE TAGGED WITH IDENTIFICATION TAGS.

1. TAGS SHALL BE WEATHERPROOF PLASTIC□3"X4"□PURPLE IN COLOR WITH THE WORDS "WARNING RECYCLED (OR RECLAIMED) WATER -DO NOT DRINK" IMPRINTED ON ONE SIDE□AND "AVISA AGUA IMPURA - NO TOMAR" ON THE OTHER SIDE. IMPRINTING SHALL BE PERMANENT AND BLACK IN COLOR. USE TAGS AS MANUFACTURED BY T. CHRISTY ENTERPRISES OR APPROVED EQUAL.

2. ONE TAG SHALL BE ATTACHED TO EACH APPURTENANCE AS FOLLOWS□OR□

IDENTIFICATION SHALL BE AFFIXED TO EACH IRRIGATION VALVE LID COVER AND VALVE AS FOLLOWS□
(A) IDENTIFY VALVE COVER WITH LABEL OR BRANDED HOT STAMP THAT READS "RECYCLED (OR RECLAIMED) WATER DO NOT DRINK" OR USE PURPLE COVER WITH SAME IDENTIFICATION.
(B) ATTACH TAG TO CONTROL VALVE STEM DIRECTLY OR WITH PLASTIC TIE-WRAP. OR
(C) ATTACH TAG TO CONTROL VALVE SOLENOID WIRE DIRECTLY OR WITH PLASTIC TIE-WRAP.
(D) ATTACH TO BODY OF THE RELATIVE APPURTENANCE WITH A PLASTIC TIE-WRAP.

F. WARNING TAPES SHALL BE USED ON ALL CONSTANT PRESSURE MAIN LINE PIPING CARRYING POTABLE WATER.

G. WARNING TAPES SHALL BE A MINIMUM OF 3-INCHES WIDE AND SHALL RUN CONTINUOUSLY FOR THE ENTIRE LENGTH OF ALL CONSTANT PRESSURE MAIN LINE PIPING. THE TAPE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH PLASTIC TAPE BANDED AROUND THE WARNING TAPE AND THE PIPE EVERY 5 FEET ON CENTER.

H. WARNING TAPE FOR THE CONSTANT PRESSURE POTABLE WATER PIPING SHALL BE BLUE IN COLOR WITH THE WORDS "CAUTION BURIED WATER LINE BELOW" IMPRINTED IN MINIMUM 1 INCH HIGH LETTERS□BLACK IN COLOR. IMPRINTING SHALL BE CONTINUOUS AND PERMANENT.

I. CITY SHALL BE NOTIFIED TWO DAYS PRIOR TO THE START OF IRRIGATION CONSTRUCTION AND EACH WORKDAY THEREAFTER UNTIL THE COMPLETION OF PROJECT.

J. ALL PRESSURE MAIN LINE PIPING FROM THE RECYCLED WATER SYSTEM SHALL BE INSTALLED TO MAINTAIN 10 FEET MINIMUM HORIZONTAL SEPARATION FROM ALL POTABLE WATER PIPING. WHERE RECYCLED AND POTABLE WATER PRESSURE MAIN LINE PIPING CROSS□THE RECYCLED WATER PIPING SHALL BE INSTALLED BELOW THE POTABLE WATER PIPING□WHEN POSSIBLE□IN A CLASS 200 PURPLE PVC SLEEVE WHICH EXTENDS A MINIMUM OF 5 FEET ON EITHER SIDE OF THE POTABLE WATER PIPING. PROVIDE A MINIMUM VERTICAL CLEARANCE OF 12-INCHES. CONVENTIONAL (WHITE) PVC PIPE MAY BE USED FOR SLEEVING MATERIAL IF IT IS TAPED WITH 3-INCH WIDE PURPLE WARNING TAPE WHICH READS "CAUTION□RECYCLED (OR RECLAIMED) WATER".

K. THE IRRIGATION SYSTEM HAS BEEN DESIGNED TO AND MUST BE OPERATED BETWEEN THE HOURS OF 10□00 PM AND 6□00 AM UNLESS OTHERWISE DIRECTED BY THE DISTRICT ENGINEER.

L. ALL NEW COMMON AREAS WHERE RECYCLED WATER IS USED AND THAT ARE ACCESSIBLE TO THE GENERAL PUBLIC SHALL BE POSTED WITH CONSPICUOUS SIGNS THAT INCLUDE THE FOLLOWING WORDING IN A SIZE NO LESS THAN 4 INCHES HIGH BY 8 INCHES WIDE□"RECYCLED WATER - DO NOT DRINK" "RECLAIMED WATER - DO NOT DRINK". EACH SIGN SHALL ALSO DISPLAY AN INTERNATIONAL SYMBOL CONVEYING THE SAME WARNING.

M. ADJUST SPRAY HEADS TO ELIMINATE OVERSPRAY ONTO AREAS NOT UNDER THE CONTROL OF THE CUSTOMER. FOR EXAMPLE□POOL DECKS□PRIVATE PATIOS□STREETS AND SIDEWALKS.

N. CONTACT THE CITY OFFICE TWO DAYS PRIOR TO THE IRRIGATION SYSTEM COVERAGE/AND CROSS CONNECTION TEST AT AND ARRANGE A WALK THROUGH OF THE SYSTEM.

O. FAILURE TO COMPLY WITH ANY OR ALL OF THE ABOVE GUIDELINES WILL PLACE THE SYSTEM IN VIOLATION OF DISTRICT RULES AND REGULATIONS□AND WILL RESULT IN TERMINATION OF SERVICE UNTIL THE APPROPRIATE CORRECTIVE MEASURES HAVE BEEN TAKEN.

P. WARNING TAPE ON RECYCLED WATER CONSTANT PRESSURE MAIN LINE PIPING IS ONLY ALLOWED ON PROJECT-BY-PROJECT APPROVAL FROM THE DISTRICT ENGINEER. IF APPROVED□IT MUST FOLLOW THESE INSTALLATION SPECIFICATIONS.

1. WARNING TAPE SHALL BE USED ON ALL CONSTANT PRESSURE MAINS.

2. WARNING TAPE SHALL BE A MINIMUM OF 3-INCHES WIDE AND SHALL RUN CONTINUOUSLY FOR THE ENTIRE LENGTH OF ALL CONSTANT PRESSURE MAIN LINE PIPING. THE TAPE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH PLASTIC TAPE BANDED AROUND THE WARNING TAPE AND THE PIPE EVERY 5 FEET ON CENTER.

3. WARNING TAPE FOR THE CONSTANT PRESSURE RECYCLED WATER PIPING SHALL BE PURPLE IN COLOR WITH THE WORDS "CAUTION RECYCLED (OR RECLAIMED) WATER" IMPRINTED A MINIMUM OF 1-INCH HIGH AND BLACK IN COLOR. IMPRINTING SHALL BE CONTINUOUS AND PERMANENT.

ONSITE RECYCLED AND POTABLE WATER SEPARATION REQUIREMENTS□

HORIZONTAL SEPARATIONS□WHEN POTABLE WATER LINE AND RECYCLED WATER LINE CROSS□THE RECYCLED LINE SHALL BE INSTALLED WITHIN A PROTECTIVE SLEEVE. THE SLEEVE SHALL EXTEND 10 FEET FROM EACH SIDE□FROM THE CENTER LINE OF POTABLE LINE□FOR A TOTAL OF 20 FEET. A 10 FOOT HORIZONTAL SEPERATION BETWEEN POTABLE WATER AND NON-POTABLE WATER LINES MUST BE MAINTAINED AT ALL TIMES. THE POTABLE LINES MUST BE INSTALLED ABOVE THE NON-POTABLE LINE.

VERTICAL SEPARATIONS□THE PRESSURIZED RECLAIMED WATER PIPING SHALL MAINTAIN A MINIMUM OF ONE FOOT VERTICAL SEPARATION AT ALL TIMES FROM ALL PRESSURIZED POTABLE WATER PIPING AND/OR A SANITARY SEWER SYSTEM. THE PRESSURIZED RECLAIMED WATER PIPING SHALL BE INSTALLED ONE FOOT BELOW ALL PRESSURIZED POTABLE WATER PIPING ONE FOOT ABOVE ALL SANITARY SEWER SYSTEMS. IF A ONE FOOT VERTICAL SEPARATION IS NOT POSSIBLE□SPECIAL CONSTRUCTION REQUIREMENTS SHALL BE CONSIDERED. REFER TO DISTRICT STANDARDS.

THE ON-SITE POTABLE LINE(S) SHALL BE MARKED WITH STENCIL OR BLUE TAPE IDENTIFYING IS AS POTABLE WATERLINE.

ALL GATE VALVES□MANUAL□BALL VALVES□CONTROL VALVES□ELECTRICAL CONTROL VALVES□PRESSURE REDUCING VALVES FOR RECYCLED WATER SYSTEMS SHALL BE INSTALLED BELOW GRADE IN A HINGED LOCKING VALVE BOX.

RECYCLED WATER□

THE DESIGN SHALL PROVIDE FOR CONNECTION OF RECYCLED WATER. PLANS SHALL BE IN ACCORDANCE WITH THE WATER DISTRICT RECYCLED GUIDELINES. A RECYCLED WATER USE PERMIT SHALL BE OBTAINED PRIOR TO RECEIVING A RECYCLED WATER CONNECTION. □□□//□□□.lb□□□r.□r□/□□□/d□□□l/□l□□/□□□l□/r□l□□r□□05.□d□

E□□□□ Irr□□□□ N□□□

1. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE EXISTING IRRIGATION AND PLANTING ON SITE. ANY DAMAGE OR ADJUSTMENTS REQUIRED INCLUDING REPLACING OR RELOCATING IRRIGATION LINES□HEADS□VALVES□WIRES OR ANY UTILITY THAT OCCURS ON THE PARCEL DUE TO THE CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR MUST REVIEW ANY REQUIRED MODIFICATIONS TO THESE AREAS AND REVIEW WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK. THE CONTRACTOR MUST NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE OF THESE CONDITIONS OR ANY DISCREPANCIES PRIOR TO COMMENCING WORK.

2. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS□PROPERTY LINES□DIMENSIONS□ETC. PRIOR TO COMMENCING WORK. ALL EXISTING IRRIGATION SYSTEMS SHALL BE VERIFIED IN THE FIELD AT START OF CONSTRUCTIONS. ALL EXISTING MAINLINES□RCVS□BACKFLOW DEVICES□CONTROLLERS□METERS□SERVICE LINES□ETC. SHALL BE VERIFIED IN FIELD. ALL EXISTING IRRIGATION EQUIPMENT SHALL BE CLEARLY INDICATED INCLUDING SIZES AND MODEL NUMBERS TO SCALE ON AN ACCURATE BASE DRAWING AND SUBMITTED AS A SHOP DRAWING. SAID SHOP DRAWING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT□AND OWNER'S AUTHORIZED REPRESENTATIVE FOR REVIEW AND APPROVAL. NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND. NO WORK SHALL PROCEED WITHOUT APPROVAL OF SAID SHOP DRAWINGS.

3. ALL EQUIPMENT LOCATIONS AND PIPE ROUTING SHALL BE STAKED IN FIELD FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. ALL LAYOUT SHALL BE AS APPROVED BY□LANDSCAPE ARCHITECT□AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVAL OF LAYOUT.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF PROPOSED IRRIGATION EQUIPMENT AND RELATED EQUIPMENT□INCLUDING BUT NOT LIMITED TO R.C.V. CONTROL WIRES□ELECTRICAL WIRES□CONDUIT□REMOTE CONTROL VALVES□ETC. ALL LAYOUT AND LOCATIONS SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO COMMENCING WORK.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER□PROVIDING COMPLETE 100□ HEAD TO HEAD COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

7. CONTRACTOR SHALL ADJUST AND CAP OFF EXISTING ADJACENT IRRIGATION SYSTEM AS REQUIRED. SYSTEM SHALL PROVIDE COMPLETE 100□ HEAD TO HEAD COVERAGE IN ALL AREAS AS APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE. ALL LAYOUT SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

8. CONTRACTOR SHALL REFER TO CORRESPONDING ON-SITE WATER AND SEWER PLAN FOR UNDERLYING WATERLINES□EASMENTS□AND OTHER RELATED EQUIPMENT. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS IN FIELD WITH OWNERS AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO EXISTING IRRIGATION□LANDSCAPE AND HARDSCAPE DAMAGED BY NEW CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

10. CONTRACTOR SHALL MEET WITH THE OWNER PRIOR TO BEGINNING DEMOLITION OR ANY OTHER WORK□AND WALK SITE TO LOCATE EXISTING CONTROLLER AND LINES AND OTHER IRRIGATION TO BE PROTECTED IN PLACE.

11. CONTRACTOR SHALL PROVIDE FOR THE IRRIGATION OF EXISTING PLANT MATERIAL THROUGHOUT THE CONSTRUCTION PROCESS. ANY DAMAGE DUE TO CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY TO PREVENT ANY LAPSE IN IRRIGATION OF THE EXISTING PLANT MATERIAL. ANY PLANT MATERIAL AND/OR IRRIGATION DAMAGED AS PART OF CONSTRUCTION SHALL BE REPAIRED TO A LIKE NEW CONDITION AS PART OF CONTRACT.

12. ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO THE EXISTING CONTROLLER SHALL BE RECONNECTED TO THE NEW CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK AND UPON COMPLETION OF WORK.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ADJUSTMENT/MODIFICATION OF EXISTING IRRIGATION SYSTEM WITHIN THIS AND OTHER AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS. ALL LAYOUT SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

14. NO DISRUPTION OF THE EXISTING IRRIGATION SYSTEMS WATERING WILL BE ALLOWED DURING CONSTRUCTION. ALL ADJACENT SYSTEM SHALL MAINTAIN AUTOMATIC PROGRAMMED WATERING SCHEDULES THROUGHOUT CONSTRUCTION.

15. PRIOR TO BID CONTRACTOR SHALL OBTAIN EXISTING IRRIGATION AS-BUILT RECORD DRAWINGS FOR ADJACENT PARKING LOT 10 IRRIGATED AREAS PRIOR TO STARTING WORK. ALL EXISTING IRRIGATION EQUIPMENT LOCATION□SIZES□AND CONDITIONS SHALL BE VERIFIED IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE AT START OF WORK.

16. WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS□THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED□THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

NOTE□
"CONTRACTOR TO REPAIR OR REPLACE ALL LANDSCAPE AND IRRIGATION MISSING OR NOT WORKING TO A FULLY FUNCTIONING SYSTEM WITH 100□ COVERAGE". ALL EXISTING SYSTEMS SHALL BE REPAIRED TO PREVENT OVERSPRAY OR RUNOFF ONTO SIDEWALKS OR STREETS.

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1. THE CONTRACTOR SHALL OBTAIN□COORDINATE AND PAY FOR ANY AND ALL PERMITS AND ALL INSPECTIONS AS REQUIRED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY AND ALL DAMAGES TO OPERATIONS OR WORK OF OTHER CONTRACTORS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ACTIVITIES WITH ALL AGENCIES AND OTHER TRADES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCROACHMENT INTO ADJACENT PROPERTY□R.O.W.'S□EASEMENTS□SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR OR REPLACE□AT NO ADDITIONAL COST TO THE OWNER□ANY DAMAGE TO UNDERGROUND UTILITIES THAT MAY OCCUR.
5. NOT APPLICABLE.
6. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON PLANS AT THE SITE PRIOR TO COMMENCEMENT OF ANY WORK. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO PROJECT LANDSCAPE ARCHITECT FOR DIRECTION. ANY CONTINUATION OF WORK IS AT THE CONTRACTOR'S RISK AND EXPENSE.
7. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES□STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES□STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE PROJECT LANDSCAPE ARCHITECT FOR DIRECTION.
8. BEFORE ANY WORK COMMENCES□A CONFERENCE SHALL BE HELD WITH THE COLLEGE REPRESENTATIVE□LANDSCAPE ARCHITECT AND THE CONTRACTOR□REGARDING GENERAL REQUIREMENTS OF THIS WORK.
9. INSTALL ALL IRRIGATION COMPONENTS ACCORDING TO LOCAL CODES AND ORDINANCES.
10. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ALL IRRIGATION EQUIPMENT DOWNSTREAM OF THE POINT OF CONNECTION (P.O.C.)
11. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
12. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS (INCLUDING EXISTING AND/OR NEW PLANT MATERIAL)□GRADE DIFFERENCES OR DIFFERENCES IN THE AREA'S DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED□THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
13. THE WORK SHOWN ON THESE PLANS IS DIAGRAMMATIC□ALL ITEMS□I.E. CONTROLLERS□VALVES□MAINLINES□SLEEVES□WIRES□IRRIGATION HEADS□ETC. ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY. DO NOT SCALE DIMENSIONS. DETAIL DRAWINGS MAY CLARIFY LOCATIONS OF SOME ITEMS. THE CONTRACTOR SHALL NOT LOCATE ANY ITEMS WHERE IT IS OBVIOUS THAT THEY ARE IN CONFLICT WITH UNDERGROUND UTILITIES□STRUCTURES□OTHER IMPROVEMENTS□OR VEHICULAR OR PEDESTRIAN SAFETY CONSIDERATIONS.
14. CONTROLLER LOCATIONS ARE APPROXIMATE. FINAL LOCATION OF THE AUTOMATIC CONTROLLER AND THE BACKFLOW DEVICE SHALL BE APPROVED BY THE OWNER AND THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
15. ALL CONSTANT PRESSURE LINES SHALL BE TESTED FOR 3 HOURS UNDER A HYDROSTATIC PRESSURE OF 150 POUNDS PER SQUARE INCH AND BE PROVEN WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS. HYDROSTATIC TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE LANDSCAPE ARCHITECT□CITY PUBLIC WORKS INSPECTOR OR□IF APPROVED BY LANDSCAPE ARCHITECT□CONTRACTOR MAY E-MAIL DIGITAL PHOTOGRAPHS OF THE PRESSURE GAUGE TO THE LANDSCAPE ARCHITECT AT BEGINNING AND END OF TEST PERIOD.
16. 120-VOLT ELECTRICAL POWER OUTLET AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE PROVIDED PER THE ELECTRICAL ENGINEER'S PLANS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ELECTRICAL SERVICE WITH THE GENERAL CONTRACTOR AND TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL OUTLET TO THE AUTOMATIC CONTROLLER.
17. ALL LOCAL LAWS□RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR. □□□//□□□.lb□□□r.□r□/□□□/d□□□l/□l□□/□□□l□/r□l□□r□□05.□d□
18. BACKFLOW DEVICE SHALL BE INSTALLED IN GROUND COVER AREA WHEREVER POSSIBLE. FINAL LOCATION SHALL BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND MAY VARY FROM THAT INDICATED ON THE DRAWINGS.
19. QUICK COUPLER VALVES□CONTROL VALVES□AND SHUT-OFF VALVES SHALL BE INSTALLED IN GROUND COVER AREAS WHEREVER POSSIBLE.
20. PIPING AND WIRE CONDUIT INSTALLATION UNDER PAVING SHALL BE INSTALLED IN SCH 40 PVC SLEEVES□AS CALLED OUT ON PLANS□OR AS PER LOCAL CODES AND MUST BE COORDINATED WITH THE GENERAL CONTRACTOR AND CONTRACTORS OF ALL VARIOUS TRADES THAT MAY BE INVOLVED TO ELIMINATE PROBLEMS THAT MAY ARISE FROM INACCESSIBILITY OR DAMAGE TO ANOTHER TRADE'S WORK. PIPING AND WIRE CONDUIT PENETRATIONS THROUGH EXISTING WALLS SHALL BE CORE DRILLED AND SLEEVED PER ABOVE□UNLESS AN EXISTING ~~SLEEVE IS AVAIL~~ABLE FOR RE-USE WHICH WILL NOT SIGNIFICANTLY AFFECT THE SYSTEM DESIGN. PER DETAIL Y□SHEET L7.20. (1)
21. USE CHECK ~~VALVES AS RE~~QUIRED TO ELIMINATE LOW HEAD DRAINAGE.
22. THE CONTRACTOR SHALL INSTALL KBI SERIES ANTI-DRAIN VALVES ON ALL LATERALS IN AREAS WHERE SLOPE OF GRADE EXCEEDS 4□1□WHERE POST VALVE SHUT-OFF DRAINING OF THE IRRIGATION OCCURS□OR AS DIRECTED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
23. THE CONTRACTOR SHALL ONLY APPLY SUFFICIENT WATER TO PROMOTE HEALTHY GROWTH OF PLANT MATERIAL. AT NO TIME SHALL THE CONTRACTOR APPLY WATER AT A RATE OF FREQUENCY WHICH CAUSES RUNOFF OR OVER-SATURATION OF THE SOIL.
24. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO ADJACENT PAVING□WALLS OR OTHER HARDSCAPE ELEMENTS TO THE EXTENT POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND ADJUSTING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING FLOW FOR EACH SYSTEM.
25. WHEN RADIUS OF SPRINKLER HEADS AS REQUIRED FOR PROPER COVERAGE IS LESS THAN RADIUS SHOWN ON LEGEND□THE CONTRACTOR SHALL EQUIP SPRINKLER HEAD WITH A PRESSURE COMPENSATING SCREEN (PCS) FOR LOW FLOW AND RADIUS CONTROL.
26. USE ADJUSTABLE ARC NOZZLES FOR ALL HEADS LOCATED IN AREAS WHERE A STANDARD ARC PATTERN SPRAYS OVER ONTO ADJACENT PAVING□WALLS OR OTHER HARDSCAPE ELEMENTS. ADJUSTABLE ARC NOZZLE SHOULD HAVE THE SAME RADIUS OF THROW AS THE NOZZLE BEING REPLACED.
27. NO OVERSPRAY OR LOW HEAD DRAINAGE SHALL BE ALLOWED.
28. WHEN VERTICAL OBSTRUCTIONS (LIGHT POLES□FIRE HYDRANTS□TREES□ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE□THE CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
29. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWING. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED□BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE IMMEDIATELY UPON REJECTION.
30. ALL ELECTRICAL CONTROL WIRE SHALL BE DIRECT BURIAL□□14 UL APPROVED□IN AN 18" DEEP TRENCH□INSTALLED UNDERNEATH THE MAINLINE PIPE WHEN RUN IN THE SAME TRENCH. WIRE CONNECTORS SHALL BE PENTITE OR DRI-SPLICE ONLY. EXTRA HOT WIRE - 2 PER EACH GROUP OF 5 WIRES - LABEL ALL SPARE WIRES AT BOTH ENDS. COLORS FOR CONTROL WIRE SHALL BE AS FOLLOWS□
   A. COMMON WIRE - WHITE
   B. HOT WIRE - BLACK
   C. EXTRA COMMON WIRE□MINIMUM 3 EACH DIRECTION AND ONE TO EACH LEG OF MAINLINE FROM POC PER CONTROLLER - WHITE WITH ORANGE STRIPE (DIFFERENT STRIPE COLOR PER CONTROLLER)
31. ALL AUTOMATIC CONTROLLER PROGRAMS MUST BE SET TO OPERATE BETWEEN THE HOURS OF 10 P.M. AND 6 A.M.
32. THE ENTIRE SPRINKLER SYSTEM SHALL BE GUARANTEED BY THE CONTRACTOR AS TO MATERIAL AND WORKMANSHIP□INCLUDING THE SETTLING OF BACKFILLED AREAS AND TRENCHES FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE OF THE WORK. SHOULD ANY OPERATION DIFFICULTIES IN CONNECTION WITH THE SPRINKLER SYSTEM DEVELOP WITHIN THE SPECIFIED GUARANTEE PERIOD□WHICH IN THE OPINION OF THE OWNER MAY BE DUE TO INFERIOR MATERIAL AND/OR WORKMANSHIP□SAID DIFFICULTIES SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.
33. THE CONTRACTOR SHALL AT ALL TIMES PROTECT HIS WORK FROM DAMAGE AND THEFT AND REPLACE ALL DAMAGED OR STOLEN PARTS AT HIS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE OWNER.
34. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT EACH POINT OF CONNECTION. THE CONTRACTOR SHALL VERIFY WATER PRESSURE IN THE FIELD PRIOR TO CONSTRUCTION TO DETERMINE IF IT IS SUFFICIENT TO OPERATE SYSTEMS AS DESIGNED. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE PROJECT LANDSCAPE ARCHITECT. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION□THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
35. AFTER INSTALLATION OF THE IRRIGATION SYSTEM IS COMPLETED□THE CONTRACTOR SHALL PERFORM A COVERAGE TEST IN THE PRESENCE OF THE LANDSCAPE ARCHITECT AND CITY PUBLIC WORKS INSPECTOR TO DETERMINE IF THE IRRIGATION COVERAGE FOR PLANTING AREAS IS ADEQUATE AND COMPLETE. FURNISH ALL MATERIALS AND PERFORM ALL WORK REQUIRED TO CORRECT ANY INADEQUACIES OF COVERAGE DUE TO DEVIATIONS FROM THE PLANS OR BECAUSE DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS WERE NOT BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

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1. IRRIGATION PLANS ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. ALL IRRIGATION EQUIPMENT□SPRINKLERS AND PIPE ARE TO BE INSTALLED IN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE. THE IRRIGATION CONTRACTOR SHALL ENSURE NO OVERSPRAY ONTO HARDSCAPE□STREETS□WALLS OR ANY OTHER HARDSCAPE / STRUCTURE.

2. MAINLINE SHOWN WITHIN PAVING FOR DRAWING CLARITY ONLY□ACTUAL MAINLINE LOCATION TO BE A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.

3. OVERHEAD IRRIGATION SHALL NOT BE PERMITTED WITHIN 24 INCHES OF ANY NON-PERMEABLE SURFACE□(PER STATE ORDINANCE AB 1881.) ABSOLUTELY NO OVERSPRAY OR LOW HEAD DRAINAGE IS ALLOWED.

4. IRRIGATION SLEEVES SHOWN FOR MAJOR STREET AND DRIVEWAY CROSSINGS FOR CLARITY ONLY. CONTRACTOR SHALL INSTALL SLEEVING BELOW ALL PAVING□HARDSCAPE□ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.

5. ALL PIPING AND WIRE SHALL BE SLEEVED UNDER PAVING. ALL SLEEVES TO BE MINIMUM 2X DIAMETER OF PIPE SLEEVES. ALL MAINLINE SHALL BE ACCOMPANIED WITH A MINIMUM 2-INCH DIAMETER WIRE SLEEVE. SLEEVING TO EXTEND MINIMUM 12 INCHES BEYOND PAVING.

6. ALL LEAD WIRES TO BE □14 GAUGE□AND BLACK IN COLOR. ALL COMMON WIRE TO BE □14 GAUGE AND WHITE WITH COLORED STRIPE. FOR MULTIPLE CONTROLLERS USE DIFFERING COLOR PER CONTROLLER.

7. TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN PAVING AND BUILDINGS FOR DRAWING CLARITY ONLY□ACTUAL LOCATION TO BE WITHIN PLANTER. BUBBLERS SHALL BE ALIGNED WITH TREES AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK.

8. ELECTRIC CONTROL VALVES AND ISOLATION VALVE LOCATIONS ON THIS DRAWING ARE APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE OUT EACH ELECTRICAL CONTROL VALVE AND ISOLATION VALVE LOCATION FOR REVIEW AND APPROVAL BY OWNER PRIOR TO INSTALLATION OF ALL VALVES. FINAL LOCATION AND EXACT POSITIONING FOR ELECTRIC CONTROL VALVES AND ISOLATION VALVES SHALL BE DETERMINED BY THE OWNER. MINOR MODIFICATIONS OF ELECTRIC CONTROL VALVES AND ISOLATION VALVE LOCATIONS AS REQUESTED BY THE OWNER SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. FAILURE TO OBTAIN OWNER'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE OWNER DIRECTED REVISIONS AT NO ADDITIONAL COST TO THE OWNER. IN GENERAL□UNLESS OTHERWISE DIRECTED BY OWNER□ALL VALVES SHALL BE INSTALLED THREE FEET FROM EDGE OF HARDSCAPE□WALK OR CURB IN SHRUB PLANTING AREAS.

COLOR CHART NOTE:
AS A REQUIREMENT THE AUTOMATIC CONTROLLER SHALL CONSIST OF A NEATLY DRAWN 11"□17" LAMINATED IRRIGATION PLAN AND COLORED ZONE MAP LAYOUT CHART. LAYOUT CHART SHALL BE COLOR CODED INDICATING LOCATION OF ALL CONTROLS□PIPING□SLEEVES□HEADS (INCLUDING TYPE)□VALVES AND CONNECTION TO WATER SERVICE.

MAINTENANCE SCHEDULE□

1) LANDSCAPES SHALL BE MAINTAINED TO ENSURE WATER EFFICIENCY FOR 90 DAYS FROM DATE OF SUBSTANTIAL COMPLETION OR LANDSCAPE ACCEPTANCE□WHICHEVER IS LATER. A REGULAR MAINTENANCE SCHEDULE SHALL INCLUDE BUT NOT LIMITED TO CHECKING□ADJUSTING□CLEANING AND REPAIRING EQUIPMENT□RESETTING THE AUTOMATIC CONTROLLER□AERATING AND DETACHING TURF AREAS□REPLENISHING MULCH□FERTILIZING□PRUNING□AND WEEDING IN ALL LANDSCAPE AREAS. PER SPECIFICATION SECTION 329300.19

2) REPAIR OF IRRIGATION EQUIPMENT SHALL BE DONE WITH THE ORIGINALLY SPECIFIED MATERIALS OR THEIR APPROVED EQUIVALENTS.

NOTE□CONTRACTOR TO PERFORM PRESSURE TEST PRIOR TO START OF CONSTRUCTION.

FOR IRRIGATION PLAN - SEE SHEETL5.10
FOR FOR IRRIGATION NOTES - SEE SHEET L6.20
FOR IRRIGATION DETAILS - SEE SHEETS L7.10 - L7.30

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SEALS / APPROVALS

PROJECT TITLE
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LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY RLA

CHECKED BY RLA

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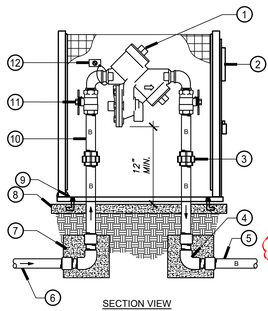
SHEET TITLE
IRRIGATION NOTES

SHEET NUMBER
L6.20

ADDENDUM#1



SECTION VIEW

LEGEND:

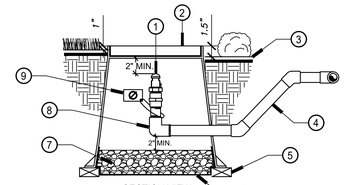
1. R/P DEVICE PAINTED PURPLE FOR RECYCLED WATER USE - SEE LEGEND FOR SIZE AND TYPE.
2. BACKFLOW ENCLOSURE MOUNTED ON CONCRETE PAD::SECURED WITH PADLOCK.
3. BRASS UNION::2 REQ.
4. BRASS ELL (TYP).
5. SCH. "K" HARD COPPER MAINLINE TO IRRIGATION SYSTEM.
6. SCH. "K" HARD COPPER MAINLINE FROM METER.
7. 12"::12"::12" CONCRETE THRUST BLOCKS- TWO REQUIRED.
8. CONCRETE SLAB - SEE NOTE BELOW.
9. (4) ANCHOR ROD (TYPICAL). 1
10. BRASS RISER - LENGTH AS REQUIRED::4 REQ.
11. BRASS BALL VALVE.
12. PURPLE PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.

NOTES:

A. CONCRETE SLAB SHALL BE MINIMUM 6" THICK::18" WIDE::AND EXTEND MINIMUM 8" PAST THE BACKFLOW ASSEMBLY PIPING.
B. IF BACKFLOW ENCLOSURE IS SPECIFIED IN THE LEGEND::THE CONCRETE SLAB SHALL BE THE SIZE REQUIRED BY THE MANUFACTURER.
C. BACKFLOW PREVENTION DEVICE ASSEMBLY SHALL BE INSTALLED IN ACCORDANCE TO GOVERNING CODES AND ORDINANCE.
D. WRAP SUBSURFACE BRASS PIPING WITH 10 MILL UPC PIPE WRAP.
E. PROVIDE 6" CLEARANCE ALL AROUND ENCLOSURE. SLOPE TO DRAIN AWAY AND FINISH WITH 1/4" ROUND OVER.
F. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS. PROVIDE ADEQUATE CLEARANCE FOR MAINTENANCE.
G. BACKFLOW TO BE PAINTED PURPLE IN COLOR.

(J) BACKFLOW DEVICE

NOT TO SCALE



SECTION VIEW

LEGEND:

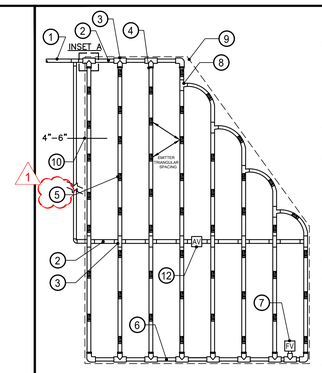
1. DRIP SYSTEM AIR RELEASE VALVE::SEE LEGEND FOR TYPE. INSTALLED ON SCH. 40 PVC THREADED COUPLING WITH A 3/4" SCH. 80 NIPPLE::LENGTH AS REQUIRED TO LOCATE VALVE 2" FROM TOP OF VALVE BOX.
2. (PURPLE) "RECYCLED WATER" SIX INCH ROUND PLASTIC VALVE BOX::HEAT BRAND "ARV" ONTO LID.
3. FINISHED GRADE.
4. (PURPLE) "RECYCLED WATER" PVC PIPE FROM DISCHARGE HEADER::1/2" SCH 40::LENGTH AS REQUIRED.
5. NOMINAL SIZE SOLID BRICK SUPPORTS (3 REQUIRED - EQUALLY SPACED).
6. LANDSCAPE FABRIC.
7. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
8. PVC SCH 40 ELBOW (S::T) OR TEE ::3/4" SIZE WITH 3/4" ::1/2" SCH 40 PVC SLIP BUSHING.
9. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ::"RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.

NOTES:

A. USE SCH 40 PVC 45 DEGREE ELLS TO TRANSITION TO DRIPLINE HEADER DEPTH.
B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN GROUNDCOVER / SHRUB AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS::TYPICAL.
D. INSTALL AIR RELIEF VALVE 18" FROM PAVING.

(G) DRIP AIR RELIEF VALVE

NOT TO SCALE

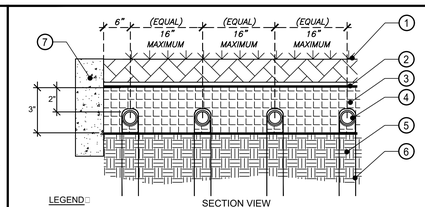


LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE VALVE KIT.
2. PVC PIPE SUPPLY HEADER - SEE PLAN FOR SIZE.
3. SCH 40 PVC TEE S::S::T OR ELL:: LINE SIZE.
4. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
5. IN-LINE DRIP TUBING WITH TRIANGULAR SPACING EMITTERS 12 INCH ON CENTER::ROW SPACING 14-16 INCHES ON CENTER FOR SHRUB AREAS AND 12 INCHES MAXIMUM FOR TURF AREAS. - SEE LEGEND FOR TYPE. INSTALL WITH 6" GALVANIZED STEEL WIRE STAKES FOUR (4) FEET ON CENTER.
6. PVC PIPE FLUSH EXHAUST MANIFOLD.
7. COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD:: PLUMBED TO EXHAUST HEADER PVC PIPE AT LOW / END OF DRIP ZONE::TYP. INSTALL "ORANGE" COLOR FOR DOMESTIC WATER AND "PURPLE" FOR RECYCLED WATER - SEE LEGEND FOR TYPE.
8. DRIP FITTING - SEE LEGEND FOR TYPE::TYP.
9. PLANTER AREA PERIMETER.
10. PERIMETER DRIPLINE PIPE TO BE INSTALLED 4"-6" FROM PERIMETER OF PLANTER AREA:: MINIMUM 12" DISTANCE FROM BUILDING.
11. PVC PIPE SCH 40 RISER::LENGTH AS REQUIRED.
12. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)

(D) DRIPLINE LAYOUT (TYP)

NOT TO SCALE



SECTION VIEW

LEGEND:

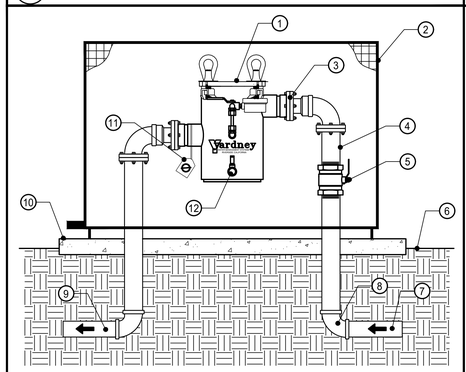
1. BARK MULCH FOR SHRUB AREA PLANTING::SEE PLANTING PLAN FOR DEPTH AND TYPE.
2. FINISHED GRADE.
3. AMENDED SOIL. BRING SOIL LEVEL MINIMUM 3" BELOW FINISHED GRADE PRIOR TO DRIP TUBING INSTALLATION.
4. IN-LINE DRIP TUBING - SEE LEGEND FOR TYPE::EMITTER AND ROW SPACING.
5. AMENDED SOIL AS PER LANDSCAPE DRAWINGS.
6. 6" WIRE STAKES FOUR (4) FEET ON CENTER - SEE LEGEND FOR TYPE.
7. HARDSCAPE / CURB / PAVING.

NOTES

A. TO INSURE EVEN PARALLEL AND LEVEL TUBING ROWS IT IS RECOMMENDED THAT THE SOIL LEVEL IN THE PLANTER AREAS BE BROUGHT TO MINIMUM 3"- 4" BELOW FINISHED GRADE AND PROPERLY COMPACTED AS PER THE LANDSCAPED DRAWINGS PRIOR TO THE INSTALLATION OF THE TUBING.
B. INSTALL TUBING ROWS A MAXIMUM 16" ROW SPACING. SECURE TO GRADE USING 6" GALVANIZED WIRE HOOP STAKES AT MAXIMUM 4 FEET ON CENTER SPACING.
C. BACKFILL FINAL 2" - 3" OF SOIL AFTER INSTALLATION OF TUBING.
D. DRIP TUBING SHALL BE INSTALLED WITH EMITTERS TRIANGULAR SPACED.
E. INSTALL PERIMETER TUBING MAXIMUM 6" FROM PERIMETER EDGE FOR GROUNDCOVER AREAS OR AT FIRST LINE OF SHRUBS.
F. INSTALL PARALLEL TO SLOPE AT ALL TIMES.
G. CONTRACTOR SHALL DETERMINE MINIMUM ROW SPACING IN THE FIELD AFTER REVIEW OF PLANT SPACING FOR EACH PLANTER.
H. EACH AND EVERY SHRUB SHALL RECEIVE WATER FROM A MINIMUM OF TWO INLINE EMITTERS.
I. AREAS OF TIGHTLY SPACED GROUNDCOVER WILL REQUIRE 12" OR CLOSER ROW SPACING.
J. FOR ANY 'SINGLE' OR' DOUBLE' ROW TYPE PLANTINGS::INSTALL DRIP TUBING ON BOTH SIDES OF THE SHRUB ROW TO IRRIGATE SHRUBS ON EITHER SIDE.
K. DUE TO SOIL STRATA DIFFERENCES AND POSSIBLE COMPACTION CONTRACTOR SHALL FIELD VERIFY PRIOR TO STARTING WORK AND BEFORE BACKFILLING THAT THE FINAL LAYOUT AND ROW SPACING WILL PROVIDE ADEQUATE WATER TO ALL PLANTS.

(A) DRIPLINE LAYOUT (TYP)

NOT TO SCALE

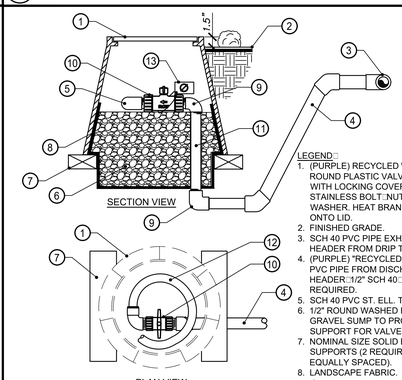


LEGEND:

1. BASKET STRAINER::REFER TO LEGEND FOR TYPE.
2. LOCKABLE ENCLOSURE::REFER TO LEGEND FOR TYPE. SECURE IN PLACE WITH (4) ANCHORS PER CAGE. 1
3. FLANGE::(SIZE VARIES).
4. BRASS NIPPLES (LENGTH VARIES::3 REQUIRED::LINE SIZE)
5. BRASS / BRONZE BALL VALVE.
6. FINISH GRADE.
7. BRASS / COPPER MAINLINE FROM WATER SOURCE.
8. BRASS ELBOWS (T::T::2 REQUIRED::LINE SIZE)
9. BRASS / COPPER MAINLINE TO MASTER VALVE AND FLOW SENSOR.
10. 6" THICK CONCRETE PAD.
11. PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
12. 1/2" MPT DRAIN VALVE.

(K) BASKET STRAINER

NOT TO SCALE



SECTION VIEW

PLAN VIEW

LEGEND:

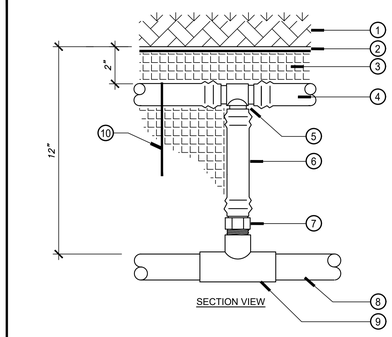
1. (PURPLE) RECYCLED WATER 10" ROUND PLASTIC VALVE BOX WITH LOCKING COVER::USE STAINLESS BOLT::NUT::AND WASHER. HEAT BRAND "FV" ONTO LID.
2. FINISHED GRADE.
3. SCH 40 PVC PIPE EXHAUST HEADER FROM DRIP TUBING.
4. (PURPLE) "RECYCLED WATER" PVC PIPE FROM DISCHARGE HEADER::1/2" SCH 40::LENGTH AS REQUIRED.
5. SCH 40 PVC ST, ELL, T::S.
6. 1/2" ROUND WASHED PEA GRAVEL SUMP TO PROVIDE SUPPORT FOR VALVE ASSEMBLY.
7. NOMINAL SIZE SOLID BRICK SUPPORTS (2 REQUIRED - EQUALLY SPACED).
8. LANDSCAPE FABRIC.
9. ½" SCH. 40 PVC 90 DEGREE ELL T::T. (2 REQUIRED)
10. 1/2" PVC BALL VALVE - F::F TO REST ON GRAVEL SUMP.
11. SCH 80 PVC NIPPLE 1/2" :: LENGTH AS REQUIRED.
12. 18" X 1/2" I.D. FLEX PVC HOSE - WELD INTO SOCKET OF ELL FITTING.
13. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ:: "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.

NOTES:

A. USE 45 DEGREE ELLS TO TRANSITION TO DRIP SYSTEM HEADER DEPTH.
B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN GROUNDCOVER / SHRUB AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS::TYPICAL.
D. FLUSH VALVES FOR TURF AREAS SHALL BE PLACED IN ADJACENT SHRUB PLANTER WHEN POSSIBLE::AVOID PLACING VALVES IN TURF AREAS.
E. INSTALL FLUSH VALVE 18" FROM PAVING.
F. INSTALL FLUSH / BALL VALVE IN THE OPEN POSITION UNTIL SYSTEM IS THOROUGHLY FLUSHED OF ANY DEBRIS.
G. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION / COLLAPSE.

(H) MANUAL DRIP FLUSH VALVE

NOT TO SCALE



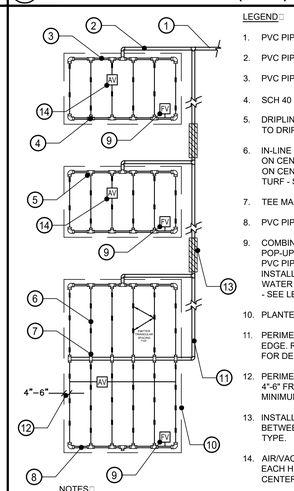
SECTION VIEW

LEGEND:

1. BARK MULCH FOR SHRUB AREA PLANTING::SEE PLANTING PLAN FOR DEPTH AND TYPE.
2. FINISHED GRADE.
3. AMENDED SOIL.
4. DRIP TUBING - SEE LEGEND FOR TYPE.
5. DRIPLINE BARB INSERT FITTINGS - SEE LEGEND FOR TYPE.
6. BLANK POLY TUBING - LENGTH AS REQUIRED.
7. DRIP TUBING MALE ADAPTER.
8. PVC LATERAL LINE PIPING INLET OR EXHAUST MANIFOLD.
9. SCH 40 PVC TEE S::S::T::LINE SIZE BY ½".
10. 6" WIRE STAKES FOUR (4) FEET ON CENTER.

(E) DRIPLINE CONNECTION

NOT TO SCALE



LEGEND:

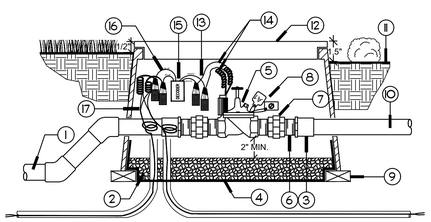
1. PVC PIPE LATERAL LINE FROM DRIP ZONE KIT.
2. PVC PIPE SUPPLY MANIFOLD.
3. PVC PIPE INLET HEADER.
4. SCH 40 PVC TEE S::S::T::LINE SIZE BY ½".
5. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
6. IN-LINE DRIP TUBING WITH EMITTERS 12 INCH ON CENTER::MAXIMUM ROW SPACING 12"-14" ON CENTER IN SHRUB AREAS AND 10"-12" IN TURF - SEE LEGEND FOR TYPE.
7. TEE MALE ADAPTER.
8. PVC PIPE FLUSH EXHAUST MANIFOLD.
9. COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD::PLUMBED TO EXHAUST HEADER PVC PIPE AT LOW / END OF DRIP ZONE::TYP. INSTALL "ORANGE" COLOR FOR DOMESTIC WATER AND "PURPLE" FOR RECYCLED WATER - SEE LEGEND FOR TYPE.
10. PLANTER AREA PERIMETER.
11. PERIMETER DRIPLINE LATERALS 18" FROM EDGE. REFER TO PIPE INSTALLATION DETAIL FOR DEPTH::SEE PLAN FOR SIZE.
12. PERIMETER DRIPLINE PIPE TO BE INSTALLED 4"-6" FROM PERIMETER OF PLANTER AREA:: MINIMUM 12" DISTANCE FROM BUILDING.
13. INSTALL PVC LATERAL LINE WITHIN SLEEVES BETWEEN ALL PLANTERS - SEE LEGEND FOR TYPE.
14. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)

NOTES:

A. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
B. DRIP EMITTER LAYOUT SHALL BE TRIANGULAR SPACED INSTALLED WITH 6" WIRE STAKES FOUR (4) FEET ON CENTER.

(B) DRIPLINE LAYOUT (TYP)

NOT TO SCALE



SECTION VIEW

LEGEND

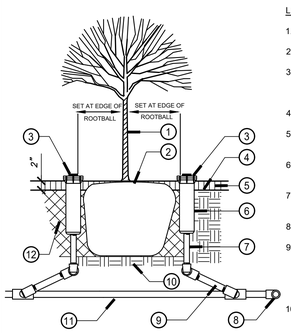
1. PVC MAINLINE SEE LEGEND FOR TYPE
2. 6" MINIMUM DEPTH PEA GRAVEL
3. SCH 80 PVC FEMALE ADAPTER (2 REQ.)
4. LANDSCAPE FABRIC
5. MASTER CONTROL VALVE SEE LEGEND FOR TYPE
6. SCH. 80 PVC NIPPLE LENGTH AS REQUIRED (4 REQ.)
7. SCH. 80 PVC UNION
8. CHRISTY'S RECYCLED WATER WARNING TAG AND VALVE STATION ::I.D. TAG ATTACHED TO VALVE BONNET BOLT.
9. NOMINAL SIZE SOLID BRICK (4 REQ.)
10. PVC MAINLINE TO FLOW SENSOR
11. FINISHED GRADE
12. PLASTIC RECTANGULAR VALVE BOX WITH PURPLE LOCKING COVER::USE STAINLESS BOLT:: NUT::AND WASHER. HEAT BRAND "MV" & CONTROLLER LETTER ONTO LID.
13. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N::PER CALSENSE SPEC. (4 REQ.)
14. WHITE WIRES TO SOLENOID
15. DECODER (ADDRESS = "MV")
16. BLUE WIRES TO 2-WIRE COMMUNICATION PATH
17. 2-WIRE COMMUNICATION PATH WITHIN 1-1/4" PVC CONDUIT / SWEEP ELL.

NOTES::

A. WIRES MUST EXTEND MINIMUM 24" ABOVE VALVE BOX FOR SERVICE.
B. SET TOP OF VALVE BOX 1/2" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUND COVER AND SHRUB AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS TYPICAL.
D. USE SCH 80 PVC FITTINGS.
E. INSTALL 45 DEGREE ELLS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION ABOVE MAINLINE DEPTH.

(L) MASTER VALVE

NOT TO SCALE



SECTION VIEW

LEGEND:

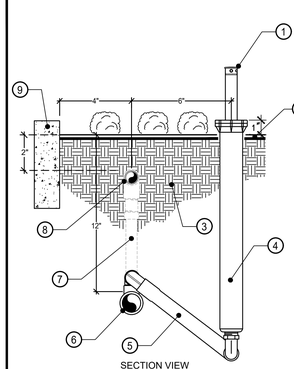
1. TREE TRUNK.
2. TREE ROOTBALL.
3. IRRIGATION POP-UP HEAD WITH BUBBLER NOZZLE - SEE LEGEND FOR TYPE.
4. FINISHED GRADE.
5. 2" LAYER OF MULCH::PER PLANTING PLANS.
6. IRRIGATION POP-UP HEAD - SEE LEGEND FOR TYPE.
7. SCH 80 PVC THREADED RISER - LENGTH AS REQUIRED.
8. PVC LATERAL::PER PLAN.
9. PRE-ASSEMBLED TRIPLE SWING JOINT::HUNTER SJ SERIES (OR APPROVED EQUAL). LAY LENGTH TO BE 6" MINIMUM::SIZE AS PER SPRINKLER OUTLET.
10. SET ROOTBALL ON UNDISTURBED NATIVE SOIL.
11. PVC SCH 40 TEE -SST OR ELL -ST ON PVC LATERAL.
12. TREE PIT::PER PLANTING DETAILS.

NOTE::

A. (2) BUBBLERS REQUIRED FOR 24" BOX TREES AND SMALLER.
(3) BUBBLERS REQUIRED FOR 36" BOX TREES.
(4) BUBBLERS REQUIRED FOR PALMS AND 48" BOX AND LARGER TREES.
B. PERCOLATION TEST TO BE DONE FOR DEEP WATERING::AND RESULTS RETURNED TO LANDSCAPE ARCHITECT.
C. PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE. ADJUST PER ROOTBALL SIZE::TYPICAL.
D. USE TEFLON TAPE ON ALL THREADED FITTINGS::TYPICAL.

(I) POP-UP TREE BUBBLER

NOT TO SCALE



SECTION VIEW

LEGEND:

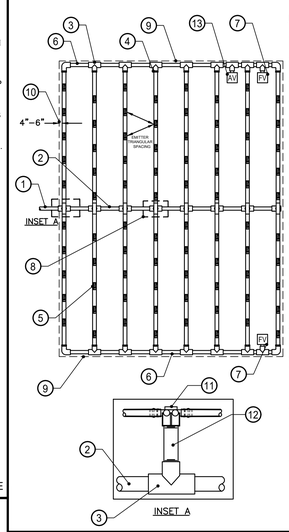
1. POP-UP DRIP INDICATOR HEAD:: WITH DRIP FLUSH NOZZLE:: - SEE LEGEND FOR TYPE.
2. FINISH GRADE. INSTALL POP-UP DRIP INDICATOR ½" ABOVE GRADE IN TURF DRIP AREAS AND 1" ABOVE GRADE IN SHRUB DRIP AREAS.
3. APPROVED AMENDED BACKFILL.
4. 12" POP-UP SPRAY HEAD - SEE LEGEND FOR TYPE.
5. MANUFACTURED SWING JOINT - HUNTER MODEL ::SJ-512 OR RAIN BIRD MODEL ::SA-125050 1/2" SWING JOINT ASSEMBLY.
6. SCH 40 PVC PIPE END FLUSH EXHAUST HEADER FROM DRIP SYSTEM::MINIMUM SIZE 1-1/4".
7. DRIP ASSEMBLY CONNECTION.
8. SUB-SURFACE IN-LINE DRIP TUBING - SEE LEGEND FOR TYPE.
9. HARDSCAPE / CURB / PAVING

NOTES::

A. AFTER COMPLETE SYSTEM FLUSH::INSTALL DRIP INDICATOR NOZZLE AND ADJUST TO FULLY CLOSED POSITION.
B. FOR POTABLE WATER INSTALL "ORANGE" COLORED FLUSH NOZZLE. FOR RECYCLED WATER INSTALL "PURPLE" COLORED FLUSH NOZZLE.
C. INSTALL POP-UP INDICATOR HEAD 10" FROM PERIMETER OF PLANTER / HARDSCAPE.
D. DISCHARGE EXHAUST HEADER SHALL BE INSTALLED 12" BELOW FINISHED SOIL GRADE::TYPICAL.
E. INSTALL MINIMUM ONE(1) DRIP INDICATOR / FLUSH ASSEMBLY PER DRIP ZONE.
E. USE TEFLON TAPE ON THREADED FITTINGS::TYPICAL. (NO LIQUID TEFLON)

NOT TO SCALE

(F) DRIP COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD



LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE VALVE KIT.
2. PVC PIPE SUPPLY MANIFOLD - SEE PLAN FOR SIZE.
3. SCH 40 PVC TEE S::S::T OR ELL:: LINE SIZE BY ½".
4. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
5. IN-LINE DRIP TUBING WITH EMITTERS 12 INCH ON CENTER:: MAXIMUM ROW SPACING 14"-16" ON CENTER FOR SHRUB AREAS AND 10"-12" FOR TURF - SEE LEGEND FOR TYPE. EMITTERS TO BE TRIANGULAR SPACING. INSTALL WITH 6" GALVANIZED STEEL WIRE STAKES FOUR (4) FEET ON CENTER.
6. PVC PIPE FLUSH EXHAUST MANIFOLD.
7. COMBINATION FLUSH VALVE / DRIP INDICATOR POP-UP HEAD:: PLUMBED TO EXHAUST HEADER PVC PIPE AT LOW / END OF DRIP ZONE::TYP. INSTALL "ORANGE" COLOR FOR DOMESTIC WATER AND "PURPLE" FOR RECYCLED WATER - SEE LEGEND FOR TYPE.
8. CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET "A"
9. PLANTER AREA PERIMETER.
10. PERIMETER DRIPLINE PIPE TO BE INSTALLED 4"-6" FROM PERIMETER OF PLANTER AREA::AND MINIMUM 12" CLEARANCE FROM BUILDING.
11. DRIP FITTING (TYPICAL) ::SEE LEGEND FOR TYPE. INSTALL STAINLESS STEEL CLAMPS ON FITTINGS FOR ANY SYSTEM THAT EXCEEDS 50 PSI.
12. ½" PVC THREADED NIPPLE:: LENGTH AS REQUIRED.
13. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)

(C) DRIPLINE LAYOUT (TYP)

NOT TO SCALE

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SEALS / APPROVALS

PROJECT TITLE

BUILDING MM - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42".

DRAWN BY RLA

CHECKED BY RLA

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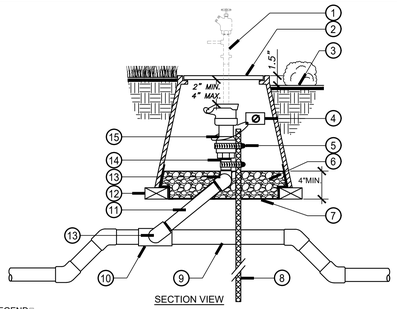
SHEET TITLE

IRRIGATION DETAILS

SHEET NUMBER

L7.10

ADDENDUM#1



SECTION VIEW

LEGEND:

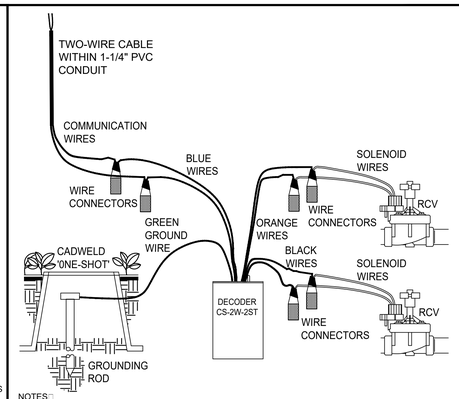
1. REMOVABLE QUICK COUPLER KEY ASSEMBLY CONNECTION. KEY MUST CLEAR VALVE BOX.:AS SHOWN.
2. (PURPLE) "RECYCLED WATER" PLASTIC 10" ROUND VALVE BOX WITH LOCKING COVER.:USE STAINLESS BOLT.:NUT.:AND WASHER. HEAT BRAND "QCV" ONTO LID MARKED FOR "RECYCLED WATER".
3. FINISHED GRADE.
4. PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
5. STAINLESS STEEL CLAMP - 2 REQUIRED.
6. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
7. LANDSCAPE FABRIC.
8. :4 REBAR - 36" MINIMUM LENGTH.
9. PVC MAINLINE - SEE LEGEND FOR TYPE.
10. PVC SCH 80 TEE OR ELL.
11. BRASS NIPPLE.:6" MINIMUM LENGTH
12. NOMINAL SIZE SOLID BRICK SUPPORTS (3 MINIMUM REQUIRED - SPACED EQUALLY.).
13. BRASS ELL - 2 REQUIRED.
14. BRASS NIPPLE.:LENGTH AS REQUIRED.
15. QUICK COUPLING VALVE WITH (PURPLE) RECYCLED WATER LOCKING CAP - SEE LEGEND FOR TYPE.

NOTES:

A. USE SCH. 80 PVC 45 DEGREE ELLS TO TRANSITION TO MAINLINE DEPTH.
B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN MULCH OR GROUNDCOVER / SHRUB AREAS.:SET ½" ABOVE FINISHED GRADE IN TURF AREAS.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS.:TYPICAL.
D. QUICK COUPLER VALVES SHALL BE OF A TYPE APPROVED FOR RECYCLED WATER USE.

(V) QUICK COUPLER VALVE

NOT TO SCALE



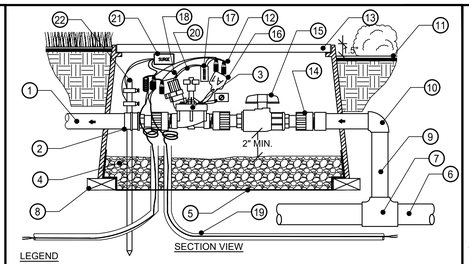
NOTES:

1. CS-2W-2ST COMES WITH A BUILT-IN SURGE PROTECTOR. REFER TO DECODER CONNECTION WIRING DIAGRAM FOR GROUNDING INSTRUCTIONS.
2. GROUNDING SHALL BE PER MANUFACTURES RECOMMENDATIONS.
3. WIRE SPLICES ARE THE WEAK LINK OF ANY ELECTRICAL CIRCUIT. IT IS ESPECIALLY IMPORTANT TO MAKE PROPER JOINTS IN IRRIGATION SYSTEMS BECAUSE THE JOINTS ARE EXPOSED TO WET AND DAMP ENVIRONMENTS THAT CAN CAUSE CORROSION OF THE COPPER CONDUCTOR.:AND PREMATURE FAILURE. CALSENSE RECOMMENDS THE STRICT USE OF 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N, AS MANUFACTURED BY THE 3M COMPANY.:FOR ALL WIRE CONNECTIONS.

NOT TO SCALE

(S) CS-2W-2ST DECODER CONNECTION

NOT TO SCALE



LEGEND

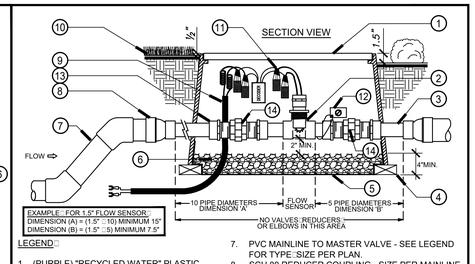
1. PVC LATERAL LINE PIPE
2. SCH 80 PVC FEMALE ADAPTER
3. REMOTE CONTROL VALVE. SEE LEGEND FOR TYPE
4. PEA GRAVEL MINIMUM 1 CUBIC FOOT
5. LANDSCAPE FABRIC
6. PVC MAINLINE.:DEPTH PER SPECS.
7. SCH 80 PVC TEE
8. NOMINAL SIZE SOLID BRICK (4 REQ.)
9. SCH. 80 PVC NIPPLE LENGTH AS REQUIRED
10. SCH 80 PVC ELL
11. FINISHED GRADE
12. CONTROL WIRES WITH EPOXY FILLED CONNECTIONS PROVIDE 24" COIL OF WIRE AT VALVE
13. PLASTIC RECTANGULAR VALVE BOX WITH PURPLE LOCKING COVER.:USE STAINLESS BOLT.:NUT.:AND WASHER. HEAT BRAND "RCV" & CONTROLLER STATION NUMBER ONTO LID.
14. DURA MANIFOLD SYSTEM ADAPTER SWIVEL COUPLING (SWIVEL .:O-RING MIPT).:THREE REQUIRED.:SIZE PER VALVE.
15. PVC BALL VALVE.:LINE SIZE.
16. CHRISTY'S RECYCLED WATER WARNING TAG AND VALVE STATION .:I.D. TAG ATTACHED TO VALVE BONNET BOLT.
17. DECODER (BLUE CASE)
18. BLUE WIRES TO 2-WIRE COMMUNICATION PATH
19. 2-WIRE COMMUNICATION PATH WITHIN 1-1/4" PVC CONDUIT / SWEEP ELL. SEAL CONDUIT ENDS WITH EXPANDING SPRAY FOAM SEALANT.
20. WHITE WIRES TO SOLENOID
21. SURGE ARRESTOR (YELLOW CASE)
22. 5/8" DIA. X 8' COPPER CLAD GROUND ROD DRIVEN INTO GROUND WITH TOP OF ROD A MIN. OF 6" ABOVE GRADE CONNECT WITH CADWELD 'ONE-SHOT' GROUNDING CONNECTOR. 50 OHMS OR LESS. INSTALL WHEN SHOWN ON PLANS.

NOTES:

A. WIRES MUST EXTEND MINIMUM 24" ABOVE VALVE BOX FOR SERVICE.
B. SET TOP OF VALVE BOX 1/2" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUND COVER AND SHRUB AREAS.

(P) REMOTE CONTROL VALVE (DECODER)

NOT TO SCALE



LEGEND:

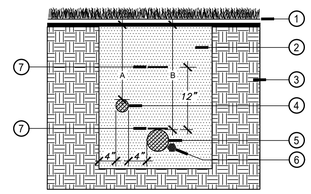
1. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR VALVE BOX WITH BOLT DOWN COVER.:USE STAINLESS BOLT.:NUT.:AND WASHER - HEAT BRAND "FS" ONTO LID.
2. FLOW SENSOR - SEE LEGEND FOR SIZE AND TYPE.
3. MAINLINE - SIZE PER FLOW SENSOR.:LENGTH AS REQUIRED PER MANUFACTURE RECOMMENDATIONS.
4. NOMINAL SIZE SOLID BRICK (4 REQUIRED.:ONE AT EACH CORNER).
5. LANDSCAPE FABRIC.
6. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
7. PVC MAINLINE TO MASTER VALVE - SEE LEGEND FOR TYPE.:SIZE PER PLAN.
8. SCH 80 REDUCER COUPLING - SIZE PER MAINLINE AND FLOW SENSOR (2 REQUIRED).
9. 1-1/4" SCH 40 PVC WIRE CONDUIT WITH SWEEP ELBOW TO CONTROLLER LOCATION.
10. FINISHED GRADE. SET TOP OF VALVE BOX ½" ABOVE GRADE IN TURF AREAS AND 1-1/2" ABOVE GRADE IN SHRUB / GROUNDCOVER AREAS.
11. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N (4 REQ.) PROVIDE MINIMUM 24" WIRE EXPANSION COILS AT FLOW SENSOR.
12. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
13. SCH 80 PVC FEMALE ADAPTER (2 REQ.)
14. PVC SCH 80 UNION.

NOTES:

A. USE SCH 80 PVC FITTINGS.
B. SET TOP OF VALVE BOX ½" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUNDCOVER AND SHRUB AREAS.
C. SET VALVE BOX AND VALVE ASSEMBLY IN GROUNDCOVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUNDCOVER.
D. USE TEFLON TAPE ON ALL THREADED FITTINGS.:TYPICAL.
E. INSTALL 45 DEGREE ELLS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION ABOVE LATERAL LINE DEPTH.
F. INSTALL FLOW SENSOR PER MANUFACTUR'S RECOMMENDATIONS.

(M) FLOW SENSOR

NOT TO SCALE



SECTION VIEW

DIMENSION	A	B
3/4" TO 3" IN SIZE	12"	18"
4" TO 6" IN SIZE	18"	24"

LEGEND:

1. FINISHED GRADE.
2. CLEAN COMPACTED BACKFILL.
3. UNDISTURBED SOIL.
4. (PURPLE) "RECYCLED WATER" PVC LATERAL LINE PIPE.:WITH WORDS "RECYCLED WATER-DO NOT DRINK" - SEE LEGEND FOR TYPE.:SEE PLANS FOR SIZE.
5. (PURPLE) "RECYCLED WATER" PVC MAINLINE PIPE.: WITH WORDS "RECYCLED WATER-DO NOT DRINK" - SEE LEGEND FOR TYPE.:SEE PLANS FOR SIZE.
6. CONTROL WIRES. TAPE AND BUNDLE TO MAINLINE . 10' O.C.
7. TWO 3" WIDE.:(PURPLE) "RECYCLED WATER".:DETECTIBLE METALLIC MARKING TAPES CONTINUOUS ALONG MAINLINE ROUTING. ONE SHALL BE LOCATED IMMEDIATELY ON TOP OF MAINLINE AND ONE 12" ABOVE THE TOP OF MAINLINE.

NOTES:

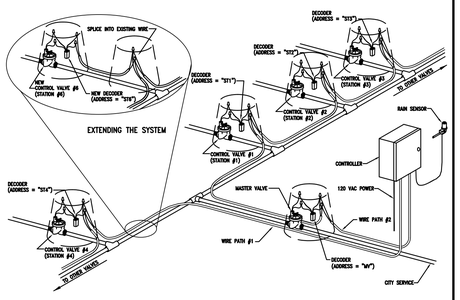
A. LINES MUST HAVE MINIMUM CLEARANCE OF 4" FROM EACH OTHER AND 24" FROM OTHER TRADES.
B. RUN WIRING UNDER MAINLINE. TAPE AND BUNDLE . 10' O.C.
C. TIE A 24" WIRE LOOP IN ALL WIRING AT CHANGES IN DIRECTION.
D. CONTRACTOR MUST ADJUST MAINLINE AROUND ALL STREET LIGHT LOCATIONS.

(W) PIPE INSTALLATION

NOT TO SCALE

STEPS TO EXTENDING THE SYSTEM:

1. TAP AND EXTEND MAIN LINE.
2. SPLICE INTO WIRE AND EXTEND.
3. PROGRAM BLANK DECODER TO NEW STATION ADDRESS.
4. INSTALL NEW VALVE AND DECODER.
5. ENTER NEW STATION .:(DECODER ADDRESS) AT CONTROLLER.

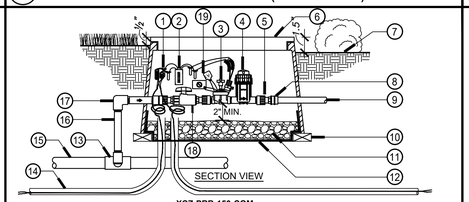


NOTES:

A. ALL WIRE CONNECTION SHALL BE MADE WITH APPROVED CONNECTORS.
B. MAKE ALL WIRE SPLICES IN VALVE BOXES.
C. LEAVE A MINIMUM OF 24" EXTRA WIRE AT ALL SPLICE POINTS.
D. MAXIMUM DISTANCE FROM DECODER TO VALVE = 100 FEET
E. INSTALL 2-WIRE CABLE WITHIN 1-1/4" PVC CONDUIT.
F. GROUND SYSTEM PER MANUFACTURE RECOMMENDATIONS.

(T) DECODER WIRING (TYPICAL)

NOT TO SCALE



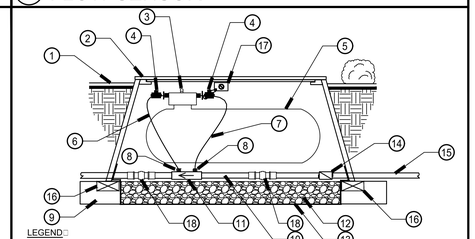
INSTALL XCZ-PRB-100-COM.:1" VALVE ASSEMBLY FOR DEMANDS (1 - 14) GPM.
INSTALL XCZ-PRB-150-COM.:1-1/2" VALVE ASSEMBLY FOR DEMANDS (15 - 35) GPM.

LEGEND:

1. CONTROL WIRES WITH EPOXY-FILLED CONNECTIONS - PROVIDE MINIMUM 24" COIL OF WIRE AT VALVE - SEE LEGEND FOR TYPE.
2. DECODER - SEE LEGEND FOR TYPE.
3. REMOTE CONTROL VALVE - SEE LEGEND FOR TYPE.
4. BASKET FILTER - SEE LEGEND FOR TYPE.
5. DURA MANIFOLD SYSTEM ADAPTER SWIVEL COUPLING (SWIVEL .:O-RING MIPT).:THREE REQUIRED.
6. PLASTIC RECTANGULAR JUMBO VALVE BOX WITH LOCKING COVER.:USE STAINLESS BOLT.:NUT.:AND WASHER. HEAT BRAND "RCV" & CONTROLLER STATION NUMBER ONTO LID.
7. FINISHED GRADE - SET TOP OF VALVE BOX ½" ABOVE GRADE IN TURF AREAS AND 2" ABOVE GRADE IN SHRUB / GROUND COVER AREAS.
8. PVC SCH 40 ELL.
9. PVC LATERAL LINE TO DRIP SYSTEM.
10. NOMINAL SIZE SOLID BRICK - 4 REQUIRED.:ONE AT EACH CORNER OF VALVE BOX.
11. PEA GRAVEL - MINIMUM 4" DEPTH WITH 2" VALVE CLEARANCE.
12. LANDSCAPE FABRIC.
13. PVC SCH 80 NIPPLE (2" LENGTH.:HIDDEN) AND PVC SCH 40 ELL.
14. 2-WIRE COMMUNICATION PATH WITHIN 1-1/4" PVC CONDUIT / SWEEP ELL.
15. PVC MAINLINE - DEPTH PER SPECIFICATIONS.
16. PVC SCH 80 NIPPLE. (LENGTH S REQUIRED)
17. PVC SCH 40 ELL.
18. PVC BALL VALVE.
19. CHRISTY'S RECYCLED WATER WARNING TAG AND VALVE STATION .:I.D. TAG ATTACHED TO VALVE BONNET BOLT.

(Q) DRIP REMOTE CONTROL VALVE (DECODER)

NOT TO SCALE



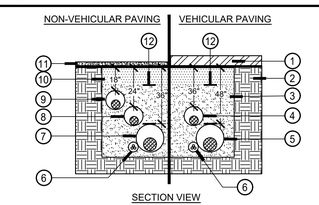
LEGEND:

1. FINISHED GRADE.
2. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR SUPER JUMBO VALVE BOX.:WITH LOCKING PURPLE COVER.:USE STAINLESS BOLT.:NUT.:AND WASHER. HEAT BRAND "FI" ONTO LID MARKED FOR "RECYCLED WATER".:SIZE PER MANUFACTURE RECOMMENDATIONS.
3. PROPORTIONING CAP WITH FEED ADJUSTMENT KNOB.
4. EZ-FLO SHUT OFF VALVES.
5. EZ-FLO FERTILIZING SYSTEM.:SEE LEGEND FOR SIZE.
6. (FERTILIZER OUT) CONNECT CLEAR TUBE TO GREEN CONNECTIONS ON PROPORTIONING CAP AND COUPLING.
7. (WATER IN) CONNECT BLACK TUBE TO BLUE CONNECTIONS ON PROPORTIONING CAP AND COUPLING.
8. 1/4" TUBING CLAMP - BOTH THE GREEN AND BLUE COUPLING TUBING CONNECTIONS.
9. APPROVED BACKFILL.
10. PVC MAIN LINE TO VALVE MANIFOLD.
11. EZ COUPLING CONNECTOR - INSTALL ACCORDING TO WATER FLOW DIRECTION ARROW.:SIZE PER MAINLINE.
12. 1/2" ROUND WASHED PEA GRAVEL (MINIMUM 4" DEPTH).
13. LANDSCAPE FABRIC.
14. INLINE THREADED BRASS CHECK VALVE.:SIZE PER MAINLINE.
15. PVC MAIN LINE FROM P.O.C EQUIPMENT.
16. NOMINAL SIZE SOLID BRICK (4 REQUIRED - ONE AT EACH CORNER OF VALVE BOX).
17. (PURPLE) "RECYCLED WATER" PLASTIC LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
18. SCH. 80 PVC UNION.:SCH. 80 PVC NIPPLE (EACH SIDE).:SCH 80 PVC FEMALE ADAPTER (2 EACH SIDE)

NOTE:
ITEMS 3.:4.:5.:6.:7 AND 8 ARE INCLUDED WITH THE EZ-FLO SYSTEM.
ITEM 11 IS PURCHASED SEPARATELY.:SIZE ITEM 11PER MAINLINE.

(N) FERTILIZING SYSTEM

NOT TO SCALE



SECTION VIEW

LEGEND:

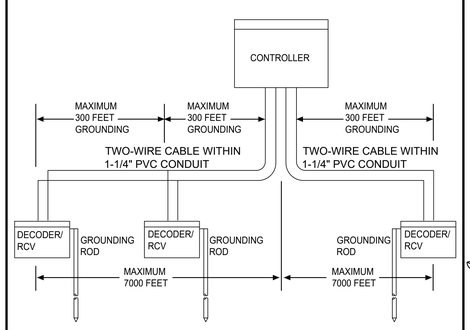
1. ROAD PAVING.
2. UNDISTURBED SOIL.
3. SAND BACKFILL.
4. LATERAL LINE SLEEVES UNDER ROADS.:(PURPLE) "RECYCLED WATER" SCH. 40 PVC PIPE.: WITH WORDS "RECYCLED WATER-DO NOT DRINK". 6" DIAMETER OR LESS = 36"COVER.
5. MAINLINE SLEEVES UNDER ROADS.:(PURPLE) "RECYCLED WATER" SCH. 40 PVC PIPE.:WITH WORDS "RECYCLED WATER-DO NOT DRINK". 6" DIAMETER OR GREATER = 48"COVER.
6. PVC SCH. 40 WIRE SLEEVE.
7. MAINLINE SLEEVES UNDER HARDSCAPE (PURPLE) "RECYCLED WATER" PVC SCH. 40 PVC PIPE.:WITH WORDS "RECYCLED WATER-DO NOT DRINK". 6" DIAMETER OR GREATER = 36"COVER.
8. LATERAL LINE SLEEVES UNDER HARDSCAPE (PURPLE) "RECYCLED WATER" PVC SCH. 40 PVC PIPE.:WITH WORDS "RECYCLED WATER-DO NOT DRINK". 4" AND GREATER DIAMETER 24"COVER.
9. LATERAL LINE SLEEVES UNDER HARDSCAPE (PURPLE) "RECYCLED WATER" PVC SCH. 40 PVC PIPE.:WITH WORDS "RECYCLED WATER-DO NOT DRINK". 2"-2.5" DIAMETER = 18"COVER.
10. 12" CLEAN COMPACTED BACKFILL.
11. HARDSCAPE / PAVING (NON-ROAD).
12. (2) TWO 3" MINIMUM WIDTH.:"PURPLE" RECYCLED WATER.:DETECTIBLE METALLIC MARKING TAPES CONTINUOUS ALONG SLEEVE ROUTING. ONE SHALL BE LOCATED IMMEDIATELY ON TOP OF SLEEVE ATTACHED . 5' O.C. AND ONE LOCATED 12" ABOVE SLEEVE.

NOTES:

A. SLEEVES UNDER PAVING (NON-ROADS) SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED. LESS THAN 3" DIAMETER = 18" COVER.:3" - 5-1/2" DIAMETER = 24" COVER.:6" DIAMETER OR GREATER = 36" COVER - SCHEDULE 40 PVC PIPE.
B. SLEEVE LOCATIONS SHALL BE MARKED AT EACH END AT THE TIME OF INSTALLATION WITH A PAINTED SPOT ON THE BACK FACE OF THE CURB OR OTHER SIMILAR MARKING.
C. EXACT SLEEVE LOCATIONS SHALL BE MARKED ON RECORD DRAWINGS WITH DIMENSIONING FOR IRRIGATION AS-BUILT PLANS PRIOR TO BACKFILL.

(Y) SLEEVE INSTALLATION

NOT TO SCALE



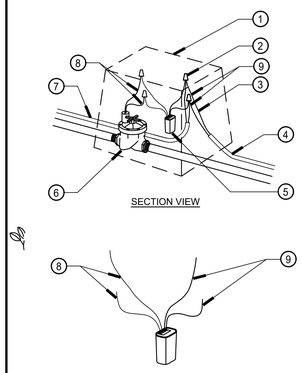
NOTES:

1. SURGE PROTECTION GROUNDING SHOULD BE INSTALLED EVERY 300 FEET OR FOR EVERY EIGHT DECODERS ON TWO-WIRE PATH.
2. GROUNDING TO BE INSTALLED AT END OF WIRE RUN THAT TERMINATES IN THE FIELD (STAR CONFIGURATION).
3. GROUNDING EQUIPMENT.:5/8-INCH X 8-FOOT COPPER GROUNDING ROD. INSTALL ONE (1) GROUNDING ROD AT THE FIRST "RCV" AND LAST "RCV" ON ALL MAINLINE END RUNS AND EVERY 300 FEET ALONG 2-WIRE PATH PLACED WITHIN VALVE BOX CONNECTED TO "RCV" DECODER. DO NOT SPLICE 2-WIRE PATH FOR GROUNDING.

NOT TO SCALE

(U) DECODER 2-WIRE CABLE LAYOUT

NOT TO SCALE

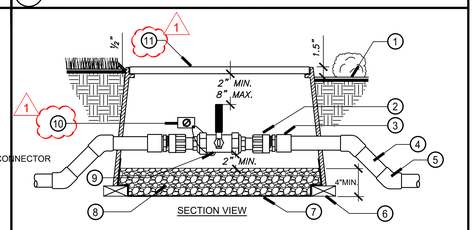


LEGEND:

1. VALVE BOX.
2. WIRE CONNECTOR WITH 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N (1 OF 4).
3. STRIP BACK 6" OF OUTER WIRE JACKET TO EXPOSE CONDUCTORS FOR TESTING WITH CLAMP METER.
4. TWO-WIRE PATH FROM CONTROLLER OR PREVIOUS VALVE (.:14/2 AWG) WITHIN 1-1/4" PVC CONDUIT.
5. 2-WIRE DECODER.
6. CONTROL VALVE (24 VAC).
7. TWO-WIRE PATH TO NEXT VALVE (.:14/2 AWG) WITHIN 1-1/4" PVC CONDUIT.
8. WIRES TO VALVE SOLENOID.
9. WIRES TO TWO-WIRE PATH.

(R) DECODER WIRING (TYPICAL)

NOT TO SCALE



LEGEND:

1. FINISHED GRADE.
2. DURA MANIFOLD SYSTEM ADAPTER SWIVEL COUPLING (SWIVEL .:O-RING MIPT).:TWO REQUIRED.:SIZE PER VALVE.
3. SCH 80 PVC REDUCER BUSHING.:S.:T.:SIZE AS REQUIRED (QTY. 2 REQUIRED).
4. PVC MAINLINE (PURPLE) WITH WORDS "RECYCLED WATER-DO NOT DRINK" - DEPTH PER SPECS.
5. 45 DEGREE ELBOW.:SCH 80 FITTINGS SHALL BE USED TO RAISE MAINLINE FOR BALL VALVE WITHIN 12" OF FINISHED GRADE. (QTY. 4 REQUIRED)
6. NOMINAL SIZE SOLID BRICK (QTY. 4 REQUIRED - ONE AT EACH CORNER OF VALVE BOX).
7. LANDSCAPE FABRIC.
8. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH WITH 2" MINIMUM CLEARANCE.
9. BALL VALVE - SEE LEGEND FOR TYPE. INSTALL SHUTOFF HANDLE PERPENDICULAR TO BOX LID.
10. PURPLE PLASTIC RECYCLED WATER LABEL ATTACHED WITH NYLON TIE. LABEL TO READ "RECYCLED WATER-DO NOT DRINK" IN ENGLISH AND SPANISH.
11. (PURPLE) "RECYCLED WATER" PLASTIC RECTANGULAR VALVE BOX WITH LOCKING COVER.:USE STAINLESS BOLT.:NUT.:AND WASHER. HEAT BRAND "BV" ONTO LID MARKED FOR "RECYCLED WATER".

NOTES:

A. SCH 80.:45 DEGREE ELBOW FITTINGS.:SHALL BE USED TO RAISE MAINLINE WITHIN 12" OF FINISHED GRADE. (FOUR REQUIRED)
B. PLACE VALVE BOX IN GROUNDCOVER AND SHRUB AREAS WHENEVER POSSIBLE.
C. USE TEFLON TAPE ON ALL THREADED FITTINGS.:TYPICAL.
D. VALVE BOX TO BE INSTALLED AS TO ALLOW FOR PROPER OPERATION OF BALL VALVE. INSTALL AT RIGHT ANGLE TO HARDSCAPE EDGE - INSTALL VALVE CENTERED IN BOX.
E. BOLTDOWN VALVE BOX COVER WITH STAINLESS STEEL BOLT AND WASHER.
F. ALL MAINLINE AND VALVE FITTINGS SHALL BE SCHEDULE 80 FITTINGS.

(O) BALL VALVE

NOT TO SCALE

DSA USE ONLY

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SEALS / APPROVALS

PROJECT TITLE

BUILDING MM - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2018 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42".

DRAWN BY RLA

CHECKED BY RLA

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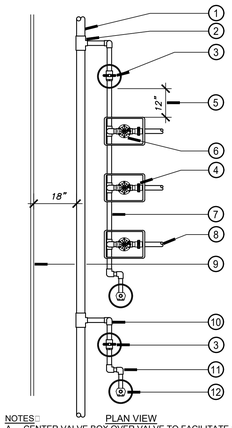
SHEET TITLE

IRRIGATION DETAILS

SHEET NUMBER

L7.20

ADDENDUM#1



PLAN VIEW

LEGEND:

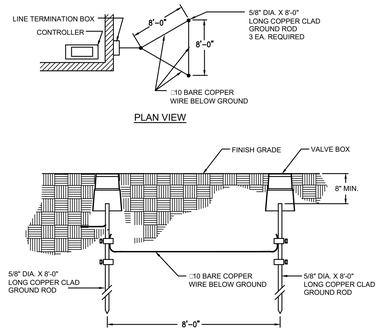
1. IRRIGATION MAINLINE.
2. SCH 80 PVC TEE:S:S:T MAINLINE X MANIFOLD SIZE.
3. PVC BALL VALVE PLACED WITHIN PLASTIC RECTANGULAR VALVE BOX:TYPICAL.
4. SCH 80 PVC UNION.
5. MINIMUM 12" SEPARATION BETWEEN ALL VALVE BOXES.
6. REMOTE CONTROL VALVE PLACED WITHIN PLASTIC RECTANGULAR VALVE BOX:TYPICAL.
7. IRRIGATION SUB-MAINLINE.
8. LATERAL LINE TO SPRINKLERS.
9. HARDSCAPE EDGE. INSTALL MAINLINE 18" OFF OF HARDSCAPE EDGE.
10. 1-1/2" SCH 40 PVC PIPE AND FITTINGS.
11. QUICK COUPLER SWING JOINT.
12. QUICK COUPLER VALVE PLACED WITHIN A PLASTIC 10" ROUND VALVE BOX. QUICK COUPLER MANIFOLD TO BE SEPARATE FROM RCV MANIFOLD.

NOTES:

A. CENTER VALVE BOX OVER VALVE TO FACILITATE SERVICING OF VALVE.
B. SET VALVE BOX AND VALVE ASSEMBLY IN GROUNDCOVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF AREAS ONLY WHEN THERE IS NO ADJACENT GROUNDCOVER.
C. SET VALVE BOXES 1-1/2" MAXIMUM ABOVE GRADE IN MULCH OR GROUNDCOVER / SHRUB AREAS: SET ½" ABOVE FINISH GRADE IN TURF AREAS.
D. SET VALVE BOXES PARALLEL TO ONE ANOTHER AND PERPENDICULAR TO EDGE.
E. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION / COLLAPSE.
F. HEAT-BRAND APPROPRIATE CONTROLLER LETTER AND STATION NUMBER ONTO VALVE BOX LID.

(II) MANIFOLD ASSEMBLIES

NOT TO SCALE



PLAN VIEW

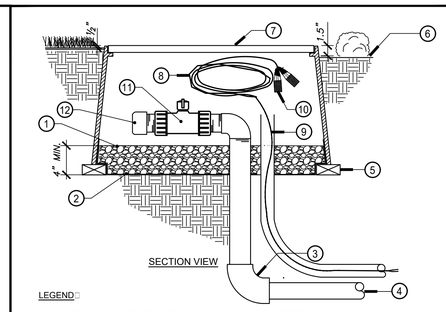
SECTION VIEW

INSTALL AT THE CENTRAL LINE TERMINATION BOX LOCATION A 3-ROD GROUNDING GRID. THIS GROUNDING GRID SHALL CONSIST OF THREE (3) - 5/8" DIAMETER COPPER CLAD RODS EACH 8'-0" LONG. THE RODS SHALL BE DRIVEN INTO THE EARTH WITH TOPS NOT LESS THAN 8" BELOW THE FINISHED GRADE. THE RODS SHALL BE ARRANGED IN A TRIANGULAR PATTERN WITH NO ROD BEING CLOSER THAN 8'-0" TO ANY OTHER ROD. THE THREE (3) SHALL BE TIED TOGETHER BELOW GROUND BY A #10 OR LARGER BARE COPPER WIRE. THE WIRE SHALL BE SECURED AT EACH ROD USING A SEPARATE BRASS CLAMP FOR EACH CONNECTION. DO NOT ATTEMPT TO PLACE TWO OR MORE WIRES IN A SINGLE CLAMP.

THE GROUNDING GRID SHALL BE TESTED FOR EARTH RESISTANCE USING A VIBRA GROUND MEGAR OR OTHER APPROVED TYPE INSTRUMENT. THE TEST SHALL NOT BE RUN UNTIL THE GROUNDING GRID HAS BEEN INSTALLED FOR A FEW WEEKS AND THE EARTH HAS HAD AN OPPORTUNITY TO "SETTLE" AROUND THE RODS. THE RESISTANCE OF THE GROUNDING GRID SHALL NOT BE GREATER THAN 10 OHMS. TO HAVE GROUNDING NETWORK THAT WILL BE AS EFFECTIVE AS POSSIBLE. IF NECESSARY THE GROUNDING GRID MAY NEED TO BE TREATED WITH SALT OR OTHER TYPE CHEMICAL IN ORDER TO IMPROVE IT. REMEMBER THAT THE EFFECTIVENESS OF THE SURGE ARRESTOR IS DRASTICALLY REDUCED AS THE RESISTANCE GOES "UP". ANYTHING OVER 10 OHMS RENDERS THE SURGE ARRESTOR ALMOST OF NO VALVE IN PROTECTING THE EQUIPMENT.

(FF) GROUNDING GRID NETWORK

NOT TO SCALE



SECTION VIEW

LEGEND:

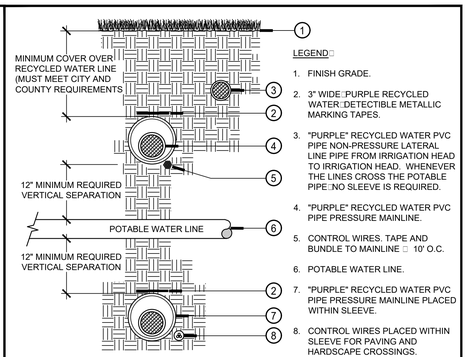
1. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4 INCH DEPTH.
2. SOIL SEPARATOR FABRIC.
3. PVC SCHEDULE 80 ELL ON MAINLINE OR MANIFOLD.
4. MAINLINE - SEE SPECIFICATIONS FOR TYPE AND DEPTH REQUIRED.
5. NOMINAL SIZE SOLID BRICK SUPPORTS. (4 REQUIRED - ONE AT EACH CORNER OF VALVE BOX)
6. FINISHED GRADE - SET TOP OF VALVE BOX 1/2" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" IN SHRUB / GROUND COVER AREAS.
7. PLASTIC RECTANGULAR VALVE BOX. HEAT BRAND "STUB" ONTO LID.
8. EXPANSION WIRE LOOP:36" MINIMUM LENGTH FOR ALL WIRES.
9. SPARE 2-WIRE DECODER CONTROL WIRES WITHIN 1-1/4" PVC CONDUIT WITH SWEEP ELLS.
10. WATERPROOF WIRE CONNECTOR TO PROTECT CONDUCTOR ENDS.
11. SCH 80 PVC BALL VALVE - F:F TO REST ON GRAVEL SUMP.
12. PVC PIPE MAINLINE CAP.

NOTES:

A. SET VALVE BOX AND VALVE ASSEMBLY IN GROUNDCOVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUNDCOVER.
B. SET VALVE BOXES 1-1/2" MAXIMUM ABOVE GRADE IN MULCH OR GROUNDCOVER / SHRUB AREAS: SET ½" ABOVE FINISH GRADE IN TURF AREAS.
C. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION / COLLAPSE.

(CC) MAINLINE AND WIRE STUB-OUT

NOT TO SCALE



SECTION VIEW - NOT TO SCALE

LEGEND:

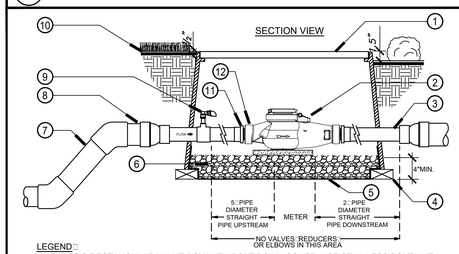
1. FINISH GRADE.
2. 3" WIDE:PURPLE RECYCLED WATER:DETECTIBLE METALLIC MARKING TAPES.
3. "PURPLE" RECYCLED WATER PVC PIPE NON-PRESSURE LATERAL LINE PIPE FROM IRRIGATION HEAD TO IRRIGATION HEAD. WHENEVER THE LINES CROSS THE POTABLE PIPE:NO SLEEVE IS REQUIRED.
4. "PURPLE" RECYCLED WATER PVC PIPE PRESSURE MAINLINE.
5. CONTROL WIRES. TAPE AND BUNDLE TO MAINLINE @ 10' O.C.
6. POTABLE WATER LINE.
7. "PURPLE" RECYCLED WATER PVC PIPE PRESSURE MAINLINE PLACED WITHIN SLEEVE.
8. CONTROL WIRES PLACED WITHIN SLEEVE FOR PAVING AND HARDSCAPE CROSSINGS.

NOTES:

A. WHERE POTABLE LINES AND CONSTANT PRESSURE RECYCLED WATER LINES CROSS:THE RECYCLED LINES SHALL BE INSTALLED IN A CLASS 200 PURPLE COLORED PVC SLEEVE. PVC SLEEVE SHALL EXTEND 10 FEET ON EITHER SIDE OF THE POTABLE LINE FOR A TOTAL OF 20 FEET.
B. INSTALLATION OF RECYCLED WATER IRRIGATION MAINLINE 24" FROM FACE OF SIDEWALK WILL PROVIDE THE NECESSARY 10' HORIZONTAL CLEARANCE FROM POTABLE MAINLINE IN STREET.
C. VERTICAL CLEARANCE OF 12" MINIMUM IS MANDATORY WHEN CROSSING PATH OF POTABLE WATER LINE.
D. ALL RECYCLED WATER IRRIGATION PIPE AND SLEEVES SHALL BE PURPLE AND LABELED AS SPECIFIED.
E. IF POTABLE WATER LINE HAS LESS THAN (36") COVER:RECYCLED WATER LINE MUST CROSS BELOW POTABLE WATER LINE REFER TO THE WATER AGENCIES' STANDARDS DESIGN GUIDE FOR PIPE SEPARATION REQUIREMENTS.

NOT TO SCALE

(Z) RECYCLED / POTABLE PIPE CROSSING



LEGEND:

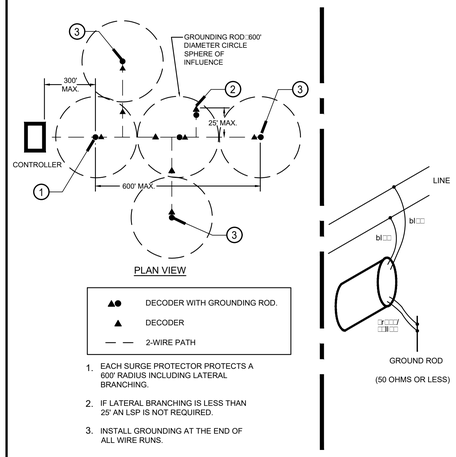
1. PLASTIC RECTANGULAR VALVE BOX WITH BOLT DOWN COVER:USE STAINLESS BOLT NUT AND WASHER - HEAT BRAND "METER FOR IRRIGATION ONLY" ONTO LID.
2. WATER METER - SEE LEGEND FOR SIZE AND TYPE.
3. MAINLINE - SIZE PER METER:LENGTH AS REQUIRED PER MANUFACTURE RECOMMENDATIONS.
4. NOMINAL SIZE SOLID BRICK (4 REQUIRED:ONE AT EACH CORNER).
5. LANDSCAPE FABRIC.
6. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
7. PVC MAINLINE FROM P.O.C. - SEE LEGEND FOR TYPE:SIZE PER PLAN.
8. SCH 80 REDUCER COUPLING - SIZE PER MAINLINE AND METER (2 REQUIRED).
9. CONTINUOUS ACTING AIR VENT/RELIEF VALVE.
10. FINISHED GRADE. SET TOP OF VALVE BOX ½" ABOVE GRADE IN TURF AREAS AND 1-1/2" ABOVE GRADE IN SHRUB / GROUNDCOVER AREAS.
11. PVC MIPT MALE ADAPTER:LINE SIZE. (2 REQ.)
12. UNION NUT.

NOTES:

A. USE SCH 80 PVC FITTINGS.
B. SET TOP OF VALVE BOX ½" ABOVE FINISHED GRADE IN TURF AREAS AND 1-1/2" ABOVE FINISHED GRADE IN GROUNDCOVER AND SHRUB AREAS.
C. SET VALVE BOX AND METER IN GROUNDCOVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUNDCOVER.
D. USE TEFLON TAPE ON ALL THREADED FITTINGS:TYPICAL.
E. INSTALL 45 DEGREE ELLS AS REQUIRED TO ACHIEVE PROPER METER INSTALLATION ABOVE LATERAL LINE DEPTH.
F. INSTALL METER PER MANUFACTURE'S RECOMMENDATIONS.
G. INSTALL AIR VENT UPSTREAM OF WATER METER.
H. LABEL WATER METER AND BOX "FOR IRRIGATION ONLY"

(JJ) IRRIGATION SUB-METER

NOT TO SCALE



PLAN VIEW

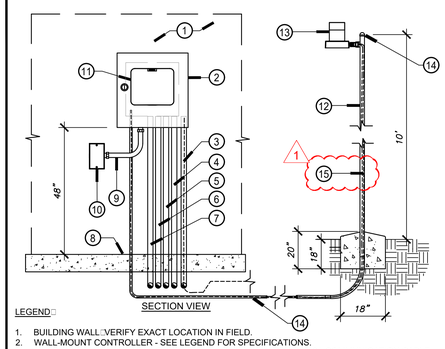
1. EACH SURGE PROTECTOR PROTECTS A 600' RADIUS INCLUDING LATERAL BRANCHING.
2. IF LATERAL BRANCHING IS LESS THAN 25' AN LSP IS NOT REQUIRED.
3. INSTALL GROUNDING AT THE END OF ALL WIRE RUNS.

NOTE:

INSTALL ONE (1) GROUNDING ROD AT THE FIRST "RCV" AND LAST "RCV" ON ALL MAINLINE END RUNS AND EVERY 300 FEET ALONG 2-WIRE PATH PLACED WITHIN VALVE BOX CONNECTED TO "RCV" DECODER. DO NOT SPLICE 2-WIRE PATH FOR GROUNDING. USE #8 AWG SOLID COPPER WIRE FROM THE COPPER ROD TO THE FIELD COMMON (WHITE WIRES IN THE BLACK HARNESS) OF THE DECODER.

(GG) FIELD SURGE PROTECTOR

NOT TO SCALE



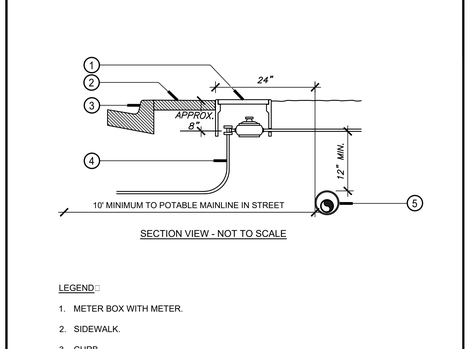
SECTION VIEW

LEGEND:

1. CALSENSE RAIN BUCKET.
2. 2" THREADED GALVANIZED FLOOR FLANGE TO CONNECT TO THE POLE. USE STAINLESS STEEL BOLTS WITH LOCKING WASHERS.
3. 2" GALVANIZED POLE.
4. CONTROLLER ASSEMBLY.
5. 1" SCH 40 RIGID CONDUIT.
6. PULL BOX.
7. 2" SCH 40 ELECTRICAL CONDUIT.
8. CONCRETE FOOTING - SLOPE TO DRAIN.

(DD) WALL-MOUNT CONTROLLER

NOT TO SCALE



SECTION VIEW - NOT TO SCALE

LEGEND:

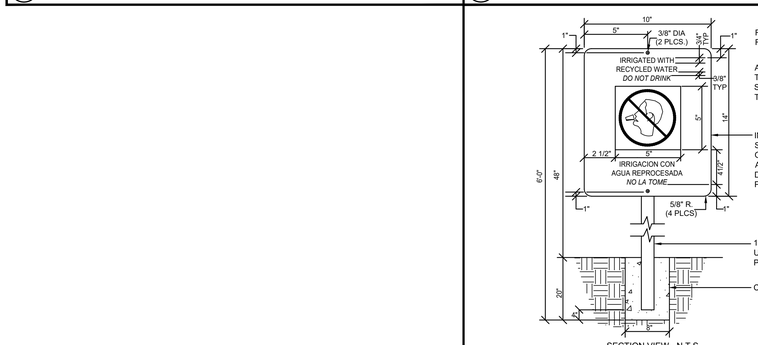
1. METER BOX WITH METER.
2. SIDEWALK.
3. CURB.
4. POTABLE SERVICE LINE.
5. RECYCLED WATER IRRIGATION MAINLINE WITH SLEEVE.

NOTE:

VERTICAL CLEARANCE OF 12" MINIMUM IS MANDATORY WHEN CROSSING PATH OF POTABLE WATER LINE. INSTALLATION OF RECYCLED WATER IRRIGATION MAINLINE 24" FROM FACE OF SIDEWALK WILL PROVIDE THE NECESSARY 10' HORIZONTAL CLEARANCE FROM POTABLE MAINLINE IN STREET.

NOT TO SCALE

(AA) POTABLE SERVICE LINE CROSSING



SECTION VIEW - N.T.S.

A. SIGN MATERIAL:.063 THICK ALUMINUM (6063T-4)

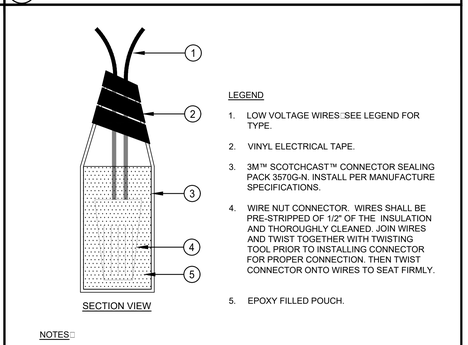
B. SIGN FACE:WHITE REFLECTIVE SHEETING 3M DIAMOND GRADE OR APPROVED EQUAL (PER CALIF. D.O.T. MATERIALS SPECIFICATIONS)
COLORS:
-WHITE WILL BE USED FOR LETTERING AND THE PICTOGRAM BACKGROUND.
-PURPLE (EQUAL TO SPL 71 PERMANENT VIOLET 498) WILL BE USED FOR THE GENERAL BACKGROUND.
-BLACK WILL BE USED FOR THE PICTOGRAM OUTLINE.
-RED WILL BE USED FOR THE "PROHIBIT" SYMBOL.

C. SIGN POST INSTALLATION SHALL BE APPROVED BY THE WATER DISTRICTS AUTHORIZED REPRESENTATIVE..

D. SIGN TYPE AND LOCATION OF SIGNS SHALL BE APPROVED BY THE WATER DISTRICTS AUTHORIZED REPRESENTATIVE.

(HH) RECYCLED WATER SIGN

NOT TO SCALE



SECTION VIEW

LEGEND

1. LOW VOLTAGE WIRES:SEE LEGEND FOR TYPE.
2. VINYL ELECTRICAL TAPE.
3. 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N. INSTALL PER MANUFACTURE SPECIFICATIONS.
4. WIRE NUT CONNECTOR. WIRES SHALL BE PRE-STRIPPED OF 1/2" OF THE INSULATION AND THOROUGHLY CLEANED. JOIN WIRES AND TWIST TOGETHER WITH TWISTING TOOL PRIOR TO INSTALLING CONNECTOR FOR PROPER CONNECTION. THEN TWIST CONNECTOR ONTO WIRES TO SEAT FIRMLY.
5. EPOXY FILLED POUCH.

NOTES:

A. WIRES SHALL BE PRE-STRIPPED OF ½" OF THE INSULATION. JOIN WIRES AND TWIST TOGETHER. WIRE SPLICES MUST BE TWISTED WITH WIRE TWISTING TOOL WITH A MAXIMUM OF TWO WIRES PER TWIST:PRIOR TO INSTALLING CONNECTOR. TWIST CONNECTOR ONTO WIRES TO SEAT FIRMLY. CORRECT WIRE CONNECTIONS ARE EXTREMELY IMPORTANT.

B. ALL WIRE CONNECTIONS SHALL INCLUDE A WIRE NUT CONNECTOR AND A 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N.

C. WIRE SPLICES ARE THE WEAK LINK OF ANY ELECTRICAL CIRCUIT. IT IS ESPECIALLY IMPORTANT TO MAKE PROPER JOINTS IN IRRIGATION SYSTEMS BECAUSE THE JOINTS ARE EXPOSED TO WET AND DAMP ENVIRONMENTS THAT CAN CAUSE CORROSION OF THE COPPER CONDUCTOR:AND PREMATURE FAILURE. CALSENSE RECOMMENDS THE STRICT USE OF 3M™ SCOTCHCAST™ CONNECTOR SEALING PACK 3570G-N, AS MANUFACTURED BY THE 3M COMPANY:FOR ALL WIRE CONNECTIONS.

D. ALL WIRE SPLICES SHALL BE PLACED WITHIN PLASTIC VALVE BOX OR WIRE PULL BOX.

(EE) RAIN BUCKET POLE MOUNTED

NOT TO SCALE

(BB) WIRE CONNECTOR

NOT TO SCALE

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SEALS / APPROVALS

PROJECT TITLE

BUILDING MM - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM 1

PROJECT IDENTIFICATION

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2018 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY RLA

CHECKED BY RLA

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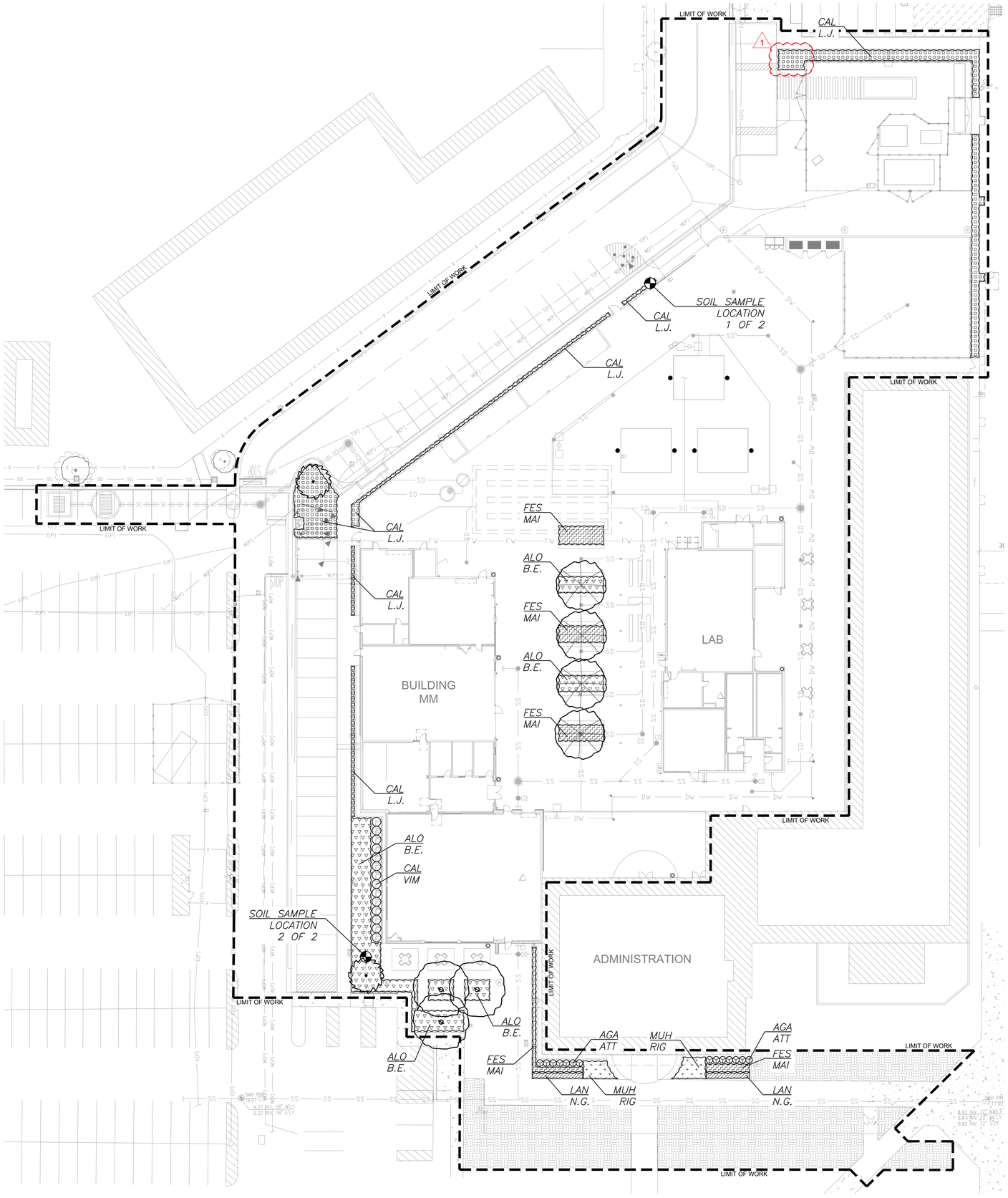
SHEET TITLE

IRRIGATION DETAILS

SHEET NUMBER

L7.30

ADDENDUM#1



EXISTING TREE LEGEND

SYMBOL	
(E)	EXISTING TREE TO REMAIN PROTECT IN PLACE

NOTE: EXISTING TREES THAT ARE MARKED WITH AN (E) ARE TO BE PROTECTED IN PLACE.

PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	FORM	WATER USE	DETAIL	QTY	MIN SIZE H:W
TREES								
	CERCIS CANADENSIS	EASTERN REDBUD	24" BOX	STD.	M	A□L9.10	4	9' □4'
	PISTACIA CHINENSIS	CHINESE PISTACHE	24" BOX	STD.	M	A□L9.10	3	10' □4'
	CERCIDIUM 'DESERT MUSEUM'	DESERT MUSEUM PALO VERDE	36" BOX	STD.	VL	A□L9.10	2	10' □8'

SYMBOL	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	DETAIL	QTY
SHRUBS								
	ALO B.E.	ALOE' BLUE ELF'	BLUE ELF ALOE	5 GAL.	30" O.C.	L	B-C□ L9.10	312
	AGA ATT	AGAVE ATTENUATA	FOX TAIL AGAVE	15 GAL.	36" O.C.	L	B-C□ L9.10	14
	CAL L.J.	CALLISTEMON 'LITTLE JOHN'	DWARF BOTTLEBRUSH	5 GAL.	30" O.C.	L	B-C□ L9.10	343
	FES MAI	FESTUCA MAIREI	ATLAS FESCUE	1 GAL.	24" O.C.	M	B-C□ L9.10	206
	LAN N.G.	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	5 GAL.	36" O.C.	L	B-C□ L9.10	30
	MUH RIG	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL.	36" O.C.	M	B-C□ L9.10	101
	CAL VIM	CALLISTEMON VIMINALIS 'SLIM'	SLIM BOTTLEBRUSH	24" BOX	48" O.C.	L	B-C□ L9.10	14

WATER USE KEY□
VL = VERY LOW WATER USE□L = LOW WATER USE□M = MODERATE WATER USE□H = HIGH WATER USE. WATER USE STATED IS PER 'A GUIDE TO ESTIMATING IRRIGATION WATER NEEDS OF LANDSCAPE PLANTINGS IN CALIFORNIA' (ALSO REFERRED TO AS WUCOLS) FOR REGION 3.

DENOTES SOIL SAMPLE LOCATION - REFER TO NOTE □9 OF PLANTING NOTES ON SHEET L9.10□ FOR ADDITIONAL INFORMATION.

EXISTING PLANT MATERIAL	
SYMBOL	DESCRIPTION
	EXISTING PLANT MATERIAL DAMAGED AS A RESULT OF CONSTRUCTION PROCEDURES EITHER CAUSED BY HARDSCAPE/UTILITY IMPROVEMENTS, IRRIGATION ADJUSTMENT, OR NEGLIGENCE SHALL BE REPLACED TO LIKE NEW CONDITION WITH NO ADDITIONAL COST TO THE OWNER. GROUNDCOVERS SHALL BE REPLACED WITH MINIMUM 5 GALLON MATERIAL, SHRUBS SHALL BE REPLACED WITH MINIMUM 15 GALLON MATERIAL, AND TURF SHALL BE REPLACED WITH SOD. ALL NEW PLANT MATERIAL SHALL MATCH THE EXISTING SPECIES, FORM AND TYPE.

FOR PLANTING DETAILS - SEE SHEET L9.10
FOR SPECIFICATIONS - SEE BOOK SPECIFICATIONS

0 10 20 40 60

ADDENDUM#1

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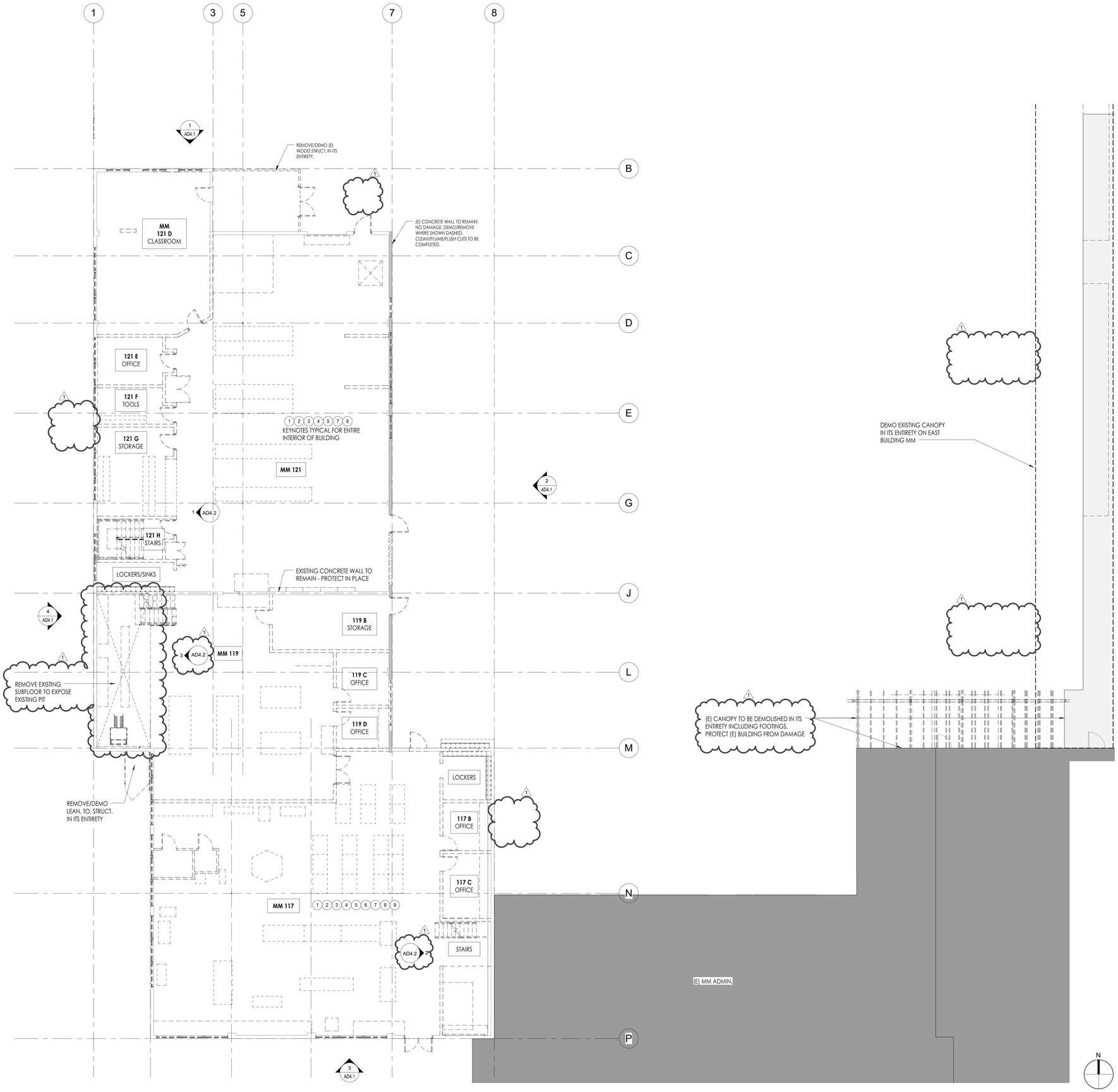
SHEET TITLE
PLANTING PLAN

SHEET NUMBER
L8.10

6/4/2020 5:45:33 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt



FIRST FLOOR DEMO PLAN | SCALE 1/8" = 1'-0" | 1

DEMOLITION KEYNOTES:

1. DEMOLISH/REMOVE (E) SLAB ON GRADE AND (E) BASE. MEANS/METHOD ON PROTECTION OF (E) VERTICAL EXT. WALLS AND NO DAMAGE TO (E) FOOTINGS.
2. PROTECT-IN-PLACE (E) INTERIOR COLUMNS. PROTECT-IN-PLACE (E) FOOTINGS TO ASSURE NO DAMAGE.
3. DEMOLISH / REMOVE ALL (E) INTERIOR WALLS IN THEIR ENTIRETY. MEANS/METHOD ON NOT DAMAGING (E) ROOF STRUCTURAL SYSTEM, UNLESS OTHERWISE NOTED.
4. DEMOLISH/REMOVE ALL DOORS AND WINDOWS IN THEIR ENTIRETY.
5. DEMOLISH /REMOVE ALL STAIRS IN THEIR ENTIRETY.
6. DEMOLISH/REMOVE SHIPS LADDER AND ROOF HATCH IN THEIR ENTIRETY.
7. DEMOLISH/REMOVE ALL WET/DRY UTILITIES ABOVE/BELOW BLDG. CUT/CAP AT EXTERIOR WALL. PULL ALL WIRE BACK TO PANELS & REMOVE.
8. DEMOLISH/REMOVE ANY/ALL CEILING FINISHES. PROTECT IN PLACE (E) ROOF STRUCT.SYSTEM
9. SAND BLAST ALL (E) CONCRETE WALLS TO REMAIN TO BE PAINTED.

DEMOLITION GENERAL NOTES

1. CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL COMPLY WITH CFC CHAPTER 33 "FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION" COMPLIANCE WITH NFPA 241 | STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERNATION AND DEMOLITION OPERATIONS) IS REQUIRED AS REFERENCED IN CHAPTER 33.

2. EXISTING BUILDING MM IS TO BE PROTECTED IN PLACE.

3. PATCH, REPAIR, REPAVE AND REPLANT EXISTING HARDSCAPE AND LANDSCAPE AS NEEDED AT SITE PERIMETER AREAS WHERE DEMOLITION WORK AFFECTS THE EXISTING SITE CONDITION OUTSIDE OF THE LIMIT OF WORK LINE.

4. DEMOLITION WORK SHOWN ON THE DRAWINGS IS DIAGRAMMATIC. ALL SITUATIONS MAY NOT BE SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ALL ITEMS THAT WILL INTERFERE WITH NEW CONSTRUCTION, STRUCTURAL ITEMS THAT ARE TO BE REMOVED SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT THROUGH THE PROJECT DIRECTOR PRIOR TO REMOVAL.

5. REFER TO THE FULL SET OF CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE ALARM, FIRE PROTECTION, AUDIO VISUAL, AND TELCOMMUNICATIONS PLANS FOR DEMOLITION WORK. DEMOLITION WORK SHALL INCLUDE DEMOLITION OF EXISTING STRUCTURES AS NOTED WITHIN THE CONSTRUCTION DOCUMENTS AS WELL AS THE DEMOLITION WORK REQUIRED TO CONSTRUCT THE NEW WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.

6. A REPRESENTATIVE OF LONG BEACH COMMUNITY COLLEGE DISTRICT SHALL REVIEW ALL ITEMS REMOVED AND SELECT WHICH ITEMS ARE TO BE RETURNED TO THE DISTRICT. ALL REMAINING ITEMS SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

7. ITEMS WHICH ARE KNOWN TO BE A PART OF THE DEMOLITION SCOPE OF WORK MAY HAVE BEEN REMOVED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL GIVE CREDIT TO LONG BEACH COMMUNITY COLLEGE DISTRICT FOR THE REMOVAL COST OF SUCH ITEMS.

8. THE COLLEGE OR THE COLLEGE'S REPRESENTING CONTRACTOR SHALL FOLLOW THE PROCEDURES AND REGULATIONS SET FORTH BY C.F.C. SECTION 8707 CONCERNING ASBESTOS REMOVAL.

9. EXCAVATION OR FILLS FOR BUILDINGS OR STRUCTURES SHALL BE SO CONSTRUCTED OR PROTECTED THAT THEY DO NOT ENDANGER LIFE OR PROPERTY. SLOPES FOR PERMANENT FILLS SHALL BE NOT BE STEEPER THAN 1 UNIT VERTICAL IN 2 UNITS HORIZONTAL (50% SLOPE). CUT SLOPES FOR PERMANENT EXCAVATIONS SHALL NOT BE STEEPER THAN 1 UNIT VERTICAL IN 2 UNITS HORIZONTAL (50% SLOPE) UNLESS SUBSTANTIATING DATA JUSTIFY STEEPER CUT SLOPES ARE SUBMITTED.
CBC SECTION 3304.

10. EXISTING FOOTINGS OR FOUNDATIONS WHICH MAY BE AFFECTED BY ANY EXCAVATION SHALL BE UNDERPINNED ADEQUATELY OR OTHERWISE PROTECTED AGAINST SETTLEMENT AND SHALL BE PROTECTED AGAINST LATERAL MOVEMENT. CBC SECTION 3304.1.2

11. ALL FILLS USED TO SUPPORT THE FOUNDATIONS OF ANY BUILDING OR STRUCTURE SHALL BE PLACED UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER, AND THE PLACEMENT OF THE FILL SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER OR HIS OR HER QUALIFIED REPRESENTATIVE. IT SHALL BE THE RESPONSIBILITY OF SUCH GEOTECHNICAL ENGINEER TO SEE THAT THE PROCEDURES USED IN PLACING FILLS MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND TO COORDINATE ALL FILL INSPECTION AND TESTING DURING THE CONSTRUCTION INVOLVING SUCH FILLS. CBC SEC. 3304.

12. THE REQUIREMENTS FOR PROTECTION OF ADJACENT PROPERTY AND DEPTH TO WHICH PROTECTION IS REQUIRED SHALL BE AS DEFINED IN SEC. 832, CIVIL CODE. CBC SECTION 3307

13. THE WORK OF DEMOLISHING ANY BUILDING SHALL NOT BE COMMENCED UNTIL THE REQUIRED PEDESTRIAN PROTECTION STRUCTURES ARE IN PLACE. CBC SECTION 3303.2

14. THE DIVISION OF THE STATE ARCHITECT MAY REQUIRE THE PERMITTEE TO SUBMIT PLANS AND A COMPLETE SCHEDULE FOR DEMOLITION. WHERE SUCH ARE REQUIRED, NO WORK SHALL BE DONE UNTIL SUCH PLANS OR SCHEDULE, OR BOTH, ARE APPROVED BY THE BUILDING OFFICIAL. SEC. 3303.1.

15. APPROVAL OF THE SAFETY PRECAUTIONS REQUIRED FOR BUILDINGS BEING CONSTRUCTED, ALTERED OR DEMOLISHED MAY BE REQUIRED BY THE FIRE MARSHAL IN ADDITION TO OTHER APPROVALS REQUIRED FOR SPECIFIC OPERATIONS OR PROCESSES ASSOCIATED WITH SUCH CONSTRUCTION, ALTERATION OR DEMOLITION. C.F.C. SEC. 8703.

16. SUITABLE FIREHOSE, AS REQUIRED BY THE FIRE MARSHAL, SHALL BE MAINTAINED AT THE DEMOLITION SITE. SUCH HOSE SHALL BE CONNECTED TO AN APPROVED SOURCE OF WATER AND SHALL NOT IMPEDE FIRE DEPARTMENT USE OF HYDRANTS. C.F.C. 8706.3.

17. DEMOLITION OPERATIONS INVOLVING CUTTING AND WELDING SHALL BE IN ACCORDANCE WITH SECTION C.F.C. CHAPTER 26.

18. COMBUSTIBLE WASTE MATERIAL, TRASH, AND RUBBISH SHALL NOT BE ACCUMULATED. SUCH MATERIAL SHALL BE REMOVED FROM THE SITE AS OFTEN AS NECESSARY TO MINIMIZE THE HAZARDS THEREFROM. "COMBUSTIBLE DEBRIS, RUBBISH AND WASTE MATERIAL SHALL NOT BE DISPOSED OF BY BURNING ON THE SITE UNLESS APPROVED." C.F.C.SEC.1404.

19. EGRESS ROUTES SHALL BE MAINTAINED. WHERE FIRE RESISTIVE CONSTRUCTION TEMPORARY EQUIVALENT PROVISIONS ARE REQUIRED.

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LONG BEACH CITY COLLEGE

SUBMITTALS

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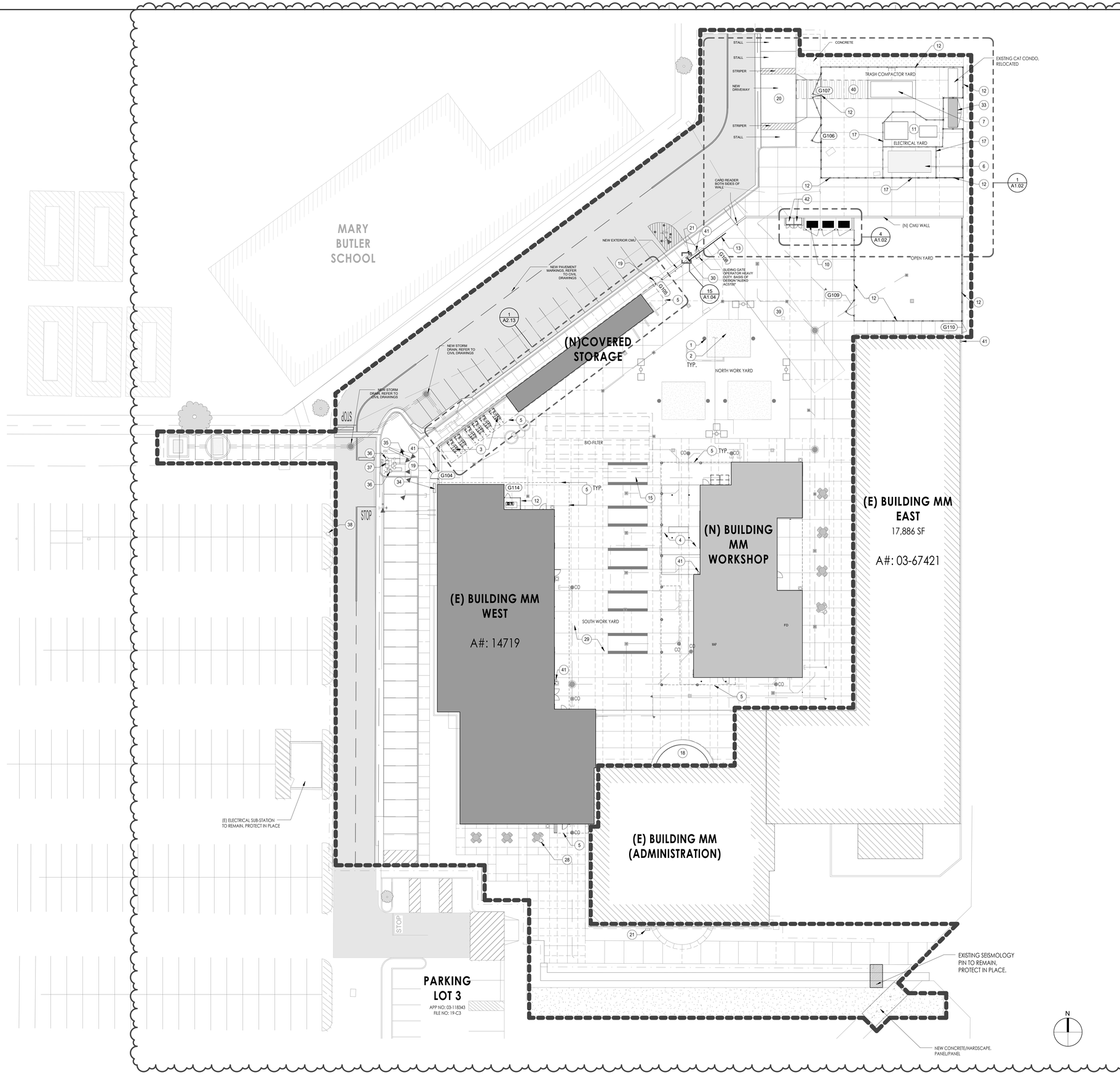
SHEET TITLE
FIRST FLOOR DEMOLITION PLAN

SHEET NUMBER
AD2.1

ADDENDUM#1



LEGEND

- LIMIT OF WORK LINE
- NEW LANDSCAPE
- NEW HARDSCAPE
- EXISTING BUILDINGS TO REMAIN
- NEW BUILDING / EXISTING BUILDING TO BE RENOVATED
- (G000) GATE TAG - SEE GATE SCHEDULE **A8.30**

KEYNOTES:

1. MONUMENT W/ WATER, COMPRESSED AIR, AND ELECTRICAL (4 CIRCUITS), SEE PLUMBING AND ELECTRICAL DRAWINGS - SEE **30/A9.80**
2. 20' X 23' CONSTRUCTION CONCRETE PAD, SEE CIVIL DRAWINGS SHEET C4.00
3. COVERED FORKLIFT PARKING (6 SPACES)
4. OUTDOOR CLASSROOM
5. CANOPY
6. EXISTING SWITCHGEAR - PROTECT IN PLACE
7. TRASH COMPACTOR O/ CONCRETE PAD
8. NOT USED
9. EXISTING CONCRETE WALK TO REMAIN - PROTECT IN PLACE
10. CONSTRUCTION WASTE (DUMPSTERS)
11. ELECTRICAL YARD, SEE LANDSCAPE AND ELECTRICAL DRAWINGS
12. NEW CHAINLINK FENCE AND GATE, SEE LANDSCAPE DRAWINGS **A/14.20**
13. SLIDING DRIVE GATE, SEE LANDSCAPE DRAWINGS
14. NOT USED
15. PLANTER, SEE LANDSCAPE DRAWINGS
16. NEW SIDEWALK PANEL
17. (E) 12' CHAINLINK FENCE TO BE PROTECTED IN PLACE. REMOVE/REPLACE WHERE ACCESS IS REQ TO REMOVE AND REPLACE ELECTRICAL GEAR, MEANS AND METHOD IS REQ FOR CHAINLINK PANELS THAT WILL BE REMOVED AND/OR REPLACED BACK TO NEXT PANEL AND REPAIRED
18. CONCRETE PAVER, SEE LANDSCAPE DRAWINGS
19. NEW GATE, SEE **4 / A1.03**
20. NEW CONCRETE DRIVE, SEE CIVIL DRAWINGS
21. NEW BUILDING SIGNAGE, SEE **20/G3.10**
22. ADA PARKING SIGN & POST (VAN), SEE SHEETS G3.10 AND G3.11
23. NOT USED
24. NOT USED
25. NOT USED
26. NOT USED
27. NOT USED
28. STANDARD TABLE AND BUILT-IN SEATS, SEE LANDSCAPE DRAWINGS
29. 7 1/2" THICK CONCRETE FOR VEHICULAR TRAFFIC, SEE CIVIL DRAWINGS
30. EMERGENCY TELEPHONE TOWER - SEE **15 / A1.04** AND "T" SHEETS
31. EXISTING TREE
32. (N) DRIVEWAY
33. (E) GAS METER AND ENCLOSURE TO REMAIN -PAINT, PROTECT IN PLACE
34. (E) BACKFLOW TO REMAIN -PAINT, PROTECT IN PLACE
35. (E) FIRE DEPARTMENT CONNECTION ASSEMBLY TO REMAIN-PAINT, PROTECT IN PLACE
36. (N) FIRE DEPARTMENT CONNECTION ASSEMBLY, SEE CIVIL
37. (N) BACKFLOW PROTECTION
38. (E) TEST HYDRANT PER SHEET F-2.0
39. (N) FIRE TRUCK LANE
40. (N) MINIMUM CLEARANCE FOR ROLL OFF TRUCK
41. (N) KNOX BOX FOR FIRE DEPARTMENT ACCESS, REF **F-1.0**
42. GAS CYLINDER METAL CABINET BY GRAINGER - 12 CYLINDER CAPACITY EACH MODEL # EGC-12-SC-50-CONDOR, REF **4/A1.02**

SITE PLAN GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR GRADING AND SITE UTILITIES INFORMATION.
2. REFER TO STRUCTURAL DRAWINGS FOR SITE WALL DESIGNS.
3. REFER TO CIVIL AND FIRE PROTECTION DRAWINGS FOR FIRE SERVICES CONNECTIONS.
4. REFER TO MECHANICAL, PLUMBING, ELECTRICAL AND TELECOM SITE PLANS FOR ADDITIONAL SITE UTILITIES WORK.
5. PATCH AND REPAIR SITE UTILITIES OUTSIDE OF "LIMIT OF WORK" LINE, PER CIVIL AND MEP DRAWINGS.
6. CONTRACTOR IS TO PROVIDE TEMPORARY CONSTRUCTION GATES AT ALL ENTRANCES TO THE PROJECT.
7. ALL BUILDING ENTRANCES & EXTERIOR GROUND LEVEL EXITS SHALL HAVE A 2% MAX. (MIN. 5'-0") SLOPE AWAY FROM DOORS.
8. PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE. EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE SURFACE AND IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (P.O.T.) SHALL MAINTAIN FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-204, 11B-307). CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC 11B-206.
9. REFER TO LANDSCAPE PLANS FOR ALL HARDSCAPE, SITE FURNITURE, PLANTING, FENCING, SITE WALL, AND IRRIGATION INFORMATION.

SITE PLAN SCALE 1" = 20'-0" 1

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SHEET TITLE
SITE PLAN

SHEET NUMBER
A1.01

ADDENDUM#1

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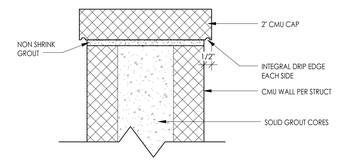
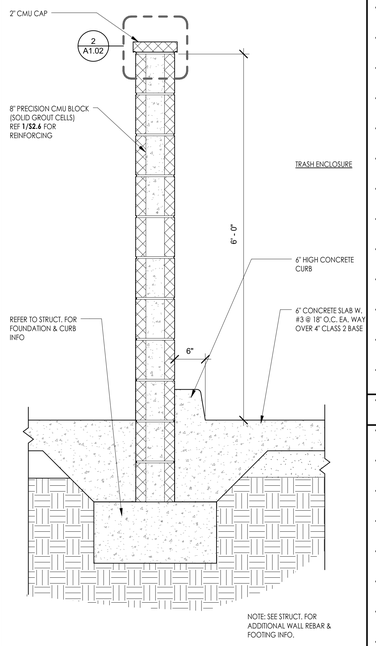
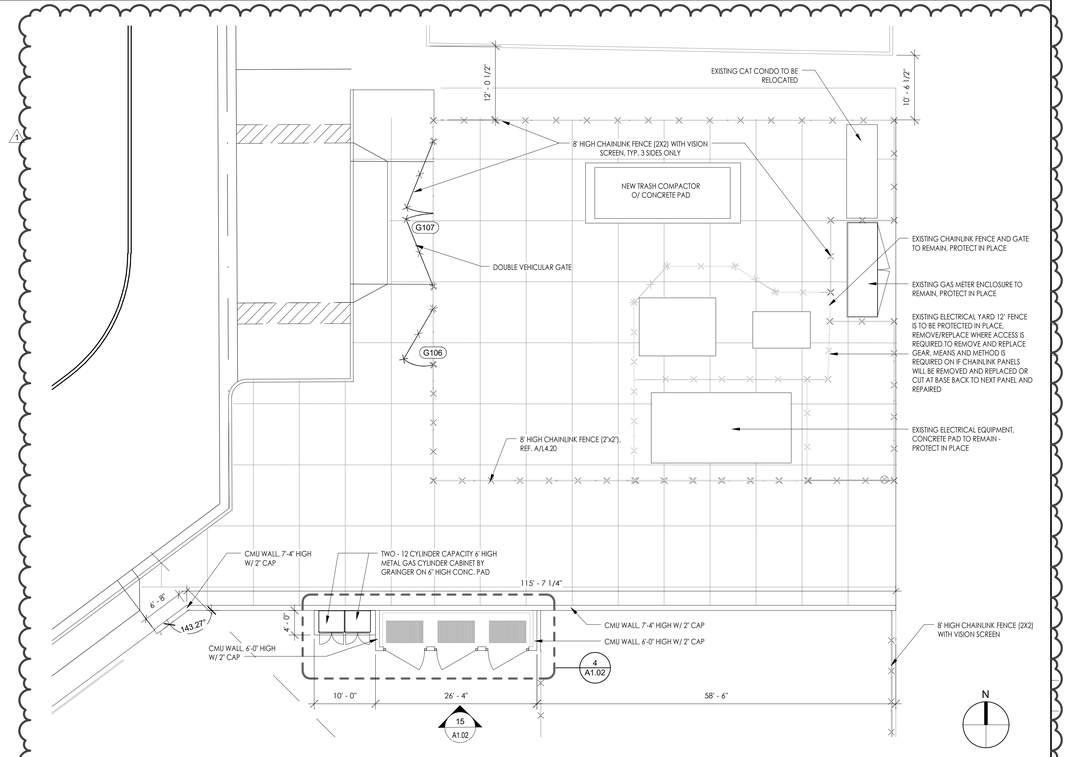


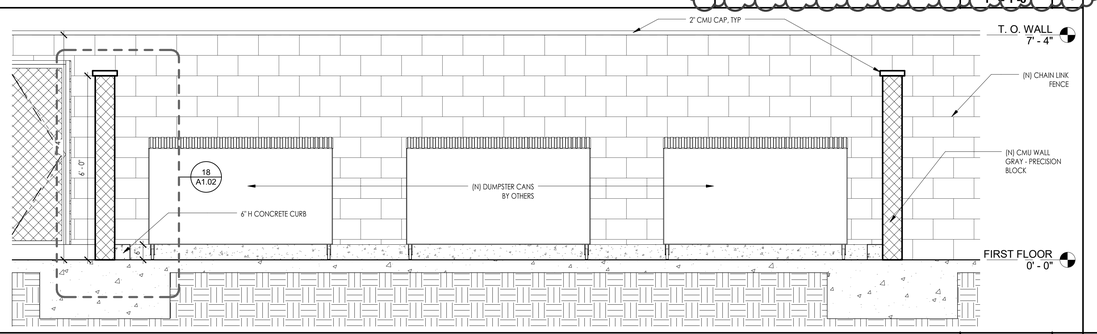
WALL COPING DETAIL | SCALE 3" = 1'-0" | 2



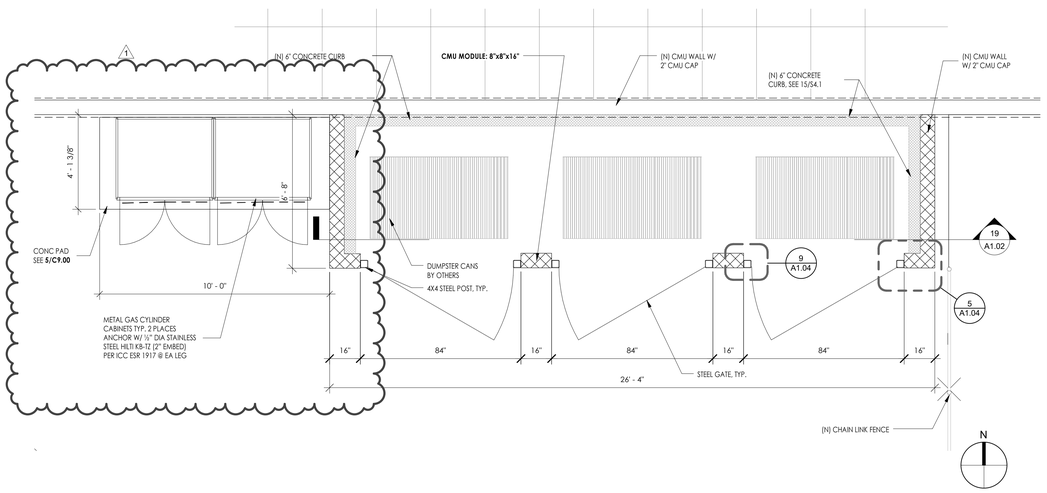
TRASH ENCLOSURE WALL SECTION | SCALE 1" = 1'-0" | 18



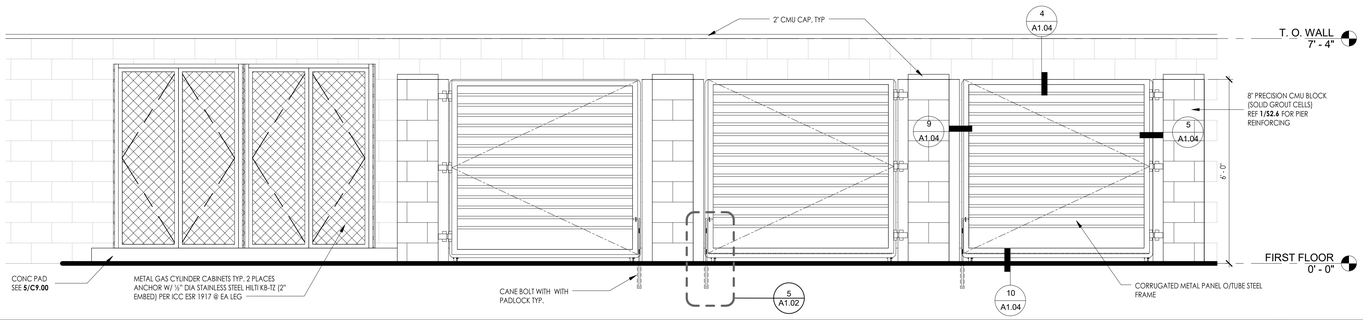
SITE PLAN -ENLARGED TRASH COMPACTOR | SCALE 1" = 10'-0" | 1



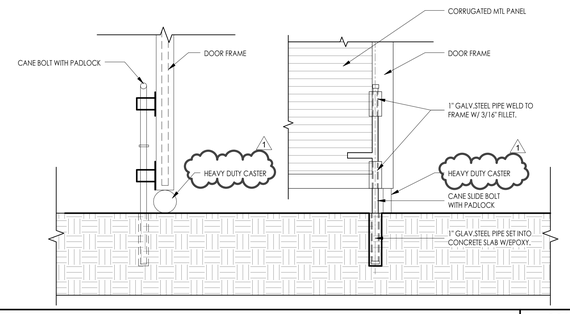
TRASH ENCLOSURE | SCALE 1/2" = 1'-0" | 19



SITE PLAN - ENLARGED DUMPSTER PLAN | SCALE 3/8" = 1'-0" | 4



TRASH ENCLOSURE - ELEVATION | SCALE 1/2" = 1'-0" | 15



TRASH ENCLOSURE GATE SECTION | SCALE 3" = 1'-0" | 5

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SHEET TITLE
ENLARGED SITE PLANS - TRASH COMPACTOR

SHEET NUMBER
A1.02

ADDENDUM#1

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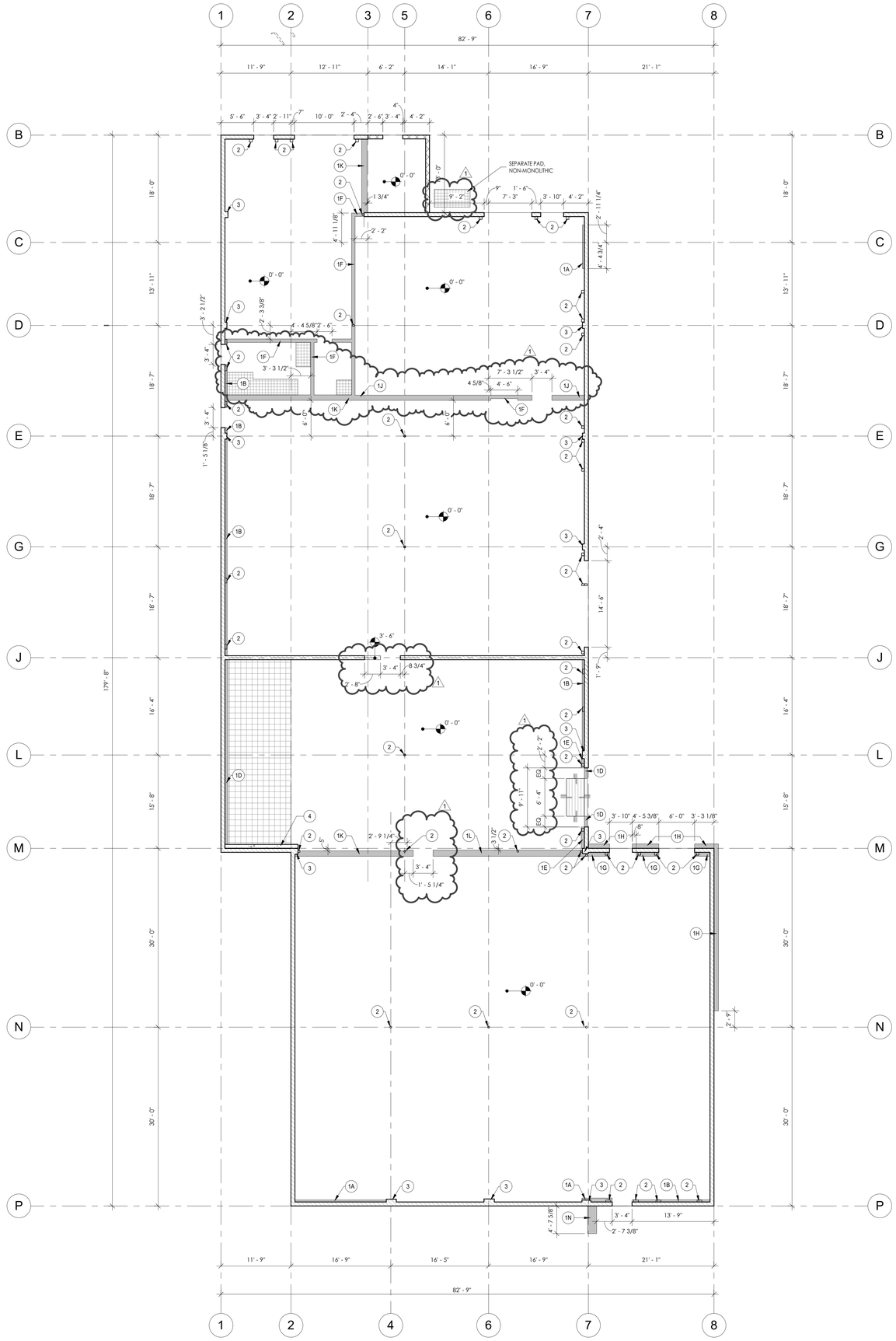

SLAB PLAN - GENERAL NOTES

1. REFER TO STRUCTURAL & MEPT DRAWINGS FOR ANY SLAB PENETRATIONS (FLOOR DRAINS, FLOOR SINKS, FLOOR BOXES, ELECTRICAL SLEEVES, ETC) NOT SHOWN ON SLAB PLAN AND COORDINATE WITH TEAM PRIOR TO POURING CONCRETE SLAB.

2. ALL LOCATIONS AND DIMENSIONS OF (E) PILASTERS, (E) COLUMNS, (E) WALLS, ETC TO BE FIELD VERIFIED AND COORDINATED WITH TEAM IF DIFFERING FROM SLAB PLAN.

SLAB PLAN - KEYNOTES

1A 4" WIDE CONCRETE CURB, REF **15/54.1**
1B 4.5" WIDE CONCRETE CURB, REF **15/54.1**
1C 5" WIDE CONCRETE CURB, REF **15/54.1**
1D 6" WIDE CONCRETE CURB, REF **15/54.1**
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1N 18" WIDE CONCRETE CURB, REF **15/54.1**
1P 19" WIDE CONCRETE CURB, REF **15/54.1**
1Q 22" WIDE CONCRETE CURB, REF **15/54.1**
2 COLUMN/POST PER STRUCTURAL DRAWINGS
3 (E) PILASTER, FIELD VERIFY DIMENSIONS
4 SHOTCRETE WALL PER STRUCTURAL DRAWINGS

SLAB PLAN - LEGEND

(N) CONC SLAB ON GRADE - SEE STRUCTURAL DRAWINGS

6" HIGH CONC CURB, U.N.O. - REF **15/54.1** & KEYNOTES FOR WIDTH

SLAB DEPRESSION - VFY W/ WALK OFF MAT MANUF

6" HIGH CONC HOUSEKEEPING PAD - REF **14/54.1**, UNO
COORDINATE EXTENT WITH MEPT CONSULTANT

(N) CONC SLAB OVER (E) CONC SLAB ON GRADE AT DEPRESSED AREA/PIT BELOW - SEE STRUCTURAL DRAWINGS

3" TOPPING SLAB (SLOPED TO DRAIN) ABOVE SLAB ON GRADE, REF **24 / A2.02**

(E) CONC WALL - SEE STRUCTURAL DRAWINGS

(N) CMU WALL - SEE STRUCTURAL DRAWINGS

SLAB PLAN - (E) BUILDING MM WEST RENOVATION SCALE 1/8" = 1'-0" 10

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SHEET TITLE
SLAB PLAN - (E) BUILDING MM WEST

SHEET NUMBER
A2.01

ADDENDUM#1

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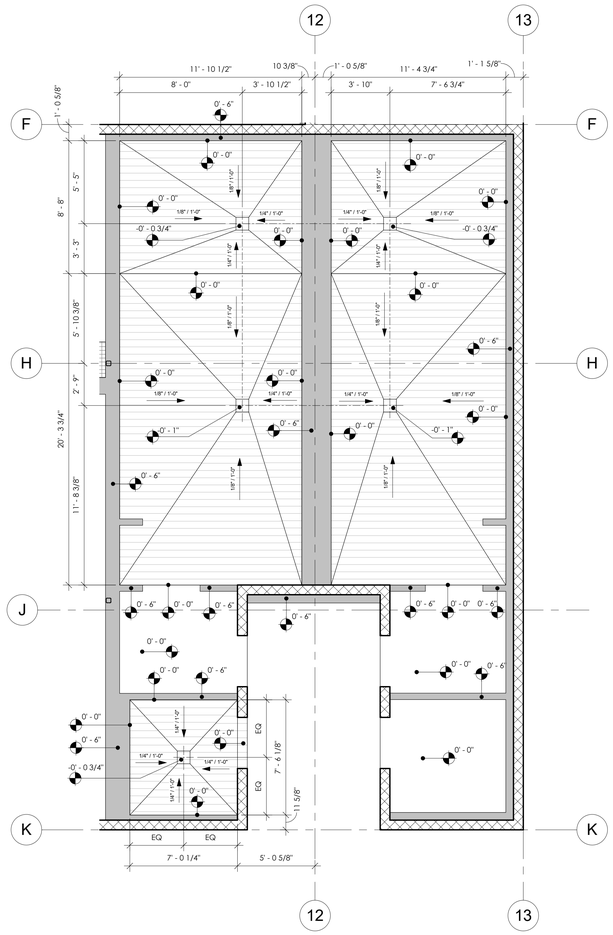
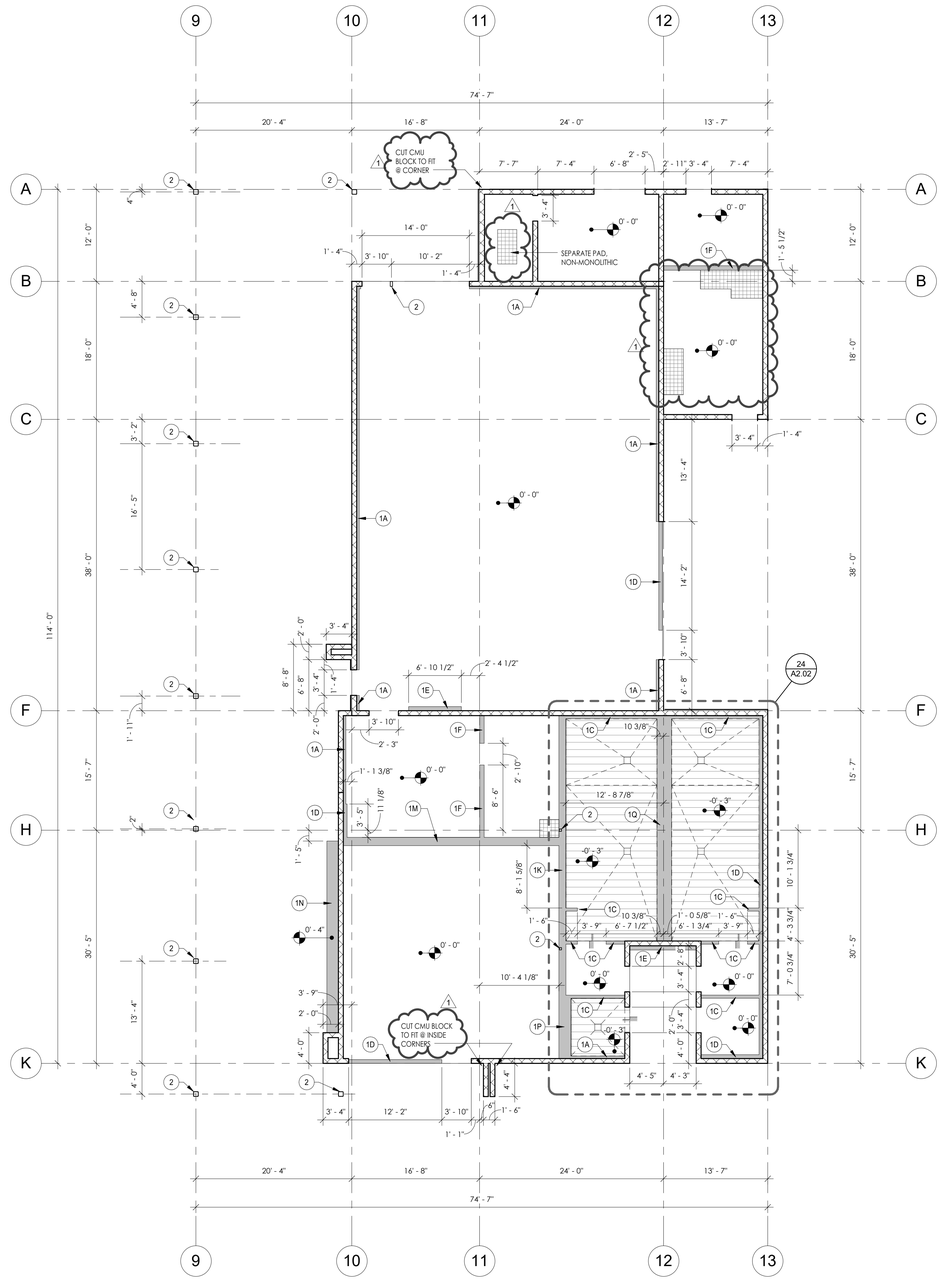
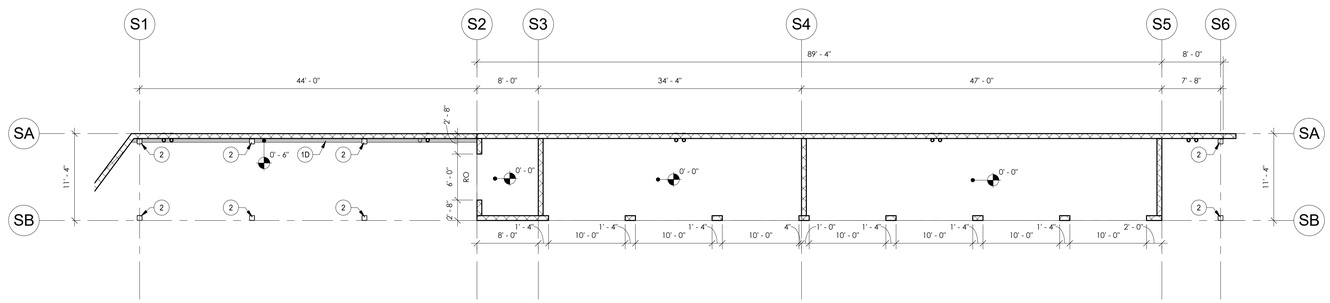


TOPPING SLAB @ RESTROOMS — SCALE 1/4" = 1'-0" — 24



SLAB PLAN - (N) WORKSHOP BUILDING — SCALE 1/8" = 1'-0" — 9



SLAB PLAN - (N) COVERED STORAGE — SCALE 1/8" = 1'-0" — 10

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2. ALL LOCATIONS AND DIMENSIONS OF (E) PILASTERS, (E) COLUMNS, (E) WALLS, ETC TO BE FIELD VERIFIED AND COORDINATED WITH TEAM IF DIFFERING FROM SLAB PLAN.

SLAB PLAN - KEYNOTES

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1M 13" WIDE CONCRETE CURB, REF **15/54.1**
1N 18" WIDE CONCRETE CURB, REF **15/54.1**
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2 COLUMN/POST PER STRUCTURAL DRAWINGS
3 (E) PILASTER, FIELD VERIFY DIMENSIONS
4 SHOTCRETE WALL PER STRUCTURAL DRAWINGS

SLAB PLAN - LEGEND

(N) CONC SLAB ON GRADE - SEE STRUCTURAL DRAWINGS

6" HIGH CONC CURB, U.N.O. - REF **15/54.1** & KEYNOTES FOR WIDTH

SLAB DEPRESSION - VFY W/ WALK OFF MAT MANUF

6" HIGH CONC HOUSEKEEPING PAD - REF **14/54.1**, UNO
COORDINATE EXTENT WITH MEPT CONSULTANT

(N) CONC SLAB OVER (E) CONC SLAB ON GRADE AT DEPRESSED AREA/PIT BELOW - SEE STRUCTURAL DRAWINGS

3" TOPPING SLAB (SLOPED TO DRAIN) ABOVE SLAB ON GRADE, REF **24 / A2.02**

(E) CONC WALL - SEE STRUCTURAL DRAWINGS

(N) CMU WALL - SEE STRUCTURAL DRAWINGS

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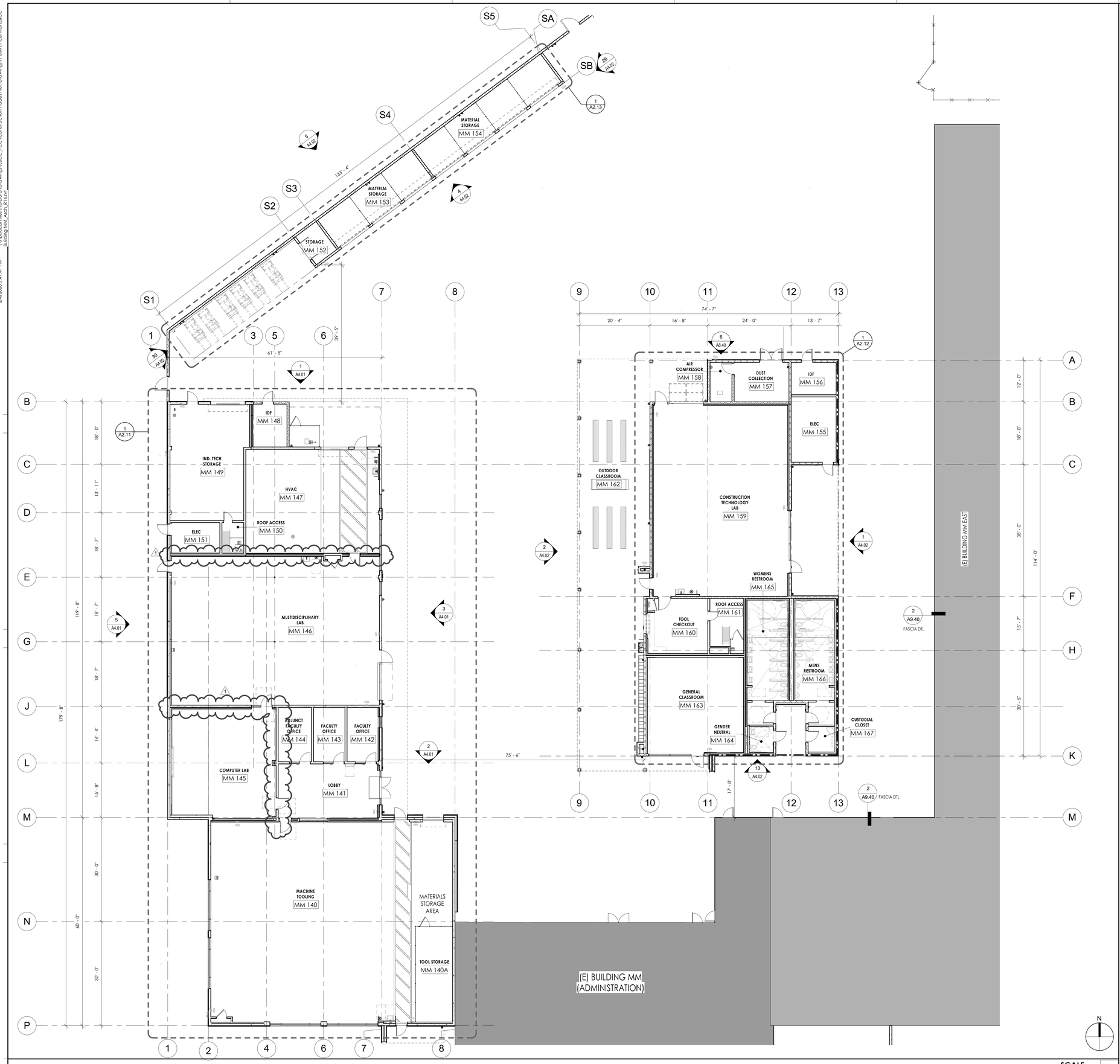
SHEET TITLE
SLAB PLAN - (N) WORKSHOP BUILDING & (N) COVERED STORAGE

SHEET NUMBER
A2.02

ADDENDUM#1



FIRST FLOOR PLAN SCALE 3/32" = 1'-0" 1

FLOOR PLAN - GENERAL NOTES

1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.

2. REFER TO SHEETS **G2.10** FOR EGRESS AND OCCUPANCY LOADS.

3. SEE SHEET **A9.60** FOR WALL TYPES.

4. FIRE EXTINGUISHERS MUST COMPLY WITH TITLE 19, ARTICLE 5. DISTRIBUTION SHALL NOT EXCEED 75 FEET TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING.

5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.

6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.

7. REFER TO SHEET **G3.11** FOR ADA CLEARANCE REQUIREMENTS.

8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**

9. THERMOSTATS WILL BE GANGED TOGETHER WITH LIGHT SWITCHES, AND PER MECHANICAL. IN CASE OF CONFLICT, IT MUST BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO INSTALLATION.

10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET **A9.90** FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.

11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.

12. ANTI GRAFFITI COATING PER SPEC:
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT, CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

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CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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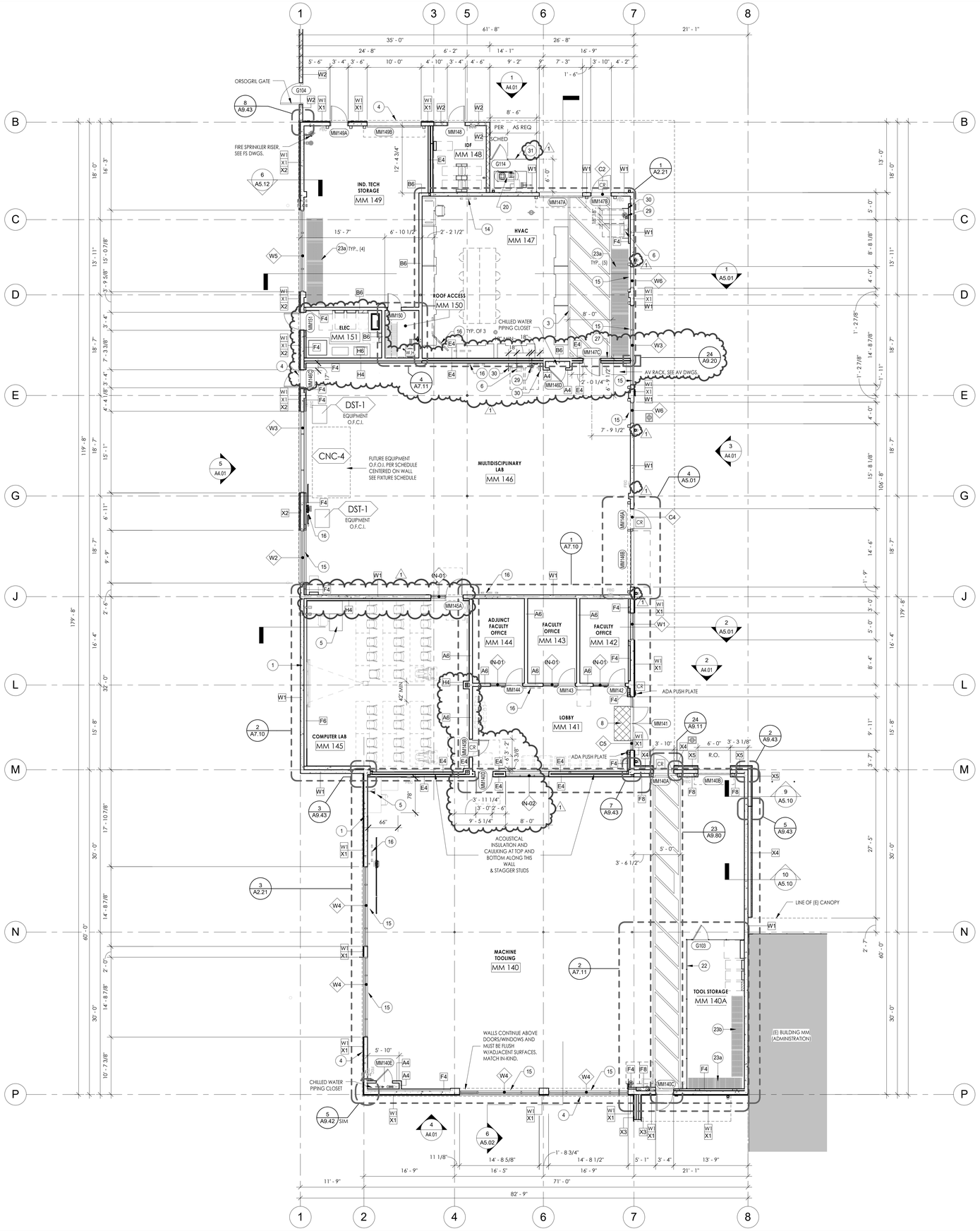
SHEET TITLE
OVERALL FLOOR PLANS

SHEET NUMBER
A2.10

ADDENDUM#1

6/4/2020 5:41:48 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BMV1 Central\LBCC Building MM_Arch_R16.rvt



FLOOR PLAN - GENERAL NOTES

1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.

2. REFER TO SHEETS **G2.10** FOR EGRESS AND OCCUPANCY LOADS.

3. SEE SHEET **A9.60** FOR WALL TYPES.

4. FIRE EXTINGUISHERS MUST COMPLY WITH TITLE 19, ARTICLE 5. DISTRIBUTION SHALL NOT EXCEED 75 FEET TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING.

5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.

6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.

7. REFER TO SHEET **G3.11** FOR ADA CLEARANCE REQUIREMENTS.

8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**

9. THERMOSTATS WILL BE GANGED TOGETHER WITH LIGHT SWITCHES, AND PER MECHANICAL. IN CASE OF CONFLICT, IT MUST BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO INSTALLATION.

10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET **A9.90** FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.

11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.

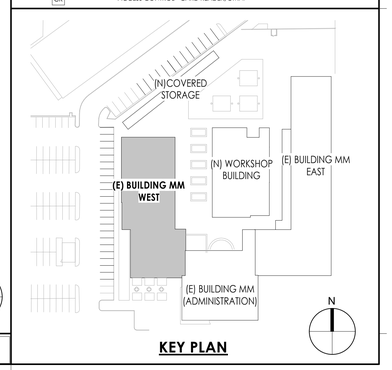
12. ANTI GRAFFITI COATING PER SPEC:
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT, CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

FLOOR PLAN KEYNOTES:

1. EXISTING CONCRETE BUILDING, INFILL PER STRUCTURAL DRAWINGS. SACK & RUB FINISH, BLEND
2. AESS WITH 3 COAT HIGH PERFORMANCE PAINT SYSTEM - BASIS OF DESIGN: CARBOLINE
3. TRAFFIC GRADE CONCRETE PAVEMENT MARKINGS
4. LINE OF EXPOSED AESS MC CHANNEL, REFER TO STRUCTURAL DRAWINGS
5. TEACHER'S LECTERN LAYOUT "A" OR "B" (C.F.C.I.) PER DISTRICT STANDARDS A/V RACK BY MIDDLE ATLANTIC PRODUCTS MODEL NO. SRSR-2-12 SLIDING RAIL SYSTEM IN OPEN SPACE OF LECTERN (O.F.O.I.) PER DISTRICT STANDARDS SEE DETAIL **12 / A9.90**
6. WALL MOUNT SINK W/EMERGENCY EYEWASH FAUCET, REFER TO PLUMBING DRAWINGS
7. SURFACE MOUNT GLASSWRITE MARKERBOARDS (FROSTED, FRAMELESS) 5' x 9', TYP. OF 3
8. WALK-OFF MAT - BASIS OF DESIGN: PEDIMAT M1 BY C/S GROUP. PER SPEC 12481-3-2.2-A SEE DETAIL: **5 / A9.10**
9. ACCESSIBLE HI-LO DRINKING FOUNTAIN
10. WATER HEATER - SEE PLUMBING DRAWINGS, DETAIL **1/P6.2**
11. FLOOR MOUNTED MOP SINK - SEE PLUMBING DRAWINGS, FIXTURE MS-1 SHEET **P0.2** & DETAIL **6/P6.2**
12. MOTORIZED PROJECTION SCREEN W/SUSPENDED PROJECTOR - SEE A/V DRAWINGS
13. INTERIOR ALUMINUM STOREFRONT SYSTEM WITH LAMINATED GLAZING - BASIS OF DESIGN: ARCADIA
14. WHITEBOARD WITH ALUMINUM FRAME AND MARKER TRAY
15. DUAL MOTORIZED WINDOW SHADES FULL WIDTH OF OPENING, WITH EXTRUDED ALUMINUM DUAL SHADE POCKET. ACOUSTIC BLACKOUT SHADE AND SOLAR CONTROL SHADE - BASIS OF DESIGN: MECHOSHADE ACOUSTIVEL
16. FLAT PANEL, REFER TO AV DRAWINGS & **1/A9.52** FOR MOUNTING INFORMATION. PENDANT OR SURFACE MOUNT
17. CAST-IN-PLACE CONCRETE BENCHES, SEE LANDSCAPE DWGS **E/L4.10**
18. DOUBLE TIER LOCKERS, SET ON CONCRETE CURB, SEE **12/A9.80**
19. DUST COLLECTOR EQUIPMENT, REFER TO MECHANICAL DRAWINGS
20. COMPRESSED AIR EQUIPMENT, REFER TO PLUMBING DRAWINGS
21. PLUMBING EQUIPMENT, REFER TO PLUMBING DRAWINGS
22. CHAINLINK GATE (LOCKABLE) & FENCE CAGE, SEE: **12/A7.11**
23a. BULK STORAGE RACK, CFCI, B.O.D. ULINE H-5394 (DEFERRED SUBMITTAL APPROVAL, SEE COVER SHEET)
23b. BULK STORAGE RACK, CFCI, B.O.D. ULINE H-5395 (DEFERRED SUBMITTAL APPROVAL, SEE COVER SHEET)
24. LOCKABLE METAL CABINETS CFCI, B.O.D., ULINE H-6896 (4) & H-6897 (3). SEE ANCHORAGE DETAILS: **20/A7.12**
25. FURNITURE, N.I.C.
26. STEEL SHIP LADDER, BASIS OF DESIGN: ALACO (65deg) W/LADDER EXTENSION SAFETY POST
27. TACK BOARD, SEE SPECS
28. FLOOR BOX OUTLET ONLY IN (E) COMPUTER LAB AND (N) CLASSROOM COORDINATE W/ ELECTRICAL CONSULTANT
29. STAND-ALONE EMERGENCY EYE-WASH STATION. SEE PLUMBING DWGS & **15/A9.80**
30. GRAB BAR, B.O.D. BOBRICK B1928 TYP., SEE DETAIL: **26 / A9.80** & **24 / A9.80**
31. NEW CHAINLINK FENCE AND GATE, SEE LANDSCAPE DRAWINGS **A/L4.20**

FLOOR PLAN - LEGEND

- (E) CONCRETE WALL TO REMAIN, PROTECT IN PLACE FROM DAMAGE DURING DEMO
- (N) CONCRETE WALL IN-FILL, REFER TO STRUCTURAL DRAWINGS
- (N) FURRED WALL OVER (E) CONCRETE WALL
- (N) CMU WALL
- (N) METAL STUD WALL
- 1 HOUR RATING
- DEPRESSED SLAB, SEE STRUCTURAL DRAWINGS
- (1) KEYNOTE - REFER TO KEYNOTE LEGEND
- (101A) DOOR TAG - SEE DOOR SCHEDULE, SHEET **A8.30**
- (A4) (A4/A4) (A4/A4/A4) WALL TYPE @ TOP / WALL TYPE @ CENTER / WALL TYPE @ BOTTOM — PARTITION TYPE - SEE SHEET **A9.60** & SEE EXTERIOR ELEVATIONS
- (W) GLAZED SYSTEM TYPE - SEE SHEETS **A8.40**
- (FEC) FIRE EXTINGUISHER CABINET, SEE DETAILS **6, 7, 8/A9.80** SPACING MUST COMPLY WITH TITLE 19, ARTICLE 5
- (CR) ACCESS CONTROL - CARD READER/OMNI



KEY PLAN

FIRST FLOOR - (E) BUILDING MM WEST RENOVATION

SCALE 1/8" = 1'-0"

1

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CONSULTANTS

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SHEET TITLE

FLOOR PLAN - (E) BUILDING MM WEST

SHEET NUMBER

A2.11

ADDENDUM#1

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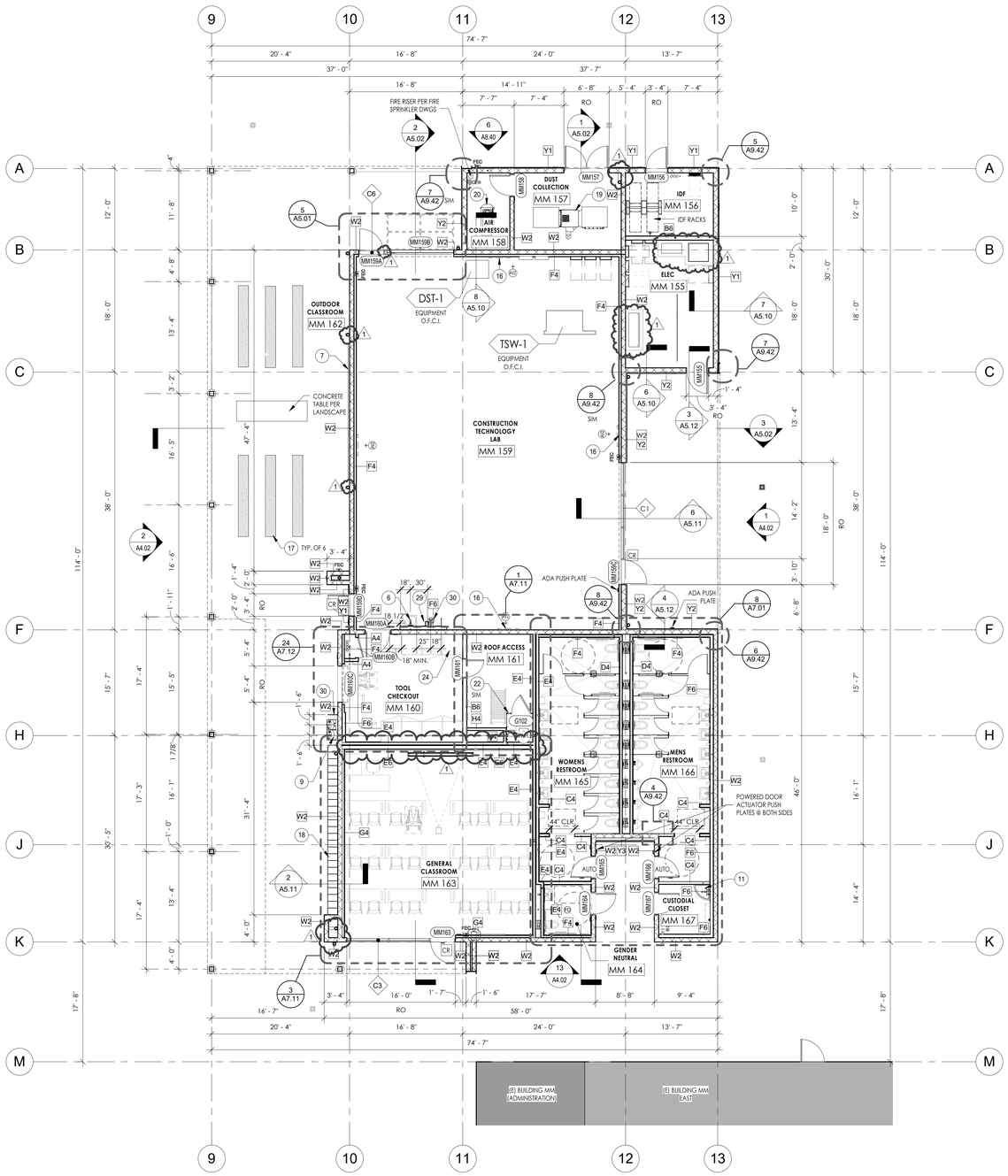

FLOOR PLAN - GENERAL NOTES

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3. SEE SHEET **A9.60** FOR WALL TYPES.

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5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.

6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.

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8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**

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10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET **A9.90** FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.

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- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
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FLOOR PLAN KEYNOTES:

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7. SURFACE MOUNT GLASSWRITE MARKERBOARDS (FROSTED, FRAMELESS) 5' x 9'. TYP. OF 3
8. WALK-OFF MAT - BASIS OF DESIGN: PEDIMAT M1 8Y C/S GROUP. PER SPEC 124613-2.2-A SEE DETAIL: **5 / A9.10**
9. ACCESSIBLE HI-LO DRINKING FOUNTAIN
10. WATER HEATER - SEE PLUMBING DRAWINGS, DETAIL **1/P6.2**
11. FLOOR MOUNTED MOP SINK - SEE PLUMBING DRAWINGS, FIXTURE MS-1 SHEET **P0.2** & DETAIL **6/P6.2**
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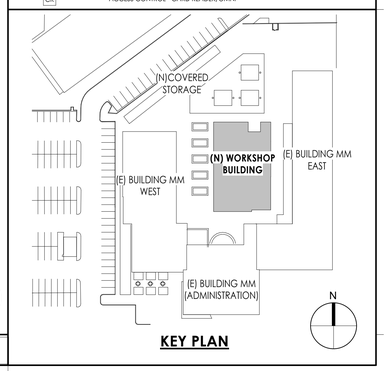
28. FLOOR BOX OUTLET ONLY IN (E) COMPUTER LAB AND (N) CLASSROOM COORDINATE W/ ELECTRICAL CONSULTANT
29. STAND-ALONE EMERGENCY EYE-WASH STATION, SEE PLUMBING DWGS & **15/A9.80**
30. GRAB BAR, B.O.D.: BOBRICK 819228 TYP., SEE DETAIL: **28 / A9.80** & **24 / A9.80**
31. NEW CHAINLINK FENCE AND GATE, SEE LANDSCAPE DRAWINGS **A/L4.20**

FLOOR PLAN - LEGEND

- (E) CONCRETE WALL TO REMAIN, PROTECT IN PLACE FROM DAMAGE DURING DEMO
- (N) CONCRETE WALL IN-FILL, REFER TO STRUCTURAL DRAWINGS
- (N) FURRED WALL OVER (E) CONCRETE WALL
- (N) CMU WALL
- (N) METAL STUD WALL
- 1 HOUR RATING
- DEPRESSED SLAB, SEE STRUCTURAL DRAWINGS
- 1 — KEYNOTE - REFER TO KEYNOTE LEGEND
- 101A — DOOR TAG - SEE DOOR SCHEDULE, SHEET **A8.30**
- A4 — A4 A4 — A4 A4 A4 — WALL TYPE @ TOP / WALL TYPE @ CENTER / WALL TYPE @ BOTTOM — PARTITION TYPE - SEE SHEET **A9.60** & SEE EXTERIOR ELEVATIONS
- W — GLAZED SYSTEM TYPE - SEE SHEETS **A8.40**
- FEC — FIRE EXTINGUISHER CABINET, SEE DETAILS **6, 7, 8/A9.80** SPACING MUST COMPLY WITH TITLE 19, ARTICLE 5
- CR — ACCESS CONTROL - CARD READER/OMNI



KEY PLAN

FIRST FLOOR - NEW WORKSHOP BUILDING — SCALE 1/8" = 1'-0" — 1

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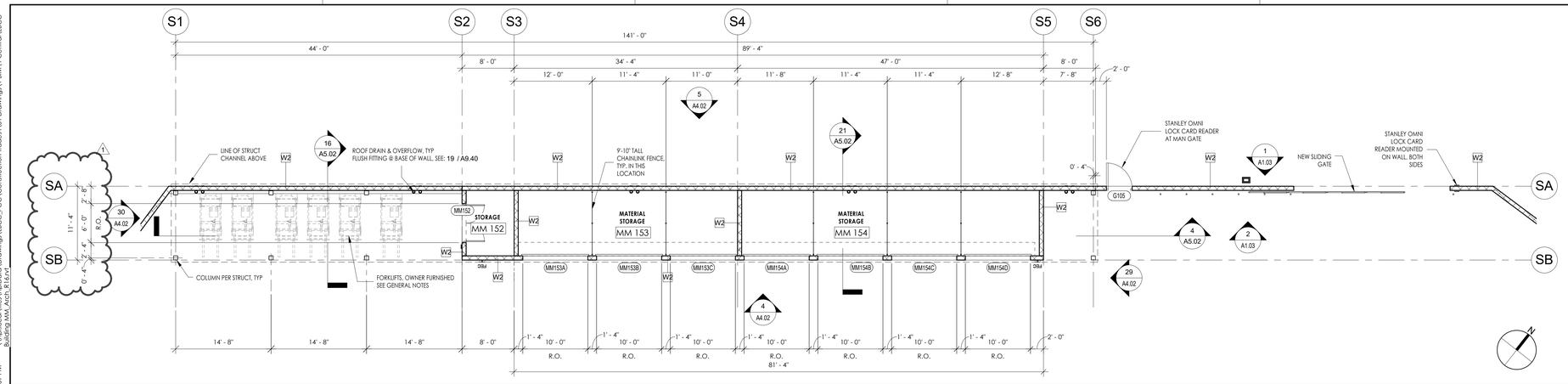
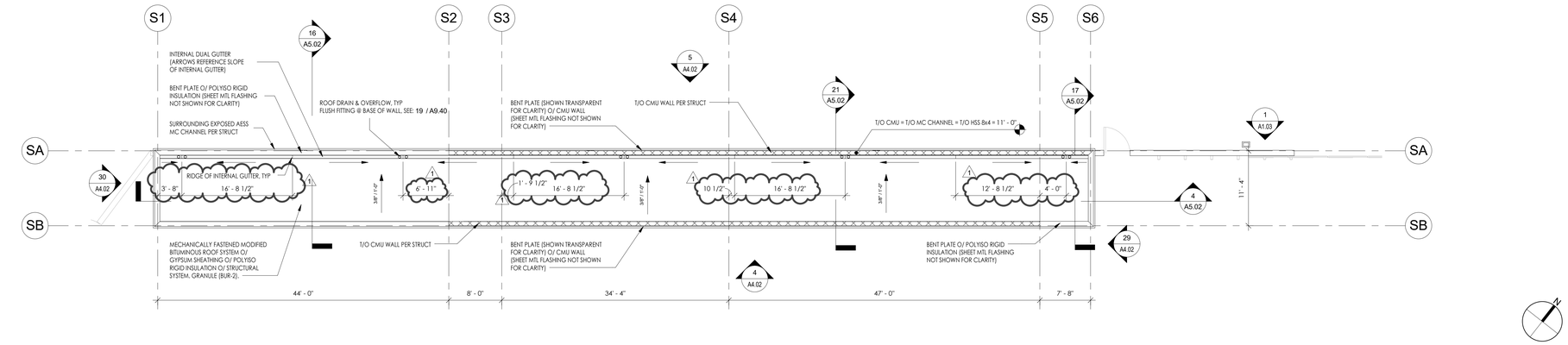
SHEET TITLE
FLOOR PLAN - (N) WORKSHOP BUILDING

SHEET NUMBER
A2.12

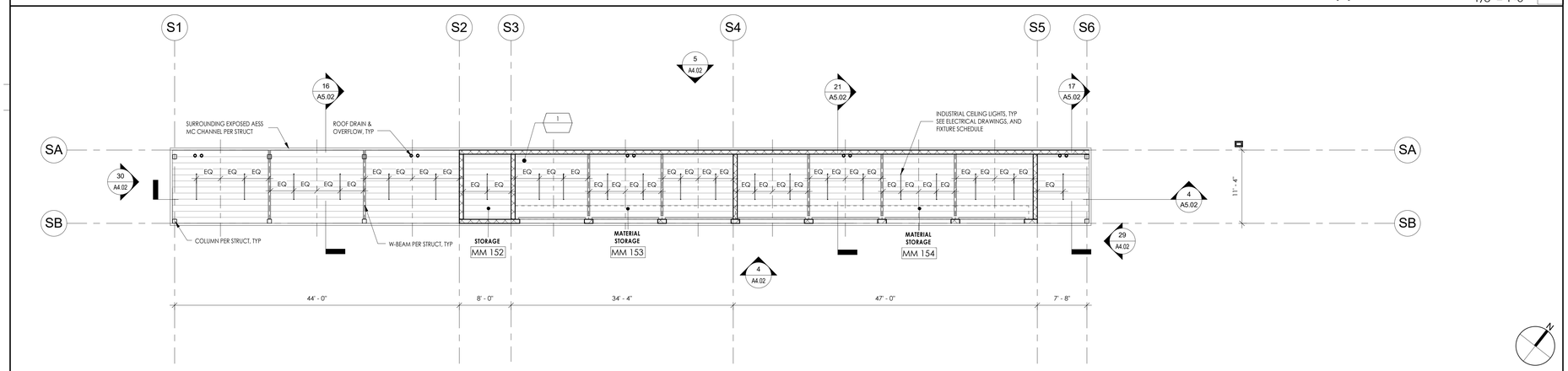
ADDENDUM#1



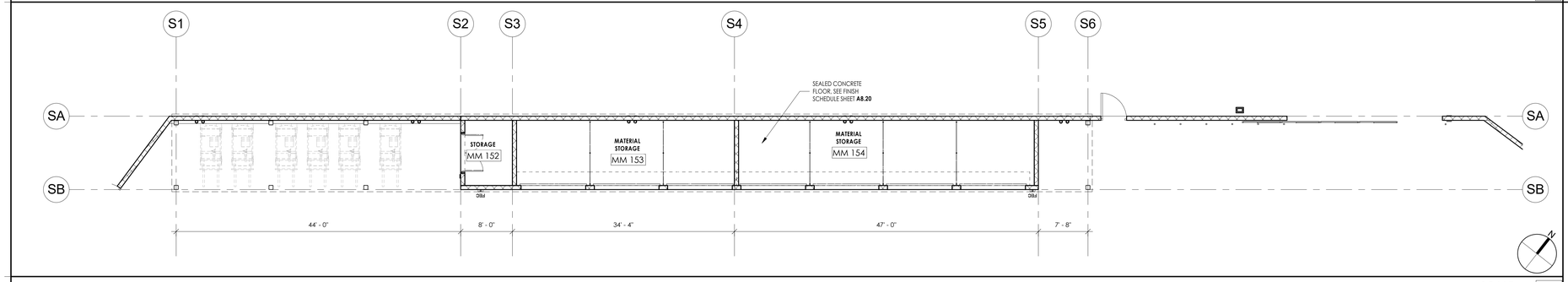
FIRST FLOOR - (N) COVERED STORAGE SCALE 1/8" = 1'-0" 1



ROOF PLAN - (N) COVERED STORAGE SCALE 1/8" = 1'-0" 2



REFLECTED CEILING PLAN - (N) COVERED STORAGE SCALE 1/8" = 1'-0" 3



FINISH PLAN - (N) COVERED STORAGE SCALE 1/8" = 1'-0" 4

FLOOR PLAN - GENERAL NOTES

1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.
2. REFER TO SHEETS G2.10 FOR EGRESS AND OCCUPANCY LOADS.
3. SEE SHEET A9.60 FOR WALL TYPES.
4. FIRE EXTINGUISHERS MUST COMPLY WITH TITLE 19, ARTICLE 5. DISTRIBUTION SHALL NOT EXCEED 75 FEET TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING.
5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.
6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.
7. REFER TO SHEET G3.11 FOR ADA CLEARANCE REQUIREMENTS.
8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**
9. THERMOSTATS WILL BE GANGED TOGETHER WITH LIGHT SWITCHES, AND PER MECHANICAL. IN CASE OF CONFLICT, IT MUST BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO INSTALLATION.
10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET A9.90 FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.
11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.
12. CONTRACTOR TO RELOCATE FORKLIFT CHARGING STATIONS FROM SOUTHEAST MM EXTERIOR YARD TO NEW LOCATION PER ELECTRICAL DRAWINGS
13. ANTI GRAFFITI COATING PER SPEC:
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT, CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

RCP - GENERAL NOTES

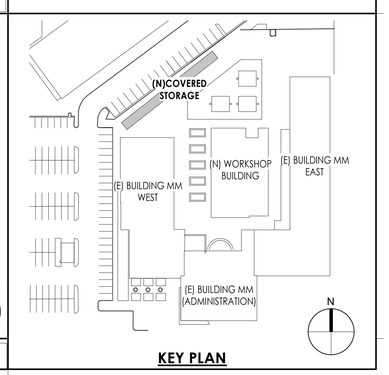
1. SEE ELECTRICAL, MECHANICAL, PLUMBING, TELECOMMUNICATION, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.
2. FOR INTERIOR FINISHES, SEE FINISH SCHEDULE.
3. SMOKE DETECTORS, SPRINKLERS, AND RECESSED DOWN LIGHTS ARE TO BE LOCATED IN THE CENTER OF CEILING TILE U.O.N.
4. ACCESS PANELS ABOVE SUSPENDED ACOUSTICAL CEILING ARE TO BE LOCATED TO SWING THROUGH CEILING GRID.
5. ALL PENDANT MOUNTED LIGHT FIXTURES SHALL BE ABLE TO SWING AT 45° FROM THE VERTICAL IN ANY DIRECTION W/OUT CONTACTING AN OBSTRUCTION. (DSA IR 16-9)
   WHERE MOUNTED AT 1'-6" OR LESS BELOW THE FINISH CEILING, A CLEAR HORIZONTAL DIMENSION OF 1'-9" MUST BE MAINTAINED. WHERE MOUNTED GREATER THAN 1'-6" BELOW THE FINISH CEILING, AND FIXTURE IS DETERMINED TO CONTACT AN OBSTRUCTION WHEN POSITIONED AT 45°, BRACING IS TO BE PROVIDED TO PROHIBIT THE POTENTIAL SWING IN THE DIRECTION OF THE OBSTRUCTION PER DETAIL 21 / A9.50.
6. GENERAL CONTRACTOR TO COORDINATE WITH ALL TRADES TO MAINTAIN 3" CLEAR ALL AROUND PROJECTION SCREENS AND 3" RADIUS CLEAR FROM CENTERLINE OF PROJECTORS TO ENSURE THERE IS NO CONFLICT WITH MOUNTING OF AUDIOVISUAL EQUIPMENT. IN AREAS WHERE THIS CANNOT BE ACHIEVED, CONTRACTOR TO PROVIDE SUPPLEMENTAL FRAMING TO ACCOMMODATE SUPPORTS.
7. PAINT ALL EXPOSED PIPING, DUCTWORK, AND STRUCTURAL MEMBERS - PAINT COLOR IS 'ANCHOR'. PROVIDE 1" INSULATED BLACK DUCT LINER BOARD TO UNDERSIDE OF CONCRETE METAL DECK.

FLOOR PLAN - LEGEND

- (E) CONCRETE WALL TO REMAIN, PROTECT IN PLACE FROM DAMAGE DURING DEMO
- (N) CONCRETE WALL IN-FILL, REFER TO STRUCTURAL DRAWINGS
- (N) FURRED WALL OVER (E) CONCRETE WALL
- (N) CMU WALL
- (N) METAL STUD WALL
- 1 HOUR RATING
- DEPRESSED SLAB, SEE STRUCTURAL DRAWINGS
- (1) KEYNOTE - REFER TO KEYNOTE LEGEND
- (101A) DOOR TAG - SEE DOOR SCHEDULE, SHEET **A8.30**
- A4 / A4 / A4 — WALL TYPE @ TOP / WALL TYPE @ CENTER / WALL TYPE @ BOTTOM — PARTITION TYPE - SEE SHEET **A9.60** & SEE EXTERIOR ELEVATIONS
- (W) GLAZED SYSTEM TYPE - SEE SHEETS **A8.40**
- FEC (R) FIRE EXTINGUISHER CABINET, SEE DETAILS **6, 7, 8/A9.80** SPACING MUST COMPLY WITH TITLE 19, ARTICLE 5
- CR ACCESS CONTROL - CARD READER/OMNI

RCP CEILING TYPE

CEILING TYPE	GRAPHICS	DESCRIPTION
1		UNDERSIDE OF EXPOSED STRUCTURE ABOVE



KEY PLAN

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LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

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1	05/22/2020	ADDENDUM#1

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SHEET TITLE
FLOOR, ROOF, RCP & FINISH PLANS - (N) COVERED STORAGE

SHEET NUMBER
A2.13

ADDENDUM#1

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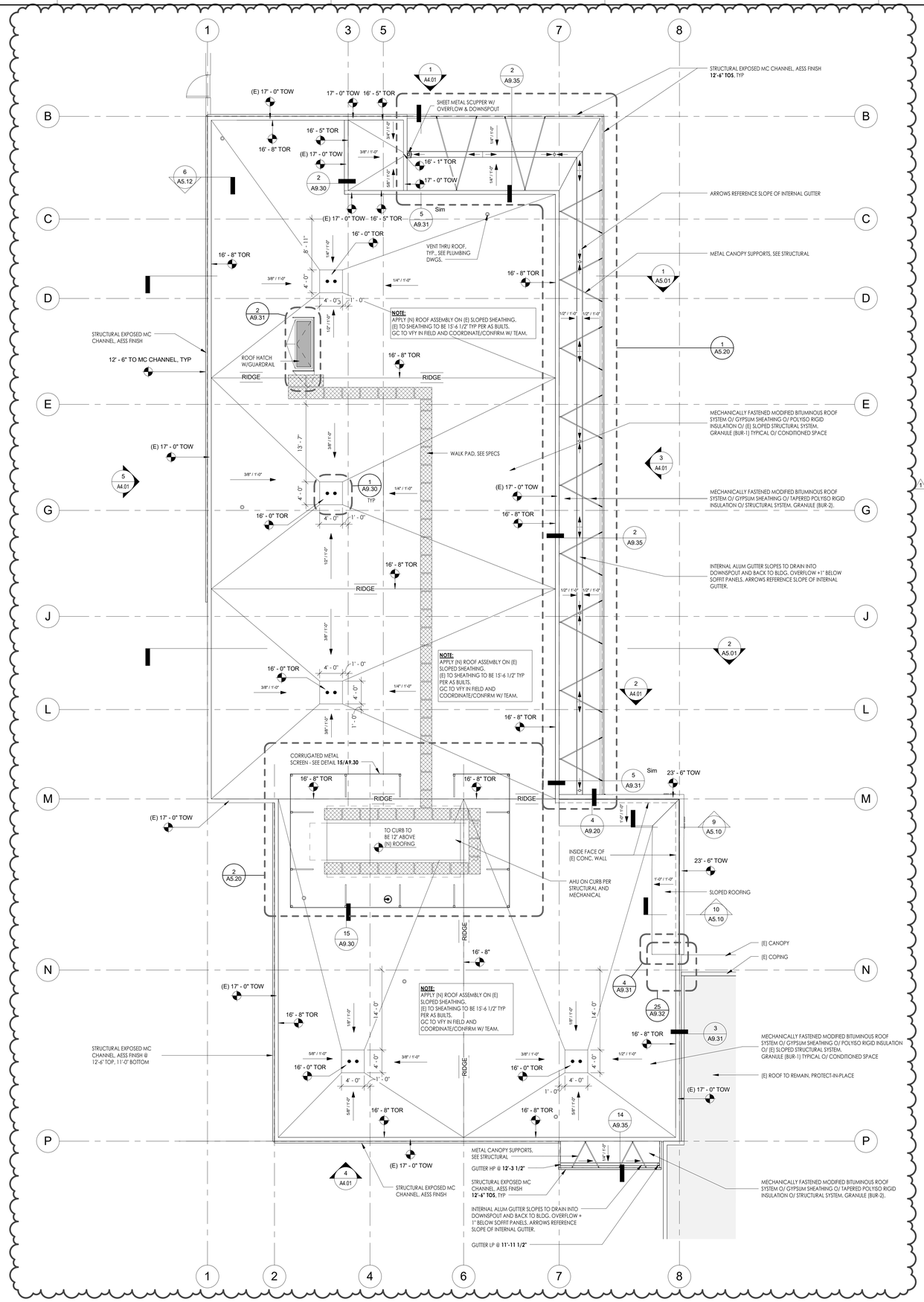


ROOF PLAN - (E) BUILDING MM WEST

SCALE 1/8" = 1'-0"

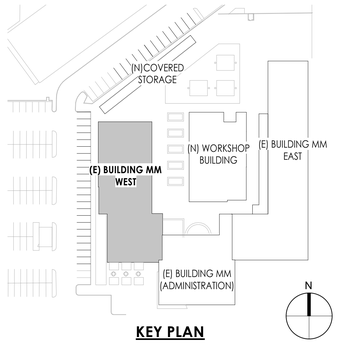
1

LEGEND

- CLASS A - SBS MODIFIED BITUMINOUS ROOFING O/ 1/2" GYPSUM SHEATHING O/ R-30 (5" MIN. THICK) RIGID INSULATION O/ (E) STRUCTURAL SYSTEM
- WALKWAY PADS (3'-0" WIDE, U.N.O.)
- 32'-0" TOP — PARAPET ELEVATION = TOP OF PARAPET FROM THE FIRST LEVEL FINISH FLOOR OF BUILDING
- 32'-0" TOR — ROOF ELEVATION = TOP OF ROOFING FINISH FROM THE FIRST LEVEL FINISH FLOOR OF BUILDING
- 32'-0" TOW — WALL ELEVATION = TOP OF WALL FINISH FROM THE FIRST LEVEL FINISH FLOOR OF BUILDING
- RIDGE — RIDGE OR HIGHEST ELEVATION OF ROOF PLANE
- ROOF AND OVERFLOW DRAIN AND RECEIVER AND PIPING - SEE PLUMBING DRAWINGS AND DETAIL

PLAN GENERAL NOTES

1. MINIMUM SLOPE OF ROOF = 3/8" PER FOOT, U.N.O.
2. MINIMUM SLOPE AT CRICKETS 1/4" PER FOOT, U.N.O.
3. MINIMUM THICKNESS OF R-30 RIGID INSULATION = 5", U.N.O.
4. K.O. PNL. = KNOCK-OUT (REMOVEABLE) PANEL AT EQUIPMENT SCREENWALL FOR FUTURE MECH./COIL SERVICING ACCESS. VERIFY EXACT LOCATION WITH MECH. CONTRACTOR.
5. FOR EXTERIOR PIPE/DUCT ROOF SUPPORT SEE MECHANICAL.



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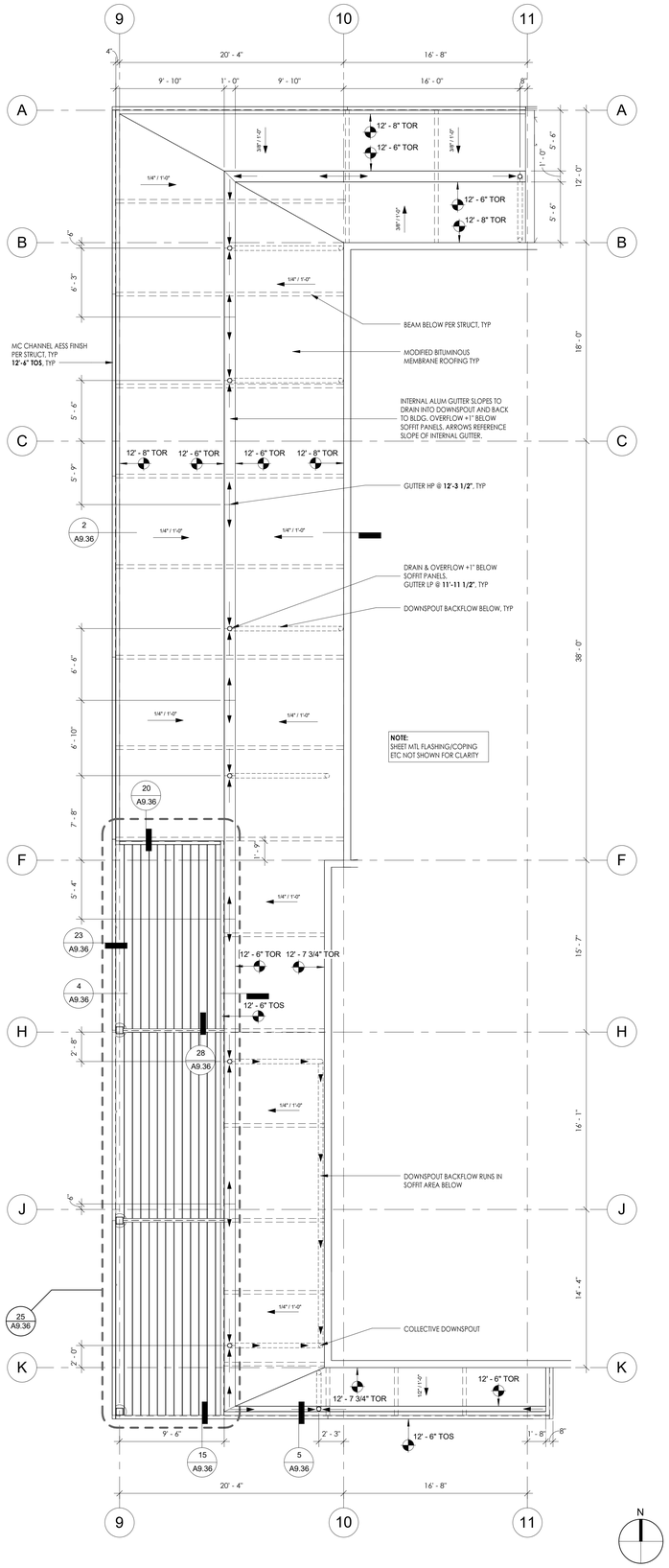
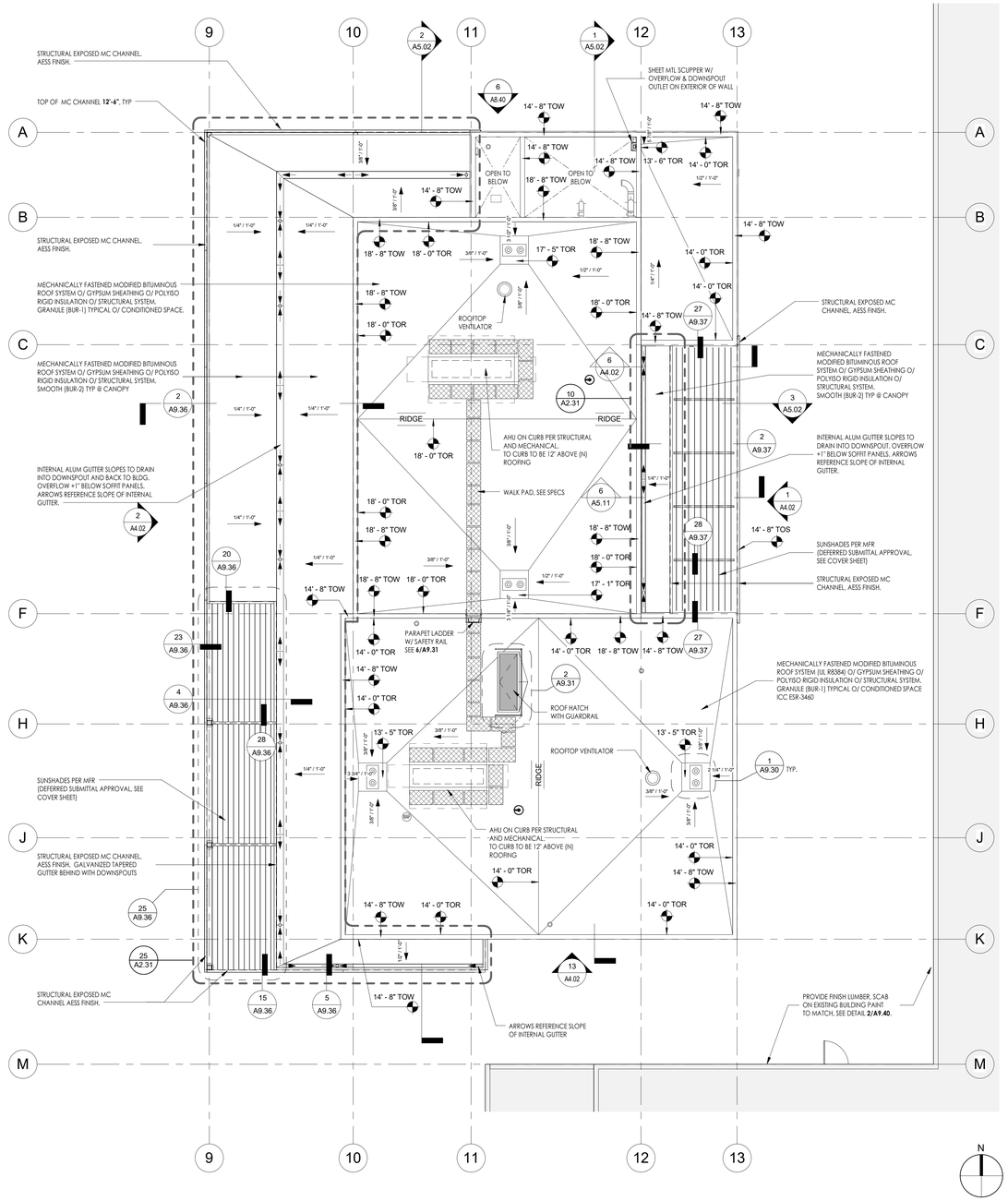
SHEET TITLE
ROOF PLAN - (E) BUILDING MM WEST

SHEET NUMBER
A2.30

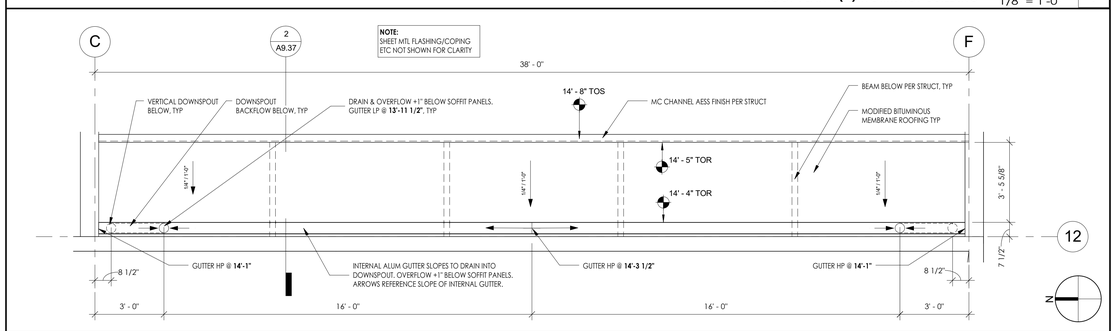
ADDENDUM#1



ENLARGED PLAN - WEST CANOPY @ (N) WORKSHOP BUILDING — SCALE 3/16" = 1'-0" — 25



ROOF PLAN - (N) WORKSHOP BUILDING — SCALE 1/8" = 1'-0" — 1



ENLARGED PLAN - EAST CANOPY @ (N) WORKSHOP BUILDING — SCALE 3/8" = 1'-0" — 10

LEGEND

- CLASS A - SBS MODIFIED BITUMINOUS ROOFING O/ 1/2" GYPSUM SHEATHING O/ R-30 (5" MIN. THICK) RIGID INSULATION O/ STRUCTURAL SYSTEM
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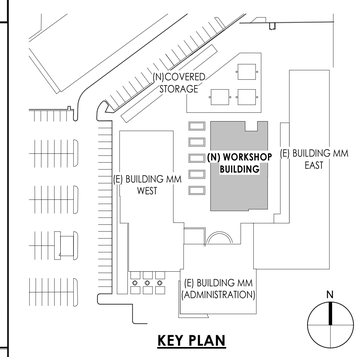

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SHEET TITLE
ROOF PLAN - (N) WORKSHOP BUILDING

SHEET NUMBER
A2.31

ADDENDUM#1

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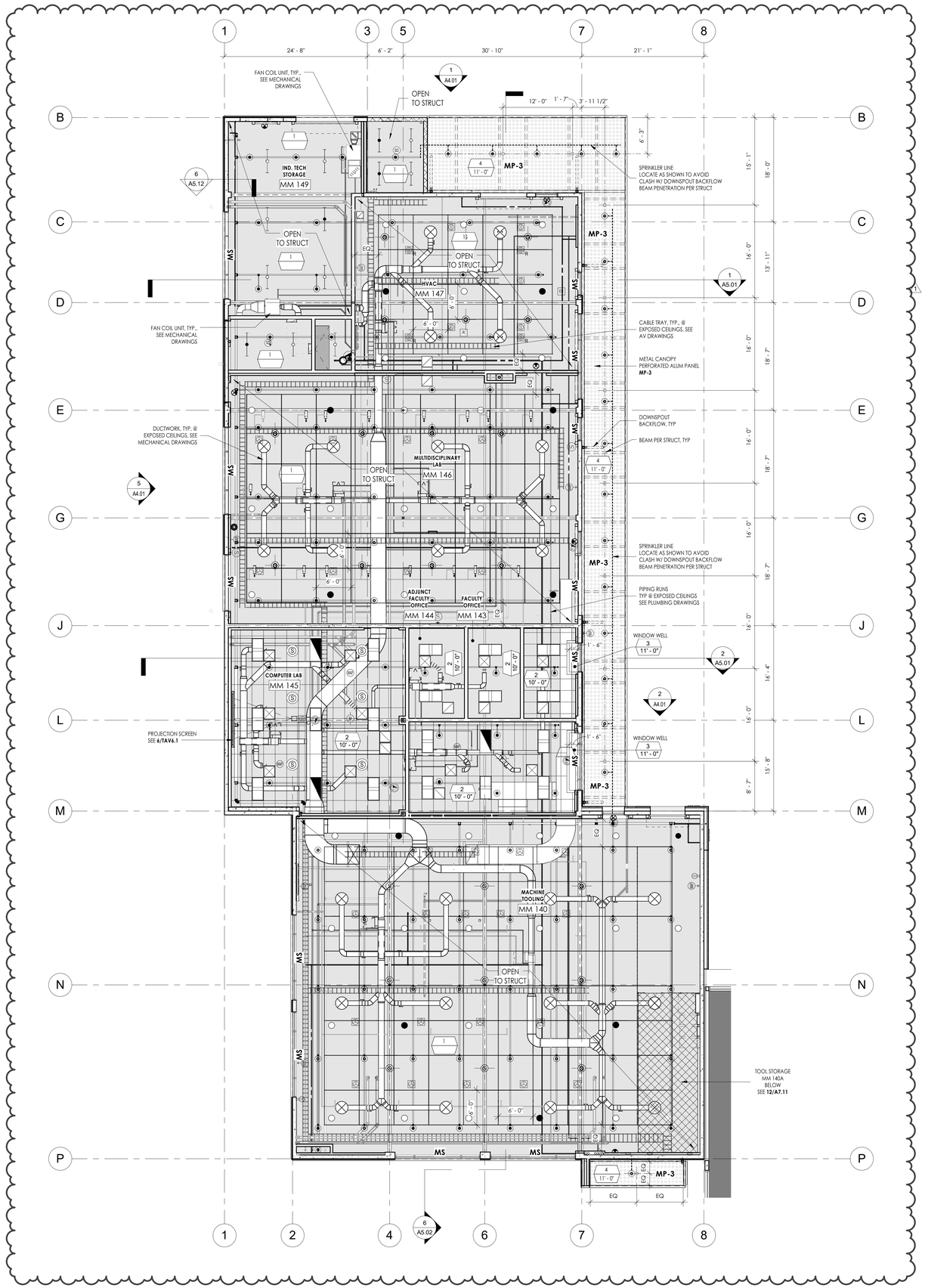

(E) BLDG - REFLECTED CEILING PLAN

SCALE 1/8" = 1'-0"

1

RCP - GENERAL NOTES

1. SEE ELECTRICAL, MECHANICAL, PLUMBING, TELECOMMUNICATION, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.
2. FOR INTERIOR FINISHES, SEE FINISH SCHEDULE.
3. SMOKE DETECTORS, SPRINKLERS, AND RECESSED DOWN LIGHTS ARE TO BE LOCATED IN THE CENTER OF CEILING TILE U.O.N.
4. ACCESS PANELS ABOVE SUSPENDED ACOUSTICAL CEILING ARE TO BE LOCATED TO SWING THROUGH CEILING GRID.
5. ALL PENDANT MOUNTED LIGHT FIXTURES SHALL BE ABLE TO SWING AT 45° FROM THE VERTICAL IN ANY DIRECTION W/OUT CONTACTING AN OBSTRUCTION. (DSA IR 16-9)
   WHERE MOUNTED AT 1'-6" OR LESS BELOW THE FINISH CEILING, A CLEAR HORIZONTAL DIMENSION OF 1'-9" MUST BE MAINTAINED. WHERE MOUNTED GREATER THAN 1'-6" BELOW THE FINISH CEILING, AND FIXTURE IS DETERMINED TO CONTACT AN OBSTRUCTION WHEN POSITIONED AT 45°, BRACING IS TO BE PROVIDED TO PROHIBIT THE POTENTIAL SWING IN THE DIRECTION OF THE OBSTRUCTION PER DETAIL 21 / A9.50.
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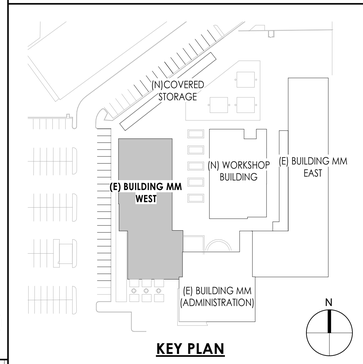
RCP LEGEND

- CEILING ACCESS PANEL, SEE MECHANICAL DRAWINGS
- ILLUMINATED EXIT SIGN, SEE ELECTRICAL DRAWINGS
- CEILING MOUNTED PROJECTOR, SEE AV DRAWINGS
- CEILING MOUNTED MOTORIZED PROJECTOR SCREEN, SEE AV DRAWINGS, SEE DETAIL 6 / TAV6.1
- RECESSED FLUORESCENT LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS, & FIXTURE SCHEDULE
- RECESSED FLUORESCENT EMERGENCY LIGHTING FIXTURE, SEE ELECTRICAL DRAWINGS, & FIXTURE SCHEDULE
- RECESSED LINEAR LED, SEE ELECTRICAL DRAWINGS, & FIXTURE SCHEDULE
- CAN PENDANT LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS & FIXTURE SCHEDULE
- CAN PENDANT EMERGENCY LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS & FIXTURE SCHEDULE
- RECESSED CAN DOWNLIGHT, SEE ELECTRICAL DRAWINGS & FIXTURE SECHEDULE
- 'INDUSTRIAL' CEILING LIGHT, SEE ELECTRICAL DRAWINGS, FIXTURE SCHEDULE, AND **5/A9.52**
- SUPPLY AIR DIFFUSER, SEE MECHANICAL DRAWINGS
- RETURN AIR DIFFUSER, SEE MECHANICAL DRAWINGS
- EXHAUST AIR DIFFUSER, SEE MECHANICAL DRAWINGS
- UNISTRUT SYSTEM @ 12' A.F.F., SEE SPECS
- CONTROL UNIT & HOSE REEL ASSEMBLY, SEE FIRE SPRINKLER DRAWINGS @ EXPOSED CEILINGS
- CEILING MOUNTED PENDANT SPEAKER, SEE FIRE ALARM DRAWINGS
- CEILING MOUNTED SPEAKER, SEE FIRE ALARM DRAWINGS
- MOTION SENSOR, CEILING MOUNTED, SEE TELECOM DRAWINGS
- WIRELESS ACCESS POINT OUTLET, SEE TELECOM DRAWINGS
- STROBE, SEE FIRE ALARM DRAWINGS
- CEILING MOUNTED DATA VOICE OUTLET, SEE TELECOM DRAWINGS
- SMOKE DETECTOR, SEE FIRE ALARM DRAWINGS
- SPECIAL RECEPTACLE, SEE ELECTRICAL DRAWINGS
- RECEPTACLE, CEILING MOUNTED, SEE ELECTRICAL DRAWINGS
- SPRINKLER, SEE FIRE ALARM DRAWINGS
- **MS** MOTORIZED SHADES PER SPECS
- **MP-3** PERFORATED METAL PANEL PER SPEC

RCP CEILING TYPE

CEILING TYPE	GRAPHICS	DESCRIPTION
1		UNDERSIDE OF EXPOSED STRUCTURE ABOVE - PAINTED SEE FINISH SCHEDULE
2		2' x 4' SUSPENDED ACOUSTICAL TILE CEILING - ICC ESR 1308 - SEE DTL 1 / A9.50
3		FRAMED GYPSUM BOARD CEILING - ICC ESR 1289 - PAINTED - SEE DTL **4/S8.2** & **12/A9.52**
4		PERFORATED ALUMINUM PANEL **MP-3**, CLEAR ANODIZED SEE **A9.35** & **A9.36**
5		CORRUGATED METAL PANEL SOFFIT - SEE DTL 2 / A9.41



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SHEET TITLE
REFLECTED CEILING PLAN - (E) BUILDING MM WEST RENOVATION

SHEET NUMBER
A3.10

ADDENDUM#1

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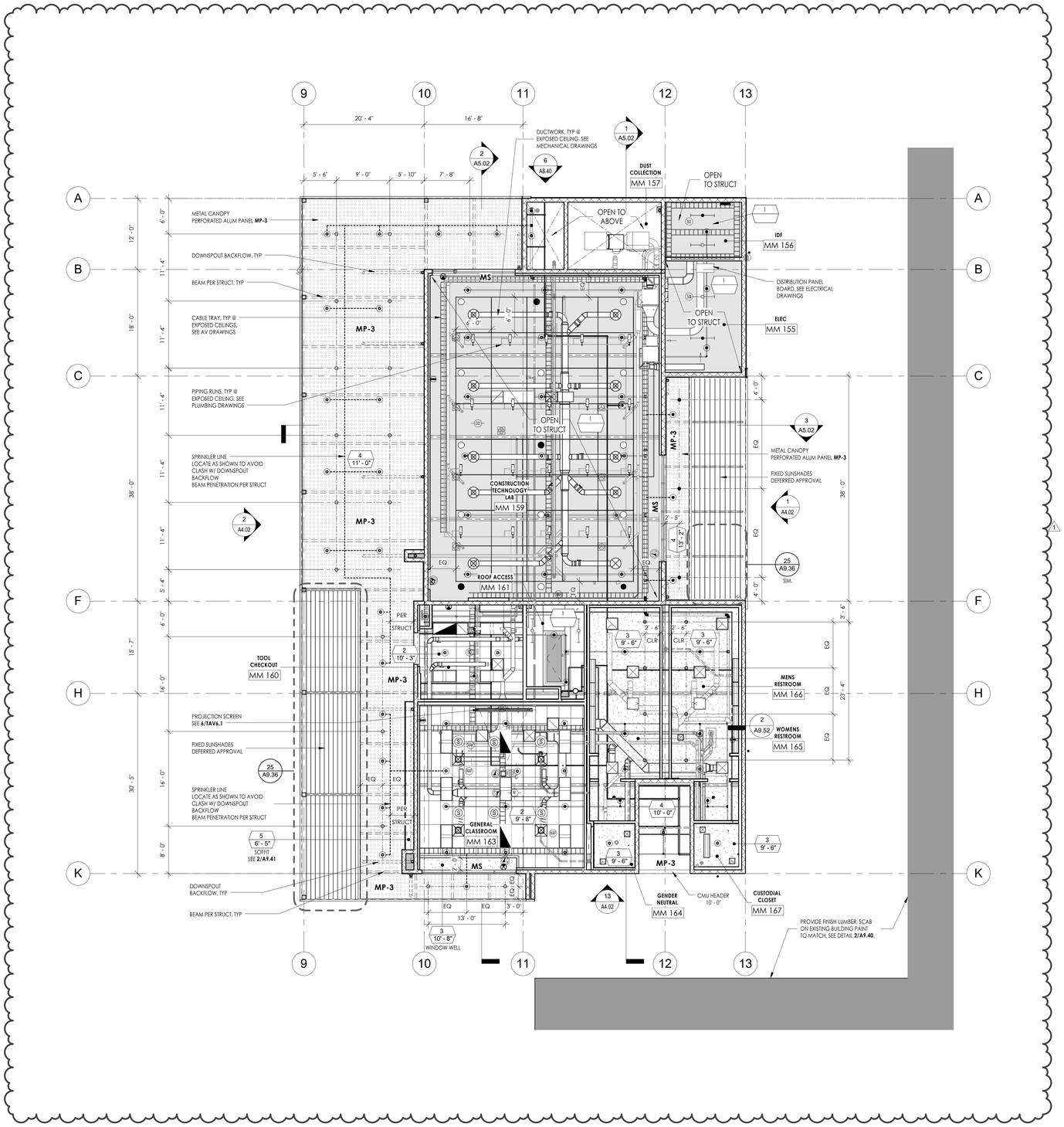

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RCP LEGEND

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- ILLUMINATED EXIT SIGN, SEE ELECTRICAL DRAWINGS
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- RECESSED FLUORESCENT EMERGENCY LIGHTING FIXTURE, SEE ELECTRICAL DRAWINGS, & FIXTURE SCHEDULE
- RECESSED LINEAR LED, SEE ELECTRICAL DRAWINGS, & FIXTURE SCHEDULE
- CAN PENDANT LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS & FIXTURE SCHEDULE
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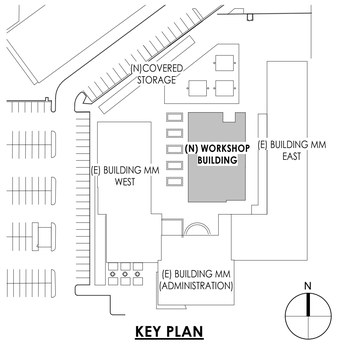

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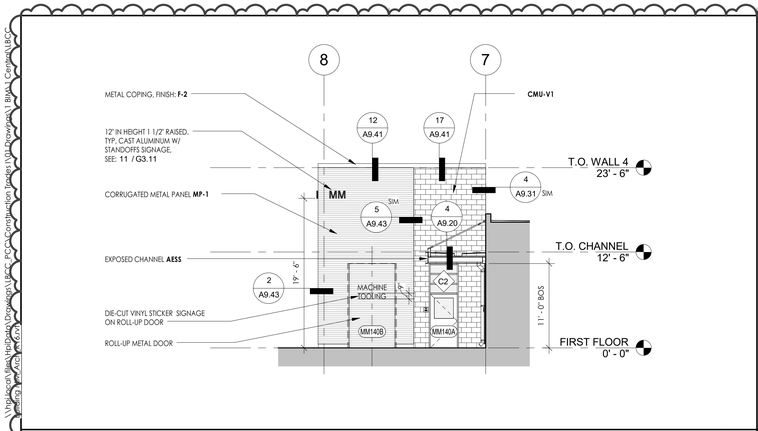
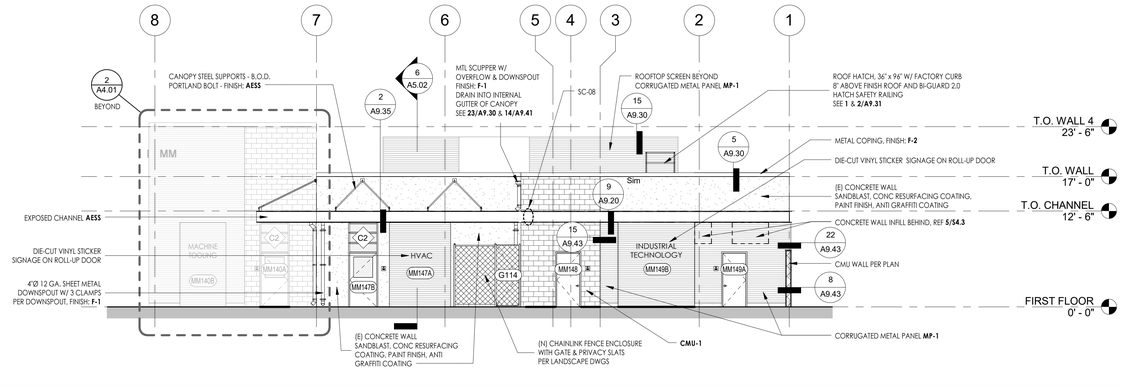
SHEET TITLE
REFLECTED CEILING PLAN - (N) WORKSHOP BUILDING

SHEET NUMBER
A3.11

ADDENDUM#1



(E) BUILDING MM WEST - NORTH 1A SCALE 1/8" = 1'-0" 2



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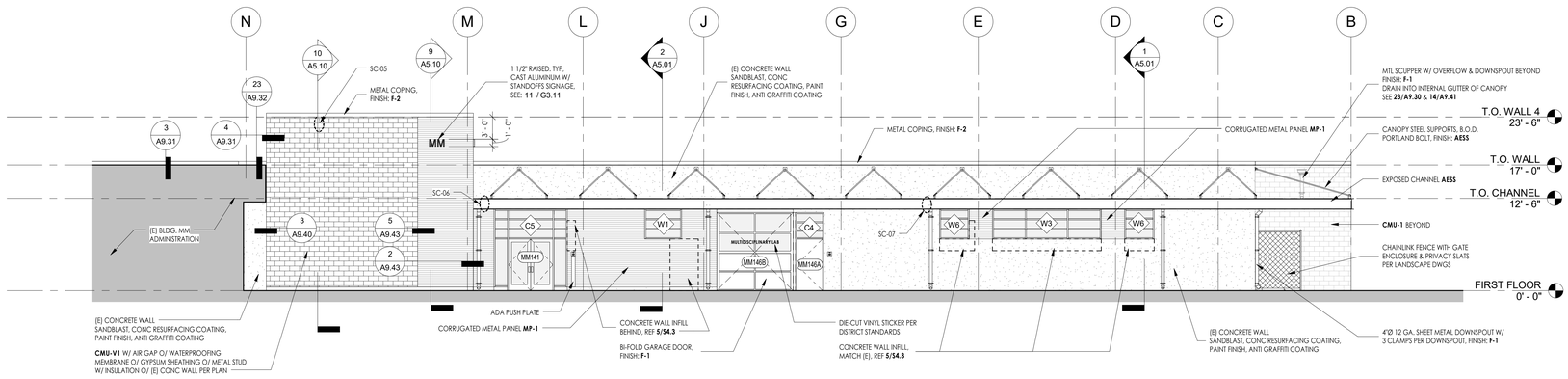
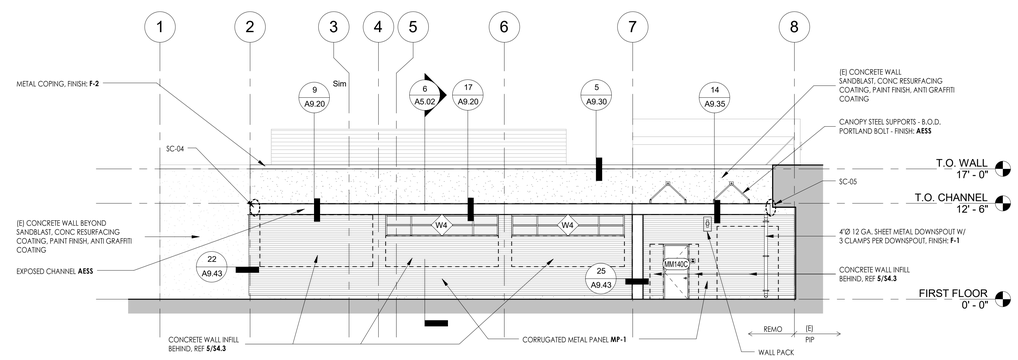
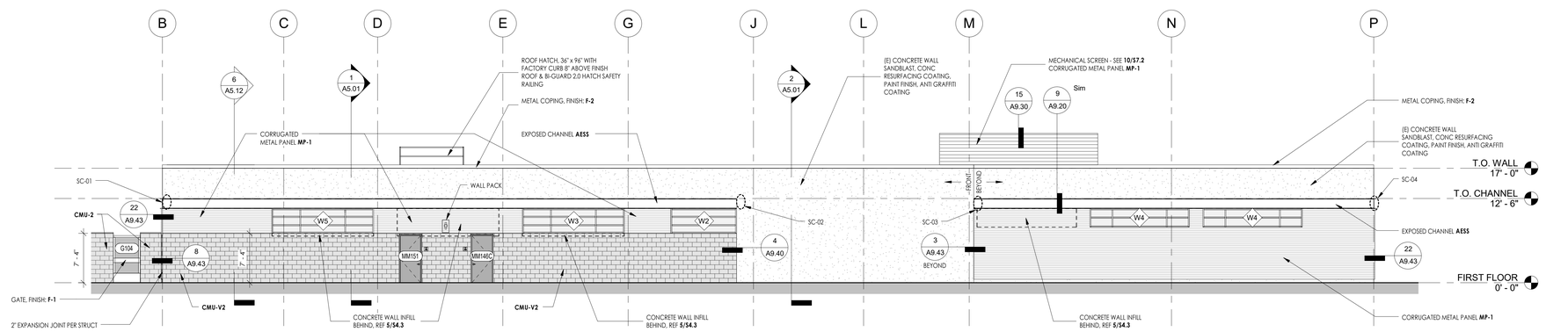


(E) BUILDING MM WEST - EAST SCALE 1/8" = 1'-0" 3



(E) BUILDING MM WEST - SOUTH SCALE 1/8" = 1'-0" 4



(E) BUILDING MM WEST - WEST SCALE 1/8" = 1'-0" 5

ELEVATIONS - GENERAL NOTES

1. ANTI GRAFFITI COATING PER SPEC:
TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT, CONT ALL AROUND, TYP
TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

2. SC- # - INDICATES SECURITY CAMERA PER TELECOM DRAWINGS

3. WALL PACK - INDICATES EXTERIOR LIGHTING WALL PACK PER ELECTRICAL DWGS.

4. ALL EXPOSED CONCRETE WALLS TO BE CLEANED AND PREPARED FOR COATING PRIOR TO PAINTING. SEE SPEC. SECTION 030130 MAINTENANCE OF CONCRETE.

5. ALL CONCRETE COLUMN PEDESTALS AND LIGHT POLE PEDESTALS WALLS TO BE SACKED & PATCHED AND PREPARED FOR COATING. APPLY CONCRETE SEAL . SEE SPEC. SECTION 030130 MAINTENANCE OF CONCRETE.

LEGEND

CMU-1	CMU FIELD COLOR-SHOT BLAST- WHITE MW
CMU-2	CMU FIELD COLOR-SHOT BLAST- BLACK 100 MW
CMU-V1	CMU VENEER- WHITE MW
CMU-V2	CMU VENEER- BLACK 100 MW
MP-1	CORRUGATED METAL PANEL - BERRIDGE HR-16 PANEL (PER MIAMI-DADE COUNTY REPORT, NOA NO. 17-1211.14) FACTORY FINISH: PRE-WEATHERED GALVALUME
MP-2	COMPOSITE METAL PANEL PER ICC-ESR-1185 FINISH: PPG INDUSTRIES - DURANAR XL MEDIUM GRAY
F-1	FINISH: PPG INDUSTRIES - DURANAR XL MEDIUM GRAY
F-2	FINISH: PPG INDUSTRIES - DURANAR XL SILVER GRAY
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL - EXPOSED CHANNELS, TRELLIS BEAMS & COLUMNS FINISH: RAL 7037

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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SHEET TITLE
EXT ELEVATIONS - (E) BLDG MM WEST

SHEET NUMBER
A4.01

ADDENDUM#1

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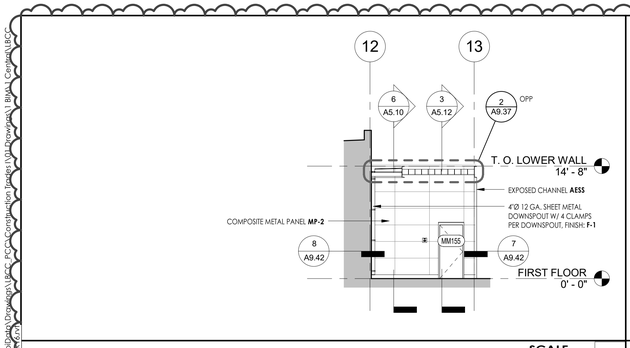
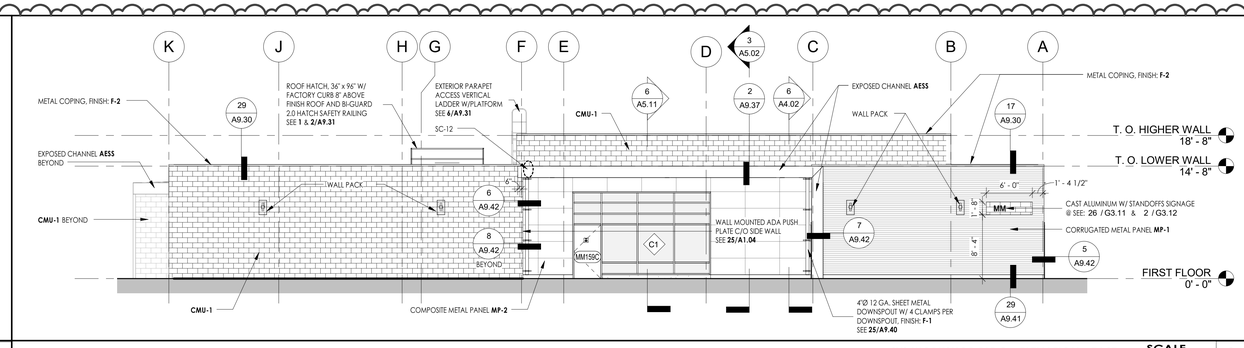


(N) WORKSHOP BLDG - ELEVATION - NORTH @ EAST INDENT SCALE 1/8" = 1'-0" 6



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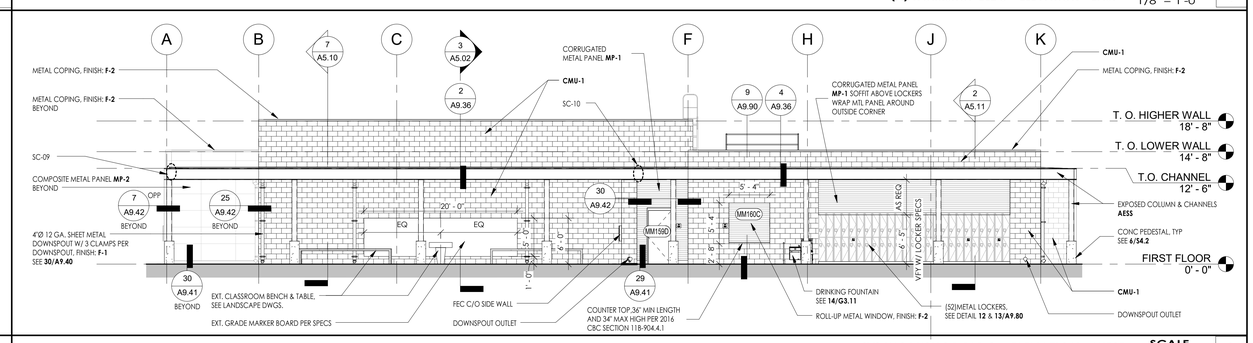
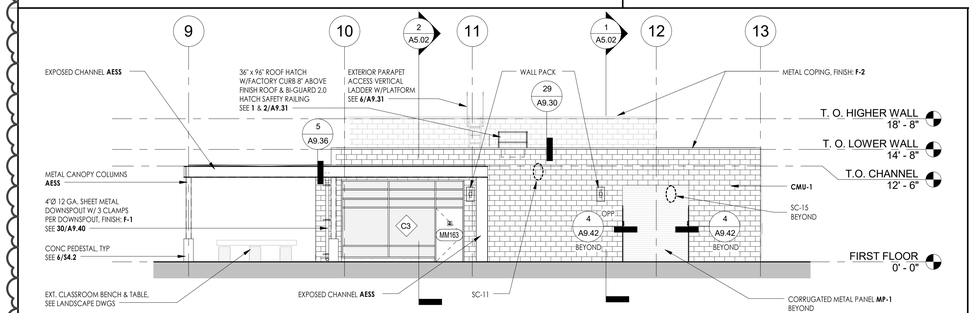
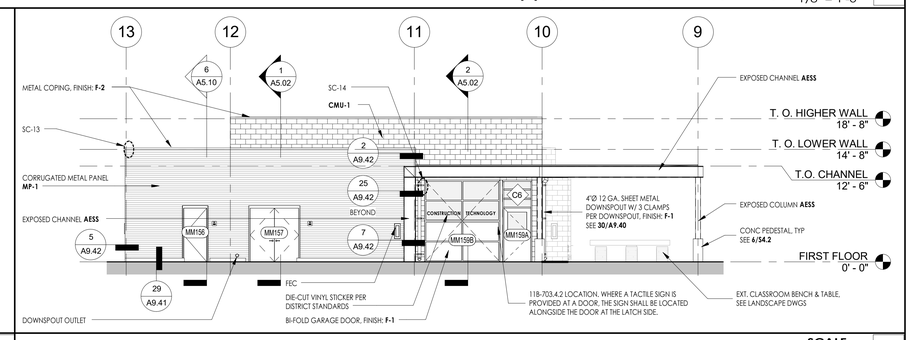


(N) WORKSHOP BLDG - ELEVATION - WEST SCALE 1/8" = 1'-0" 2



(N) WORKSHOP BLDG - ELEVATION - SOUTH SCALE 1/8" = 1'-0" 13



(N) WORKSHOP BLDG - ELEVATION - NORTH SCALE 1/8" = 1'-0" 3

ELEVATIONS - GENERAL NOTES

1. ANTI GRAFFITI COATING PER SPEC:
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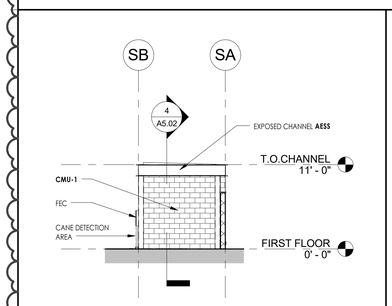
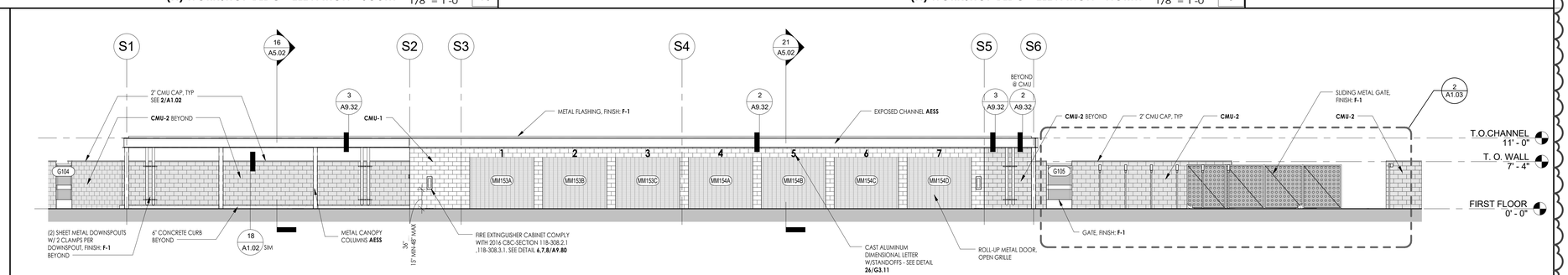
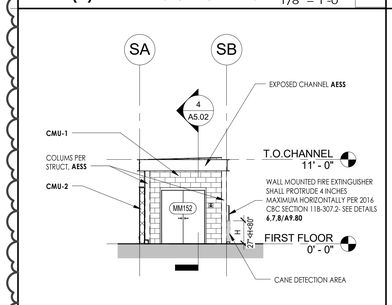
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL - EXPOSED CHANNELS, TRELLIS BEAMS & COLUMNS FINISH: RAL 7037



(N) MATERIAL STORAGE - EAST SCALE 1/8" = 1'-0" 29



(N) MATERIAL STORAGE - SOUTH SCALE 1/8" = 1'-0" 4



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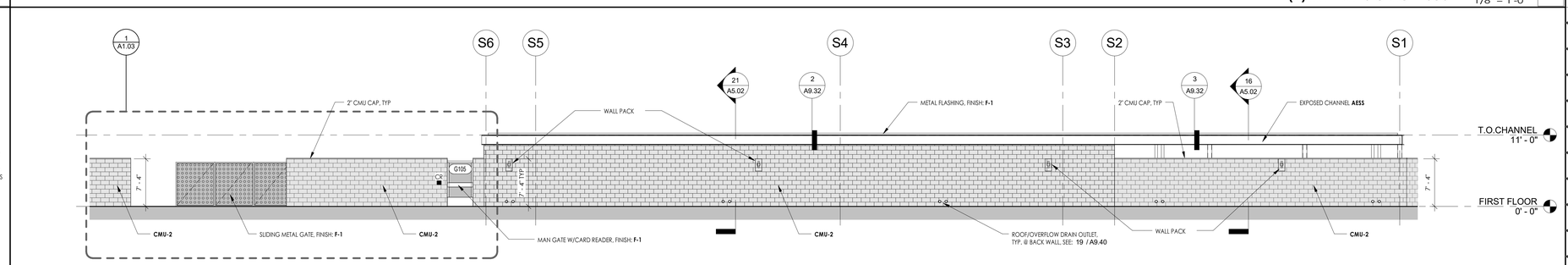

(N) MATERIAL STORAGE - NORTH SCALE 1/8" = 1'-0" 5

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PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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SHEET TITLE
EXT ELEVATIONS - (N) BLDG & MATERIAL STORAGE

SHEET NUMBER
1
A4.02

ADDENDUM#1

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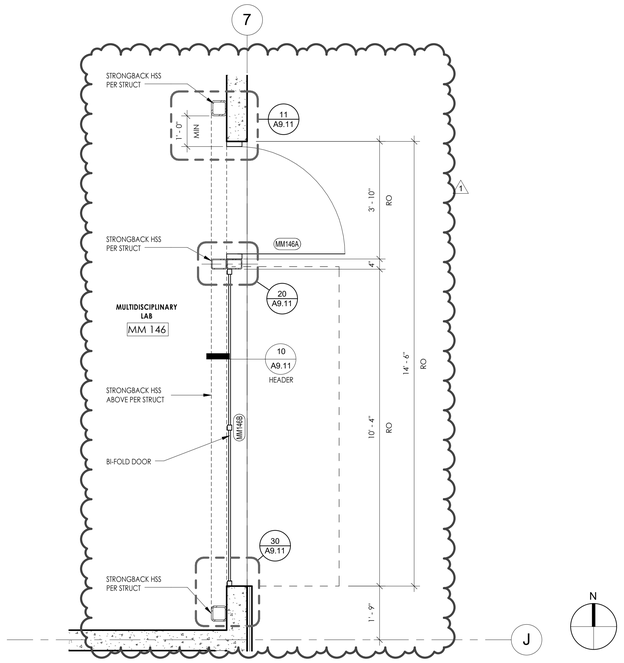
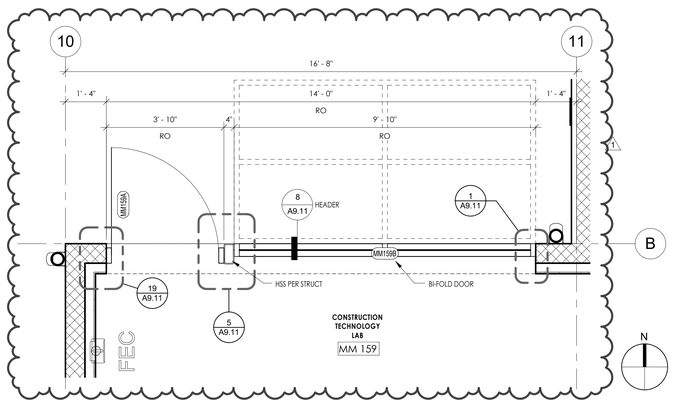
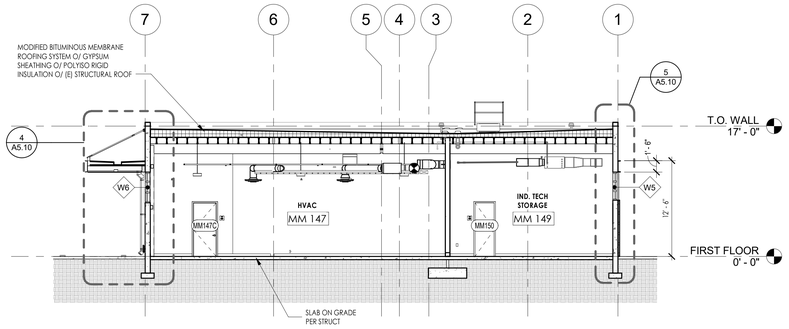


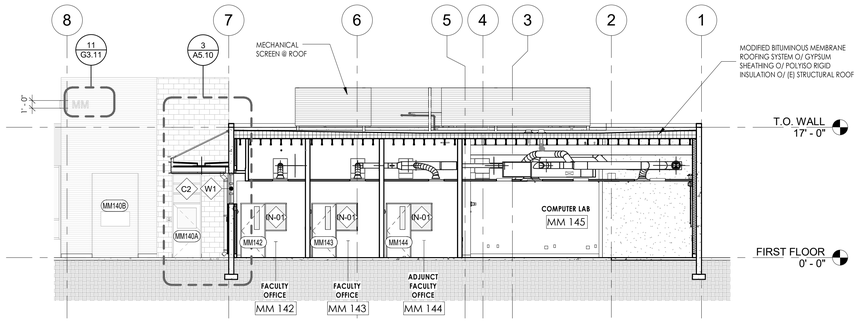
ENLARGED PLAN - MM 146A/B SCALE 1/2" = 1'-0" 4



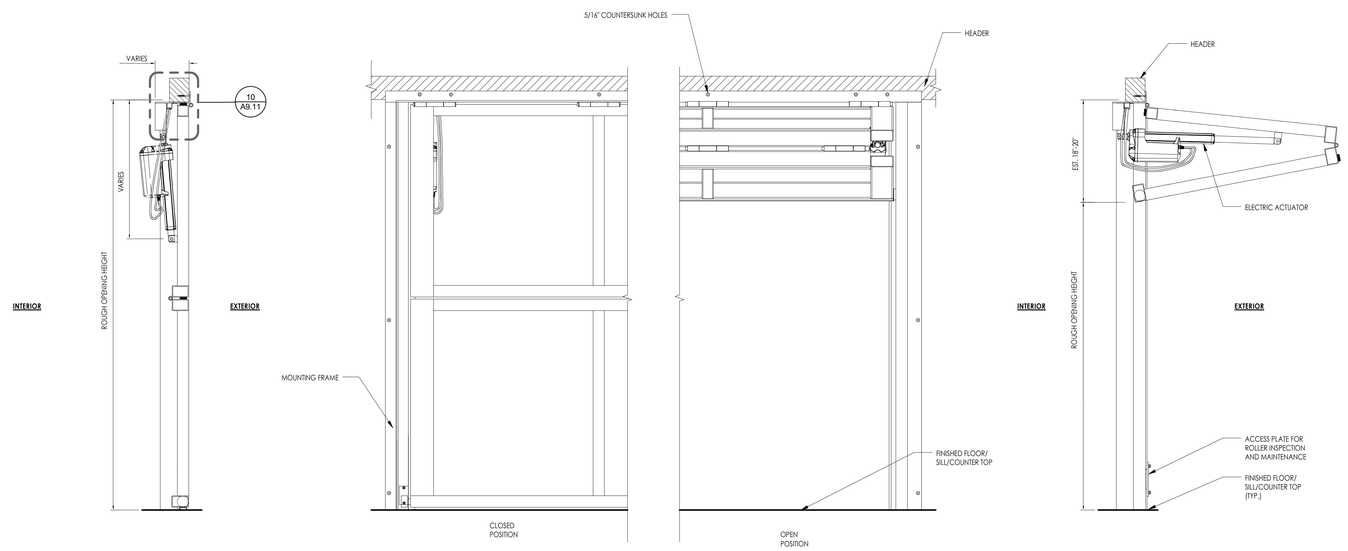
ENLARGED PLAN - MM 159A/B SCALE 1/2" = 1'-0" 5



BUILDING MM WEST RENOVATION - TRANSVERSE SECTION1 SCALE 1/8" = 1'-0" 1



BUILDING MM WEST RENOVATION - TRANSVERSE SECTION SCALE 1/8" = 1'-0" 2



SECTION (IN CLOSED POSITION)

DOOR PANEL W/FRAME-EXTERIOR VIEW

SECTION (IN OPEN POSITION)

BI-FOLD DOOR @ MM 146B & MM 159B SCALE 1/2" = 1'-0" 3

6/4/2020 5:43:15 PM \\hpilocal\files\Hpi\Data\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt

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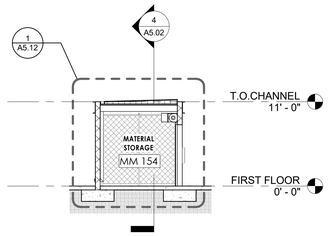
SHEET TITLE
BUILDING SECTIONS

SHEET NUMBER
A5.01

ADDENDUM#1



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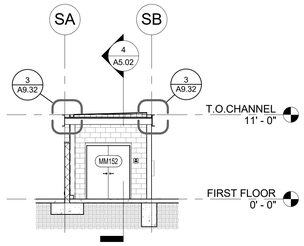

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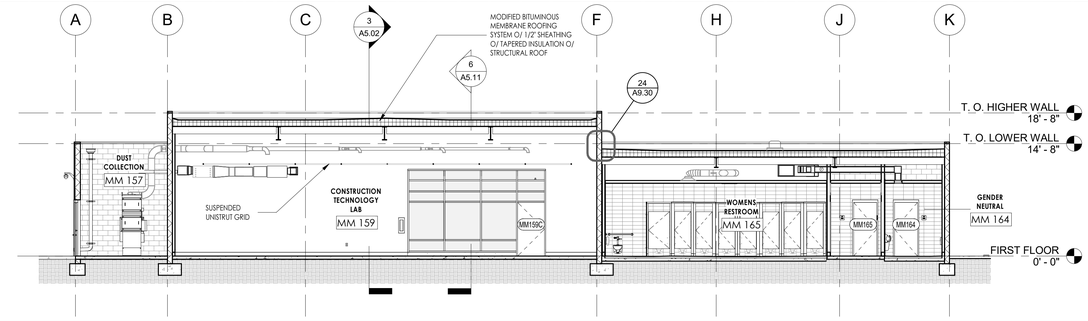
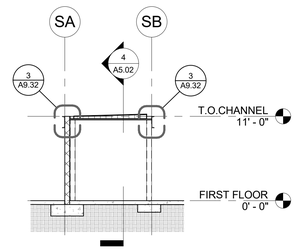
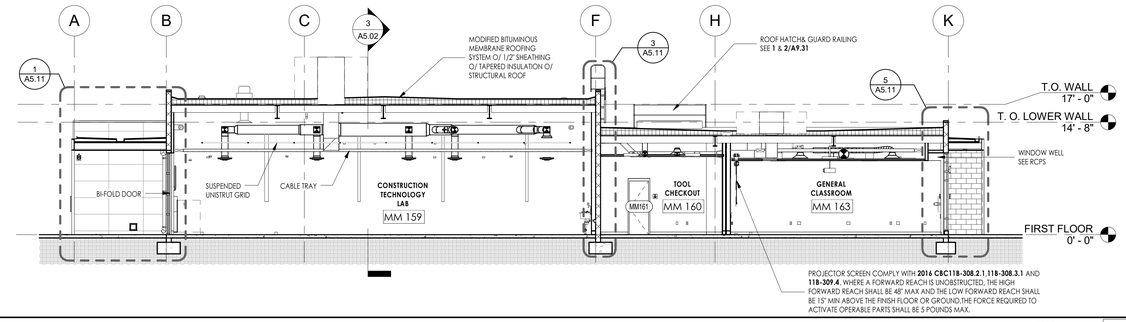


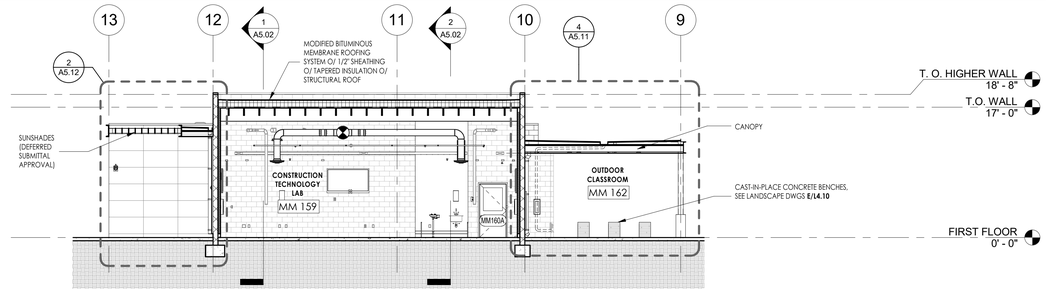
WORKSHOP BUILDING - LONGITUDINAL SECTION SCALE 1/8" = 1'-0" 1



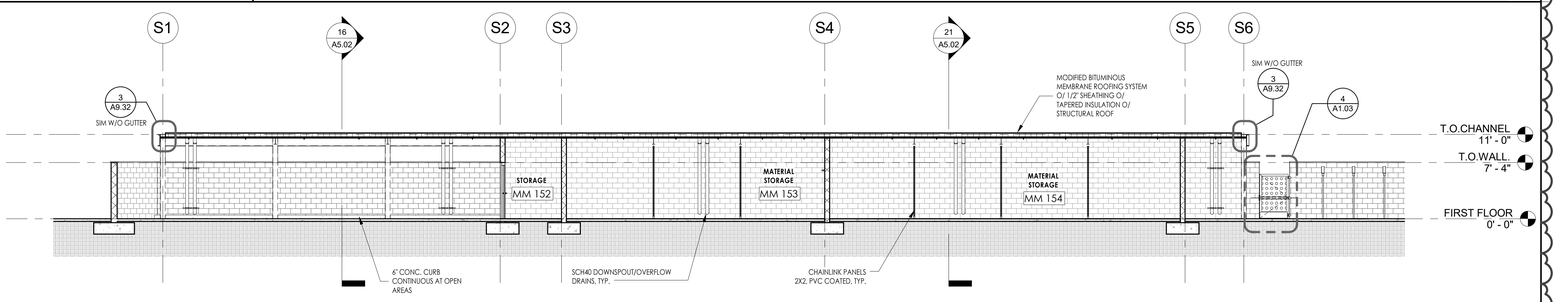
COVERED STORAGE BUILDING - TRANSVERSE SECTION 1 SCALE 1/8" = 1'-0" 17



WORKSHOP BUILDING - LONGITUDINAL SECTION1 SCALE 1/8" = 1'-0" 2



WORKSHOP BUILDING - TRANSVERSE SECTION SCALE 1/8" = 1'-0" 3



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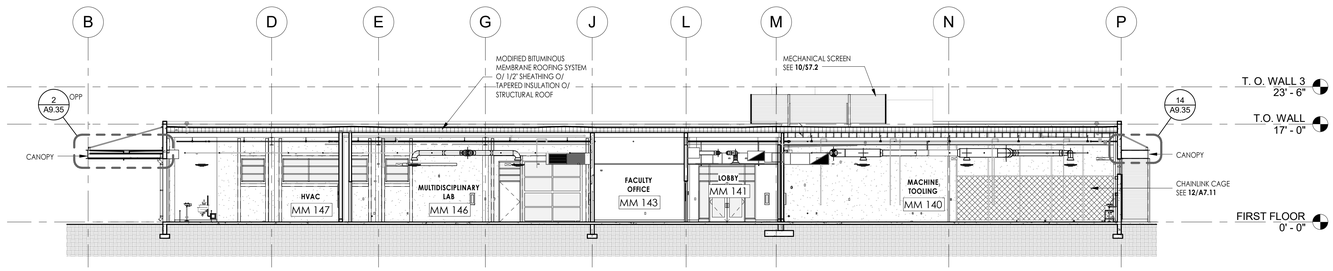

BUILDING MM WEST RENOVATION- LONGITUDINAL SECTION 1 SCALE 3/32" = 1'-0" 6

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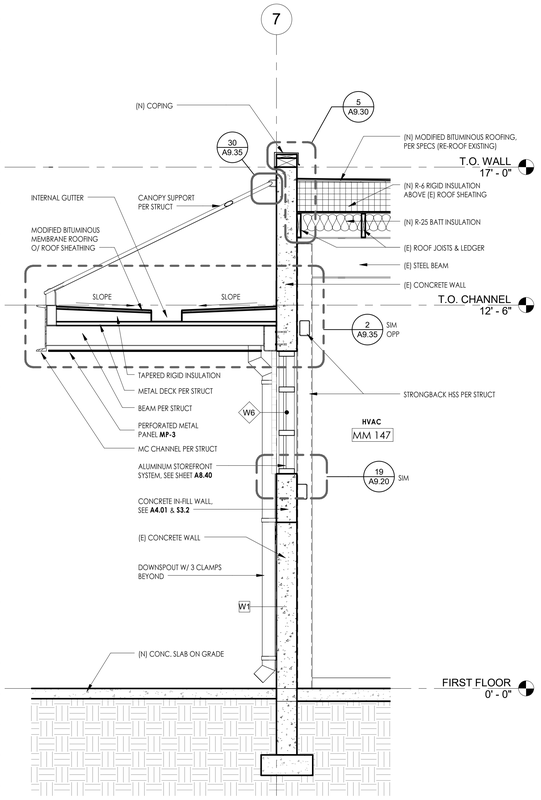
SHEET TITLE

BUILDING SECTIONS

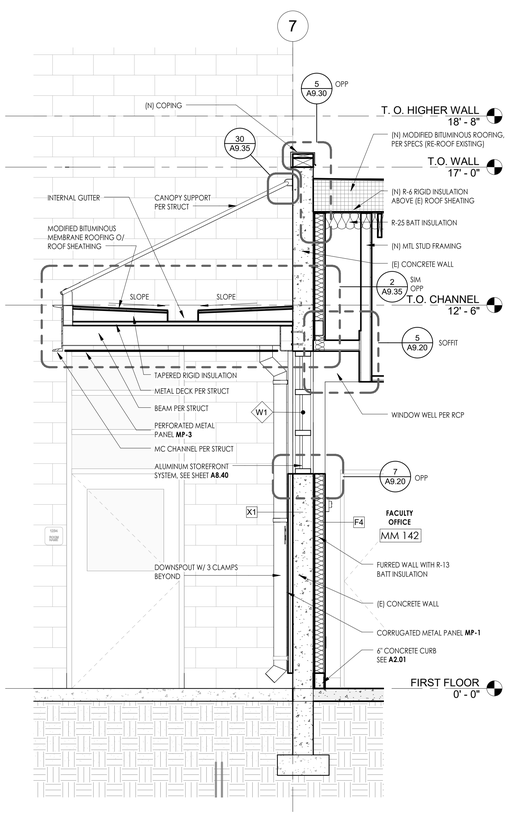
SHEET NUMBER

A5.02

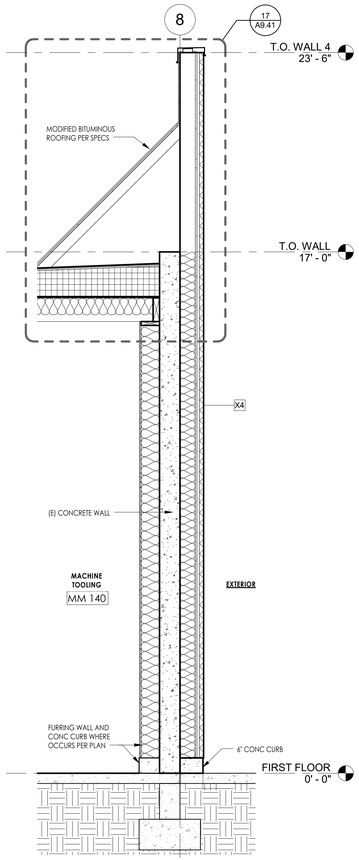
ADDENDUM#1



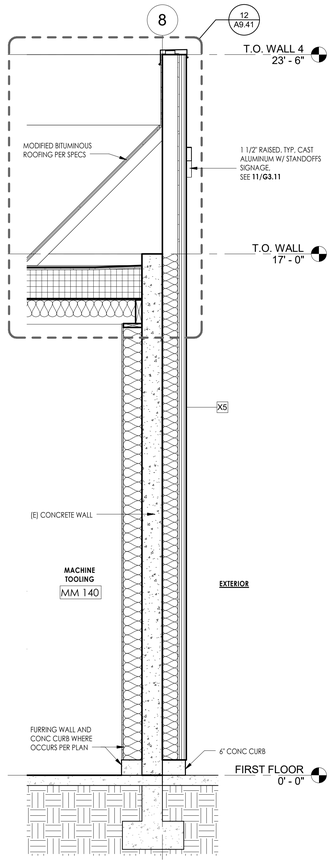
WALL SECTION @ CANOPY — SCALE 1/2" = 1'-0" — 4



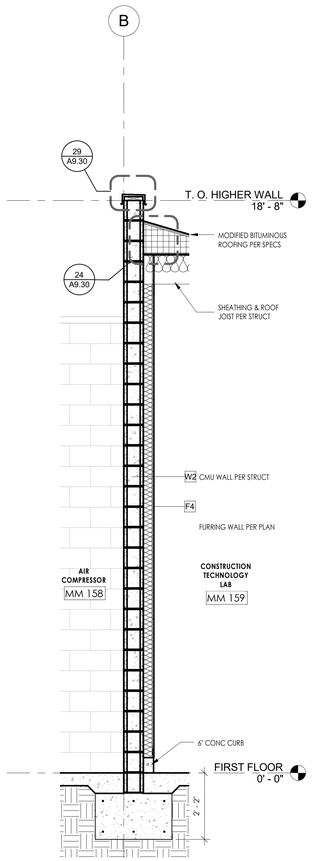
WALL SECTION AT EXTERIOR CANOPY — SCALE 1/2" = 1'-0" — 3



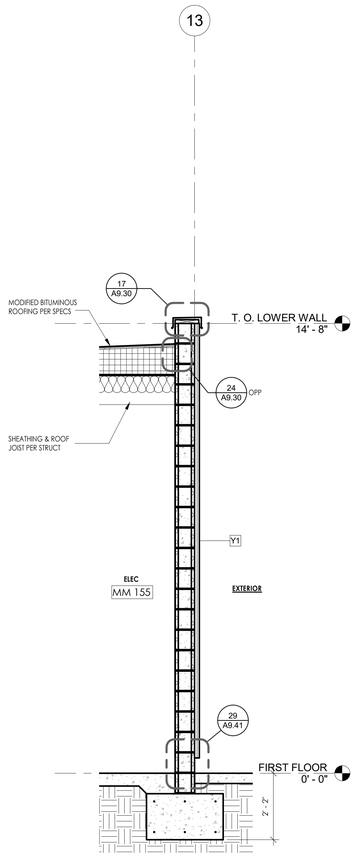
BUILDING MM WEST RENOVATION - TRANSVERSE SECTION51 — SCALE 1/2" = 1'-0" — 10



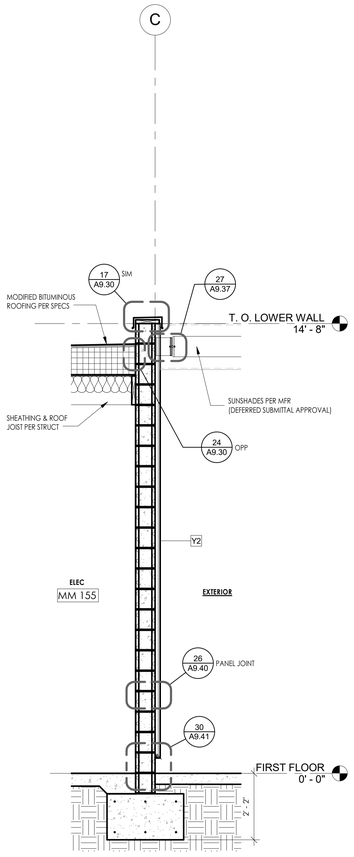
BUILDING MM WEST RENOVATION - TRANSVERSE SECTION41 — SCALE 1/2" = 1'-0" — 9



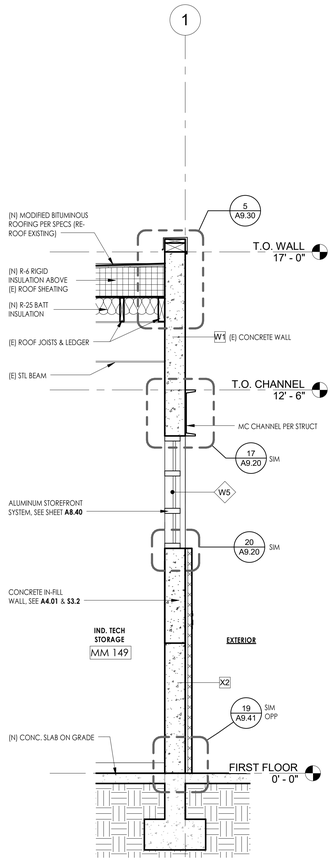
WALL SECTION THRU CONST. TECH. LAB — SCALE 1/2" = 1'-0" — 8



CORRUGATED WALL SECTION THRU ELEC MM114 — SCALE 1/2" = 1'-0" — 7



ALUCOBOND WALL SECTION THRU ELEC M155 SOUTH WALL — SCALE 1/2" = 1'-0" — 6



WALL SECTION @ (E) AND IN-FILL CONCRETE WALL ALONG GRIDLINE 1 — SCALE 1/2" = 1'-0" — 5

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LONG BEACH CITY COLLEGE

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1	05/22/2020	ADDENDUM#1

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SHEET TITLE
WALL SECTIONS

SHEET NUMBER
A5.10

ADDENDUM#1

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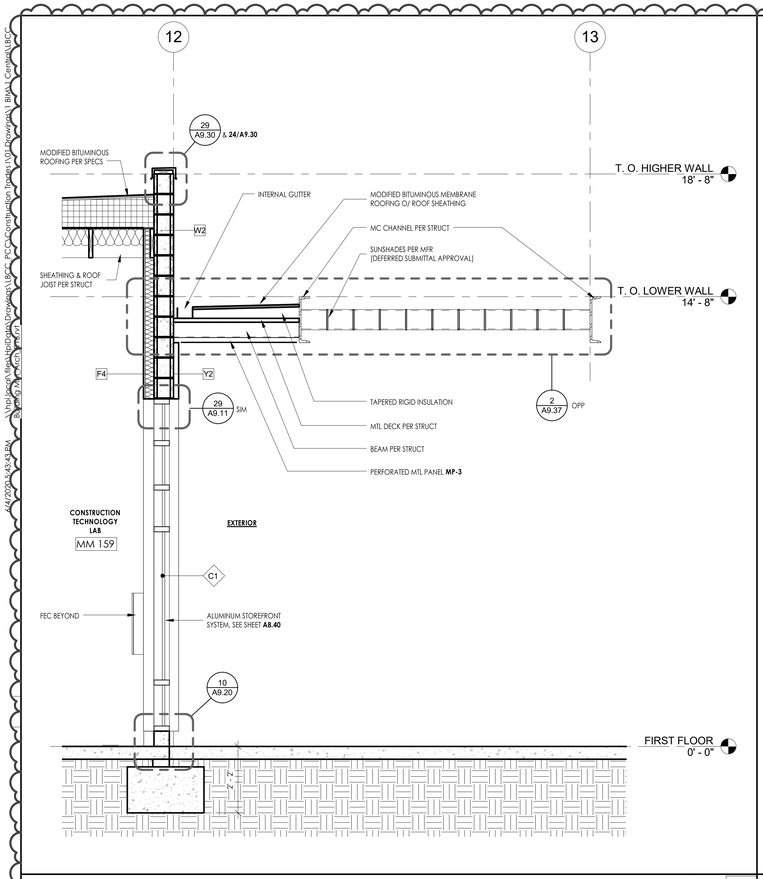

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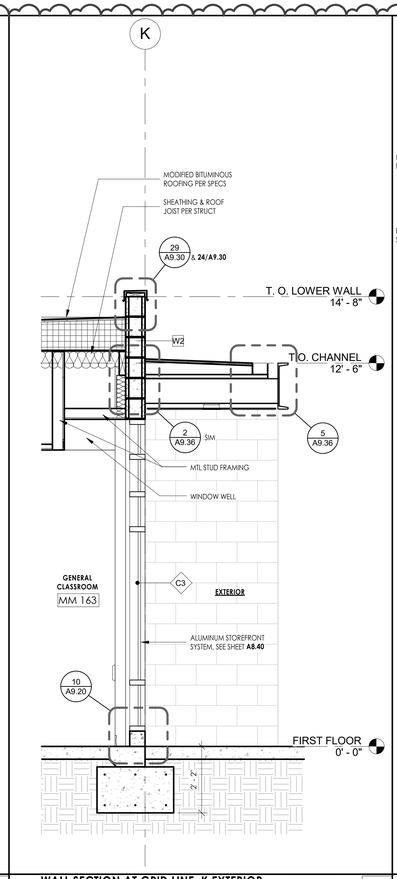
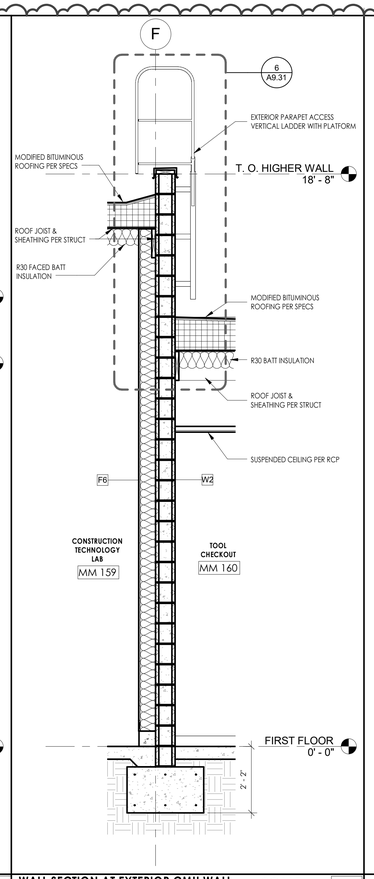


WALL SECTION AT GRID LINE K EXTERIOR CMU WALL — SCALE 1/2" = 1'-0" — 5



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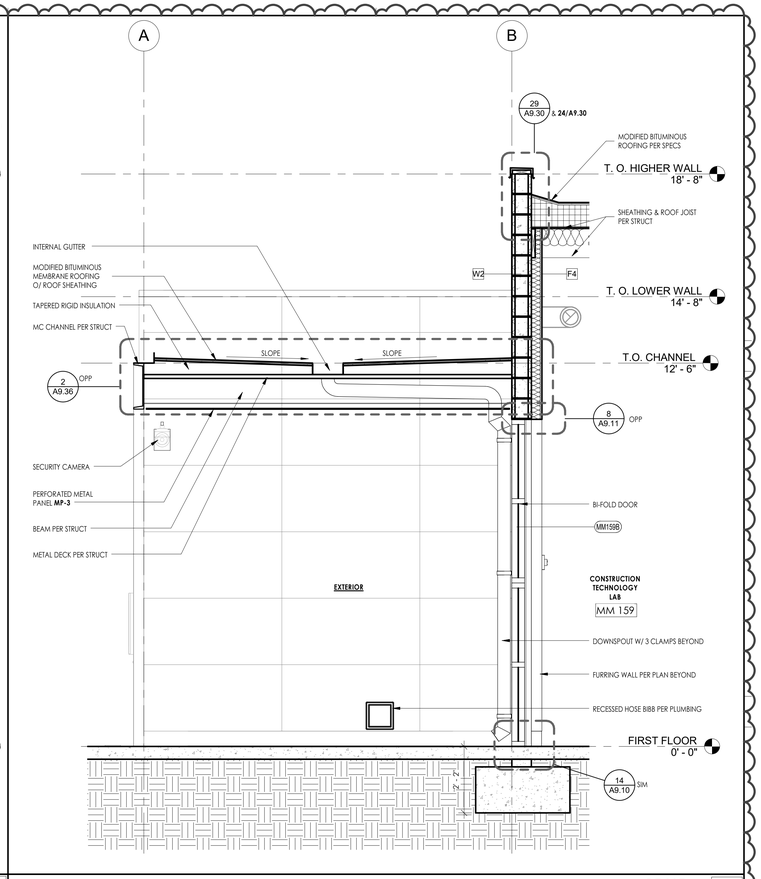

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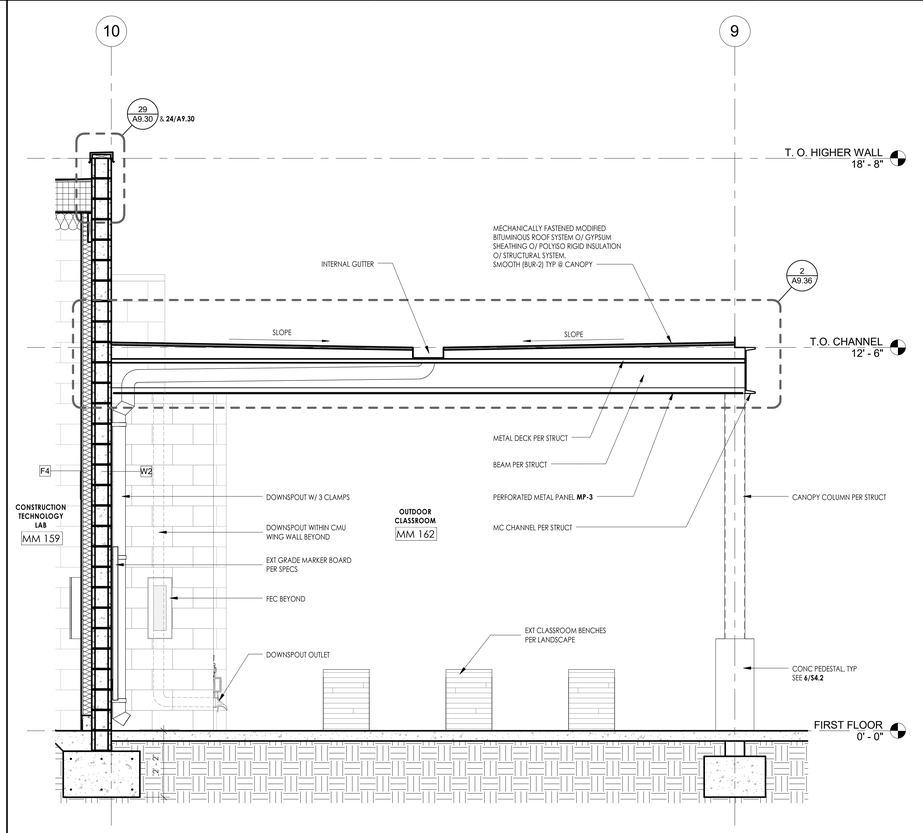
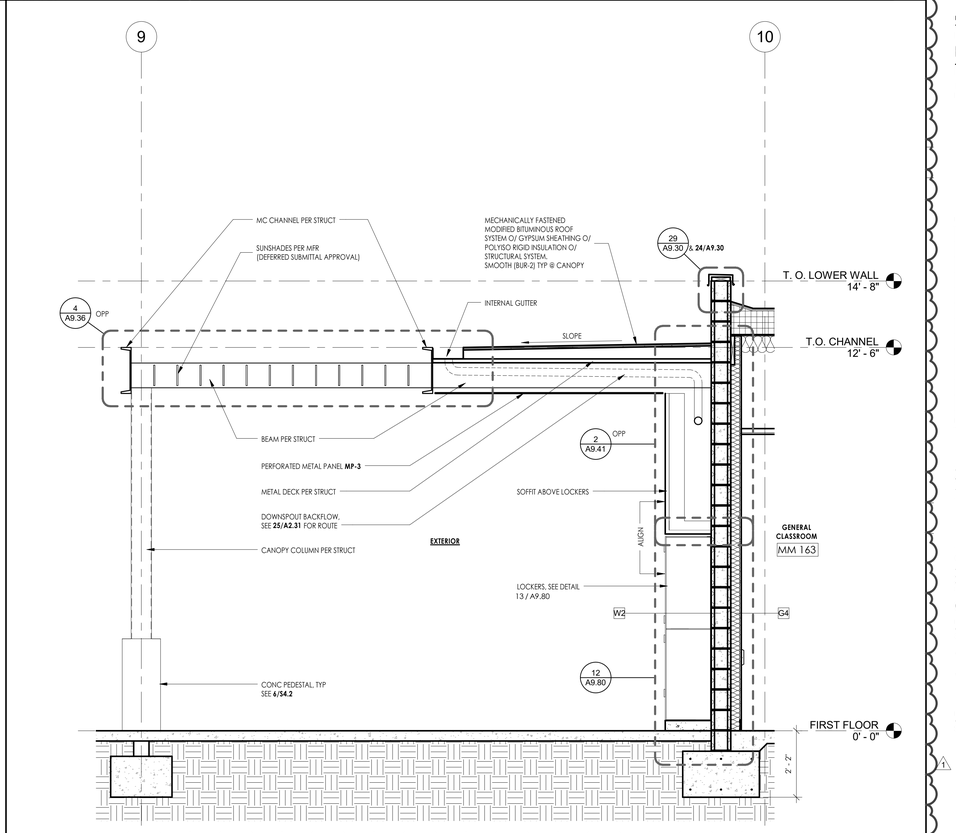


WALL SECTION AT CANOPY - EXTERIOR CLASSROOM WORKSHOP BLDG. — SCALE 1/2" = 1'-0" — 4



WALL SECTION AT CANOPY - LOCKER AREA - WORKSHOP BLDG. — SCALE 1/2" = 1'-0" — 2

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SHEET TITLE

WALL SECTIONS - WORKSHOP BLDG

SHEET NUMBER

A5.11

ADDENDUM#1

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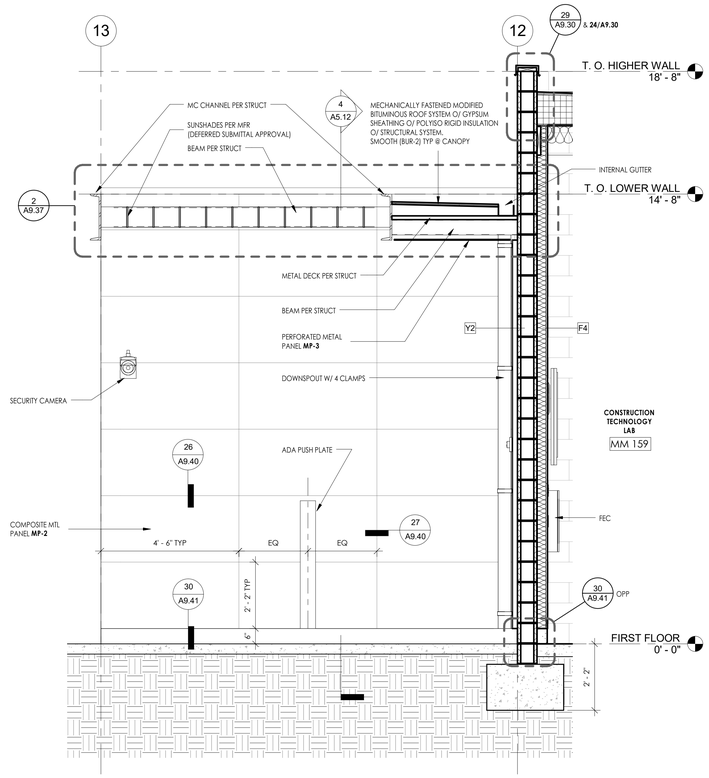
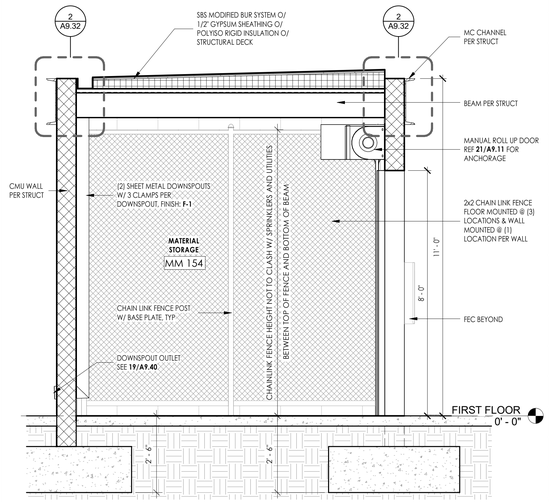
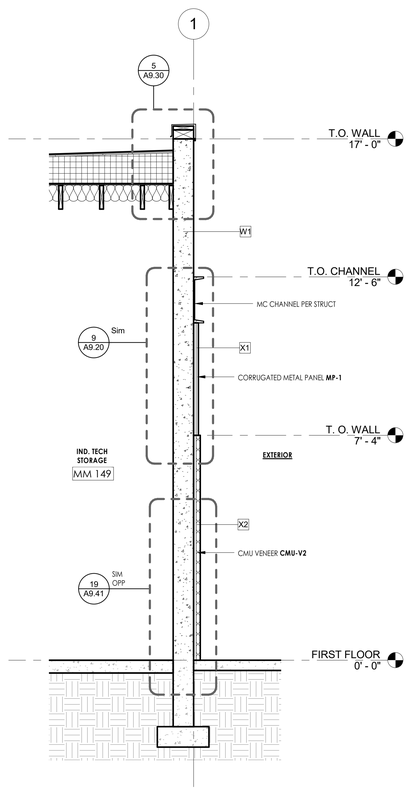


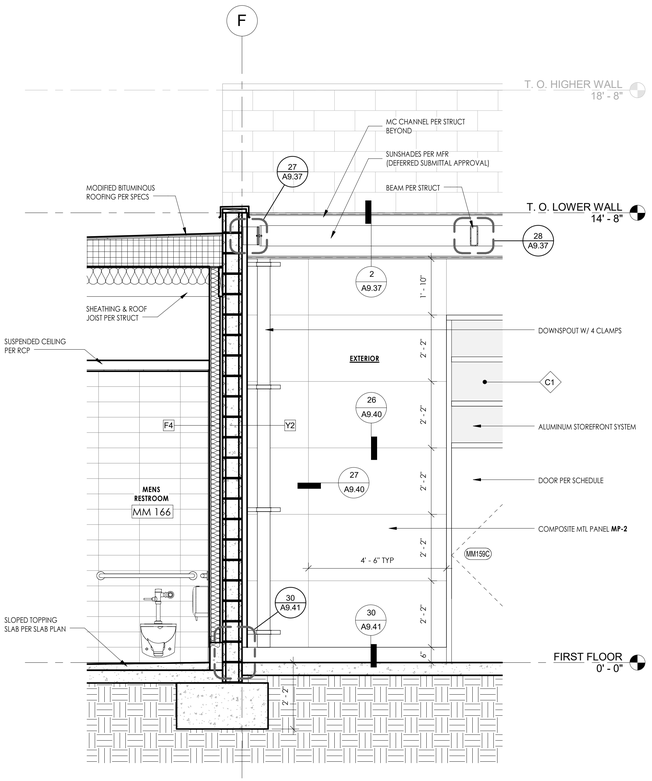
SECTION THRU EAST TRELLIS- WORKSHOP BLDG. SCALE 1/2" = 1'-0" 2



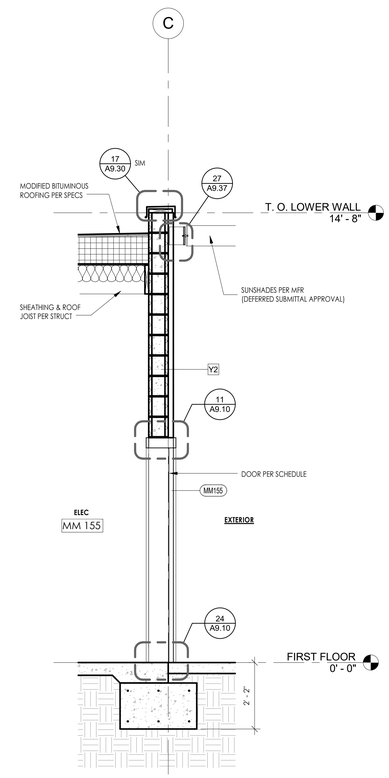
WALL SECTION @ COVERED STORAGE BUILDING SCALE 1/2" = 1'-0" 1



SECTION THROUGH CONC. WALL @ IND. TECH STORAGE SCALE 1/2" = 1'-0" 6



LOUVER & ALUCOBOND DETAIL @ CANOPY SCALE 1/2" = 1'-0" 4



SECTION THRU MET. PNL @ TRELLIS SCALE 1/2" = 1'-0" 3

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SHEET TITLE
WALL SECTIONS

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A5.12

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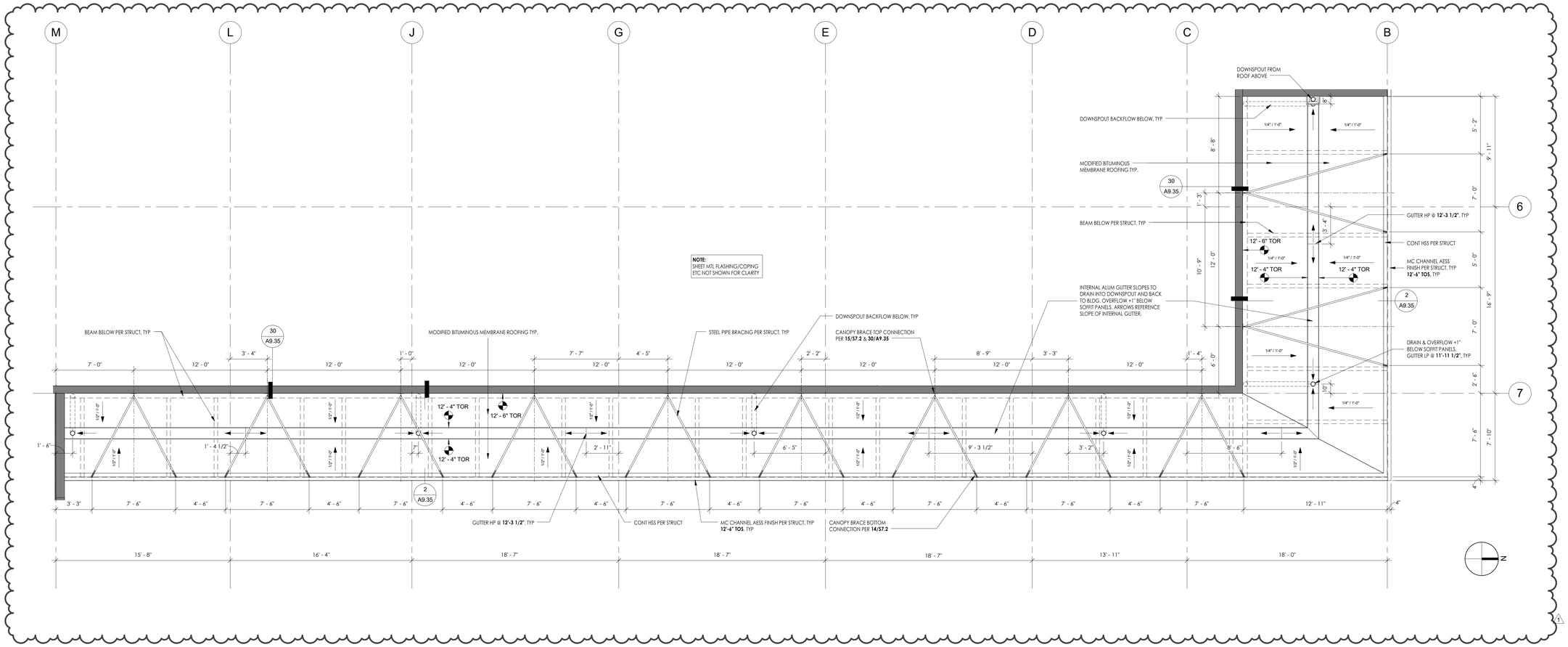
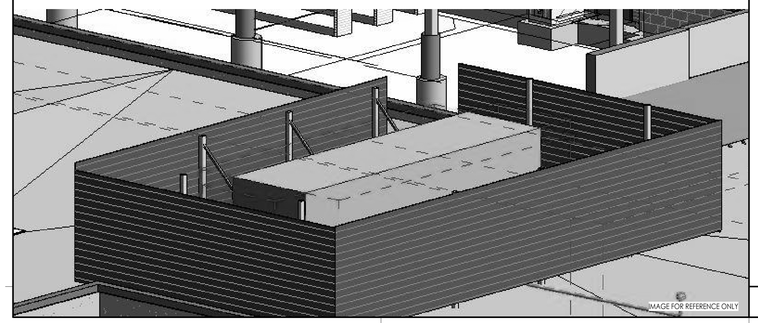
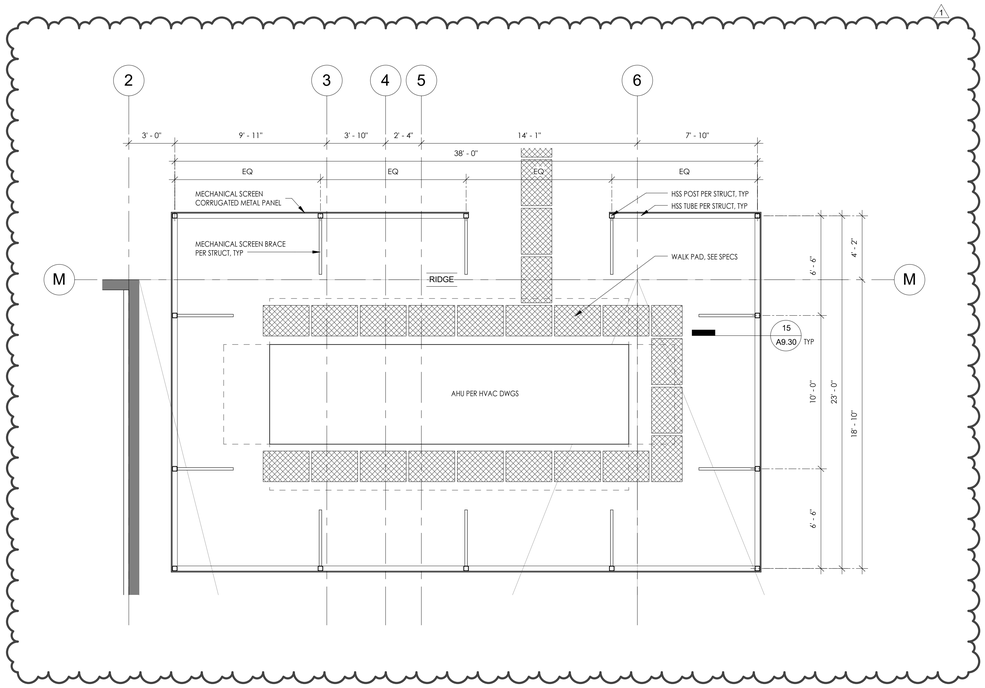
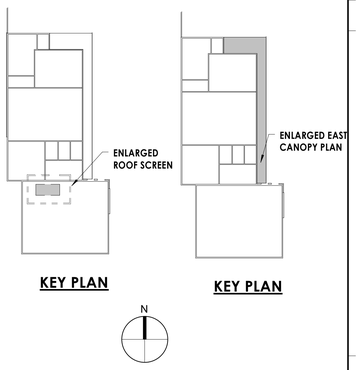


ENLARGED EAST CANOPY - (E) BUILDING MM WEST SCALE 1/4" = 1'-0" 1





ENLARGED (E) BUILDING MM WEST -ROOF SCREEN SCALE 1/4" = 1'-0" 2



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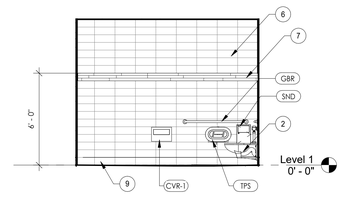
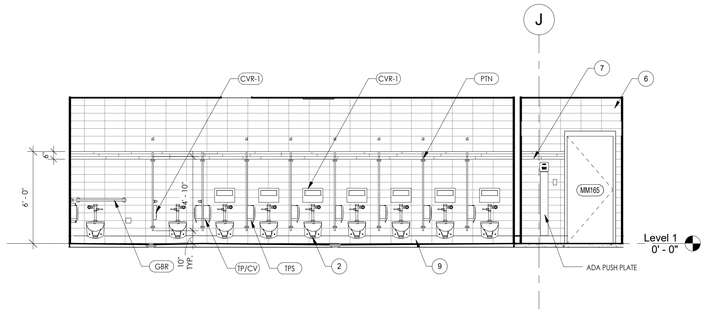
SHEET TITLE
ENLARGED CANOPY PLANS AND DETAILS - (E) BLDG MM WEST

SHEET NUMBER
A5.20

ADDENDUM#1



WOMENS RESTROOM - NORTH SCALE 1/4" = 1'-0" **26**



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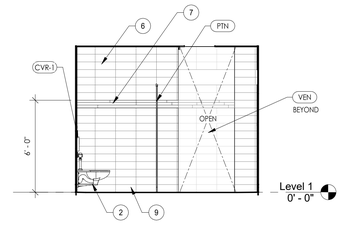

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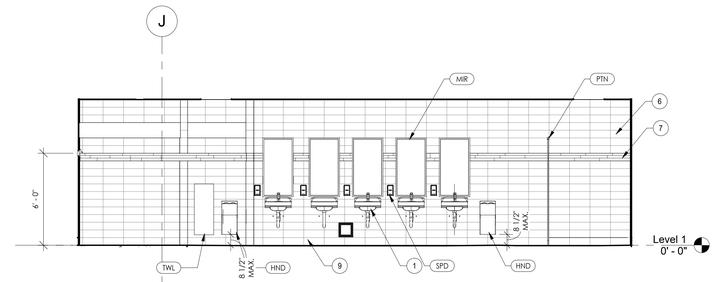
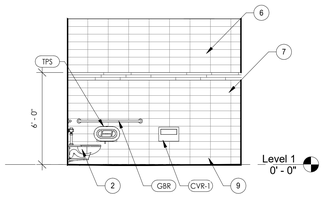
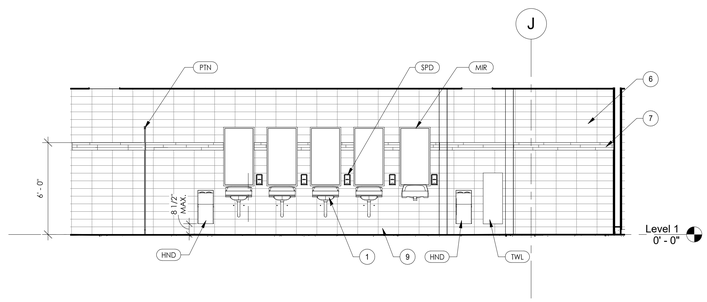


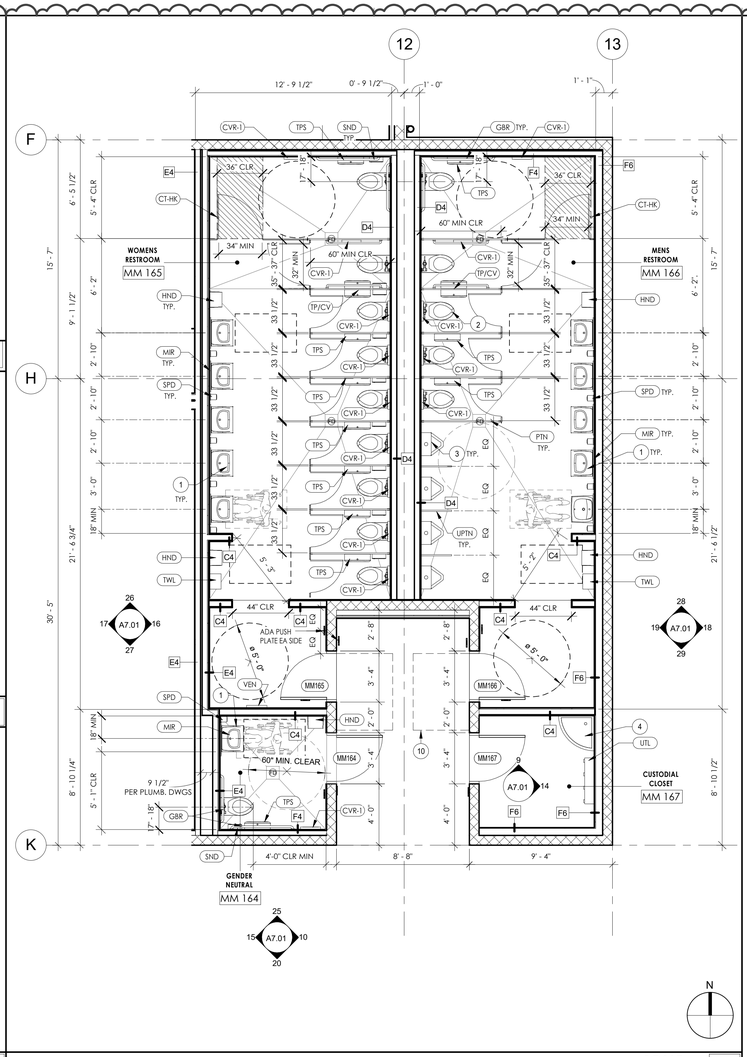
WOMENS RESTROOM - WEST SCALE 1/4" = 1'-0" **17**



MENS RESTROOM - NORTH SCALE 1/4" = 1'-0" **28**



MENS RESTROOM - EAST SCALE 1/4" = 1'-0" **18**



FIRST FLOOR RESTROOM - ENLARGED FLOOR PLAN SCALE 1/4" = 1'-0" **8**

FLOOR PLAN - GENERAL NOTES

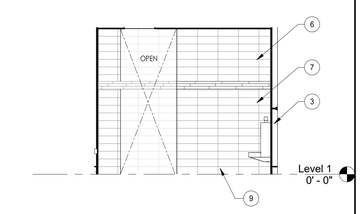
1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.
2. REFER TO SHEETS **G2.10** FOR EGRESS AND OCCUPANCY LOADS.
3. SEE SHEET **A9.60** FOR WALL TYPES.
4. FIRE EXTINGUISHERS MUST COMPLY WITH TITLE 19, ARTICLE 5. DISTRIBUTION SHALL NOT EXCEED 75 FEET TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING.
5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.
6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.
7. REFER TO SHEET **G3.11** FOR ADA CLEARANCE REQUIREMENTS.
8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**
9. THERMOSTATS WILL BE GANGED TOGETHER WITH LIGHT SWITCHES, AND PER MECHANICAL. IN CASE OF CONFLICT, IT MUST BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO INSTALLATION.
10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET **A9.90** FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.
11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.
12. ANTI GRAFFITI COATING PER SPEC.
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT. CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

KEYNOTES:

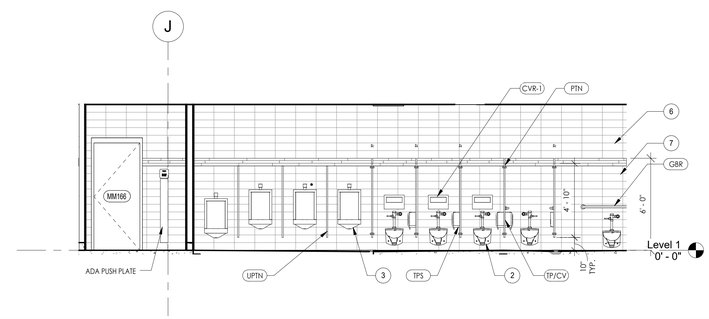
1. LAVATORY W/ UNDER LAVATORY GUARD, SEE PLUMBING DRAWINGS, SEE 5 / G3.11 FOR REQUIRED CLEARANCES.
2. WATER CLOSET, SEE PLUMBING DRAWINGS
3. URINAL, SEE PLUMBING DRAWINGS
4. FLOOR SINK, SEE PLUMBING DRAWINGS
5. HI-LOW DRINKING FOUNTAIN W/ BOTTLE FILLER, SEE PLUMBING DRAWINGS
6. CERAMIC TILE ON WATER-RESISTANT GYP. BOARD PER FINISH SCHEDULE, SEE SHEET A8.20
7. GLASS MOSAIC TILE ON WATER-RESISTANT GYP. BOARD PER FINISH SCHEDULE, SEE SHEET A8.20
8. FLOOR DRAIN, SEE PLUMBING DRAWINGS
9. COVED TILE BASE PER FINISH SCHEDULE
10. HINGE APPROACH, PUSH SIDE. CBC FIGURE 11B-404.2.4.1 (G)

TOILET ACCESSORIES

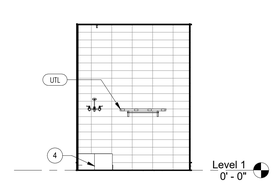
CT-HK	COAT HOOK - BASIS OF DESIGN: BOBRICK B-2116
CVR-1	TOILET SEAT COVER DISPENSER - BASIS OF DESIGN: BOBRICK B-221
GBR	36" GRAB BAR BEHIND WATER CLOSET AND 42" GRAB BAR TO THE SIDE OF WATER CLOSET - BASIS OF DESIGN: BOBRICK B-6806 SERIES
HND	ELECTRIC DRYER - BASIS OF DESIGN: DYSON AIRBLADE DB
MIR	MIRROR, 24" W x 36" H, TEMPERED GLASS MIRROR W/STAINLESS STEEL ANGLE FRAME, BASIS OF DESIGN: BOBRICK B-165
PTN	TOILET PARTITION, OVERHEAD BRACED, SOLID PHENOLIC CORE - BASIS OF DESIGN: BOBRICK 1180 DURALINE SERIES
SND	SANITARY NAPKIN DISPOSAL - BASIS OF DESIGN: BOBRICK B-254
SPD	SOAP DISPENSER - BASIS OF DESIGN: BRADLEY 6563
TPS	TOILET TISSUE DISPENSER - BASIS OF DESIGN: BOBRICK B-2892
TP/CV	COMBO SEAT COVER & TOILET TISSUE DISPENSER - BASIS OF DESIGN: BOBRICK B-347
UTL	UTILITY SHELF - BASIS OF DESIGN: BOBRICK B-224
VEN	NAPKIN/TAMPON VENDOR, RECESSED - BASIS OF DESIGN: BOBRICK-37063
TWL	RECESSED TOWEL DISPENSER & WASTE BIN - BASIS OF DESIGN: BOBRICK-3961
UPTN	URINAL PARTITION



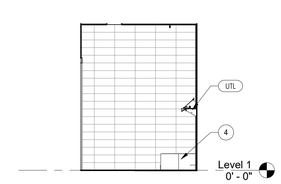
MENS RESTROOM - SOUTH SCALE 1/4" = 1'-0" **29**



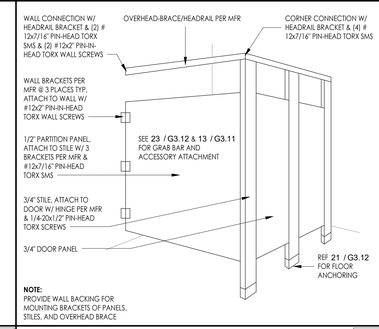
MENS RESTROOM - WEST SCALE 1/4" = 1'-0" **19**



JANITOR - WEST SCALE 1/4" = 1'-0" **14**

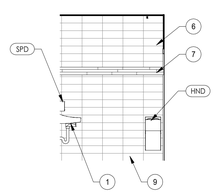


JANITOR - NORTH SCALE 1/4" = 1'-0" **9**

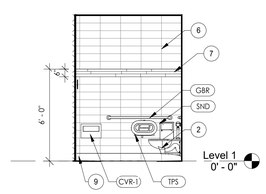


NOTE:
PROVIDE WALL BACKING FOR MOUNTING BRACKETS OF PANELS, STILES, AND OVERHEAD BRACE

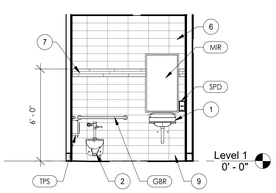
TOILET PARTITION SCHEME - AXON SCALE 1/2" = 1'-0" **4**



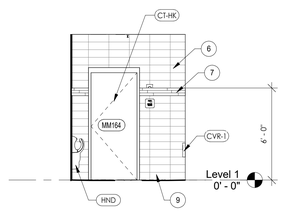
GENDER NEUTRAL - NORTH SCALE 1/4" = 1'-0" **25**



GENDER NEUTRAL - SOUTH SCALE 1/4" = 1'-0" **20**



GENDER NEUTRAL - WEST SCALE 1/4" = 1'-0" **15**



GENDER NEUTRAL - EAST SCALE 1/4" = 1'-0" **10**

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CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN **AUTODESK REVIT V. 2016** UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY -

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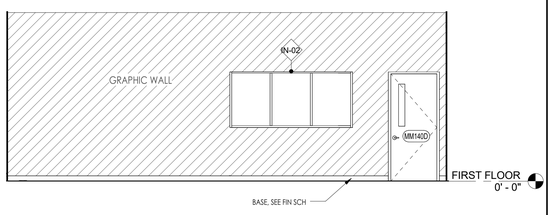
SHEET TITLE
ENLARGED PLANS & INTERIOR ELEVATIONS - RESTROOMS

SHEET NUMBER
A7.01

ADDENDUM#1

6/4/2020 5:44:13 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt



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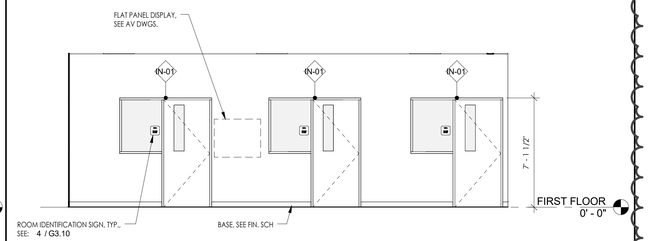

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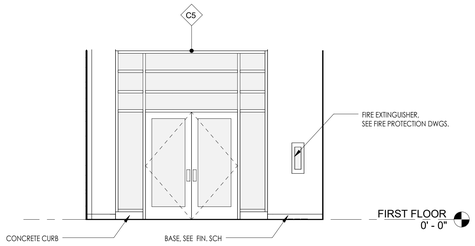

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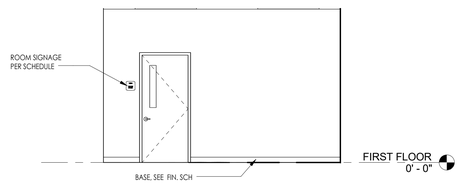

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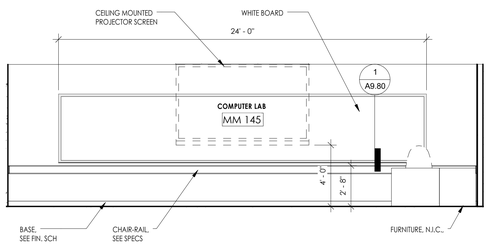

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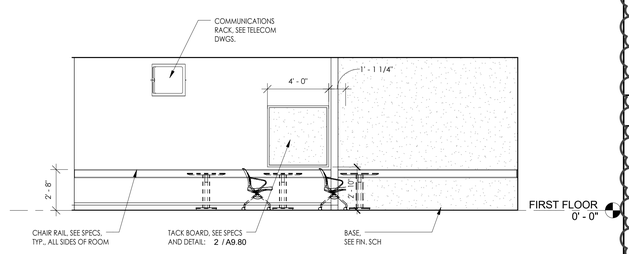

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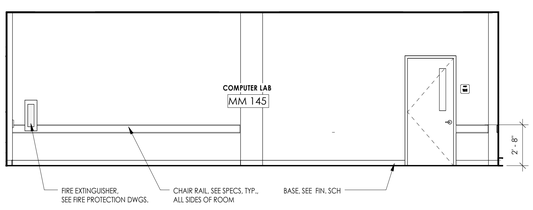

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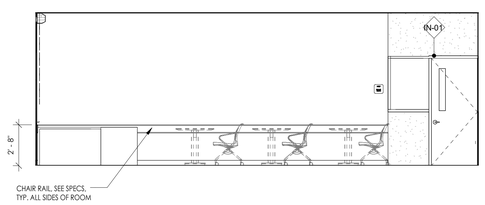
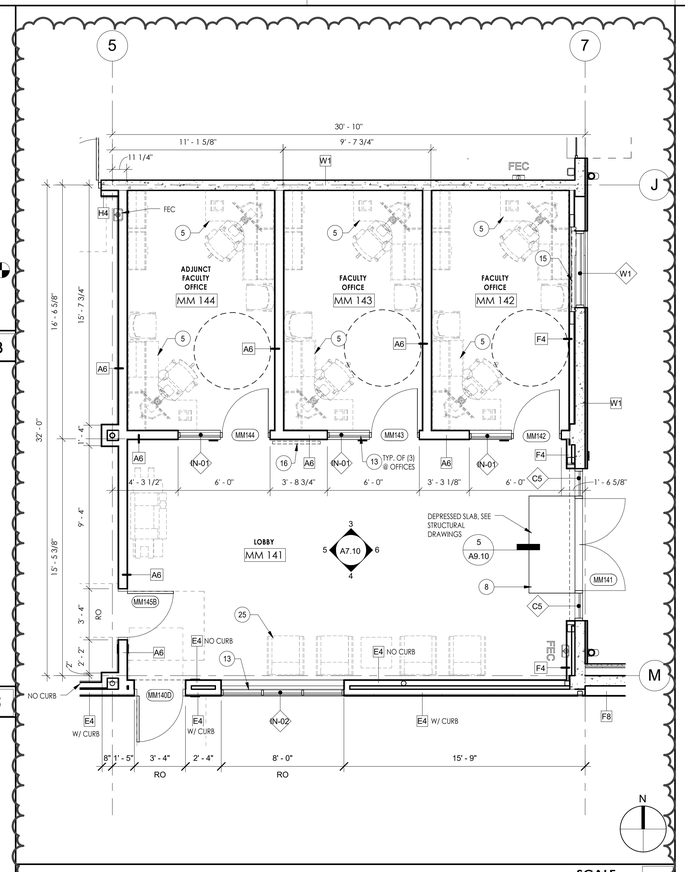
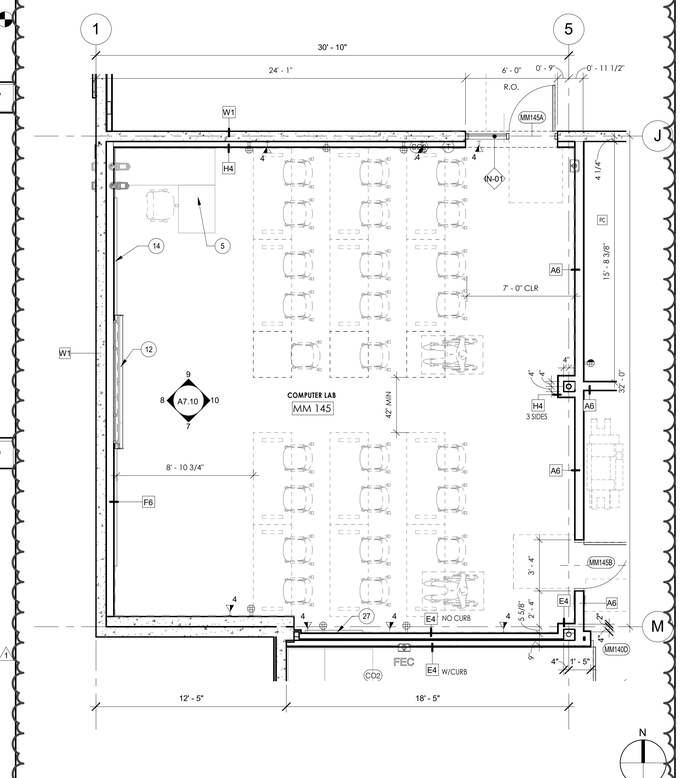


NORTH ELEV.-COMPUTER LAB MM 145 SCALE 1/4" = 1'-0" 9



ENLARGED FLOOR PLAN - FACULTY OFFICES AND LOBBY SCALE 1/4" = 1'-0" 1



ENLARGED FLOOR PLAN - COMPUTER LAB MM 145 SCALE 1/4" = 1'-0" 2

FLOOR PLAN - GENERAL NOTES

1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.

2. REFER TO SHEETS **G2.10** FOR EGRESS AND OCCUPANCY LOADS.

3. SEE SHEET **A9.60** FOR WALL TYPES.

4. FIRE EXTINGUISHERS MUST COMPLY WITH TITLE 19, ARTICLE 5. DISTRIBUTION SHALL NOT EXCEED 75 FEET TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING.

5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.

6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.

7. REFER TO SHEET **G3.11** FOR ADA CLEARANCE REQUIREMENTS.

8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**

9. THERMOSTATS WILL BE GANGED TOGETHER WITH LIGHT SWITCHES, AND PER MECHANICAL. IN CASE OF CONFLICT, IT MUST BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO INSTALLATION.

10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET **A9.90** FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.

11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.

12. ANTI GRAFFITI COATING PER SPEC:-
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT, CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

FLOOR PLAN KEYNOTES:

1. EXISTING CONCRETE BUILDING, INFILL PER STRUCTURAL DRAWINGS. SACK & RUB FINISH, BLEND
2. AESS WITH 3 COAT HIGH PERFORMANCE PAINT SYSTEM - BASIS OF DESIGN: CARBOLINE
3. TRAFFIC GRADE CONCRETE PAVEMENT MARKINGS
4. LINE OF EXPOSED AESS MC CHANNEL. REFER TO STRUCTURAL DRAWINGS
5. TEACHER'S LECTERN LAYOUT "A" OR "B" (C.F.C.I.) PER DISTRICT STANDARDS A/V RACK BY MIDDLE ATLANTIC PRODUCTS MODEL NO. SRSR-2-12 SLIDING RAIL SYSTEM IN OPEN SPACE OF LECTERN (O.F.O.I.) PER DISTRICT STANDARDS SEE DETAIL **12 / A9.90**
6. WALL MOUNT SINK W/EMERGENCY EYEWASH FAUCET. REFER TO PLUMBING DRAWINGS
7. SURFACE MOUNT GLASSWRITE MARKERBOARDS (FROSTED, FRAMELESS) 5' x 9', TYP. OF 3
8. WALK-OFF MAT - BASIS OF DESIGN: PEDIMAT M1 BY C/S GROUP, PER SPEC 124813-2.2-A SEE DETAIL: **5 / A9.10**
9. ACCESSIBLE HI-LO DRINKING FOUNTAIN
10. WATER HEATER - SEE PLUMBING DRAWINGS, DETAIL **1/P6.2**
11. FLOOR MOUNTED MOP SINK - SEE PLUMBING DRAWINGS, FIXTURE MS-1 SHEET **P0.2** & DETAIL **6/P6.2**
12. MOTORIZED PROJECTION SCREEN W/SUSPENDED PROJECTOR - SEE A/V DRAWINGS
13. INTERIOR ALUMINUM STOREFRONT SYSTEM WITH LAMINATED GLAZING - BASIS OF DESIGN: ARCADIA
14. WHITEBOARD WITH ALUMINUM FRAME AND MARKER TRAY
15. DUAL MOTORIZED WINDOW SHADES FULL WIDTH OF OPENING. WITH EXTRUDED ALUMINUM DUAL SHADE POCKET. ACOUSTIC BLACKOUT SHADE AND SOLAR CONTROL SHADE - BASIS OF DESIGN: MECHOSHADE ACOUSTIVEIL
16. FLAT PANEL. REFER TO AV DRAWINGS & **1/A9.52** FOR MOUNTING INFORMATION, PENDANT OR SURFACE MOUNT
17. CAST-IN-PLACE CONCRETE BENCHES. SEE LANDSCAPE DWGS **E/L4.10**
18. DOUBLE TIER LOCKERS. SET ON CONCRETE CURB. SEE **12/A9.80**
19. DUST COLLECTOR EQUIPMENT. REFER TO MECHANICAL DRAWINGS
20. COMPRESSED AIR EQUIPMENT. REFER TO PLUMBING DRAWINGS
21. PLUMBING EQUIPMENT. REFER TO PLUMBING DRAWINGS
22. CHAINLINK GATE (LOCKABLE) & FENCE CAGE. SEE: **12/A7.11**
23a. BULK STORAGE RACK. CFCI. B.O.D. ULINE H-5394 (DEFERRED SUBMITTAL APPROVAL. SEE COVER SHEET)
23b. BULK STORAGE RACK. CFCI. B.O.D. ULINE H-5395 (DEFERRED SUBMITTAL APPROVAL. SEE COVER SHEET)
24. LOCKABLE METAL CABINETS CFCI. B.O.D., ULINE H-6896 (4) & H-6897 (3). SEE ANCHORAGE DETAILS: **20/A7.12**
25. FURNITURE, N.I.C.
26. STEEL SHIP LADDER. BASIS OF DESIGN: ALACO (65deg) W/LADDER EXTENSION SAFETY POST
27. TACK BOARD. SEE SPECS
28. FLOOR BOX OUTLET ONLY IN (E) COMPUTER LAB AND (N) CLASSROOM COORDINATE W/ ELECTRICAL CONSULTANT
29. STAND-ALONE EMERGENCY EYE-WASH STATION. SEE PLUMBING DWGS & **15/A9.80**
30. GRAB BAR. B.O.D.: BOBRICK 819298. TYP.. SEE DETAIL: **28 / A9.80** & **24 / A9.80**
31. NEW CHAINLINK FENCE AND GATE. SEE LANDSCAPE DRAWINGS **A/L4.20**

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CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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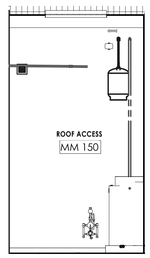
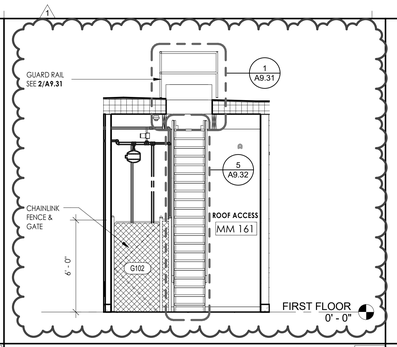
SHEET TITLE
ENL PLANS & INT ELEVS - FACULTY OFFICES, LOBBY & COMP LAB

SHEET NUMBER
A7.10

ADDENDUM#1



EAST ELEV. - ROOF ACCESS MM 150 SCALE 1/4" = 1'-0" 7



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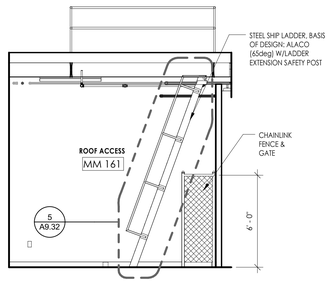

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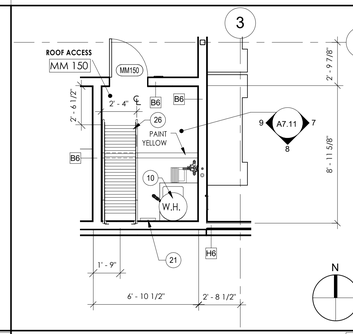
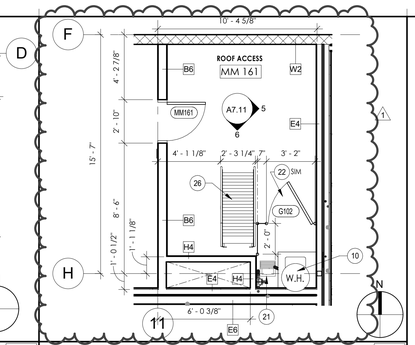


ENLARGED PLAN - ROOF ACCESS MM 150 SCALE 1/4" = 1'-0" 4



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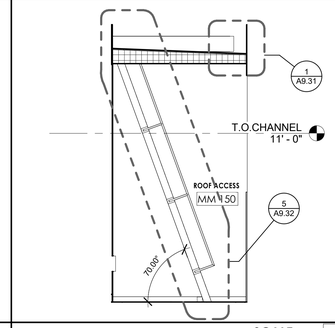
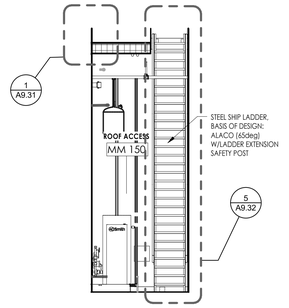
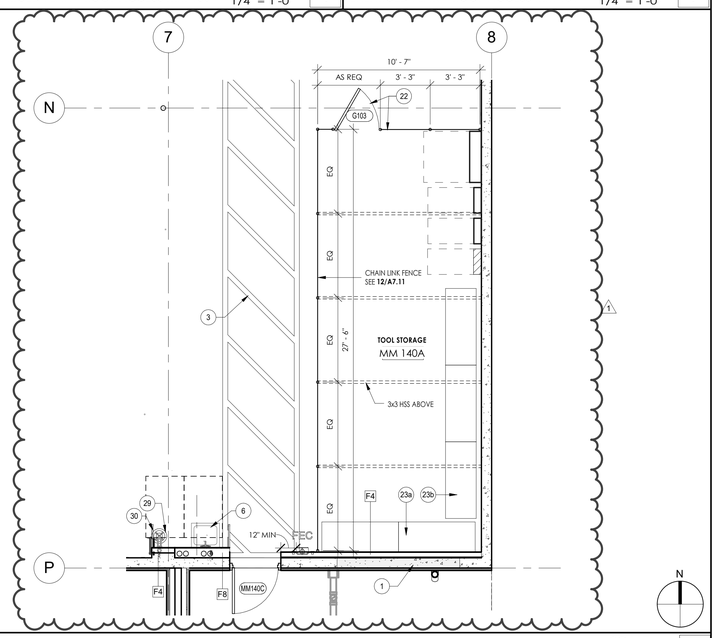


WEST ELEV. - ROOF ACCESS MM 150 SCALE 1/4" = 1'-0" 9



SO. ELEV. - ROOF ACCESS MM 150 SCALE 1/4" = 1'-0" 8



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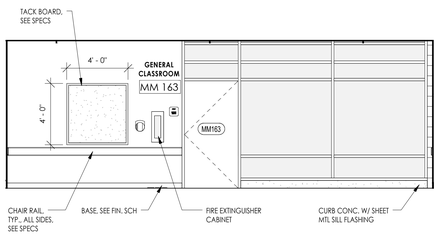

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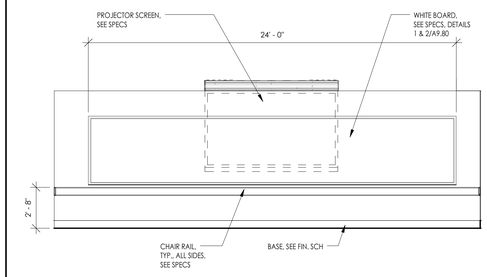

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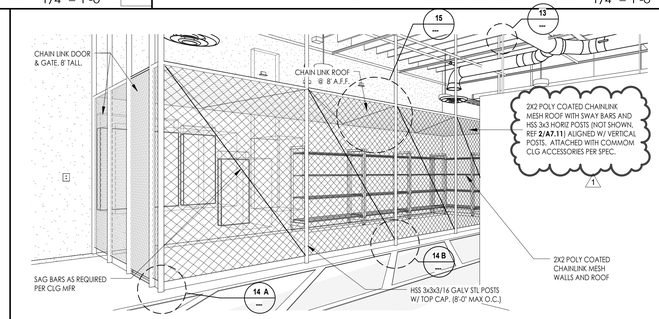
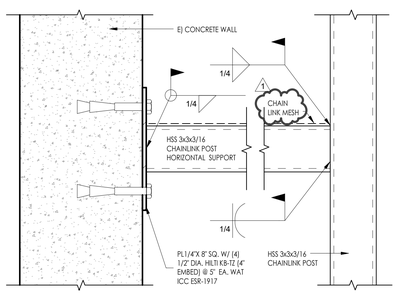
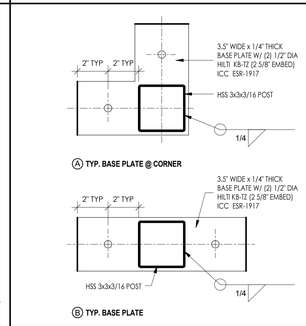


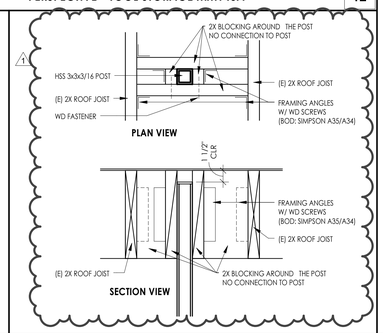
PERSPECTIVE - TOOL STORAGE MM140A SCALE 12



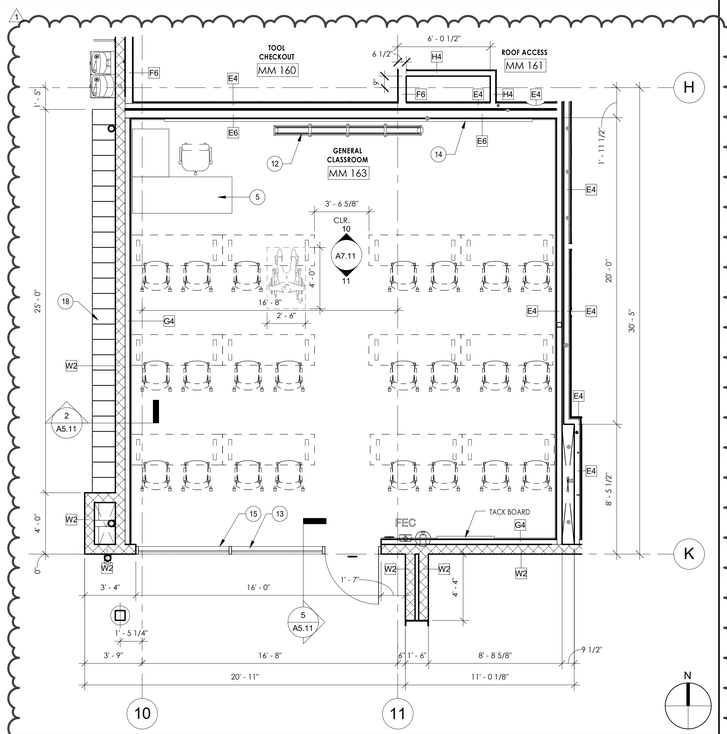
CHAINLINK HORIZONTAL SUPPORT SCALE 3" = 1'-0" 15



CHAINLINK F. POST BASE SUPPORT SCALE 3" = 1'-0" 14



CHAINLINK FENCE CEILING CONNECTION SCALE 1 1/2" = 1'-0" 13



ENLARGED FLOOR PLAN - GENERAL CLASSROOM MM 163 SCALE 1/4" = 1'-0" 3

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1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.

2. REFER TO SHEETS **G2.10** FOR EGRESS AND OCCUPANCY LOADS.

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11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.

12. ANTI GRAFFITI COATING PER SPEC:
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT. CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

FLOOR PLAN KEYNOTES:

1. EXISTING CONCRETE BUILDING, INFILL PER STRUCTURAL DRAWINGS. SACK & RUB FINISH, BLEND
2. AESS WITH 3 COAT HIGH PERFORMANCE PAINT SYSTEM - BASIS OF DESIGN: CARBOLINE
3. TRAFFIC GRADE CONCRETE PAVEMENT MARKINGS
4. LINE OF EXPOSED AESS MC CHANNEL, REFER TO STRUCTURAL DRAWINGS
5. TEACHER'S LECTERN LAYOUT "A" OR "B" (C.F.C.I.) PER DISTRICT STANDARDS AV RACK BY MIDDLE ATLANTIC PRODUCTS MODEL NO.: SRSR-2-12 SLIDING RAIL SYSTEM IN OPEN SPACE OF LECTERN (O.F.O.I.) PER DISTRICT STANDARDS SEE DETAIL **12 / A9.90**
6. WALL MOUNT SINK W/EMERGENCY EYEWASH FAUCET. REFER TO PLUMBING DRAWINGS
7. SURFACE MOUNT GLASSWRITE MARKERBOARDS (FROSTED, FRAMELESS) 5' x 9', TYP. OF 3
8. WALK-OFF MAT - BASIS OF DESIGN: PEDIMAT M1 BY C/S GROUP, PER SPEC 124813-2:2-A SEE DETAIL: **5 / A9.10**
9. ACCESSIBLE HI-LO DRINKING FOUNTAIN
10. WATER HEATER - SEE PLUMBING DRAWINGS, DETAIL **1/P6.2**
11. FLOOR MOUNTED MOP SINK - SEE PLUMBING DRAWINGS, FIXTURE MS-1 SHEET **P0.2** & DETAIL **6/P6.2**
12. MOTORIZED PROJECTION SCREEN W/SUSPENDED PROJECTOR - SEE A/V DRAWINGS
13. INTERIOR ALUMINUM STOREFRONT SYSTEM WITH LAMINATED GLAZING - BASIS OF DESIGN: ARCADIA
14. WHITEBOARD WITH ALUMINUM FRAME AND MARKER TRAY
15. DUAL MOTORIZED WINDOW SHADES FULL WIDTH OF OPENING, WITH EXTRUDED ALUMINUM DUAL SHADE POCKET. ACOUSTIC BLACKOUT SHADE AND SOLAR CONTROL SHADE - BASIS OF DESIGN: MECHOSHADE ACOUSTIVEIL
16. FLAT PANEL, REFER TO AV DRAWINGS & **1/A9.52** FOR MOUNTING INFORMATION. PENDANT OR SURFACE MOUNT
17. CAST-IN-PLACE CONCRETE BENCHES. SEE LANDSCAPE DWGS **E/L4.10**
18. DOUBLE TIER LOCKERS, SET ON CONCRETE CURB. SEE **12/A9.80**
19. DUST COLLECTOR EQUIPMENT, REFER TO MECHANICAL DRAWINGS
20. COMPRESSED AIR EQUIPMENT, REFER TO PLUMBING DRAWINGS
21. PLUMBING EQUIPMENT, REFER TO PLUMBING DRAWINGS
22. CHAINLINK GATE (LOCKABLE) & FENCE CAGE. SEE: **12/A7.11**
23a. BULK STORAGE RACK, CFCI, B.O.D. ULINE H-5394 (DEFERRED SUBMITTAL APPROVAL, SEE COVER SHEET)
23b. BULK STORAGE RACK, CFCI, B.O.D. ULINE H-5395 (DEFERRED SUBMITTAL APPROVAL, SEE COVER SHEET)
24. LOCKABLE METAL CABINETS CFCI, B.O.D., ULINE H-6896 (4) & H-6897 (3). SEE ANCHORAGE DETAILS: **20/A7.12**
25. FURNITURE, N.I.C.
26. STEEL SHIP LADDER, BASIS OF DESIGN: ALACO (65deg) W/LADDER EXTENSION SAFETY POST
27. TACK BOARD, SEE SPECS
28. FLOOR BOX OUTLET ONLY IN (E) COMPUTER LAB AND (N) CLASSROOM COORDINATE W/ ELECTRICAL CONSULTANT
29. STAND-ALONE EMERGENCY EYE-WASH STATION, SEE PLUMBING DWGS & **15/A9.80**
30. GRAB BAR, B.O.D - BOBRICK 819298 , TYP., SEE DETAIL: **26 / A9.80** & **24 / A9.80**
31. NEW CHAINLINK FENCE AND GATE, SEE LANDSCAPE DRAWINGS **A/L4.20**

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CONSULTANTS

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	12/09/2019	DSA RESUBMITTAL
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SHEET TITLE
ENLARGED PLANS & INTERIOR ELEVATIONS

SHEET NUMBER
A7.11

ADDENDUM#1

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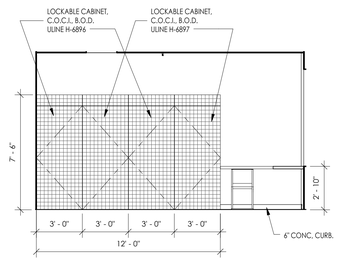
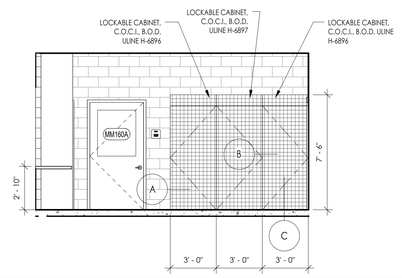


SOUTH ELEV-TOOL STORAGE MM 160 SCALE 1/4" = 1'-0" **21**



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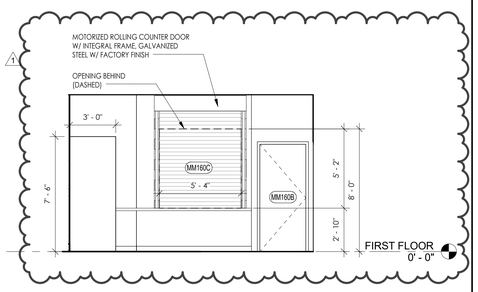

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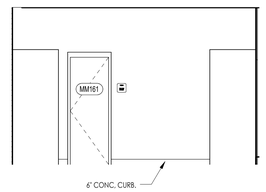
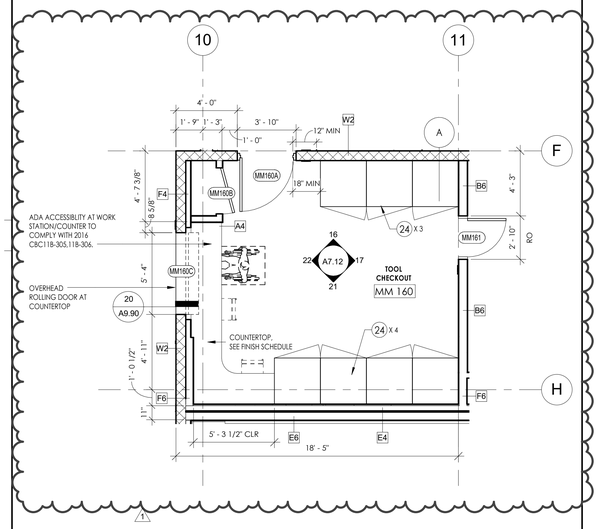
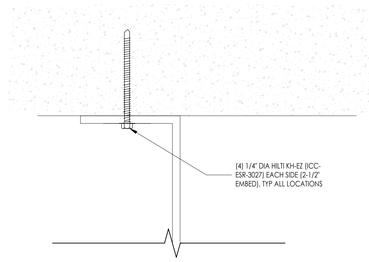


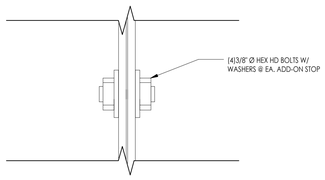
EAST ELEV-TOOL STORAGE MM 160 SCALE 1/4" = 1'-0" **17**



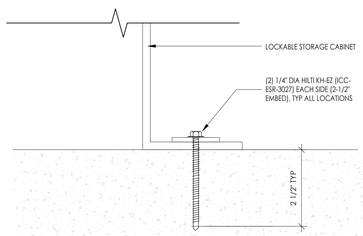
ENLARGED PLAN - TOOL STORAGE MM 160 SCALE 1/4" = 1'-0" **24**



(A) PANEL / WALL

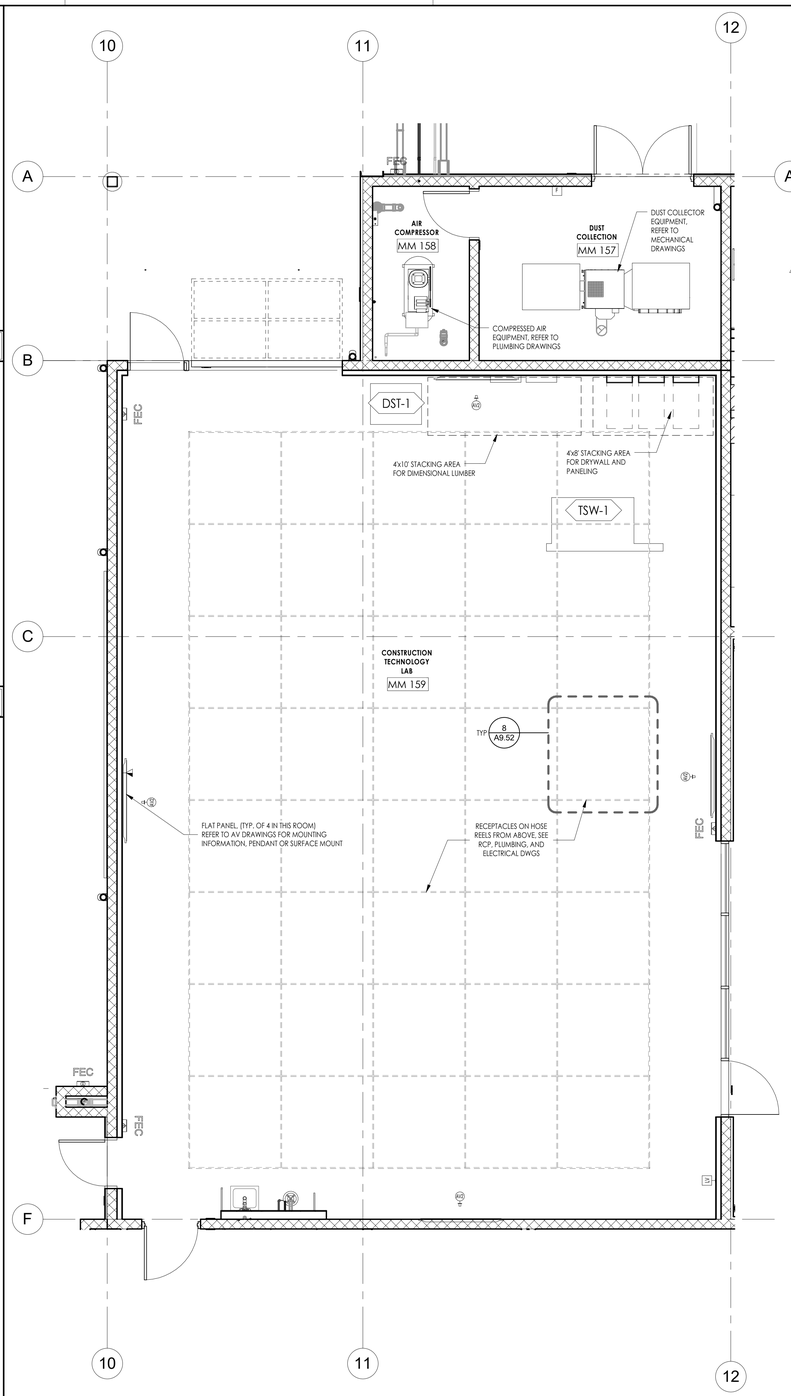


(B) PANEL / PANEL



(C) BASE

LOCKABLE STORAGE SCALE 6" = 1'-0" **20**



FURNITURE AND EQUIPMENT PLAN - GENERAL NOTES

1. ALL FURNITURE AND EQUIPMENT SHOWN DASHED ARE N.I.C. AND SHALL BE OWNER FURNISHED OWNER INSTALLED (O.F.O.I) UNLESS NOTED OTHERWISE ON PLAN OR ON EQUIPMENT SCHEDULE. FURNITURE MUST COMPLY WITH ACCESSIBILITY REQUIREMENTS INCLUDING KNEE CLEARANCE AND COUNTER TOP HEIGHTS, SEE DETAILS 6, 10 ON G3.11. PER 2016 CBC SECTION 11B-226.1, "...WHERE WORK SURFACES ARE PROVIDED FOR USE BY OTHER THAN EMPLOYEES, AT LEAST 5 PERCENT SHALL COMPLY WITH SECTION 11B-902."

2. FOR EQUIPMENT SCHEDULE AND INFORMATION REFER TO SHEET A8.20

EQUIPMENT PLAN - CONSTRUCTION TECHNOLOGY LAB MM 159 SCALE 1/4" = 1'-0" **10**

FLOOR PLAN - GENERAL NOTES

1. DIMENSIONS ARE INDICATED TO THE CENTERLINE OF THE STRUCTURAL GRID, FACE OF CONCRETE WALL, NOMINAL FACE OF CMU WALL, FACE OF PARTITION AS SCHEDULED, UNLESS OTHERWISE NOTED.

2. REFER TO SHEETS **G2.10** FOR EGRESS AND OCCUPANCY LOADS.

3. SEE SHEET **A9.60** FOR WALL TYPES.

4. FIRE EXTINGUSHERS MUST COMPLY WITH TITLE 19, ARTICLE 5. DISTRIBUTION SHALL NOT EXCEED 75 FEET TRAVEL DISTANCE FROM ANYWHERE IN THE BUILDING.

5. SEE ENLARGED PLANS FOR INTERIOR ELEVATION REFERENCES NOT SHOWN.

6. SEE ELECTRICAL DRAWINGS FOR BDF, IDF, AND ELECTRICAL EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR BACKING DETAILS.

7. REFER TO SHEET **G3.11** FOR ADA CLEARANCE REQUIREMENTS.

8. FOR OUTLET BOX SOUND INSULATION DETAIL, SEE: **18 / A9.61**

9. THERMOSTATS WILL BE GANGED TOGETHER WITH LIGHT SWITCHES, AND PER MECHANICAL. IN CASE OF CONFLICT, IT MUST BE BROUGHT TO THE ATTENTION OF THE DESIGNER PRIOR TO INSTALLATION.

10. WORK STATION AND COUNTER SHALL COMPLY WITH CBC ACCESSIBILITY REQUIREMENTS - SEE SHEET **A9.90** FOR COUNTER DETAILS AND CBC ACCESSIBLE DIMENSIONS.

11. ALL EXPOSED CONDUITS TO BE PAINTED T/M ADJACANT FINISHES.

12. ANTI GRAFFITI COATING PER SPEC:
- TO RUN UP TO 10'-0" MIN TO THE NEAREST JOINT, CONT ALL AROUND, TYP
- TO RUN UP TO PARAPET @ EXPOSED CMU BLOCK WALLS
- ENTIRE CMU VENEERS TO BE COATED, BOTTOM TO TOP

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10. WATER HEATER - SEE PLUMBING DRAWINGS, DETAIL **1/P6.2**
11. FLOOR MOUNTED MOP SINK - SEE PLUMBING DRAWINGS, FIXTURE MS-1 SHEET **P0.2** &, DETAIL **6/P6.2**
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29. STAND-ALONE EMERGENCY EYE-WASH STATION, SEE PLUMBING DWGS & **15/A9.80**
30. GRAS BAS, B.O.D, BORRICK 819228, TYP., SEE DETAIL: **26 / A9.80** & **24 / A9.80**
31. NEW CHAINLINK FENCE AND GATE, SEE LANDSCAPE DRAWINGS **A/L4.20**

FURNITURE AND EQUIPMENT PLAN - LEGEND

1 EQUIPMENT TAG, SEE A8.20 FOR EQUIPMENT SCHEDULE

20A, 125V DUPLEX RECEPTACLE, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE

20A, 125V QUAD RECEPTACLE, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE

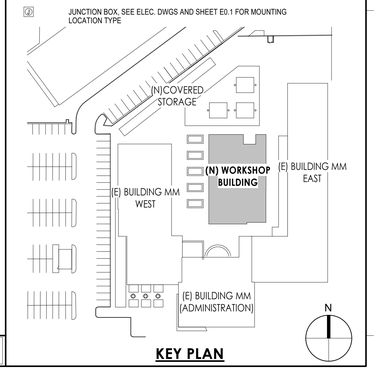
20A, 125V DUPLEX RECEPTACLE ON DEDICATED CIRCUIT, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE

20A, 125V CONTROLLED DUPLEX RECEPTACLE, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE

20A, 125V QUAD RECEPTACLE, (HALF) CONTROLLED RECEPTACLE, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE

SPECIAL RECEPTACLE, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE

JJ JUNCTION BOX, SEE ELEC. DWGS AND SHEET E0.1 FOR MOUNTING LOCATION TYPE



KEY PLAN

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SHEET TITLE
ENLARGED PLANS & INT ELEVATIONS - TOOL STORAGE

SHEET NUMBER
A7.12

ADDENDUM#1

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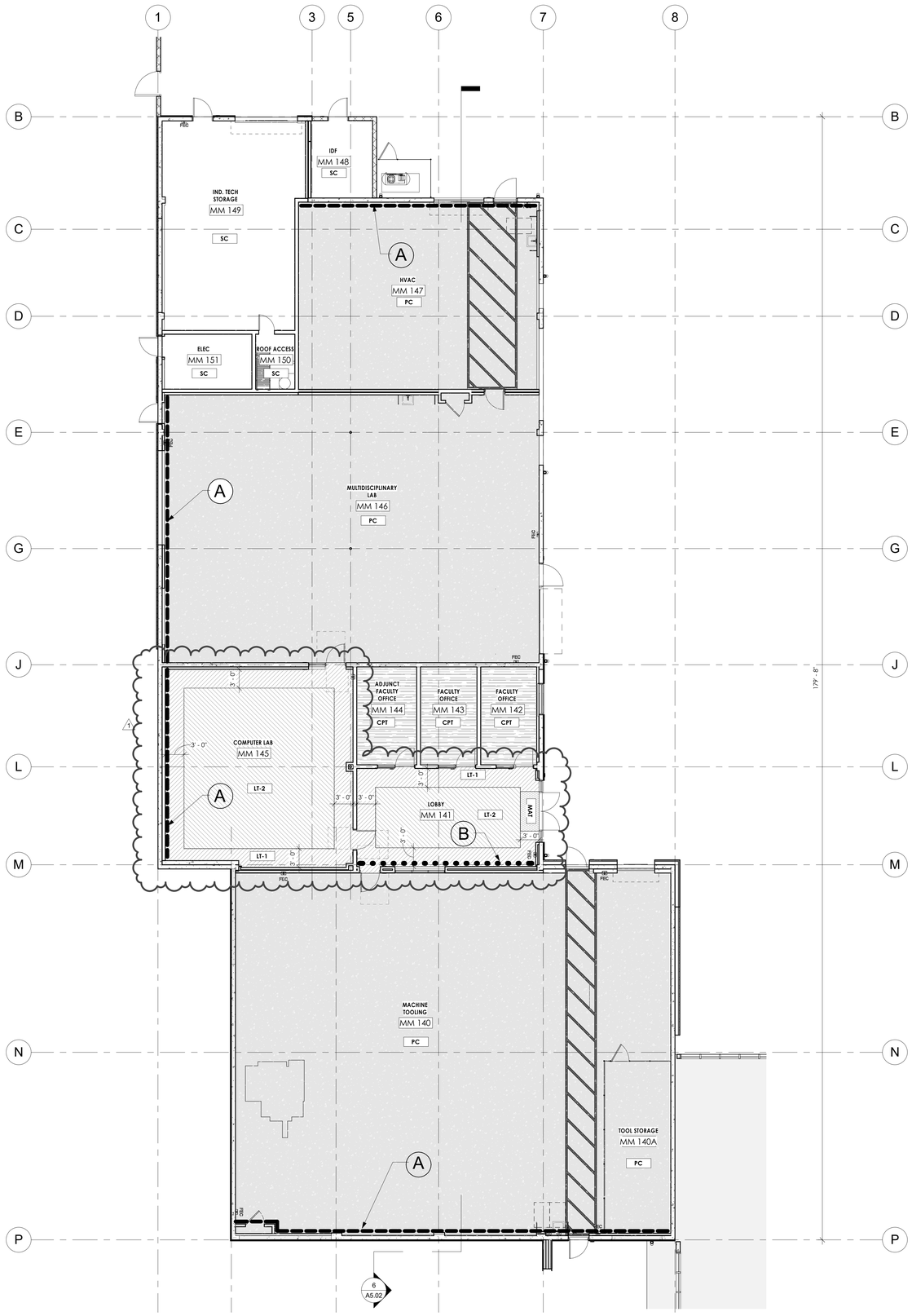

FINISH PLAN - (E) BUILDING MM WEST SCALE 1/8" = 1'-0" 1

LEGEND

CMU-1	CMU FIELD COLOR:SHOT BLAST- WHITE
CMU-2	CMU FIELD COLOR:SHOT BLAST- BLACK 250
MP-1	CORRUGATED METAL PANEL- SILVER GRAY
MP-2	METAL PANEL, STEEL TRELLIS BEAM, COLUMNS - MEDIUM GRAY
MP-3	CORRUGATED METAL PANEL- MEDIUM GRAY
CPT	CARPET TILE
PT	PORCELAIN TILE
SC	SEALED CONCRETE
PC	POLISHED CONCRETE
FG-1	WALL BASE- BLACK BROWN
LT-1	MARMOLEUM FLOOR TILE- FIELD- VIVACE- GRANADA
LT-2	MARMOLEUM FLOOR TILE- ACCENT- CONCRETE- BLACK HOLE
MAT	ENTRY MAT
ESF	EQUIPMENT SAFETY FLOOR STRIPING

NOTE:

1. FOR FURTHER INFORMATION, REFER TO SHEET A8.20 FOR ROOM FINISH SCHEDULE AND FINISH MATERIAL SCHEDULE

COUNTERTOP FINISH

NOTE: THE FINISH PLAN ONLY IDENTIFIES FINISHES THAT HAVE MULTIPLE COUNTERTOP FINISHES WITHIN ONE ROOM. SEE FINISH SCHEDULE A8.20 FOR COUNTERTOP FINISH TYPES

S	SOLID SURFACE COUNTERTOP

ACCENT WALL

A	ACCENT WALL PAINT DES318 GOLDEN RETRIEVER
B	VINYL GRAPHIC WALL

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SHEET TITLE
FINISH FLOOR PLAN - (E) BUILDING MM WEST

SHEET NUMBER
A8.01

ADDENDUM#1

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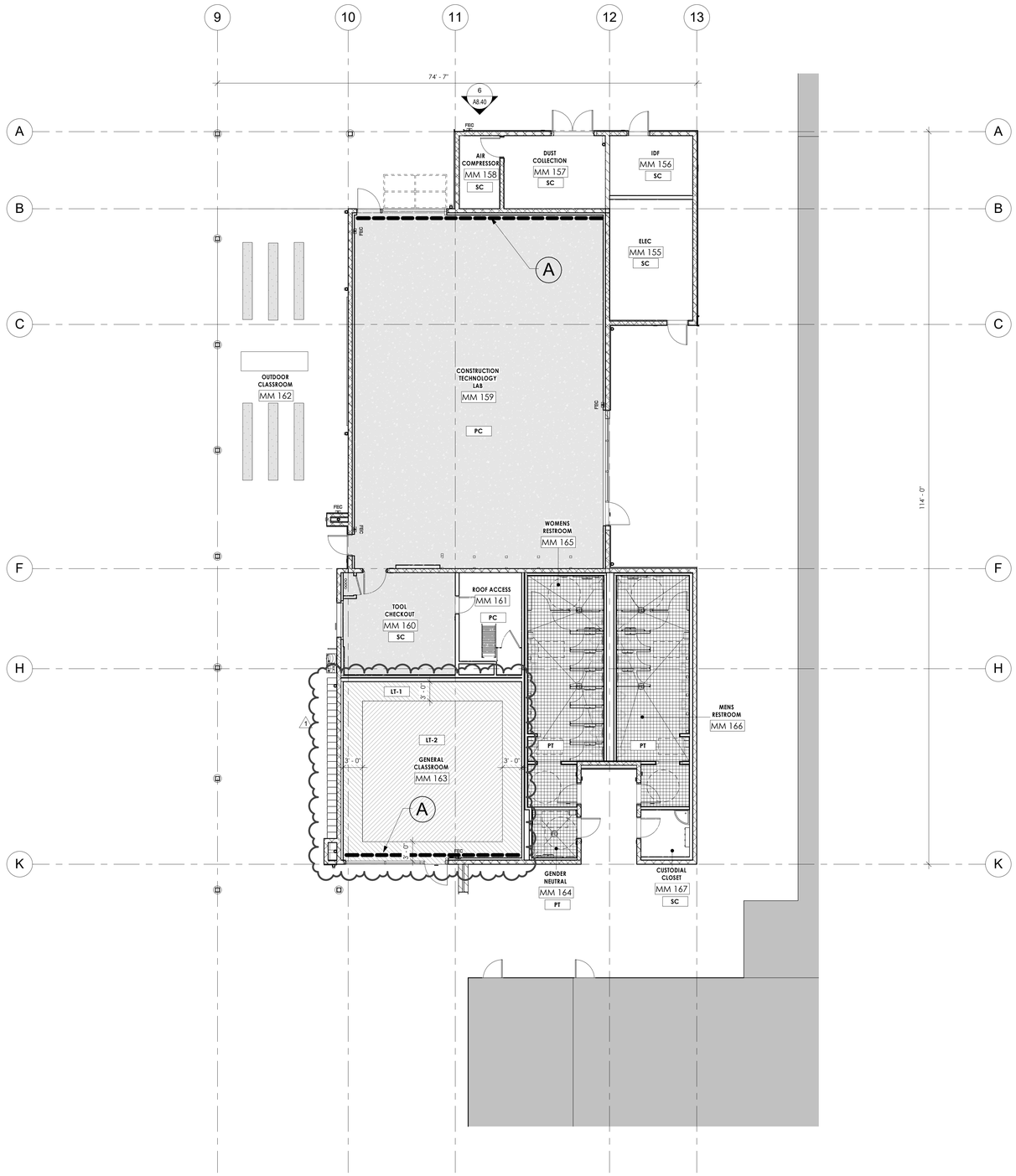

FINISH PLAN - (N) WORKSHOP BUILDING SCALE 1/8" = 1'-0" 1

LEGEND

CMU-1	CMU FIELD COLOR-SHOT BLAST- WHITE
CMU-2	CMU FIELD COLOR-SHOT BLAST- BLACK 250
MP-1	CORRUGATED METAL PANEL- SILVER GRAY
MP-2	METAL PANEL, STEEL TRELLIS BEAM, COLUMNS - MEDIUM GRAY
MP-3	CORRUGATED METAL PANEL- MEDIUM GRAY
CPT	CARPET TILE
PT	PORCELAIN TILE
SC	SEALED CONCRETE
PC	POLISHED CONCRETE
FG-1	WALL BASE- BLACK BROWN
LT-1	MARMOLEUM FLOOR TILE- FIELD- VIVACE- GRANADA
LT-2	MARMOLEUM FLOOR TILE- ACCENT- CONCRETE- BLACK HOLE
MAT	ENTRY MAT
ESF	EQUIPMENT SAFETY FLOOR STRIPING

NOTE:

1. FOR FURTHER INFORMATION, REFER TO SHEET A8.20 FOR ROOM FINISH SCHEDULE AND FINISH MATERIAL SCHEDULE

COUNTERTOP FINISH

NOTE: THE FINISH PLAN ONLY IDENTIFIES FINISHES THAT HAVE MULTIPLE COUNTERTOP FINISHES WITHIN ONE ROOM. SEE FINISH SCHEDULE A8.20 FOR COUNTERTOP FINISH TYPES

S	SOLID SURFACE COUNTERTOP

ACCENT WALL

A	ACCENT WALL PAINT DES318 GOLDEN RETRIEVER
B	VINYL GRAPHIC WALL

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SHEET TITLE
FINISH FLOOR PLAN - (N) WORKSHOP BUILDING

SHEET NUMBER
A8.02

ADDENDUM#1

MATERIALS AND COLOR SCHEDULE

MARK	MATERIAL / PRODUCT	MANUFACTURER	MODEL	COLOR	FLAME CLASS	REMARKS
FLOORING						
CPT	CARPET TILE	INTERFACE	ENTROPY	9600 RAVEN		20" X 20", 1/4 TURN
FG-1	FLOOR GROUT	MAPEI		CHARCOAL		
LT-1	LINOLEUM TILE	FORBO	VIVACE	T3405 GRANADA		19.7" X 19.7"
LT-2	LINOLEUM TILE	FORBO	CONCRETE	T3707 BLACK HOLE		19.7" X 19.7"
PT-1	PORCELAIN TILE	DALTILE	KEYSTONES	D208 SUEDE GRAY SPECKLE		2" X 2", RANDOM PATTERN (60%)
PT-2	PORCELAIN TILE	DALTILE	KEYSTONES	D182 SUEDE GRAY		2" X 2", RANDOM PATTERN (20%)
PT-3	PORCELAIN TILE	DALTILE	KEYSTONES	D189 NAVY		2" X 2", RANDOM PATTERN (20%)
SC	SEALED CONCRETE		CONCRETE	NATURAL CONCRETE		STEEL TROWEL FINISH WITH CONCRETE SEALER
PC	POLISHED CONCRETE	AMERIPOLISH	CONCRETE	NATURAL CONCRETE		CONCRETE POLISHED SEALANT
BASE						
PB	PORCELAIN TILE BASE	DALTILE	KEYSTONES	SUEDE GRAY		COVE BASE C833 - 2X1
RB	RUBBER BASE	ROPPE	PINNACLE - 6" COVE	193 BLACK BROWN		
WALL FINISHES / WALL PANELS						
CMU-1	CONCRETE MASONRY UNIT (SEAL W/ BLOCK SEALER)	ORCO BLOCK	SHOTBLAST MEDIUM	WHITE MW (GROUT T/M)		ROOM MM 140 - NORTH EXTERIOR WALL IN EXISTING BUILDING - SEE A4.01
CMU-2	CONCRETE MASONRY UNIT (SEAL W/ BLOCK SEALER)	ORCO BLOCK	SHOTBLAST MEDIUM	BLACK 100 MW (GROUT T/M)		ROOM MM 146 &149 - WEST EXTERIOR WALL IN EXISTING BUILDING TO MATCH WITH BACKYARD CMU WALL - SEE A4.01
CP	CAST-IN-PLACE CONCRETE/SACK & RUB					
CT-1	CERAMIC TILE	DALTILE	ANNAPOLIS - 6"x16"	AP06 SAIL		RESTROOMS: CHARCOAL GROUT COLOR
GT-1	GLASS TILE	DALTILE	11" x 15" RANDOM INTERLOCKING MOSAIC	CW27 WINTER BLUES		RESTROOMS: CHARCOAL GROUT COLOR
FRP	FIBERGLASS REINFORCED PLASTIC	MARLITE	SYMMETRIX FRP	C-100-G63 WHITE		CUSTODIAL ROOMS - SEE ROOM FINISH SCHEDULE
GYP-P	GYPSUM BOARD - PAINTED			SEE PAINT COLORS		LOBBY AND CONFERENCE ROOMS
GYP-IR	IMPACT RESISTANT GYP. BOARD- PAINTED			SEE PAINT COLORS		RESTROOMS, CUSTODIAL
TP	TOILET PARTITION	BOBRICK	COMPACT LAMINATE SOLID, PHENOLIC 1180	CHARCOAL - 0077 FH		RESTROOMS
CMU-V1	CMU VENEER	ORCO BLOCK	SHOTBLAST MEDIUM	WHITE MW (GROUT T/M)		SIZE T/M CMU-1 - SEE A4.01 & A4.02
CMU-V2	CMU VENEER	ORCO BLOCK	SHOTBLAST MEDIUM	BLACK 100 MW (GROUT T/M)		SIZE T/M CMU-2 - SEE A4.01 & A4.02
VWG	VINYL WALL GRAPHIC					ROOM MM 141 - SEE A8.01
ACCW	ACCENT WALL - PAINTED	DUNN EDWARDS	WALLS: SEMI GLOSS FINISH	DE5318 GOLDEN RETRIEVER		ROOM MM 140, 145, 146, 147, 159, 163 - SEE A8.01 & A8.02
CEILING MATERIAL						
ACT-1	ACOUSTIC CEILING TILE	ARMSTRONG	2' x 4' OPTIMA SQUARE LAY-IN	WHITE		
GYP-P-1	GYPSUM BOARD CEILING - PAINTED			P1 - SEE PAINT COLORS		
EXP-P-5	EXPOSED CEILING - PAINTED			P5 - SEE PAINT COLORS		
CASEWORK						
PL-1	PLASTIC LAMINATE	FORMICA		STORM		LECTERN TOP / WORK SURFACE
PL-2	PLASTIC LAMINATE	FORMICA		BURNT STRAND		LECTERN BODY
S	SOLID SURFACE	FORMICA	FORMICA DESIGNER SERIES	WHITE TRAVERTINE		COUNTERTOP - TOOL CHECKOUT
PAINT						
P-1	PAINT	DUNN EDWARDS	WALLS: SEMI GLOSS FINISH	DEW357 WHITE CREST		WALL PAINT- FIELD
P-2	PAINT	DUNN EDWARDS	WALLS: SEMI GLOSS FINISH	DE5318 GOLDEN RETRIEVER		WALL PAINT- ACCENT
P-3	PAINT	DUNN EDWARDS		DE6355 TARNISHED SILVER		METAL DOORS
P-4	PAINT	DUNN EDWARDS		DE5887 ADMIRAL BLUE		HOLLOW METAL DOOR FRAME
P-5	PAINT	DUNN EDWARDS		DE6377 BOAT ANCHOR		EXPOSED CEILING PAINT
P-6	PAINT	DUNN EDWARDS		DEW383 COOL DECEMBER		EXTERIOR WALL PAINT @ EXISTING BUILDING
DOOR / STOREFRONT FINISHES						
	SOLID CORE WOOD DOOR	ALGOMA HARDWOODS, INC.	ASPIRO SERIES	GRADE A NATURAL BIRCH - BOOK MATCH CLEAR FINISH		FACTORY FINISH TO MATCH VALSPAR 25% DYE STAIN
	METAL DOOR - PAINTED			P3 - SEE PAINT COLORS		
	HOLLOW METAL DOOR FRAME - PAINTED			P4 - SEE PAINT COLORS		
	EXT & INT STOREFRONT	ARCADIA		CLEAR ANODIZED ALUMINUM		
WINDOW TREATMENT						
WS-1	WINDOW SHADE - MANUAL	MECHOSHADE SYSTEMS, INC.		PEARL GREY		OPENESS PER SPECS
WS-2	WINDOW SHADE - MOTORIZED W/ REMOTE SWITCH	MECHOSHADE SYSTEMS, INC.		PEARL GREY		OPENESS PER SPECS
MISC MATERIAL						
AESS	EXPOSED STRUCTURAL STEEL		EXPOSED AESS STEEL PER SPECS	RAL 7037		EXPOSED MC CHANNELS, CANOPY COLUMNS & SUPPORT, SEE A4.01 & A4.02
MP-1	CORRUGATED METAL PANEL	BERRIDGE	HR-16	LIGHT MEDIUM GRAY		PER MIAMI-DADE COUNTY REPORT, NOA NO. 17-1211.14. FACTORY FINISH: PRE-WEATHERED GALVALUME
MP-2	COMPOSITE METAL PANEL	ALUCOBOND	ALUCOBOND PLUS	PPG INDUSTRIES - DURANAR XL MEDIUM GRAY		PER ICC-ESR-1185
MP-3	ALUMINUM PERFORATED PANEL	MCNICHOLS	1/8" ROUND 3/16" STAGGERED	CLEAR ANODIZED ALUMINUM		METAL CANOPY CEILING PANEL
F-1	SHEET METAL PANEL - PAINTED			PPG INDUSTRIES - DURANAR XL MEDIUM GRAY		SCUPPER, DOWNSPOUT & CLAMPS
F-2	SHEET METAL PANEL - PAINTED			PPG INDUSTRIES - DURANAR XL SILVER GRAY		PARAPET METAL COPING

ROOM FINISHES

ROOM NO.	ROOM NAME	FLOOR MATERIAL	FLOOR BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CASEWORK LECTERN	CASEWORK COUNTER TOP	Comments
MM 140	MACHINE TOOLING	PC	RB	GYP-P-1	* CONC-P-1	* CONC-P-2 / GYP-P-2	* CONC-P-1	EXP-P-5	PL-1 / PL-2		* SEE NOTE # 9 & 12
MM 140A	TOOL STORAGE	PC	RB		* CONC-P-1	GYP-P-2					
MM 140E	CHW CLOSET										
MM 141	LOBBY	LT-1 / LT-2	RB	GYP-P-1	GYP-P-1	GYP-VWG	GYP-P-1	ACT-1			
MM 142	FACULTY OFFICE	CPT	RB	* CONC-P-1	GYP-P-1	GYP-P-1	GYP-P-1	ACT-1			* SEE NOTE # 9
MM 143	FACULTY OFFICE	CPT	RB	* CONC-P-1	GYP-P-1	GYP-P-1	GYP-P-1	ACT-1			
MM 144	ADJUNCT FACULTY OFFICE	CPT	RB	* CONC-P-1	GYP-P-1	GYP-P-1	GYP-P-1	ACT-1			
MM 145	COMPUTER LAB	LT-1 / LT-2	RB	GYP-P-1	GYP-P-1	* CONC-P-1 / GYP-P-1	GYP-P-2	ACT-1	PL-1 / PL-2		* SEE NOTE # 9
MM 146	MULTIDISCIPLINARY LAB	PC	RB	GYP-P-1	* CONC-P-1	* CONC-P-1	GYP-P-2	EXP-P-5	PL-1 / PL-2		* SEE NOTE # 9 & 12
MM 147	HVAC	PC	RB	* CONC-P-2	* CONC-P-1 / GYP-P-1	GYP-P-1	GYP-P-1	EXP-P-5			* SEE NOTE # 9 & 12
MM 148	IDF	SC	RB	CMU-1	CMU-1	* CONC-P-1	GYP-P-1	EXP-P-5			* SEE NOTE # 9
MM 149	IND. TECH STORAGE	SC	RB	* CONC-P-1	GYP-P-1	GYP-P-1	* CONC-P-1	EXP-P-5			* SEE NOTE # 9
MM 150	ROOF ACCESS	SC	RB	GYP-P-1	GYP-P-1	GYP-P-1	GYP-P-1	EXP-P-5			
MM 151	ELEC	SC	RB	GYP-P-1	GYP-P-1	GYP-P-1	GYP-P-1	EXP-P-5			
MM 152	STORAGE	SC		CMU-2	CMU-1	CMU-1	CMU-1	EXP-P-5			
MM 153	MATERIAL STORAGE	SC		CMU-2	CMU-1	CMU-1	CMU-1	EXP-P-5			
MM 154	MATERIAL STORAGE	SC		CMU-2	CMU-1	CMU-1	CMU-1	EXP-P-5			
MM 155	ELEC	SC		GYP-P-1	CMU-1	CMU-1	CMU-1	EXP-P-5			
MM 156	IDF	SC		CMU-1	CMU-1	GYP-P-1	CMU-1	EXP-P-5			
MM 157	DUST COLLECTION	SC		CMU-1	CMU-1	CMU-1	CMU-1				
MM 158	AIR COMPRESSOR	SC		CMU-1	CMU-1	CMU-1	CMU-1				
MM 159	CONSTRUCTION TECHNOLOGY LAB	PC	RB	GYP-P-2	GYP-P-1	CMU-1 / GYP-P-1	GYP-P-1	EXP-P-5			SEE NOTE # 12
MM 160	TOOL CHECKOUT	PC	RB	CMU-1	GYP-P-1	GYP-P-1	GYP-P-1	ACT-1		S	
MM 161	ROOF ACCESS	SC	RB	CMU-1	GYP-P-1	GYP-P-1	GYP-P-1	EXP-P-5			
MM 162	OUTDOOR CLASSROOM										
MM 163	GENERAL CLASSROOM	LT-1 / LT-2	RB	GYP-P-1	GYP-P-1	GYP-P-2	GYP-P-1	ACT-1	PL-1 / PL-2		
MM 164	GENDER NEUTRAL	PT-1 / PT-2 / PT-3	PB	CT-1 / GT-1	CT-1 / GT-1	CT-1 / GT-1	CT-1 / GT-1	GYP-P-1			SEE A7.01
MM 165	WOMENS RESTROOM	PT-1 / PT-2 / PT-3	PB	CT-1 / GT-1	CT-1 / GT-1	CT-1 / GT-1	CT-1 / GT-1	GYP-P-1			SEE A7.01
MM 166	MENS RESTROOM	PT-1 / PT-2 / PT-3	PB	CT-1 / GT-1	CT-1 / GT-1	CT-1 / GT-1	CT-1 / GT-1	GYP-P-1			SEE A7.01
MM 167	CUSTODIAL CLOSET	SC	CT-1	CT-1	CT-1	CT-1	CMU-1	GYP-P-1			SEE A7.01

EQUIPMENT SCHEDULE

ITEM NO.	BLDG.	DEPARTMENT	EXISTING LOCATION	NEW LOCATION	ITEM DESCRIPTION	MANUFACTURER AND MODEL NO.	QTY.	WIDTH	DEPTH	HEIGHT	WEIGHT	FOUNDATION -ANCHORAGE	VENTILATION / EXHAUST	POWER	DATA	WATER	DRAINAGE	COMPRESSED AIR	MODEL No.	(N) OR (E)	O.F.O.I.	O.F.C.I.	C.F.C.I.	PROCUREMENT
CNC-1	MM	Construction Tech	New	MM140	Universal Machine	HAAS	2	149"	113"	120"	19100 LBS	Contractor to anchor per struct dtls	N/A	High Voltage 480V (3 Phase)/ 35A	Y	N/A	N/A	Y	UMC-750	N		X		
CNC-2	MM	Construction Tech	New	MM140	TL-1 CNC Toolroom Lath	HAAS	8	86"	54"	79"	3750 LBS	Contractor to anchor per struct dtls	N/A	208V (3 Phase)/ 25A	Y	N/A	N/A	Y	TL-1	N		X		
CNC-3	MM	Construction Tech	New	MM140	Super Mini Mill	HAAS	8	81"	66"	106"	3400 LBS	Contractor to anchor per struct dtls	N/A	Low Voltage 208V (3 Phase)/ 40A	Y	N/A	N/A	Y	Super Mini Mill	N		X		
CNC-4	MM	Construction Tech	New	MM146	CNC Routing Machine	TBD	1	TBD	TBD	TBD	TBD	Owner to install per struct dtls	Y	220V, 3 Ph	Y	N/A	N/A	Y	TBD	N	X			
DST-1	MM	Construction Tech	New	MM146 & MM159	1.5HP	Baileigh	3	32"	40"	75"	230 LBS	Contractor to anchor per struct dtls	N/A	110V	N/A	N/A	N/A	N/A	DC-600C	N		X		
FRK-1	MM	Construction Tech	New	COVERED STORAGE	Forklifts	Toyota	5	N/A	N/A	N/A	PER SPEC		N/A	9.6 AMP 480 3-Phase	N/A	N/A	N/A	N/A		N				
FRK-2	MM	Construction Tech	New	COVERED STORAGE	Forklift/Telehandler	JCB	1	5.1'	126"	6.5'	2500 LBS		N/A	220V 3-Phase	N/A	N/A	N/A	N/A	520-40	N				
TSW-1	MM	Construction Tech	New	MM159	Table Saw	Baileigh	1	91"	79"	42.5"	715 LBS	Contractor to anchor per struct dtls	Y	220V 1-Phase	N/A	N/A	N/A	N/A	TS-1248P-52	N		X		
HPU-1	MM	HVAC	New	MM147	Domestic Heat Pump Training System	Lab Volt - Festo	8	86.6"	31.5"	74.8"	350 LBS	Contractor to anchor per struct dtls	N/A	Standard Single Phase AC Outlet	N/A	N/A	N/A	N/A	3402-30	N		X		
RFG-1	MM	HVAC	New	MM147	Refrigeration System Demonstrator	Lab Volt - Festo	8	83"	31.5"	74.8"	308 LBS	Contractor to anchor per struct dtls	N/A	Standard Single Phase AC Outlet	N/A	N/A	N/A	N/A	3400-30	N		X		
RFG-2	MM	HVAC	New	MM147	Refrigeration Training System	Lab Volt - Festo	8	86.6"	31.5"	74.8"	619 LBS	Contractor to anchor per struct dtls	N/A	Standard Single Phase AC Outlet	N/A	N/A	N/A	N/A	3401-20	N		X		

FINISH SCHEDULE - GENERAL NOTES

1. REFER TO FLOOR PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO CEILING PLANS FOR ADDITIONAL INFORMATION INCLUDING SOFFIT HEIGHTS.
3. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.
4. REFER TO SPECIFICATIONS FOR FINISH LEVEL REQUIRED @ ALL GYPSUM BOARD WALLS.
5. REFER TO FINISH PLANS FOR ACCENT WALL LOCATIONS.
6. ALL INTERIOR FINISHES SHALL COMPLY W/ CBC CHAPTER 8 AND CFC CHAPTER 8.
7. ALL EXPOSED FIRE PROOFING FOR MTL. DECK AND BEAMS TO BE PAINTED. ALL EXPOSED STRUCTURAL SUPPORTS AND BRACING IN THE CEILING SPACE TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
8. FOR SPECIFIC FINISH LOCATIONS SEE FLOOR FINISH PLANS A8.01 & A8.02, AND EXTERIOR ELEVATIONS A4.01 & A4.02
9. ALL EXPOSED CONCRETE WALLS AND CURBS TO BE CLEANED & PREPARED FOR CONCRETE COATING & PAINTING. SEE SPECIFICATIONS SECTION 030130 MAINTENANCE OF CONCRETE
10. FRP SHALL BE PROVIDED WITH REQUIRED ACCESSORIES. SEE SPECS SECTION 066200.
11. ALL FINISHES SHALL COMPLY WITH CBC, CFC, & TITLE 19 CCR.
12. FRP TO BE INSTALLED AT EYE WASH WHEN AT STUD/GYP WALL. NO FRP AT EYE WASH WHEN AT CMU/CONC WALL.

MATERIALS AND ABBREVIATIONS

REFER TO MATERIALS AND COLOR SCHEDULE THIS SHEET FOR MORE INFORMATION.

FLOORING

CPT- # CARPET TILE
FG - # FLOOR GROUT
LT - # LINOLEUM TILE
PC POLISHED CONCRETE
PT- # PORCELAIN TILE
SC- # SEALED CONCRETE

BASE

PB- # PORCELAIN TILE BASE
RB- # RUBBER BASE

WALL

CONC. CONCRETE COATING
CMU- # CMU BLOCK
CMU-V# CMU VENEER
FRP FIBERGLASS REINFORCED PLASTIC
GT - # GLASS TILE
GYP-P- # GYPSUM BOARD - PAINTED
GYP-IR-P- # IMPACT RESISTANT GYPSUM BOARD - PAINTED
P - # PAINT
TP TOILET PARTITION
VWG VINYL WALL GRAPHIC
ACCW ACCENT WALL

CEILING

ACT- # ACOUSTICAL CEILING TILE
EXP-P- # EXPOSED STRUCTURE - PAINTED (INCLUDES ALL EXPOSED DUCTS, PIPES, CONDUITS, ETC.), DO NOT PAINT DUCT LINER BOARD
GYP-P- # GYPSUM BOARD-PAINTED

CASEWORK

PL - # PLASTIC LAMINATE
S SOLID SURFACE

DSA USE ONLY

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CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION -

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN **AUTODESK REVIT V. 2018** UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY -

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SHEET TITLE
MATERIALS, EQUIPMENT & FINISH SCHEDULE

SHEET NUMBER
A8.20

ADDENDUM#1

6/4/2020 5:44:36 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BMA\1 Central\LBCC Building MM_Arch_R16.rvt

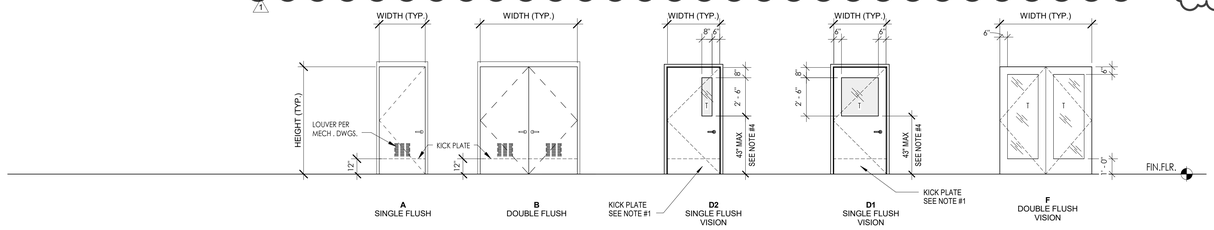
ROOM#	ROOM NAME	DOOR PAIR	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR CORE	DOOR CONSTR.	DOOR FACE / FINISH	FRAME MATERIAL	FRAME FINISH	RATED ASSEMBLY (IN MINUTES)	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	HARDWARE SET	PANIC HARDWARE	CLOSER	KEYNOTES/ REMARKS
FIRST FLOOR																			
MM140A	MACHINE TOOLING		3' - 6"	7' - 0"	1 3/4"	D1	SC	INS AL/GL	FF	AL	ANOD AL		4/A9.20	24/A9.11	24/A9.10	021	Y		A/CARD READER-OMNI
MM140B	MACHINE TOOLING		6' - 0"	11' - 0"	1"	K	SC	INS SL	FF	STL	FF-PC		22/A9.11	3/A9.11	14/A9.10	017			OVERHEAD ROLLUP DOOR
MM140C	MACHINE TOOLING		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		20/A9.10	21/A9.10	24/A9.10	02.1	Y		EXIT ONLY DOOR
MM140D	MACHINE TOOLING		3' - 0"	7' - 0"	1 3/4"	D2	SC	INS HM/GL	P	HM	P		8/A9.10	8/A9.10	9/A9.10	007.1			J, STC 50
MM140E	CHW CLOSET		3' - 0"	7' - 0"	1 3/4"	A	HC	HM	P	HM	P		8/A9.10	8/A9.10	13/A9.10	003			
MM141	LOBBY	Y	6' - 0"	7' - 0"	1 3/4"	F	SC	INS AL/GL	FF	AL	ANOD AL		2/A9.20	23/A9.20	5/A9.10	022	Y		K, AUTO OPENER- ADA, A/CARD READER-OMNI
MM142	FACULTY OFFICE		3' - 0"	7' - 0"	1 3/4"	D2	SC	INS AL/GL	FF	AL	ANOD AL		22/A9.20	22/A9.20	19/A9.10	001			J,
MM143	FACULTY OFFICE		3' - 0"	7' - 0"	1 3/4"	D2	SC	INS AL/GL	FF	AL	ANOD AL		22/A9.20	22/A9.20	19/A9.10	001			J,
MM144	ADJUNCT FACULTY OFFICE		3' - 0"	7' - 0"	1 3/4"	D2	SC	INS AL/GL	FF	AL	ANOD AL		22/A9.20	22/A9.20	19/A9.10	001			J,
MM145A	COMPUTER LAB		3' - 0"	7' - 0"	1 3/4"	D2	SC	INS AL/GL	FF	AL	ANOD AL		25/A9.20	25/A9.20	9/A9.10	006			J, STC 50
MM145B	COMPUTER LAB		3' - 0"	7' - 0"	1 3/4"	D2	SC	INS HM/GL	P	HM	P		8/A9.10	8/A9.10	4/A9.10	007	Y		J, STC 50, A/CARD READER-OMNI
MM146A	MULTIDISCIPLINARY LAB		3' - 6"	7' - 0"	1 3/4"	A	SC	INS AL	FF	AL	ANOD AL		2/A9.20	11 & 20/A9.11	24/A9.10	019	Y		A/CARD READER-OMNI
MM146B	MULTIDISCIPLINARY LAB		10' - 4"	10' - 7"	1"	G	SC	INS HM/GL	FF-PC	STL	FF-PC		10/A9.11	20 & 30/A9.11	14/A9.10	018			CROWN GLASS BI-FOLD
MM146C	MULTIDISCIPLINARY LAB		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		20/A9.10	22/A9.10	24/A9.10	005	Y		EXIT ONLY DOOR
MM146D	MULTIDISCIPLINARY LAB		3' - 0"	7' - 0"	1 3/4"	A	HC	HM	P	HM	P		8/A9.10	8/A9.10	13/A9.10	003			
MM147A	HVAC		8' - 0"	11' - 0"	1"	K	SC	INS SL	FF	STL	FF-PC		27/A9.11	4/A9.11 SIM	14/A9.10	017			OVERHEAD ROLLUP DOOR
MM147B	HVAC		3' - 6"	7' - 0"	1 3/4"	D1	SC	INS AL/GL	FF	AL	ANOD AL		2/A9.20	25/A9.20	24/A9.10	021	Y		A/CARD READER-OMNI
MM147C	MULTIDISCIPLINARY LAB		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		8/A9.10	8/A9.10	13/A9.10	005	Y		STC 50
MM148	IDF		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10 SIM	10/A9.10 SIM	24/A9.10	013			
MM149A	IND. TECH STORAGE		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		20/A9.10	21/A9.10	24/A9.10	011			
MM149B	IND. TECH STORAGE		10' - 0"	11' - 0"	1"	K	SC	INS SL	FF	STL	FF-PC		22/A9.11 SIM	4/A9.11	14/A9.10	017			OVERHEAD ROLLUP DOOR
MM150	ROOF ACCESS		2' - 6"	7' - 0"	1 3/4"	A	HC	HM	P	HM	P		8/A9.10	8/A9.10	13/A9.10	004.2			
MM151	ELEC		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		20/A9.10	22/A9.10	24/A9.10	014			
MM152	STORAGE	Y	5' - 8"	7' - 0"	1 3/4"	B	HC	HM	P	HM	P		10/A9.10 SIM	10/A9.10 SIM	24/A9.10	008			
MM153A	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM153B	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM153C	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM154A	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM154B	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM154C	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM154D	MATERIAL STORAGE		10' - 0"	8' - 0"	5/16"	H	OG	AL	ANOD AL	STL	FF		21/A9.11 SIM	7/A9.11 SIM	14/A9.10 SIM	016			MICRO-COIL DOOR LOCKABLE
MM155	ELEC		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10 SIM	11/A9.10	24/A9.10	014	Y		
MM156	IDF		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		15/A9.10	16/A9.10	24/A9.10	013			
MM157	DUST COLLECTION	Y	6' - 4"	7' - 0"	1 3/4"	B	SC	INS HM	P	HM	P		15/A9.10	16/A9.10	24/A9.10	015			K,
MM158	AIR COMPRESSOR		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10	10/A9.10 SIM	13/A9.10	004.1			
MM159A	CONSTRUCTION TECHNOLOGY LAB		3' - 6"	7' - 0"	1 3/4"	D1	SC	INS AL/GL	FF	AL	ANOD AL		19/A9.11 SIM	19/A9.11	24/A9.10	005	Y		L
MM159B	CONSTRUCTION TECHNOLOGY LAB		9' - 10"	10' - 8"	1"	G	SC	INS HM/GL	FF-PC	STL	FF-PC		8/A9.11	1 & 5/A9.11	14/A9.10	018			CROWN GLASS BI-FOLD
MM159C	CONSTRUCTION TECHNOLOGY LAB		3' - 6"	7' - 0"	1 3/4"	A	SC	INS AL	FF	AL	ANOD AL		29/A9.11 SIM	29/A9.11	24/A9.10	020			AUTO OPENER-ADA
MM159D	CONSTRUCTION TECHNOLOGY LAB		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		15/A9.10	16/A9.10	24/A9.10	021	Y		A/CARD READER-OMNI
MM160A	TOOL CHECKOUT		3' - 6"	7' - 0"	1 3/4"	D1	SC	INS HM	P	HM	P		10/A9.10	10/A9.10 SIM	13/A9.10	002			
MM160B	TOOL CHECKOUT		3' - 0"	7' - 0"	1 3/4"	A	HC	HM	P	HM	P		8/A9.10	8/A9.10	13/A9.10	003			
MM160C	TOOL CHECKOUT		5' - 4"	5' - 2"	1"	J	SC	INS SL	FF	STL	FF		21/A9.11 SIM	7/A9.11 SIM	20/A9.90	017			OVERHEAD ROLL UP DOOR
MM161	ROOF ACCESS		2' - 6"	7' - 0"	1 3/4"	A	HC	HM	P	HM	P		8/A9.10	8/A9.10	13/A9.10	004			
MM163	GENERAL CLASSROOM		3' - 6"	7' - 0"	1 3/4"	A	SC	INS AL	FF	AL	ANOD AL		19/A9.11 SIM	19/A9.11	24/A9.10	020	Y		K, STC, AUTO OPENER- ADA, A/CARD READER-OMNI
MM164	GENDER NEUTRAL		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10 SIM	10/A9.10 SIM	18/A9.10	010			
MM165	WOMENS RESTROOM		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10 SIM	10/A9.10 SIM	18/A9.10	009			AUTO OPENER-ADA
MM166	MENS RESTROOM		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10 SIM	10/A9.10 SIM	18/A9.10	009			AUTO OPENER-ADA
MM167	CUSTODIAL CLOSET		3' - 0"	7' - 0"	1 3/4"	A	SC	INS HM	P	HM	P		10/A9.10 SIM	10/A9.10 SIM	24/A9.10	012			

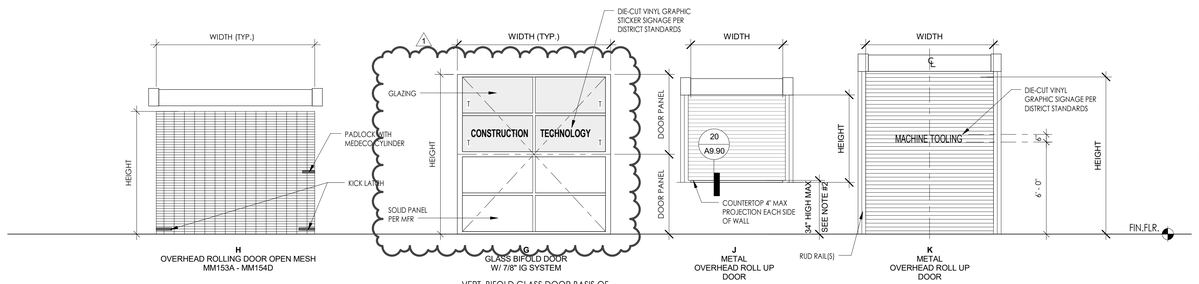
1

GATE SCHEDULE

DOOR NO.	PAIR	WIDTH	HEIGHT	THICKNESS	TYPE	CONSTR.	FINISH	REMARKS	HARDWARE SET
G102		3' - 0"	6' - 0"	0' - 0"	3	AL	GALV	PADLOCK W/ MEDECO	025
G103		3' - 0"	8' - 0"	0' - 0"	3	AL	GALV	LOCKABLE	024
G104		4' - 0"	7' - 2"		2	STL	GALV	PANIC HARDWARE,CARD READER -OMNI , REFERENCE 4/A1.03	023
G105		4' - 0"	7' - 2"		2	STL	GALV	PANIC HARDWARE,CARD READER -OMNI , REFERENCE 4/A1.03	023
G106		3' - 0"	8' - 0"	0' - 0"	3	AL	GALV	PANIC HARDWARE CYLINDER DOGGING AND SECURITY MESH 3' BOTH SIDES.	028
G107	Y	23' - 0"	8' - 0"		L4.20			PANIC HARDWARE CYLINDER DOGGING AND SECURITY MESH 3' BOTH SIDES.	026
G108		24' - 0"	6' - 8"		4	STL	GALV	AUTOMATIC GATE OPENER	027
G109		3' - 0"	8' - 0"	0' - 0"	3	AL	GALV	PANIC HARDWARE CYLINDER DOGGING AND SECURITY MESH 3' BOTH SIDES.	028
G110		3' - 0"	8' - 0"	0' - 0"	3	AL	GALV	PANIC HARDWARE CYLINDER DOGGING AND SECURITY MESH 3' BOTH SIDES.	028
G114		3' - 0"	8' - 0"	0' - 0"	3	AL	GALV	PANIC HARDWARE CYLINDER DOGGING AND SECURITY MESH 3' BOTH SIDES.	028

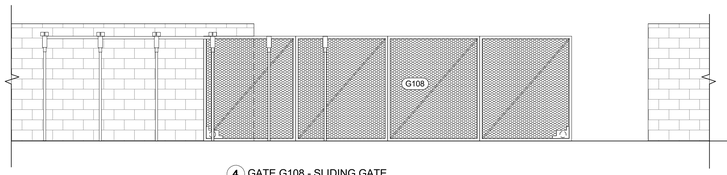
1



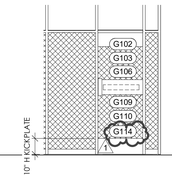


VERT. BIFOLD GLASS DOOR BASIS OF DESIGN: CROWN DOORS, SST-II BI-FOLD ELECTRIC SYSTEM

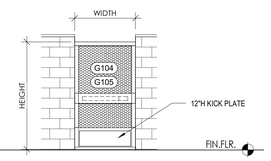
DOOR TYPES



4 GATE G108 - SLIDING GATE
1/4"=1'- 0"



3 FENCE GATE G102, G103, G106, G109, G110 & G114
1/4" = 1'-0"



2 GATE G104- G105
1/4" = 1'-0"

GATE TYPES

NOTE:

1- KICK PLATES SHALL BE ON "PUSH" SIDE

2- **2016 CBC 11B-904.4.1-** A PORTION OF THE COUNTER SURFACE THAT IS 36 INCHES (914 MM) LONG MINIMUM AND 34 INCHES (864 MM) HIGH MAXIMUM ABOVE THE FINISH FLOOR SHALL BE PROVIDED. A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH SECTION 11B-305 SHALL BE POSITIONED FOR A PARALLEL APPROACH ADJACENT TO THE 36 INCH (914 MM) MINIMUM LENGTH OF COUNTER.

3- **2016 CBC 11B-404.2.7-** HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY WITH SECTION 11B-309-4. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES (864 MM) MINIMUM AND 44 INCHES (1118 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.

4- **2016 CBC 11B-404.2.11-** DOORS, GATES, AND SIDE LIGHTS ADJACENT TO DOORS OR GATES, CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE GLAZED PANEL LOCATED 43 INCHES (1092 MM) MAXIMUM ABOVE THE FINISH FLOOR.

NOTE: AT PEDESTRIAN GATE SHALL BE REQUIRED TO COMPLY WITH:

2016 CBC SECTION 11B-404.2.7, HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL COMPLY WITH SECTION 11B-309-4. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34 INCHES (864 MM) MINIMUM AND 44 INCHES (1118 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES.

2016 CBC SECTION 11B-404.2.9,THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE SHALL BE AS FOLLOWS: 1. INTERIOR HINGED DOORS AND GATES: 5 POUNDS (22.2 N) MAXIMUM.

2016 CBC SECTION 11B-404.2.10, SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES (254 MM) OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN 1/16 INCH (1.6 MM) OF THE SAME PLANE AS THE OTHER AND BE FREE OF SHARP OR ABRASIVE EDGES. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED.

DOOR - GENERAL NOTES

1 ALL HARDWARE FOR ACCESSIBLE DOORS SHALL MEET THE REQUIREMENTS OF 2016 CBC SECTIONS 11B-404.2.7, 11B-309.4 AND 1010.1.9.*

2 HAND ACTIVATED DOOR OPENING HARDWARE, HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. HARDWARE SHALL BE CENTERED BETWEEN 34" MIN. (PER ADA 404.2.7) AND 44" ABOVE THE FLOOR. 2016 CBC SECTION 11B-404.2.7

3 PRESSURE TO OPERATE DOORS SHALL NOT EXCEED 5 LBS. (22.2N) FOR EXTERIOR DOORS, AND 5 LBS. (22.2N) FOR INTERIOR DOORS. WHEN FIRE DOORS ARE REQUIRED. THE MAXIMUM EFFORT TO OPERATE THE DOORS SHALL NOT EXCEED 5 LBS (22.2 N), EXCEPT THAT, WHEN APPROVED BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, THE MAXIMUM EFFORT REQUIRED TO OPERATE THE DOORS MAY BE INCREASED NOT TO EXCEED 15 LBS (66.72 N). 2016 CBC SECTION 1010.1.3 AND 11B-404.2.

4 DOOR CLOSERS AND DOOR STOPS SHALL BE PERMITTED TO BE 78 INCHES (1981 MM) MINIMUM ABOVE THE FINISH FLOOR OR GROUND. DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM. 2016 CBC SCTION 11B-404.2.3, 11B-404.2.8.1

5 THRESHOLDS SHALL COMPLY WITH 2016 CBC SECTIONS 1010.1.6 AND 11B-404.2.5

6 FLOOR STOPS SHALL NOT BE LOCATED IN THE PATH OF TRAVEL AND 4" MAXIMUM FROM WALLS. DSA POLICY 99-08.

7 HARDWARE (INCLUDING PANIC HARDWARE) SHALL NOT BE PROVIDED WITH "NIGHT LATCH" (NL) FUNCTION FOR ANY ACCESSIBLE DOORS OR GATES UNLESS THE FOLLOWING CONDITIONS ARE MET PER DSA INTERPRETATION 10-08 DSA/AC (EXTERNAL), REVISED 4 /28 /09. SUCH CONDITIONS MUST BE CLEARLY DEMONSTRATED AND INDICATED IN THE SPECIFICATIONS:

7a a. SUCH HARDWARE HAS A 'DOGGING' FEATURE.

7b b. IT IS 'DOGGING' DURING THE TIME THE FACILITY IS OPEN.

7c c. SUCH 'DOGGING' OPERATION IS PERFORMED ONLY BY EMPLOYEES AS THEIR JOB FUNCTION (NON-PUBLIC USE).

8 PANIC HARDWARE SHALL COMPLY WITH 2016 CBC SECTION 1010.1.10.

9 PANIC HARDWARE SHALL BE SO MOUNTED (CENTERED BETWEEN 36" AND 44" ABOVE FINISHED FLOOR AS RECOMMENDED) THAT THE CLEAR WIDTH OF THE EXITWAY IS NOT LESS THAN 32" MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP. 2016 CBC SECTION 11B-404.2.3 AND FIGURE 11B-58.

10 THE UNLATCHING FORCE OF PANIC HARDWARE SHALL NOT EXCEED 15 LBS (66.72N). APPLIED IN THE DIRECTION OF TRAVEL.

11 PANIC HARDWARE SHALL BE PROVIDED ON EXIT DOORS SERVING ROOMS, CORRIDORS OR STAIRWAYS HANDLING AN OCCUPANT CAPACITY OF 50 OR MORE PERSONS; OR AN H-OCCUPANCY PER CBC 1008.1.10.

12 EXIT DOOR SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. PROVIDE VISIBLE SIGN ON OR ADJACENT TO THE DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHENEVER THE BUILDING IS OCCUPIED."

13 ALL FIRE ASSEMBLIES SHALL COMPLY WITH SECTION 715 CBC.

14 THE FLOOR OR LANDING ON BOTH SIDES OF A DOOR SHALL NOT BE MORE THAN 1/2" HIGH.CHANGES IN LEVEL BETWEEN 1/4" HIGH MIN AND 1/2" HIGH MAX SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2. (CBC 2016 SECTION 11B-303.3).

15 ALL EXIT DOORS SHALL OPEN IN THE DIRECTION OF EXIT TRAVEL WHEN SERVING AN OCCUPANT LOAD OF 50 OR MORE.

16 AUTOMATIC-CLOSING DOORS WHERE REQUIRED SHALL BE ACTIVATED BY SMOKE DETECTORS AND WILL CLOSE IN THE EVENT OF A POWER FAILURE. (CBC SEC. 715.4.8.3).

17 ALL THRESHOLDS SHALL BE 1/2 " HIGH OR LESS AND MEET ALL ACCESSIBILITY REQUIREMENTS. SEE DETAILS 4, 5, 9, 13, 18, 19 /A9.10

18 DOORS AND LANDINGS AT DOORS WHICH ARE LOCATED WITHIN AN ACCESSIBLE ROUTE OF TRAVEL SHALL COMPLY WITH CHAPTER 11 OF CALIFORNIA BUILDING CODE.

19 ALL BOTTOM 10" OF DOORS SHALL BE HAVE A SMOOTH UNINTERRUPTED SMOOTH SURFACE OR EQUIPPED WITH 10" HIGH STAINLESS STEEL KICK PLATE ON ALL PUSH SIDES OF DOORS WHERE REQUIRED.

20 DOORS, WINDOWS, EXTERIOR JOINTS AND OPENINGS IN THE BUILDING ENVELOPE SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED OR OTHERWISE SEALED.

21 ALL EDGES OF ALL WOOD DOORS TO BE SEALED & FINISHED.

22 DOOR UNDERCUTS TO BE 1/2" MAX.

23 PROVIDE SOLID BACKING IN WALL AT WALL MOUNTED DOOR STOPS.

24 PROVIDE MEN'S AND WOMEN'S ROOM DOOR SIGNS CONFORMING TO UNIFORM BUILDING CODE CHAPTER 11 AND CABO/ANSI A117-1-1992 REQUIREMENTS.

25 COORDINATE DOOR FRAME THROAT SIZES W/ PARTITION TYPES.

26 MANUALLY OPERATED EDGE OR SURFACE MOUNTED FLUSH BOLTS AND SURFACE BOLTS ARE PROHIBITED ON EXIT DOORS. C.B.C. 2016 SECTION 1008.1.9.4.

27 ALL ELECTRICAL ROOMS SHALL HAVE LEVER ACTION DOOR HARDWARE.

28 PROVIDE SAFETY GLAZING AT THE FOLLOWING HAZARDOUS LOCATIONS AS REQUIRED BY CBC SECTION 2406:

28a ALL DOOR LITES.

28b GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24 INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE.

28c GLAZING IN INDIVIDUAL FIXED OR OPERABLE PANEL, THAT MEETS ALL OF THE FOLLOWING CONDITIONS:

28d 1. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET.

28e 2. EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR

28f 3. EXPOSED TOP EDGE GREATER THAN 36 INCHES ABOVE FLOOR

28g 4. ONE OR MORE WALKING SURFACE WITHIN 36 INCHES HORIZONTALLY OF THE PLANE OF THE GLAZING.

28h GLAZING IN WALLS ENCLOSING STAIRWAY LANDINGS OR WITHIN 5 FEET OF THE BOTTOM AND TOP OF STAIRWAYS WHERE THE BOTTOM EDGE OF THE GLASS IS LESS THAN 60 INCHES ABOVE A WALKING SURFACE.

29 CONTRACTOR TO FIELD VERIFY DOOR SIZE PRIOR TO ORDERING.

30 ALL RATED DOORS TO BE SELF-CLOSING.

31 CORRIDOR DOORS THAT ARE REQUIRED TO BE 20 MIN. FIRE RATED SHALL BE TIGHT FITTING SMOKE AND DRAFT CONTROL ASSEMBLIES AND SELF-CLOSING (CBC 715.4.3).

32 MANUFACTURED DOORS AND WINDOWS INSTALLED SHALL HAVE AIR INFILTRATION RATES NOT EXCEEDING THOSE SHOWN IN TABLE NO. 1-E OF THE STANDARDS. MANUFACTURERS FENESTRATION PRODUCTS MUST BE LABELED FOR U-VALUE ACCORDING TO NFRC PROCEDURES.

33 DOORS WITH ACOUSTICAL DOOR BOTTOM GASKET SHALL NOT HAVE 3/8" GAP AT THE BOTTOM OF THE DOOR.

34 A. FIRE RATED GLAZING SHALL BE BY TGP, FIRELITE PLUS (OR EQUAL) WITH TEST REPORT UL FILE # R13377 SEE SPECIFICATIONS.

34a B. FIRE RATED GLAZING FOR INSULATED GLASS UNITS SHALL BE BY TGP, FILRELITE IGU (OR EQUAL) WITH TEST REPORT UL FILE # R13377 SEE SPECIFICATIONS.

35 PROVIDE ANTI-GRAFFITI FILM ON ALL GLAZED EXTERIOR DOORS AND SIDELITES. SEE SPECIFICATIONS.

36 FOR AREAS ACCESSED BY TEACHING STAFF AND STUDENTS, PROVIDE ACCESSIBLE HARDWARE. STORE ROOM FUNCTION REQUIRES TWO HANDS UNLESS LATCH CONTROL IS PROVIDED.

37 FIRE DOOR ASSEMBLIES SHALL ALSO MEET THE REQUIREMENT FOR A SMOKE AND DRAFT CONTROL DOOR ASSEMBLY IN ACCORDANCE WITH CBC 715.4.3.1.

38 TYPICAL ON ALL ROLL UPS AUTOMATIC / MOTORIZED: MEDECO KEYSWITCH TO OPERATE FROM THE INTERIOR. NOTHING NEEDED ON THE EXTERIOR.

DOOR - LEGEND

DOOR / FRAME CONSTRUCTION

AL ALUMINUM
AL/GL ALUMINUM & GLASS
GL GLASS
HC HOLLOW CORE
HM HOLLOW METAL
HM/GL HOLLOW METAL & GLASS
INS INSULATED
M METAL
PH PANIC HARDWARE
SC SOLID CORE
SR WOOD STILE & RAIL
SL SLATS
STL STEEL
WD WOOD
WM WIRE MESH
OG OPEN GRILLE

DOOR / FRAME FINISH

ANOD ANODIZED
FF FACTORY FINISH (KYNAR COATED)
FF-PC FACTORY FINISH (POWDER COATED)
MP METAL PANEL (ALUM. COMPOSITE MATERIAL)
P PAINT
SS STAINLESS STEEL
STN STAIN
WD/GL WOOD/GLAZE

GLAZING

INT. INTERIOR
EXT. EXTERIOR
S SPANDREL
T TEMPERED (SAFETY GLASS)

DOOR - KEYNOTES

A. DOORS TO BE INTEGRATED WITH OMNI CARD READER AND AFTER HOURS SECURITY ALARM SYSTEM. OMNI EQUIPMENT AND WIRING SHALL BE C.F.C.I REFER TO ELECTRICAL/TELECOM DRAWINGS FOR MORE INFORMATION.
B. DOORS TO BE OPERABLE FROM INTERIOR ROOM SIDE ONLY AND CONNECTED TO LOCAL ALARM SYSTEM TO BE PROVIDED BY STANLEY (N.I.C.). CONTRACTOR TO PROVIDE SIGN STATING, "ALARM WILL SOUND WHEN DOOR IS OPEN."
C. DOOR TO BE OPERABLE FROM INTERIOR SIDE ONLY AND CONNECTED TO AFTER HOURS SECURITY ALARM SYSTEM BY OMNI. OMNI EQUIPMENT AND WIRING WILL BE C.F.C.I AND N.I.C.
D. DOOR TO BE OPERABLE FROM INTERIOR SIDE ONLY.
E. PROVIDE DOOR HOLD OPEN BUILT INTO DOOR CLOSER.
F. MAGNETIC HOLD OPEN, LINKED TO FIRE ALARM SYSTEM.
G. PROVIDE VISION PANEL.
H. PROVIDE DOOR LOUVER ON EACH DOOR LEAF.
I. LOCKABLE FROM THE INSIDE WITH MANUAL LATCH.
J. PROVIDE 1/2" THICK TEMPERED GLASS FOR VISION PANELS, SIDE LITES, AND/OR TRANSOMS.
K. PROVIDE 90 DEGREE SWING LIMITER AT DOOR LEAF ADJACENT TO TACTILE SIGNAGE.
L. PROVIDE 90 DEGREE SWING LIMITER AT DOOR

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CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION -
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN **AUTODESK REVIT V. 2018** UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY -

CHECKED BY -

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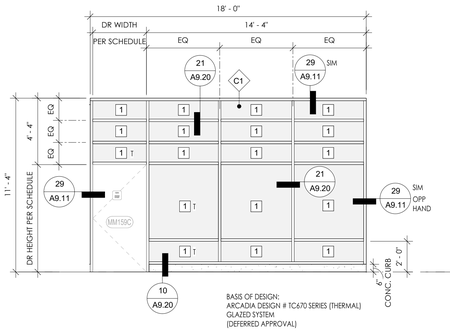
SHEET TITLE
DOOR SCHEDULE & TYPES

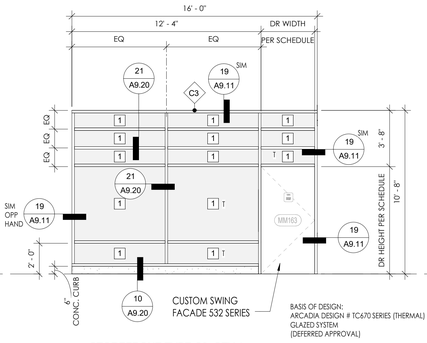
SHEET NUMBER
A8.30

ADDENDUM#1

6/4/2020 5:44:38 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt



1 STOREFRONT TYPE C1, QTY 1
1/4" = 1'-0"



2 STOREFRONT TYPE C3, QTY 1
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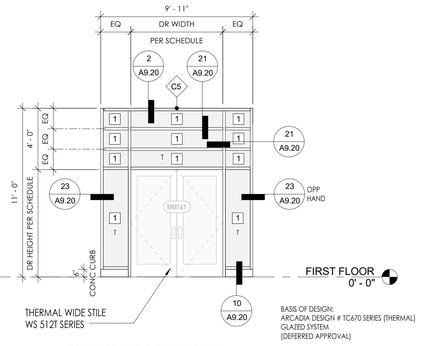
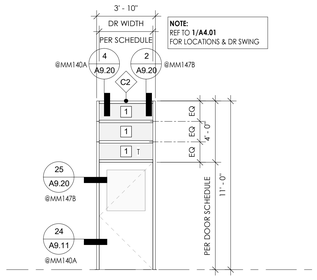
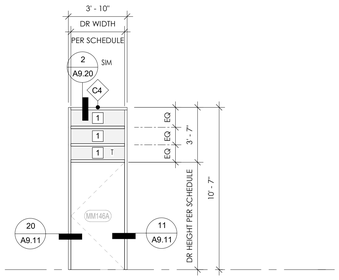


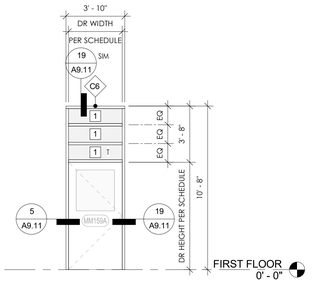
3 STOREFRONT TYPE C5, QTY 1
1/4" = 1'-0"



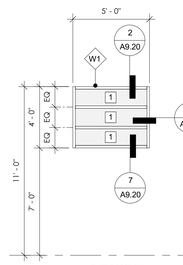
4 STOREFRONT TYPE C2, QTY 2
1/4" = 1'-0"



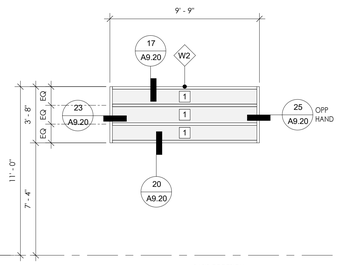
5 STOREFRONT TYPE C4, QTY 1
1/4" = 1'-0"



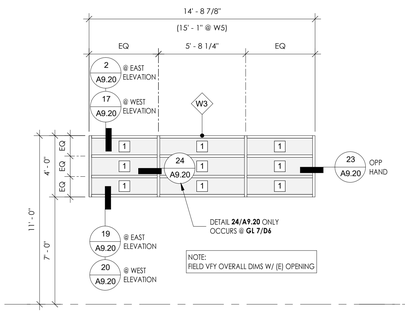
6 STOREFRONT TYPE C6, QTY 1
1/4" = 1'-0"



7 EXT STOREFRONT TYPE W1, QTY 1
1/4" = 1'-0"



8 EXT STOREFRONT TYPE W2, QTY 1
1/4" = 1'-0"



9 EXT STOREFRONT TYPE W3 (W5), QTY 3
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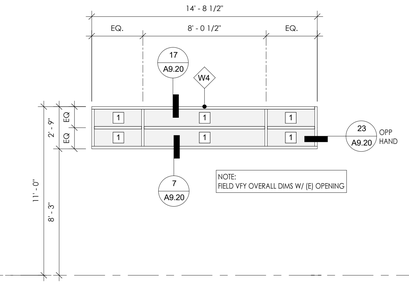
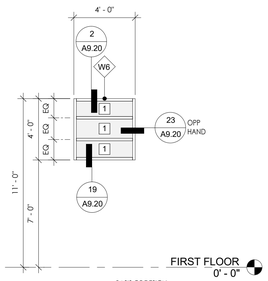
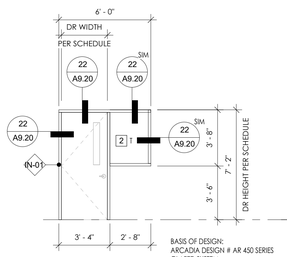


10 EXT STOREFRONT TYPE W4, QTY 4
1/4" = 1'-0"

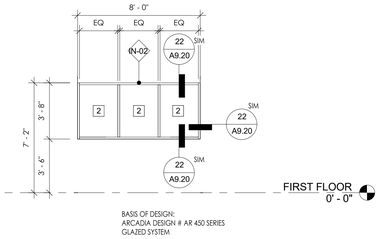


11 EXT STOREFRONT TYPE W6, QTY 2
1/4" = 1'-0"

EXTERIOR STOREFRONT TYPES SCALE 1/4" = 1'-0" 2



12 INT. WIN. TYPE IN-01, QTY 4
1/4" = 1'-0"



13 INT. WIN. TYPE IN-02, QTY 1
1/4" = 1'-0"

INTERIOR STOREFRONT TYPES SCALE 1/4" = 1'-0" 3

GLAZING TYPES

1 EXTERIOR : 1" INSULATED GLASS UNIT
SOLAR CONTROL LOW-E INSULATED GLASS UNIT
BASIS OF DESIGN :PPG SOLARBAN 60 ATLANTICA
INDOOR LITE : CLEAR
OUTDOOR LITE : TINTED
LOW E COATING ON SECOND SURFACE

2 INTERIOR : 1" LAMINATED CLEAR GLASS
MONOLITHIC GLASS

1

T = TEMPERED GLASS (SEE WINDOW GENERAL NOTE #3)

* NOTE: SEE DOOR SCHEDULE "REMARKS/KEYNOTES" COLUMN FOR ADDITIONAL GLAZING REQUIREMENTS AT INTERIOR DOORS, SIDELIGHTS, WINDOWS AND/OR TRANSOMS

WINDOW GENERAL NOTES

1. SEPARATE WINDOWS FROM DISSIMILAR MATERIALS WITH SYNTHETHIC RUBBER TAPE PER SPECIFICATIONS.WINDOW SHALL BE FACTORY FINISH PER SPECIFICATIONS.
2. CONTRACTOR TO VERIFY AND COORDINATE ALL ROUGH OPENINGS IN FIELD BEFORE FABRICATION.
3. PROVIDE SAFETY GLAZING IN WINDOW PANELS ADJACENT TO DOOR WHERE THE NEAREST EXPOSURE OF THE GLAZING IS WITHIN A 24 INCH ARCH OF EITHER VERTICAL EDGE OF THE DOOR IN THE CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE.

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PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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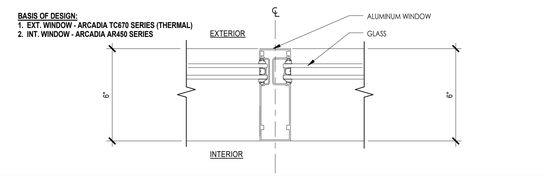
SHEET TITLE
EXTERIOR & INTERIOR STOREFRONT TYPES

SHEET NUMBER
A8.40

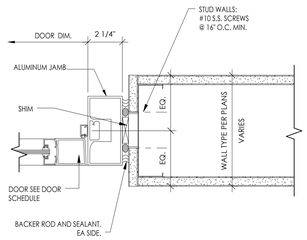
ADDENDUM#1

6/4/2020 5:44:39 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt

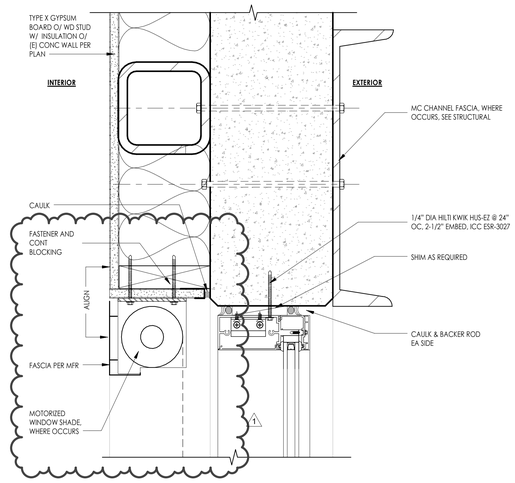
6/4/2020 5:44:47 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BMM\1 Central\LBCC Building MM_Arch_R16.rvt



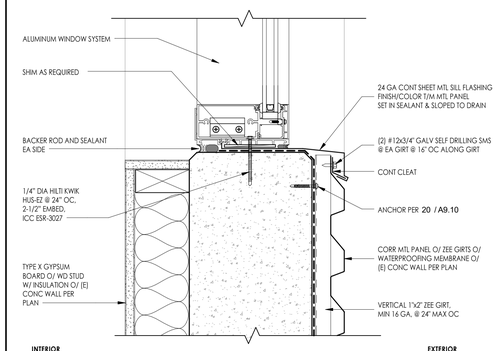
TYP. EXT. INT. MULLION SCALE 3" = 1'-0" **21**



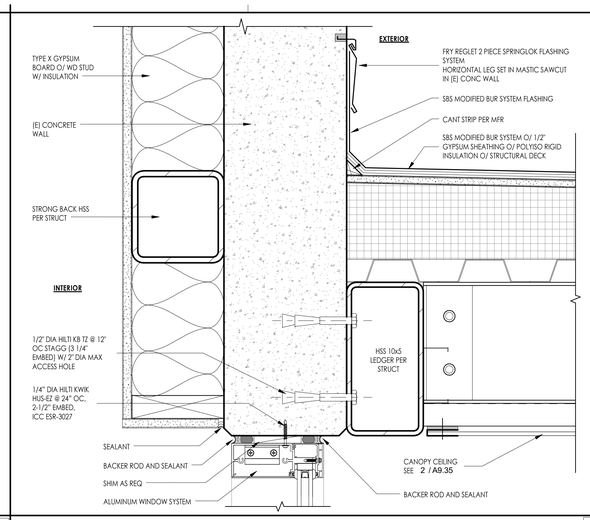
INT. STOREFRONT DOOR JAMB/HEAD SCALE 3" = 1'-0" **22**



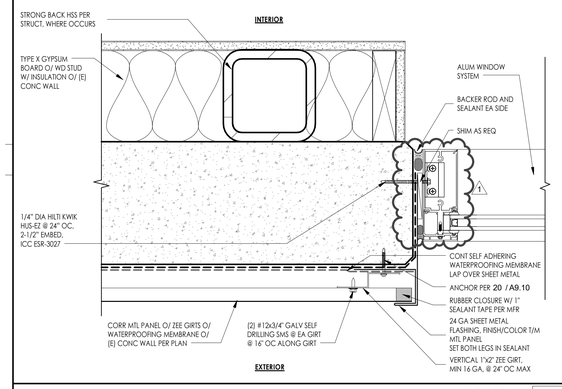
HEADER DETAIL @ (E) CONC. WALL SCALE 3" = 1'-0" **17**



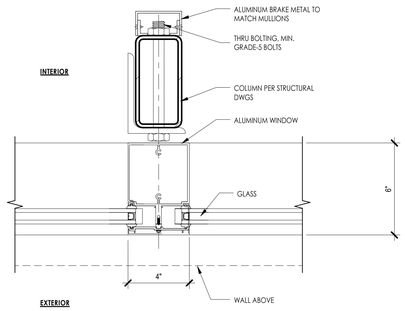
WINDOW SILL @ CORR. MTL SCALE 3" = 1'-0" **7**



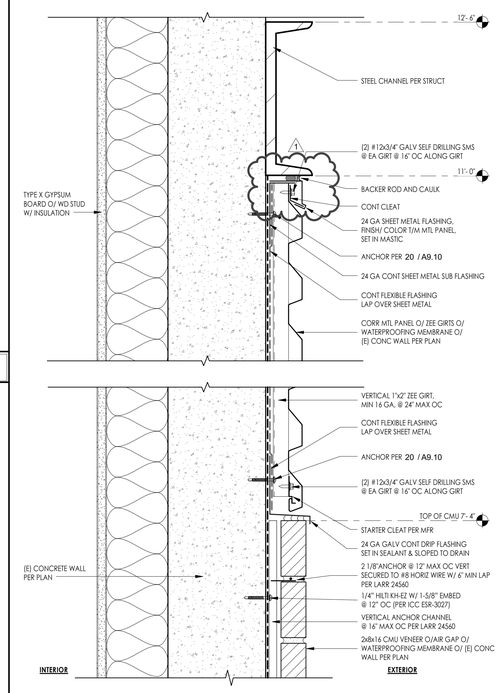
HEADER DETAIL @ (E) CONC WALL @ CANOPY SCALE 3" = 1'-0" **2**



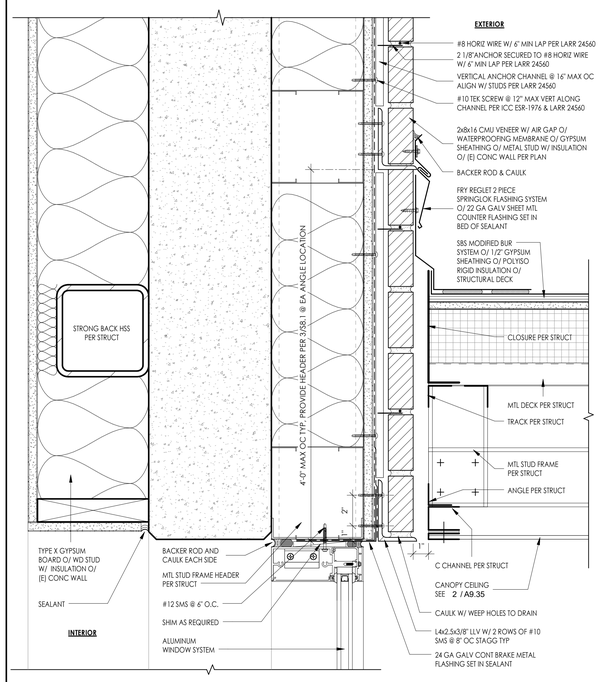
JAMB DETAIL @ (E) CONC. WALL /CORRUGATED SCALE 3" = 1'-0" **23**



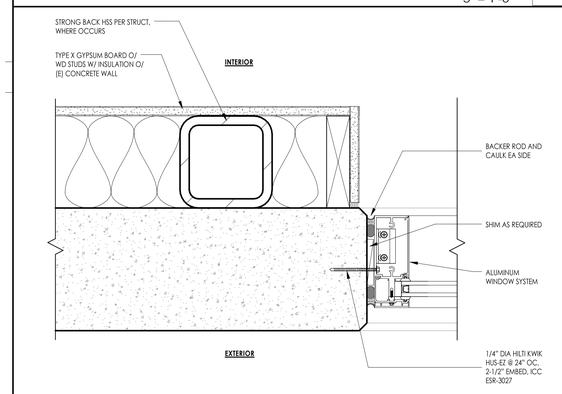
EXTERIOR STOREFRONT MULLION AT BREAK METAL SCALE 3" = 1'-0" **18**



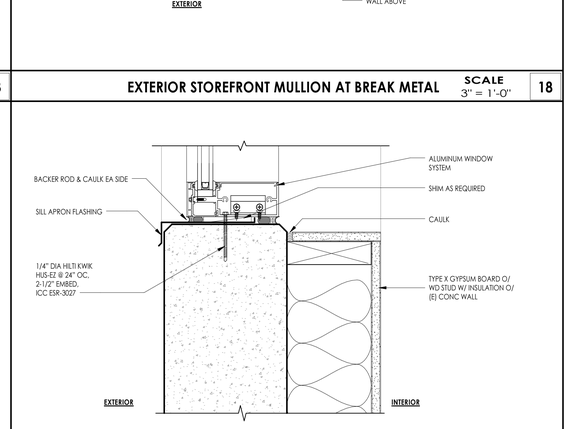
SHEET METAL & CORRUGATED @ (E) CONC. WALL SCALE 3" = 1'-0" **9**



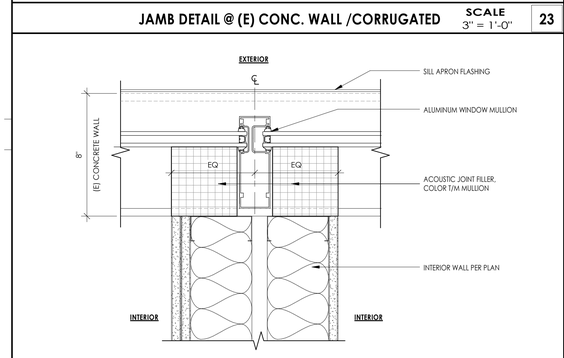
HEADER DETAIL @ VENEER CMU O/ (E) CONC WALL @ CANOPY SCALE 3" = 1'-0" **4**



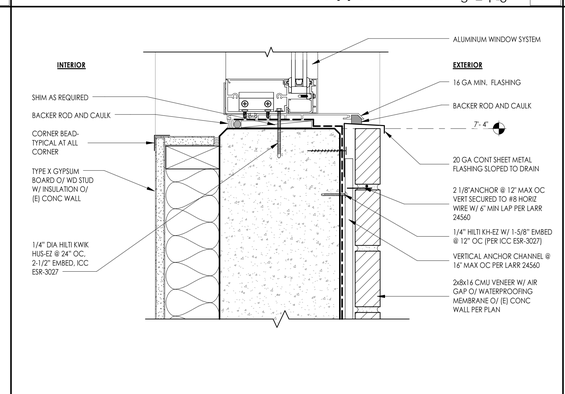
JAMB DETAIL @ (E) CONC. WALL SCALE 3" = 1'-0" **25**



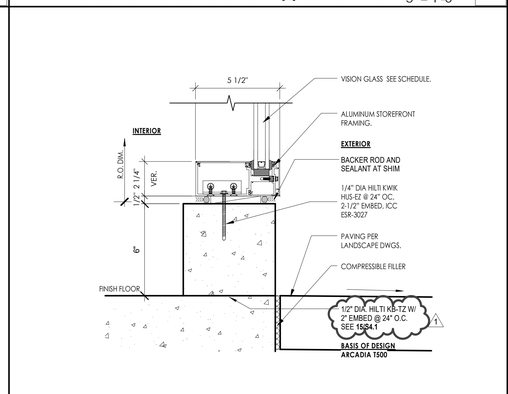
SILL @ (E) CONC. WALL SCALE 3" = 1'-0" **19**



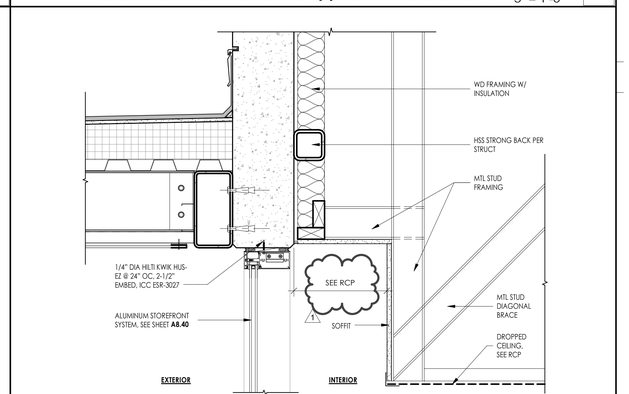
EXT MULLION TO INT WALL CONNECTION SCALE 3" = 1'-0" **24**



WINDOW SILL @ CMU VENEER SCALE 3" = 1'-0" **20**



STOREFRONT SILL AT CURB SCALE 3" = 1'-0" **10**



HEADER @ WINDOW WELL SCALE 1 1/2" = 1'-0" **5**

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1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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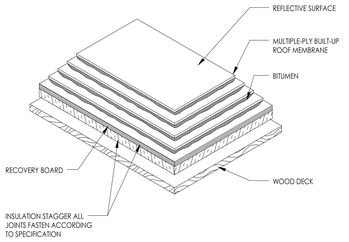
SHEET TITLE
STOREFRONT AND OPENING DETAILS

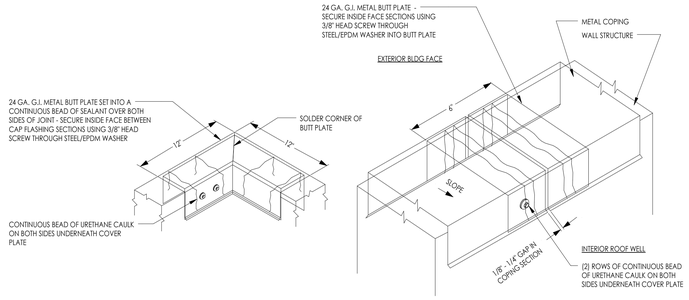
SHEET NUMBER
A9.20

ADDENDUM#1

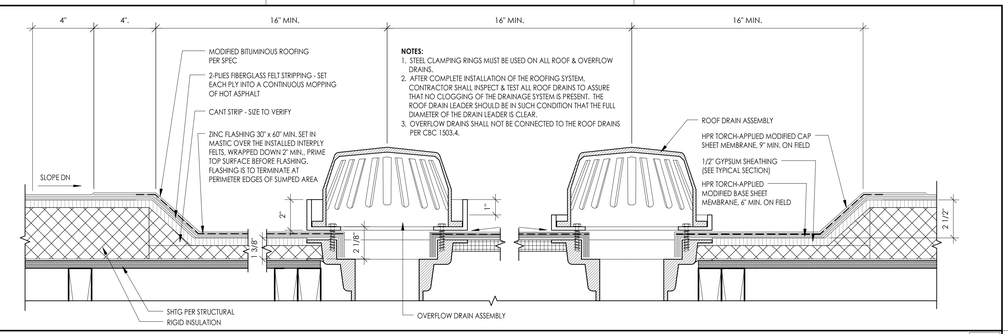
6/4/2020 5:44:49 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt



SBS MODIFIED BITUMINOUS ROOF PROFILE SCALE no scale **26**

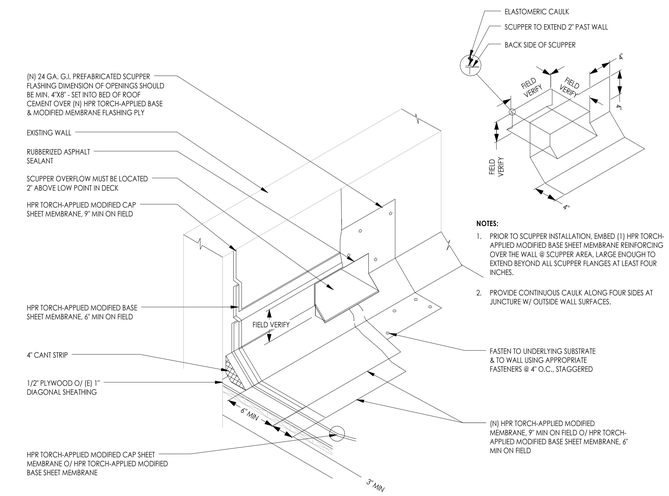


COPING JOINT BUTT PLATE SCALE 3" = 1'-0" **16**



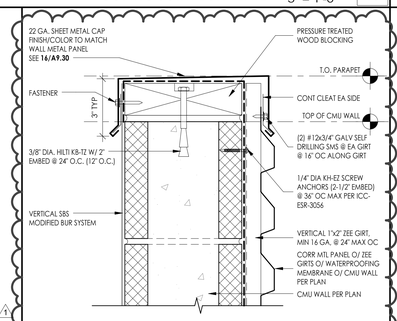
NOTES:
1. STEEL CLAMPING RINGS MUST BE USED ON ALL ROOF & OVERFLOW DRAINS.
2. AFTER COMPLETE INSTALLATION OF THE ROOFING SYSTEM, CONTRACTOR SHALL INSPECT & TEST ALL ROOF DRAINS TO ASSURE THAT NO CLOGGING OF THE DRAINAGE SYSTEM IS PRESENT. THE ROOF DRAIN LEADER SHOULD BE IN SUCH CONDITION THAT THE FULL DIAMETER OF THE DRAIN LEADER IS CLEAR.
3. OVERFLOW DRAINS SHALL NOT BE CONNECTED TO THE ROOF DRAINS PER CBC 1503.4.

ROOF DRAIN/ OVERFLOW DRAIN SCALE N.T.S. **1**

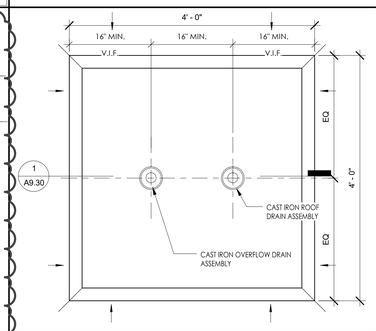


NOTES:
1. PRIOR TO SCUPPER INSTALLATION, EMBED (1) HPR TORCH-APPLIED MODIFIED BASE SHEET MEMBRANE REINFORCING OVER THE WALL @ SCUPPER AREA, LARGE ENOUGH TO EXTEND BEYOND ALL SCUPPER FLANGES AT LEAST FOUR INCHES.
2. PROVIDE CONTINUOUS CAULK ALONG FOUR SIDES AT JUNCTURE W/ OUTSIDE WALL SURFACES.
3. FASTEN TO UNDERLYING SUBSTRATE & TO WALL USING APPROPRIATE FASTENERS @ 4" O.C., STAGGERED

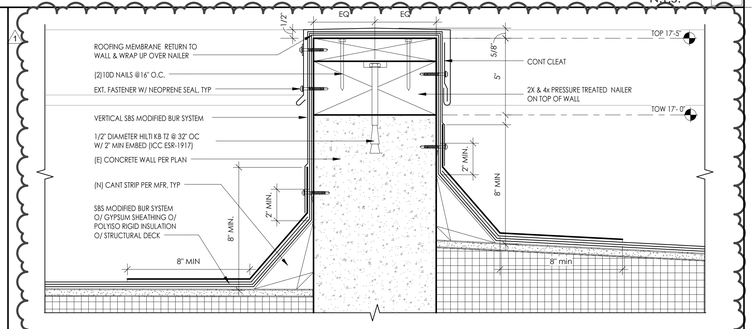
OVERFLOW SCUPPER SCALE 3" = 1'-0" **23**



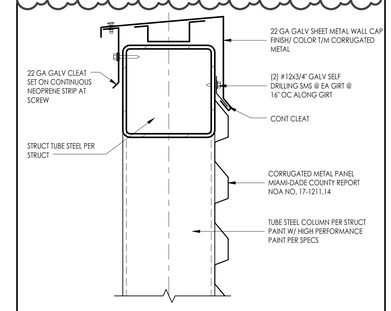
PARAPET @ CMU & CORR MTL PANEL SCALE 3" = 1'-0" **17**



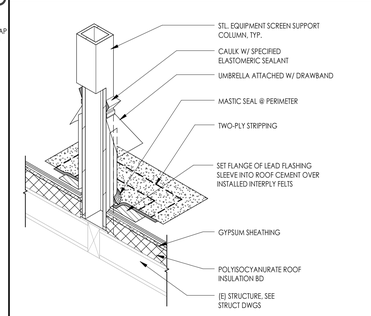
ROOF DRAIN PLAN SCALE 1" = 1'-0" **12**



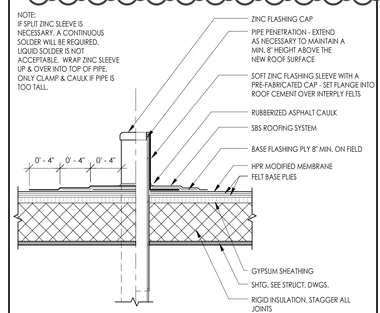
INNER PARAPET @ (E) CONC WALL SCALE 3" = 1'-0" **2**



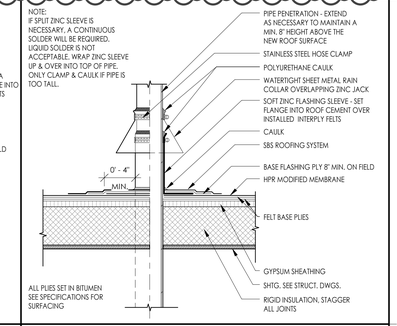
TOP OF SCREENWALL SCALE 3" = 1'-0" **18**



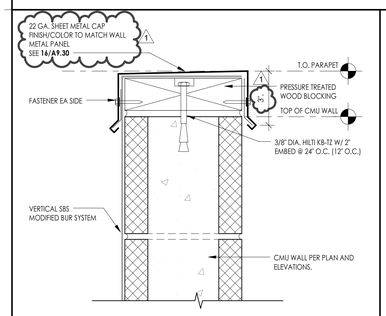
SCREEN POST ISOMETRIC VIEW SCALE NO SCALE **13**



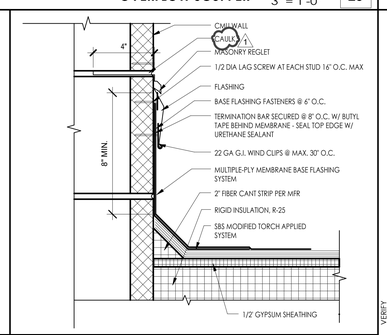
VENT PIPE FLASHING SCALE 1 1/2" = 1'-0" **8**



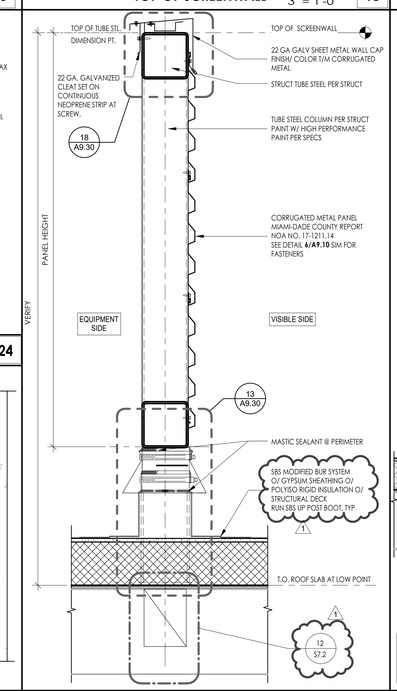
PIPE FLASHING - CLAMPED SCALE 1 1/2" = 1'-0" **3**



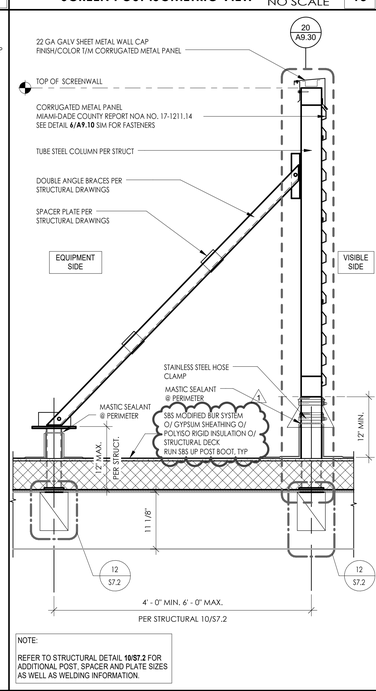
FLASHING AT CMU PARAPET SCALE 3" = 1'-0" **29**



CMU WALL FLASHING @ ROOF. SCALE 3" = 1'-0" **24**

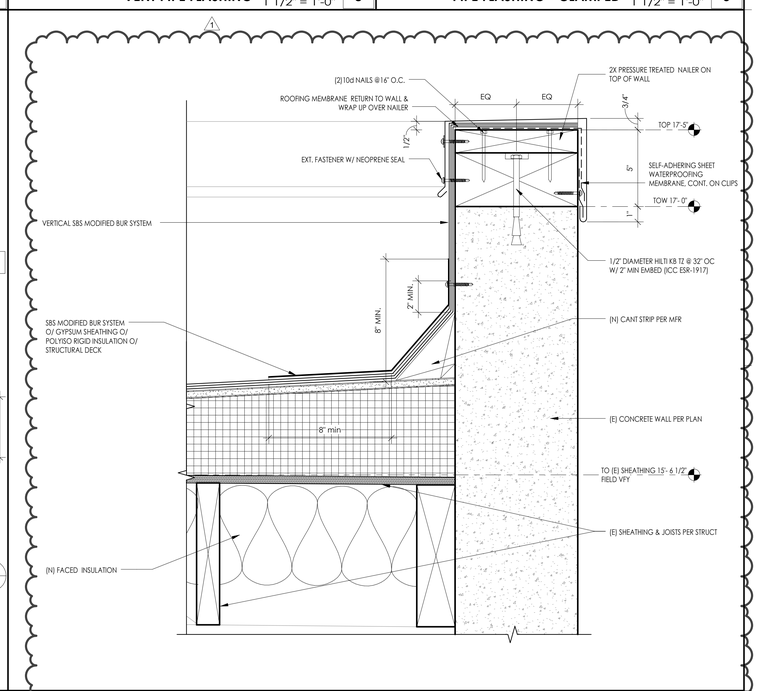


SCREENWALL SECTION SCALE 1 1/2" = 1'-0" **20**

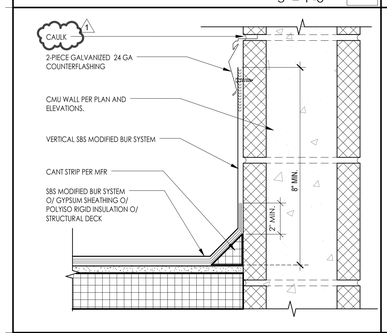


NOTE:
REFER TO STRUCTURAL DETAIL **10/S7.2** FOR ADDITIONAL POST, SPACER AND PLATE SIZES AS WELL AS WELDING INFORMATION.

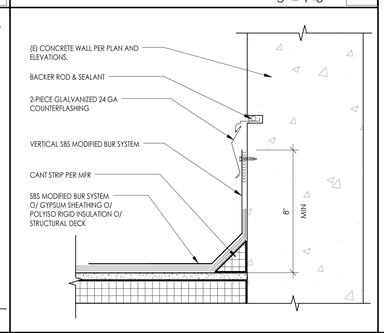
ROOFTOP SCREEN SCALE 1" = 1'-0" **15**



CRICKET @ PARAPET @ (E) CONC. WALL SCALE 3" = 1'-0" **5**



METAL DECK ROOF TO CMU WALL SCALE 3" = 1'-0" **30**



METAL DECK ROOF TO CONC. WALL SCALE 3" = 1'-0" **25**

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1305 EAST PACIFIC COAST HIGHWAY
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LONG BEACH CITY COLLEGE

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SHEET TITLE
ROOF DETAILS

SHEET NUMBER
A9.30

ADDENDUM#1

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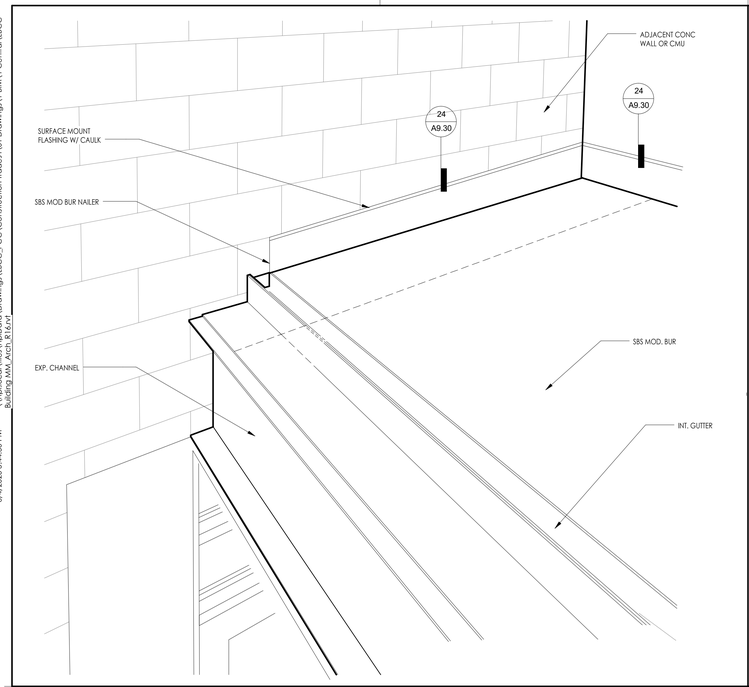
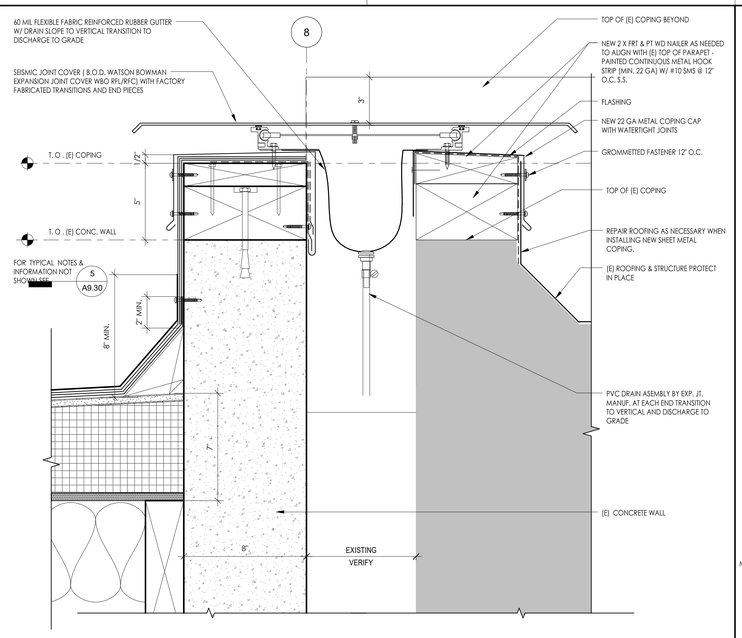
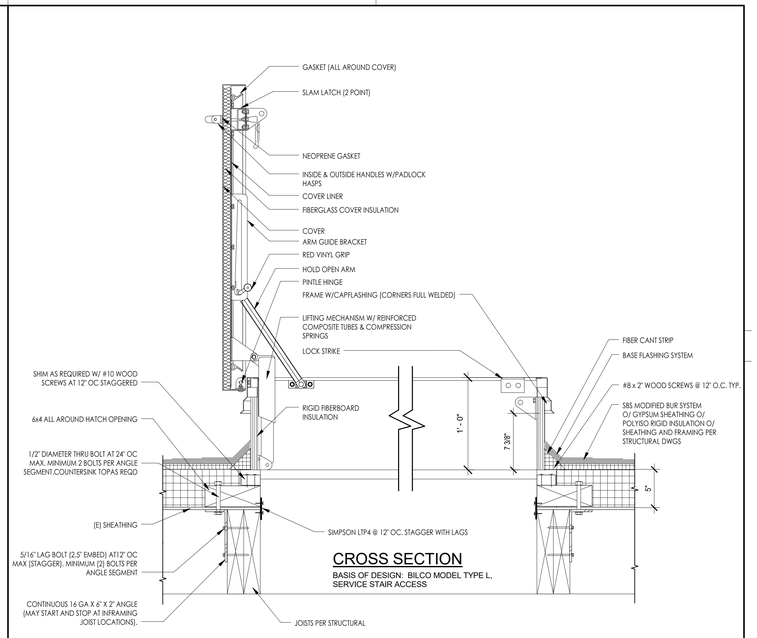


ISOMETRIC VIEW @ CANOPY WALL / ROOF — SCALE 1" = 1'-0" — 5



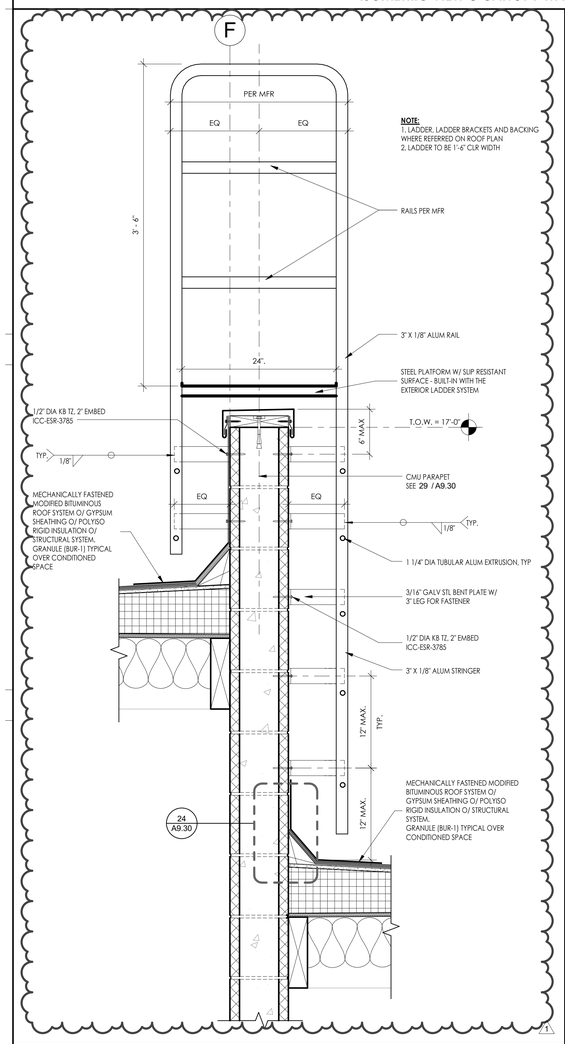
SEISMIC JOINT @ EXISTING ROOF — SCALE 3" = 1'-0" — 3



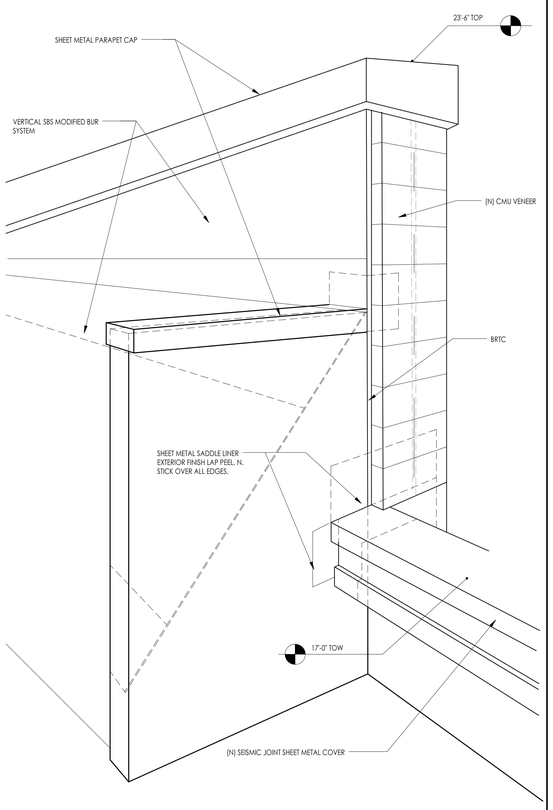
CROSS SECTION

BASIS OF DESIGN: BILCO MODEL TYPE L, SERVICE STAIR ACCESS

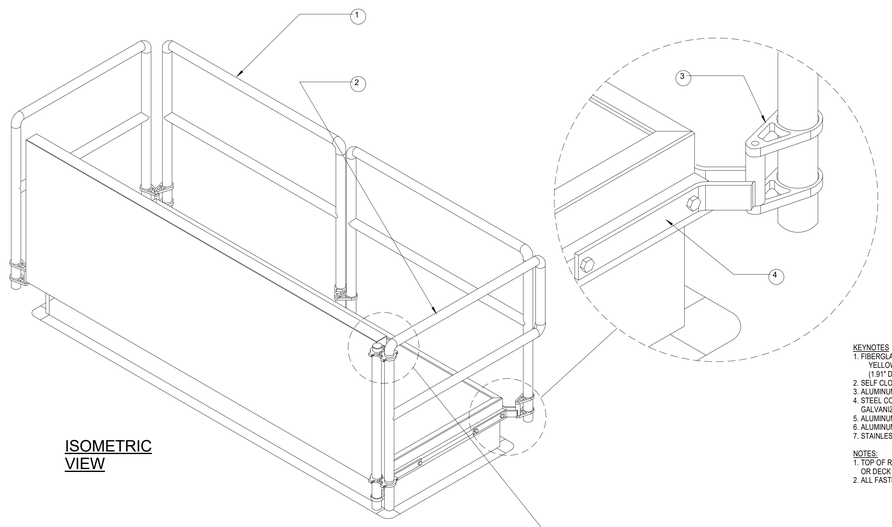
ROOF HATCH SECTION — SCALE 1 1/2" = 1'-0" — 1



ROOF LADDER DETAIL — SCALE 1 1/2" = 1'-0" — 6



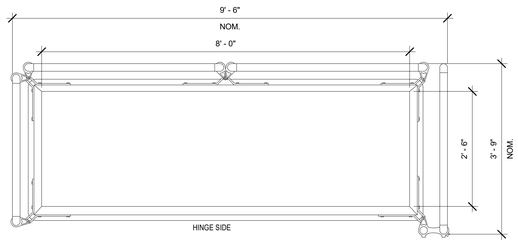
(E) BLDG MM ISOMETRIC VIEW @ (N) 4" STUD WALL — SCALE 1" = 1'-0" — 4



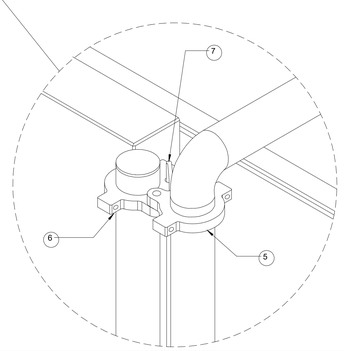
ISOMETRIC VIEW

KEYNOTES
1. FIBERGLASS REINFORCED POLYMER (FRP). YELLOW, UV RESISTANT & FIRE RETARDANT (1.91" DIA.)
2. SELF CLOSING (FRP) GATE (1.91" DIA.)
3. ALUMINUM POST SUPPORTS
4. STEEL CORNER BRACKETS (HOT DIP GALVANIZED)
5. ALUMINUM GATE HINGE
6. ALUMINUM POST HINGE
7. STAINLESS STEEL TORSION ROD

NOTES:
1. TOP OF RAIL TO BE SET 42" ABOVE THE ROOF SURFACE OR DECK
2. ALL FASTENERS STAINLESS STEEL



PLAN VIEW
(SHOWN WITHOUT COVER)



BASIS OF DESIGN:
BILCO BIL-GUARD TYPE L ROOF HATCH

ROOF HATCH RAIL SYSTEM — SCALE 3/4" = 1'-0" — 2

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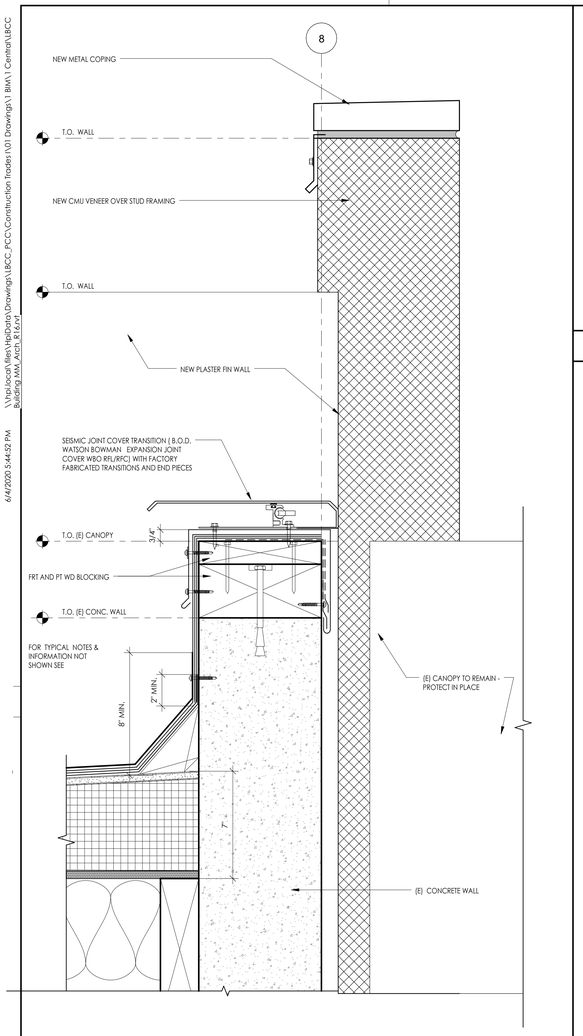
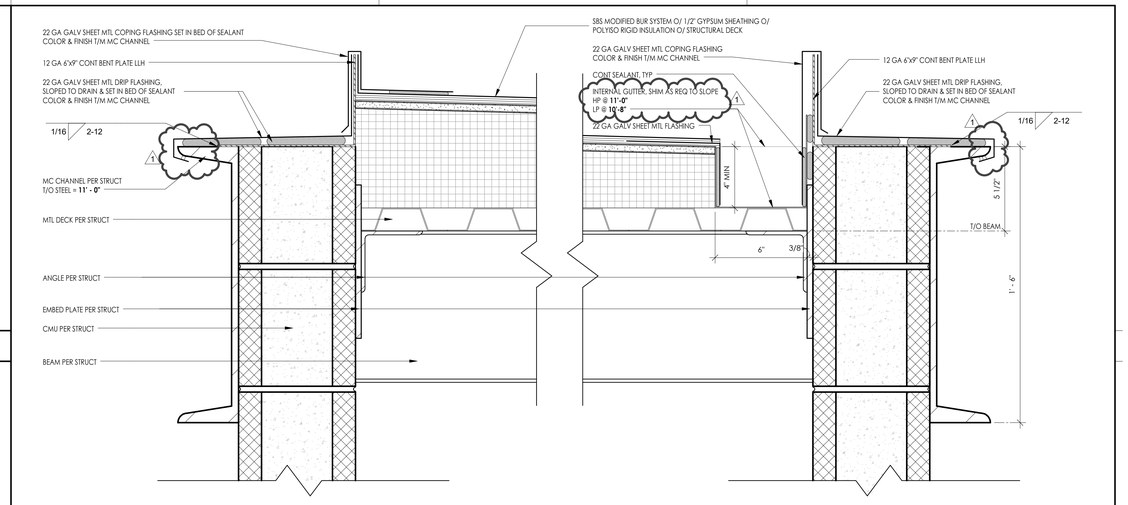
SHEET TITLE
ROOF DETAILS

SHEET NUMBER
A9.31

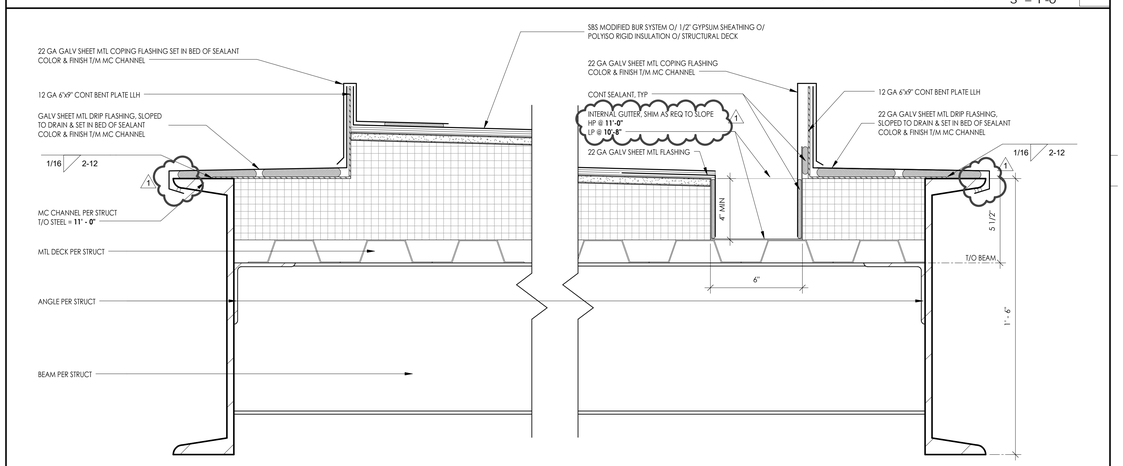
ADDENDUM#1



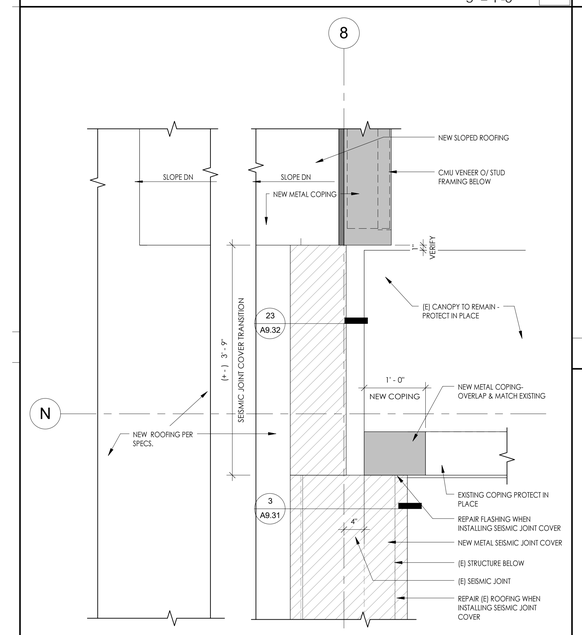
SEISMIC JOINT COVER TRANSITION — SCALE 3" = 1'-0" — 23



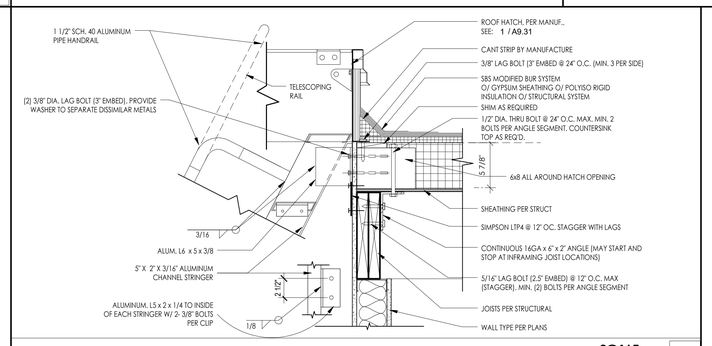
PARAPET CMU @ COVERED STORAGE — SCALE 3" = 1'-0" — 2



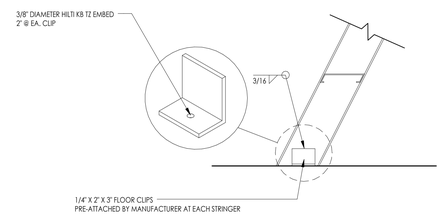
PARAPET @ COVERED STORAGE — SCALE 3" = 1'-0" — 3



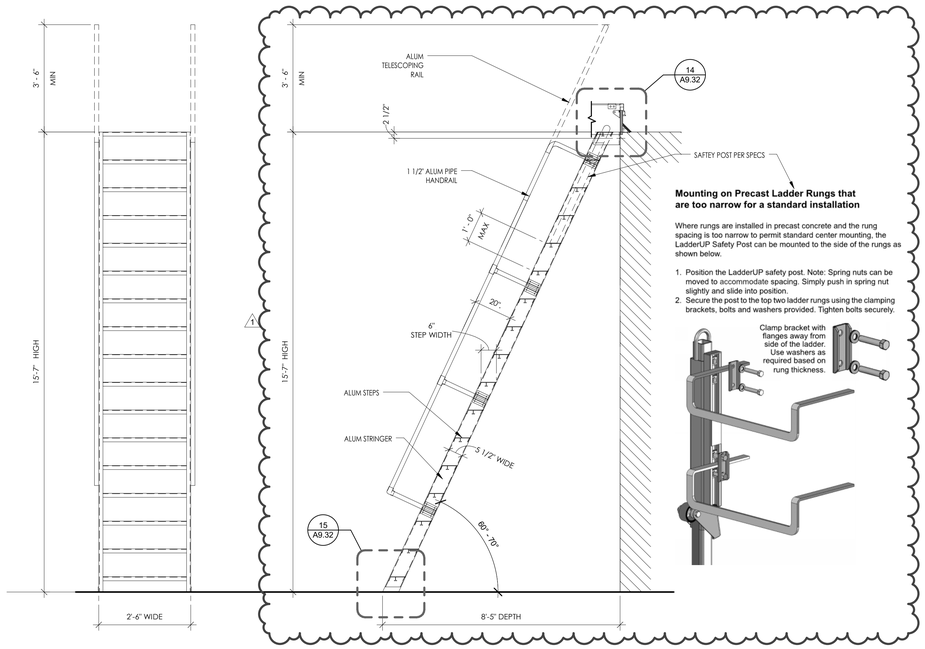
PARAPET TRANSITION @ SEISMIC JOINT — SCALE 1" = 1'-0" — 25



SHIPS LADDER @ HATCH — SCALE 1 1/2" = 1'-0" — 14



SHIPS LADDER @ FLOOR SLAB — SCALE 1 1/2" = 1'-0" — 15



SHIP LADDER DETAIL — SCALE 1/2" = 1'-0" — 5

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LONG BEACH CITY COLLEGE

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SHEET TITLE
ROOF DETAILS

SHEET NUMBER
A9.32

ADDENDUM#1

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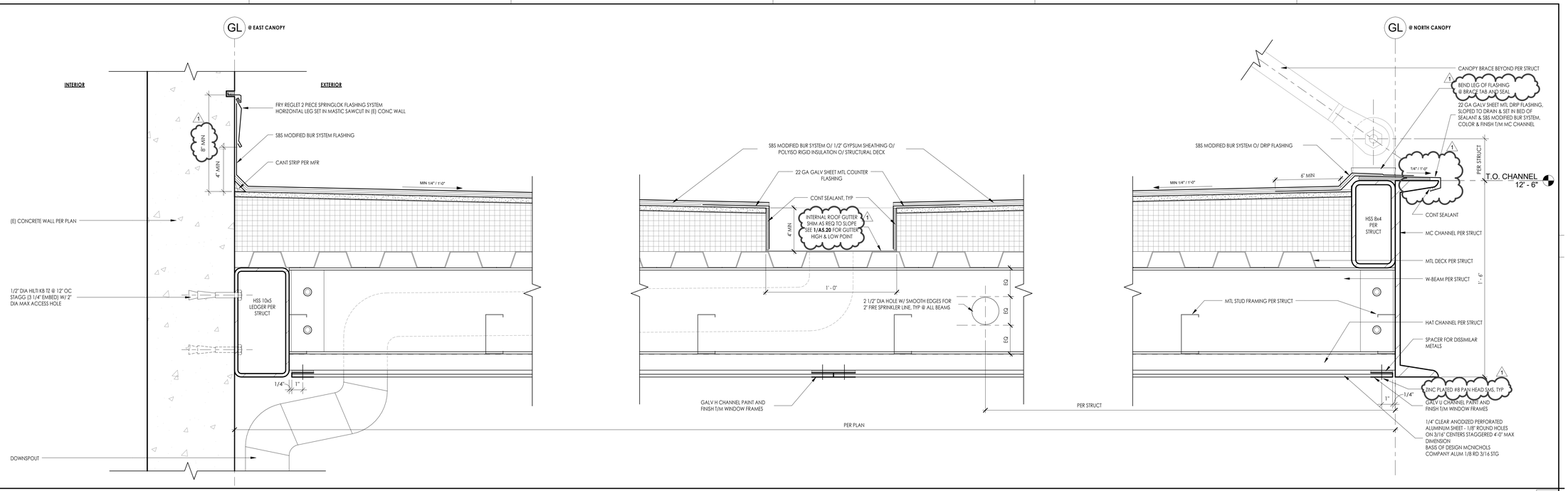
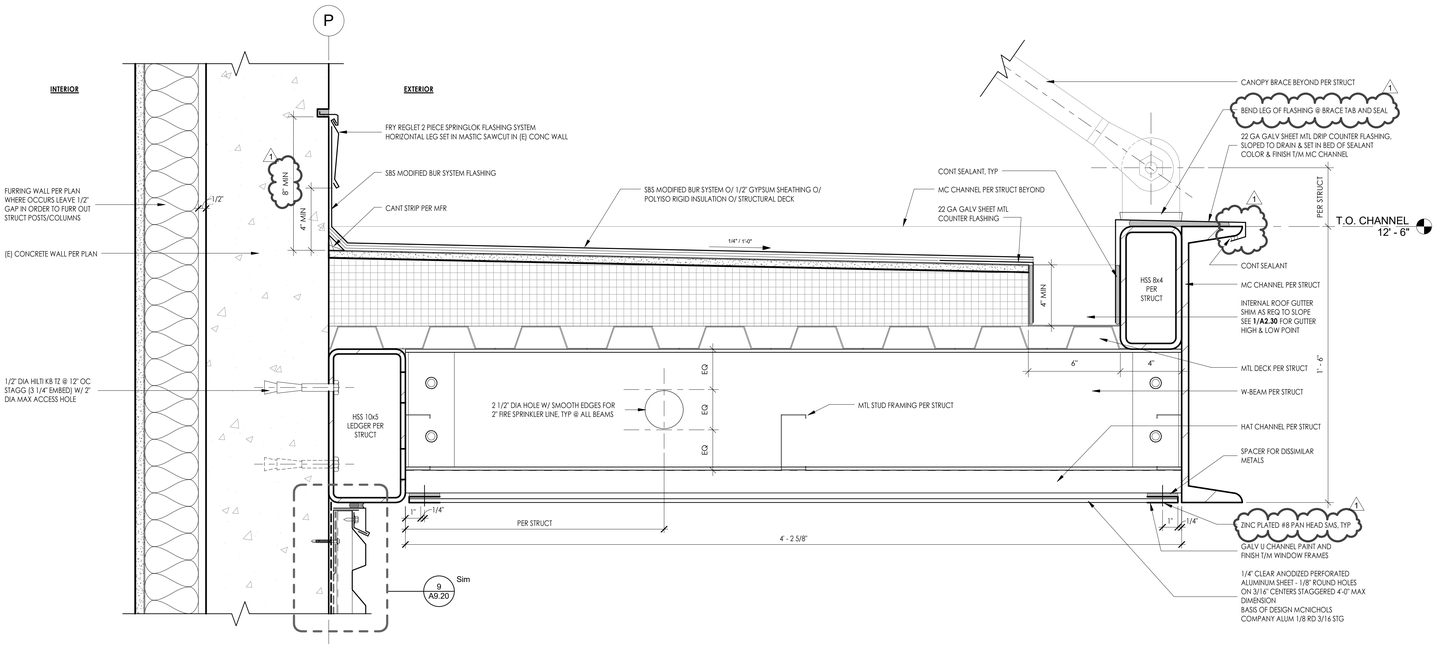
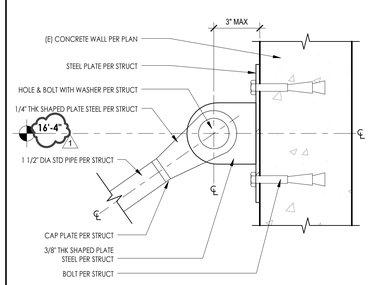


CANOPY NORTH & EAST @ (E) BUILDING SCALE 3" = 1'-0" 2



CANOPY SOUTH @ (E) BUILDING SCALE 3" = 1'-0" 14



CANOPY BRACE TOP CONNECTION SCALE 3" = 1'-0" 30

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SHEET TITLE

CANOPY DETAILS - (E) BUILDING

SHEET NUMBER

A9.35

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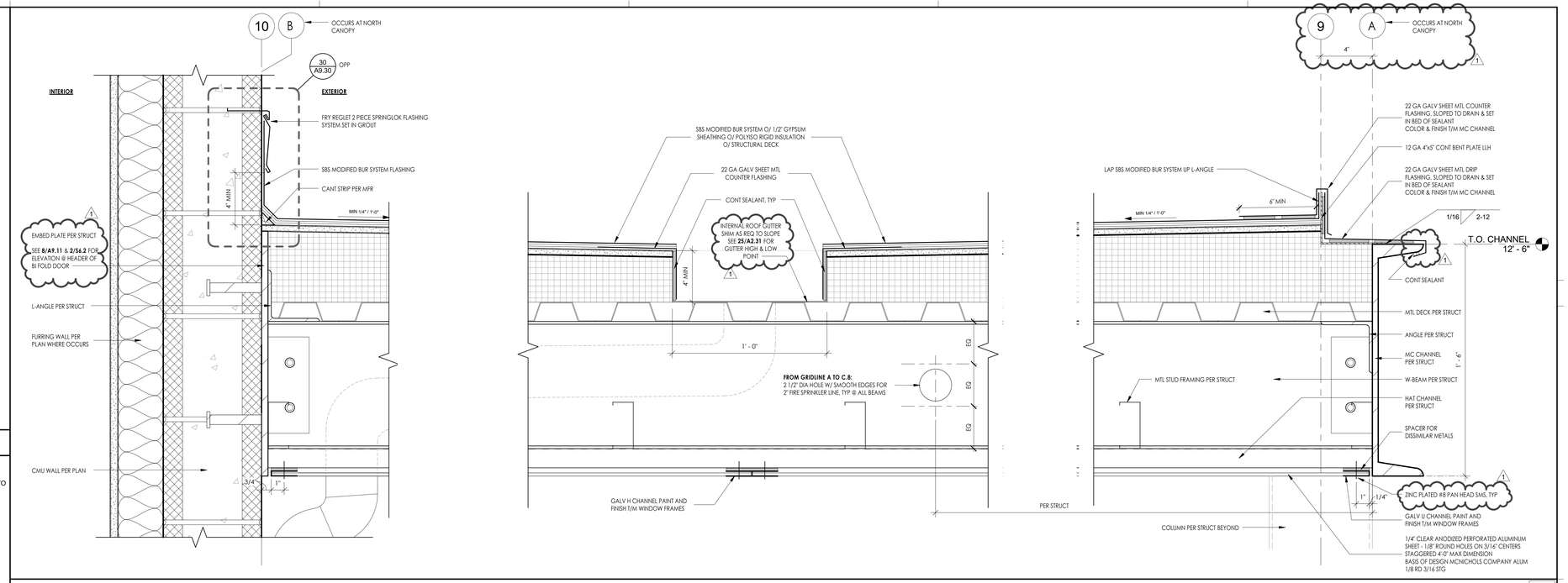
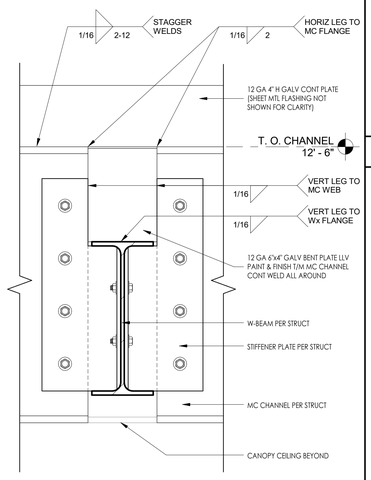
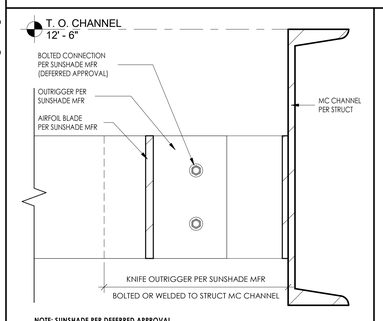


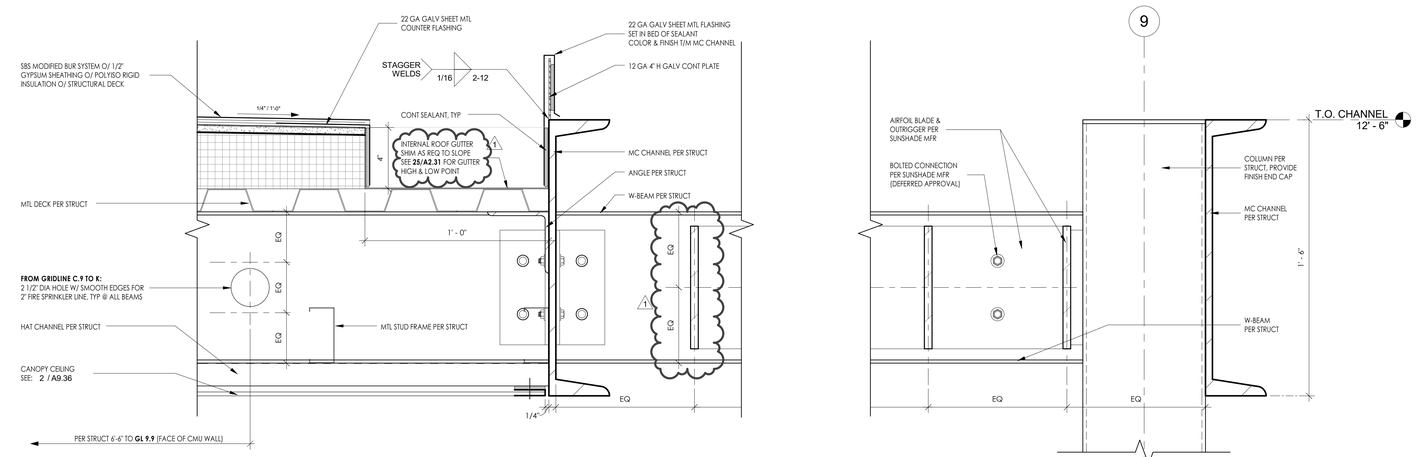
CANOPY WEST @ (N) BUILDING (NORTH SIMILAR) SCALE 3" = 1'-0" | 2



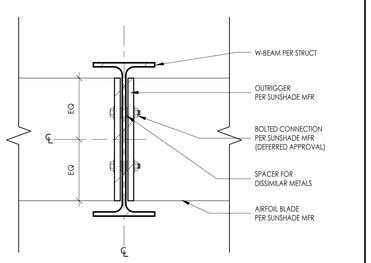
CHANNEL TO BEAM CONNECTION SCALE 3" = 1'-0" | 28



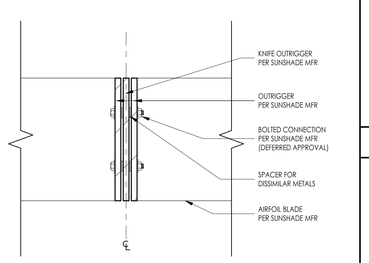
SUNSHADE - EDGE @ CANOPY WEST SCALE 3" = 1'-0" | 23



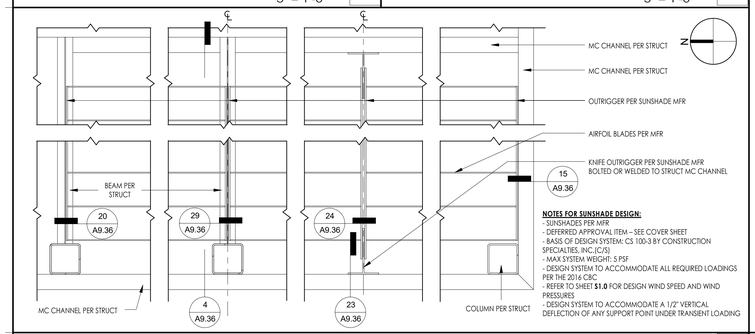
CANOPY WEST @ SUNBLADES @ (N) BUILDING SCALE 3" = 1'-0" | 4



SUNSHADE OUTRIGGER @ STEEL BEAM SCALE 3" = 1'-0" | 29

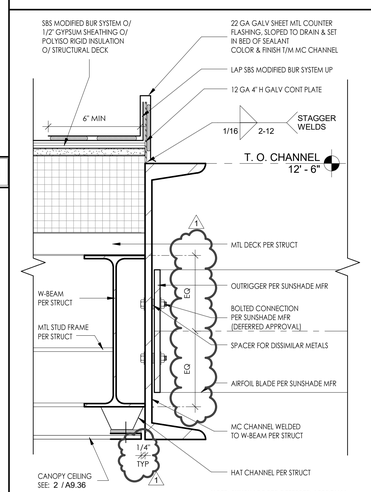


SUNSHADE OUTRIGGER @ KNIFE PLATE SCALE 3" = 1'-0" | 24

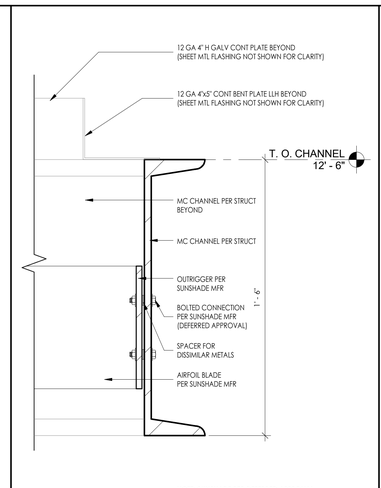


NOTES FOR SUNSHADE DESIGN:
- SUNSHADES PER MFR
- DEFERRED APPROVAL ITEM – SEE COVER SHEET
- BASIS OF DESIGN SYSTEM: CS 100-3 BY CONSTRUCTION SPECIALTIES, INC.(C/S)
- MAX SYSTEM WEIGHT: 5 PSF
- DESIGN SYSTEM TO ACCOMMODATE ALL REQUIRED LOADINGS PER THE 2016 CBC
- REFER TO SHEET S1.0 FOR DESIGN WIND SPEED AND WIND PRESSURES
- DESIGN SYSTEM TO ACCOMMODATE A 1/2" VERTICAL DEFLECTION OF ANY SUPPORT POINT UNDER TRANSIENT LOADING

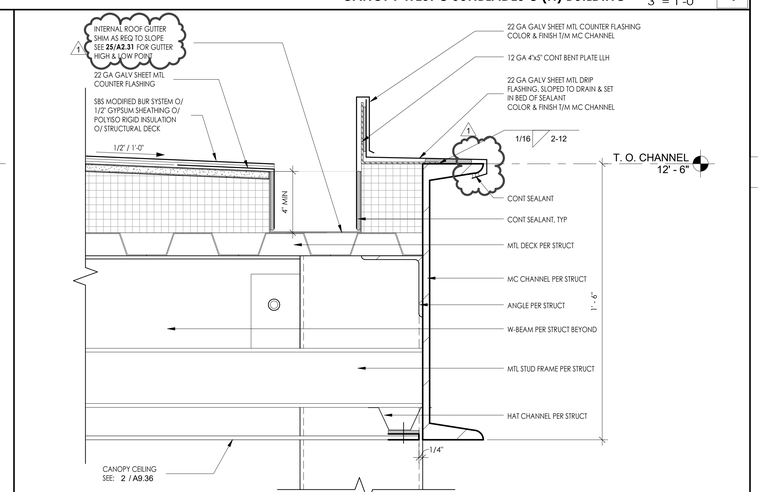
SUNSHADE PLAN @ CANOPY WEST SCALE 3/4" = 1'-0" | 25



SBS ROOF TO SUNSHADE TRANSITION SCALE 3" = 1'-0" | 20



SUNSHADE - EDGE @ CANOPY SOUTH SCALE 3" = 1'-0" | 15



CANOPY SOUTH @ (N) BUILDING SCALE 3" = 1'-0" | 5

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SHEET TITLE
CANOPY DETAILS - (N) BUILDING

SHEET NUMBER
A9.36

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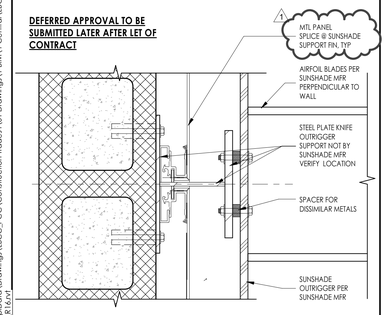
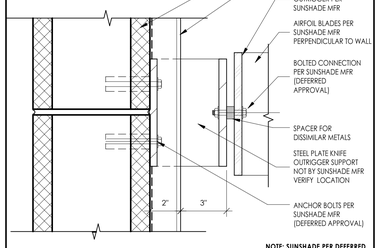
DEFERRED APPROVAL TO BE SUBMITTED LATER AFTER LET OF CONTRACT



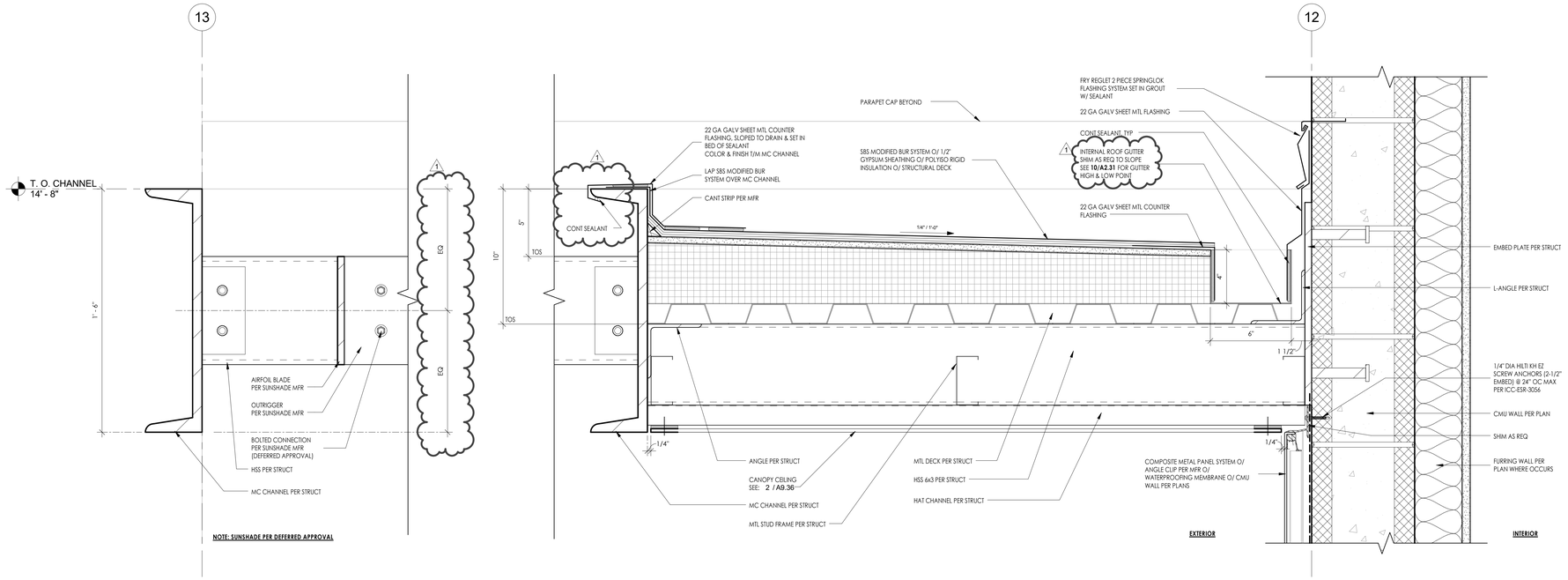
PLAN



SECTION

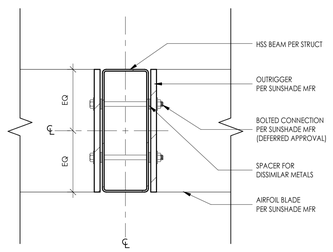
NOTE: SUNSHADE PER DEFERRED APPROVAL

METAL PANEL @ TRELLIS SCALE 3" = 1'-0" **27**



NOTE: SUNSHADE PER DEFERRED APPROVAL

CANOPY EAST @ (N) BUILDING SCALE 3" = 1'-0" **2**



NOTE: SUNSHADE PER DEFERRED APPROVAL

SUNSHADE OUTRIGGER @ HSS BEAM SCALE 3" = 1'-0" **28**

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SHEET TITLE
CANOPY DETAILS - (N) BUILDING

SHEET NUMBER
A9.37

ADDENDUM#1

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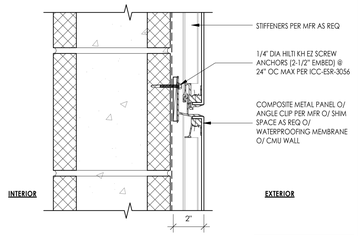
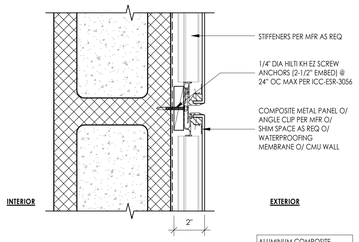
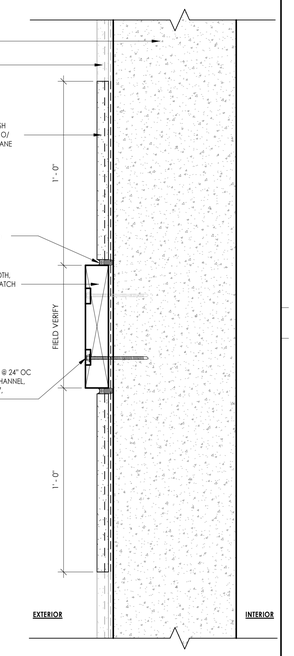


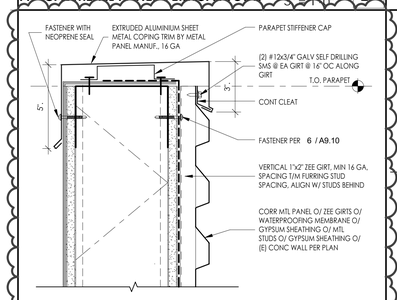
TYPICAL METAL PNL HORIZONTAL JOINT DETAIL SCALE 3" = 1'-0" **26**



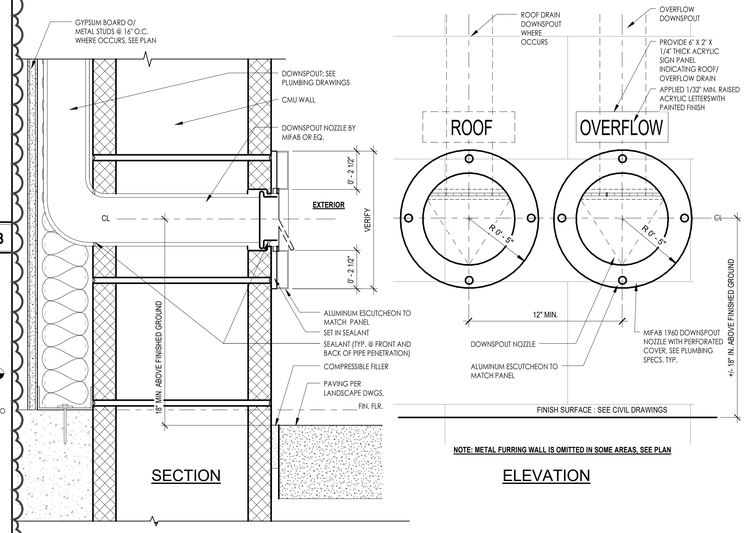
TYPICAL METAL PANEL VERTICAL JOINT SCALE 3" = 1'-0" **27**



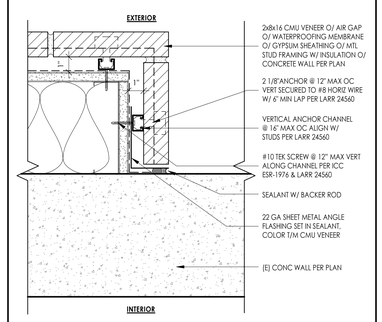
TRIM COVER @ DEMOLISHED CANOPY SCALE 3" = 1'-0" **2**



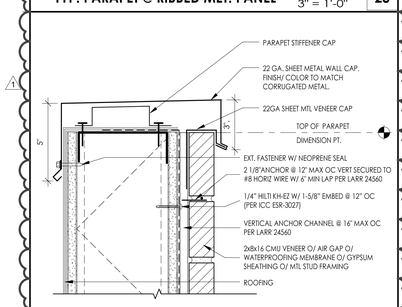
TYP. PARAPET @ RIBBED MET. PANEL SCALE 3" = 1'-0" **28**



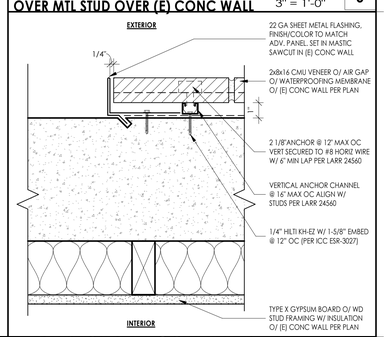
ROOF / OVERFLOW DRAIN OUTLET @ CMU WALL SCALE 3" = 1'-0" **19**



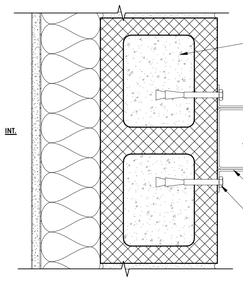
TRANSITION DETAIL @ CMU VENEER OVER MTL STUD OVER (E) CONC WALL SCALE 3" = 1'-0" **3**



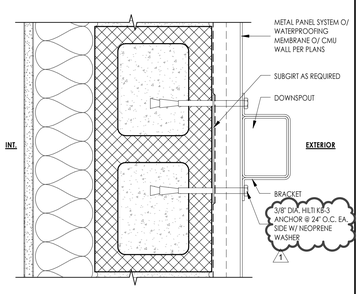
TYPICAL PARAPET @ CMU VENEER SCALE 3" = 1'-0" **29**



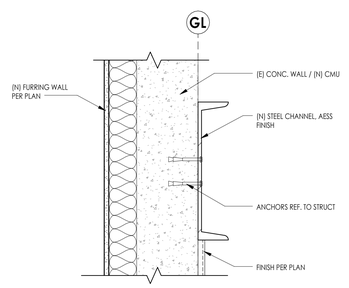
TRANSITION DETAIL @ CMU VENEER OVER (E) CONC WALL SCALE 3" = 1'-0" **4**



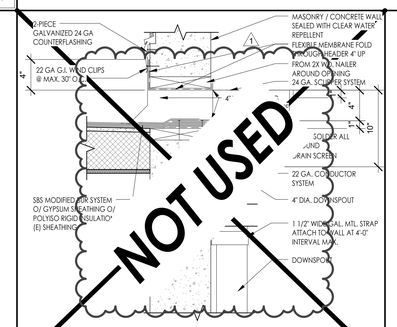
DOWNSPOUT AT CMU WALL SCALE 3" = 1'-0" **30**



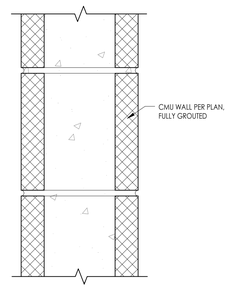
DOWNSPOUT AT METAL PANEL OVER CMU WALL SCALE 3" = 1'-0" **25**



EXPOSED CHANNEL SURFACE MOUNT SCALE 1 1/2" = 1'-0" **20**



SCUPPER AND DOWNSPOUT SCALE 1 1/2" = 1'-0" **15**



C&C TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS:

MATERIAL	ITEM NUMBER	CONSTRUCTION	MINIMUM FINISHED THICKNESS FACE-TO-FACE (INCHES)			
			4 HOURS	3 HOURS	2 HOURS	1 HOUR
3. CONCRETE MASONRY UNITS	3-1.1	EXPANDED SLAG OR PUMICE	4.7	4.0	3.2	2.1
	3-1.2	EXPANDED CLAY, SHALE OR SLATE	5.1	4.4	3.6	2.6
	3-1.3	LIMESTONE, CINDERS OR AIR-COOLED SLAG	5.9	5.0	4.0	2.7
	3-1.4	CALCAREOUS OR SILICEOUS GRAVEL	6.2	5.3	4.2	2.8

1 HR. RATED EXT. CMU WALL SCALE 3" = 1'-0" **5**

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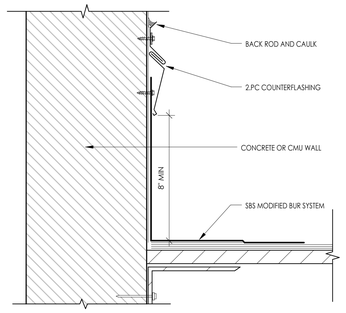
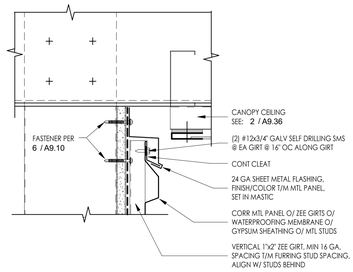
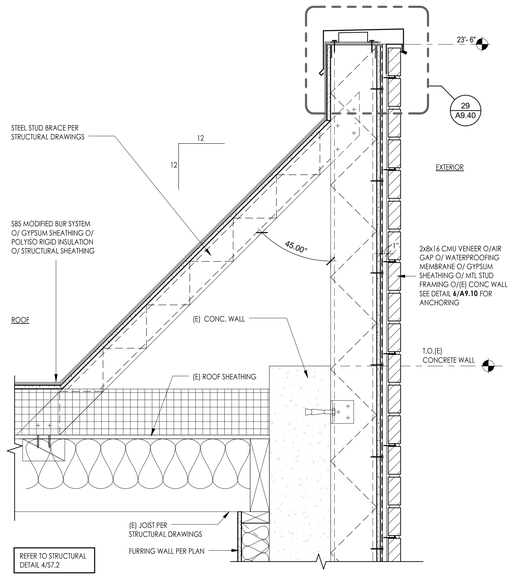


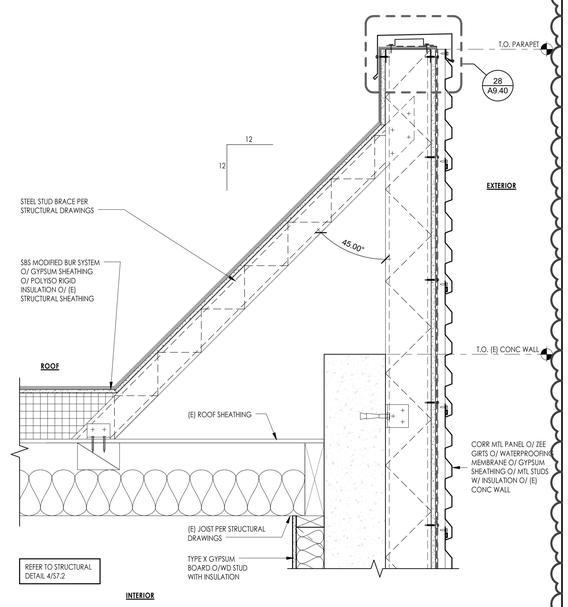
TYPICAL ROOF TO WALL FLASHING SCALE 3" = 1'-0" **26**



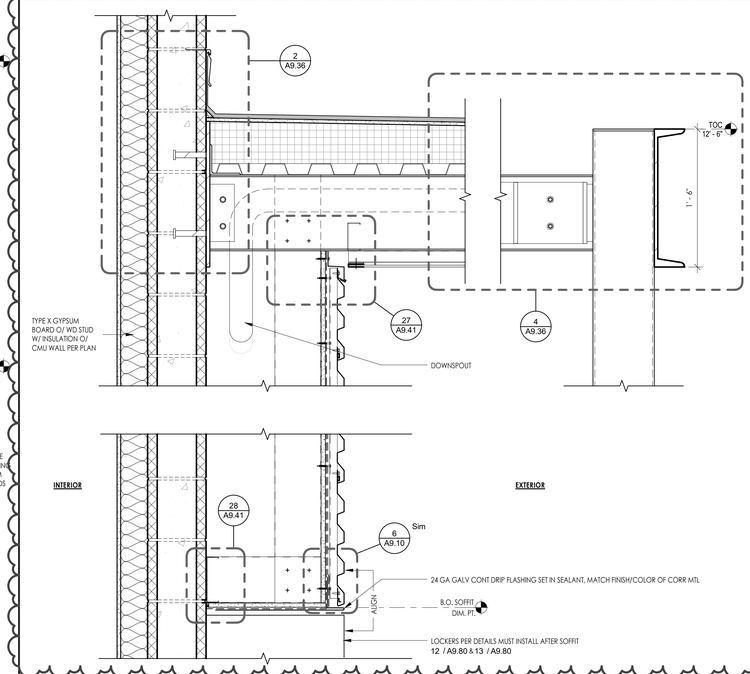
INSIDE CORNER @ SOFFIT SCALE 3" = 1'-0" **27**



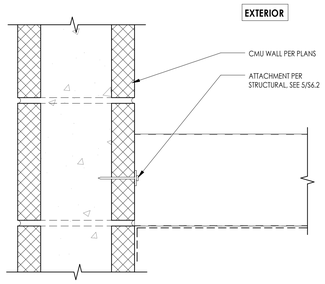
STUD PARAPET AT (E) CONCRETE WALL - VENEER CMU SCALE 1 1/2" = 1'-0" **17**



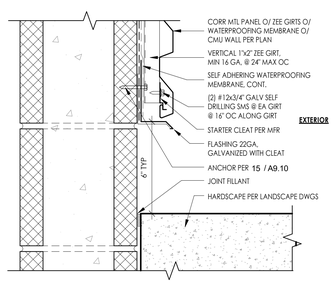
STUD PARAPET AT (E) CONCRETE WALL - CORRUGATED METAL PANEL SCALE 1 1/2" = 1'-0" **12**



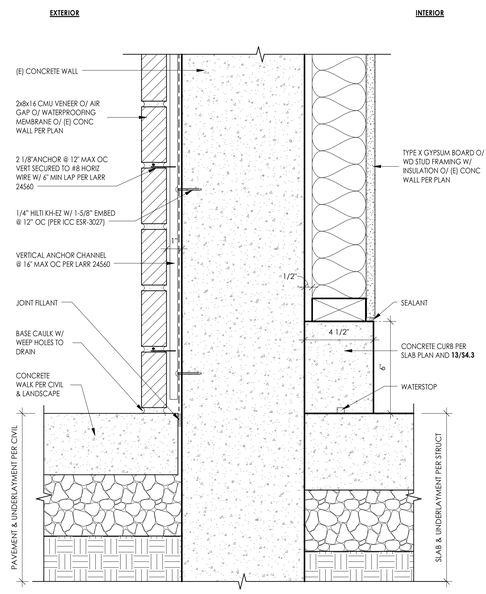
CORRUGATED METAL PANEL DETAIL AT SOFFIT SCALE 1 1/2" = 1'-0" **2**



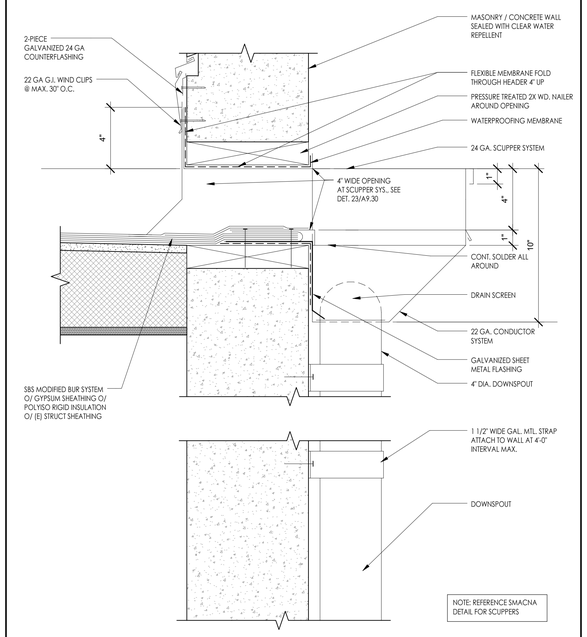
TYP. METAL FRAMING INTO CMU WALL SCALE 3" = 1'-0" **28**



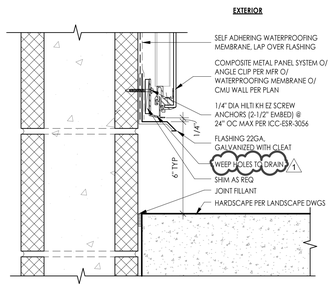
TYP CORRU MTL PANEL SILL DETAIL SCALE 3" = 1'-0" **29**



CMU VENEER CONC WALL BASE SCALE 3" = 1'-0" **19**



SCUPPER AND DOWNSPOUT 1 SCALE 3" = 1'-0" **14**



TYP COMPOSITE MTL PANEL SILL DETAIL SCALE 3" = 1'-0" **30**

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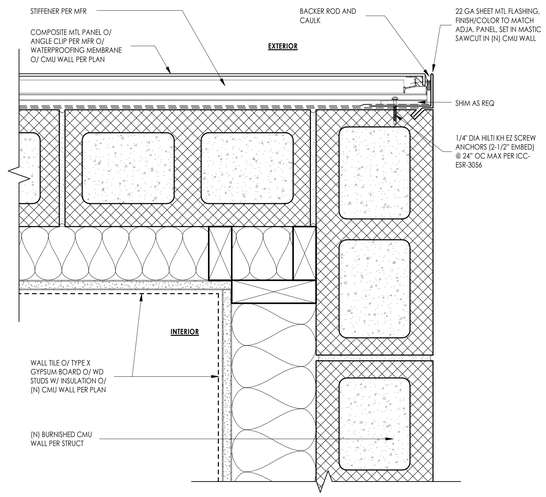

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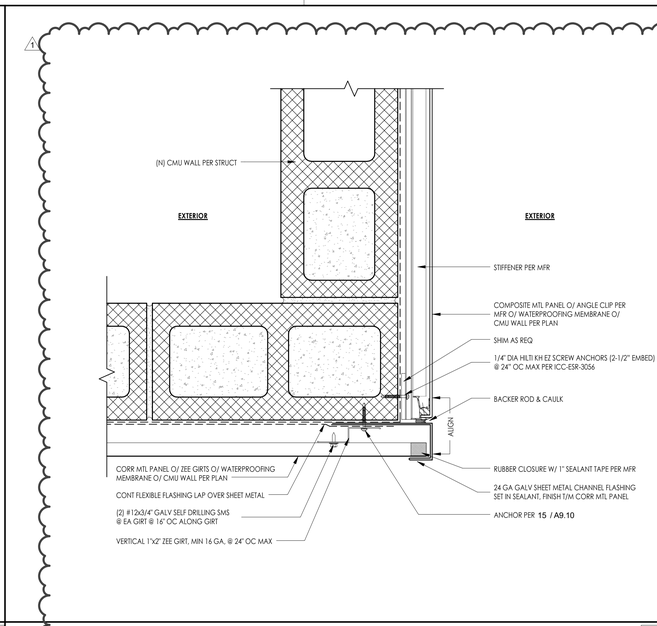
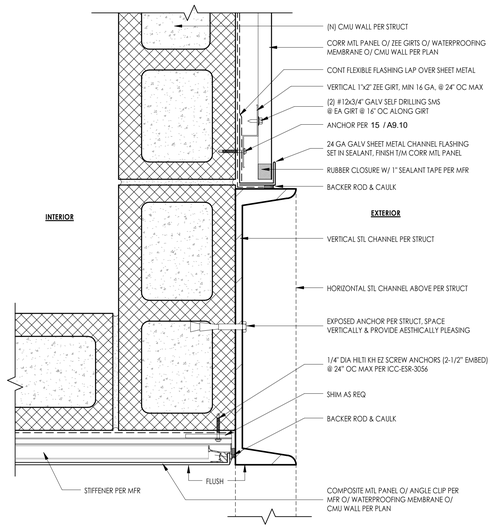


CORR TO COMPOSITE MTL PANEL OUTSIDE CORNER SCALE 3" = 1'-0" 2



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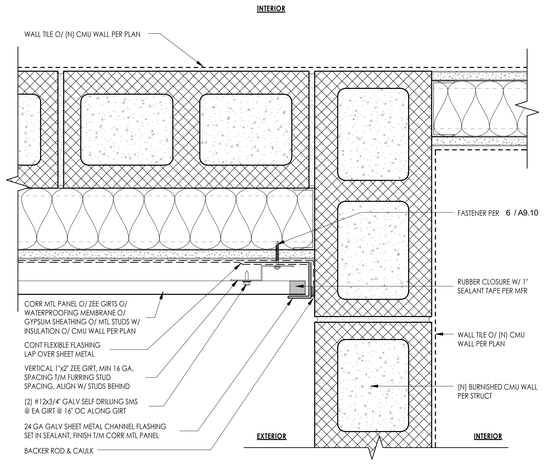

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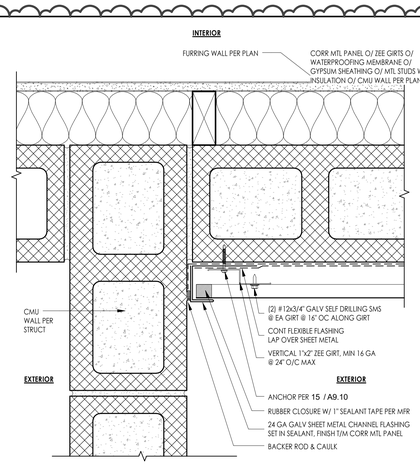
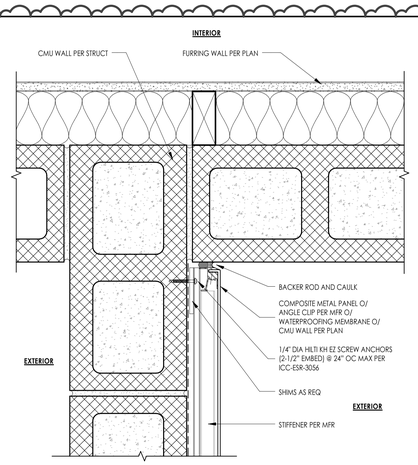
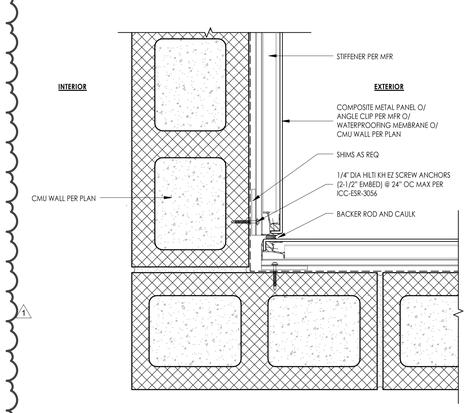


CORR MTL PANEL TO CMU INSIDE CORNER SCALE 3" = 1'-0" 30



COMPOSITE MTL PANEL TO CMU INSIDE CORNER SCALE 3" = 1'-0" 25



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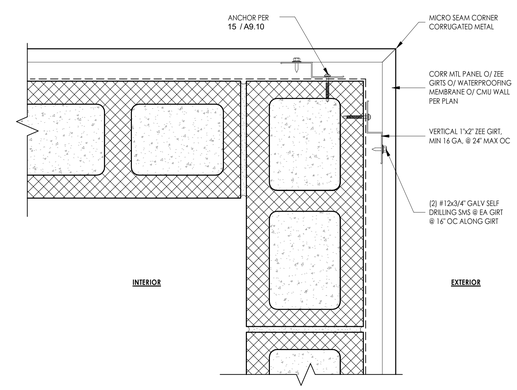

(N) BUILDING - CORR & CORR MTL PANEL OUTSIDE CORNER SCALE 3" = 1'-0" 5

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SHEET TITLE
EXTERIOR DETAILS - (N) BUILDING

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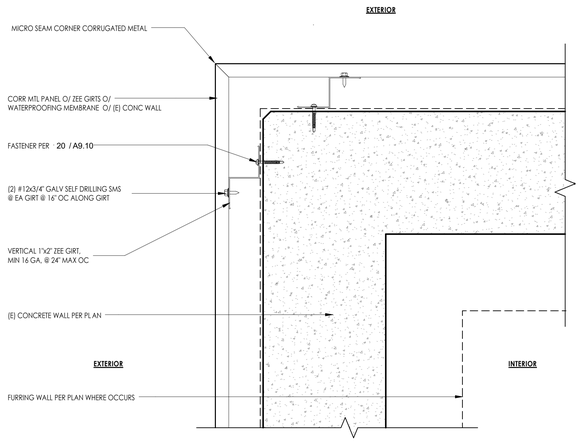
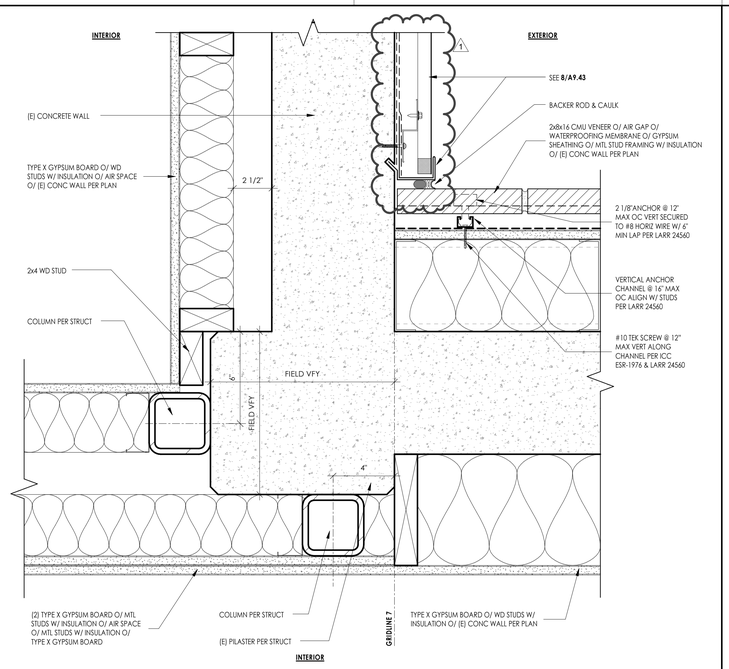
A9.42

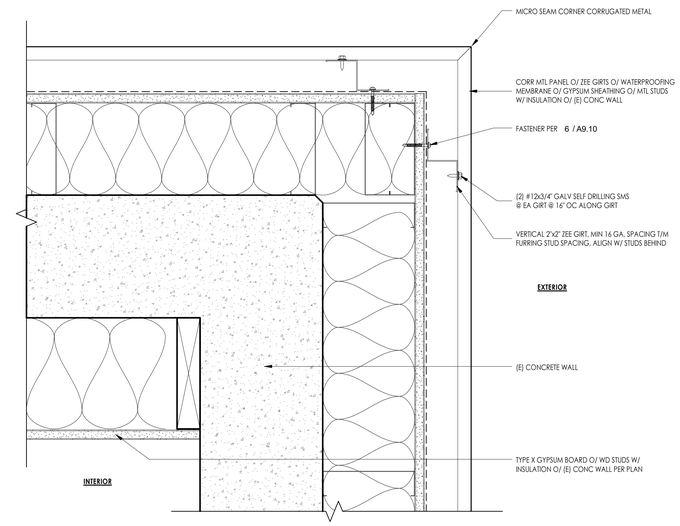
ADDENDUM#1



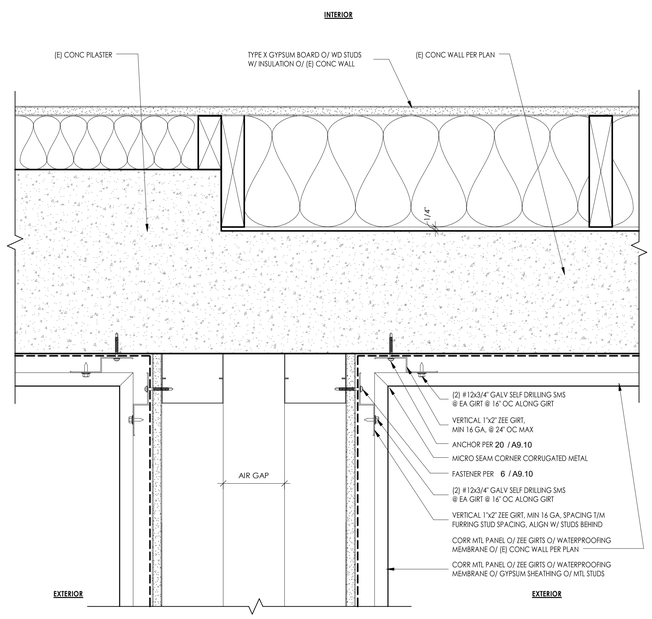
(E) BUILDING MM WEST - CORR MTL PANEL OUTSIDE CORNER SCALE 3" = 1'-0" **22**

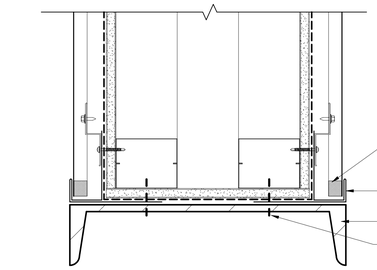


(E) BUILDING MM WEST - (E) CONC & CMU VENEER INSIDE CORNER SCALE 3" = 1'-0" **7**

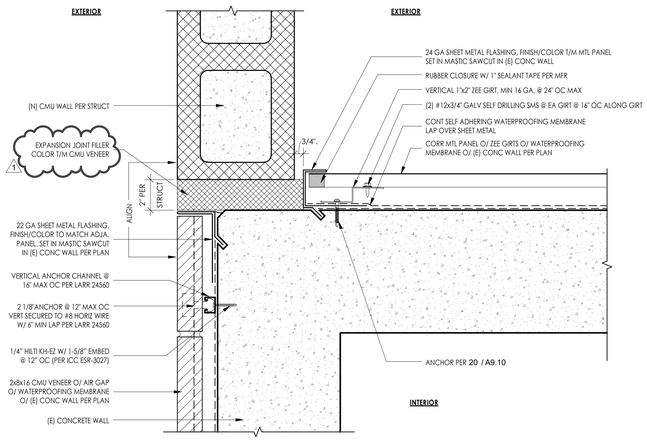


(E) BUILDING MM WEST - CORR MTL PANEL O/ MTL STUD OUTSIDE CORNER SCALE 3" = 1'-0" **2**

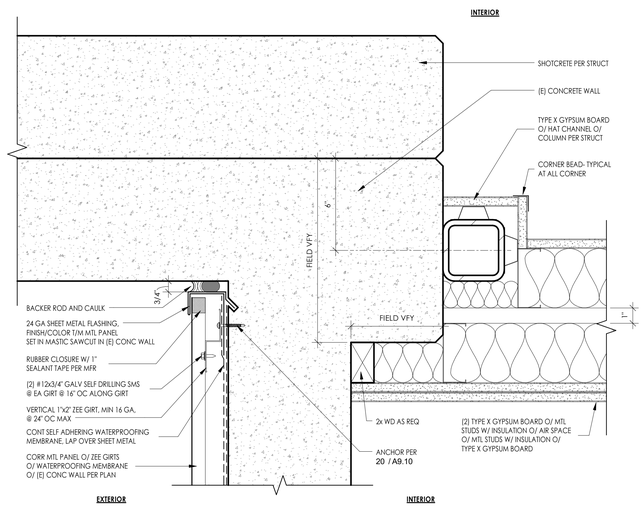




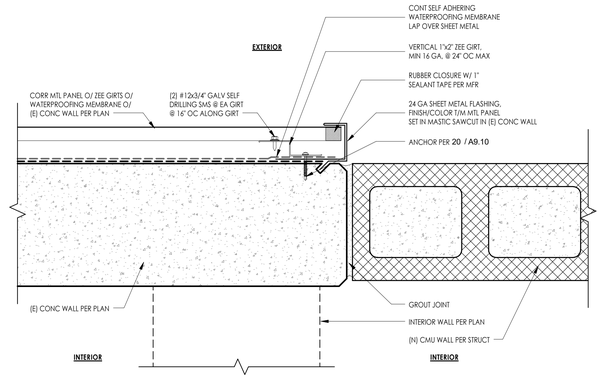
CORR MTL PANEL TO CORR MTL PANEL - INSIDE CORNER SCALE 3" = 1'-0" **25**



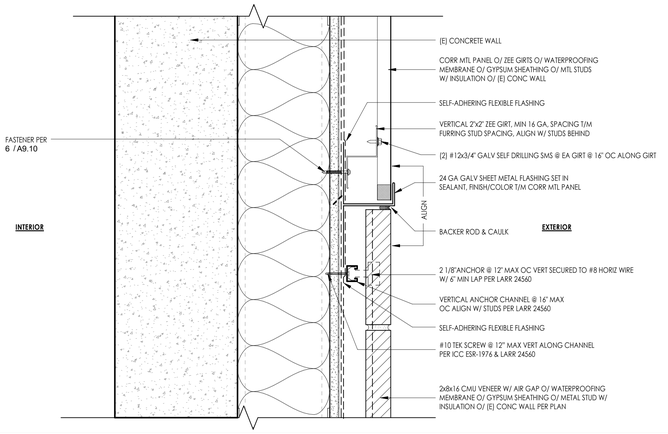
(E) BUILDING MM WEST - CMU WALL & CORR MTL PANEL INSIDE CORNER SCALE 3" = 1'-0" **8**



(E) BUILDING MM WEST - CORR MTL PANEL & (E) CONC INSIDE CORNER SCALE 3" = 1'-0" **3**



CORR MTL PANEL @ (E) CONC WALL TO CMU WALL TRANSITION SCALE 3" = 1'-0" **15**



(E) BUILDING MM WEST - CORR MTL PANEL & CMU VENEER TRANSITION SCALE 3" = 1'-0" **5**

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CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

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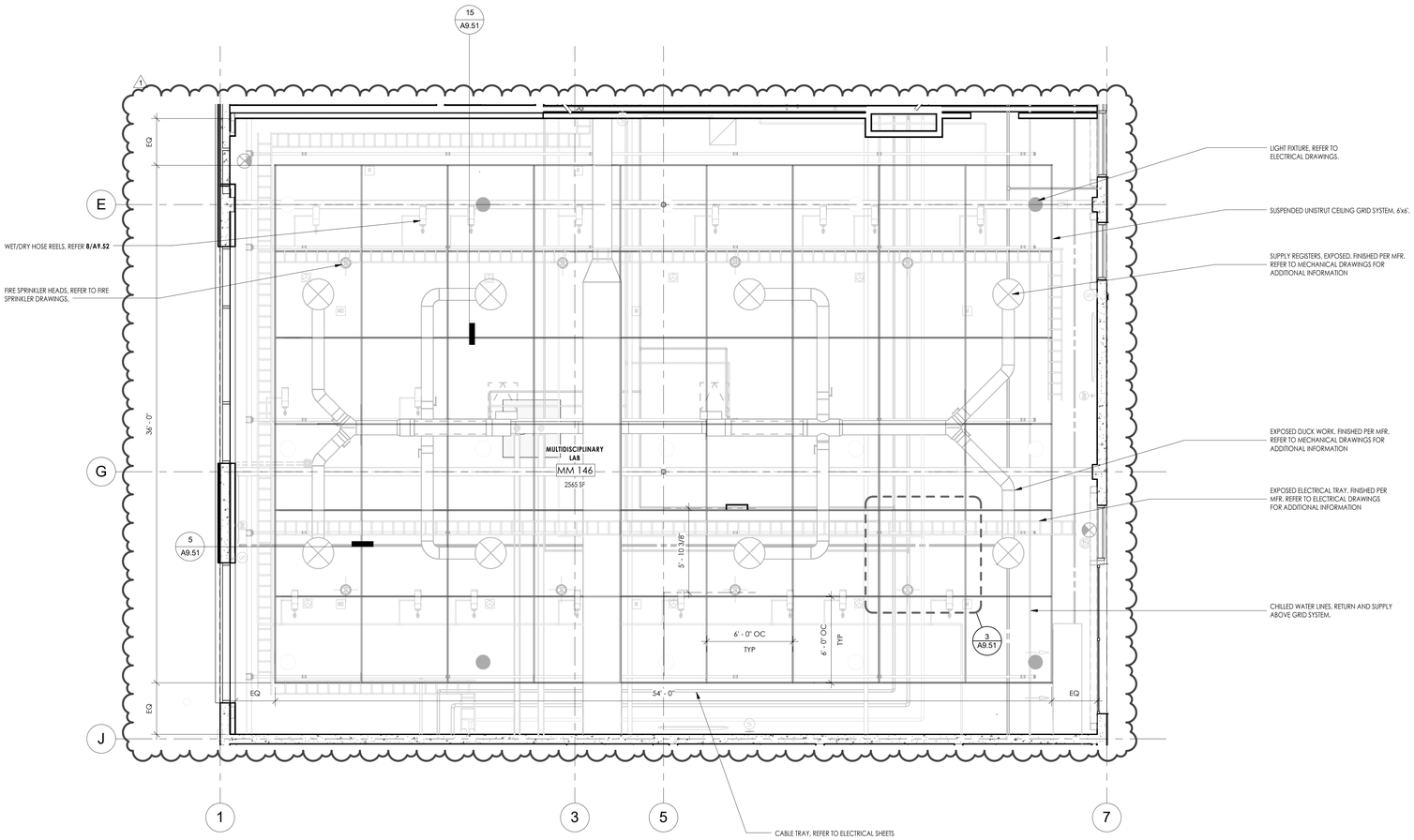
SHEET TITLE
EXTERIOR DETAILS - (E) BUILDING

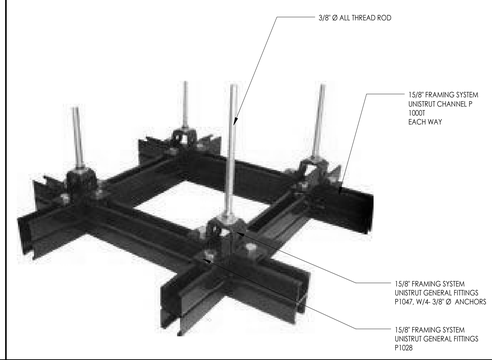
SHEET NUMBER
A9.43

ADDENDUM#1

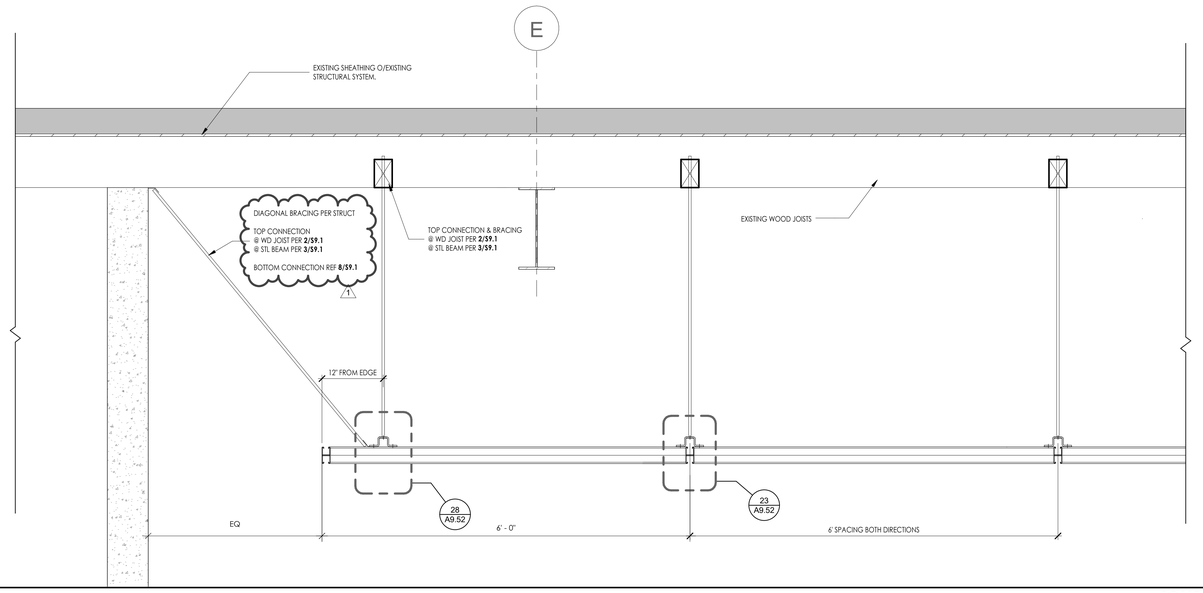
6/4/2020 5:45:08 PM \\hpilocal\files\Hpi\Data\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM_Arch_R16.rvt



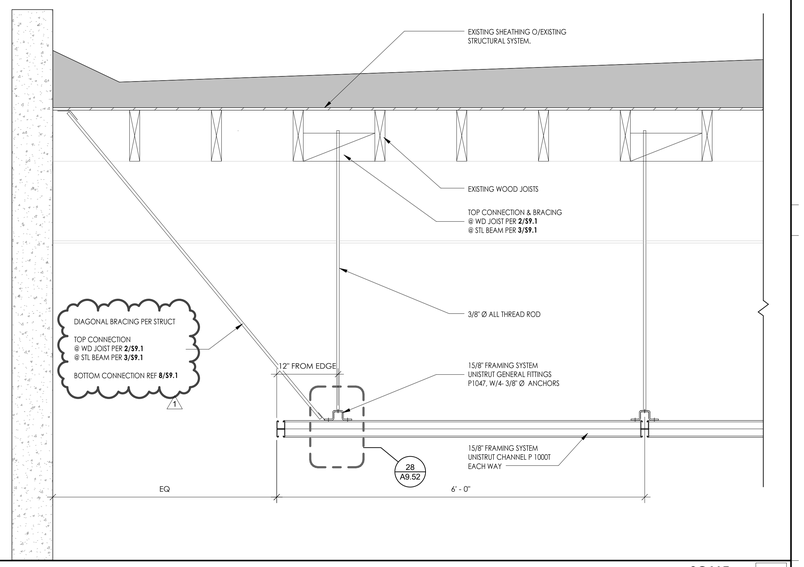
REFLECTED CEILING PLAN SCALE 1/4" = 1'-0" 8



UTILITY GRID SYSTEM SCALE 1" = 1'-0" 3



SECTION AT UTILITY GRID SYSYEM SCALE 1" = 1'-0" 15



SECTION AT UTILITY GRID SYSTEM SCALE 1" = 1'-0" 5

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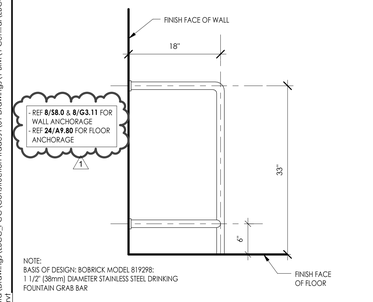
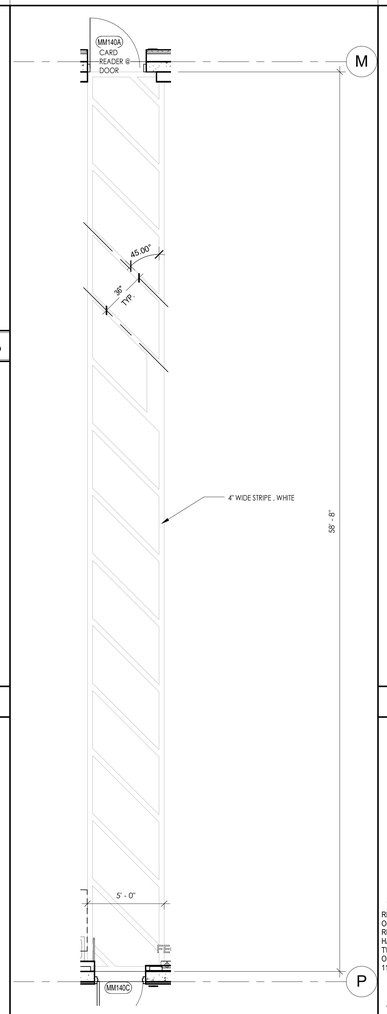
SHEET TITLE
CEILING DETAILS SPEC

SHEET NUMBER
A9.51

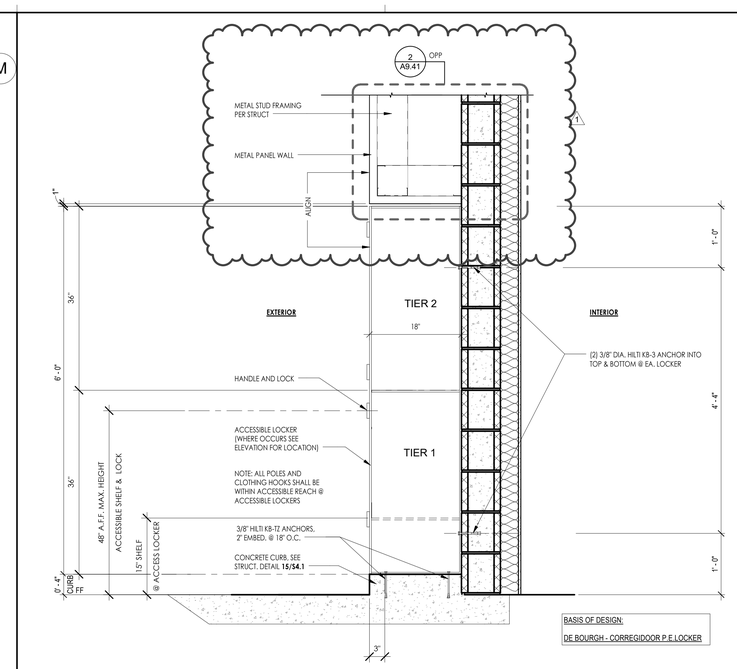
ADDENDUM#1



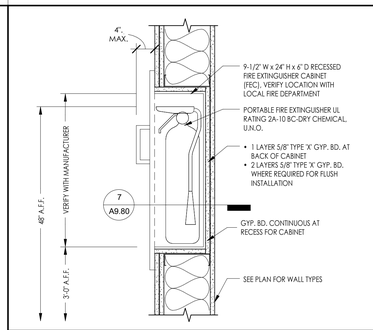
GRAB BAR (WALL & FLOOR MOUNTED) SCALE 1" = 1'-0" **26**



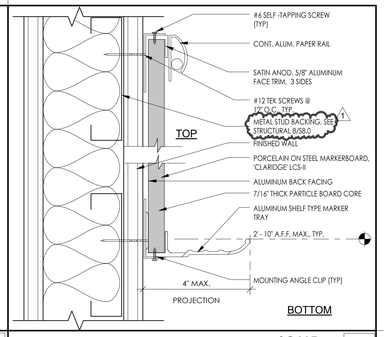
SECURITY STRIPES - ENLARGED PLAN SCALE 1/4" = 1'-0" **23**



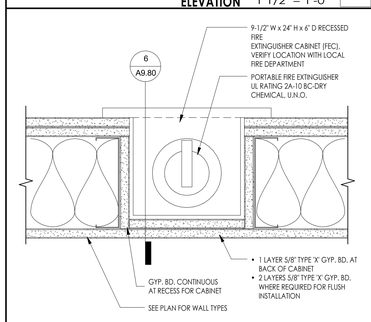
METAL LOCKER - SECTION SCALE 1" = 1'-0" **12**



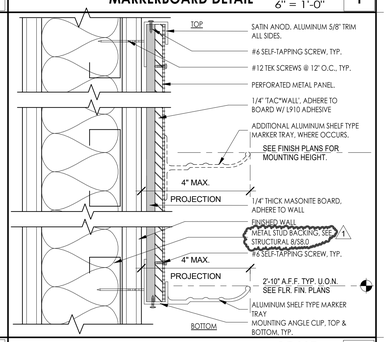
RECESSED FIRE EXTINGUISHER CABINET ELEVATION SCALE 1 1/2" = 1'-0" **6**



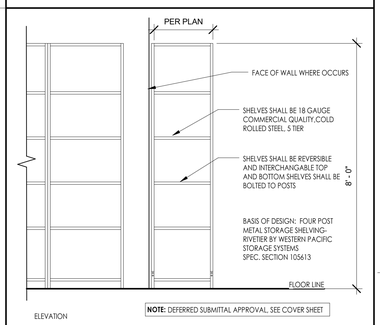
MARKERBOARD DETAIL SCALE 6" = 1'-0" **1**



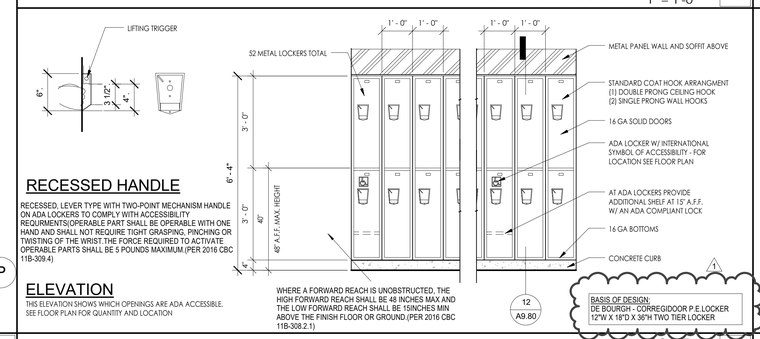
RECESSED FIRE EXTINGUISHER CABINET PLAN SCALE 3" = 1'-0" **7**



TACK BOARD SCALE 6" = 1'-0" **2**



HEAVY DUTY STORAGE RACKS SCALE 1/2" = 1'-0" **27**



RECESSED HANDLE

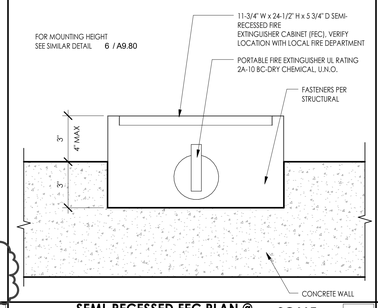
RECESSED, LEVER TYPE WITH TWO-POINT MECHANISM HANDLE ON ADA LOCKERS TO COMPLY WITH ACCESSIBILITY REQUIRMENTS(OPERABLE PART SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS MAXIMUM.(PER 2016 CBC 11B-309.4)

ELEVATION

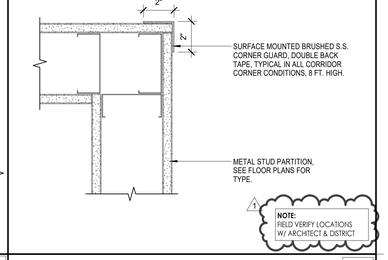
THIS ELEVATION SHOWS WHICH OPENINGS ARE ADA ACCESSIBLE. SEE FLOOR PLAN FOR QUANTITY AND LOCATION

WHERE A FORWARD REACH IS UNOBSTRUCTED, THE HIGH FORWARD REACH SHALL BE 48 INCHES MAX AND THE LOW FORWARD REACH SHALL BE 15INCHES MIN ABOVE THE FINISH FLOOR OR GROUND.(PER 2016 CBC 11B-308.2.1)

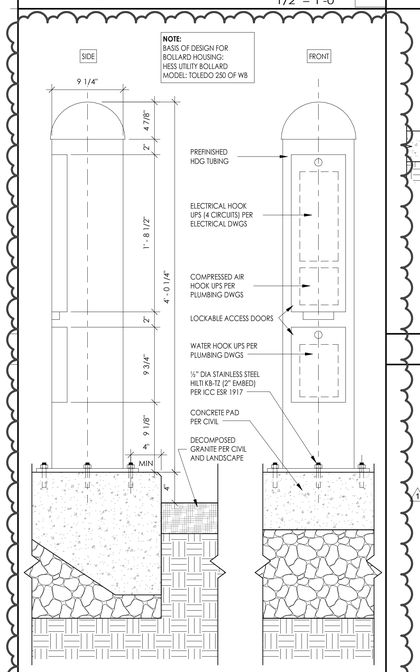
METAL LOCKERS ELEVATION SCALE 1/2" = 1'-0" **13**



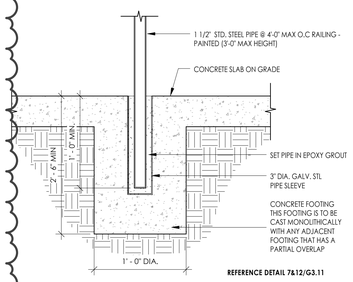
SEMI-RECESSED FEC PLAN @ CONCRETE WALL SCALE 3" = 1'-0" **8**



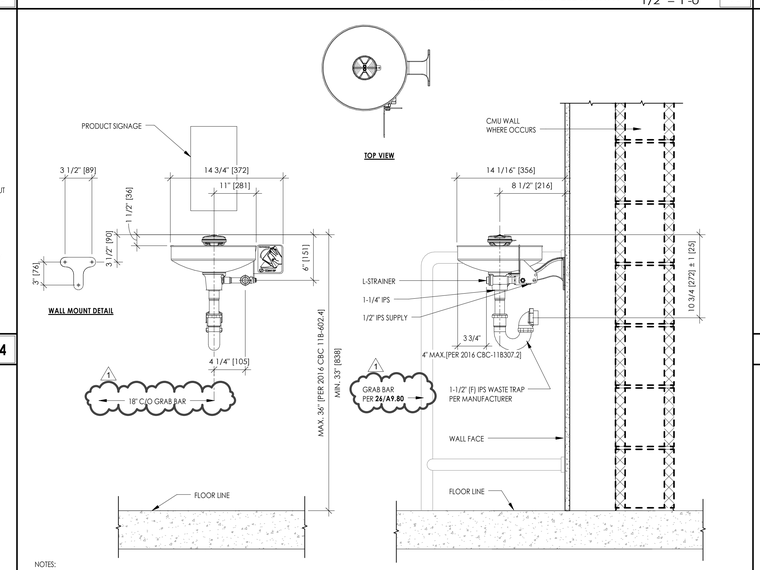
CORNER GUARD DETAIL SCALE 3" = 1'-0" **3**



UTILITY BOLLARD SCALE 1 1/2" = 1'-0" **30**



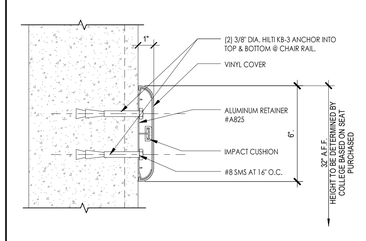
EXTERIOR HAND RAIL POST SCALE 1 1/2" = 1'-0" **24**



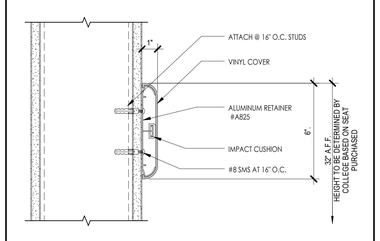
NOTES:

1. METRIC DIMENSIONS ARE IN BRACKETS [X].
2. TO COMPLY WITH ANSI Z358.1-2009 FOR EMERGENCY EYEWASH OR EYE/FACE WASH:
   - UNIT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ACCEPTABLE PLUMBING PRACTICES.
   - EYEWASH OR EYE/FACE WASH SHALL BE POSITIONED WITH NOZZLES NOT LESS THEN 83.8 CM (33 IN.) AND NO GREATER THAN 114.3 CM (45 IN.) FROM SURFACE ON WHICH USER STANDS AND 15.3 CM (6 IN.) MINIMUM FROM WALL OR NEAREST OBSTRUCTION.
3. DIMENSIONS MAY VARY BY ± 1/2 [13].
4. A CLEAR FLOOR SPACE COMPLYING W/SECTION 11B-305 POSITIONED FOR A FORWARD APPROACH SHALL BE PROVIDED. KNEE AND TOE CLEARANCE COMPLYING WITH SECTION 11B-306 SHALL BE PROVIDED,
5. UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH SECTION 11B-305 POSITIONED FOR A FORWARD APPROACH AND CENTERED ON THE UNIT. KNEE AND TOE CLERANCE COMPLYING WITH SECTION 11B-306 SHALL BE PROVIDED.

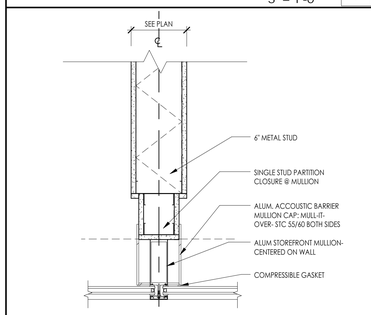
EYEWASH DETAILS SCALE 1 1/2" = 1'-0" **15**



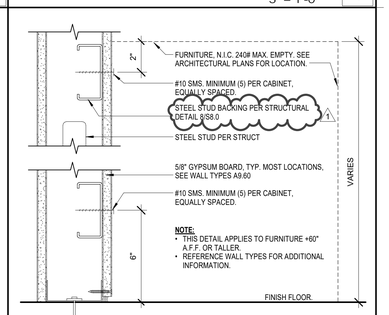
CHAIR RAIL DETAIL @ CONCRETE WALL SCALE 3" = 1'-0" **9**



CHAIR RAIL DETAIL SCALE 3" = 1'-0" **4**



WALL AT MULLION SCALE 1 1/2" = 1'-0" **10**



FURNITURE ATTACHMENT @ METAL STUDS SCALE 3" = 1'-0" **5**

ADDENDUM#1

6/4/2020 5:45:15 PM \\hpilocal\files\HPIdata\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BIM\1 Central\LBCC Building MM Arch_R16.rvt

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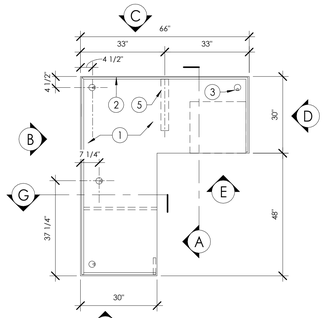
SHEET TITLE

INTERIOR & MISC DETAILS

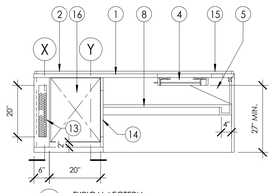
SHEET NUMBER

A9.80

6/4/2020 5:45:20 PM \\hpilocal\files\HpiData\Drawings\LBCC_PCC\Construction Trades I\01 Drawings\1 BMA\1 Central\LBCC Building MM_Arch_R16.rvt



F PLAN - LAYOUT "A"



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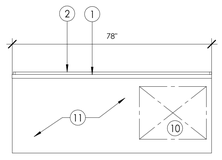
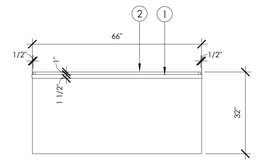


B TYPICAL LECTERN



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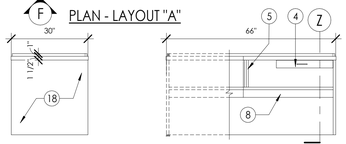
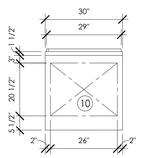
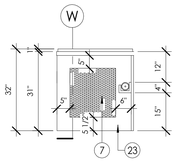




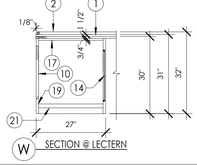


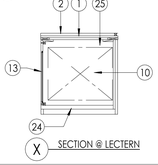
D TYPICAL LECTERN

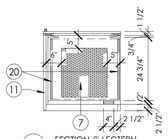
E TYPICAL LECTERN

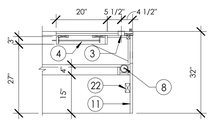
F TYPICAL LECTERN

G TYPICAL LECTERN









W SECTION @ LECTERN

X SECTION @ LECTERN

Y SECTION @ LECTERN

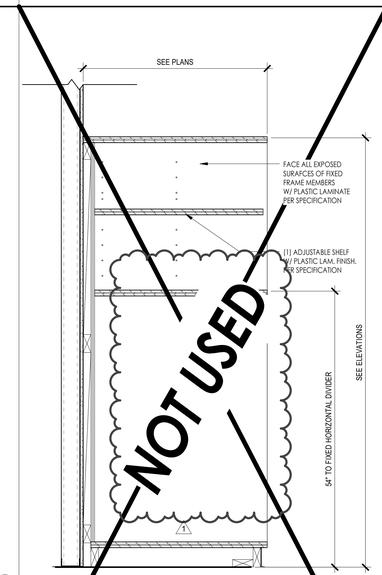
Z SECTION @ LECTERN

KEYNOTES:

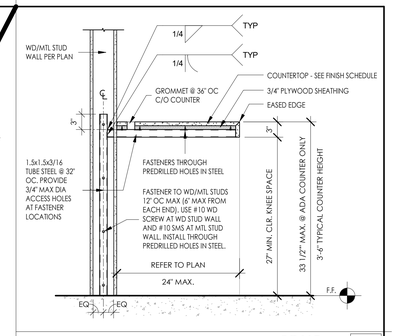
1. 3/4" THK. MDF PLAM TOP WITH HPI, BACKING SHEET
2. 3/4" X 1" HIGH LIP
3. GROMMET - DOUG MOCKET "EDP" FOR 2 1/2" DRILLED HOLE OR EQUAL
4. PENCIL DRAWER (LOCKABLE) 1
5. CORBEL SUPPORT
6. NOT USED
7. PERFORATED METAL PANEL (HOLE SIZE 3/16" WITH 25% OPENINGS) AT CABINET.
8. CABLE TRAY
9. NOT USED
10. CUT-OUT FOR ELECTRICAL AND DATA SUPPLY FEED. COORDINATE THE LOCATION OF THE CUT-OUT WITH THE FEED LOCATION IN THE WALL / FLOOR AS REQUIRED.
11. 1" FINISHED BACK ENAMEL
12. 1 1/2" P-LAM LEG
13. REMOVABLE FRONT ACCESS PANEL WITH PERFORATED METAL PANEL ATTACHED WITH #10 1.5" PAN HEAD SCREWS.
14. PERFORATED METAL PANEL AT CABINET FINISH END.
15. 4 1/2" X 4 1/2" CUT-OUT PAINTED TO MATCH P-LAM EXTRON CABLE CUBBY 600- BY AV CONTRACTORS.
16. OPEN SPACE FOR (SLIDING RAIL SYSTEM BY MIDDLE ATLANTIC PRODUCTS MODEL # SRSR-2-12 O.F.O.)
17. WEB FRAME
18. 1 1/2" P-LAM END LEG PANEL
19. 1 1/2" P-LAM LEG
20. RACK RAILS BY CONTRACTOR
21. CABINET BOTTOM
22. ELECTRICAL BY AV/ ELECTRICAL CONTRACTOR
23. CABINET FINISHED END
24. 1 1/2" BOTTOM REQUIRED
25. CABINET END

1 NOTE:
- THESE DETAILS ARE BASED ON LBCC DISTRICT STANDARDS DESIGN GUIDELINES FOR LECTERN TABLE
- SEE FINISH SCHEDULE FOR PANEL COLORS

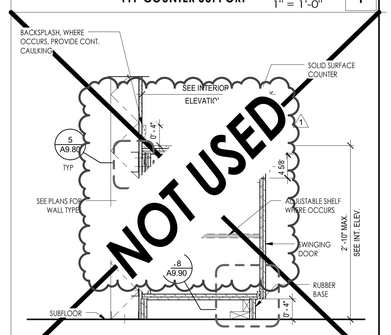
TEACHERS LECTERN PLAN A — SCALE 1/2" = 1'-0" — 12



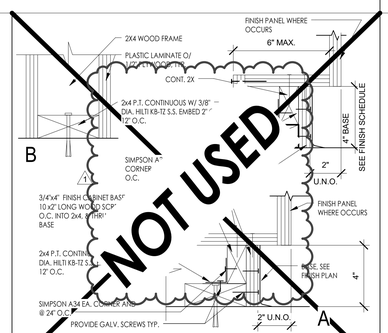
TALL COMPARTMENT CABINET — SCALE 1" = 1'-0" — 7



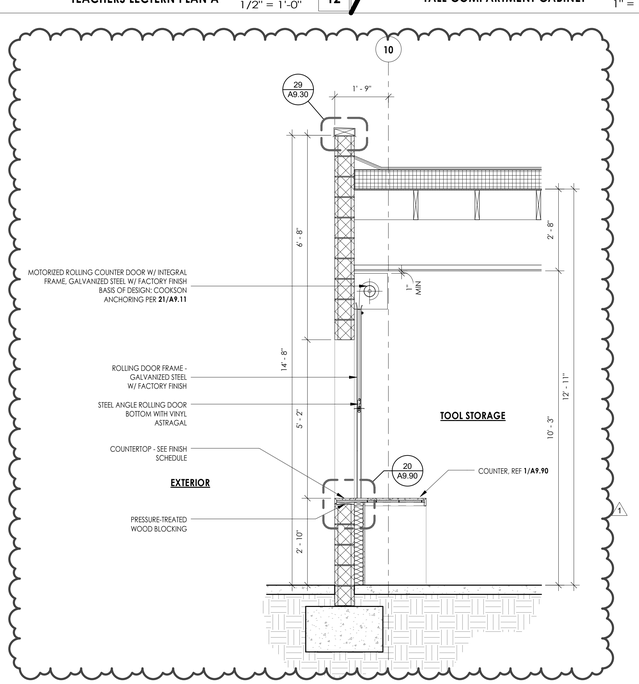
TYP COUNTER SUPPORT — SCALE 1" = 1'-0" — 1



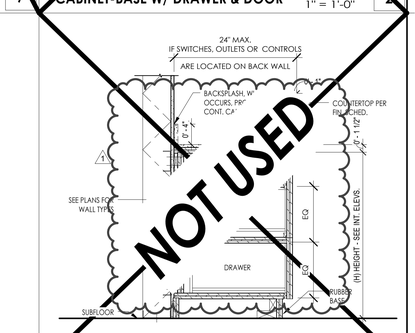
CABINET-BASE W/ DRAWER & DOOR — SCALE 1" = 1'-0" — 2



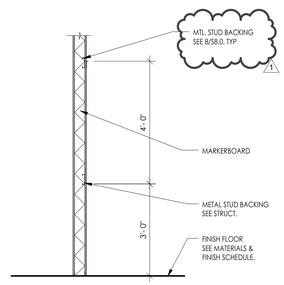
TYP. CABINET BASE ANCHOR — SCALE 3" = 1'-0" — 19



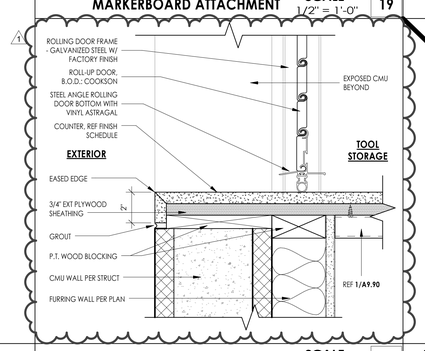
SECTION @ ROLL UP DOOR @ TOOL CHECKOUT — SCALE 1/2" = 1'-0" — 9



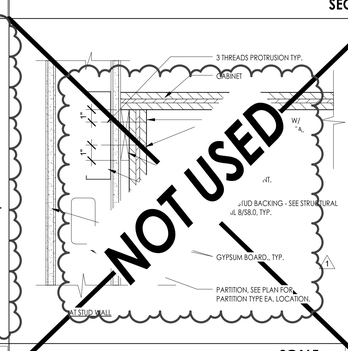
BASE DETAIL — SCALE 1" = 1'-0" — 5



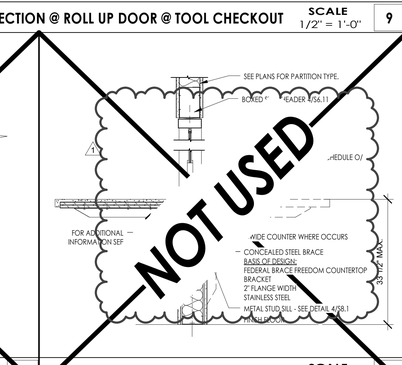
MARKERBOARD ATTACHMENT — SCALE 1/2" = 1'-0" — 19



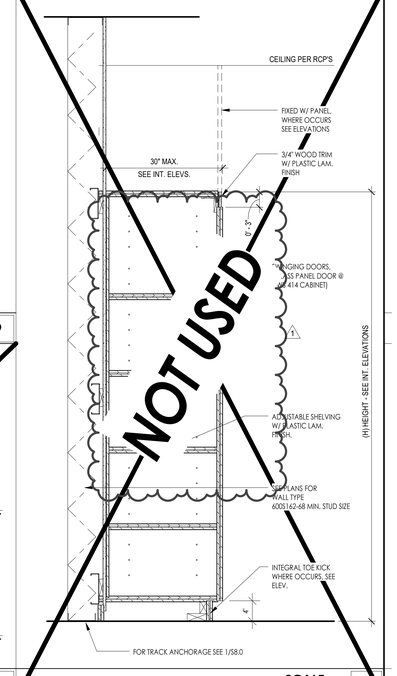
THRESHOLD/SILL @ RUD COUNTER — SCALE 3" = 1'-0" — 20



TYP. CABINET ANCHOR — SCALE 3" = 1'-0" — 15



COUNTER @ WINDOW — SCALE 1" = 1'-0" — 10



CABINET - TALL STORAGE DETAIL — SCALE 1" = 1'-0" — 5

DSA USE ONLY

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Newport Beach, CA 92663
o: 949. 675. 6442

CONSULTANTS

SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM # 1

PROJECT IDENTIFICATION -

THE DRAWINGS IN THIS SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42'.

DRAWN BY -

CHECKED BY -

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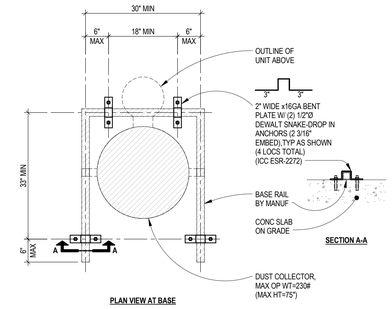
SHEET TITLE
CASEWORK DETAILS

SHEET NUMBER
A9.90

ADDENDUM#1

5/19/2020 5:25:18 PM C:\Users\gleyson\Documents\17-0627-00_LBCC Construction Trades I_R14_Shuc_gleyson.rvt



DUST COLLECTOR (DST-1) ANCHORAGE (1 / S2.1)

SCALE: 3/4" = 1'-0"

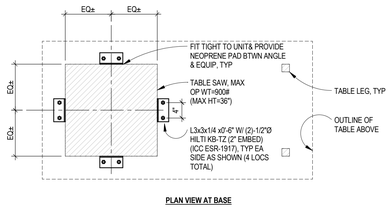
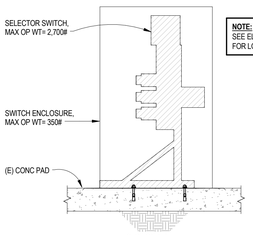
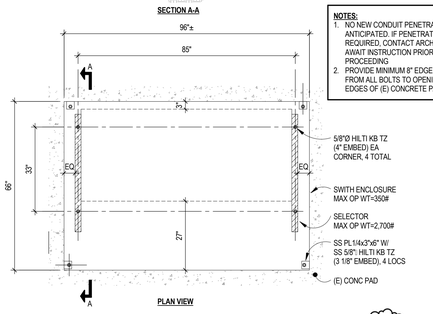


TABLE SAW (TSW-1) ANCHORAGE (2 / S2.1)

SCALE: 3/4" = 1'-0"



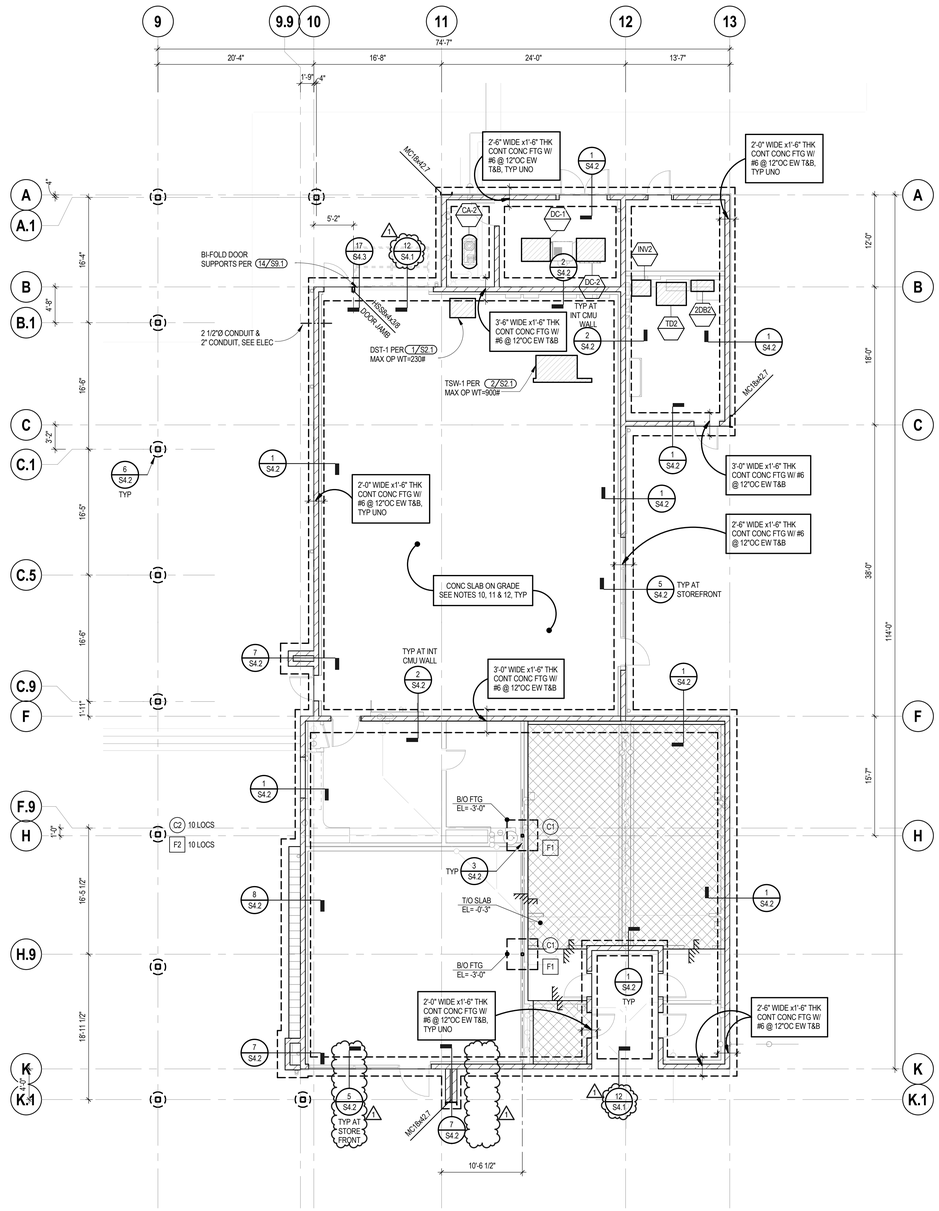
NOTE:
SEE ELECTRICAL DRAWINGS FOR LOCATION OF UNIT.



NOTES:
1. NO NEW CONDUIT PENETRATIONS ARE ANTICIPATED. IF PENETRATIONS ARE REQUIRED, CONTACT ARCHITECT AND AWAIT INSTRUCTION PRIOR TO PROCEEDING
2. PROVIDE MINIMUM 8" EDGE DISTANCE FROM ALL BOLTS TO OPENINGS OR EDGES OF (E) CONCRETE PAD

SELECTOR SWITCH ANCHORAGE (3 / S2.1)

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



NEW WORKSHOP BUILDING FOUNDATION PLAN — SCALE 1/8" = 1'-0" — A

FOUNDATION PLAN NOTES

1. SEE GENERAL NOTES SHEET(S) FOR APPLICABLE NOTES, ABBREVIATIONS AND PLAN SYMBOLS LEGEND. SEE PLAN SHEET FOR LIST OF APPLICABLE TYPICAL DETAILS NOT CALLED OUT ON PLANS. **SEE PROJECT SPECIFICATIONS WHERE APPLICABLE FOR ADDITIONAL INFORMATION.**
2. PROVIDE OVER-EXCAVATION AND COMPACTED BACKFILL PER GEOTECHNICAL REPORT AND TYPICAL OVER-EXCAVATION AND COMPACTED BACKFILL REQUIREMENTS DETAIL.
3. SLEEVES ACROSS FOOTINGS SHOWN ON PLAN ARE FOR 2" DIAMETER AND GREATER PIPES/ CONDUITS. SEE MECHANICAL, ELECTRICAL AND/ OR PLUMBING DRAWINGS FOR SMALLER ELEMENTS REQUIRING SLEEVES. CONTRACTOR TO DETERMINE ACTUAL INVERT ELEVATION AND LOCATIONS OF SLEEVES. SEE TYPICAL PIPE/ CONDUIT SLEEVES ACROSS FOOTING DETAIL **8/S4.1** AND TYPICAL STEPPED FOOTING DETAIL **7/S4.1** WHERE STEPS ARE REQUIRED AT SLEEVES.
4. LOCATIONS AND NUMBER OF STEPS IN FOOTING SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE IN FIELD ACTUAL LOCATIONS AND NUMBER OF STEPS REQUIRED PER **7/S4.1**.
5. UNLESS NOTED OTHERWISE ON PLAN OR DETAIL, CENTER LINE OF FOUNDATION ELEMENT SHALL MATCH WALL AND/OR COLUMN CENTER LINE.
6. BOTTOM OF FOOTING ELEVATION = **-2'-6"**, TYPICAL UNLESS NOTED OTHERWISE.
7. UNLESS NOTED OTHERWISE, ALL NOTES REFERRING TO FOUNDATIONS SHALL ALSO APPLY TO GRADE BEAMS, WHERE THEY OCCUR.
8. FINISH FLOOR ELEVATION = **0'-0" OR PER ARCHITECT**.
9. UNLESS NOTED OTHERWISE, DIMENSIONS SHOWN ARE TO CENTERLINE OF STEEL COLUMN OR FACE OF STUD, CONCRETE OR CMU.
10. UNLESS NOTED OTHERWISE, SLAB-ON-GRADE SHALL BE **5"** THICK, REINFORCED W/ **#4 @ 12"OC EACH WAY**, OVER SUB-BASE AND SUB-GRADE PREPARED PER RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT, AND TYPICAL SLAB-ON-GRADE UNDERLAYMENT DETAIL **9/S4.1**.
11. WHEN SLAB-ON-GRADE CONTROL JOINTS ARE NOT SHOWN ON PLAN, PROVIDE JOINTS PER TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS DETAIL **10/S4.1**.
12. SEE ARCHITECTURAL PLANS FOR CURBS, SLAB DEPRESSIONS AND SLOPES NOT SHOWN ON PLAN.
13. UNLESS NOTED OTHERWISE, ALL CMU WALLS SHALL BE 8" THICK, **SOLID** GROUTED AND REINFORCED W/ **#5 VERTS @ 16"OC** AND **#4 HORIZ @ 24"OC**. FOR CMU WALL ELEVATIONS, SEE SHEET **S3.1**. CMU WALL CONTROL JOINTS SHOWN ON WALL ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION OF CONTROL JOINTS PER TYPICAL CMU WALL CONTROL JOINT DETAIL.
14. SEE ARCHITECTURAL DRAWINGS FOR NON-BEARING WALL LOCATIONS AND DIMENSIONS NOT SHOWN ON PLAN.
15. UNLESS NOTED OTHERWISE, ALL INTERIOR STEEL STUDS WALLS SHALL BE FRAMED PER **A/S8.0**. SEE SHEET **S8.0, S8.1** AND **S8.2** FOR STEEL STUD WALL ELEVATIONS, SECTIONS AND DETAILS.
16. EXTERIOR STEEL TO BE AESS. REFER TO ARCHITECTURAL DRAWINGS.
17. FOR EQUIPMENT ANCHORAGE SCHEDULE, SEE **A/S9.1**.

FOOTING SCHEDULE - WORKSHOP BUILDING

SEE DETAIL 6/S4.2

FOOTING MARK	FOOTING SIZE	FOOTING REINFORCING
F1	4'-0" x 4'-0" x 18" THK	(6)-#5 EW BOT
F2	2'-6"Ø x5'-6" DEEP	

COLUMN SCHEDULE - WORKSHOP BUILDING

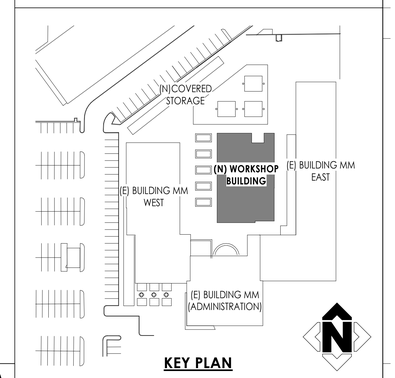
MARK	COLUMN SIZE	BASE PLATE SIZE	BASE PLATE TYPE	REFERENCE DETAIL
C1	HSS4x4x3/8	3/4"x12x1'-0"	A	3/S4.2
C2	HSS8x8x5/8	-	-	6/S4.2

LIST OF APPLICABLE TYPICAL CONCRETE DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL OVER-EXCAVATION AND COMPACTED FILL REQUIREMENTS	1	S4.1
TYPICAL EXCAVATION ADJACENT TO FOOTING	2	S4.1
TYPICAL FOOTING POURED AGAINST EARTH	3	S4.1
TYPICAL REINFORCING HOOKS	4	S4.1
TYPICAL REINFORCING BAR IN CONCRETE DEVELOPMENT AND LAP SPLICE SCHEDULE	5	S4.1
WALL AND FOOTING REINFORCING AT CORNER AND INTERSECTION	6	S4.1
TYPICAL STEPPED FOOTING	7	S4.1
TYPICAL PIPE/CONDUIT SLEEVES ACROSS FOOTINGS	8	S4.1
TYPICAL SLAB-ON-GRADE UNDERLAYMENT	9	S4.1
TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS	10	S4.1
TYPICAL ISOLATION JOINT IN SLAB-ON-GRADE AT STEEL COLUMN	11	S4.1
TYPICAL SLAB EDGE AT OPENINGS	12	S4.1
TYPICAL DEPRESSION IN SLAB-ON-GRADE	13	S4.1
TYPICAL CONCRETE HOUSEKEEPING PAD	14	S4.1
TYPICAL CONCRETE CURBS	15	S4.1
EXTERIOR CMU WALL FOUNDATION	1	S4.2
INTERIOR CMU WALL FOUNDATION	2	S4.2
INTERIOR HSS OR PIPE COLUMN TO FOOTING	3	S4.2
SLAB EDGE AT STOREFRONT	5	S4.2
HSS COLUMN TO CAISSON	6	S4.2
TYPICAL NON-BEARING WOOD STUD PARTITION AT CONCRETE	13	S4.3

LIST OF APPLICABLE TYPICAL CMU DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL REINFORCING BAR IN CMU DEVELOPMENT AND LAP SPLICE SCHEDULE	1	S5.1
TYPICAL REINFORCING PLACEMENT IN CMU	2	S5.1
TYPICAL CMU WALL REINFORCING AT INTERSECTION AND CORNER	3	S5.1
TYPICAL CMU WALL CONTROL JOINT	4	S5.1
TYPICAL CMU WALL JAMB REINFORCING	5	S5.1
TYPICAL CMU WALL LINTEL REINFORCING	6	S5.1
TYPICAL RECESSED RECEPTACLE LOCATIONS	7	S5.1
8" CMU JAMB REINFORCING (OPENING ON EACH SIDE OF JAMB)	8	S5.1
TYPICAL CMU WALL REINFORCING AT PENETRATION	9	S5.1
STEEL LEDGER TO CMU WALL CORNER	10	S5.1
CMU WALL LINTEL CENTERED REINFORCING	11	S5.1



KEY PLAN

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Newport Beach, CA 92663
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MHP STRUCTURAL ENGINEERS
3900 Cover Street
Long Beach, CA 90808
562.985.3200 P
562.985.1011 F
MHP JN 17-0627-00

SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION 17-0627-00

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE
NEW WORKSHOP BUILDING FOUNDATION PLAN

SHEET NUMBER
S2.1

ADDENDUM#1

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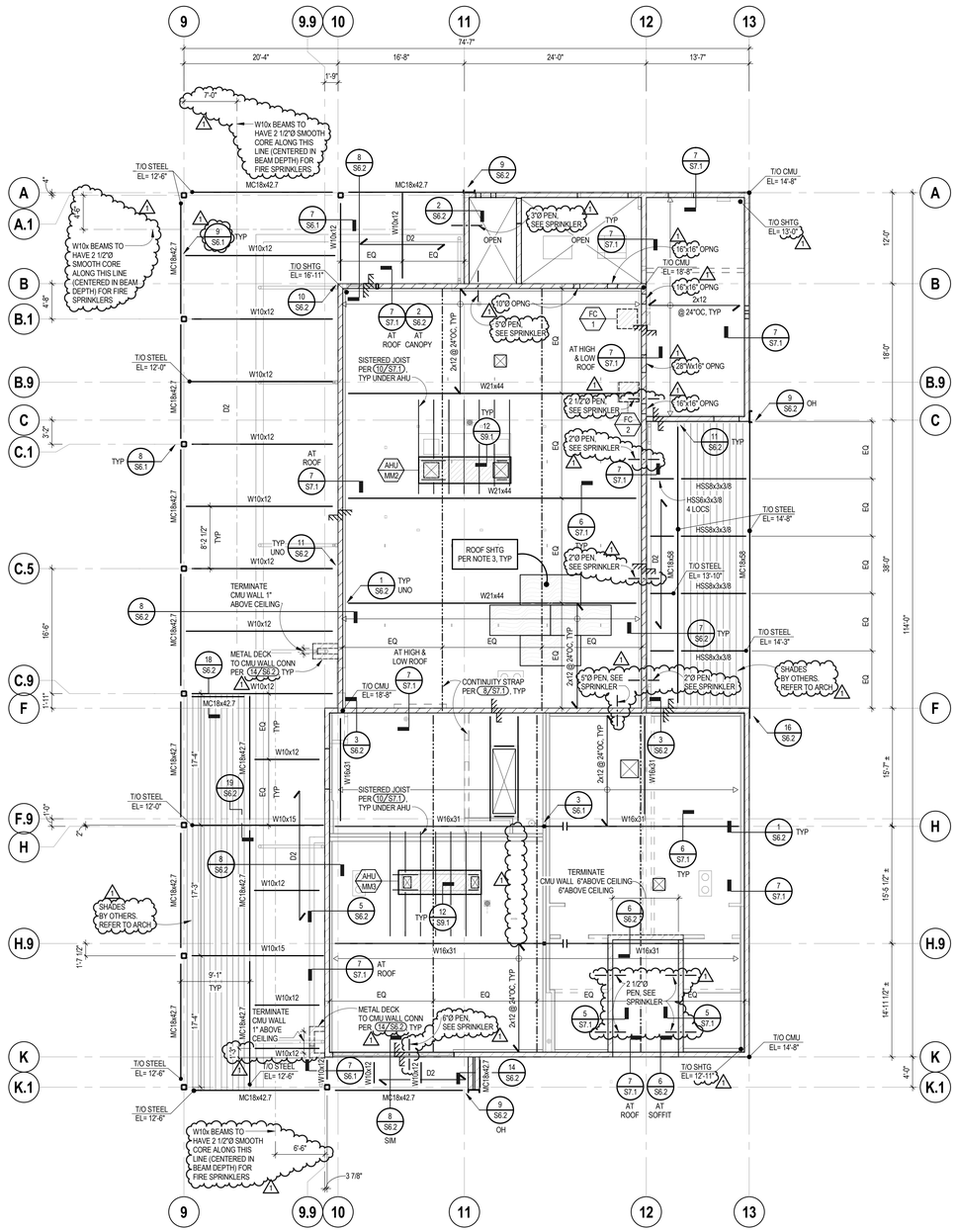


ROOF FRAMING PLAN NOTES

1. SEE GENERAL NOTES SHEET(S) FOR APPLICABLE NOTES, ABBREVIATIONS AND PLAN SYMBOLS LEGEND. SEE PLAN SHEET FOR LIST OF APPLICABLE TYPICAL DETAILS NOT CALLED OUT ON PLANS.
2. FINISH ROOF ELEVATION = **PER ARCHITECT**.
3. UNLESS NOTED OTHERWISE, ROOF SHEATHING SHALL BE **1/2" STRUCT I** PLYWOOD, **BLOCKED**, W/ **10d NAILS @ 4",6",12" (BN,EN,FN)**.
4. WHERE MECHANICAL UNIT OCCURS OVER 2x FRAMING, PROVIDE DOUBLE JOISTS BELOW MECHANICAL UNIT (NOT REQUIRED BELOW UNITS WEIGHING 215# OR LESS).
5. ALL FRAMING MEMBERS NOT OTHERWISE DIMENSIONED SHALL BE EQUALLY SPACED BETWEEN GIRDERS OR OTHER SUPPORTS.
6. FOR FRAMING SPANS GREATER THAN **6'-0"**, PROVIDE WOOD BLOCKING AT THE LESSER OF MIDSPAN OR **8'-0"OC**. INSTALL BLOCKING PER APPLICABLE TYPICAL DETAILS.
7. SEE SHEET **S3.1** FOR CMU WALL ELEVATIONS.
8. SEE SHEET **S8.0, S8.1** AND **S8.2** FOR STEEL STUD WALL ELEVATIONS, SECTIONS AND DETAILS.
9. ALL ROOF OPENINGS TO BE FRAMED PER **9/S7.2** OR **9/S7.2**.
10. ROOF JOISTS SUPPORTING TRAPEZES ARE REQUIRED TO BE SISTERED OR REPLACED WITH 3x MEMBERS, SEE **8/S9.1**.
11. EXTERIOR STEEL TO BE AESS. REFER TO ARCHITECTURAL DRAWINGS.

LIST OF APPLICABLE TYPICAL STEEL FRAMING DETAILS

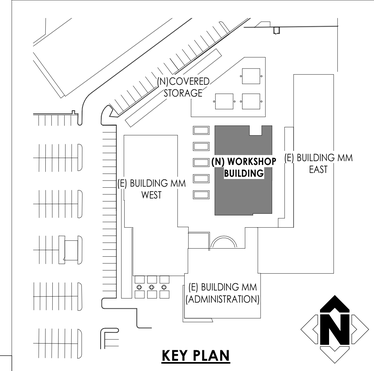
DESCRIPTION	DETAIL	SHEET
TYPICAL BEAM CONNECTION SCHEDULE	1	S6.1
TYPICAL STIFFENER PLATE	2	S6.1
TYPICAL INTERIOR Wx BEAM TO COLUMN CONNECTION	3	S6.1
TYPICAL BEAM TO BEAM CONNECTION	4	S6.1
TYPICAL STEEL BEAM TO STEEL BEAM SPLICE	5	S6.1
TYPICAL FLOOR AND ROOF DECK SCHEDULE	6	S6.1
TYPICAL CHANGE IN DECK DIRECTION	7	S6.1
TYPICAL BEAM TO CANOPY COLUMN CONNECTION	8	S6.1

LIST OF APPLICABLE TYPICAL WOOD FRAMING DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL INTERIOR NON-BEARING WOOD STUD PARTITION AT JOIST OR RAFTER	1	S7.1
TYPICAL WOOD NAILER AT STEEL BEAM	2	S7.1
TYPICAL WOOD BEAM HANGER SCHEDULE	3	S7.1
TYPICAL HORIZONTAL PLYWOOD SHEATHING	4	S7.1
TYPICAL JOIST TO STEEL BEAM CONNECTION	6	S7.1
TYPICAL JOIST TO CMU WALL CONNECTION	7	S7.1
TYPICAL WOOD FASTENING SCHEDULE	8	S7.1

LIST OF APPLICABLE TYPICAL CMU DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL REINFORCING BAR IN CMU DEVELOPMENT AND LAP SPLICE SCHEDULE	1	S5.1
TYPICAL REINFORCING PLACEMENT IN CMU	2	S5.1
TYPICAL CMU WALL REINFORCING AT INTERSECTION AND CORNER	3	S5.1
TYPICAL CMU WALL CONTROL JOINT	4	S5.1
TYPICAL CMU WALL JAMB REINFORCING	5	S5.1
TYPICAL CMU WALL JAMB AND LINTEL REINFORCING	6	S5.1
TYPICAL RECESSED RECEPTACLE LOCATIONS IN CMU WALL REINFORCING (OPENING ON EACH SIDE OF JAMB)	8	S5.1
TYPICAL CMU WALL REINFORCING AT PENETRATION	9	S5.1
STEEL LEDGER TO CMU WALL CORNER	10	S5.1
CMU WALL LINTEL CENTERED REINFORCING	11	S5.1



KEY PLAN

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MHP JN 17-0627-00

SEALS / APPROVALS

PROJECT TITLE
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LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
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1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION 17-0627-00

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DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE
NEW WORKSHOP BUILDING ROOF FRAMING PLAN

SHEET NUMBER
S2.2

ADDENDUM#1

NEW WORKSHOP BUILDING ROOF FRAMING PLAN SCALE 1/8" = 1'-0" 1

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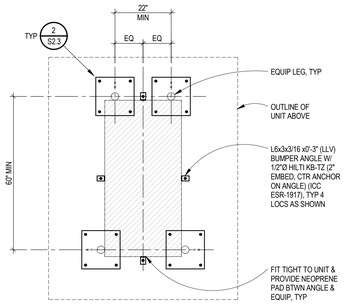
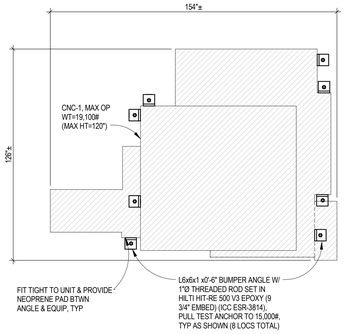


PLAN VIEW AT BASE

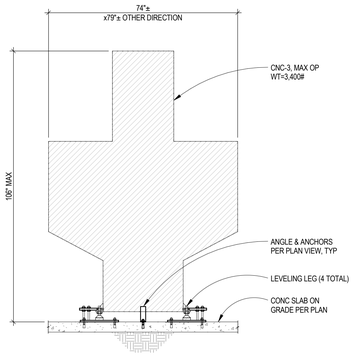
CNC-1 ANCHORAGE

SCALE: 3/8" = 1'-0"

1 / S2.3



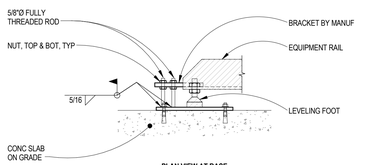
PLAN VIEW AT BASE



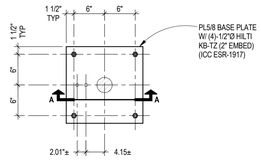
CNC-3 ANCHORAGE

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

4 / S2.3



PLAN VIEW AT BASE

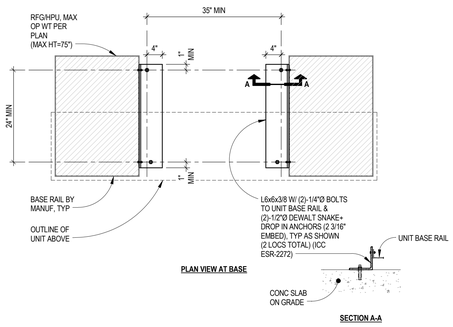


PLAN VIEW AT BASE

CNC ANCHORAGE AT FOOT

SCALE: 1" = 1'-0"

2 / S2.3



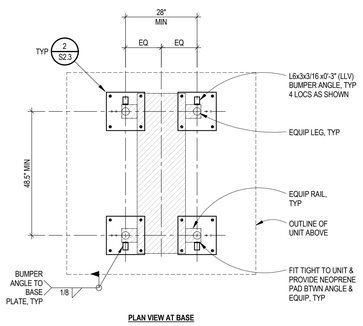
PLAN VIEW AT BASE

SECTION A-A

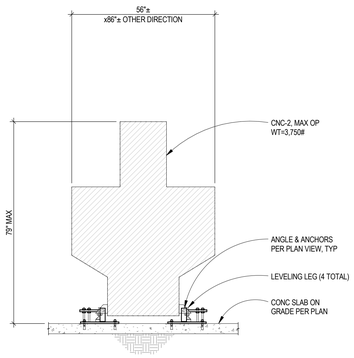
RFG / HPU ANCHORAGE

SCALE: 3/4" = 1'-0"

5 / S2.3



PLAN VIEW AT BASE



CNC-2 ANCHORAGE

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

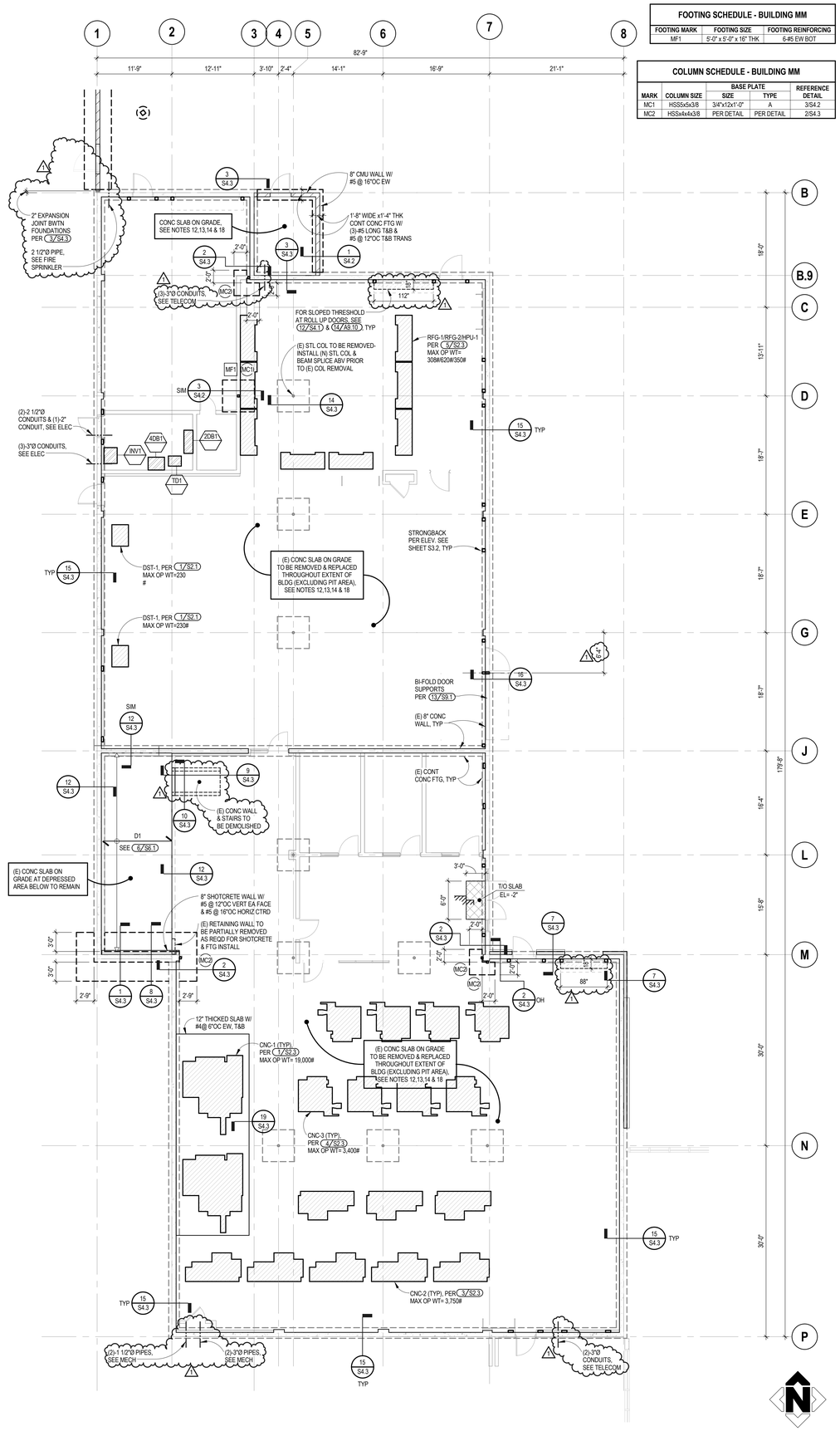
3 / S2.3

FOOTING SCHEDULE - BUILDING MM

FOOTING MARK	FOOTING SIZE	FOOTING REINFORCING
MF1	5'-0" x 5'-0" x 16" THK	6-#5 EW BOT

COLUMN SCHEDULE - BUILDING MM

MARK	COLUMN SIZE	BASE PLATE SIZE	BASE PLATE TYPE	REFERENCE DETAIL
MC1	HSS5x5x3/8	3/4"x12x1'-0"	A	3/S4.2
MC2	HSS4x4x4x3/8	PER DETAIL	PER DETAIL	2/S4.3



EXISTING BUILDNG MM FOUNDATION PLAN — SCALE 1/8" = 1'-0" — A

FOUNDATION PLAN NOTES

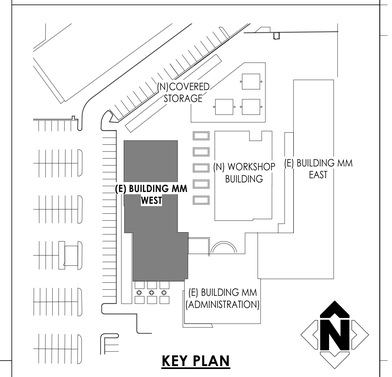
1. SEE GENERAL NOTES SHEET(S) FOR APPLICABLE NOTES, ABBREVIATIONS AND PLAN SYMBOLS LEGEND. SEE PLAN SHEET FOR LIST OF APPLICABLE TYPICAL DETAILS NOT CALLED OUT ON PLANS. **SEE PROJECT SPECIFICATIONS WHERE APPLICABLE FOR ADDITIONAL INFORMATION.**
2. EXISTING CONSTRUCTION IS SHOWN FADED AND IS LABELED AS EXISTING OR (E). NEW CONSTRUCTION IS SHOWN DARK AND IS SPECIFICALLY REFERENCED BY DETAILS AND NOTES.
3. EXISTING CONDITIONS ARE SHOWN TO THE BEST OF OUR KNOWLEDGE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING.
4. PROVIDE OVER-EXCAVATION AND COMPACTED BACKFILL PER GEOTECHNICAL REPORT AND TYPICAL OVER-EXCAVATION AND COMPACTED BACKFILL REQUIREMENTS DETAIL.
5. SLEEVES ACROSS FOOTINGS SHOWN ON PLAN ARE FOR 2" DIAMETER AND GREATER PIPES/ CONDUITS. SEE MECHANICAL, ELECTRICAL AND/ OR PLUMBING DRAWINGS FOR SMALLER ELEMENTS REQUIRING SLEEVES. CONTRACTOR TO DETERMINE ACTUAL INVERT ELEVATION AND LOCATIONS OF SLEEVES. SEE TYPICAL PIPE/ CONDUIT SLEEVES ACROSS FOOTING DETAIL **8/S4.1** AND TYPICAL STEPPED FOOTING DETAIL **7/S4.1** WHERE STEPS ARE REQUIRED AT SLEEVES.
6. LOCATIONS AND NUMBER OF STEPS IN FOOTING SHOWN ON PLAN ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE IN FIELD ACTUAL LOCATIONS AND NUMBER OF STEPS REQUIRED PER **7/S4.1**.
7. UNLESS NOTED OTHERWISE ON PLAN OR DETAIL, CENTER LINE OF FOUNDATION ELEMENT SHALL MATCH WALL AND/OR COLUMN CENTER LINE.
8. EXISTING WALL FOOTINGS WERE EXPOSED IN TWO LOCATIONS. IN THESE LOCATIONS, BOTTOM OF EXISTING FOOTING ELEVATION = **-2'-10"**. IN EXISTING PIT APPROXIMATE BOTTOM OF EXISTING FOOTING ELEVATION = **-7'-8"**.
9. UNLESS NOTED OTHERWISE, ALL NOTES REFERRING TO FOUNDATIONS SHALL ALSO APPLY TO GRADE BEAMS, WHERE THEY OCCUR.
10. FINISH FLOOR ELEVATION = **0'-0" OR PER ARCHITECT.**
11. UNLESS NOTED OTHERWISE, DIMENSIONS SHOWN ARE TO CENTERLINE OF STEEL COLUMN OR FACE OF STUD, CONCRETE OR CMU.
12. UNLESS NOTED OTHERWISE, SLAB-ON-GRADE SHALL BE **5"** THICK, REINFORCED W/ **#4 @ 12"OC EACH WAY**, OVER SUB-BASE AND SUB-GRADE PREPARED PER RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT, AND TYPICAL SLAB-ON-GRADE UNDERLAYMENT DETAIL **9/S4.1**.
13. WHEN SLAB-ON-GRADE CONTROL JOINTS ARE NOT SHOWN ON PLAN, PROVIDE JOINTS PER TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS DETAIL **10/S4.1**.
14. SEE ARCHITECTURAL PLANS FOR CURBS, SLAB DEPRESSIONS AND SLOPES NOT SHOWN ON PLAN.
15. UNLESS NOTED OTHERWISE, ALL CMU WALLS SHALL BE 8" THICK, **SOLID** GROUTED AND REINFORCED W/ **#5 VERTS @ 16"OC** AND **#4 HORIZ @ 32"OC**. WHERE CMU WALL CONTROL JOINTS ARE NOT SHOWN ON WALL ELEVATIONS, CONTRACTOR SHALL PROVIDE CONTROL JOINTS PER TYPICAL CMU WALL CONTROL JOINT DETAIL.
16. SEE SHEET **S3.2** FOR CONCRETE WALL ELEVATIONS.
17. SEE ARCHITECTURAL DRAWINGS FOR NON-BEARING WALL LOCATIONS AND DIMENSIONS NOT SHOWN ON PLAN.
18. UNLESS NOTED OTHERWISE, ALL INTERIOR STEEL STUDS WALLS SHALL BE FRAMED PER **A/S8.0**. SEE SHEET **S8.0, S8.1** AND **S8.2** FOR STEEL STUD WALL ELEVATIONS, SECTIONS AND DETAILS.
19. GEOTECH TO VERIFY EXISTING SUB-GRADE AFTER REMOVAL OF SLAB.
20. FOR EQUIPMENT ANCHORAGE SCHEDULE, SEE **A/S9.1**.

LIST OF APPLICABLE TYPICAL CONCRETE DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL OVER-EXCAVATION AND COMPACTED FILL REQUIREMENTS	1	S4.1
TYPICAL EXCAVATION ADJACENT TO FOOTING	2	S4.1
TYPICAL FOOTING POURED AGAINST EARTH	3	S4.1
TYPICAL REINFORCING HOOKS	4	S4.1
TYPICAL REINFORCING BAR IN CONCRETE DEVELOPMENT AND LAP SPLICE SCHEDULE	5	S4.1
WALL AND FOOTING REINFORCING AT CORNER AND INTERSECTION	6	S4.1
TYPICAL STEPPED FOOTING	7	S4.1
TYPICAL PIPE/CONDUIT SLEEVES ACROSS FOOTINGS	8	S4.1
TYPICAL SLAB-ON-GRADE UNDERLAYMENT	9	S4.1
TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS	10	S4.1
TYPICAL ISOLATION JOINT IN SLAB-ON-GRADE AT STEEL COLUMN	11	S4.1
TYPICAL SLAB EDGE AT OPENINGS	12	S4.1
TYPICAL DEPRESSION IN SLAB-ON-GRADE	13	S4.1
TYPICAL CONCRETE HOUSEKEEPING PAD	14	S4.1
TYPICAL CONCRETE CURBS	15	S4.1
EXTERIOR CMU WALL FOUNDATION	1	S4.2
INTERIOR CMU WALL FOUNDATION	2	S4.2
INTERIOR HSS OR PIPE COLUMN TO FOOTING	3	S4.2
SLAB EDGE AT STOREFRONT	5	S4.2
HSS COLUMN TO CAISSON	6	S4.2
TYPICAL NON-BEARING WOOD STUD PARTITION AT CONCRETE	13	S4.3

LIST OF APPLICABLE TYPICAL CMU DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL REINFORCING BAR IN CMU DEVELOPMENT AND LAP SPLICE SCHEDULE	1	S5.1
TYPICAL REINFORCING PLACEMENT IN CMU	2	S5.1
TYPICAL CMU WALL REINFORCING AT INTERSECTION AND CORNER	3	S5.1
TYPICAL CMU WALL CONTROL JOINT	4	S5.1
TYPICAL CMU WALL JAMB REINFORCING	5	S5.1
TYPICAL CMU WALL JAMB AND LINTEL REINFORCING	6	S5.1
TYPICAL RECESSED RECEPTACLE LOCATIONS	7	S5.1
8" CMU JAMB REINFORCING (OPENING ON EACH SIDE OF JAMB)	8	S5.1
TYPICAL CMU WALL REINFORCING AT PENETRATION	9	S5.1
STEEL LEDGER TO CMU WALL CORNER	10	S5.1
CMU WALL LINTEL CENTERED REINFORCING	11	S5.1



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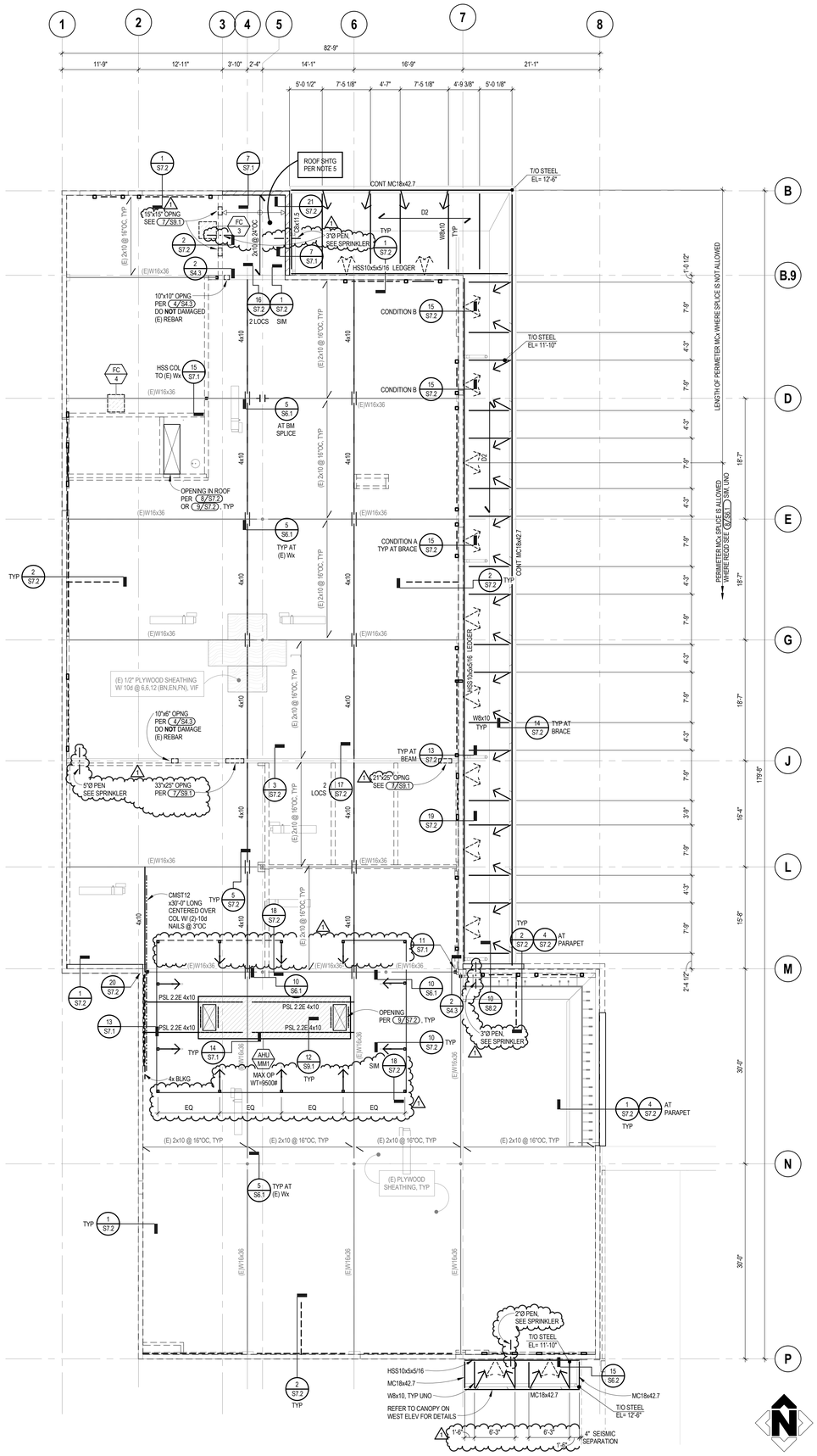
SHEET TITLE

EXISTING BUILDING MM FOUNDATION PLAN

SHEET NUMBER

S2.3

ADDENDUM#1



ROOF FRAMING PLAN NOTES

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4. FINISH ROOF ELEVATION = PER ARCHITECT.
5. UNLESS NOTED OTHERWISE, ROOF SHEATHING SHALL BE 1/2" STRUCT I PLYWOOD, BLOCKED. W/ 10d NAILS @ 6",6",12" (BN,EN,FN).
6. ALL FRAMING MEMBERS NOT OTHERWISE DIMENSIONED SHALL BE EQUALLY SPACED BETWEEN GIRDERS OR OTHER SUPPORTS.
7. FOR FRAMING SPANS GREATER THAN 6'-0", PROVIDE WOOD BLOCKING AT THE LESSER OF MIDSPAN OR 8'-0"OC. INSTALL BLOCKING PER APPLICABLE TYPICAL DETAILS.
8. ROOF JOISTS SUPPORTING TRAPEZES ARE REQUIRED TO BE SISTERED OR REPLACED WITH 3x MEMBERS, SEE 8/S9.1.
9. SEE SHEET S3.2 FOR CONCRETE WALL ELEVATIONS.
10. FOR ANY EXISTING OPENINGS TO BE INFILLED, SEE 7/S7.2.

LIST OF APPLICABLE TYPICAL STEEL FRAMING DETAILS

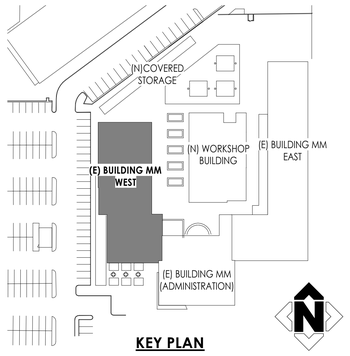
DESCRIPTION	DETAIL	SHEET
TYPICAL BEAM CONNECTION SCHEDULE	1	S6.1
TYPICAL STIFFENER PLATE	2	S6.1
TYPICAL INTERIOR Wx BEAM TO COLUMN CONNECTION	3	S6.1
TYPICAL BEAM TO BEAM CONNECTION	4	S6.1
TYPICAL STEEL BEAM TO STEEL BEAM SPLICE	5	S6.1
TYPICAL FLOOR AND ROOF DECK SCHEDULE	6	S6.1
TYPICAL CHANGE IN DECK DIRECTION	7	S6.1
TYPICAL BEAM TO CANOPY COLUMN CONNECTION	8	S6.1

LIST OF APPLICABLE TYPICAL WOOD FRAMING DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL INTERIOR NON-BEARING WOOD STUD PARTITION AT JOIST OR RAFTER	1	S7.1
TYPICAL WOOD NAILER AT STEEL BEAM	2	S7.1
TYPICAL WOOD BEAM HANGER SCHEDULE	3	S7.1
TYPICAL HORIZONTAL PLYWOOD SHEATHING	4	S7.1
TYPICAL JOIST TO STEEL BEAM CONNECTION	6	S7.1
TYPICAL JOIST TO CMU WALL CONNECTION	7	S7.1
TYPICAL WOOD FASTENING SCHEDULE	8	S7.1

LIST OF APPLICABLE TYPICAL CMU DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL REINFORCING BAR IN CMU DEVELOPMENT AND LAP SPLICE SCHEDULE	1	S5.1
TYPICAL REINFORCING PLACEMENT IN CMU	2	S5.1
TYPICAL CMU WALL REINFORCING AT INTERSECTION AND CORNER	3	S5.1
TYPICAL CMU WALL CONTROL JOINT	4	S5.1
TYPICAL CMU WALL JAMB REINFORCING	5	S5.1
TYPICAL CMU WALL JAMB AND LINTEL REINFORCING	6	S5.1
TYPICAL RECESSED RECEPTACLE LOCATIONS (OPENING ON EACH SIDE OF JAMB)	8	S5.1
TYPICAL CMU WALL REINFORCING AT PENETRATION	9	S5.1
STEEL LEDGER TO CMU WALL CORNER	10	S5.1
CMU WALL LINTEL CENTERED REINFORCING	11	S5.1



KEY PLAN

EXISTING BUILDING MM ROOF FRAMING PLAN SCALE 1/8" = 1'-0" 1

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SHEET TITLE
EXISTING BUILDING MM ROOF FRAMING PLAN

SHEET NUMBER
S2.4

ADDENDUM#1

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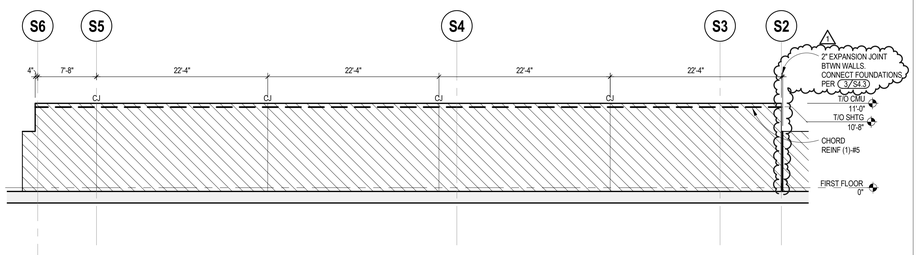
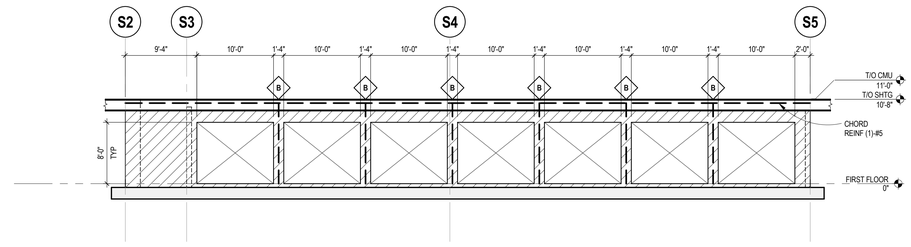
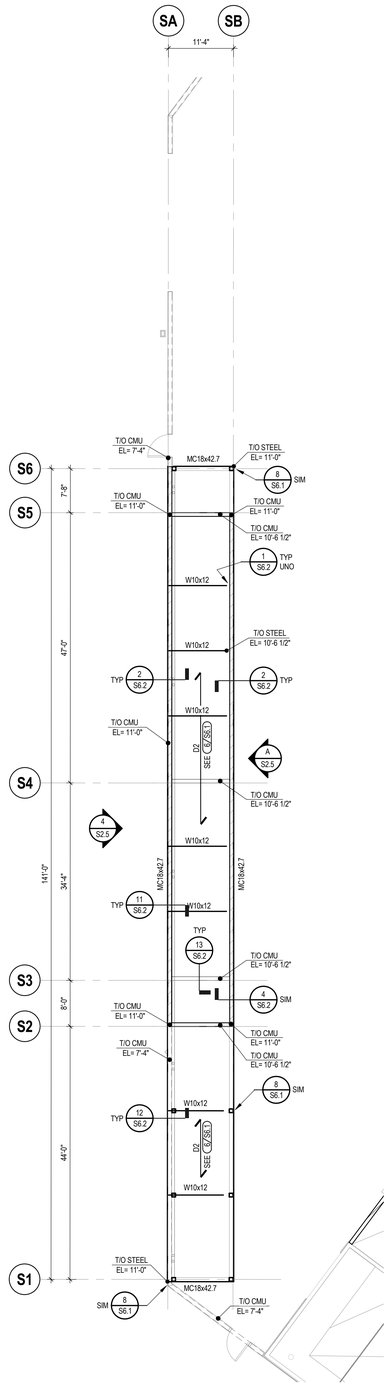


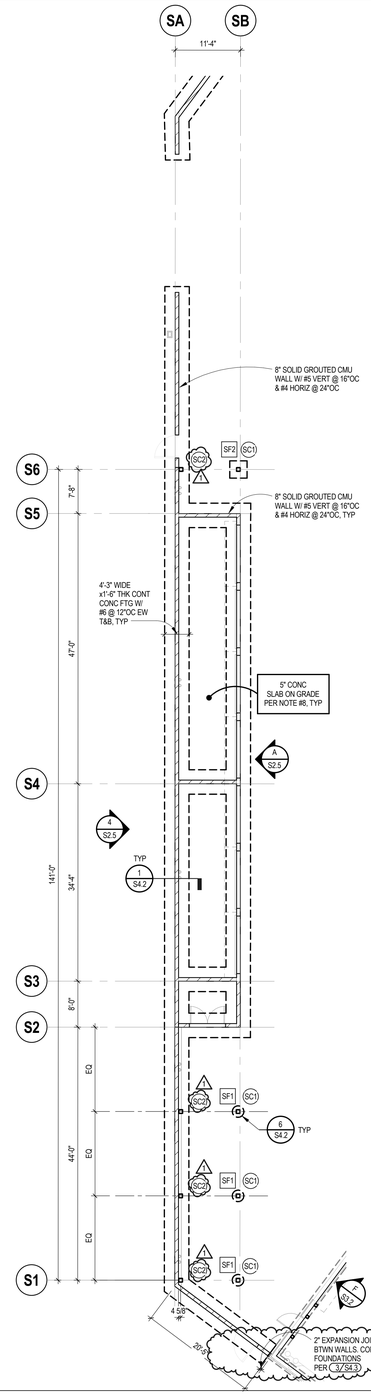
CMU WALL ELEVATION SCALE 1/8" = 1'-0" | 4



CMU WALL ELEVATION SCALE 1/8" = 1'-0" | A



ROOF FRAMING PLAN - STORAGE UNIT SCALE 3/32" = 1'-0" | 2



FOUNDATION PLAN - STORAGE UNIT SCALE 3/32" = 1'-0" | 1

FOUNDATION PLAN NOTES

1. SEE GENERAL NOTES SHEET(S) FOR APPLICABLE NOTES, ABBREVIATIONS AND PLAN SYMBOLS LEGEND. SEE PLAN SHEET FOR LIST OF APPLICABLE TYPICAL DETAILS NOT CALLED OUT ON PLANS.
2. PROVIDE OVER-EXCAVATION AND COMPACTED BACKFILL PER GEOTECHNICAL REPORT AND TYPICAL OVER-EXCAVATION AND COMPACTED BACKFILL REQUIREMENTS DETAIL.
3. UNLESS NOTED OTHERWISE ON PLAN OR DETAIL, CENTER LINE OF FOUNDATION ELEMENT SHALL MATCH WALL AND/OR COLUMN CENTER LINE.
4. BOTTOM OF EXTERIOR FOOTING ELEVATION = **-2'-6"** AND BOTTOM OF INTERIOR FOOTING ELEVATION = **-2'-0"**, TYPICAL UNLESS NOTED OTHERWISE.
5. UNLESS NOTED OTHERWISE, ALL NOTES REFERRING TO FOUNDATIONS SHALL ALSO APPLY TO GRADE BEAMS, WHERE THEY OCCUR.
6. FINISH FLOOR ELEVATION = **0'-0" OR PER ARCHITECT.**
7. UNLESS NOTED OTHERWISE, DIMENSIONS SHOWN ARE TO CENTERLINE OF STEEL COLUMN OR FACE OF STUD, CONCRETE OR CMU.
8. UNLESS NOTED OTHERWISE, SLAB-ON-GRADE SHALL BE **5"** THICK, REINFORCED W/ **#4 @ 12"OC EACH WAY**, OVER SUB-BASE AND SUB-GRADE PREPARED PER RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT, AND TYPICAL SLAB-ON-GRADE UNDERLAYMENT DETAIL **9/S3.1**.
9. WHEN SLAB-ON-GRADE CONTROL JOINTS ARE NOT SHOWN ON PLAN, PROVIDE JOINTS PER TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS DETAIL **10/S3.1**.
10. SEE ARCHITECTURAL PLANS FOR CURBS, SLAB DEPRESSIONS AND SLOPES NOT SHOWN ON PLAN.
11. UNLESS NOTED OTHERWISE, ALL CMU WALLS SHALL BE 8" THICK, **SOLID** GROUTED AND REINFORCED W/ **#5 VERTS @ 16"OC** AND **#4 HORIZ @ 24"OC**. WHERE CMU WALL CONTROL JOINTS ARE NOT SHOWN ON WALL ELEVATIONS, CONTRACTOR SHALL PROVIDE CONTROL JOINTS PER TYPICAL CMU WALL CONTROL JOINT DETAIL.
12. SEE ARCHITECTURAL DRAWINGS FOR NON-BEARING WALL LOCATIONS AND DIMENSIONS NOT SHOWN ON PLAN.

ROOF FRAMING PLAN NOTES

1. SEE GENERAL NOTES SHEET(S) FOR APPLICABLE NOTES, ABBREVIATIONS AND PLAN SYMBOLS LEGEND. SEE PLAN SHEET FOR LIST OF APPLICABLE TYPICAL DETAILS NOT CALLED OUT ON PLANS.
2. FINISH ROOF ELEVATION = **PER ARCHITECT**.
3. ALL FRAMING MEMBERS NOT OTHERWISE DIMENSIONED SHALL BE EQUALLY SPACED BETWEEN GIRDERS OR OTHER SUPPORTS.

LIST OF APPLICABLE TYPICAL CONCRETE DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL OVER-EXCAVATION AND COMPACTED FILL REQUIREMENTS	1	S4.1
TYPICAL EXCAVATION ADJACENT TO FOOTING	2	S4.1
TYPICAL FOOTING POURED AGAINST EARTH	3	S4.1
TYPICAL REINFORCING HOOKS	4	S4.1
TYPICAL REINFORCING BAR IN CONCRETE DEVELOPMENT AND LAP SPLICE SCHEDULE	5	S4.1
WALL AND FOOTING REINFORCING AT CORNER AND INTERSECTION	6	S4.1
TYPICAL STEPPED FOOTING	7	S4.1
TYPICAL PIPE/CONDUIT SLEEVES ACROSS FOOTINGS	8	S4.1
TYPICAL SLAB-ON-GRADE UNDERLAYMENT	9	S4.1
TYPICAL SLAB-ON-GRADE CONTROL AND CONSTRUCTION JOINTS	10	S4.1
TYPICAL ISOLATION JOINT IN SLAB-ON-GRADE AT STEEL COLUMN	11	S4.1
TYPICAL SLAB EDGE AT OPENINGS	12	S4.1
TYPICAL DEPRESSION IN SLAB-ON-GRADE	13	S4.1
TYPICAL CONCRETE HOUSEKEEPING PAD	14	S4.1
TYPICAL CONCRETE CURBS	15	S4.1
EXTERIOR CMU WALL FOUNDATION	1	S4.2
INTERIOR CMU WALL FOUNDATION	2	S4.2
INTERIOR HSS OR PIPE COLUMN TO FOOTING	3	S4.2
SLAB EDGE AT STOREFRONT	5	S4.2
HSS COLUMN TO CAISSON	6	S4.2
TYPICAL NON-BEARING WOOD STUD PARTITION AT CONCRETE	13	S4.3

LIST OF APPLICABLE TYPICAL CMU DETAILS

DESCRIPTION	DETAIL	SHEET
TYPICAL REINFORCING BAR IN CMU DEVELOPMENT AND LAP SPLICE SCHEDULE	1	S5.1
TYPICAL REINFORCING PLACEMENT IN CMU	2	S5.1
TYPICAL CMU WALL REINFORCING AT INTERSECTION AND CORNER	3	S5.1
TYPICAL CMU WALL CONTROL JOINT	4	S5.1
TYPICAL CMU WALL JAMB REINFORCING	5	S5.1
TYPICAL CMU WALL JAMB AND SILL REINFORCING	6	S5.1
TYPICAL RECESSED RECEPTACLE LOCATIONS	7	S5.1
8" CMU JAMB REINFORCING (OPENING ON EACH SIDE OF JAMB)	8	S5.1
TYPICAL CMU WALL REINFORCING AT PENETRATION	9	S5.1
STEEL LEDGER TO CMU WALL CORNER	10	S5.1
CMU WALL LINTEL CENTERED REINFORCING	11	S5.1

LIST OF APPLICABLE TYPICAL STEEL FRAMING DETAILS

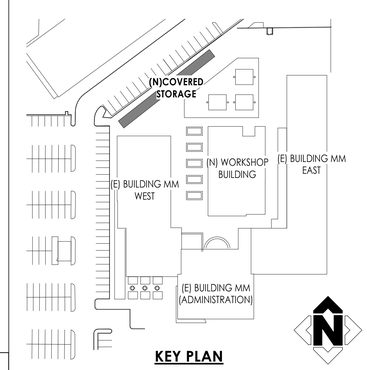
DESCRIPTION	DETAIL	SHEET
TYPICAL BEAM CONNECTION SCHEDULE	1	S6.1
TYPICAL STIFFENER PLATE	2	S6.1
TYPICAL INTERIOR Wx BEAM TO COLUMN CONNECTION	3	S6.1
TYPICAL BEAM TO BEAM CONNECTION	4	S6.1
TYPICAL STEEL BEAM TO STEEL BEAM SPLICE	5	S6.1
TYPICAL FLOOR AND ROOF DECK SCHEDULE	6	S6.1
TYPICAL CHANGE IN DECK DIRECTION	7	S6.1
TYPICAL BEAM TO CANOPY COLUMN CONNECTION	8	S6.1

COLUMN SCHEDULE - STORAGE BUILDING

MARK	COLUMN SIZE	BASE PLATE SIZE	BASE PLATE TYPE	BASE PLATE REFERENCE DETAIL
SC1	HSSx8x8x3/8	3/4x10x0'-10"	B	3/S4.2
SC2	HSSx8x8x3/8	3/4x10x0'-10"	A	3/S4.2

FOOTING SCHEDULE - STORAGE BUILDING

FOOTING MARK	FOOTING SIZE	FOOTING REINFORCING
SF1	2'-6"Ø x6'-6" DEEP	SEE TYPICAL DETAIL
SF2	3'-0" x3'-0" x18" THK	(5)-#5 EW



KEY PLAN

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MHP JN 17-0627-00

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SUBMITTALS

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1	05/22/2020	ADDENDUM#1

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DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE
NEW COVERED STORAGE FOUNDATION & FRAMING PLANS

SHEET NUMBER
S2.5

ADDENDUM#1

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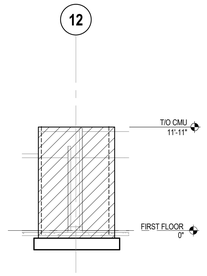
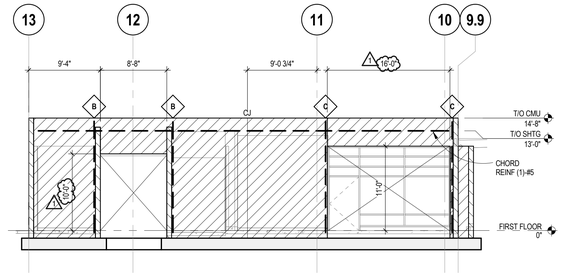


CMU WALL ELEVATION SCALE 1/8" = 1'-0" P



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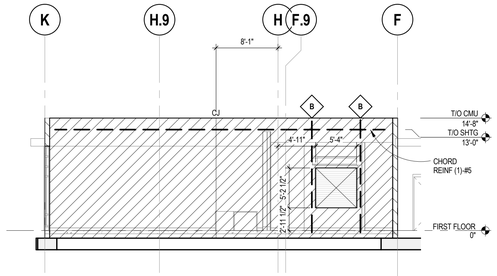

CMU WALL ELEVATION SCALE 1/8" = 1'-0" A

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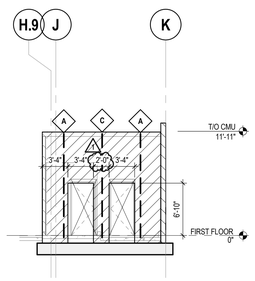
2. FOR TYPICAL CMU WALL JAMB AND LINTEL REINFORCING, SEE DETAIL **6/S5.1**.
3. FOR TYPICAL CMU WALL REINFORCING AT PENETRATION, SEE DETAIL **9/S5.1**.
4. FOR TYPICAL CMU WALL CONTROL JOINT, SEE DETAIL **4/S5.1**.



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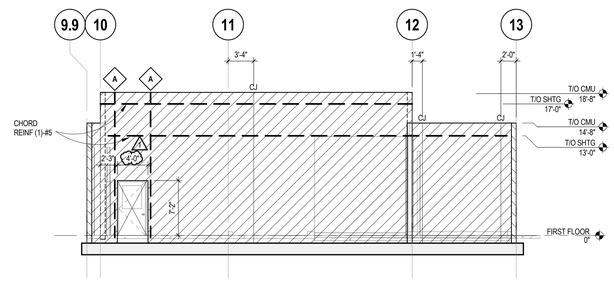

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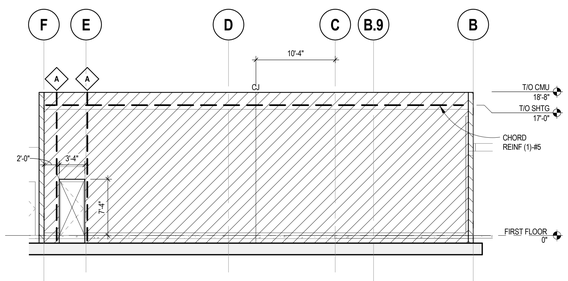

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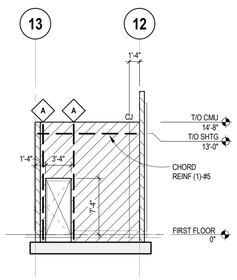

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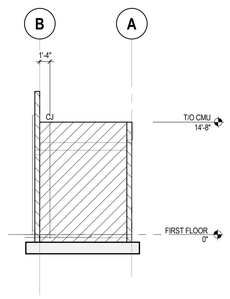

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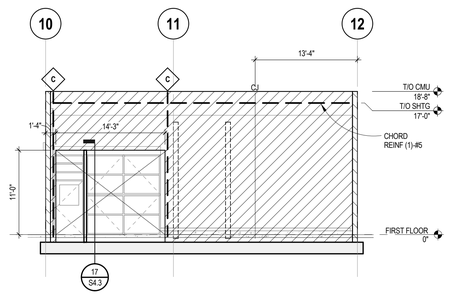

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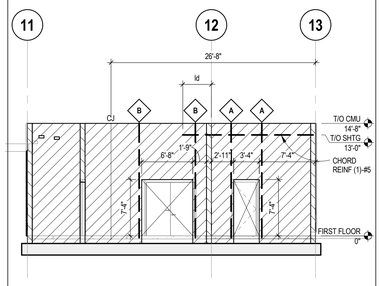

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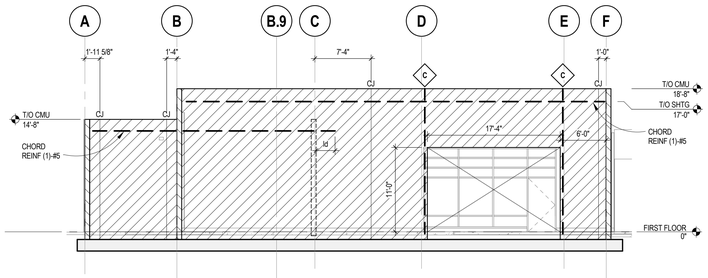

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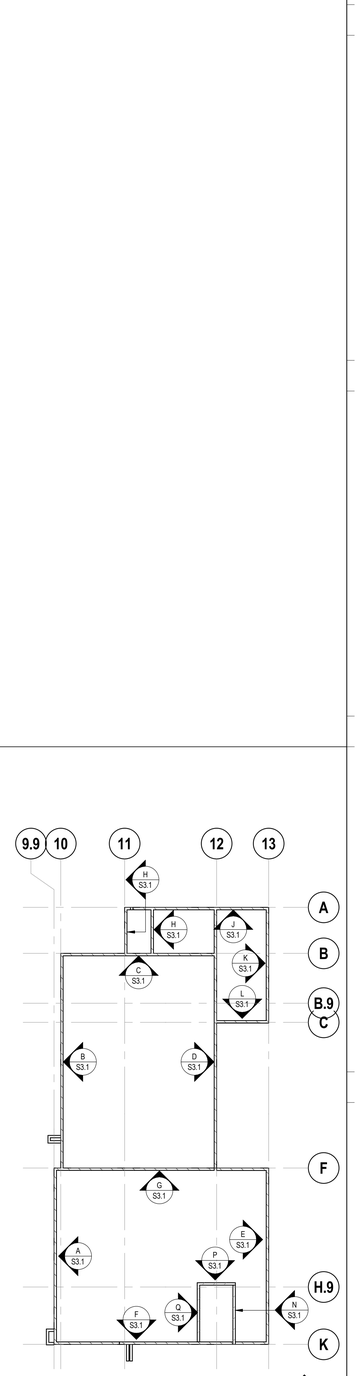
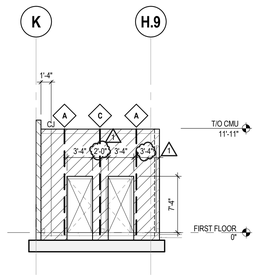


NEW WORKSHOP BUILDING CMU WALL ELEVATION KEY PLAN



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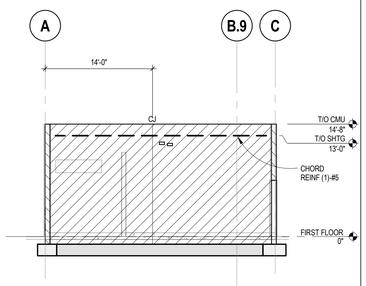
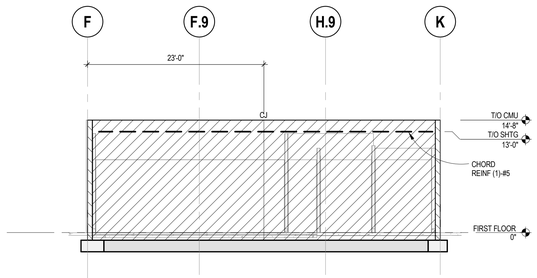


CMU WALL ELEVATION SCALE 1/8" = 1'-0" K



CMU WALL ELEVATION SCALE 1/8" = 1'-0" E

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MHP JN 17-0627-00

SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
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SHEET TITLE

NEW WORKSHOP BUILDING CMU WALL ELEVATIONS

SHEET NUMBER

S3.1

ADDENDUM#1

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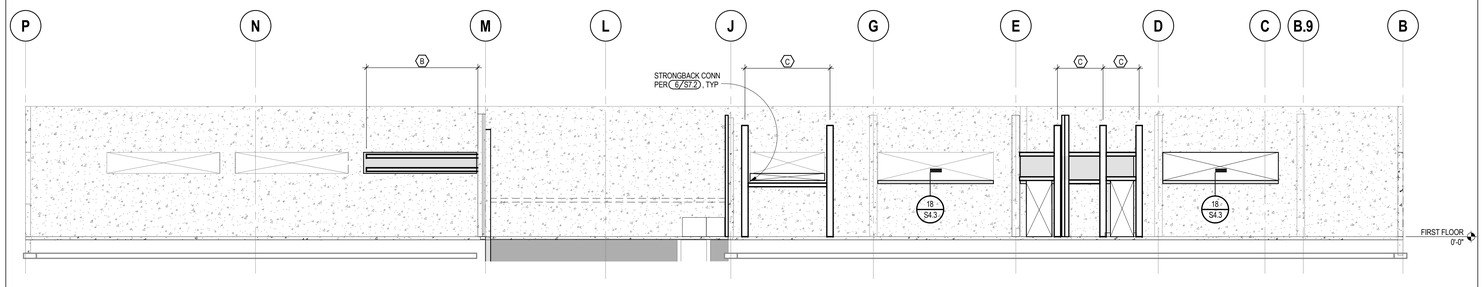
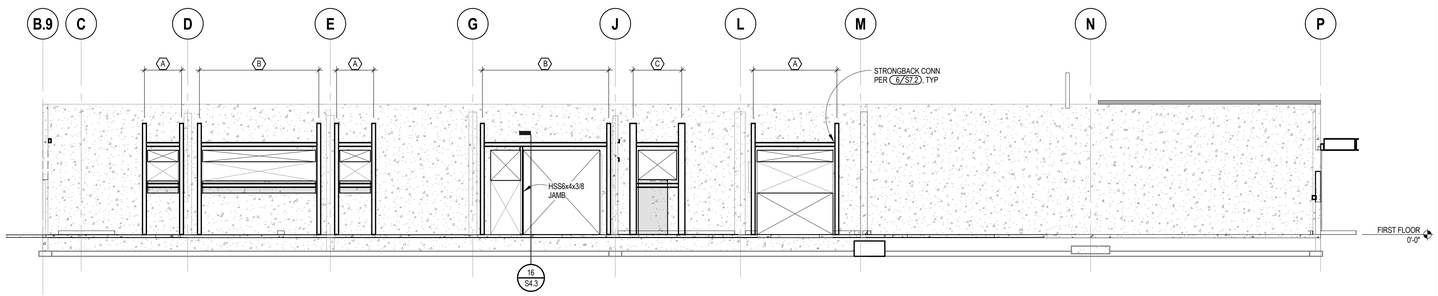


CONCRETE WALL ELEVATION SCALE 1/8" = 1'-0" A



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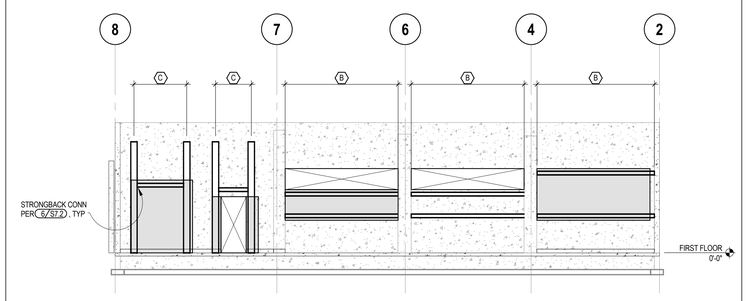

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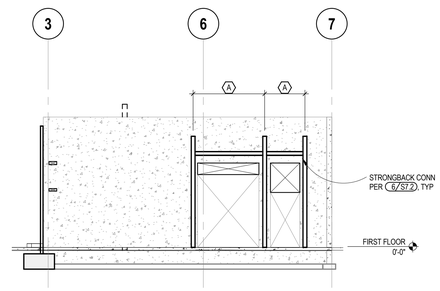

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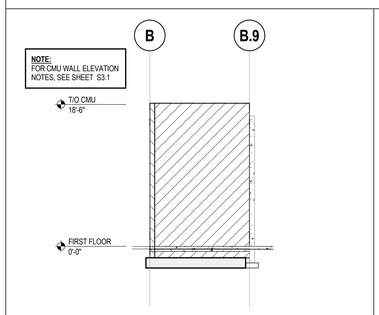
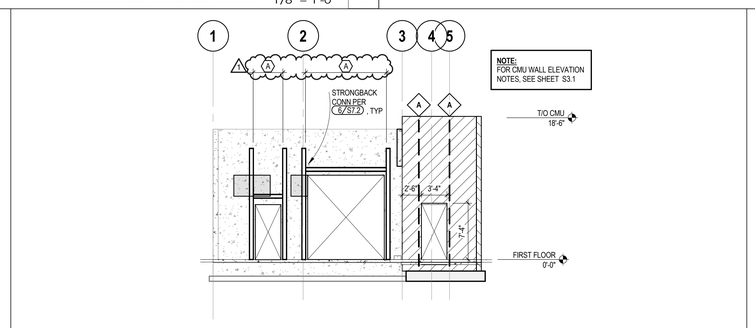


CMU WALL ELEVATION SCALE 1/8" = 1'-0" G



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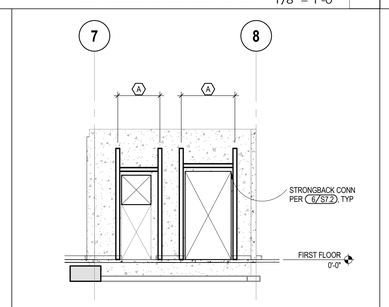

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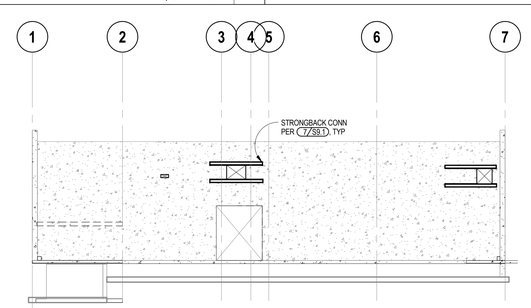


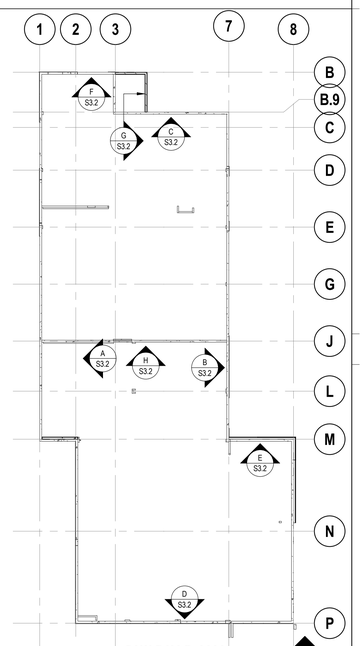
CONCRETE WALL ELEVATION SCALE 1/8" = 1'-0" H

ELEVATION NOTES

1. SEE GENERAL NOTES SHEET(S) FOR APPLICABLE NOTES, ABBREVIATIONS AND PLAN SYMBOLS LEGEND. SEE PLAN SHEET FOR LIST OF APPLICABLE TYPICAL DETAILS NOT CALLED OUT ON PLANS.
2. EXISTING CONSTRUCTION IS SHOWN FADED AND IS LABELED AS EXISTING OR (E). NEW CONSTRUCTION IS SHOWN DARK AND IS SPECIFICALLY REFERENCED BY DETAILS AND NOTES.
3. EXISTING CONDITIONS ARE SHOWN TO THE BEST OF OUR KNOWLEDGE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACTUAL CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING.
2. FOR TYPICAL CMU WALL JAMB AND LINTEL REINFORCING, SEE DETAIL **6/S5.1**.
3. FOR TYPICAL CMU WALL REINFORCING AT PENETRATION, SEE DETAIL **9/S5.1**.
4. FOR TYPICAL CMU WALL CONTROL JOINT, SEE DETAIL **4/S5.1**.

PLAN SYMBOLS

SYMBOL	DESCRIPTION
	EXISTING OPENING TO REMAIN
	NEW OPENING, SEE 4/S4.3
	NEW CONCRETE INFILL, SEE 5/S4.3
X	NEW OPENING STRENGTHENING MARK, SEE 6/S7.2



BUILDING MM WALL ELEVATION KEY PLAN

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DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE
EXISTING BUILDING MM WALL ELEVATIONS

SHEET NUMBER
S3.2

ADDENDUM#1

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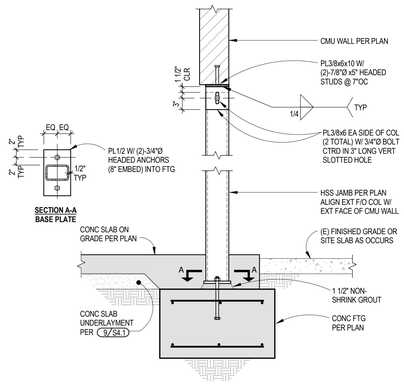

HSS JAMB AT BI-FOLD DOOR 17 S4.3
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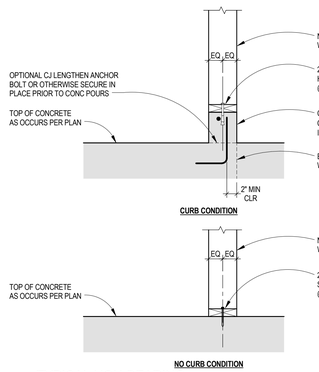
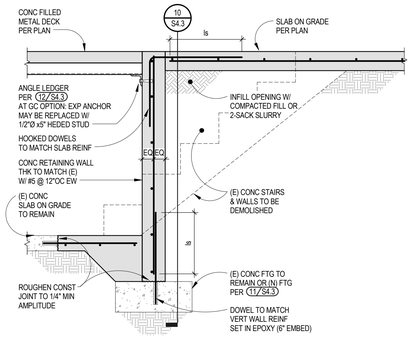
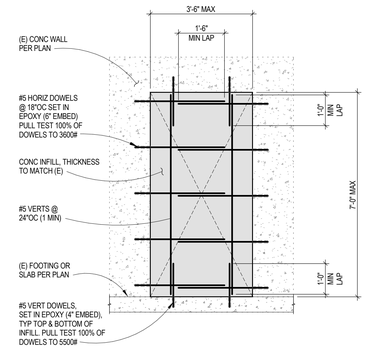


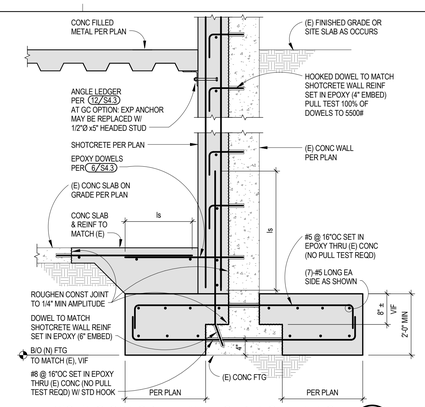
TYPICAL NON-BEARING
WOOD STUD PARTITION AT CONCRETE 13 S4.3
SCALE: 1" = 1'-0"



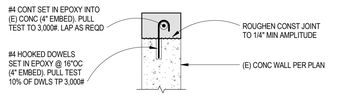
RETAINING WALL INFILL AT STAIR 9 S4.3
SCALE: 3/4" = 1'-0"



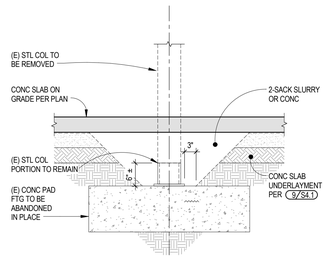
TYPICAL CONCRETE WALL INFILL
SCALE: NONE
5 S4.3



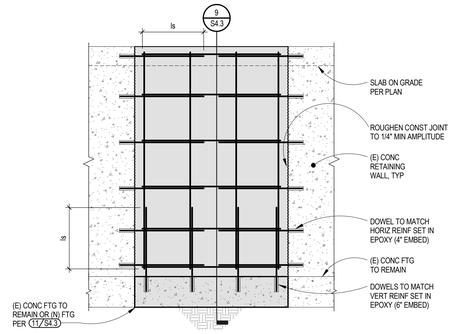
EXISTING CONCRETE WALL STRENGTHENING 1 S4.3
SCALE: 3/4" = 1'-0"



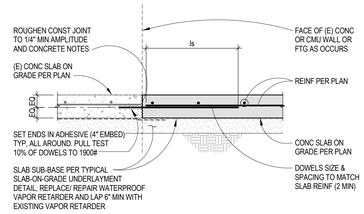
CONCRETE CAP DETAIL 18 S4.3
SCALE: 1" = 1'-0"



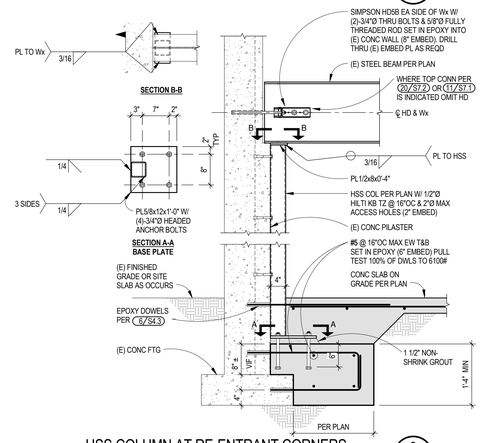
EXISTING REMOVED COLUMN FOUNDATION 14 S4.3
SCALE: 3/4" = 1'-0"



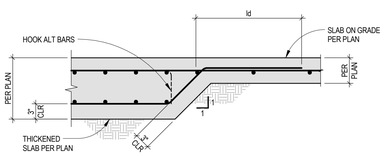
EXISTING CONCRETE RETAINING WALL INFILL 10 S4.3
SCALE: 3/4" = 1'-0"



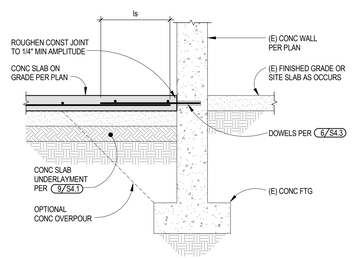
TYPICAL NEW SLAB TO EXISTING SLAB OR WALL 6 S4.3
SCALE: NONE



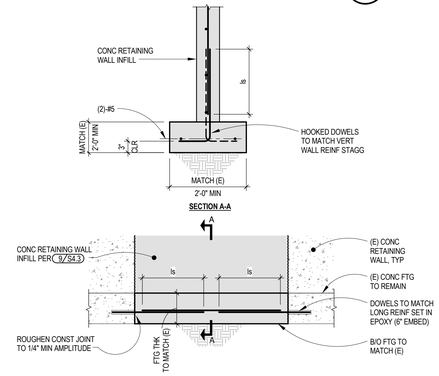
HSS COLUMN AT RE-ENTRANT CORNERS 2 S4.3
SCALE: 3/4" = 1'-0"



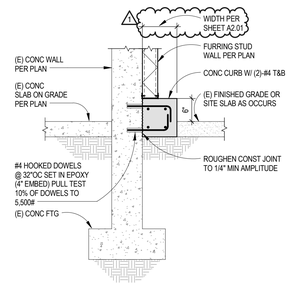
THICKENED SLAB TRANSITION 19 S4.3
SCALE: 1" = 1'-0"



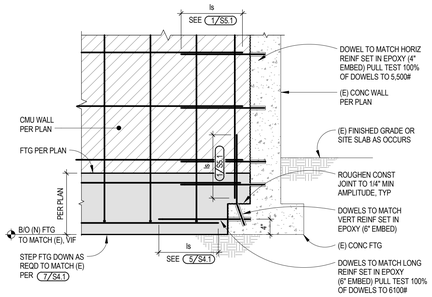
CONCRETE SLAB TO EXISTING CONCRETE WALL 15 S4.3
SCALE: 3/4" = 1'-0"



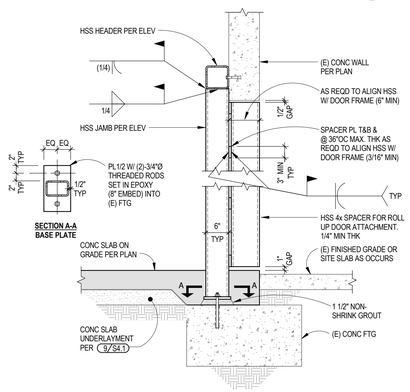
RETAINING WALL INFILL FOOTING AT STAIRS 11 S4.3
SCALE: 3/4" = 1'-0"



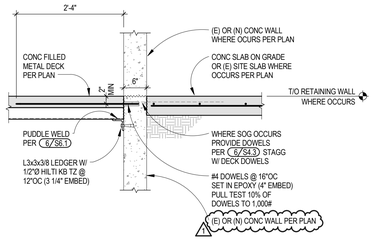
CONCRETE CURB AT FURRED WALL 7 S4.3
SCALE: 3/4" = 1'-0"



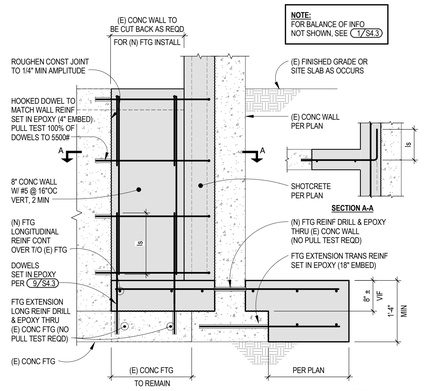
NEW CMU WALL
TO EXISTING CONCRETE WALL 3 S4.3
SCALE: 3/4" = 1'-0"



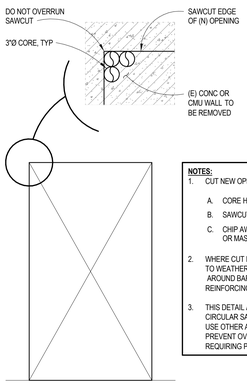
HSS JAMB AT BI-FOLD DOOR 16 S4.3
SCALE: 3/4" = 1'-0"



STEEL LEDGER AT CONCRETE WALL 12 S4.3
SCALE: 3/4" = 1'-0"



EXISTING RETAINING WALL STRENGTHENING 8 S4.3
SCALE: 3/4" = 1'-0"



NOTES:
1. CUT NEW OPENING AS FOLLOW:
   A. CORE HOLES AT EACH CORNER
   B. SAWCUT BETWEEN CORNERS
   C. CHIP AWAY REMAINING CONCRETE OR MASONRY AT CORED HOLES
2. WHERE CUT REBAR IS PERMANENTLY EXPOSED TO WEATHER, CHIP AWAY CONC OR GROUT AROUND BAR TO 3/4" DEPTH ALL AROUND, CUT REINFORCING AND FILL WITH EPOXY.
3. THIS DETAIL ANTICIPATES THE USE OF A CIRCULAR SAW BLADE. THE CONTRACTOR MAY USE OTHER APPROVED MEANS THAT WOULD PREVENT OVER-CUTTING WHILE NOT REQUIRING PRE-CORING.

NEW OPENING IN EXISTING CONCRETE OR CMU 4 S4.3
SCALE: NONE

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MHP JN 17-0627-00

SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION 17-0627-00

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE
BUILDING MM FOUNDATION SECTIONS AND DETAILS

SHEET NUMBER
S4.3

ADDENDUM#1

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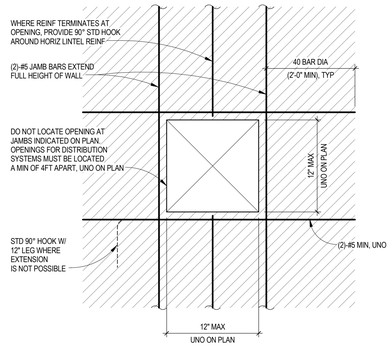


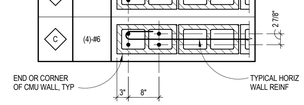
TYPICAL CMU WALL REINFORCING AT PENETRATION

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

9 / S5.1

JAMB REINFORCING SCHEDULE

MARK	VERT BARS	VERT BAR PLACEMENT
A	(2)-#5	
B	(2)-#6	
C	(4)-#6	



NOTE:
PROVIDE DOWELS INTO FOOTING TO MATCH FULL HEIGHT VERTICAL BARS SHOWN. DOWELS TO BE EMBEDDED ldh PER **5/S4.1**. MINIMUM WITH A STANDARD HOOK AT END.

TYPICAL CMU WALL JAMB REINFORCING

SCALE: 3/4" = 1'-0"

5 / S5.1

DEVELOPMENT LENGTH (ld) AND LAP SPLICE (ls) FOR TYPICAL BARS

BAR SIZE (GR 60)	ASSEMBLY STRENGTH f'm (PSI) 2000
#3	14"
#4	25"
#5	39"
#6	54"
#7	63"
#8	72"

HOOK LENGTH (ldh) WITH STANDARD HOOKS

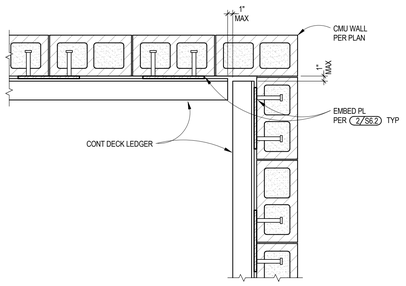
BAR SIZE (GR 60)	ASSEMBLY STRENGTH f'm (PSI) 2000
#3	5"
#4	7"
#5	9"
#6	10"
#7	12"
#8	13"

NOTES:
1. PROVIDE THE MINIMUM DEVELOPMENT LENGTH OR LAP SPLICE FOR REINFORCING BARS IN CMU PER THE ABOVE TABLES, UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.
2. CLEAR COVER OF BARS IS ASSUMED TO BE NOT LESS THAN 2".

TYPICAL REINFORCING BAR IN CMU DEVELOPMENT AND LAP SPLICE SCHEDULE

SCALE: 1" = 1'-0"

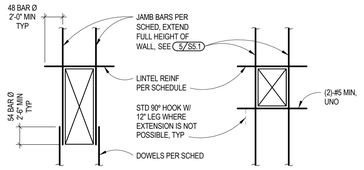
1 / S5.1



STEEL LEDGER TO CMU WALL CORNER

SCALE: 1" = 1'-0"

10 / S5.1



LINTEL REINFORCING SCHEDULE

OPENING WIDTH	HEADER REINFORCING (UNO) 8" CMU		JAMB REINFORCING PER 5/S5.1
LESS THAN 5'-0"	(1)-#5		A
5'-0" TO 10'-0"	(1)-#5		B
10'-0" TO 18'-0"	(2)-#5		C

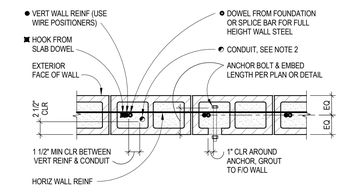
NOTE: FOR LINTEL REINFORCING CONFIGURATION, SEE 11/S5.1

TYPICAL CMU WALL JAMB AND LINTEL REINFORCING

SCALE: 1" = 1'-0"

6 / S5.1

NOTE:
1. DOWELS, ANCHORS AND/OR EMBED PLATES SHALL BE SECURELY TIED IN PLACE PRIOR TO GROUTING CELLS.
2. ELECTRICAL CONDUIT MAY BE LOCATED WITHIN MIDDLE 1/3 OF WALL THICKNESS (BETWEEN HORIZONTAL BARS IN WALLS WITH DOUBLE CURTAIN REINFORCING, SAME SIDE OF HORIZONTAL BARS AS VERTICAL BARS IN WALLS WITH CENTERED REINFORCING) 1 1/2" MAXIMUM OUTSIDE DIAMETER, 1 PER CELL.
3. NO RECESSED ELECTRICAL RECEPTACLES ALLOWED WITHIN JAMB LOCATIONS, SEE TYPICAL RECESSED RECEPTACLE LOCATIONS DETAIL.

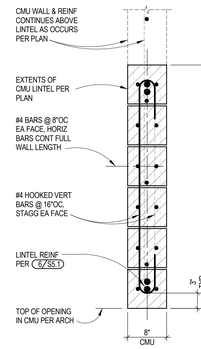


PLAN VIEW
CMU WALLS WITH CENTERED WALL REINFORCING

TYPICAL REINFORCING PLACEMENT IN CMU

SCALE: 1" = 1'-0"

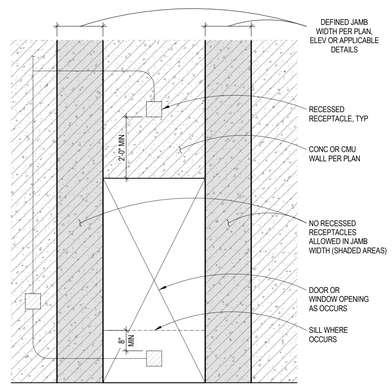
2 / S5.1



CMU WALL LINTEL CENTERED REINFORCING

SCALE: 1" = 1'-0"

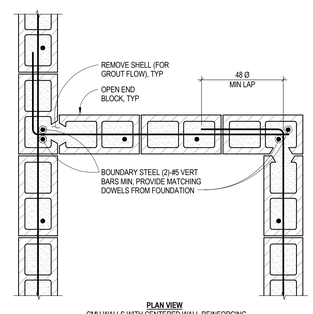
11 / S5.1



TYPICAL RECESSED RECEPTACLE LOCATIONS

SCALE: 1" = 1'-0"

7 / S5.1



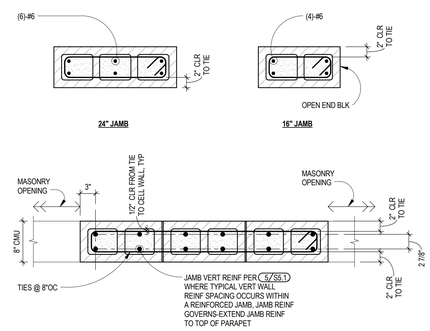
PLAN VIEW
CMU WALLS WITH CENTERED WALL REINFORCING

NOTE:
WHERE BOUNDARY REINFORCING CONSISTS OF (4) OR MORE BARS, TOTAL NUMBER MAY BE PLACED IN EITHER WALL PLANE.

TYPICAL CMU WALL REINFORCING AT INTERSECTION AND CORNER

SCALE: 1" = 1'-0"

3 / S5.1



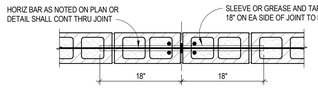
TYPICAL JAMB

8" CMU JAMB REINFORCING (OPENING ON EACH SIDE OF JAMB)

SCALE: 1" = 1'-0"

8 / S5.1

NOTE:
SEE ARCHITECTURAL DRAWINGS FOR WATERPROOFING DETAILS AT SUBTERRANEAN WALLS.



TYPICAL HORIZONTAL REINFORCING BARS

TYPICAL CMU WALL CONTROL JOINT

SCALE: 1" = 1'-0"

4 / S5.1

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
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DRAWN BY AM / GL

CHECKED BY KDO

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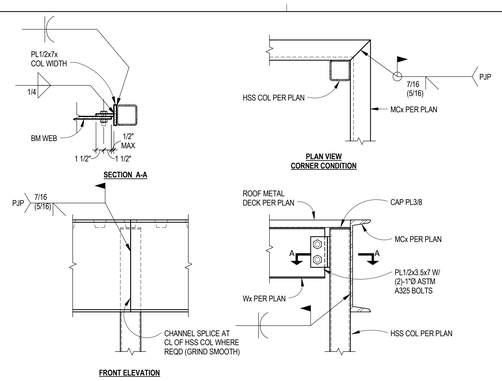
SHEET TITLE

TYPICAL CMU WALL SECTIONS AND DETAILS

SHEET NUMBER

S5.1

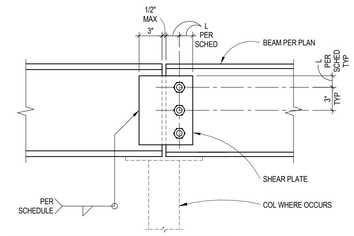
ADDENDUM#1



TYPICAL BEAM
TO CANOPY COLUMN CONNECTION

SCALE: 1" = 1'-0"

8 / S6.1



NOTE:
FOR SIZE AND NUMBER OF FASTENERS, WELD AND SHEAR PLATE SIZE & THICKNESS, SEE TYPICAL BEAM CONNECTION SCHEDULE DETAIL. BOTH CONNECTIONS MAY BE WELDED WHERE DESIRED. AT EXISTING BEAMS. WELDS MAY BE 3-SIDED AND FIELD WELDED.

TYPICAL STEEL BEAM TO STEEL BEAM SPLICE

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

5 / S6.1

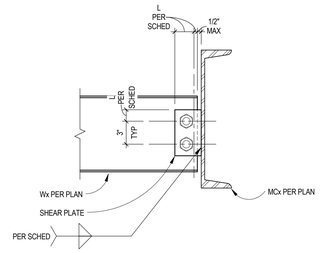
BEAM CONNECTION SCHEDULE

BEAM SIZE (Wx,Cx,MCx)	NUMBER & SIZE OF A325 BOLTS	SHEAR PL THICKNESS	L EDGE DISTANCE	SHEAR PL WELD SIZE
W8x, W10x, C10x, MC10x	(2)-1"Ø	1/4"	1 1/2"	1/4"
W12x, C12x, MC12x	(3)-1"Ø	5/16"	1 1/2"	1/4"
W14x	(3)-1"Ø	5/16"	2"	1/4"
W16x, W18x, C18x, MC18x	(4)-1"Ø	3/8"	2"	1/4"
W21x	(5)-1"Ø	7/16"	2"	5/16"
W24x	(6)-1"Ø	7/16"	2"	5/16"
W27x	(7)-1"Ø	7/16"	2"	5/16"
W30x	(8)-1"Ø	7/16"	2"	5/16"
W33x	(9)-1"Ø	7/16"	2"	5/16"
W36x	(10)-1"Ø	7/16"	2"	5/16"

TYPICAL BEAM CONNECTION SCHEDULE

SCALE: 1" = 1'-0"

1 / S6.1

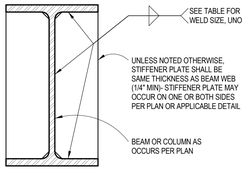


NOTE:
FOR SIZE AND NUMBER OF FASTENERS, WELD AND SHEAR PLATE SIZE & THICKNESS, SEE TYPICAL BEAM CONNECTION SCHEDULE DETAIL.

Wx BEAM TO CHANNEL CONNECTION

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

9 / S6.1



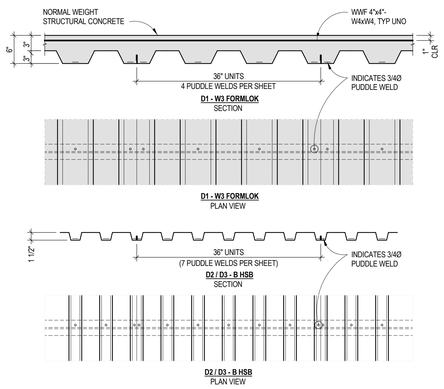
STIFFENER PLATE WELD SIZE TABLE
(SEE AISC SPECIFICATION TABLE J2.4)

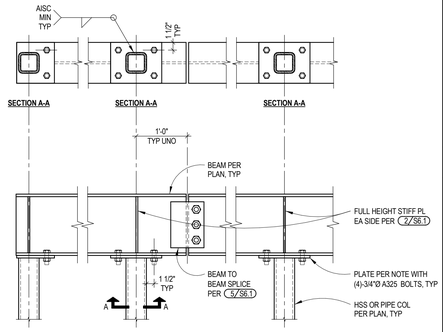
MATERIAL THICKNESS OF THICKER PART JOINED	MINIMUM WELD SIZE OF FILLET WELD
TO 1/4" INCLUSIVE	1/8"
OVER 1/4" TO 1/2"	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4"	5/16"

TYPICAL STIFFENER PLATE

SCALE: 1" = 1'-0"

2 / S6.1



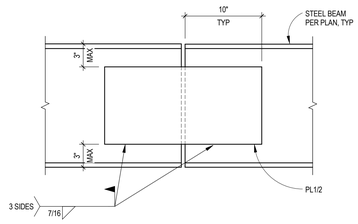


NOTE:
COLUMN CAP PLATE AND BASE PLATE SHALL MATCH THE GREATER OF BEAM FLANGE WIDTH OR COLUMN WIDTH WITH A THICKNESS TO MATCH BEAM FLANGE (1/2" MINIMUM).

TYPICAL
INTERIOR Wx BEAM TO COLUMN CONNECTION

SCALE: 1" = 1'-0"

3 / S6.1



DRAG BEAM SPLICE

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

10 / S6.1

DECK SCHEDULE

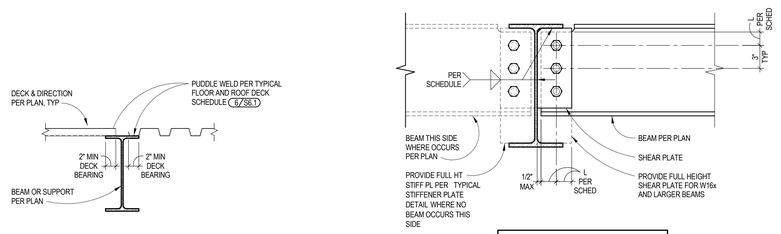
MARK	DECK TYPE	DECK PROPERTIES			LENGTH (MAX SPAN)			WELD SPACING (PARALLEL TO FLUTE)		SIDELAP CONNECTION
		+I	+S	-S	SINGLE SPAN	DOUBLE SPAN	TRIPLE SPAN	DRAG BEAMS	OTHER BEAMS	
D1	W3 x18GA	1.213	0.752	0.768	11'-0"	-	-	-	12"OC	VSC2 @ 12"OC
D2	B x18GA	0.302	0.314	0.331	8'-0"	-	-	-	6"OC	VSC2 @ 12"OC

NOTES:
1. DECK SHALL BE WELDED AT BEARING SUPPORTS WITH SPACING AS SHOWN.
2. UNLESS NOTED OTHERWISE, SHEAR STUD MAY REPLACE A PUDDLE WELD 1 FOR 1.

TYPICAL FLOOR AND ROOF DECK SCHEDULE

SCALE: 1" = 1'-0"

6 / S6.1



NOTE:
FOR SIZE AND NUMBER OF FASTENERS, WELD AND SHEAR PLATE SIZE & THICKNESS, SEE TYPICAL BEAM CONNECTION SCHEDULE DETAIL.

TYPICAL CHANGE IN DECK DIRECTION

SCALE: 1" = 1'-0"

7 / S6.1

TYPICAL BEAM TO BEAM CONNECTION

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

4 / S6.1

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MHP JN 17-0627-00

SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION 17-0627-00

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE
TYPICAL STEEL FRAMING SECTIONS AND DETAILS

SHEET NUMBER
S6.1

ADDENDUM#1

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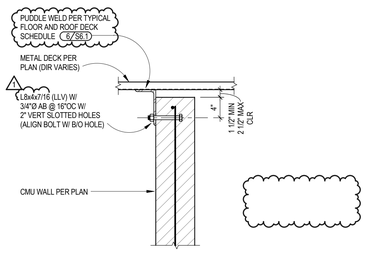
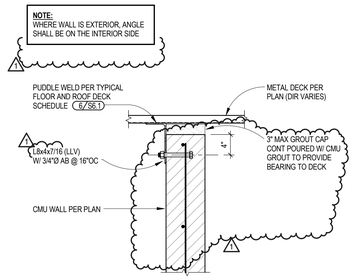
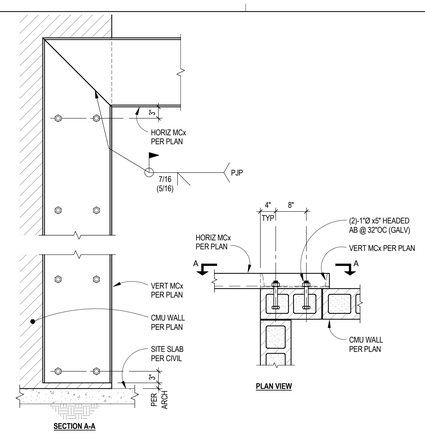


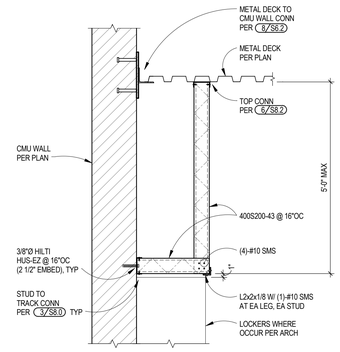
METAL DECK TO TOP OF CMU WALL (SLOTTED) 17 S6.2
SCALE: 1" = 1'-0"



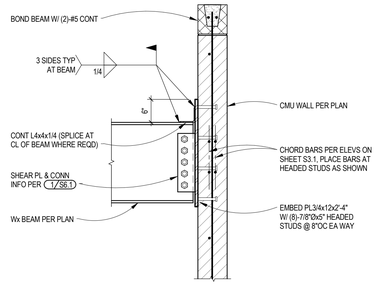
METAL DECK TO TOP OF CMU WALL 13 S6.2
SCALE: 1" = 1'-0"



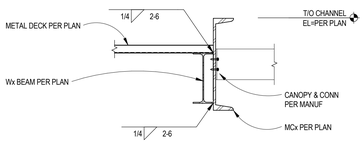
VERTICAL CHANNEL TO CMU WALL 9 S6.2
SCALE: 3/4" = 1'-0"



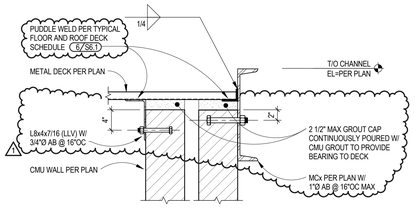
SOFFIT ABOVE LOCKERS 5 S6.2
SCALE: 3/4" = 1'-0"



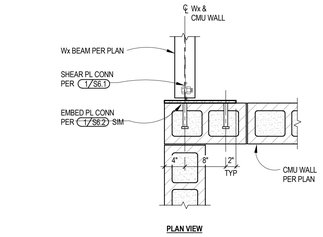
ROOF STEEL BEAM TO CMU WALL CONNECTION 1 S6.2
SCALE: 3/4" = 1'-0"



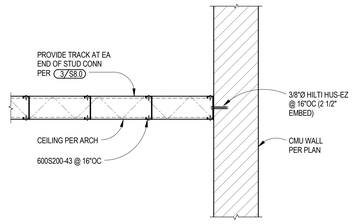
CHANNEL COVER OVER Wx BEAM 18 S6.2
SCALE: 1" = 1'-0"



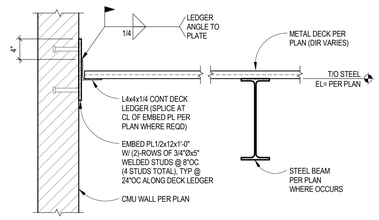
METAL DECK TO TOP OF
CMU WALL - EXTERIOR CONDITION 14 S6.2
SCALE: 1" = 1'-0"



STEEL BEAM TO CMU WALL CORNER 10 S6.2
SCALE: 1" = 1'-0"



INTERIOR SOFFIT DETAIL 6 S6.2
SCALE: 3/4" = 1'-0"



METAL DECK TO CMU WALL CONNECTION 2 S6.2
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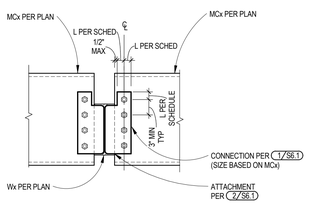

CHANNEL TO LOWER Wx BEAM CONNECTION 19 S6.2
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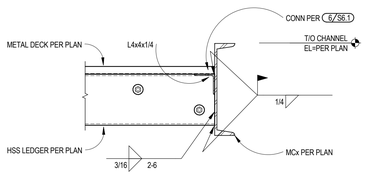

HSS LEDGER TO CHANNEL 15 S6.2
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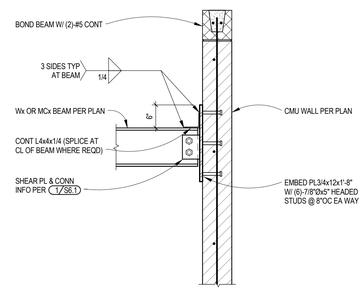
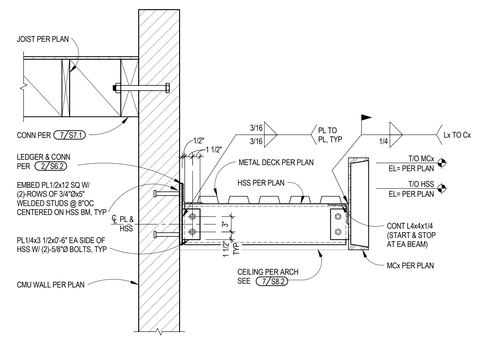
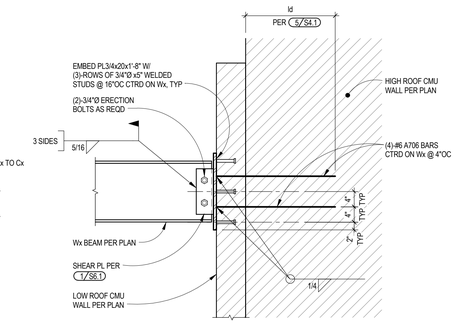


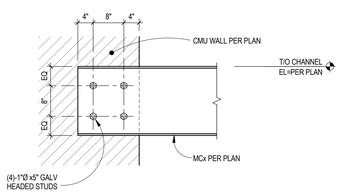
CANOPY STEEL BEAM
TO CMU WALL CONNECTION 11 S6.2
SCALE: 3/4" = 1'-0"



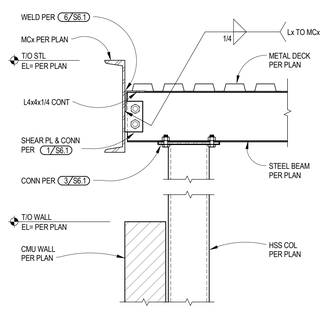
EAST CANOPY FRAMING 7 S6.2
SCALE: 1" = 1'-0"



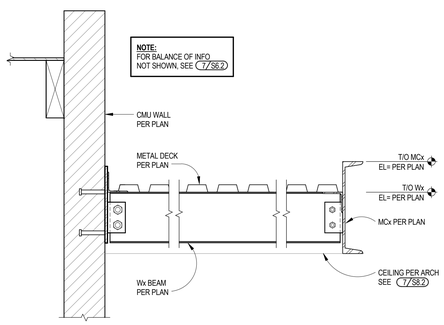
HIGH TO LOW ROOF DIAPHRAGM CONNECTION 3 S6.2
SCALE: 3/4" = 1'-0"



CHANNEL TO CMU WALL CONNECTION 16 S6.2
SCALE: 3/4" = 1'-0"



DETAIL 12 S6.2
SCALE: 1" = 1'-0"



WEST CANOPY FRAMING 8 S6.2
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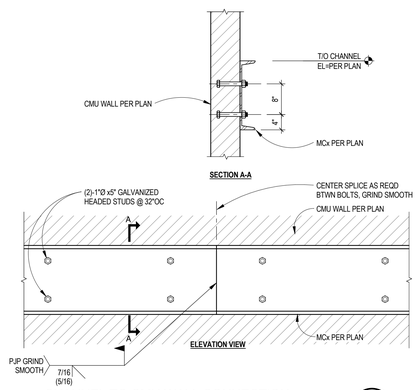

CHANNEL TO CMU WALL CONNECTION 4 S6.2
SCALE: 3/4" = 1'-0"

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SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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SHEET TITLE
NEW WORKSHOP BUILDING FRAMING SECTIONS AND DETAILS

SHEET NUMBER
S6.2

ADDENDUM#1

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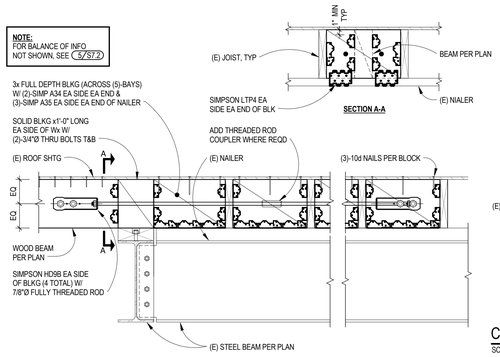
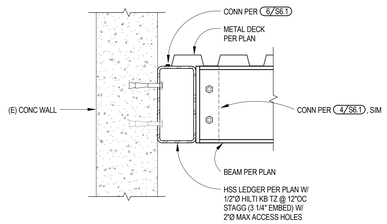
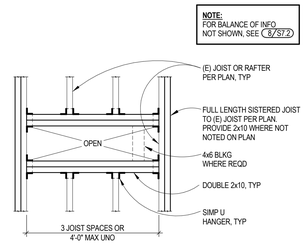


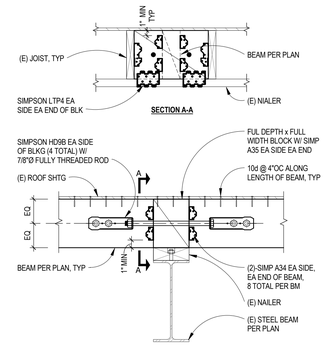
CONTINUITY TIE AT WOOD TO STEEL BEAM 18 S7.2
SCALE: 1" = 1'-0"



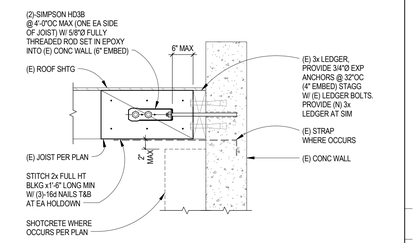
CANOPY BEAM TO LEDGER 13 S7.2
SCALE: 1 1/2" = 1'-0"



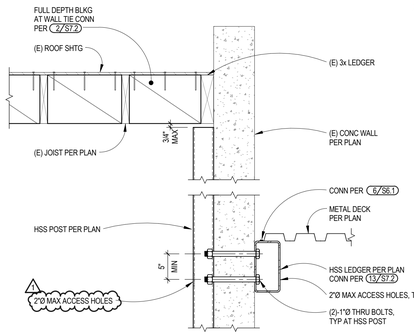
TYPICAL HORIZONTAL FRAMING AT OPENING (4'-0" MAX) 9 S7.2
SCALE: NONE



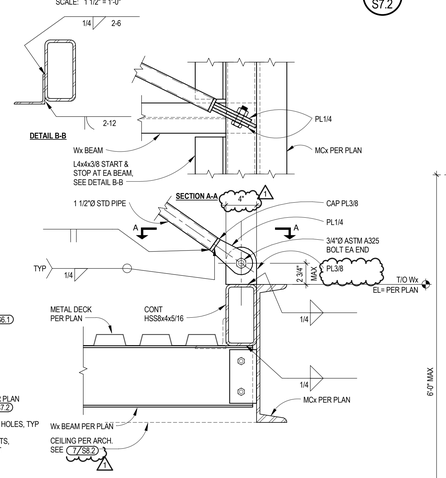
CONTINUITY TIE 5 S7.2
SCALE: 1" = 1'-0"



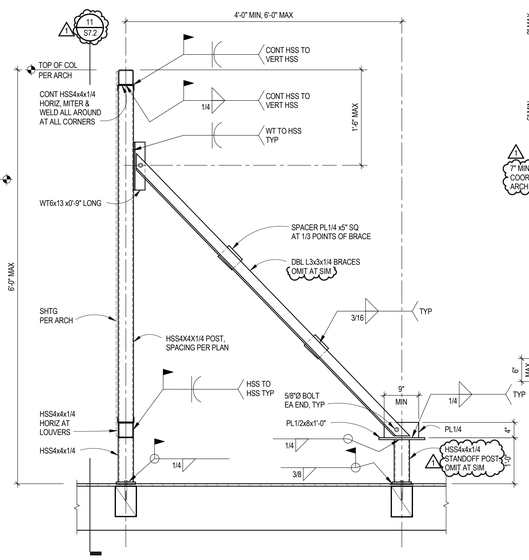
WALL TIE AT JOIST 1 S7.2
SCALE: 1" = 1'-0"



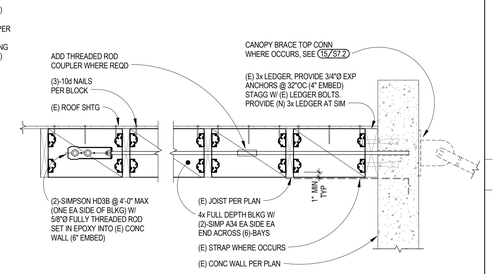
CANOPY LEDGER TO HSS STRONGBACK 19 S7.2
SCALE: 1" = 1'-0"



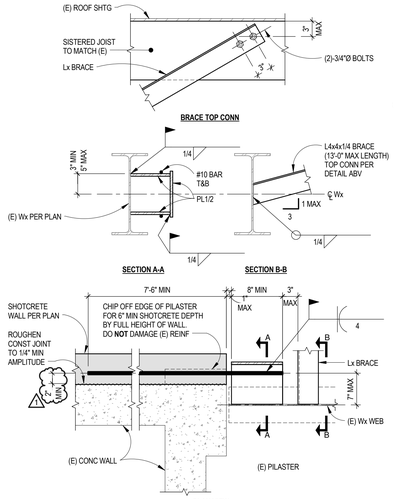
CANOPY BRACE BOTTOM CONNECTION 14 S7.2
SCALE: 1 1/2" = 1'-0"



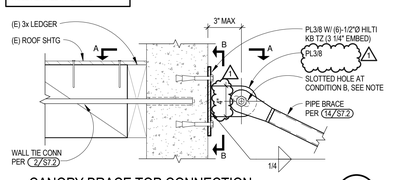
OPENING IN EXISTING CONCRETE WALL STRENGTHENING 6 S7.2
SCALE: 3/4" = 1'-0"



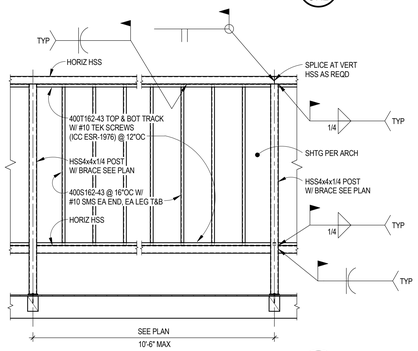
WALL TIE PERPENDICULAR TO JOIST 2 S7.2
SCALE: 1" = 1'-0"



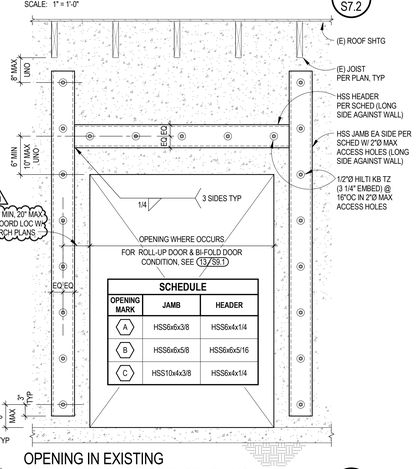
DRAG BEAM TO EXISTING CONCRETE WALL 20 S7.2
SCALE: 1" = 1'-0"



CANOPY BRACE TOP CONNECTION 15 S7.2
SCALE: 1 1/2" = 1'-0"



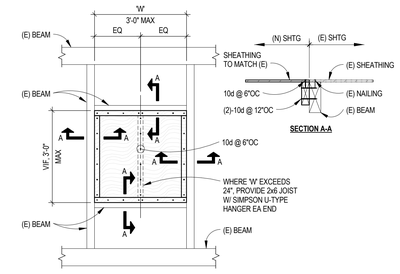
ROOF SCREEN ELEVATION 11 S7.2
SCALE: 3/8" = 1'-0"



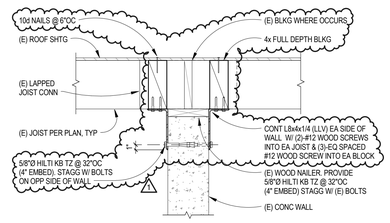
SCHEDULE

OPENING MARK	JAMB	HEADER
A	HSS6x6x3/8	HSS6x4x1/4
B	HSS6x6x5/8	HSS6x6x5/16
C	HSS10x4x3/8	HSS6x4x1/4

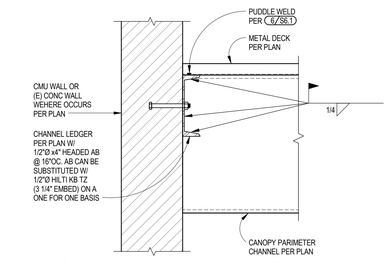
OPENING IN EXISTING CONCRETE WALL STRENGTHENING 6 S7.2
SCALE: 3/4" = 1'-0"



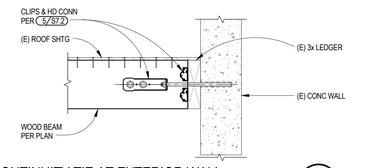
EXISTING OPENING INFILL DETAIL 7 S7.2
SCALE: 1/2" = 1'-0"



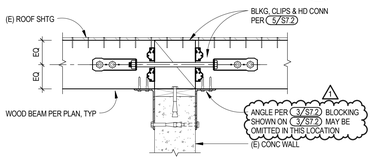
WALL ANCHORAGE AT INTERIOR WALL 3 S7.2
SCALE: 1" = 1'-0"



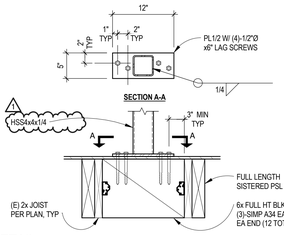
CANOPY PARIMETER CHANNEL TO LEDGER AT CMU WALL 21 S7.2
SCALE: 1 1/2" = 1'-0"



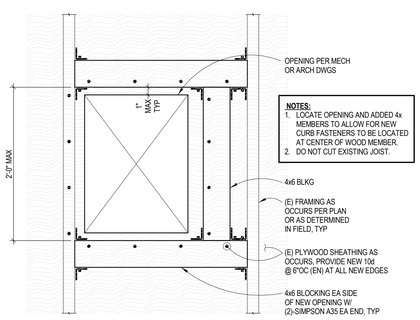
CONTINUITY TIE AT EXTERIOR WALL 16 S7.2
SCALE: 1" = 1'-0"



WALL TIE ACROSS INTERIOR CONCRETE WALL 17 S7.2
SCALE: 1" = 1'-0"

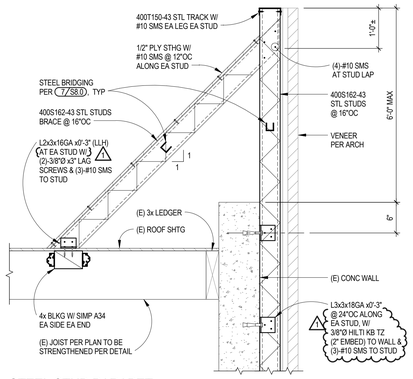


DETAIL 12 S7.2
SCALE: 1" = 1'-0"



NOTES:
1. LOCATE OPENING AND ADDED 4x MEMBERS TO ALLOW FOR NEW CURB FASTENERS TO BE LOCATED AT CENTER OF WOOD MEMBER.
2. DO NOT CUT EXISTING JOIST.

NEW OPENING BETWEEN EXISTING FRAMING MEMBERS 8 S7.2
SCALE: 1 1/2" = 1'-0"



STEEL STUD PARAPET AT EXISTING CONCRETE WALL 4 S7.2
SCALE: 1" = 1'-0"

ADDENDUM#1

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SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

PROJECT IDENTIFICATION 17-0627-00
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

DRAWN BY AM / GL
CHECKED BY KDO

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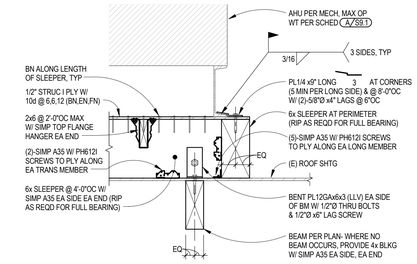
SHEET TITLE
BUILDING MM FRAMING SECTIONS AND DETAILS

SHEET NUMBER
S7.2

5/19/2020 5:26:41 PM C:\Users\gleyva\Documents\17-0627-00_LBCC Construction Trades I_R16_3truc_gleyva.rvt

5/19/2020 5:26:58 PM C:\Users\gleyva\Documents\17-0627-00_LBCC Construction Trades I_R18_3hsuc_gleyva.rvt

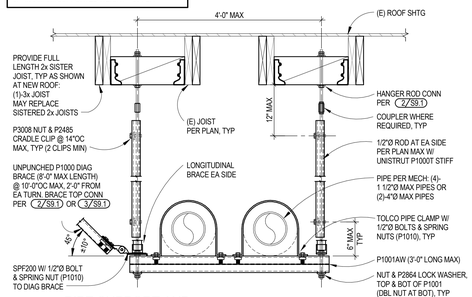


AHU ANCHORAGE

SCALE: 1" = 1'-0"

12 / S9.1

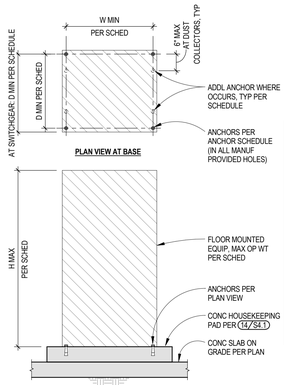
NOTES:
1. PROVIDE TRANSVERSE BRACE AT 10'-0"OC AND 2'-0" MAXIMUM FROM EACH TURN.
2. PROVIDE (2)-LONGITUDINAL BRACES AT 20'-0"OC AND 2'-0" MAXIMUM FROM EACH TURN.
3. MAXIMUM SUPPORTED WEIGHT = 36 PLF.



PIPE SUPPORT AND BRACING TO WOOD FRAMING

SCALE: 1" = 1'-0"

8 / S9.1



NOTE:
SEE SCHEDULE (A/S9.1) FOR UNIT DIMENSIONS AND MAXIMUM OPERATING WEIGHTS.

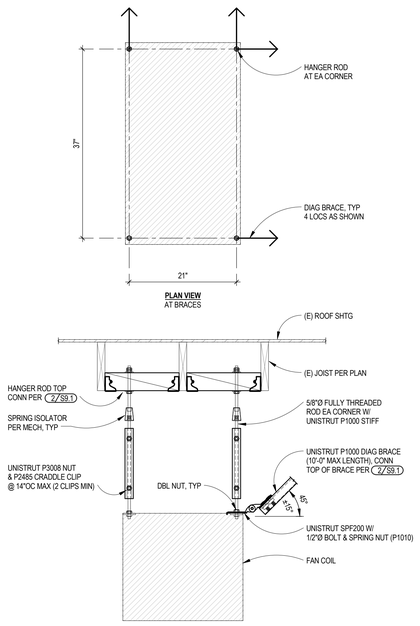
ANCHOR SCHEDULE

MARK	ANCHORS
DC-1, DC-2	(8)-1/2"Ø SS HILTI KB-TZ (2" EMBED)
TD-1	(8)-5/8"Ø HILTI KB-TZ (3 1/8" EMBED)
TD-2	(4)-5/8"Ø HILTI KB-TZ (3 1/8" EMBED)
CA-1	(4)-1/2"Ø SS HILTI KB-TZ (2" EMBED)
CA-2	(4)-1/2"Ø SS HILTI KB-TZ (2" EMBED)
2DB1 2DB2 4DB1	(4)-5/8"Ø HILTI KB-TZ (3 1/8" EMBED)

FLOOR MOUNTED EQUIPMENT ANCHORAGE

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

9 / S9.1



FAN COIL ANCHORAGE

SCALE: 1" = 1'-0"

5 / S9.1

MECHANICAL EQUIPMENT

MARK	MODEL	DESCRIPTION	LOCATION	DIMENSIONS W	D	H	MAXIMUM OPERATING WEIGHT	DETAIL
AHU-MM1	ENERGY LABS INC C6678-FC-L	AIR HANDLING UNIT	(E) BLDG - ROOF	281"	78"	66"	9,052#	12/S9.1
AHU-MM2	ENERGY LABS INC C6678-FCH-L	AIR HANDLING UNIT	(N) BLDG - ROOF	146"	42"	54"	3,515#	12/S9.1
AHU-MM3	ENERGY LABS INC C6678-FCH-L	AIR HANDLING UNIT	(N) BLDG - ROOF	131"	38"	34"	2,284#	12/S9.1
DC-1	DONALDSON UMA250	DUST COLLECTOR	(N) BLDG - SOG	42"	33"	133"	1,265#	9/S9.1
DC-2	DONALDSON UMA250	DUST COLLECTOR	(N) BLDG - SOG	42"	33"	133"	1,265#	9/S9.1
FC-1	CARRIER 42BHE12	FAN COIL	(N) BLDG - ROOF	38"	37"	22"	296#	5/S9.1
FC-2	CARRIER 42BHE06	FAN COIL	(N) BLDG - ROOF	36"	28"	20"	235#	5/S9.1
FC-3	CARRIER 42BHE12	FAN COIL	(E) BLDG - ROOF	38"	37"	22"	296#	5/S9.1
FC-4	CARRIER 42BHE06	FAN COIL	(E) BLDG - ROOF	36"	28"	20"	235#	5/S9.1
EF-1	GREENCHECK CUE-121-VG	EXHAUST FAN	(N) BLDG - ROOF	19"	19"	28"	60#	1/S9.1
EF-2	GREENCHECK CUE-101-VG	EXHAUST FAN	(N) BLDG - ROOF	19"	19"	28"	46#	1/S9.1

ELECTRICAL EQUIPMENT

MARK	MODEL	DESCRIPTION	LOCATION	DIMENSIONS W	D	H	MAXIMUM OPERATING WEIGHT	DETAIL
INV1	DUAL LITE #D-277-37-S	LIGHTING INVERTER	(E) BLDG - SOG	30"	18"	92"	1,230#	10/S9.1
INV2	DUAL LITE #D-277-37-S	LIGHTING INVERTER	(N) BLDG - SOG	30"	18"	92"	1,230#	10/S9.1
TD1	EATON V48M28T5516	DRY TYPE TRANSFORMER	(E) BLDG - SOG	42"	33.5"	66"	2,290#	9/S9.1
TD2	EATON V48M28T5516	DRY TYPE TRANSFORMER	(N) BLDG - SOG	49"	41.5"	64"	2,750#	9/S9.1
2DB1	EATON SWBD	SWITHCBOARD	(E) BLDG - SOG	31"	12.75"	90"	490#	9/S9.1
2DB2	EATON SWBD	SWITHCBOARD	(N) BLDG - SOG	31"	12.75"	90"	650#	9/S9.1
4DB1	EATON SWBD	SWITHCBOARD	(E) BLDG - SOG	31"	12.75"	90"	810#	9/S9.1
PNL	VARIES	PANELBOARD	VARIES	VARIES			150#	11/S9.1

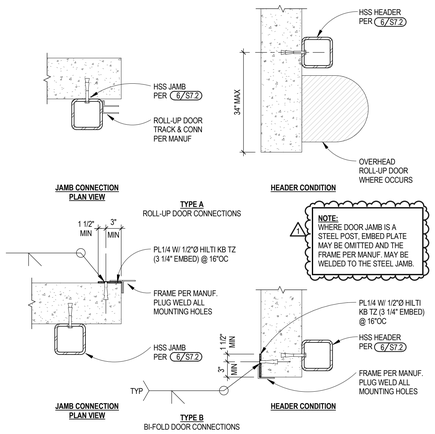
PLUMBING EQUIPMENT

MARK	MODEL	DESCRIPTION	LOCATION	DIMENSIONS W	D	H	MAXIMUM OPERATING WEIGHT	DETAIL
CA-1	INGERSOLL RAND 2000E25	AIR COMPRESSOR	(E) BLDG - SOG	33"	27"	50"	1,350#	9/S9.1
CA-2	INGERSOLL RAND 7100E10	AIR COMPRESSOR	(N) BLDG - SOG	24"	24"	47"	800#	9/S9.1

EQUIPMENT ANCHORAGE SCHEDULE

SCALE: 12" = 1'-0"

A / S9.1

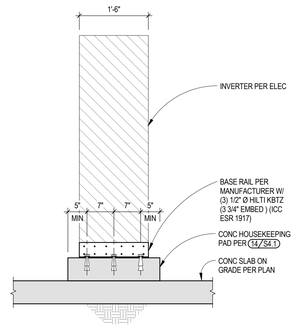


NOTE:
WHERE DOOR JAMB IS A STEEL POST, EMBED PLATE MAY BE OMITTED AND THE FRAME PER MANUF. MAY BE WELDED TO THE STEEL JAMB.

MISCELLANIOUS DOOR OPENING IN EXISTING CONCRETE WALL

SCALE: 1" = 1'-0"

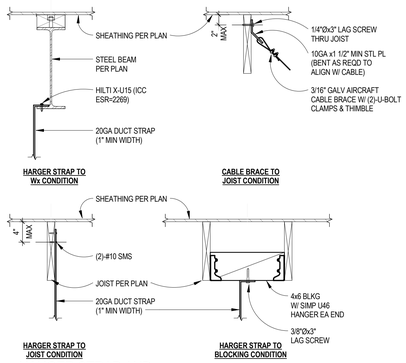
13 / S9.1



FLOOR MOUNTED EQUIPMENT ANCHORAGE

SCALE: 3/4" = 1'-0"

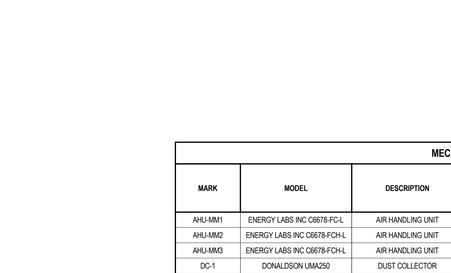
10 / S9.1



HANGER STRAP AND CABLE BRACE TOP CONNECTIONS

SCALE: 1" = 1'-0"

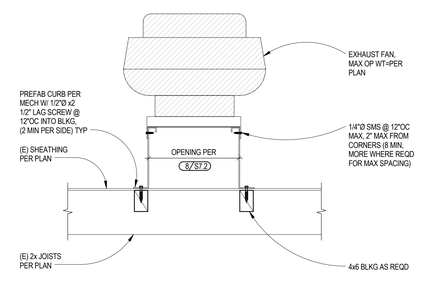
6 / S9.1



HANGER ROD AND BRACE TOP CONNECTIONS TO Wx BEAM

SCALE: 1" = 1'-0"

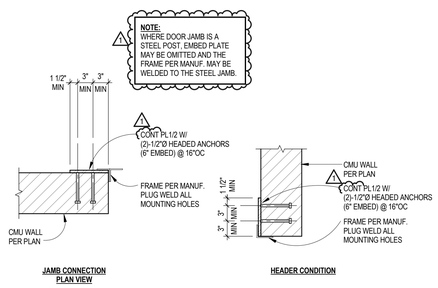
3 / S9.1



CURB MOUNTED EXHAUST FAN ANCHORAGE

SCALE: 3/4" = 1'-0"

1 / S9.1

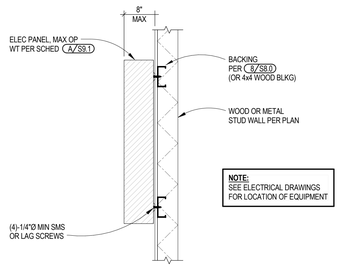


NOTE:
WHERE DOOR JAMB IS A STEEL POST, EMBED PLATE MAY BE OMITTED AND THE FRAME PER MANUF. MAY BE WELDED TO THE STEEL JAMB.

BI-FOLD DOOR OPENING IN CMU WALL

SCALE: 1" = 1'-0"

14 / S9.1

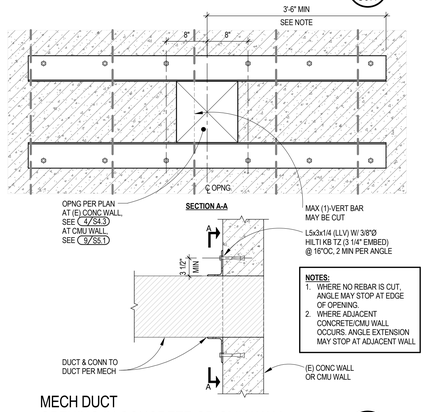


NOTE:
SEE ELECTRICAL DRAWINGS FOR LOCATION OF EQUIPMENT

ELECTRICAL PANEL ANCHORAGE

SCALE: 1" = 1'-0"

11 / S9.1

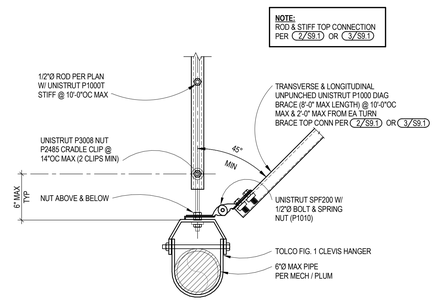


NOTES:
1. WHERE NO REBAR IS CUT, ANGLE MAY STOP AT EDGE OF OPENING.
2. WHERE ADJACENT CONCRETE/CMU WALL OCCURS, ANGLE EXTENSION MAY STOP AT ADJACENT WALL

MECH DUCT OPENING IN CONCRETE OR CMU WALL

SCALE: 1" = 1'-0"

7 / S9.1

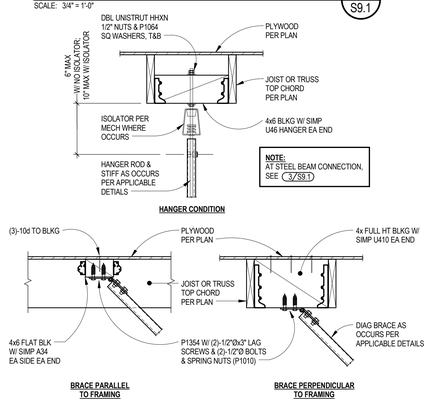


NOTE:
ROD & STIFF TOP CONNECTION PER (2/S9.1) OR (3/S9.1)

PIPE SUPPORT AND BRACING

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

4 / S9.1



NOTE:
AT STEEL BEAM CONNECTION, SEE (3/S9.1)

HANGER ROD AND UNISTRUT BRACE TOP CONNECTIONS TO WOOD FRAMING

SCALE: 1" = 1'-0"

2 / S9.1

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LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
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1	05/22/2020	ADDENDUM#1

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DRAWN BY AM / GL

CHECKED BY KDO

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SHEET TITLE

EQUIPMENT ANCHORAGE SECTIONS AND DETAILS

SHEET NUMBER

S9.1

ADDENDUM#1

2 PIPE AIR HANDLING UNITS

MARK	MANUFACTURER & MODEL	TYPE	SERVICE	SUPPLY FAN QTY	SUPPLY FAN TOTAL CFM	SUPPLY FAN TSP IN WC	SUPPLY FAN ESP IN WC	SUPPLY FAN RPM	SUPPLY FAN MOTOR BHP	SUPPLY FAN MOTOR HP	SUPPLY FAN MOTOR RPM	SUPPLY FAN MOTOR VOLTS	SUPPLY FAN MOTOR PHASE	RETURN FAN QTY	RETURN FAN TOTAL CFM	RETURN FAN TSP IN WC	RETURN FAN ESP IN WC	RETURN FAN RPM	RETURN FAN MOTOR BHP	RETURN FAN MOTOR HP	RETURN FAN MOTOR RPM	RETURN FAN MOTOR VOLTS	RETURN FAN MOTOR PHASE	COOLING COIL FV FPM	COIL MBH TOTAL MBH	COIL MBH SENS. MBH	AIR SIDE EAT °F DB	AIR SIDE EAT °F WB	AIR SIDE LAT °F DB	AIR SIDE LAT °F WB	AIR SIDE ΔP IN. WC	WATER SIDE GPM	WATER SIDE EWT °F	WATER SIDE LWT °F	WATER SIDE ΔP FT.	COIL DESCRIPTION QTY	COIL DESCRIPTION SIZE INCHES	COIL DESCRIPTION ROWS/ FPI	FILTERS TYPE	FILTERS QUANTITY/SIZE	FILTERS MERV	ELECTRICAL FLA	ELECTRICAL MCA	ELECTRICAL MOCP	OPERATING WEIGHT LBS.	CODE MIN (DCV) OSA CFM	CODE OSA CFM	DETAIL	REMARKS
AHU-MM1	ENERGY LABS	OUTDOOR, CUSTOM	MM WEST	1	10,000	-	3.5	1,579	7.92	10.0	1,800	460	3	1	10,000	-	1.25	1,052	3.16	5.0	1,200	460	3	400	308	280	79.0	63.0	53.0	52.3	0.42	30.8	42.0	62.0	12.45	1	-	6/7	MINI-PLEAT	6 / 24x24x12 3 / 12x24x12	13	21.6	25.1	35	9,062	1,930	3,300	A/S9.1	A B C D E

A PROVIDE SIEMENS BACNET BUILDING CONTROLLER IN NEMA 3R ENCLOSURE MOUNTED TO UNIT.

B UNIT SHALL BE PROVIDED WITH INTERNALLY ISOLATED SUPPLY AND RETURN FANS.

C PROVIDE WITH FACTORY MOUNTED VFDS FOR SUPPLY AND RETURN FAN. INTEGRATE WITH SIEMENS BUILDING CONTROLLER.

D PROVIDE WITH PREFILTER SLOT WITH MERV-8 PREFILTERS.

E PROVIDE WITH SMOKE DETECTOR IN SUPPLY DUCT FOR UNIT SHUTDOWN IN ACCORDANCE WITH CMC 608.1 AND DETAILS 1/M5.1. COORDINATE WITH FIRE ALARM CONTRACTOR FOR DEVICE INTEGRATION INTO BUILDING FA SYSTEM. 1

4 PIPE AIR HANDLING UNITS

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	SUPPLY FAN AIRFLOW CFM	SUPPLY FAN ESP "WC"	SUPPLY FAN HP	COOLING TOT MBH	COOLING SENS MBH	COOLING EAT FDB/FWB	CHILLED WATER EWT °F	CHILLED WATER LWT °F	CHILLED WATER GPM	CHILLED WATER P FT W.G.	HEATING TOT MBH	HEATING SENS MBH	HEATING EAT FDB/FWB	HOT WATER EWT °F	HOT WATER LWT °F	HOT WATER GPM	HOT WATER P FT W.G.	FILTER MERV	FILTER TYPE	ELECTRICAL FLA	ELECTRICAL VOLT/ PHASE	OPERATING WEIGHT LBS.	DETAIL	REMARKS
AHU-MM2	ENERGY LABS INC	ROOF TOP	OUTDOOR, CUSTOM	WORKSHOP BUILDING	3250	1	3	152.4	124.2	90/69	42	62	15	11.11	152.3	152.3	31	190	130	5	6.26	13	12" PLEATED	5.2	460/3	3515	A/S9.1	A B C D E
AHU-MM3	ENERGY LABS INC	ROOF TOP	OUTDOOR, CUSTOM	WORKSHOP BUILDING	1650	.6	1.5	75.2	61.7	87.7/67.8	42	62	7.52	9.99	82.4	82.4	32.3	190	130	2.7	6.23	13	12" PLEATED	5.2	460/3	2284	A/S9.1	B C D

A PROVIDE SIEMENS BACNET BUILDING CONTROLLER IN NEMA 3R ENCLOSURE MOUNTED TO UNIT. PROVIDE ZONE TEMPERATURE SENSOR WIRED BACK TO CONTROLLER.

B UNIT SHALL BE PROVIDED WITH INTERNALLY ISOLATED SUPPLY FAN.

C PROVIDE WITH FACTORY MOUNTED VFDS FOR SUPPLY AND RETURN FAN. INTEGRATE WITH SIEMENS BUILDING CONTROLLER.

D PROVIDE WITH PREFILTER SLOT WITH MERV-8 PREFILTERS.

E PROVIDE WITH SMOKE DETECTOR IN SUPPLY DUCT FOR UNIT SHUTDOWN IN ACCORDANCE WITH CMC 608.1 AND DETAILS 1/M5.1. COORDINATE WITH FIRE ALARM CONTRACTOR FOR DEVICE INTEGRATION INTO BUILDING FA SYSTEM. 1

FAN COIL UNITS (2 PIPE)

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	SUPPLY FAN AIRFLOW CFM	SUPPLY FAN ESP "WC"	SUPPLY FAN HP	COOLING TOT MBH	COOLING SENS MBH	COOLING EAT FDB/FWB	CHILLED WATER EWT °F	CHILLED WATER LWT °F	CHILLED WATER GPM	CHILLED WATER P FT W.G.	FILTER MERV	FILTER TYPE	ELECTRICAL FLA	ELECTRICAL VOLT/ PHASE	OPERATING WEIGHT LBS.	DETAIL	REMARKS
FC-1	CARRIER 42BHE12	WORKSHOP BUILDING	DUCTED, CABINET	IDF	1,200	0.7	0.5	28	24	80/67	42	62	2.8	1.41	13	4" PLEATED	1.1	460/3	296	4/M6.2	A B
FC-2	CARRIER 42BHE06	WORKSHOP BUILDING	DUCTED, CABINET	ELECTRICAL	750	0.7	0.5	22	18	80/67	42	62	1.8	1.19	13	4" PLEATED	1.1	460/3	235	4/M6.2	A B
FC-3	CARRIER 42BHE12	MM WEST	DUCTED, CABINET	IDF	1,200	0.7	0.5	28	24	80/67	42	62	2.8	1.41	13	4" PLEATED	1.1	460/3	296	4/M6.2	A B
FC-4	CARRIER 42BHE06	MM WEST	DUCTED, CABINET	ELECTRICAL	750	0.7	0.5	22	18	80/67	42	62	1.8	1.19	13	4" PLEATED	1.1	460/3	235	4/M6.2	A B

A PROVIDE SIEMENS BACNET CONTROLLER AND MOUNTED TO UNIT. PROVIDE ZONE TEMPERATURE SENSOR WIRED BACK TO CONTROLLER.

B UNIT SHALL BE PROVIDED WITH INTEGRAL MOTOR STARTER.

EXHAUST FAN

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	FAN AIRFLOW CFM	FAN ESP IN WG.	FAN RPM	MOTOR HP	MOTOR BHP	MOTOR VOLTS	MOTOR PHASE	MOTOR RPM	MOTOR ENCLOSURE	OPERATING WEIGHT LBS.	DETAIL	REMARKS
EF-1	GREENHECK CUE-121-VG	WORKSHOP BUILDING	CENTRIFUGAL UPBLAST	RESTROOMS	1,550	0.325	1457	1/2	0.26	120	1	1,725	ODP	60	5/M6.2	PROVIDE MANUFACTURER ROOF CURB, BACKDRAFT DAMPER, 0-10V CONTROL INPUT.
EF-2	GREENHECK CUE-101-VG	WORKSHOP BUILDING	CENTRIFUGAL UPBLAST	CONSTRUCTION TECHNOLOGY	1,200	0.25	1540	1/4	0.19	120	1	1,725	ODP	46	5/M6.2	PROVIDE MANUFACTURER ROOF CURB, BACKDRAFT DAMPER, 0-10V CONTROL INPUT.

VARIABLE FREQUENCY DRIVES

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	VARIABLE FREQUENCY DRIVE MOTOR HP	VARIABLE FREQUENCY DRIVE VFD HP	VARIABLE FREQUENCY DRIVE VOLTAGE	VARIABLE FREQUENCY DRIVE FLA	REMARKS
VFD-1	YASKAWA	AHU-MM1	PULSE WIDTH MODULATING	SUPPLY FAN	10.0	10.0	460	14.0	FACTORY MOUNTED, POWERED VIA AHU SINGLE POINT CONNECTION.
VFD-2	YASKAWA	AHU-MM1	PULSE WIDTH MODULATING	RETURN FAN	5.0	5.0	460	7.6	FACTORY MOUNTED, POWERED VIA AHU SINGLE POINT CONNECTION.
VFD-3	YASKAWA	AHU-MM2	PULSE WIDTH MODULATING	SUPPLY FAN	3.0	3.0	460	4.8	FACTORY MOUNTED, POWERED VIA AHU SINGLE POINT CONNECTION.
VFD-4	YASKAWA	AHU-MM3	PULSE WIDTH MODULATING	SUPPLY FAN	1.0	3.0	460	4.8	FACTORY MOUNTED, POWERED VIA AHU SINGLE POINT CONNECTION.

GRILLES, REGISTERS, DIFFUSERS

MARK	MANUFACTURER & MODEL	DESCRIPTION	MATERIAL	BORDER	FRONT BLADES	DAMPER	FINISH	DETAIL	REMARKS
CD-1	TITUS MCD	CEILING SUPPLY	STEEL	LAY-IN	MODULAR CORE	NONE	WHITE	2/M6.1	-
CD-2	TITUS MCD	CEILING SUPPLY	STEEL	SURFACE MOUNTED	MODULAR CORE	NONE	WHITE	2/M6.1	-
CD-3	TITUS TMR	ROUND SUPPLY	STEEL	DUCT MOUNTED	THREE CONES	NONE	WHITE	3/M6.1	-
SG-1	TITUS 300RL	SIDEWALL SUPPLY	STEEL	SURFACE MOUNTED	LOUVERED	NONE	WHITE	6/M6.1	-
RG-1	TITUS PXP	CEILING RETURN	ALUMINUM	LAY-IN	PERFORATED	NONE	WHITE	N/A	PROVIDE RETURN BOOT PER 5/M6.1 WHERE INDICATED
RG-2	TITUS 350FL	SIDEWALL RETURN	STEEL	SURFACE MOUNTED	LOUVERED	NONE	WHITE	6/M6.1	-
EG-1	TITUS 350FL	CEILING EXHAUST	ALUMINUM	SURFACE MOUNTED	LOUVERED	NONE	WHITE	2/M6.1	-
EG-2	TITUS 350FL	CEILING EXHAUST	ALUMINUM	SURFACE MOUNTED	LOUVERED	NONE	WHITE	2/M6.1	12X12 MODULE SIZE
TG-1	TITUS 350FL	CEILING/WALL TRANSFER	ALUMINUM	SURFACE MOUNTED	LOUVERED	NONE	WHITE	6/M6.1	-

DUST COLLECTION SYSTEM

MARK	MANUFACTURER & MODEL	TYPE	SERVICE	LOCATION	FAN AIRFLOW CFM	FAN EXT SP IN WC	FAN RPM	FAN BHP	DRIVE TYPE	DRIVE VFD	MOTOR HP	MOTOR RPM	MOTOR V/PH	MOTOR ENCLOSURE	OPERATING WEIGHT LBS.	ANCHORAGE DETAIL	REMARKS
DC-1	DONALDSON UMA250	MODULAR BAGHOUSE	CONSTRUCTION TECHNOLOGY LAB	ENCLOSURE ON GRADE	1,400	10	-	-	-	YES	5	-	480/3	TEFC	1,265	A/S9.1	A B C D E
DC-2	DONALDSON UMA250	MODULAR BAGHOUSE	CONSTRUCTION TECHNOLOGY LAB	ENCLOSURE ON GRADE	1,850	8	-	-	-	YES	10	-	480/3	TEFC	1,265	A/S9.1	A B C D E

A PROVIDE WITH DONALDSON CONTROL PANEL FOR DUST COLLECTOR CONTROL. CONTROL PANEL SHALL BE FIELD MOUNTED IN LOCATION INDICATED ON M2.1. EACH PANEL SHALL INCLUDE AN AUXILIARY CONTACT TO ALLOW REMOTE EPO CONNECTION.

B PROVIDE EXPLOSION ISOLATION VALVE IN MAIN DUCT AS SHOWN ON M2.1. COORDINATE WITH DIV. 26 FOR LINE VOLTAGE WIRING FROM DUST COLLECTOR CONTROL PANEL TO ISOLATION VALVE.

C COORDINATE WITH DIV. 26 FOR LINE VOLTAGE WIRING FROM CONTROL PANEL TO BLOWER MOTOR AND FROM CONTROL PANEL TO SHAKER MOTOR.

D PROVIDE RAINPROOF WEATHER HOOD ON DUST COLLECTOR OUTLET.

E DUST COLLECTOR SHALL BE INTERLOCKED WITH THE VENTILATION SYSTEM SUCH THAT THE EQUIPMENT CANNOT BE OPERATED UNLESS THE VENTILATION FANS ARE IN OPERATION (CMC 503.1).

VAV BOXES

MARK	MANUFACTURER & MODEL	SERVICE	INLET SIZE IN	DCV Y/N	AIRFLOW MAX CFM	AIRFLOW MIN CFM	AIRFLOW MAX HTG. CFM	HEATING COIL AIRSIDE HTG. MBH	HEATING COIL AIRSIDE EAT °F	HEATING COIL AIRSIDE LAT °F	HEATING COIL AIRSIDE MAX PD IN	HEATING COIL WATERSIDE GPM	HEATING COIL WATERSIDE EWT °F	HEATING COIL WATERSIDE LWT °F	HEATING COIL WATERSIDE MAX PD FT	HEATING COIL WATERSIDE ROWS	ELEC. V/PH	DETAIL	REMARKS
VAV 1-1	TITUS DESV	HVAC INUSTRIAL STORAGE	12	Y	1,800	300	650	24.5	53	88	0.3	2.1	190	165.5	0.57	1	120/1	6/M6.2	A B C D
VAV 1-2	TITUS DESV	MULTIDISCIPLINARY LAB	10	Y	1,100	200	320	12.4	53	88	0.14	0.8	190	156.5	0.09	1	120/1	6/M6.2	A C D
VAV 1-3	TITUS DESV	MULTIDISCIPLINARY LAB	10	Y	1,100	200	320	12.4	53	88	0.14	0.8	190	156.5	0.09	1	120/1	6/M6.2	A C D
VAV 1-4	TITUS DESV	COMPUTER LAB	10	Y	1,260	465	465	13.0	53	79	0.18	0.7	190	149.5	0.08	1	120/1	6/M6.2	A C D
VAV 1-5	TITUS DESV	ADJUNCT FACULTY FACULTY MM-102	6	N	220	60	60	1.62	53	78	0.03	0.3	190	162.8	0.07	1	120/1	6/M6.2	A C D
VAV 1-6	TITUS DESV	FACULTY MM-103 LOBBY	8	Y	450	105	135	8.3	53	88	0.06	0.4	190	149.1	0.16	1	120/1	6/M6.2	A C D
VAV 1-7	TITUS DESV	MACHINE TOOLING	12	Y	1,680	300	490	25.4	53	88	0.39	0.9	190	140.1	.1	2	120/1	6/M6.2	A C D
VAV 1-8	TITUS DESV	MACHINE TOOLING	12	Y	1,680	300	490	25.4	53	88	0.39	0.9	190	140.1	.1	2	120/1	6/M6.2	A C D

A PROVIDE WITH INTEGRAL TOGGLE DISCONNECT SWITCH AND 120V/;24V TRANSFORMER BY MANUFACTURER.

B PROVIDE 3-WAY VALVE ON REHEAT COIL.

C PROVIDE BACNET VAV CONTROLLER AND ZONE TEMPERATURE SENSOR COMPATIBLE WITH SIEMENS BUILDING CONTROLLER. INTEGRATE INTO BUILDING CONTROLLER AT AHU ON ROOF.

D PROVIDE WITH SPACE CO2 SENSOR FOR DEMAND CONTROL VENTILATION WITH SPACE CO2 READOUT. CO2 SENSOR MAY BE INTEGRAL TO TEMPERATURE SENSOR.

CONTROL VALVES

MARK	MANUFACTURER & MODEL	TYPE	SERVICE	LOCATION	CV	FLOW RATE (GPM)	CLOSE-OFF (PSI)	PRESSURE DROP PSID	VALVE SIZE (INCH)	PIPE SIZE (INCH)	VOLTAGE (VAC)	ACTUATOR	FAIL POSITION	REMARKS
CV-1	BELIMO B238	CCV	AHU-MM1 COOLING COIL	MM WEST ROOF	19	30.8	200	2.63	1-1/2	1-1/2	24	NON-SPRING RETURN	LAST	
CV-2	BELIMO B229	CCV	AHU-MM2 COOLING COIL	WORKSHOP BUILDING ROOF	10	15	200	2.25	1-1/4	1-1/4	24	NON-SPRING RETURN	LAST	
CV-3	BELIMO B212	CCV	AHU-MM2 HEATING COIL	WORKSHOP BUILDING ROOF	3	5	200	2.78	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-4	BELIMO B217	CCV	AHU-MM3 COOLING COIL	WORKSHOP BUILDING ROOF	4.7	7.5	200	2.55	3/4	1	24	NON-SPRING RETURN	LAST	
CV-5	BELIMO B211	CCV	AHU-MM3 HEATING COIL	WORKSHOP BUILDING ROOF	1.9	2.7	200	2.02	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-6	BELIMO B211	CCV	FCU-1 COOLING COIL	CONSTRUCTION TECHNOLOGY	1.9	2.7	200	2.02	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-7	BELIMO B211	CCV	FCU-2 COOLING COIL	CONSTRUCTION TECHNOLOGY	1.9	2.2	200	1.34	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-8	BELIMO B211	CCV	FCU-3 COOLING COIL	INDUSTRIAL STORAGE	1.9	2.7	200	2.02	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-9	BELIMO B211	CCV	FCU-4 COOLING COIL	INDUSTRIAL STORAGE	1.9	2.2	200	1.34	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-10	BELIMO B211	CCV	VAV 1-1 REHEAT COIL	HVAC LAB	1.9	2.1	200	1.22	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-11	BELIMO B209	CCV	VAV 1-2 REHEAT COIL	MULTIDISCIPLINARY LAB	0.8	0.8	200	1.0	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-12	BELIMO B209	CCV	VAV 1-3 REHEAT COIL	MULTIDISCIPLINARY LAB	0.8	0.8	200	1.0	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-13	BELIMO B208	CCV	VAV 1-4 REHEAT COIL	COMPUTER LAB	0.46	0.7	200	2.32	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-14	BELIMO B207	CCV	VAV 1-5 REHEAT COIL	ADJUNCT FACULTY	0.3	0.3	200	1.00	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-15	BELIMO B207	CCV	VAV 1-6 REHEAT COIL	LOBBY	0.3	0.4	200	1.78	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-16	BELIMO B209	CCV	VAV 1-7 REHEAT COIL	MACHINE TOOLING	0.8	0.9	200	1.27	1/2	3/4	24	NON-SPRING RETURN	LAST	
CV-17	BELIMO B209	CCV	VAV 1-8 REHEAT COIL	MACHINE TOOLING	0.8	0.9	200	1.27	1/2	3/4	24	NON-SPRING RETURN	LAST	

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE Not To Scale
DRAWN BY G Jacob
DESIGNED BY S Newman
CHECKED BY -

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SHEET TITLE

SCHEDULES

SHEET NUMBER

M0.2

ADDENDUM#1

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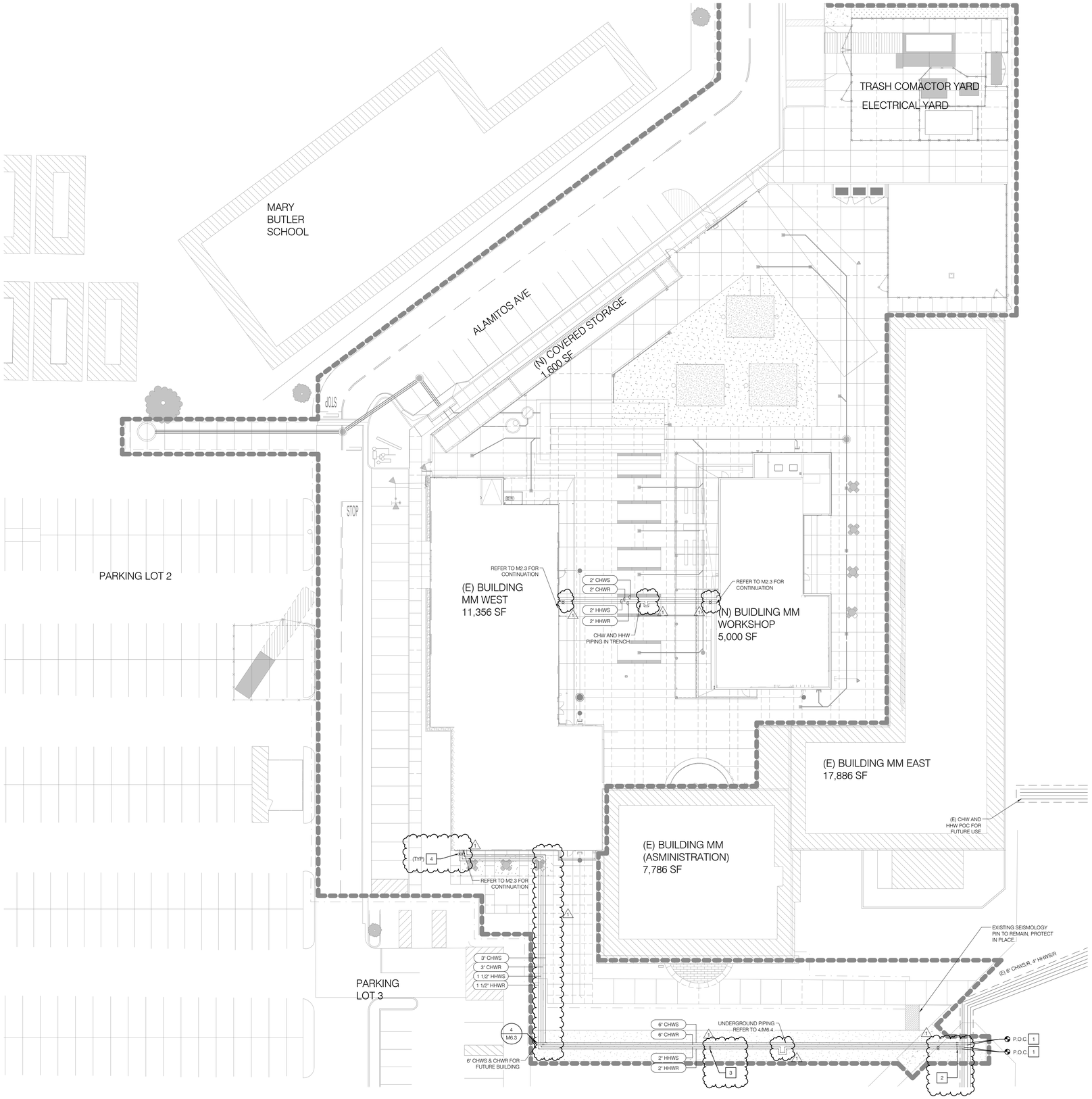
5/21/2020 8:38:57 PM C:\Users\Gennie.Jacob\Documents\P099_LBCC_MEP-CENTRAL_R16_gennierose.jacob@p2inc.com.rvt



GENERAL NOTES

1. CONTRACTOR TO VERIFY SIZING AND LOCATION OF EXPANSION LOOPS, ANCHORS AND AIR VENT HIGH POINTS ON UNDERGROUND HHWS/R SYSTEM DELEGATED DESIGN SUBMITTAL. REFER TO UNDERGROUND HYDRONIC PIPING 232113.13 SPECIFICATION FOR ADDITIONAL REQUIREMENTS

NOTES

1. COORDINATE WITH COLLEGE FOR SHUTDOWN OF BUILDING QQ AND RR HVAC SYSTEMS FOR INSTALLATION OF NEW VALVES. PROVIDE TEMPORARY COOLING AS REQUIRED BY COLLEGE.
2. PROVIDE DIRECT BURIED GATE VALVES FOR ISOLATION.
3. PROVIDE AIR VENT AT HIGH POINTS ON HHWS/R.
4. PROVIDE HHW ANCHORS AS REQUIRED BY DELEGATED DESIGN SUBMITTAL FOR HHWS/R.

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SIGNED: 12/04/2019

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MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

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SCALE	1" = 20'-0"
DRAWN BY	G Jacob
DESIGNED BY	S Newman
CHECKED BY	-

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SHEET TITLE
SITE PLAN

SHEET NUMBER
M1.1

ADDENDUM#1

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ELECTRIC WATER HEATER

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	STORAGE CAPACITY	INLET @ 60 ^ ΔT(GPH)	INLET TEMP °F	OUTLET TEMP °F	ELECTRICAL KW	ELECTRICAL VOLT	ELECTRICAL PH	ELECTRICAL HZ	OPERATING WEIGHT LBS	REMARKS
EWH-1	BRADFORD WHITE MODEL NO 50A-45-3	VOCATIONAL TRADE BLDG.	TANK TYPE	48 GALLONS	310	60	140	45	480	3	60	270	LIGHT DUTY, COMMERCIAL, ASME RATED TEMP. & PRESS. RELIEF VALVE & DRAIN VALVE. PROVIDE WITH REQUIRED ELECTRICAL CONVERSION KIT. 1-1/2" WATER CONNECTIONS. PROVIDE FACTORY WALL BRACKET FOR MOUNTING AND INSTALL AS HIGH AS POSSIBLE IN ROOM. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENTS. REFER TO DETAIL 1/P6.2.
EWH-2	BRADFORD WHITE MODEL NO 50A-45-3	RESTROOM BLDG.	TANK TYPE	48 GALLONS	310	60	140	45	480	3	60	270	LIGHT DUTY, COMMERCIAL, ASME RATED TEMP. & PRESS. RELIEF VALVE & DRAIN VALVE. PROVIDE WITH REQUIRED ELECTRICAL CONVERSION KIT. 1-1/2" WATER CONNECTIONS. PROVIDE FACTORY WALL BRACKET FOR MOUNTING AND INSTALL AS HIGH AS POSSIBLE IN ROOM. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENTS. REFER TO DETAIL 1/P6.2.

CIRCULATING PUMP SCHEDULE

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	GPM	HEAD (FT.)	HP	ELECTRICAL DATA WATTS	ELECTRICAL DATA VOLT	ELECTRICAL DATA PHASE	ELECTRICAL DATA HERTZ	OPER WEIGHT (LBS)	REMARKS
CP-1	GRUNDFOS MODEL NO UPS26-99SFC	BUILDING MM WEST	IN-LINE	5	15	1/6	197	115	1	60	12	3-SPEED STAINLESS STEEL WET ROTOR CIRCULATOR, SET @ SPEED 1. MAX. WORKING PRESSURE=150 PSI, MAXIMUM OPERATING TEMPERATURE=230°F. PROVIDE GRUNDFOS 3/4" CLIP-ON AQUASTAT CONTROL MODEL 595444 AND AUTOMATIC TIMER KIT. INTERLOCK PUMP WITH AQUASTAT. REFER TO DETAIL 2/P6.2.
CP-2	GRUNDFOS MODEL NO UPS26-99SFC	BUILDING MM WORKSHOP	IN-LINE	10	15	1/6	197	115	1	60	12	3-SPEED STAINLESS STEEL WET ROTOR CIRCULATOR, SET @ SPEED 1. MAX. WORKING PRESSURE=150 PSI, MAXIMUM OPERATING TEMPERATURE=230°F. PROVIDE GRUNDFOS 3/4" CLIP-ON AQUASTAT CONTROL MODEL 595444 AND AUTOMATIC TIMER KIT. INTERLOCK PUMP WITH AQUASTAT. REFER TO DETAIL 2/P6.2.

EXPANSION TANK SCHEDULE

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	TANK VOLUME (GAL.)	ACCEPT. VOLUME (GAL.)	CHARGING PRESSURE (PSIG)	WORKING PRESSURE (PSIG)	OPER. TEMP. (°F)	TANK SIZE DIA. (IN)	TANK SIZE HGT. (IN)	SYSTEM CONN. SIZE (NPT)	OPER. WEIGHT (LBS)	REMARKS
ET-1	AMTROL THERM-X-TROL MODEL ST-5-C	BUILDING MM WEST	IN-LINE	EWH-1	2.1	0.9	40	150	200	10	10-3/8	3/4	36	CONSTRUCTION PER ASME BOILER PRESSURE VESSEL CODE STEEL CONSTRUCTION. PRE-CHARGED 55 PSIG. PROVIDE AMTROL FILL-TROL VALVE AS PART OF THE INSTALLATION. REFER TO DETAIL 1/P6.2.
ET-2	AMTROL THERM-X-TROL MODEL ST-5-C	BUILDING MM WORKSHOP	IN-LINE	EWH-2	2.1	0.9	40	150	200	10	10-3/8	3/4	36	CONSTRUCTION PER ASME BOILER PRESSURE VESSEL CODE STEEL CONSTRUCTION. PRE-CHARGED 55 PSIG. PROVIDE AMTROL FILL-TROL VALVE AS PART OF THE INSTALLATION. REFER TO DETAIL 1/P6.2.

AIR COMPRESSORS

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	MAX (PSI)	MIN. CAPACITY IN CFM	MAX. CAPACITY IN CFM	HP	DIMENSIONS HEIGHT (IN)	DIMENSIONS LENGTH (IN)	DIMENSIONS WIDTH (IN)	ELECTRICAL DATA VOLT	ELECTRICAL DATA PH	ELECTRICAL DATA HZ	REMARKS
CA-1	INGERSOLL RAND MODEL IRN20H	BUILDING MM WEST	ROTARY SCREW COMPRESSOR	EQUIPMENT IN BUILDING	150	41	87	20	55.8	64.2	28.5	460	3	60	QUIET ELECTRIC DRIVEN ROTARY SCREW AIR COMPRESSOR. DURABLE BASEPLATE INCLUDES DRYER/FILTERS, DRAINS, CONDENSATE FILTER & REGULATOR UNIT TOTAL WEIGHT: 1553 LBS. REFER TO DETAIL 5/P6.5.
CA-2	INGERSOLL RAND MODEL R7.5n	BUILDING MM WORKSHOP	ROTARY SCREW COMPRESSOR	EQUIPMENT IN BUILDING	145	11.7	33.4	10	47	38	27.3	460	3	60	QUIET SMALL ELECTRIC DRIVEN ROTARY SCREW AIR COMPRESSOR. TOTAL AIR SYSTEM (TAS) INCLUDES DRYER AND FILTERS TOTAL WEIGHT: 711 LBS. REFER TO DETAIL 6/P6.5.

THERMOSTATIC MIXING VALVE

MARK	MANUFACTURER & MODEL	LOCATION	TYPE	SERVICE	FLOW RATE (GPM)	MAXIMUM PRESS. DROP (PSI)	INLET SIZE (IN)	OUTLET SIZE (IN)	DIMENSIONS WIDTH (IN)	DIMENSIONS HEIGHT (IN)	DIMENSIONS DEPTH (IN)	REMARKS
TMV-1	BRADLEY S59-2025-P	BUILDING MM WEST	THERMOSTATIC HIGH-LOW	120°F HW SYSTEM	5	5	3/4	3/4	9	8-3/4	2-7/8	LEAD-FREE BRASS DESIGN WITH LIQUID FILLED THERMOSTAT, INTEGRAL STRAINER CHECKSTOPS, PIPED ASSEMBLY WITH INLET AND OUTLET SHUT-OFFS. PROVIDE TEMPERATURE GAUGE ON OUTLET PIPE. INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS AND MANUFACTURERS PIPING DIAGRAMS.
TMV-2	BRADLEY S59-2025-P	BUILDING MM WORKSHOP	THERMOSTATIC HIGH-LOW	120°F HW SYSTEM	10	15	3/4	3/4	9	8-3/4	2-7/8	LEAD-FREE BRASS DESIGN WITH LIQUID FILLED THERMOSTAT, INTEGRAL STRAINER CHECKSTOPS, PIPED ASSEMBLY WITH INLET AND OUTLET SHUT-OFFS. PROVIDE TEMPERATURE GAUGE ON OUTLET PIPE. INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS AND MANUFACTURERS PIPING DIAGRAMS.

FIXTURE SCHEDULE

	FIXTURE	MIN. ROUGH-IN SIZES CW	HW	S OR W	V	REMARKS
WC-1	WATER CLOSET (ACCESSIBLE)	1½"	-	4"	2"	KOHLER 'KINGSTON' MODEL K-4325 WALL-HUNG VITREOUS CHINA, ELONGATED ADA BOWL WITH 1¼" TOP SPUD. COMPLETE WITH MOEN COMMERCIAL MODEL 8311AC12 EXPOSED, HARD-WIRED, SENSOR OPERATED FLUSH VALVE @ 1.28 GPF. MOEN COMMERCIAL MODEL 104517 FLUSH/VALVE TRAP PRIMER FITTING AS REQUIRED. CHURCH MODEL 9500SSCT ELONGATED SEAT, OPEN FRONT LESS COVER, WHITE WITH SELF-SUSTAINING, CONCEALED CHECK HINGE WITH STAINLESS STEEL POSTS. MOUNT AT ACCESSIBLE (ADA) HEIGHT AND INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTION.
WC-2	WATER CLOSET	1½"	-	4"	2"	SAME AS WC-1 EXCEPT MOUNTED AT STANDARD HEIGHT. (REFER TO ARCHITECTURAL DRAWINGS FOR NON-ADA MOUNTING HEIGHTS).
U-1	URINAL (ACCESSIBLE)	¾"	-	2"	1½"	KOHLER 'BARDON' MODEL K-4991-ET WALL-MOUNT, VITREOUS CHINA WITH 3/4" TOP SPUD. COMPLETE WITH MOEN COMMERCIAL MODEL 8316AC EXPOSED, HARD-WIRED, SENSOR OPERATED FLUSH VALVE @ 0.125 GPF AND MIFAB MC-31/MC-32 SERIES SUPPORT CARRIER. MOUNT AT ACCESSIBLE (ADA) HEIGHT AND INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTION.
U-2	URINAL	¾"	-	2"	1½"	SAME AS U-1 EXCEPT MOUNTED AT STANDARD HEIGHT. (REFER TO ARCHITECTURAL DRAWINGS FOR NON-ADA MOUNTING HEIGHTS).
L-1	LAVATORY WALL MTD. (ACCESSIBLE)	½"	½"	2"	1½"	KOHLER 'KINGSTON' MODEL K-2007 WALL-MOUNT, VITREOUS CHINA, SINGLE-HOLE WITH FRONT OVERFLOW LAVATORY. COMPLETE WITH MOEN COMMERCIAL MODEL CA8302 HARD-WIRED, SENSOR OPERATED ELECTRONIC FAUCET @ 0.35 GPM OUTLET, VANDAL RESISTANT AERATOR, BELOW DECK THERMOSTATIC MIXING VALVE, CHICAGO NO. 1017ABCP LOOSE KEY STOPS WITH RIGID SUPPLIES, McGUIRE NO. PW155WC DRAIN, McGUIRE PRE-INSULATED P-TRAP, McGUIRE PRE-INSULATED FITTINGS AND MIFAB MC-40/MC-41/MC-42 SERIES SUPPORT CARRIER.
L-2	LAVATORY (COUNTER MTD.)	½"	½"	2"	1½"	SAME AS L-1 EXCEPT MOUNTED AT STANDARD HEIGHT. (REFER TO ARCHITECTURAL DRAWINGS FOR NON-ADA MOUNTING HEIGHTS).
S-1	CLASSROOM SINK (WALL MTD.)	½"	½"	2"	1½"	KOHLER 'KINGSTON' MODEL K-2007 WALL-MOUNT, VITREOUS CHINA, SINGLE-HOLE W/ FRONT OVERFLOW LAVATORY. COMPLETE WITH CHICAGO FAUCET MODEL 50-E35-317XKABCP MANUAL FAUCET @ 1.5 GPM OUTLET, VANDAL RESISTANT AERATOR, CHICAGO 131-CABNF BELOW DECK THERMOSTATIC MIXING VALVE, CHICAGO NO. 1017ABCP LOOSE KEY STOPS W/ RIGID SUPPLIES, McGUIRE NO. PW155WC DRAIN, McGUIRE PRE-INSULATED P-TRAP, McGUIRE PRE-INSULATED FITTINGS AND MIFAB MC-40/MC-41/MC-42 SERIES SUPPORT CARRIER.
MS-1	MOP SINK (FLR., CORNER MTD.)	¾"	¾"	3"	2"	KOHLER "WHITBY" MODEL K-6710 CORNER, FLOOR MOUNTED, CAST IRON SERVICE SINK 28"L x 28"W x 13"H WITH OPTIONAL K-8940 COATED WIRE RIM GUARD AND FLAT GRID DRAIN. COMPLETE WITH MOEN No. 8232 UTILITY FAUCET WITH VACUUM BREAKER AND TOP BRACE. MOEN #8198 STAINLESS STEEL MOP/BROOM HOLDER, STERN WILLIAMS MODEL T-35 HEAVY DUTY HOSE (36" LONG) W/ WALL BRACE & STERN WILLIAMS MODEL BP-1-28 STAINLESS STEEL SPLASH GUARD PANELS.
DF-1	DRINKING FOUNTAIN W/ BOTTLE FILLER	½"	-	2"	1½"	ELKAY MODEL LVRCTL8WSK EZH20 BI-LEVEL WALL MOUNTED DRINKING FOUNTAIN, VANDAL-RESISTANT ONE PIECE CONSTRUCTION WITH BOTTLE FILLING STATION, FILTERED, 8.0 GPH CHILLED WATER OUTPUT. COMPLETE WITH MOUNTING SUPPORT BRACKET, WASTE STRAINER AND STAINLESS STEEL ACCESS PANEL INSTALL BOTTLE FILLER PORTION ON LOW (ADA) SIDE OF THE DRINKING FOUNTAIN FOR FULL ADA COMPLIANCE. COORDINATE POWER REQUIREMENTS FOR BOTTLE FILLER OPTION WITH ELECTRICAL CONTRACTOR (115V/60HZ/F.L.A.:1.0/15W).
EEW-1	EMERGENCY EYE WASH	½"	½"	2"	1½"	GUARDIAN MODEL G1760 PEDESTAL-MOUNTED EYEWASH. PROVIDE WITH THERMOSTATIC MIXING VALVE OPTION GUARDIAN MODEL G3600LF ENSURE THAT BUBBLER OUTLET HEIGHT DOES NOT EXCEED 38 "A.F.F.
RD-1	ROOF DRAIN	SEE PLANS FOR SIZES				MIFAB MODEL R1200-6-12-B. COMPLETE WITH CAST IRON FLASHING CLAMP, GALVANIZED METAL DOME, STRAINER AND SUMP RECEIVER. PROVIDE WALL CLEANOUTS AT BUILDING EXTERIORS WITH COVER CUSTOM COLOR TO MATCH THE METAL PANEL WALL SYSTEM. PROVIDE DOWNSPOUT NOZZLE MIFAB MODEL R1960 WITH HINGED PERFORATED BIRD SCREEN COVER, VANDAL PROOF AND FLUSH MOUNTED DESIGN AT EVERY TERMINATION THRU WALL SPILLING TO GRADE.
OD-1	OVERFLOW DRAIN	SEE PLANS FOR SIZES				MIFAB MODEL R1200R-6-12-B. COMPLETE WITH CAST IRON FLASHING CLAMP, GALVANIZED METAL DOME STRAINER, SUMP RECEIVER AND 2" HIGH WATER DAM. PROVIDE DOWNSPOUT NOZZLE MIFAB MODEL R1960 WITH HINGED PERFORATED BIRD SCREEN COVER, VANDAL PROOF AND FLUSH MOUNTED DESIGN AT EVERY TERMINATION THRU WALL SPILLING TO GRADE.
DS-1	DOWNSPOUT NOZZLE	SEE PLANS FOR SIZES				MIFAB MODEL R1960 STAINLESS STEEL DOWNSPOUT NOZZLE WITH HINGED PERFORATED BIRD SCREEN COVER, VANDAL PROOF AND FLUSH MOUNTED.
RR-1	ROOF RECEPTOR	-	-	-	-	MIFAB MODEL R1200-RS-11-B-U. COMPLETE WITH LACQUERED CAST IRON DEEP SUMP DRAIN, SUMP RECEIVER, UNDERDECK CLAMP AND 2" HIGH WATER DAM.
FD-1	FLOOR DRAIN	½"	-	2"	1½"	MIFAB MODEL F1100C-Z CAST IRON DRAIN WITH ROUND NICKEL-BRONZE HEEL-PROOF TOP, CLAMPING COLLAR, TRAP PRIMER CONNECTION AND P-TRAP. REFER TO DETAIL 6/P601.
FS-1	FLOOR SINK	½"	-	2" / 3"	1½" / 2"	MIFAB MODEL FS1730-3-7. COMPLETE WITH DEEP CAST IRON DRAIN, ACID-RESISTANT PORCELAIN ENAMEL COATED INTERIOR, STAINLESS STEEL FRAME/GRATE, HALF GRATE, TRAP PRIMER CONNECTION AND P-TRAP. REFER TO DETAIL 4/P601.
TP-1	TRAP PRIMER ELECTRONIC TYPE	½"	-	-	-	PPP MINI-PRIME MPB-500, HARDWIRED OPERATED IN RECESSED BOX WITH STAINLESS STEEL COVER. COMPLETE WITH 1/2" COPPER TYPE "L" PIPE TO RECEPTOR. PROVIDE DISTRIBUTION UNIT AS REQUIRED. ROUGH-IN DIMENSIONS: 12" x 12" x 4" DEEP. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR (115V/60HZ/1PH).
TP-2	TRAP PRIMER VACUUM BREAKER TYPE	½"	-	-	-	PROVIDE WITH WC-/WC-2 FLUSH VALVE MANUFACTURER VACUUM BREAKER OPTION COMPLETE WITH 1/2" COPPER TYPE "L" PIPE TO RECEPTOR. REFER TO DETAIL 2/P601.
HB-1	HOSE BIBB	¾"	-	-	-	ACORN NO. 8151, RECESSED WALL MOUNTED HOSE BOX WITH WALL FLANGE AND VACUUM BREAKER. CARTRIDGE-OPERATED TYPE WITH VANDAL-RESISTANT LOCKSHIELD, REMOVABLE LOOSE KEY WHEEL HANDLE AND SCREWDRIVER OPERATED STOP. REFER TO DETAIL 3/P6.3.
HB-2	HOSE BIBB (ON ROOF)	1"	-	-	-	WOODFORD MODEL RHMC-MS MILD CLIMATE ROOF HYDRANT WITH MOUNTING SYSTEM, HOSE CONNECTION BACKFLOW PREVENTER AND MODEL 50HF 3/4" HOSE CONNECTION. REFER TO DETAIL 3/P6.3.
HB-3	HOSE BIBB (SURFACE MTD.)	¾"	-	-	-	ACORN NO. 8121CR-LF, ROUGH CHROME-PLATED WITH VACUUM BREAKER HOSE VALVE. CARTRIDGE OPERATED TYPE, REMOVABLE LOOSE KEY WHEEL HANDLE AND VANDAL RESISTANT LOCKSHIELD BONNET.
HR-1	HOSE REEL (SURFACE MTD.)	-	-	-	-	MCMASTER NO. 9244-K52 STEEL CONSTRUCTION, CONTROLLED RETRACTION, AUTOMATIC WINDING HOSE REEL WITH PVC HOSE, MEDIUM DUTY, 6-1/8" WIDE REEL COMPLETE WITH QUICK-DISCONNECT HOSE COUPLINGS AND OPTIONAL STEEL SWIVEL-BASE (345°) MOUNTING BRACKET. VERIFY REEL COLOR OPTIONS WITH ARCHITECT AND/OR COLLEGE. HOSE I.D: 3/8", HOSE LENGTH: 50 FT.
BFP-1	BACKFLOW PREVENTER (PER EQUIP. ITEM)	1"	-	-	-	WILKINS 975-XLSU PRESSURE TYPE BACKFLOW PREVENTER WITH TWO FULL PORT RESILIENT SEATED BALL VALVES FOR SHUT-OFF AND FOUR RESILIENT BALL VALVE TEST COCKS, "Y" STRAINER, UNION CONNECTIONS BETWEEN SHUT-OFF VALVES AND BRONZE BODY CONSTRUCTION. PROVIDE AIR GAP FITTING AND SPILL INDIRECT WASTE TO NEAREST FLOOR SINK OR ROOF RECEPTOR.
FCO-1	FLOOR CLEANOUT	-	-	SEE PLANS	-	MIFAB C1220-S-1-6 WITH SQUARE NICKEL BRONZE TOP AND VANDAL PROOF SCREWS. REFER TO DETAIL 1/P6.1.
WCO-1	WALL CLEANOUT	-	-	SEE PLANS	-	MIFAB 1460-RD WITH STAINLESS STEEL COVER, NO. 4 SATIN FINISH. REFER TO DETAIL 2/P6.1.
WHA-1	WATER HAMMER ARRESTOR	SEE PLANS	-	-	-	MIFAB MODEL "WHB" SERIES BELLOWS OPERATED TYPE WATER HAMMER ARRESTORS. INSTALLATION AND SIZING SHALL CONFORM TO PDI WH-201 STANDARD.
WM-1	WATER METER (BLDG. MONITORING)	2"	-	-	-	SENSUS "OMNI C2S" MODEL WDS-10000-01. MIN. FLOW: 0.25 GPM. FLOW RANGE @ 4.3 PSI = 160 GPM. MAXIMUM OPERATING PRESSURE 200 PSI; AWWA CLASS 125 OVAL BOLT FLANGE; FULLY ELECTRONIC SEALED REGISTER WITH PROGRAMMABLE REGISTER; 304 STAINLESS STEEL MAINCASE; STAINLESS STEEL STRAINER SCREEN AND STRAINER COVER. PROVIDE ALL REQUIRED DEVICES/COMPONENTS TO INTERFACE WITH BUILDING ENERGY MANAGEMENT SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR. REFER TO DETAIL 6/P6.03
EQV-1	EARTHQUAKE VALVE	-	-	-	-	PACIFIC SEISMIC PRODUCTS MODEL 314F. SIZE: 2", FLANGED CONNECTION, HORIZONTAL POSITION, MEETS STANDARD NO. 12-23-1, ASCE STANDARD 25-97 AND ANSI Z21.21,2012 FOR EARTHQUAKE ACTUATED AUTOMATIC GAS SHUT-OFF SYSTEMS. CA-DSA #: 45R-113R. REFER TO DETAIL 4/P6.5.

NOTES:

A. ALL FIXTURES SHALL BE PROVIDED WITH MINIMUM ROUGH-IN CONNECTIONS AS INDICATED IN THIS SCHEDULE OR PER MANUFACTURERS RECOMMENDATIONS. THE PLUMBING CONTRACTOR SHALL RUN ALL SERVICE LINES, ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL FIXTURES. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL TRIMS, FLUSH VALVES, TAILPIECES, STRAINERS, P-TRAPS, TRAP ARMS, HOT & COLD WATER STOPS AND FAUCETS AS REQUIRED.

B. ALL FIXTURES AND/OR COMPONENTS AS PART OF THE PLUMBING SYSTEM SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

PIPING MATERIALS

1.	DRAIN PIPING SEWER WASTE & STORM BELOW GRADE:	CAST IRON 'NO-HUB' PIPE CONFORMING TO CISPI 301 AND ASTM A 888 WITH NEOPRENE GASKET AND HEAVY DUTY, SHIELDED, STAINLESS-STEEL 4 OR 6 BAND COUPLINGS. PIPE WRAP ALL UNDERGROUND PIPING.
2.	DRAIN PIPING SEWER WASTE & STORM ABOVE GRADE:	CAST IRON 'NO-HUB' PIPE CONFORMING TO CISPI 301 AND ASTM A 888 WITH NEOPRENE GASKET AND HEAVY DUTY, SHIELDED, STAINLESS-STEEL 4 OR 6 BAND COUPLINGS.
3.	VENT PIPING FOR SEWER / WASTE ABOVE GRADE:	CAST IRON 'NO-HUB' PIPE CONFORMING TO CISPI 301 AND ASTM A 888 WITH NEOPRENE GASKET AND STANDARD, SHIELDED, STAINLESS-STEEL 2 OR 4 BAND COUPLINGS.
4.	DOMESTIC WATER PIPING BELOW GRADE:	TYPE 'K' COPPER TUBING, HARD DRAWN CONFORMING TO ASTM B 88, WITH WROUGHT COPPER SOLDER SWEAT FITTINGS AND LEAD FREE SOLDER JOINTS. AVOID UNNECESSARY JOINTS BELOW SLAB. PIPE WRAP ALL UNDERGROUND PIPING.
5.	DOMESTIC WATER PIPING ABOVE GRADE:	TYPE 'L' COPPER TUBING, HARD DRAWN CONFORMING TO ASTM B 88, WITH WROUGHT COPPER SOLDER SWEAT FITTINGS AND LEAD FREE-SOLDER JOINTS.
6.	CONDENSATE DRAIN PIPING:	TYPE 'L' COPPER TUBING, HARD DRAWN CONFORMING TO ASTM B 88, WITH WROUGHT COPPER SOLDER SWEAT FITTINGS AND LEAD-FREE SOLDER JOINTS.
7.	COMPRESSED AIR, ABOVE GRADE:	TYPE 'L' COPPER TUBING, HARD DRAWN CONFORMING TO ASTM B 88, WITH WROUGHT COPPER SOLDER-JOINT PRESSURE TYPE OR MSS SP-73 WROUGHT COPPER WITH DIMENSIONS FOR BRAZED JOINTS.
8.	INSULATION OF DOMESTIC HOT/TEMPERED WATER AND CONDENSATE DRAIN PIPING:	GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED JACKET CONFORMING TO ASTM C547. 1-INCH THICK FOR PIPE SIZES 1" & SMALLER. 1½-INCH THICK FOR PIPE SIZES 1¼" INCHES & LARGER. SEAL ALL JOINTS WITH THE FACTORY-APPLIED, SELF-SEAL LAP AND BUTT STRIPS. JOHNS MANVILLE MICRO-LOK 'HP' OR EQUAL.
9.	GAS PIPING:	SCHEDULE 40 BLACK STEEL PIPE CONFORMING TO ASTM A 53 WITH 150 PSIG MALLEABLE IRON THREADED FITTINGS. WELDED JOINTS FOR PIPE SIZES 2½" AND LARGER OR WELDED THROUGHOUT WHEN USED FOR MEDIUM PRESSURE. OUTDOOR PIPING EXPOSED TO ATMOSPHERE SHALL BE GALVANIZED STEEL PIPE OR PAINTED WITH RUST INHIBITING PAINT.
10.	GAS PIPING BELOW GRADE: (EXTERIOR SITE DISTRIBUTION)	POLYETHYLENE PIPE (PE) ORANGE OR YELLOW IN COLOR CONFORMING TO ASTM D 2513, SDR-11 AND IAPMO INSTALLATION STANDARD IS-12 WITH PE FITTINGS CONFORMING TO ASTM D-2683, SOCKET-FUSION TYPE OR ASTM D-3261 WITH DIMENSIONS MATCHING PE PIPE. P.E. TRANSITION FITTINGS, FACTORY-FABRICATED FITTINGS WITH PE COMPLYING WITH ASTM D-2513, SDR-11. PROTECTIVE COATING FOR UNDERGROUND PIPING, FACTORY APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE AND PE.
11.	PIPE PROTECTION: ALL UNDERGROUND METALLIC PIPE WETHER BURIED OR ENCASED SHALL BE WRAPPED WITH ANTI-CORROSIVE 20 MIL PVC TAPE AND PRIMED OR INSTALLED IN 8 MIL POLYETHYLENE SLEEVE CONFORMING TO ASTM D-1248 AND/OR ANSI/AWWA C105/A21.5.	
12.	PIPE PROTECTION: PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS JOINING DISSIMILAR METALS.	
13.	TRACER WIRE: ALL UNDERGROUND PLASTIC PIPE SHALL BE INSTALLED WITH BARE COPPER WIRE, TYPE TW, SIZE AWG#12 PLACED AND SECURED ON TO THE TOP OF THE MAINS AND BRANCHES WITH ALL WIRE TO WIRE CONNECTIONS SOLDERED FOR CONTINUITY.	
14.	QUALITY ASSURANCE: THE PIPING SYSTEMS SHALL BE CONSTRUCTED FROM MATERIALS EXTRUDED AND MOLDED USING THE SAME COMPOUND MANUFACTURER.	
15.	QUALITY ASSURANCE: BOTH THE PIPE AND FITTINGS SHALL BE MANUFACTURED IN NORTH AMERICA AND MEET OR EXCEED THE REQUIREMENTS SET FORTH BY THE AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM) AND ANSI/NSF STANDARDS 14 AND 61.	

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE Not To Scale
DRAWN BY S Repenning
DESIGNED BY E Gomez
CHECKED BY -

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SHEET TITLE

SCHEDULES

SHEET NUMBER

P0.2

ADDENDUM#1

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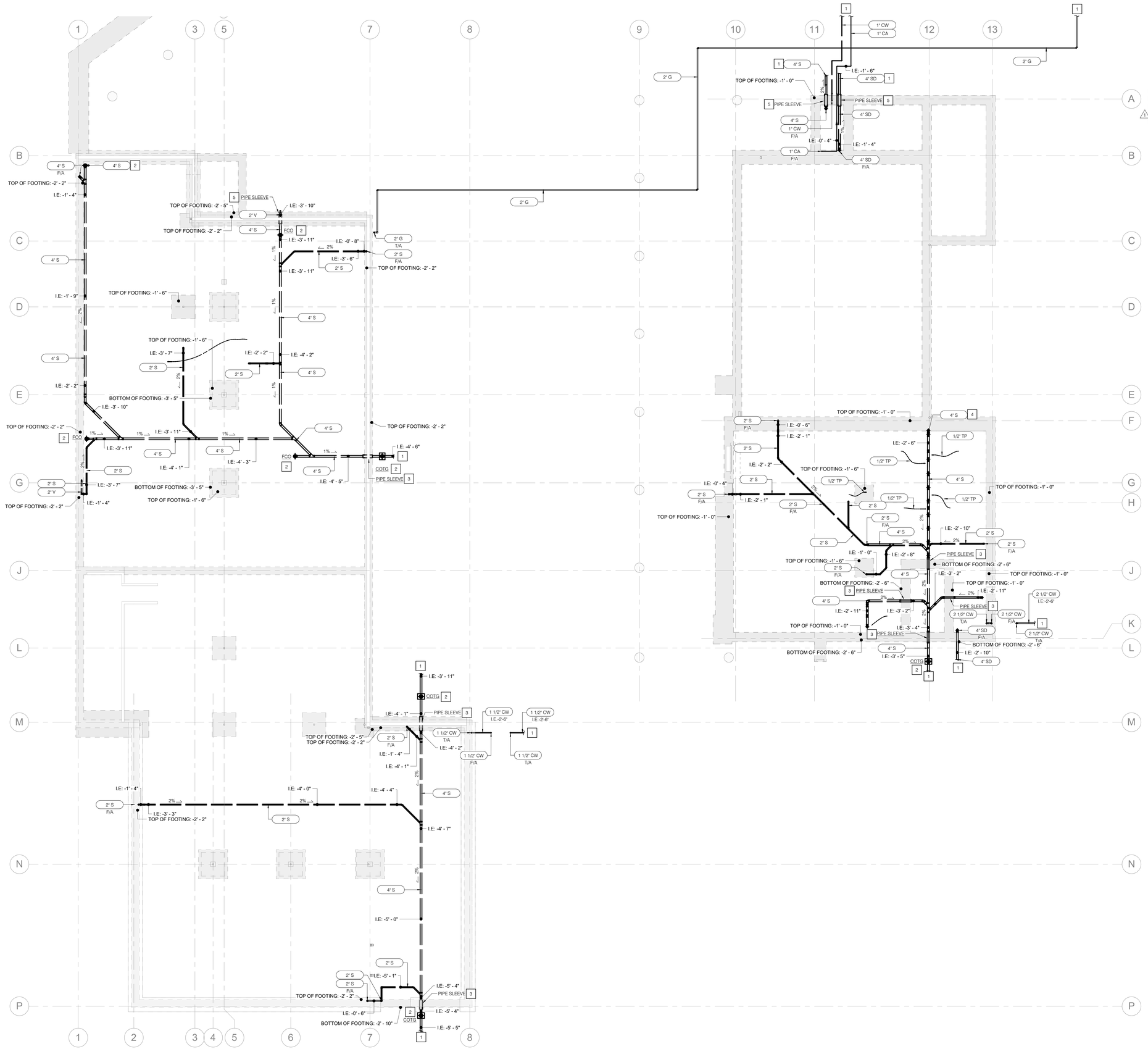

NOTES

1. REFER TO PLUMBING SITE PLAN P1.1 FOR CONTINUATION.
2. PROVIDE CLEANOUT (FCO/COTG). REFER TO DETAIL 1/P6.1.
3. PIPE CROSSING UNDER FOOTING / GRADE BEAM MAINTAIN MINIMUM 6" CLEARANCE FROM BOTTOM OF FOOTING TO TOP OF PIPE SLEEVE. REFER TO STRUCTURAL DETAIL 8/S4.1.
4. SERVING WALL CLEANOUT ABOVE. REFER TO DETAIL 2/P6.1.
5. PIPE SLEEVE AT CONCRETE FOOTING. REFER TO STRUCTURAL DETAIL 8/S4.1.

GENERAL NOTES

A. INVERT ELEVATIONS, TOP OF FOOTING AND BOTTOM OF FOOTING ELEVATIONS TAKEN FROM FINISHED FLOOR.

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SHEET TITLE

UNDERGROUND PLAN

SHEET NUMBER

P2.0

ADDENDUM#1

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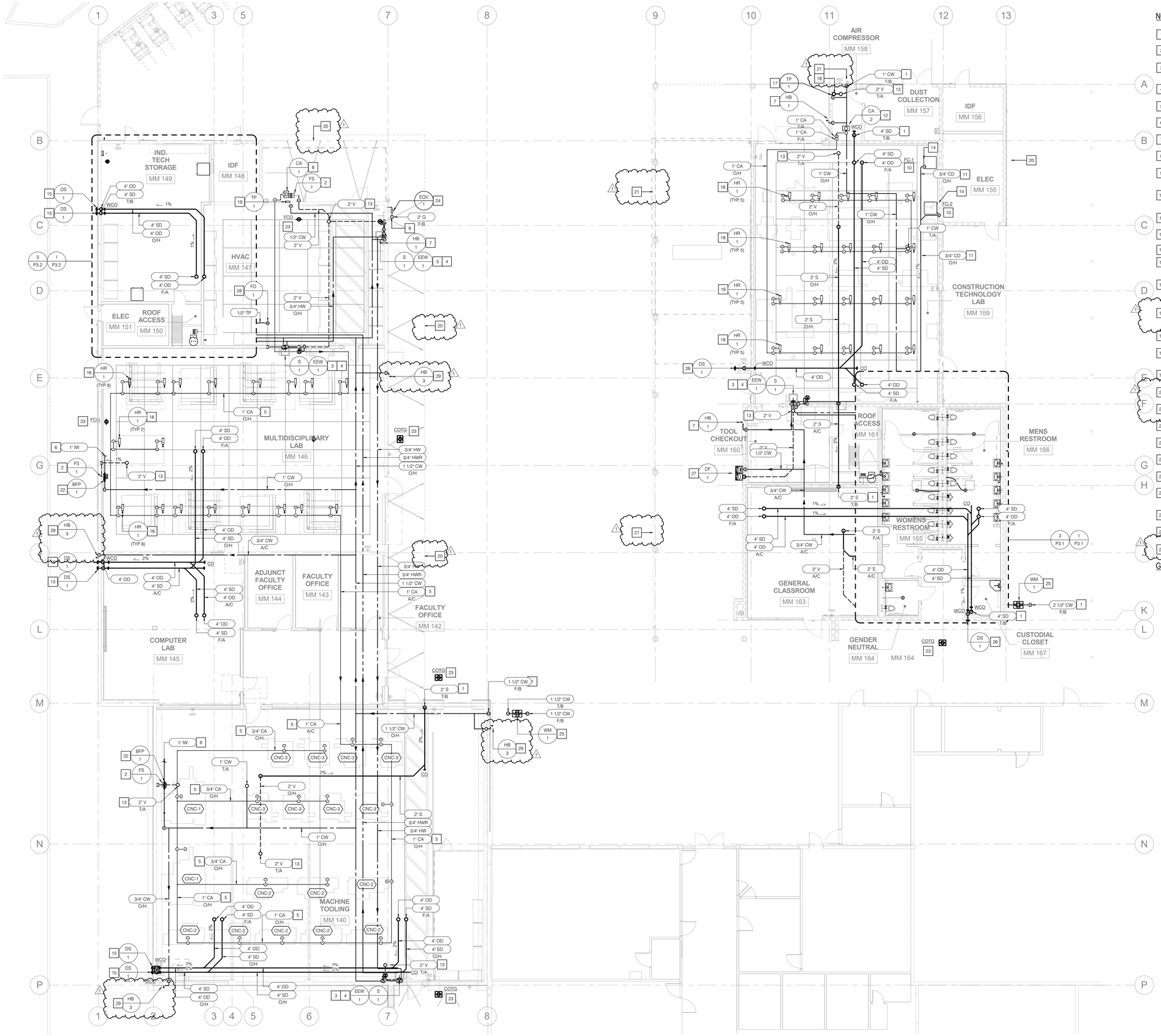

NOTES

1. REFER TO PLUMBING UNDERGROUND PLAN P2.0 FOR CONTINUATION.
2. PROVIDE 2" WASTE DOWN AND 1-1/2" VENT UP TO SERVE FLOOR SINK (FS-1).
3. PROVIDE 2" WASTE DOWN AND 1-1/2" VENT UP TO SERVE EMERGENCY EYEWASH (EEW-1). EXTEND 3/4" CW/HW TO EMERGENCY EYEWASH(EEW-1)
4. PROVIDE 2" WASTE DOWN, 1-1/2" VENT UP AND 3/4" CW/HW TO SERVE SINK(S-1).
5. COMPRESSED AIR TO SERVE MACHINE TOOLING/HVAC CLASSROOMS.
6. BACKFLOW PREVENTER ON WALL FOR INDUSTRIAL COLD WATER STUB TO SUPPLY LABORATORY
7. PROVIDE 3/4"CW TO SERVE RECESSED HOSE BIBB (HB-1). REFER TO DETAIL 6/P6.1.
8. AIR COMPRESSOR (CA-1) LOCATED ON CONCRETE PAD.
9. GAS UP IN WALL WITH GAS CONNECTOR TO SERVE CLASSROOM. CONNECTION ON EXTERIOR OF BUILDING.
10. MECHANICAL EQUIPMENT (NOT IN PLUMBING SCOPE). REFER TO MECHANICAL DRAWINGS FOR UNIT DESCRIPTION AND INFORMATION.
11. PROVIDE 3/4" CD ABOVE CEILING SLOPED AT 1% MIN. FROM MECHANICAL UNIT TO NEAREST RECEPTOR.
12. AIR COMPRESSOR (CA-2) LOCATED ON CONCRETE PAD.
13. VENT THRU ROOF. REFER TO DETAIL 5/P6.1.
14. PROVIDE 3/4" OCD ABOVE CEILING SLOPED AT 1% MIN. FROM MECHANICAL UNIT TERMINATE TO VISIBLE LOCATION.
15. PRIMARY & SECONDAY (OVERFLOW) DRAIN DISCHARGE TO GRADE. TERMINATE THRU WALL W/ DOWNSPOUT NOZZEL (DS-1) AT 18" ABOVE FINISH GRADE. REFER TO DETAIL 5/P6.3.
16. PROVIDE 1/2" COMPRESSED AIR TO SERVE HOSE REEL (HR-1) MOUNTED OVERHEAD. FOR MOUNTING REFER TO DETAIL 8, 13, 18/A9.52.
17. PROVIDE ELECTRONIC TRAP PRIMER (TP-1) RECESSED IN WALL. ROUTE 1/2" TP LINE TO HUB DRAIN.
18. PROVIDE 4" WASTE DOWN AND 2 " VENT UP TO SERVE HUB DRAIN. COORINDATE WITH FIRE PROTECTION DRAWINGS. REFER TO DETAIL 3/P6.4.
19. PROVIDE ELECTRONIC TRAP PRIMER (TP-1) RECESSED IN WALL. ROUTE 1/2" TP LINE TO HUB DRAIN.
20. CANOPY GUTTER AND DOWNSPOUTS BY ARCHITECT REFER TO DETAIL 2 &14/A9.35.
21. CANOPY GUTTER AND DOWNSPOUTS BY ARCHITECT REFER TO DETAIL 2, 4 & 5/A9.36 AND 2/A9.37.
22. PROVIDE 1" WATER SERVICE WITH BACKFLOW PREVENTOR (BFP-1). REFER TO DETAIL 4/P6.3.
23. PROVIDE CLEANOUT TO GRADE. REFER TO DETAIL 1/P6.1
24. PROVIDE EARTHQUAKE VALVE (EQV-1) MOUNTED ON EXTERIOR WALL.
25. PROVIDE WATER METER (WM-1) BELOW GRADE IN CONCRETE YARD BOX. REFER TO DETAIL 6/P6.3.
26. OVERFLOW DRAIN DISCHARGE TO GRADE. TERMINATE THRU WALL W/ DOWNSPOUT NOZZEL (DS-1) AT 18" ABOVE FINISH GRADE.
27. PROVIDE 2" WASTE DOWN, 1-1/2" VENT UP AND 1/2" CW TO SERVE DRINKING FOUNTAIN (DF-1).
28. PROVIDE 2" WASTE DOWN AND 1-1/2" VENT UP TO SERVE FLOOR SINK (FS-2).
29. PROVIDE 3/4"CW TO SERVE SURFACE MOUNTED HOSE BIBB (HB-3).

GENERAL NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE/EQUIPMENT DESCRIPTION, INFORMATION AND DETAILS ON EQUIPMENT #'S INDICATED WITH SYMBOL TAG. XXX-#

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DESIGNED BY	E Gomez
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SHEET TITLE

PLUMBING - FLOOR PLAN

SHEET NUMBER

P2.1

ADDENDUM#1

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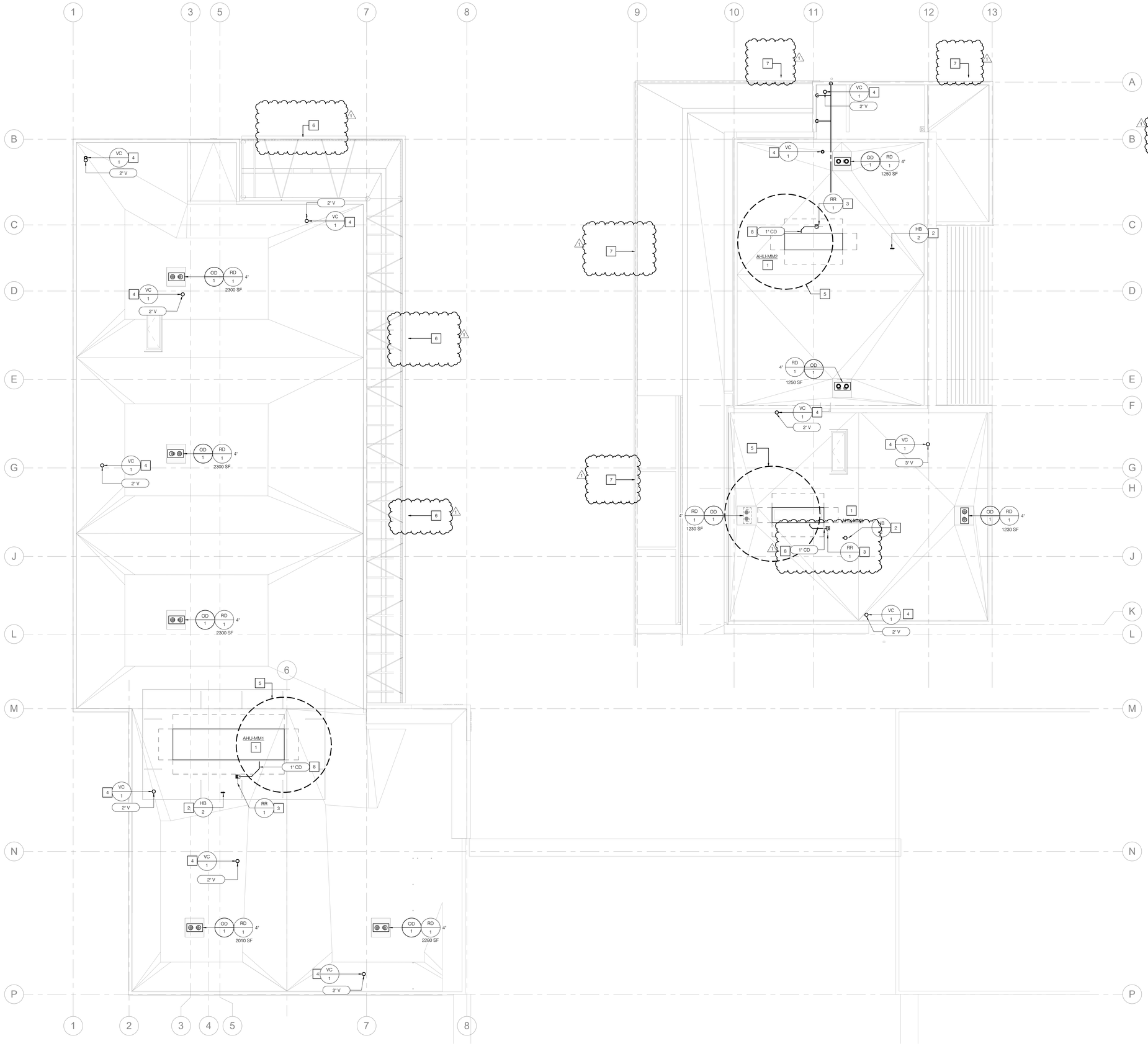

NOTES

1. MECHANICAL EQUIPMENT (NOT IN PLUMBING SCOPE). REFER TO MECHANICAL DRAWINGS FOR UNIT DESCRIPTION AND INFORMATION.
2. 1" CW FROM BELOW TO SERVE HOSE BIBB (HB-2). REFER TO DETAIL 3/P6.3.
3. PROVIDE 2" WASTE DOWN AND 2" VENT UP TO SERVE ROOF RECEPTOR (RR-1). ROOF RECEPTOR TO COLLECT CONDENSATE FROM MECHANICAL EQUIPMENT.
4. VENT THRU ROOF. REFER TO DETAIL 5/P6.1.
5. DASHED CIRCLE INDICATES 10'-0" CLEARANCE ZONE FROM OUTSIDE AIR INTAKE. NO VENT PIPING ALLOWED WITHIN THIS AREA.
6. CANOPY GUTTER AND DOWNSPOUTS BY ARCHITECT REFER TO DETAIL 2 &14/A9.35.
7. CANOPY GUTTER AND DOWNSPOUTS BY ARCHITECT REFER TO DETAIL 2, 4 & 5/A9.36 AND 2/A9.37.
8. ROUTE CONDENSATE FROM MECHANICAL UNIT TO ROOF RECEPTOR (RR-1) ON ROOF.

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099

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THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE 1/8" = 1'-0"
DRAWN BY S Repenning
DESIGNED BY E Gomez
CHECKED BY -

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SHEET TITLE

PLUMBING - ROOF PLAN

SHEET NUMBER

P2.2

ADDENDUM#1

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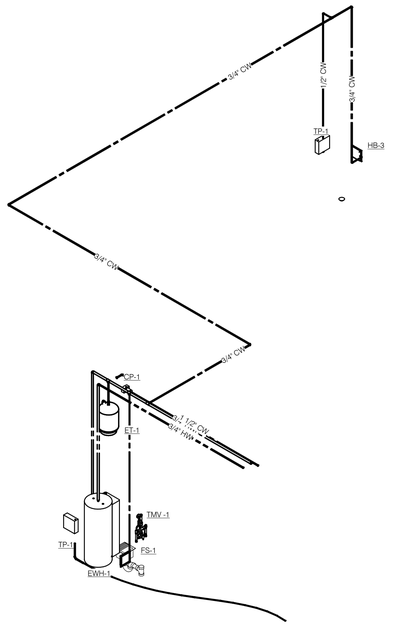
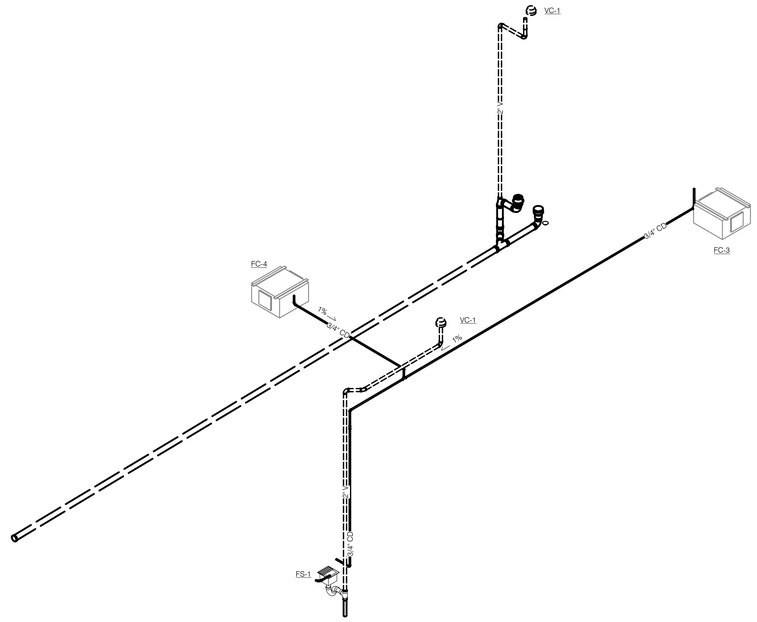


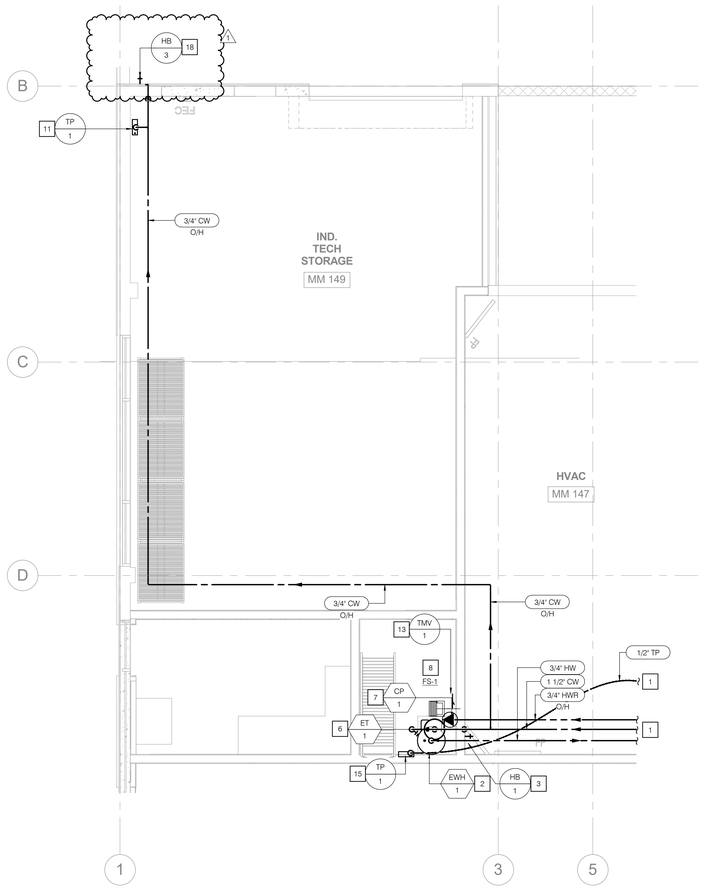
4 BLDG. MM WEST ENLARGED - WATER AND GAS ISOMETRIC

SCALE:



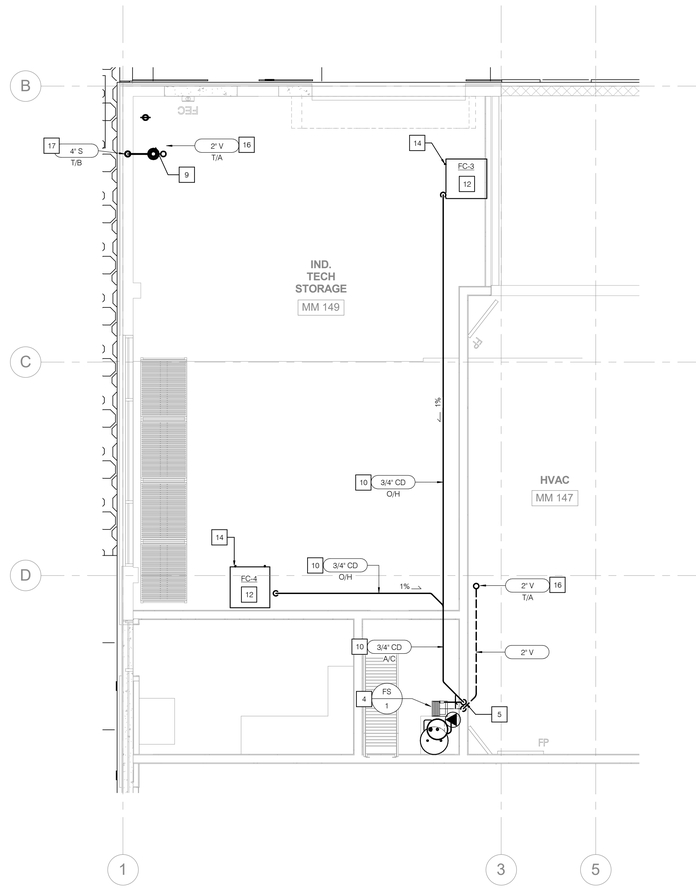
2 BLDG. MM WEST ENLARGED - WASTE AND VENT ISOMETRIC

SCALE:



3 BLDG. MM WEST ENLARGED - WATER AND GAS

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



1 BLDG. MM WEST ENLARGED - WASTE AND VENT

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

NOTES

1. REFER TO PLUMBING FLOOR PLAN P2.1 FOR CONTINUATION
2. ELECTRIC WATER HEATER (EWH-1) WILL BE USED TO SERVE RESTROOMS. REFER TO DETAIL 1/P6.2.
3. PROVIDE 3/4"CW TO SERVE RECESSED HOSE BIBB (HB-1). REFER TO DETAIL 6/P6.1.
4. PROVIDE 2" WASTE DOWN AND 1-1/2" VENT UP TO SERVE FLOOR SINK (FS-1).
5. PROVIDE 3/4" CD DOWN IN WALL AND SPILL INTO FLOOR SINK (FS-1).
6. EXPANSION TANK (ET-1) REFER TO DETAIL 1/P6.2
7. CIRCULATING PUMP (CIP-1). REFER TO DETAIL 2/P6.2.
8. PROVIDE 1/2" TRAP PRIMER BELOW FLOOR TO SERVE FLOOR SINK (FS-1) FROM TRAP PRIMER (TP-1).
9. HUB DRAIN FOR FIRE SPRINKLER SYSTEM DISCHARGE.
10. PROVIDE 3/4" CD ABOVE CEILING SLOPED AT 1% MIN. FROM MECHANICAL UNIT TO NEAREST RECEPTOR. REFER TO DETAIL 6/P6.4.
11. PROVIDE 1/2" CW TO SERVE TRAP PRIMER (TP-1). ROUTE 1/2" TP FROM TRAP PRIMER UNIT TO HUB DRAIN.
12. MECHANICAL UNIT (NOT IN PLUMBING SCOPE). REFER TO MECHANICAL DRAWINGS FOR UNIT DESCRIPTION AND INFORMATION.
13. THERMOSTATIC MIXING VALVE (TMV-1) MOUNTED ON THE WALL.
14. PROVIDE 3/4" OCD ABOVE CEILING SLOPED AT 1% MIN. FROM MECHANICAL UNIT TERMINATE TO VISIBLE LOCATION.
15. PROVIDE 1/2" CW TO SERVE TRAP PRIMER (TP-1). ROUTE 1/2" TP FROM TRAP PRIMER UNIT TO FLOOR SINK (FS-1) AND FLOOR DRAIN (FD-1).
16. VENT THRU ROOF. REFER TO DETAIL 5/P6.1.
17. REFER TO PLUMBING UNDERGROUND PLAN P2.0 FOR CONTINUATION.
18. PROVIDE 3/4"CW TO SERVE SURFACE MOUNTED HOSE BIBB (HB-3).

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SIGNED: 12/04/2019

SEALS / APPROVALS

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SCALE	1/4" = 1'-0"
DRAWN BY	Author
DESIGNED BY	S. Repenning
CHECKED BY	E. Gomez

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SHEET TITLE
BUILDING MM WEST ENLARGED

SHEET NUMBER
P3.2

ADDENDUM#1

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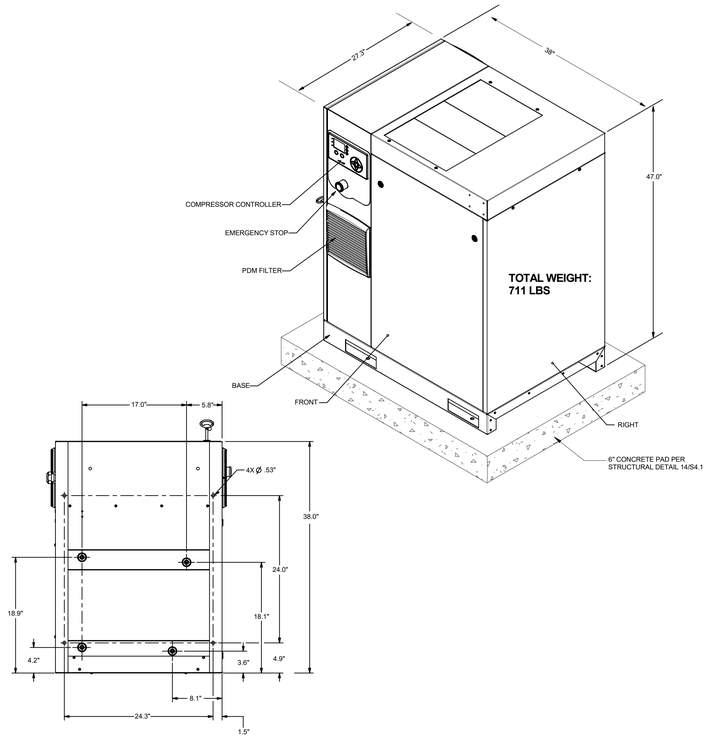
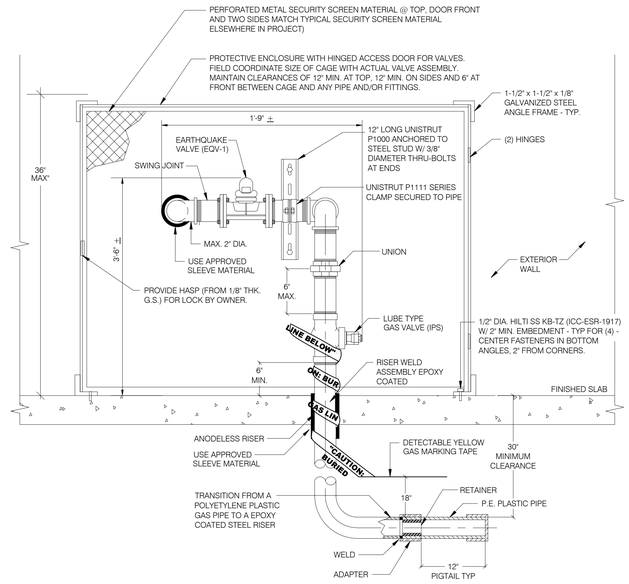


6 AIR COMPRESSOR (CA-2)

NO SCALE



DETAIL NOTES:

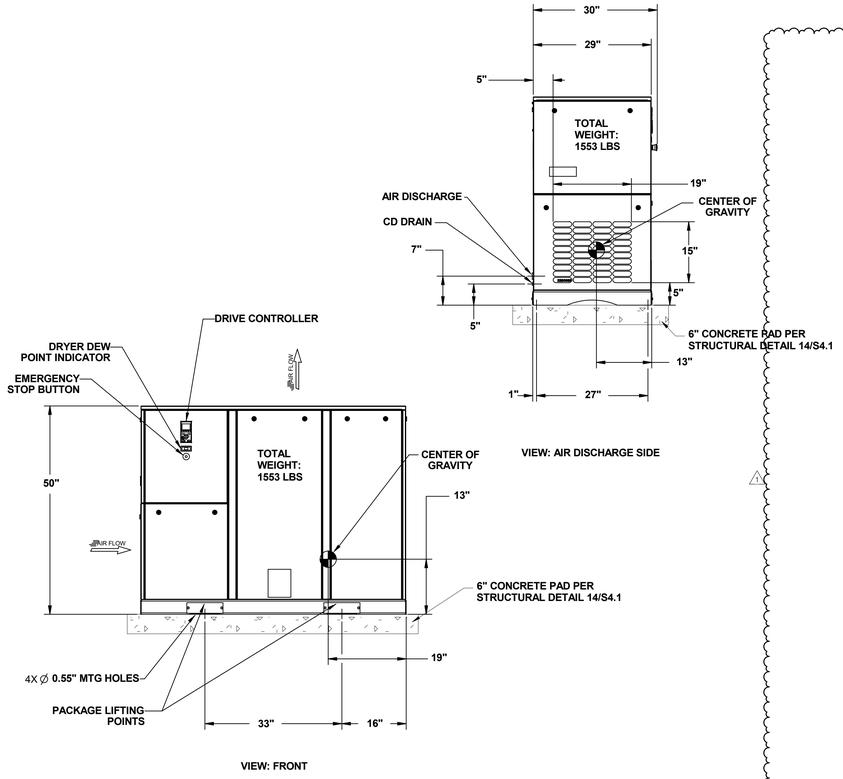
1. PROVIDE ENCLOSURE TO AVOID TAMPERING. ALSO, INSTALL STABILIZER BRACKET (UNISTRUT OR EQUIVALENT) TO PLUMBING WITHIN 6' OF VALVE AND SECURE TO THE BUILDING.
2. GRIND ALL WELDS SMOOTH - NO SHARP EDGES!
3. SET ENCLOSURE SNUG AND TIGHT TO WALL.
4. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.

4 TYPICAL GAS VALVE SUPPLY INSTALLATION

NO SCALE

2 NOT USED

NO SCALE



5 AIR COMPRESSOR (CA-1)

NO SCALE

3 NOT USED

NO SCALE

1 NOT USED

NO SCALE

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DRAWN BY	S Repenning
DESIGNED BY	E Gomez
CHECKED BY	-

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SHEET TITLE

DETAILS

SHEET NUMBER

P6.5

ADDENDUM#1

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LEGEND

SYMBOL	DESCRIPTION
	NOTE CALLOUT
	DETAIL CALLOUT - NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN
	MECHANICAL EQUIPMENT CALLOUT. SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS
	LIGHTING FIXTURE CALLOUT. SEE FIXTURE SCHEDULE: - LETTER DENOTES FIXTURE TYPE - NUMBER DENOTES FIXTURE VOLT/AMPS
	SECTION CALLOUT
	FEEDER CALLOUT
	EXISTING FEEDER CALLOUT
	NEW LINEWORK
	EXISTING LINEWORK
	DEMOLISHED LINEWORK
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING
	CONDUIT EXPOSED
	CONDUIT CONCEALED UNDERGROUND OR BELOW FLOOR
	CONDUIT EMERGENCY
	CONDUIT TURNED UP
	CONDUIT CAPPED
A-1	BRANCH CIRCUIT HOMERUN TO PANELBOARD AND CIRCUITS AS INDICATED
	3/4" CONDUIT, TICK MARKS INDICATE QUANTITY OF #12 AWG WIRES (UNLESS NOTED OTHERWISE, NO MARKS INDICATES 2#12 & 1#12 GND WIRES) - SMALL MARK DENOTES HOT WIRE - LARGE MARK DENOTES NEUTRAL WIRE - DIAGONAL DENOTES GROUND WIRE
G	GENERATOR
	SWITCH
	CIRCUIT BREAKER
	2-WAY SWITCH, TRANSFER SWITCH
	FUSE
	TRANSFORMER
	GROUND CONNECTION
	MOTOR - SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER
M	METER
ECM	ELECTRONIC CIRCUIT MONITOR
	480V DRAWOUT BREAKER
VFD	VARIABLE FREQUENCY DRIVE
	PANEL
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	COMBINATION STARTER/DISCONNECT SWITCH
M	SWITCH MOTOR RATED
	SPLICE
	TERMINATION
	EXISTING TERMINATION
52	MEDIUM VOLTAGE - AIR CIRCUIT BREAKER DRAWOUT BREAKER
	MEDIUM VOLTAGE FUSED DISCONNECT SWITCH
	MEDIUM VOLTAGE MODULAR SPLICE
	MEDIUM VOLTAGE EXISTING MODULAR SPLICE
X y	2X4 LIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
	2X4 EMERGENCY LIGHT FIXTURE FED FROM INVERTER
X y	2X2 LIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
	2X2 EMERGENCY LIGHT FIXTURE FED FROM INVERTER
X y	LINEAR LIGHT FIXTURE, DIMENSIONS PER PLANS - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
	EMERGENCY LINEAR LIGHT FIXTURE, DIMENSIONS PER PLANS - LIGHT FIXTURE FED FROM INVERTER
X y	LINEAR PENDANT LIGHT FIXTURE, DIMENSIONS PER PLANS - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
X y	TRACK LIGHTING - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
X y	UNDERCABINET / COVE FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
X y	LED STRIP LIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.

SYMBOL	DESCRIPTION
X y	DOWNLIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
X y	EMERGENCY DOWNLIGHT FIXTURE FED FROM INVERTER
X y	PENDANT LUMINAIRE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
X y	WALL MOUNTED LIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
	EMERGENCY WALL MOUNTED LIGHT FIXTURE FED FROM INVERTER
	BOLLARD LUMINAIRE
	POST TOP LUMINAIRE
	POLE MOUNTED LUMINAIRE, SINGLE HEAD
	POLE MOUNTED LUMINAIRE, DOUBLE HEAD
	POLE MOUNTED LUMINAIRE, TRIPLE HEAD
	IN GRADE LUMINAIRE
	PATHWAY LUMINAIRE
	LANDSCAPE FIXTURE
	EXIT LIGHT FIXTURE WITH DIRECTIONAL ARROWS AS INDICATED. SHADED SIDE DENOTES NUMBER OF FACES
J	JUNCTION BOX
PC	PHOTOCELL FOR EXTERIOR APPLICATIONS
PC	PLUG CONTROLLER - nLIGHT #nPP20 PL
R	DIMMING RELAY - nLIGHT #nPP16-D
ER	EMERGENCY DIMMING RELAY UL 924 COMPLIANT - nLIGHT #nPP16-ER
M	MOTION SENSOR - CEILING MOUNTED - nLIGHT #nRM-PDT9/10
MD	COMBINATION MOTION AND DAYLIGHT SENSOR- nLIGHT #nRM-PDT9/10-ADCX
MS	MOTION SENSOR SWITCH - nLIGHT #WSX-PDT SERIES
LV	LOW VOLTAGE SWITCH - nLIGHT #nPOD-M SERIES
EPO	EMERGENCY POWER OFF SWITCH
	MODULAR FURNITURE - BASE POWER WHIP FEED CONNECTION
	MODULAR FURNITURE - FLOOR BOX FEED CONNECTION
	MODULAR FURNITURE - POWER POLE FEED CONNECTION
	LIGHTING CONTROL PANEL - SURFACE MOUNTED
	PANELBOARD - RECESSED MOUNTED
	PANELBOARD - SURFACE MOUNTED
	DISTRIBUTION PANEL/ BOARD
S	SINGLE POLE SWITCH, DEVICE SHALL BE MOUNTED +48" MAX AND +36" MIN FROM THE CENTER OF DEVICE.
S3	SWITCH 3-WAY (48" AFF MAXIMUM)

RECESSED ON WALL
SURFACE OR WIREMOLD
FLOOR OR CEILING

G= GFCI, WP=WEATHER PROOF
G= GFCI, WP=WEATHER PROOF
C= CEILING
S.O.= CORD REEL

A= NEMA 5-30R, 120/240V, 1PH, 3W + GND, 30A RECEPTACLE
B= NEMA L5-30R, TWISTLOCK, 120/240V, 1PH, 3W + GND, 30A RECEPTACLE
C= NEMA 21-30R, 208V, 3PH, 4W, 30A RECEPTACLE

20A, 125V DUPLEX RECEPTACLE
MOUNTED +15' AFF, UNLESS OTHERWISE NOTED

20A, 125V QUAD RECEPTACLE
MOUNTED +15' AFF, UNLESS OTHERWISE NOTED

20A, 125V DUPLEX RECEPTACLE
RECEPTACLE ON DEDICATED CIRCUIT

20A, 125V CONTROLLED DUPLEX RECEPTACLE

20A, 125V QUAD RECEPTACLE
(HALF) CONTROLLED RECEPTACLE

SPECIAL RECEPTACLE
REFER TO DRAWINGS FOR NEMA CONFIGURATION

J JUNCTION BOX

RECESSED POKE-THROUGH -
RECESSED POKE-THROUGH - POWER/TEL/DATA
RECESSED FLOOR BOX - POWER/TEL/DATA

20A, 125V DUPLEX RECEPTACLE FIRE RATED TYPE

20A, 125V QUAD RECEPTACLE FIRE RATED TYPE

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
&	AND
1/C	SINGLE CONDUCTOR
@	AT
A OR AMP	AMPERES
A.C.	ASPHALT CONCRETE
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECT; ARCHITECTURAL
AS	DIS. SWITCH SIZE RATING
ATC	AIR TERMINAL CHAMBER
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
B.S.	BARE STRANDED
BAT	BATTERY
BEL	BELOW
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
C.O.	CONDUIT ONLY WITH PULL WIRE
CB	CIRCUIT BREAKER
CC	CONSTANT CURRENT
CKT	CIRCUIT
CL	CENTER LINE
CLG.	CEILING
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CP	COMMUNICATION PROCESSOR
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CSFD	COMBINATION SMOKE FIRE DAMPER
CSU	CALIFORNIA STATE UNIVERSITY
CT	CURRENT TRANSFORMER
CU	COPPER
CW	COLD WATER
DIA	DIAGRAM
DIS	DISCONNECT
DIST.	DISTANCE
DL	DAMP LOCATION LISTING
DM	DIGITAL METER
DP	DISTRIBUTION PANEL
DWG	DRAWING
DWP	DEPARTMENT OF WATER & POWER
EA	EACH
ELEC.	ELECTRICAL
EMH	ELECTRICAL MANHOLE
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER
EQUIP	EQUIPMENT
EXIST/(E)	EXISTING
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
FFE	FINISHED FLOOR ELEVATION
FIN.	FINISH
FIP	FIELD INTERFACE PANEL
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FIBER OBTIC
FT	FEET
FTG	FOOTING
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GG	GREEN GROUND
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
IE	INVERT ELEVATION
INCAND	INCADESCENT
ISC	SHORT CIRCUIT CURRENT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LF	LINEAR FEET
LIS	LOAD INTERRUPTER SWITCH
LOC.	LOCATION
LTG	LIGHTING
LV	LOW VOLTAGE
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFGR	MANUFACTURER
MH	MANHOLE
MI.	MECHANICAL INTERLOCK
MOCP	MAXIMUM OVERCURRENT PROTECTION
MRCT	MULTI-RATIO CURRENT TRANSFORMER
MTD	MOUNTED
MTG	MOUNTING
MV	MEDIUM VOLTAGE
N	NORTH
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT- 24HRS ON
NO.	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRICAL
OFC	OIL FUSED CUTOUT
OH	OVER HEAD
OL	OIL LEVER SWITCH
P	POLE
PB	PULL BOX
PC	PHOTOCELL
PCB	POLYCHLORINATED BIPHENYL
PDS	PRESSURE DIFFERENTIAL SWITCH
PF	POWER FACTOR
PH OR Ø	PHASE
PILC	PAPER INSULATED, LEAD COVER
PIV	POST INDICATING VALVE
PL	PLATE
PNL	PANEL
POC	POINT OF CONNECTION
PRI.	PRIMARY
PVC	POLY-VINYL CHLORIDE
PWR	POWER
REC/RECEPT	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RPBP	REDUCED PRESSURE BACK FLOW PREVENTER
SCE	SOUTHERN CALIFORNIA EDISON
SF	SQUARE FEET
SHT	SHEET
SIG.	SIGNAL
SP	SPARE
SPECS	SPECIFICATIONS
ST	STREET
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SWST	SWITCHING STATION
T.O.D.	TOP OF DUCTBANK
T.O.M.	TOP OF MANHOLE
TB	TERMINAL BLOCK
TEL./TELE	TELEPHONE
TMH	TELEPHONE MANHOLE
TPS	TWISTED SHIELDED PAIR
TRANSF/XFMR	TRANSFORMER
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT-AMPERES
VB	VIBRATION SWITCH
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
Z	IMPEDANCE

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS AND OTHER STANDARD INDUSTRY CONVENTIONS.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2016 EDITION OF THE CALIFORNIA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL AND STATE. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.

2. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS AND/OR SPECIFICATIONS OR WITH CODE REQUIREMENTS, THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE JOB OR THE HIGHER STANDARD SHALL PREVAIL.

3. OMISSIONS FROM THE DRAWINGS OR SPECIFICATIONS OR THE MISDESCRIPTION OF DETAILS OF WORK WHICH ARE MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, OR WHICH ARE CUSTOMARILY PERFORMED, SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR MISDESCRIBED DETAILS OF THE WORK BUT THEY SHALL BE PERFORMED AS IF FULLY AND CORRECTLY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.

4. THE CONTRACTOR SHALL CHECK ALL DRAWINGS FURNISHED TO HIM IMMEDIATELY UPON THEIR RECEIPT AND SHALL PROMPTLY NOTIFY THE OWNER OF ANY DISCREPANCIES. FIGURES MARKED ON DRAWINGS SHALL IN GENERAL BE FOLLOWED IN PREFERENCE TO SCALE MEASUREMENTS. LARGE SCALE DRAWINGS SHALL IN GENERAL GOVERN SMALL SCALE DRAWINGS. THE CONTRACTOR SHALL COMPARE ALL DRAWINGS AND VERIFY THE FIGURES BEFORE LAYING OUT THE WORK AND WILL BE RESPONSIBLE FOR ANY ERRORS WHICH MIGHT HAVE BEEN AVOIDED THEREBY.

5. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS' LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.

6. THE CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR STRUCTURAL ENGINEER.

7. ALL CONDUIT CONNECTIONS TO MACHINES AND EQUIPMENT SUBJECT TO VIBRATION (INCLUDING TRANSFORMERS) SHALL BE MADE WITH SEALTIGHT FLEX CONDUIT. PROVIDE SUFFICIENT SLACK TO ELIMINATE VIBRATION. ARRANGE CONNECTIONS TO PREVENT THE ENTRANCE OF MOISTURE. PROVIDE CONTINUOUS GROUND WIRE THROUGH ALL FLEX TO ASSURE GROUND CONTINUITY.

8. FOR PURPOSES OF CLEARNESS AND LEGIBILITY, THE ELECTRICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DATA INFORMATION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION SECTIONS WHERE ELECTRICAL WORK INTERFACES WITH OTHER TRADES.

9. ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE CALIFORNIA STATE ACCESSIBILITY LAWS WITH REGARD TO THE FOLLOWING:
   - A. MOUNTING HEIGHT OF RECEPTACLES - NO OUTLET SHALL BE MOUNTED ON A WALL AT LESS THAN 18" AFF.
   - B. MOUNTING HEIGHT OF SWITCHES AND THERMOSTATS - DEVICES SHALL BE MOUNTED AT NO HIGHER THAN 48" AFF TO TOP OF DEVICE, BUT NOT LESS THAN 36" AFF.

10. THE CONTRACTOR SHALL MAINTAIN AS-BUILT DRAWINGS TO REFLECT ALL CHANGES MADE DURING CONSTRUCTION AND ANY DEVIATIONS FROM THE ELECTRICAL DRAWINGS. THIS INCLUDES DEVIATIONS FROM CIRCUIT NUMBERS AND ANY ADDITION, DELETION OR RELOCATION OF OUTLETS SHOWN ON WORKING DRAWINGS.

11. OUTLET BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES.

12. ALL RECEPTACLES INSTALLED IN A WET LOCATION SHALL BE WITHIN AN ENCLOSURE THAT'S WEATHERPROOF EVEN WHEN AN ATTACHMENT PLUG IS INSERTED.

13. 2016 CBC MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT ANCHORAGE NOTES:

    ALL 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 FORCES AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.23, 1.24, 1.25, 1.26 AND ASCE 7-16 CHAPTER 13, 26, AND 30.
    - A. ALL 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. MOVABLE 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.

    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 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
    - B. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

    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 ABOVE REQUIREMENTS.

14. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE: PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8, 13.6.7, 13.6.5.6 ITEM 6, AND 2016 CBC SECTIONS 1616A.1.24, 1616A.1.25, AND 1616A.1.26.

    THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS.THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

    MP [ ] MD [ ] PP [ ] E [X] - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

    MP ☐ MD ☐ PP☐ E ☐ - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL OPM #_____

    MP ☐ MD ☐ PP☐ E ☐ - OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009),

    INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL_____ FOR THE PROJECT AND CONDITIONS.

15. THE CONTRACTOR SHALL INSTALL ALL CONDUITS AND WIRES WITH A MINIMUM NUMBER OF BENDS AND IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE. AVOID OBSTRUCTIONS, PRESERVE HEAD ROOM, KEEP OPENINGS AND PASSAGEWAYS CLEAR AND MEET ALL STRUCTURAL CODE REQUIREMENTS.

16. THE CONTRACTOR SHALL PROVIDE SUPPORT FOR ALL FIXTURES AND ELECTRICAL EQUIPMENT TO COMPLY WITH THE SEISMIC REQUIREMENTS OF THE UNIFORM BUILDING CODE AND ALL LOCAL ORDINANCES.

17. PROVIDE TYPEWRITTEN DIRECTORY CARD IN ALL PANELS, IDENTIFY LOAD SERVED BY EACH CIRCUIT BREAKER.

18. ALL EXPOSED CONDUITS SHALL BE RIGID GALVANIZED STEEL (RGS) UON.

SHEET INDEX

SHEET	DESCRIPTION
E0.1	GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
E0.2	FIRE ALARM GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX
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E0.4	PANEL SCHEDULES
E0.5	PANEL SCHEDULES
E0.6	PANEL SCHEDULES
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E1.2	LIGHTING - SITE PLAN
E1.2PM	PHOTOMETRICS - SITE PLAN
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E2.2	LIGHTING - FLOOR PLAN
E2.3	LIGHTING - COVERED STORAGE
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E3.3	ENLARGED PLANS
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E6.2	DETAILS
E6.3	DETAILS
E6.4	DETAILS
1 E6.5	DETAILS
E6.6	DETAILS
E7.01	TITLE 24 COMPLIANCE FORMS
ED2.1	POWER - FLOOR DEMO PLAN
ED1.1	SITE - DEMO PLAN

DSA USE ONLY

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SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE	Not To Scale
DRAWN BY	G Jacob
DESIGNED BY	M Klug
CHECKED BY	M Cabbibo

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SHEET TITLE
GENERAL NOTES, LEGEND, ABBREVIATIONS AND SHEET INDEX

E0.1

ADDENDUM#1

5/21/2020 9:37:15 PM C:\Users\Kathy Olais\Documents\J9099_LBCC_MEP-CENTRAL_R16_kathy.olais@p2sinc.com.rvt

*PROVIDE FEED THRU LUGS TO PANEL 2P4A

PANEL: 2P3A

LOCATION: TOOL STORAGE MM 140A | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB1
FLOOR: FIRST | BUS AMPS: 800 A | RATING 22,800AIC
MOUNTING: SURFACE | MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	CNC-3 RM 140	50 A	3	4798 VA			4798 VA			3	50 A	CNC-3 RM 140	N	2
3	--	--	--	--		4798 VA			4798 VA		--	--	--	--	4
5	--	--	--	--			4798 VA			4798 VA	--	--	--	--	6
7	N	CNC-3 RM 140	50 A	3	4798 VA			2999 VA			3	50 A	CNC-2 RM 140	N	8
9	--	--	--	--		4798 VA			2999 VA		--	--	--	--	10
11	--	--	--	--			4798 VA			2999 VA	--	--	--	--	12
13	N	CNC-3 RM 140	50 A	3	4798 VA			2999 VA			3	50 A	CNC-2 RM 140	N	14
15	--	--	--	--		4798 VA			2999 VA		--	--	--	--	16
17	--	--	--	--			4798 VA			2999 VA	--	--	--	--	18
19	N	CNC-3 RM 140	50 A	3	4798 VA			2999 VA			3	50 A	CNC-2 RM 140	N	20
21	--	--	--	--		4798 VA			2999 VA		--	--	--	--	22
23	--	--	--	--			4798 VA			2999 VA	--	--	--	--	24
25	N	CNC-3 RM 140	50 A	3	4798 VA			0 VA			1	20 A	SPARE	--	26
27	--	--	--	--		4798 VA			0 VA		1	20 A	SPARE	--	28
29	--	--	--	--			4798 VA			0 VA	1	20 A	SPARE	--	30
31	N	CNC-3 RM 140	50 A	3	4798 VA			0 VA			1	20 A	SPARE	--	32
33	--	--	--	--		4798 VA			0 VA		1	20 A	SPARE	--	34
35	--	--	--	--			4798 VA			0 VA	1	20 A	SPARE	--	36
37	N	CNC-3 RM 140	50 A	3	4798 VA			15993...			3	400 A	2P4A	N	38
39	--	--	--	--		4798 VA			15923...		--	--	--	--	40
41	--	--	--	--			4798 VA			15493...	--	--	--	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 63371 VA 529 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 63301 VA 528 A
L=LIGHTING | K=KITCHEN | TOTAL C: 62871 VA 524 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	189542 VA	100.00%	189542 VA			
				TOTAL LOAD:	189542 VA	526 A
				TOTAL DEMAND LOAD:	189542 VA	526 A

PANEL: 2M1B

LOCATION: ELEC MM 155 | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB2
FLOOR: FIRST | BUS AMPS: 100 A | RATING 10,000AIC
MOUNTING: SURFACE | MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	DRINKING FOUNTAIN	20 A	1	800 VA			50 VA			1	20 A	MOTORIZED SHADES RM 159	N	2
3	N	HAND DRYER RR - MM 165	20 A	1		1000 VA			50 VA		1	20 A	MOTORIZED SHADES RM 163	N	4
5	N	HAND DRYER RR - MM 166	20 A	1			1000 VA			1200 VA	1	20 A	BI-FOLD DOOR RM 159	N	6
7	M	TP-1 QTY. 2	20 A	1	400 VA			0 VA			1	20 A	SPARE	--	8
9	M	CP-2	20 A	1		200 VA			0 VA		1	20 A	SPARE	--	10
11	N	PLUMBING SENSORS RR	20 A	1			1000 VA			0 VA	1	20 A	SPARE	--	12
13	N	PLUMBING SENSORS RR	20 A	1	500 VA			0 VA			1	20 A	SPARE	--	14
15	M	EF-1	20 A	1		1176 VA			0 VA		1	20 A	SPARE	--	16
17	M	EF-2	20 A	1			696 VA			0 VA	1	20 A	SPARE	--	18
19	M	AHU-2	20 A	1	200 VA			0 VA			1	20 A	SPARE	--	20
21	M	AHU-3	20 A	1		200 VA			0 VA		1	20 A	SPARE	--	22
23	R	ROOF RECEPTS	20 A	1			540 VA			0 VA	1	20 A	SPARE	--	24
25	L; R	AHU-2 LTG & REC CONNECTION	20 A	1	400 VA			0 VA			1	20 A	SPARE	--	26
27	L; R	AHU-3 LTG & REC CONNECTION	20 A	1		400 VA			0 VA		1	20 A	SPARE	--	28
29	N	TP-1 MM 165	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	N	PLUMBING SENSORS RR	20 A	1	1600 VA			0 VA			1	20 A	SPARE	--	32
33									0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 3950 VA 34 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 3026 VA 25 A
L=LIGHTING | K=KITCHEN | TOTAL C: 4436 VA 38 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
L	400 VA	100.00%	400 VA			
N	7200 VA	100.00%	7200 VA			
R	940 VA	100.00%	940 VA	TOTAL LOAD:	11412 VA	32 A
M	2872 VA	100.00%	2872 VA	TOTAL DEMAND LOAD:	11412 VA	32 A

PANEL: 2T1A

LOCATION: IDF MM 148 | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB1
FLOOR: FIRST | BUS AMPS: 100 A | RATING 10,000 AIC
MOUNTING: SURFACE | MAIN BREAKER: 100 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	R	CONV RECEPT IDF MM 148	20 A	1	360 VA			250 VA			2	30 A	208V 30A L6-30R RACK RECEPT	R	2
3	R	CONV RECEPT IDF MM 148	20 A	1		360 VA			250 VA		--	--	--	--	4
5	C	RACK QUAD RECEPT MM 148	20 A	1			360 VA			250 VA	2	30 A	208V 30A L6-30R RACK RECEPT	R	6
7	C	RACK QUAD RECEPT MM 148	20 A	1	360 VA			250 VA			--	--	--	--	8
9	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	10
11	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	18
19	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 1220 VA 10 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 610 VA 5 A
L=LIGHTING | K=KITCHEN | TOTAL C: 610 VA 5 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
R	1720 VA	100.00%	1720 VA			
C	720 VA	125.00%	900 VA			
				TOTAL LOAD:	2440 VA	7 A
				TOTAL DEMAND LOAD:	2620 VA	7 A

PANEL: 2P4A

LOCATION: TOOL STORAGE MM 140A | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2P3A
FLOOR: FIRST | BUS AMPS: 400 A | RATING 22,000AIC
MOUNTING: SURFACE | MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	CNC-2 RM 140	50 A	3	2999 VA			250 VA			1	20 A	DED REC RM 140	N	2
3	--	--	--	--		2999 VA			250 VA		1	20 A	DED REC RM 140	N	4
5	--	--	--	--			2999 VA			250 VA	1	20 A	DED REC RM 140	N	6
7	N	CNC-2 RM 140	50 A	3	2999 VA			250 VA			1	20 A	DED REC RM 140	N	8
9	--	--	--	--		2999 VA			250 VA		1	20 A	DED REC RM 140	N	10
11	--	--	--	--			2999 VA			250 VA	1	20 A	DED REC RM 140	N	12
13	N	CNC-2 RM 140	50 A	3	2999 VA			250 VA			1	20 A	DED REC RM 140	N	14
15	--	--	--	--		2999 VA			250 VA		1	20 A	DED REC RM 140	N	16
17	--	--	--	--			2999 VA			0 VA	1	20 A	SPARE	--	18
19	N	CNC-2 RM 140	50 A	3	2999 VA			250 VA			1	20 A	M MACHINE TOOLING MM 140	N	20
21	--	--	--	--		2999 VA			180 VA		1	20 A	FLAT PANEL DISPLAY RM 140	N	22
23	--	--	--	--			2999 VA			0 VA	1	20 A	SPARE	--	24
25	N	CNC-2 RM 140	50 A	3	2999 VA			0 VA			1	20 A	SPARE	--	26
27	--	--	--	--		2999 VA			0 VA		1	20 A	SPARE	--	28
29	--	--	--	--			2999 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			1	20 A	SPARE	--	38
39	--	SPACE	--	--		0 VA			0 VA		1	20 A	SPARE	--	40
41	--	SPACE	--	--			0 VA			0 VA	1	20 A	SPARE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 15993 VA 134 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 15923 VA 133 A
L=LIGHTING | K=KITCHEN | TOTAL C: 15493 VA 129 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	47410 VA	100.00%	47410 VA			
				TOTAL LOAD:	47410 VA	132 A
				TOTAL DEMAND LOAD:	47410 VA	132 A

PANEL: 2P1A

LOCATION: ELEC MM 151 | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB1
FLOOR: FIRST | BUS AMPS: 100 A | RATING 22,000AIC
MOUNTING: SURFACE | MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	INSTRUCTOR DESK RM 147	20 A	1	360 VA			720 VA			1	20 A	CONT RECEPTS LOBBY, RM 142	R	2
3	C	DED RECEPT RM 147	20 A	1		600 VA			360 VA		1	20 A	NON CONT RECEPTS RM 142,...	R	4
5	C	DED RECEPT RM 147	20 A	1			600 VA			720 VA	1	20 A	NON CONT RECEPTS RM 143,144	R	6
7	C	DED RECEPT RM 147	20 A	1	600 VA			720 VA			1	20 A	CONT RECEPT RM 143,144	R	8
9	C	DED RECEPT RM 147	20 A	1		600 VA			720 VA		1	20 A	R FACULTY OFFICE-1 MM 143-1	R	10
11	C	DED RECEPT RM 147	20 A	1			600 VA			360 VA	1	20 A	INSTRUCTOR PODIUM RM 145	N	12
13	M	DED RECEPT RM 147	20 A	1	600 VA			720 VA			1	20 A	FLAT PANEL DISPLAYS RM 151	N	14
15	M	CORD REEL RM 147	20 A	1		600 VA			720 VA		1	20 A	CONV RECEPTS RM 151	R	16
17	R	CORD REEL CONV REC RM 147	20 A	1			360 VA			360 VA	1	20 A	CONV RECEPTS RM 151	R	18
19	M	CONV RECEPT RM 147	20 A	1	600 VA			600 VA			1	20 A	MOTORIZED SCREENS RM146-7	N	20
21	R	CONV RECEPT RM 147	20 A	1		540 VA			1000 VA		1	20 A	MOTORIZED GATE	N	22
23	N	FLAT PANEL DISPLAY RM 147	20 A	1			540 VA			200 VA	1	20 A	ADA PUSH PLATE	N	24
25	R	CONV RECEPT RM 149	20 A	1	540 VA			600 VA			1	20 A	ROLL UP DOOR RM 149	N	26
27	R	CONV RECEPT RM 149	20 A	1		720 VA			600 VA		1	20 A	ROLL UP DOOR RM 147	N	28
29	R	DED. EXTERIOR RECEPT	20 A	1			180 VA			600 VA	1	20 A	ROLL UP DOOR RM 140	N	30
31	R	DED. EXTERIOR RECEPT	20 A	1	360 VA			0 VA			1	20 A	SPARE	--	32
33	R	CONV. EXTERIOR RECEPT	20 A	1		540 VA			0 VA		1	20 A	SPARE	--	34
1 35	C	FACP-1	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			1	20 A	SPARE	--	38
39	--	SPACE	--	--		0 VA			0 VA		1	20 A	SPARE	--	40
41	--	SPACE	--	--			0 VA			0 VA	1	20 A	SPARE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 6420 VA 56 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 7000 VA 61 A
L=LIGHTING | K=KITCHEN | TOTAL C: 4520 VA 38 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	5580 VA	100.00%	5580 VA			
R	7560 VA	100.00%	7560 VA			
C	3000 VA	125.00%	3750 VA	TOTAL LOAD:	17940 VA	50 A
M	1800 VA	100.00%	1800 VA	TOTAL DEMAND LOAD:	18690 VA	52 A

PANEL: 2T1B

LOCATION: IDF MM 156 | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB2
FLOOR: FIRST | BUS AMPS: 100 A | RATING 10,000AIC
MOUNTING: SURFACE | MAIN BREAKER: 100 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	R	CONV RECEPT IDF MM 156	20 A	1	360 VA			90 VA			2	30 A	208V 30A L6-30R RACK RECEPT	R	2
3	R	CONV RECEPT IDF MM 156	20 A	1		360 VA			90 VA		--	--	--	--	4
5	C	RACK QUAD RECEPT IDF MM 156	20 A	1			360 VA			250 VA	2	30 A	208V 30A L6-30R RACK RECEPT	R	6
7	C	RACK QUAD RECEPT IDF MM 156	20 A	1	360 VA			250 VA			--	--	--	--	8
9	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	10
11	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	18
19	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 1060 VA 9 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 450 VA 4 A
L=LIGHTING | K=KITCHEN | TOTAL C: 610 VA 5 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
R	1400 VA	100.00%	1400 VA			
C	720 VA	125.00%	900 VA			
				TOTAL LOAD:	2120 VA	6 A
				TOTAL DEMAND LOAD:	2300 VA	6 A

PANEL: 2P5A

LOCATION: ELEC MM 151 | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB1
FLOOR: FIRST | BUS AMPS: 225 A | RATING 22,000AIC
MOUNTING: SURFACE | MAIN BREAKER: 225 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	M	DED CORD REEL RM 151	30 A	1	500 VA			2700 VA			1	20 A	DUST COLLECTOR RM 151	M	2
3	M	DED CORD REEL RM 151	30 A	1		500 VA			0 VA		1	20 A	SPARE	--	4
5	M	DED CORD REEL RM 151	30 A	1			500 VA			0 VA	1	20 A	SPARE	--	6
7	M	DED CORD REEL RM 151	30 A	1	500 VA			0 VA			1	20 A	SPARE	--	8
9	M	DED CORD REEL RM 151	30 A	1		500 VA			0 VA		1	20 A	SPARE	--	10
11	M	DED CORD REEL RM 151	30 A	1			500 VA			0 VA	1	20 A	SPARE	--	12
13	M	DED CORD REEL RM 151	30 A	1	500 VA			0 VA			1	20 A	SPARE	--	14
15	M	DED CORD REEL RM 151	30 A	1		500 VA			0 VA		1	20 A	SPARE	--	16
17	M	FUTURE CNC-4 - RM 151	30 A	3			2522 VA			0 VA	1	20 A	SPARE	--	18
19	--	--	--	--	2522 VA			0 VA			1	20 A	SPARE	--	20
21	--	--	--	--		2522 VA			0 VA		1	20 A	SPARE	--	22
23	M	DUST COLLECTOR RM 151	30 A	1			2700 VA			0 VA	1	20 A	SPARE	--	24
25	N	R ELEC MM 146	20 A	1	250 VA			0 VA			1	20 A	SPARE	--	26
27	N	R ELEC MM 146	20 A	1		250 VA			0 VA		1	20 A	SPARE	--	28
29	N	R ELEC MM 146	20 A	1			250 VA			0 VA	1	20 A	SPARE	--	30
31	N	R ELEC MM 146	20 A	1	250 VA			0 VA			1	20 A	SPARE	--	32
33	N	R ELEC MM 146	20 A	1		250 VA			0 VA		1	20 A	SPARE	--	34
35	N	R ELEC MM 146	20 A	1			250 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			1	20 A	SPARE	--	38
39	--	SPACE	--	--		0 VA			0 VA		1	20 A	SPARE	--	40
41	--	SPACE	--	--			0 VA			0 VA	1	20 A	SPARE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 7222 VA 63 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 4522 VA 38 A
L=LIGHTING | K=KITCHEN | TOTAL C: 6722 VA 59 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	1500 VA	100.00%	1500 VA			
M	16965 VA	100.00%	16965 VA			
				TOTAL LOAD:	18465 VA	51 A
				TOTAL DEMAND LOAD:	18465 VA	51 A

PANEL: 2P2A

LOCATION: ELEC MM 151 | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB1
FLOOR: FIRST | BUS AMPS: 225 A | RATING 22,000AIC
MOUNTING: SURFACE | MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	PRINTER RM 141	20 A	1	800 VA										2
3	R	FLAT PANEL DISPLAYRM 141	20 A	1		180 VA			0 VA		1	20 A	SPARE	--	4
5	R	CONT RECEPTS RM 141	20 A	1			360 VA			0 VA	1	20 A	SPARE	--	6
7	N	N MACHINE TOOLING MM 140	20 A	1	1500 VA			0 VA			1	20 A	SPARE	--	8
9	N	INSTRUCTOR DESK RM 140	20 A	1		400 VA			0 VA		1	20 A	SPARE	--	10
11	R	R MACHINE TOOLING MM 140	20 A	1			720 VA			0 VA	1	20 A	SPARE	--	12
13	C	COMPUTER QUAD RM 145	20 A	1	800 VA			0 VA			1	20 A	SPARE	--	14
15	C	COMPUTER QUAD RM 145	20 A	1		800 VA			0 VA		1	20 A	SPARE	--	16
17	C	COMPUTER QUAD RM 145	20 A	1			800 VA			0 VA	1	20 A	SPARE	--	18
19	C	COMPUTER QUAD RM 145	20 A	1	800 VA			0 VA			1	20 A	SPARE	--	20
21	C	COMPUTER QUAD RM 145	20 A	1		800 VA			0 VA		1	20 A	SPARE	--	22
23	C	COMPUTER QUAD RM 145	20 A	1			800 VA			0 VA	1	20 A	SPARE	--	24
25	N	PROJECTOR RM 145	20 A	1	500 VA			0 VA			1	20 A	SPARE	--	26
27	R	CONV RECEPTS RM 145	20 A	1		540 VA			0 VA		1	20 A	SPARE	--	28
29	R	CONV RECEPTS RM 145	20 A	1			540 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 4400 VA 37 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 2720 VA 23 A
L=LIGHTING | K=KITCHEN | TOTAL C: 3220 VA 27 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	3200 VA	100.00%	3200 VA			
R	2340 VA	100.00%	2340 VA			
C	4800 VA	125.00%	6000 VA	TOTAL LOAD:	10340 VA	29 A
				TOTAL DEMAND LOAD:	11540 VA	32 A

PANEL: 2M1A

LOCATION: TOOL STORAGE MM 140A | VOLTAGE/PHASE: 120/208 Wye,3PH,4W | FED FROM: 2DB1
FLOOR: FIRST | BUS AMPS: 100 A | RATING 22,000AIC
MOUNTING: SURFACE | MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	VAVS	20 A	1	400 VA			0 VA			1	20 A	SPARE	--	2
3	M	TP-1 QTY.3	20 A	1		600 VA			0 VA		1	20 A	SPARE	--	4
5	M	CP-1	20 A	1			200 VA			0 VA	1	20 A	SPARE	--	6
7	N	IRRIGATION CONTROLLER	20 A	1	200 VA			0 VA			1	20 A	SPARE	--	8
9	N	BIFOLD DOOR RM 151	20 A	1		1200 VA			0 VA		1	20 A	SPARE	--	10
11	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	L; R	AHU-1 LTG & REC CONNECTION	20 A	1			400 VA			0 VA	1	20 A	SPARE	--	18
19	R	ROOF RECEPT	20 A	1	180 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS | M=MECH EQUIP | TOTAL A: 780 VA 7 A
R=RECEPTACLE | R=RECEPTACLE | TOTAL B 1800 VA 15 A
L=LIGHTING | K=KITCHEN | TOTAL C: 600 VA 5 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
L	200 VA	100.00%	200 VA			
N	1800 VA	100.00%	1800 VA			
R	380 VA	100.00%	380 VA	TOTAL LOAD:	3180 VA	9 A
M	800 VA	100.00%	800 VA	TOTAL DEMAND LOAD:	3180 VA	9 A

GENERAL NOTES

1. FOR MULTI-WIRE BRANCH CIRCUITS CONTRACTOR SHALL PROVIDE A HANDLE TIE OR A MULTI-POLE BREAKER TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AS REQUIRED PER CEC 210.4(B). DOCUMENTS INDICATE SINGLE POLE BREAKERS. IF CONTRACTOR UTILIZES MULTI-POLE OPTION, THEY SHALL INDICATE REVISION ON ELECTRICAL PANEL BOARD SUBMITTALS.

NOTES

1 PROVIDE LOCK ON DEVICE, RED IN COLOR, PERMANENTLY LABELED "FIRE ALARM/ECS".

DSA USE ONLY

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115 22nd street
Newport Beach, CA 92663
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CONSULTANTS

P2S ENG
Long Beach | Los Angeles
San Diego | San Jose
p2sinc.com

REGISTERED PROFESSIONAL ENGINEER MARCO CABIBBO No. E17508 ELECTRICAL STATE OF CALIFORNIA
SIGNED: 12/04/2019

SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE Not To Scale
DRAWN BY G Jacob
DESIGNED BY M Klug
CHECKED BY M Cabbibo

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SHEET TITLE
PANEL SCHEDULES

SHEET NUMBER
E0.4

ADDENDUM#1

5/21/2020 9:37:20 PM C:\Users\Kathy Olais\Documents\J9099_LBCC_MEP-CENTRAL_R16_kathy.olais@p2sinc.com.rvt

PANEL: 4P1A

LOCATION: TOOL STORAGE MM 140A VOLTAGE/PHASE: 480/277 Wye,3PH,4W FED FROM: 4DB1
FLOOR: FIRST BUS AMPS: 225 A RATING
MOUNTING: SURFACE MAIN BREAKER: 225 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	CNC-1 MM 140	50 A	3	9699 VA			0 VA			1	20 A	SPARE	--	2
3	--	--	--	--		9699 VA			0 VA		1	20 A	SPARE	--	4
5	--	--	--	--			9699 VA			0 VA	1	20 A	SPARE	--	6
7	N	CNC-1 MM 140	50 A	3	9699 VA			0 VA			1	20 A	SPARE	--	8
9	--	--	--	--		9699 VA			0 VA		1	20 A	SPARE	--	10
11	--	--	--	--			9699 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	18
19	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS M=MECH EQUIP TOTAL A: 19399 VA 70 A
R=RECEPTACLE R=RECEPTACLE TOTAL B 19399 VA 70 A
L=LIGHTING K=KITCHEN TOTAL C: 19399 VA 70 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	58196 VA	100.00%	58196 VA			
				TOTAL LOAD:	58196 VA	70 A
				TOTAL DEMAND LOAD:	58196 VA	70 A

PANEL: 2P4B

LOCATION: CONSTRUCTION... VOLTAGE/PHASE: 120/208 Wye,3PH,4W FED FROM: 2DB2
FLOOR: FIRST BUS AMPS: 100 A RATING 10,000AIC
MOUNTING: SURFACE MAIN BREAKER: 100 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	M	TSW-1 TABLE SAW RM 159	30 A	2	1560 VA			500 VA			1	30 A	CORD REEL RM 159	M	2
3	--	--	--	--		1560 VA			500 VA		1	30 A	CORD REEL RM 159	M	4
5	M	CORD REEL RM 159	30 A	1			500 VA			0 VA	1	20 A	SPARE	--	6
7	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	8
9	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	10
11	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	18
19	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS M=MECH EQUIP TOTAL A: 2060 VA 19 A
R=RECEPTACLE R=RECEPTACLE TOTAL B 2060 VA 19 A
L=LIGHTING K=KITCHEN TOTAL C: 500 VA 4 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
M	4620 VA	100.00%	4620 VA			
				TOTAL LOAD:	4620 VA	13 A
				TOTAL DEMAND LOAD:	4620 VA	13 A

PANEL: 2P1C

LOCATION: ELEC MM 155 VOLTAGE/PHASE: 120/208 Wye,3PH,4W FED FROM: 2P1B
FLOOR: FIRST BUS AMPS: 100 A RATING 10,000AIC
MOUNTING: SURFACE MAIN BREAKER: 100 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1 (note 1)	C	FAPS ELEC RM 155	20 A	1	300 VA			0 VA			1	20 A	SPARE	--	2
3	C	OMNI SYSTEM	20 A	1		500 VA			0 VA		1	20 A	SPARE	--	4
5										0 VA	1	20 A	SPARE	--	6
7	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	8
9	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	10
11	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	18
19	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS M=MECH EQUIP TOTAL A: 300 VA 3 A
R=RECEPTACLE R=RECEPTACLE TOTAL B 500 VA 5 A
L=LIGHTING K=KITCHEN TOTAL C: 0 VA 0 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
C	800 VA	125.00%	1000 VA			
				TOTAL LOAD:	800 VA	2 A
				TOTAL DEMAND LOAD:	1000 VA	3 A

LOAD SUMMARY: 4DB1

LOCATION: ELEC MM 151 VOLTAGE/PHASE 480/277 Wye,3PH,4W

LOAD DESCRIPTION	LOAD	AMPS
4L1A	10336 VA	12 A
4L1B	7612 VA	9 A
4M1A	192818 VA	232 A
4M1B	85074 VA	102 A
4P1A	58196 VA	70 A
TRASH COMPACTOR	11639 VA	14 A
TD2-2DB2	44062 VA	53 A
TD1-2DB1	241907 VA	291 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
L	18548 VA	100.00%	18548 VA			
N	398251 VA	100.00%	398251 VA			
R	22440 VA	72.28%	16220 VA			
C	15020 VA	125.00%	18775 VA			
M	201366 VA	100.00%	201366 VA			
P	4000 VA	100.00%	4000 VA	Total Conn. Load:	659625 VA	793 A
				Total Est. Demand:	657160 VA	790 A

LOAD SUMMARY: 2DB1

LOCATION: ELEC MM 151 400ATAGE/PHASE 120/208 Wye,3PH,4W

LOAD DESCRIPTION	LOAD	AMPS
2P1A	17940 VA	50 A
2P2A	10340 VA	29 A
2P3A - 2P4A	189542 VA	526 A
2P5A	18465 VA	51 A
2M1A	3180 VA	9 A
2T1A	2440 VA	7 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
L	200 VA	100.00%	200 VA			
N	201622 VA	100.00%	201622 VA			
R	12000 VA	91.67%	11000 VA			
C	8520 VA	125.00%	10650 VA			
M	19565 VA	100.00%	19565 VA			
				Total Conn. Load:	241907 VA	671 A
				Total Est. Demand:	243037 VA	675 A

LOAD SUMMARY: 2DB2

LOCATION: ELEC MM 155 400ATAGE/PHASE 120/208 Wye,3PH,4W

LOAD DESCRIPTION	LOAD	AMPS
2P1B	20480 VA	57 A
2P2B	3430 VA	10 A
2P3B	2000 VA	6 A
2P4B	4620 VA	13 A
2M1B	11412 VA	32 A
2T1B	2120 VA	6 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
L	400 VA	100.00%	400 VA			
N	13230 VA	100.00%	13230 VA			
R	10440 VA	97.89%	10220 VA			
C	6500 VA	125.00%	8125 VA			
M	9492 VA	100.00%	9492 VA			
P	4000 VA	100.00%	4000 VA	Total Conn. Load:	44062 VA	122 A
				Total Est. Demand:	45467 VA	126 A

PANEL: 2P1B

LOCATION: ELEC MM 155 VOLTAGE/PHASE: 120/208 Wye,3PH,4W FED FROM: 2DB2
FLOOR: FIRST BUS AMPS: 225 A RATING 10,000AIC
MOUNTING: SURFACE MAIN BREAKER: MLO

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	P	UTILITY BOLLARD	20 A	1	1000 VA			720 VA			1	20 A	LAB MM 159	R	2
3	P	UTILITY BOLLARD	20 A	1		1000 VA			720 VA		1	20 A	LAB MM 159	R	4
5	P	UTILITY BOLLARD	20 A	1			1000 VA			360 VA	1	20 A	LAB MM 159	R	6
7	P	UTILITY BOLLARD	20 A	1	1000 VA			360 VA			1	20 A	~~CLASSROOM MM 162~~	~~R~~	8
9	R; C	EXTERIOR RECEPTS	20 A	1		720 VA			720 VA		1	20 A	FLAT PANEL DISPLAYS RM 159	N	10
11	R	EXTERIOR RECEPTS	20 A	1			720 VA			0 VA	1	20 A	SPARE	--	12
13	N	AV RACK RM 163	20 A	1	360 VA			0 VA			1	20 A	SPARE	--	14
15	C	COMPUTER QUAD RM 163	20 A	1		800 VA			0 VA		1	20 A	SPARE	--	16
17	C	COMPUTER QUAD RM 163	20 A	1			800 VA			600 VA	1	20 A	ROLL UP DOOR RM 160	N	18
19	C	COMPUTER QUAD RM 163	20 A	1	800 VA			540 VA			1	20 A	RECEPTS RM 164, 165	R	20
21	C	COMPUTER QUAD RM 163	20 A	1		800 VA			540 VA		1	20 A	RECEPTS RM 166,167	R	22
23	C	COMPUTER QUAD RM 163	20 A	1			800 VA			540 VA	1	20 A	R AIR COMPRESSOR MM 158	R	24
25	C	COMPUTER QUAD RM 163	20 A	1	800 VA			360 VA			1	20 A	RECPT RM 160	R	26
27	R	CONV RECPT RM 163	20 A	1		720 VA			360 VA		1	20 A	RECPT RM 160	R	28
29	N	ADA PUSH PLATE	20 A	1			600 VA			360 VA	1	20 A	RECPT RM 160	R	30
31	R	CONV RECEPTS RM 163	20 A	1	540 VA			540 VA			1	20 A	RECPT RM 160	R	32
33	N	PROJECTOR RM 163	20 A	1		500 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	C	PANEL 2P1C	100 A	3	300 VA			0 VA			1	20 A	SPARE	--	38
39	--	--	--	--		500 VA			0 VA		1	20 A	SPARE	--	40
41	--	--	--	--			0 VA			0 VA	1	20 A	SPARE	--	42

(Revision 1)

LOAD TYPE KEY:
N= NON CONTINUOUS M=MECH EQUIP TOTAL A: 7320 VA 63 A
R=RECEPTACLE R=RECEPTACLE TOTAL B 7380 VA 63 A
L=LIGHTING K=KITCHEN TOTAL C: 5780 VA 48 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	2780 VA	100.00%	2780 VA			
R	7920 VA	100.00%	7920 VA			
C	5780 VA	125.00%	7225 VA			
P	4000 VA	100.00%	4000 VA	TOTAL LOAD:	20480 VA	57 A
				TOTAL DEMAND LOAD:	21925 VA	61 A

PANEL: 2P2B

LOCATION: CONSTRUCTION... VOLTAGE/PHASE: 120/208 Wye,3PH,4W FED FROM: 2DB2
FLOOR: FIRST BUS AMPS: 100 A RATING 10,000AIC
MOUNTING: SURFACE MAIN BREAKER: 100 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	N	DED PERIMETER RECEPT RM 159	20 A	1	250 VA			0 VA			1	20 A	SPARE	--	2
3	N	DED PERIMETER RECEPT RM 159	20 A	1		250 VA			250 VA		1	20 A	DED PERIMETER RECEPT RM 159	N	4
5	N	DED PERIMETER RECEPT RM 159	20 A	1			250 VA			250 VA	1	20 A	DED PERIMETER RECEPT RM 159	N	6
7	N	DST RM 159	20 A	1	250 VA			250 VA			1	20 A	DED PERIMETER RECEPT RM 159	N	8
9	--	SPARE	20 A	1		0 VA			250 VA		1	20 A	DED PERIMETER RECEPT RM 159	N	10
11	--	SPARE	20 A	1			0 VA			180 VA	1	20 A	DED PERIMETER RECEPT RM 159	R	12
13	--	SPARE	20 A	1	0 VA			250 VA			1	20 A	DED PERIMETER RECEPT RM 159	N	14
15	--	SPARE	20 A	1		0 VA			250 VA		1	20 A	DED PERIMETER RECEPT RM 159	N	16
17	--	SPARE	20 A	1			0 VA			250 VA	1	20 A	DED PERIMETER RECEPT RM 159	N	18
19	--	SPARE	20 A	1	0 VA			250 VA			1	20 A	DED PERIMETER RECEPT RM 159	N	20
21	--	SPARE	20 A	1		0 VA			250 VA		1	20 A	DED PERIMETER RECEPT RM 159	N	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			1	20 A	SPARE	--	38
39	--	SPACE	--	--		0 VA			0 VA		1	20 A	SPARE	--	40
41	--	SPACE	--	--			0 VA			0 VA	1	20 A	SPARE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS M=MECH EQUIP TOTAL A: 1250 VA 11 A
R=RECEPTACLE R=RECEPTACLE TOTAL B 1250 VA 11 A
L=LIGHTING K=KITCHEN TOTAL C: 930 VA 8 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
N	3250 VA	100.00%	3250 VA			
R	180 VA	100.00%	180 VA			
				TOTAL LOAD:	3430 VA	10 A
				TOTAL DEMAND LOAD:	3430 VA	10 A

PANEL: 2P3B

LOCATION: CONSTRUCTION... VOLTAGE/PHASE: 120/208 Wye,3PH,4W FED FROM: 2DB2
FLOOR: FIRST BUS AMPS: 100 A RATING 10,000AIC
MOUNTING: SURFACE MAIN BREAKER: 100 A

CKT	TYPE	LOAD	BKR/POLE		A	B	C	A	B	C	BKR/POLE		LOAD	TYPE	CKT
1	M	CORD REEL RM 159	30 A	1	500 VA			0 VA			1	20 A	SPARE	--	2
3	M	CORD REEL RM 159	30 A	1		500 VA			0 VA		1	20 A	SPARE	--	4
5	M	CORD REEL RM 159	30 A	1			500 VA			0 VA	1	20 A	SPARE	--	6
7	M	CORD REEL RM 159	30 A	1	500 VA			0 VA			1	20 A	SPARE	--	8
9	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	10
11	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	12
13	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	14
15	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	16
17	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	18
19	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	20
21	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	22
23	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	24
25	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	26
27	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	28
29	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	30
31	--	SPARE	20 A	1	0 VA			0 VA			1	20 A	SPARE	--	32
33	--	SPARE	20 A	1		0 VA			0 VA		1	20 A	SPARE	--	34
35	--	SPARE	20 A	1			0 VA			0 VA	1	20 A	SPARE	--	36
37	--	SPACE	--	--	0 VA			0 VA			--	--	SPACE	--	38
39	--	SPACE	--	--		0 VA			0 VA		--	--	SPACE	--	40
41	--	SPACE	--	--			0 VA			0 VA	--	--	SPACE	--	42

LOAD TYPE KEY:
N= NON CONTINUOUS M=MECH EQUIP TOTAL A: 1000 VA 8 A
R=RECEPTACLE R=RECEPTACLE TOTAL B 500 VA 4 A
L=LIGHTING K=KITCHEN TOTAL C: 500 VA 4 A

LOAD TYPE	CONNECTED	DEMAND FACTOR	ESTIMATED	PANEL TOTALS		
M	2000 VA	100.00%	2000 VA			
				TOTAL LOAD:	2000 VA	6 A
				TOTAL DEMAND LOAD:	2000 VA	6 A

GENERAL NOTES

1. FOR MULTI-WIRE BRANCH CIRCUITS CONTRACTOR SHALL PROVIDE A HANDLE TIE OR A MULTI-POLE BREAKER TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AS REQUIRED PER CEC 210.4(B). DOCUMENTS INDICATE SINGLE POLE BREAKERS. IF CONTRACTOR UTILIZES MULTI-POLE OPTION, THEY SHALL INDICATE REVISION ON ELECTRICAL PANEL BOARD SUBMITTALS.

NOTES

1 PROVIDE LOCK ON DEVICE, RED IN COLOR, PERMANENTLY LABELED "FIRE ALARM/ECS".

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REGISTERED PROFESSIONAL ENGINEER MARCO CABIBBO No. E17508 ELECTRICAL STATE OF CALIFORNIA
SIGNED: 12/04/2019

SEALS / APPROVALS

LICENSED ARCHITECT STATE OF CALIFORNIA

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099
THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.
THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE	Not To Scale
DRAWN BY	G Jacob
DESIGNED BY	M Klug
CHECKED BY	M Cabbibo

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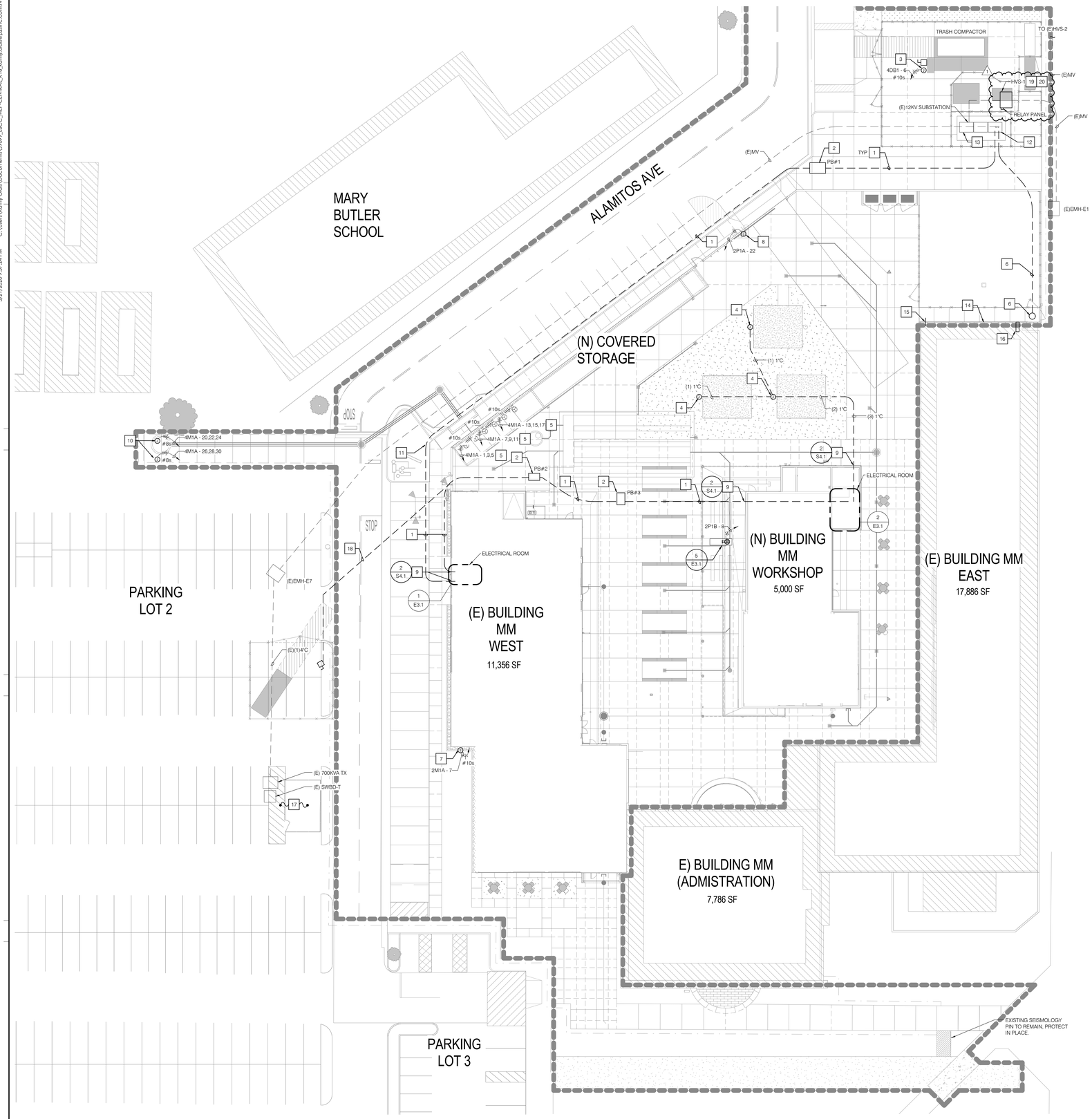
SHEET TITLE
PANEL SCHEDULES

SHEET NUMBER
E0.5

ADDENDUM#1



GENERAL NOTES

1. FOR ADDITIONAL TRENCHING REQUIREMENTS ACROSS OR IN VICINITY OF BUILDING FOOTINGS REFER TO 2/S4.1 AND 8/S4.1.

NOTES

1. PROVIDE NEW UNDERGROUND FEEDERS. REFER TO SINGLE LINE DIAGRAMS, SHEETS E5.1 AND E5.2 FOR ADDITIONAL INFORMATION.
2. PROVIDE 2'-6'x3' PULL BOX WITH TRAFFIC RATED H20 LOADING HINGED COVER. REFER TO DETAIL 6/E6.4 FOR ADDITIONAL INFORMATION.
3. PROVIDE 480V, 30A CONNECTION TO TRASH COMPACTOR. REFER TO SINGLE LINE DIAGRAM E5.2 FOR ADDITIONAL INFORMATION. DISCONNECT SHALL BE IN NEMA 3R ENCLOSURE. PROVIDE C-CHANNEL FOR MOUNTING ADJACENT TO COMPACTOR.
4. PROVIDE (2) 120V, 20A CONNECTIONS AT UTILITY BOLLARD MONUMENT. REFER TO PANEL 2P1B, SHEET E0.5, FOR CIRCUIT DESIGNATIONS.
5. CONTRACTOR SHALL RELOCATE EXISTING FORKLIFT CHARGERS HERE. PROVIDE 480V, 30A CONNECTION WITH 1"C - 3#10 & 1#10G TO SERVE FORKLIFT STATIONS. MOUNT 18" ABOVE GRADE. COORDINATE WITH MANUFACTURER AND PROVIDE PLUG TO ALLOW CHARGING OF FORKLIFTS. REFER TO SHEET ED1.1 FOR ADDITIONAL INFORMATION.
6. PROVIDE (2) 4"C FOR FUTURE USE. STUB UP 6" A.F.G. PROVIDE PULL ROPE, BUSH AND CAP.
7. PROVIDE 120V, 20A CONNECTION TO SERVE IRRIGATION CONTROLLER. REFER TO LANDSCAPE DRAWINGS FOR EXACT LOCATION.
8. PROVIDE 120V, 20A CONNECTION TO SERVE MOTORIZED GATE. COORDINATE WITH MANUFACTURER FOR ASSOCIATED CONTROLS.
9. COORDINATE TRENCHING DEPTH FOR DUCT BANKS ADJACENT TO FOOTINGS. REFER TO DETAIL 8/S4.1 FOR ADDITIONAL INFORMATION.
10. PROVIDE 480V CONNECTION TO SERVE SUMP PUMP. REFER TO CIVIL DRAWINGS FOR ADDTIONAL INFORMATION.
11. PROPOSED DUCT BANK WILL NEED TO BE CONSTRUCTED DEEPER TO AVOID UTILITY CROSSING CONFLICTS. REFER TO CIVIL PLANS SHEET C-6.0 FOR ADDITIONAL INFORMATION.
12. THE EXISTING SWITCHBOARD HAS (3) 2"C, (2) 4"C THAT ARE CAST IN CONCRETE PAD TO THIS SECTION. CONTRACTOR SHALL UTILIZE (2) 4"C, (1) 3"C FOR NEW FEED TO BUILDING MM WEST. CONTRACTORS SHALL REMOVE EXISTING CONDUCTORS IN EXISTING 3"C. CONTRACTOR SHALL INCLUDE TIME IN THEIR BID TO FIELD VERIFY HOW THE CONDUITS EXIT THE SWITCHBOARD AND CONCRETE PAD. EXCEVATE, EXPOSE, INTERCEPT, AND EXTEND TO NEW SERVICE.
13. EXISTING SWITCHBOARD IS AN EATON/CUTLER HAMMER POW-R-LINE I SWITCHBOARD, 65 KA AIC.
14. EXISTING SERVICE FOR BUILDING MM EAST LOCATED HERE. PRIOR TO ANY DEMO, CONTRACTOR SHALL INCLUDE TIME IN THEIR BID TO VERIFY EXISTING SERVICE ORIGIN AND PROTECT IN PLACE. THIS SERVICE SHALL REMAIN AND BE OPERATIONAL THROUGHOUT.
15. EXISTING CONDUIT AGAINST WALL UP TO ROOF EXISTING TO REMAIN.
16. EXISTING CONDUIT AND PULL BOX ON ROOF EXISTING TO REMAIN.
17. EXISTING BOLLARDS SHALL BE PROTECTED IN PLACE.
18. TEMPORARY FEED TO TEMPORARY TRASH COMPACTOR LOCATION. CONTRACTOR SHALL MAINTAIN POWER TO TRASH COMPACTOR UNTIL NEW LOCATION AND POWER IS ONLINE. SEE SHEET ED1.1 FOR ADDITIONAL INFORMATION.
19. PROVIDE 5-WAY, 15KV, 600A, SOLID DIELECTRIC, PADMOUNT SELECTOR SWITCH ALONG WITH ALL ASSOCIATED ACCESSORIES. PROVIDE ABB DIGITAL RELAY COMPLETE WITH ALL ASSOCIATED ACCESSORIES FOR MONITORING AND OPERATION OF MAGNETIC ACTUATED LOOP SWITCH WAYS.
20. PROVIDE MINIMUM 62" DEEP X 96" WIDE ENCLOSURE FOR SELECTOR SWITCH TO ACCOMODATE INCOMING UNDERGROUNG CONDUITS. PROVIDE ADDITIONAL 12" HEIGHT TO THE SWITCH EQUIPMENT FOR EASE IN TERMINATION OF EXISTING CABLE TO NEW SWITCH WAYS.

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SEALS / APPROVALS

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LONG BEACH CITY COLLEGE

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SCALE	1" = 20'-0"
DRAWN BY	G Jacob
DESIGNED BY	M Klug
CHECKED BY	M Cabbibo

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SHEET TITLE

POWER - SITE PLAN

SHEET NUMBER

E1.1

ADDENDUM#1

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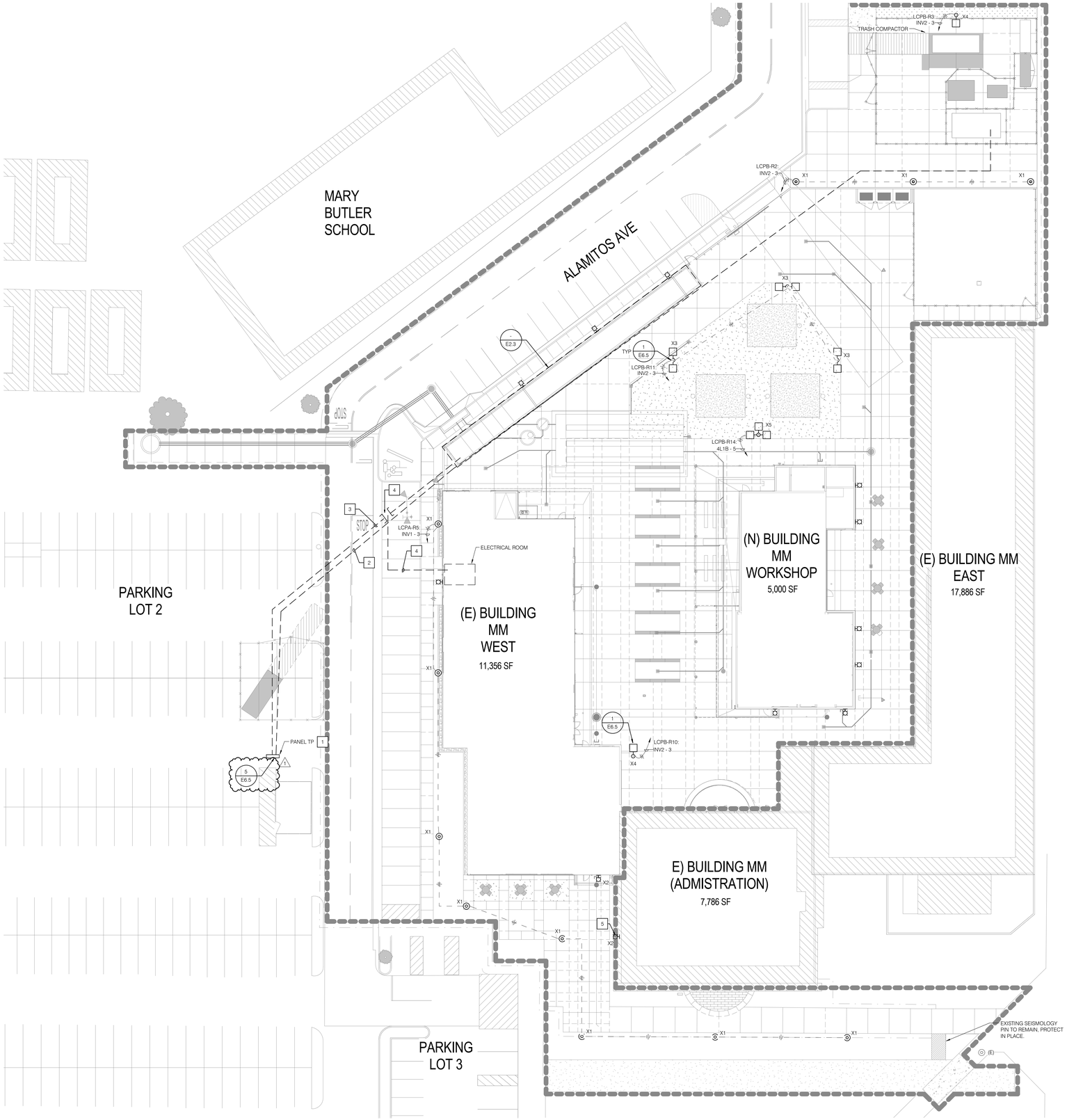

GENERAL NOTES

1. REFER TO LIGHT FIXTURE SCHEDULE ON SHEET E0.3 FOR LIGHT FIXTURE TYPE AND ADDITIONAL INFORMATION.
2. PROVIDE PHOTOSENSOR ON ROOF FOR CONTROL OF EXTERIOR LIGHTING.
3. PARKING LOT LIGHTS MUST REMAIN OPERATIONAL DURING CONSTRUCTION.
4. ALL CONDUCTORS ON SITE SHALL BE #10 MINIMUM UNLESS OTHERWISE NOTED.

NOTES

1. TEMPORARY LIGHTING PANEL TO SERVE PARKING LOT LIGHTS. AFTER CONSTRUCTION IS COMPLETE AND PARKING LOT LIGHTS ARE ROUTED TO ELECTRICAL PANEL IN ELECTRICAL ROOM, CONTRACTOR SHALL REMOVE PANEL AND STRUT STRUCTURE IN ITS ENTIRETY. REFER TO SHEET ED1.1 FOR ADDITIONAL INFORMATION.
2. TEMPORARY FEED TO SERVE PANEL TP. AFTER CONSTRUCTION IS COMPLETE AND CIRCUITS ARE CUT OVER TO PERMANENT PANEL, CONTRACTOR SHALL REMOVE CONDUCTORS. ABANDON CONDUIT IN PLACE. REFER TO SHEET ED1.1 FOR ADDITIONAL INFORMATION.
3. TEMPORARY FEED OF EXTENSION OF PARKING LOT LIGHTING CIRCUITS. AFTER CONSTRUCTION IS COMPLETE AND CIRCUITS ARE CUT OVER TO PERMANENT PANEL, CONTRACTOR SHALL REMOVE CONDUCTORS. ABANDON CONDUIT IN PLACE. REFER TO SHEET ED1.1 FOR ADDITIONAL INFORMATION.
4. INTERCEPT PARKING LOT LIGHTING CIRCUITS AND EXTEND TO PANEL 4L1A LOCATED IN ELECTRICAL ROOM - MM151. PROVIDE (4)1"C - 4#8, 1#10G EACH.
5. REPLACE WALL PACK. RECONNECT TO EXISTING CIRCUIT, PATCH AND PAINT TO MATCH EXISTING.

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1	05/22/20	Addendum #1

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DRAWN BY	G Jacob
DESIGNED BY	M Klug
CHECKED BY	M Cabbibo

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SHEET TITLE

LIGHTING - SITE PLAN

SHEET NUMBER

E1.2

ADDENDUM#1

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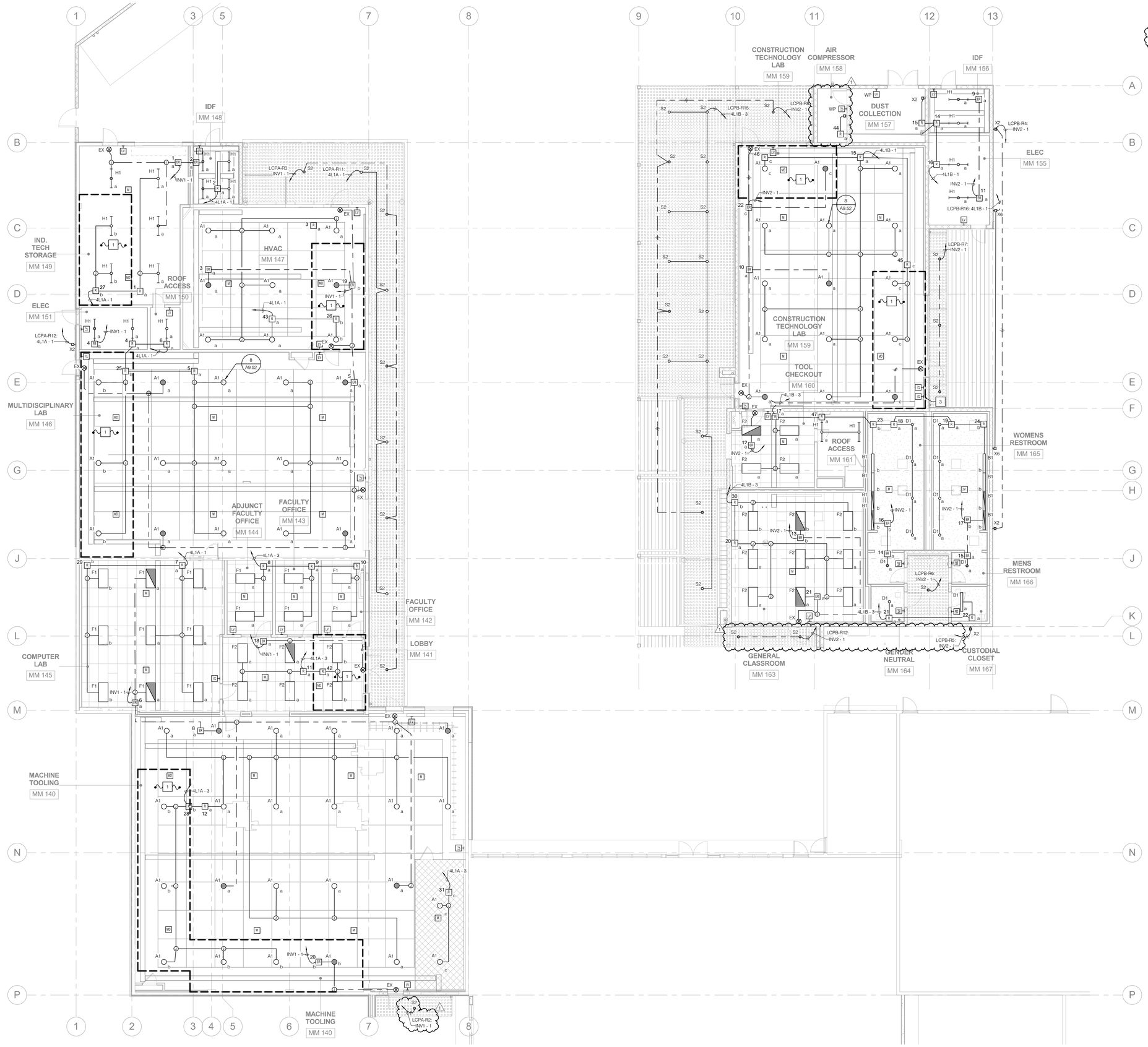

NOTES

1. PRIMARY DAYLIGHT ZONE.
2. PROVIDE WEATHER PROOF COVER.
3. PROVIDE LIGHT SWITCH, AT CONSTRUCTION TECHNOLOGY LAB MM 159, FOR CONTROL OF EXTERIOR FLOOD LIGHTS.

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SCALE	1/8" = 1'-0"
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DESIGNED BY	M Klug
CHECKED BY	M Cabbibo

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SHEET TITLE

LIGHTING - FLOOR PLAN

SHEET NUMBER

E2.2

ADDENDUM#1

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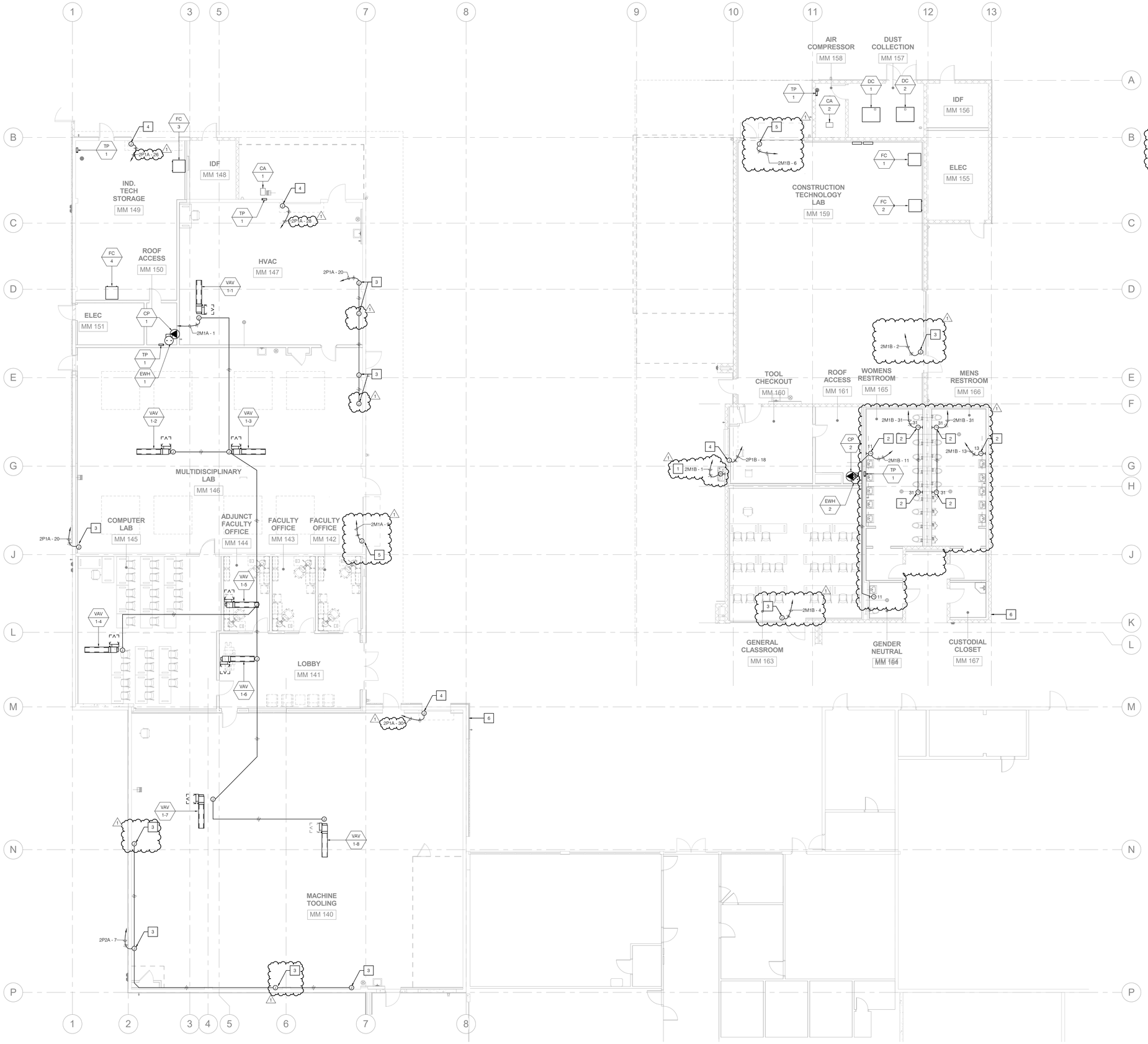

GENERAL NOTES

1. REFER TO SHEET E0.3 FOR MECHANICAL AND PLUMBING ELECTRICAL CONNECTION SCHEDULE.

NOTES

1. PROVIDE 120V, 20A CONNECTION TO SERVE DRINKING FOUNTAIN.
2. PROVIDE 120V CONNECTION TO SERVE LOW VOLTAGE TRANSFORMER. TRANSFORMER FURNISHED BY PLUMBING CONTRACTOR. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
3. PROVIDE 120V CONNECTION TO MOTORIZED SHADES. CONTROL PER MANUFACTURER REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE 120V CONNECTION TO MOTORIZED ROLL UP DOOR. CONTROL PER MANUFACTURER REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. PROVIDE 120V, 1P, 20A CONNECTION TO SERVE CROWN BIFOLD DOOR SYSTEM. CONTROL PER MANUFACTURER REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. PROVIDE CONDUIT, WIRE TO SWITCH. FIELD COORDINATE EXACT LOCATION PRIOR TO INSTALLATION.
6. PROVIDE 3/4" SPARE CONDUIT FROM WATER METER TO IDF ROOM. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

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PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

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#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
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PROJECT IDENTIFICATION J9099

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THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE 1/8" = 1'-0"
DRAWN BY G Jacob
DESIGNED BY M Klug
CHECKED BY M Cabbibo

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AUXILIARY - FLOOR PLAN

SHEET NUMBER

E2.4

ADDENDUM#1

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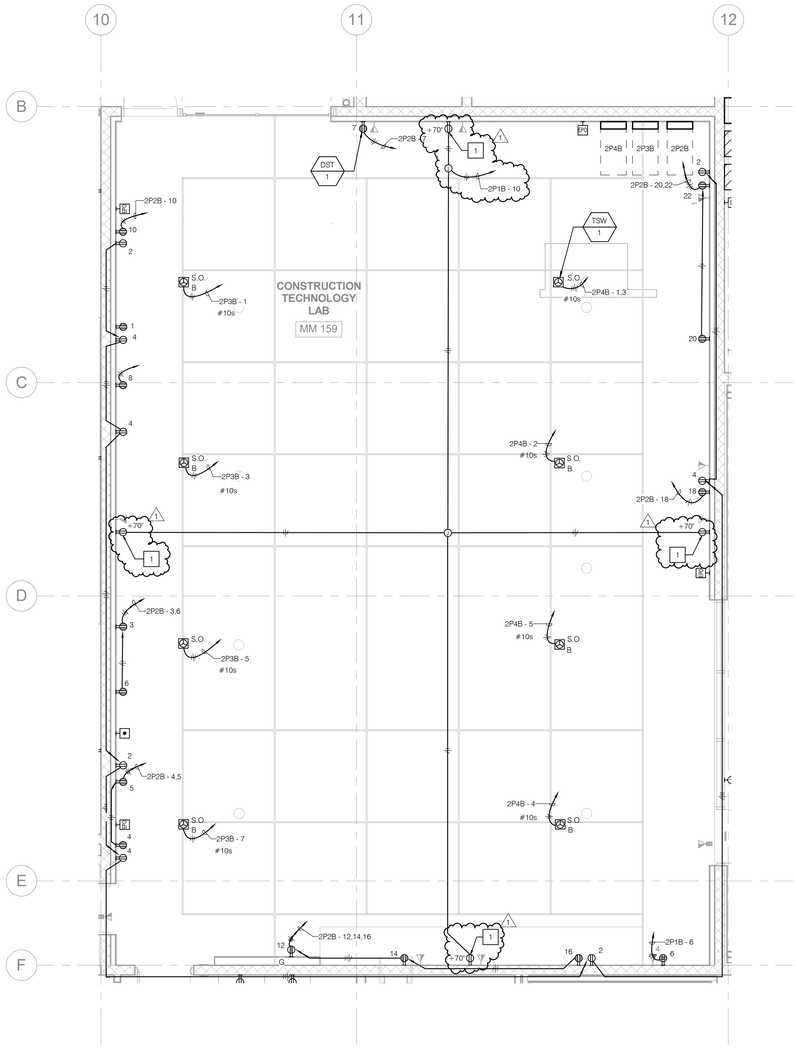
NOTES

1. PROVIDE 120V, 20A DUPLEX RECEPTACLE TO SERVE TV DISPLAY. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.

EQUIPMENT SCHEDULE

EQUIP. ID	DESCRIPTION	VOLTAGE	PHASE	HP	KVA	AMPS	PLUG TYPE	FEEDER	CIRCUIT	REMARKS
DST-1	DUST COLLECTOR - DC-600C	120	1	1.5	-	-	-	3/4" C- 2#12. 1#12GND	2P2B-23	
TSW-1	TABLE SAW	208	1	5	-	14	-	3/4" C- 2#10. 1#10GND	2P4B-1,3	PROVIDE WITH NEMA L6-30 PLUG/OUTLET. COORDINATE WITH MANUFACTURER REQUIREMENTS.



1 ENLARGED CONSTRUCTION TECHNOLOGY LAB MM 159

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

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SHEET TITLE

ENLARGED PLANS

SHEET NUMBER

E3.2

ADDENDUM#1

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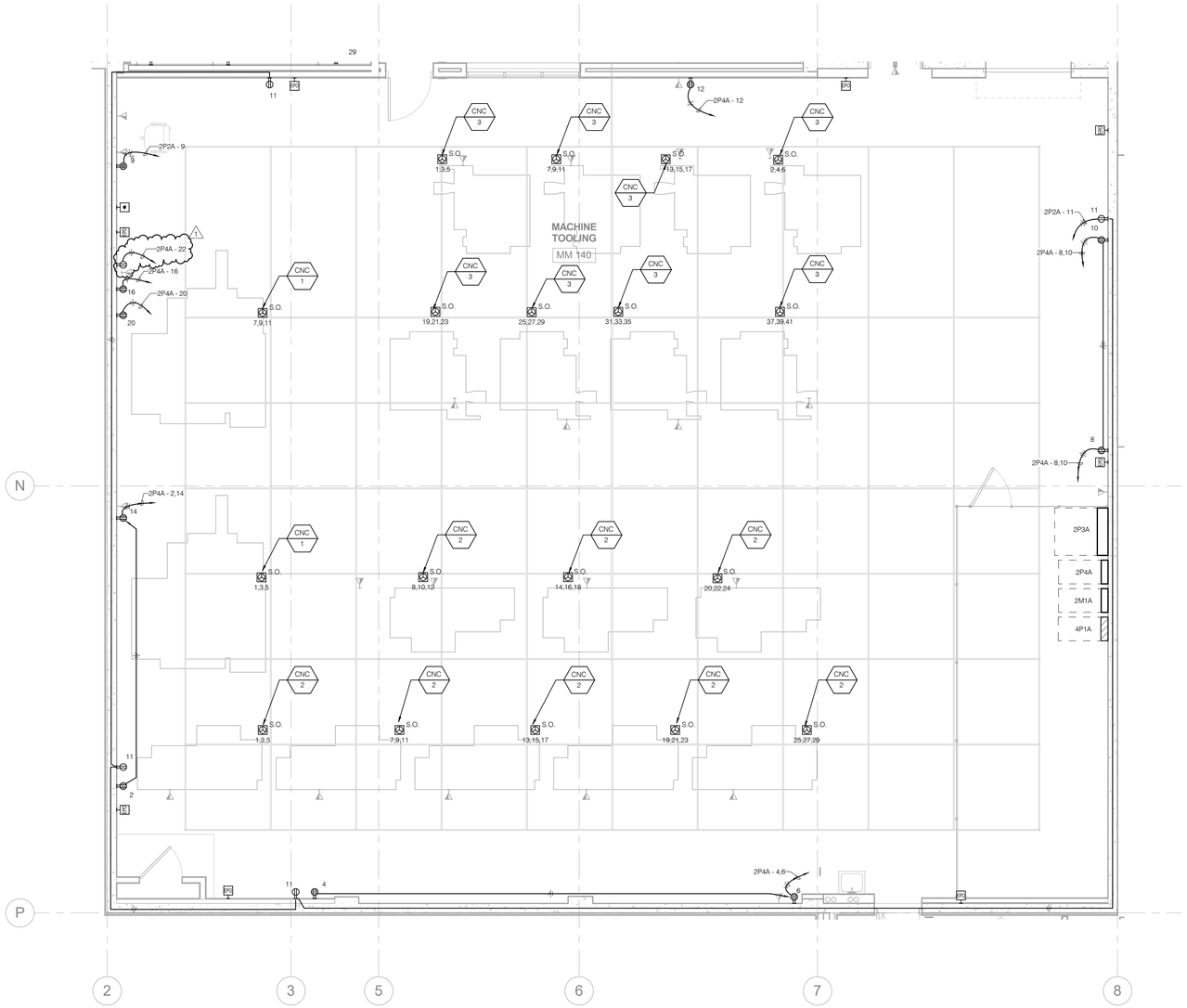
NOTES

1. PROVIDE 120V, 20A DUPLEX RECEPTACLE TO SERVE TV DISPLAY. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.

EQUIPMENT SCHEDULE

EQUIP. ID	DESCRIPTION	VOLTAGE	PHASE	HP	KVA	AMPS	PLUG TYPE	FEEDER	CIRCUIT	REMARKS
CNC-1	UNIVERSAL MACHINE	480V	3	-	-	35A	-	1" C - 3#6, 1#10GND	4P1A-1,3,5: 4P1A-7,9,11:	
CNC-2	TL-1 CNC TOOLROOM LATHE	208V	3	-	-	25A	-	1" C - 3#6, 1#10GND	2P4A-1,3,5: 2P4A-7,9,11: 2P4A-13,15,17: 2P4A-14,16,18: 2P4A-19,21,23: 2P4A-25,27,29: 2P3A-14,16,18: 2P3A-20,22,24:	
CNC-3	SUPER MINI MILL	208V	3	-	-	40A	-	1" C - 3#6, 1#10GND	2P3A-1,3,5: 2P3A-2,4,6: 2P3A-7,9,11: 2P3A-13,15,17: 2P3A-19,21,23: 2P3A-25,27,29: 2P3A-31,33,35: 2P3A-37,39,41:	



1 ENLARGED MACHINE TOOLING MM 140

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

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DESIGNED BY	M Klug
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SHEET TITLE

ENLARGED PLANS

SHEET NUMBER

E3.3

ADDENDUM#1

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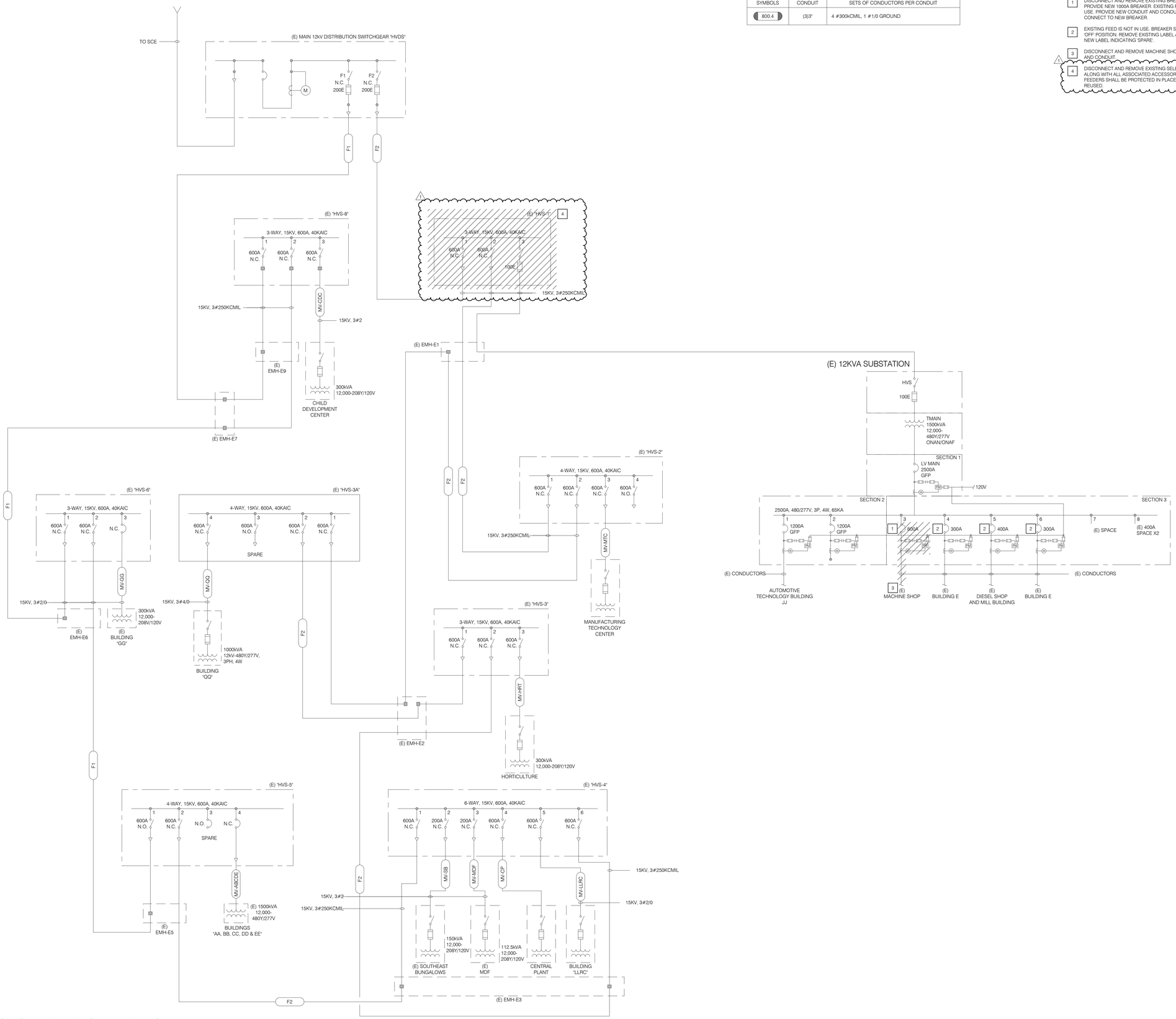
FEEDER SCHEDULE		
SYMBOLS	CONDUIT	SETS OF CONDUCTORS PER CONDUIT
800.4	(3)3"	4 #300kCMIL, 1 #1/0 GROUND

NOTES

1. DISCONNECT AND REMOVE EXISTING BREAKER AND PROVIDE NEW 1000A BREAKER. EXISTING FEED IS NOT IN USE. PROVIDE NEW CONDUIT AND CONDUCTORS AND CONNECT TO NEW BREAKER.
2. EXISTING FEED IS NOT IN USE. BREAKER SHALL BE IN 'OFF' POSITION. REMOVE EXISTING LABEL AND PROVIDE NEW LABEL INDICATING 'SPARE'.
3. DISCONNECT AND REMOVE MACHINE SHOP FEEDERS AND CONDUIT.
4. DISCONNECT AND REMOVE EXISTING SELECTOR SWITCH ALONG WITH ALL ASSOCIATED ACCESSORIES. EXISTING FEEDERS SHALL BE PROTECTED IN PLACE AND BE REUSED.



1 12KV SINGLE LINE DIAGRAM - DEMO

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SCALE	Not To Scale
DRAWN BY	G Jacob
DESIGNED BY	M Klug
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SHEET TITLE

MEDIUM VOLTAGE SINGLE LINE DIAGRAM

SHEET NUMBER

E5.1

ADDENDUM#1

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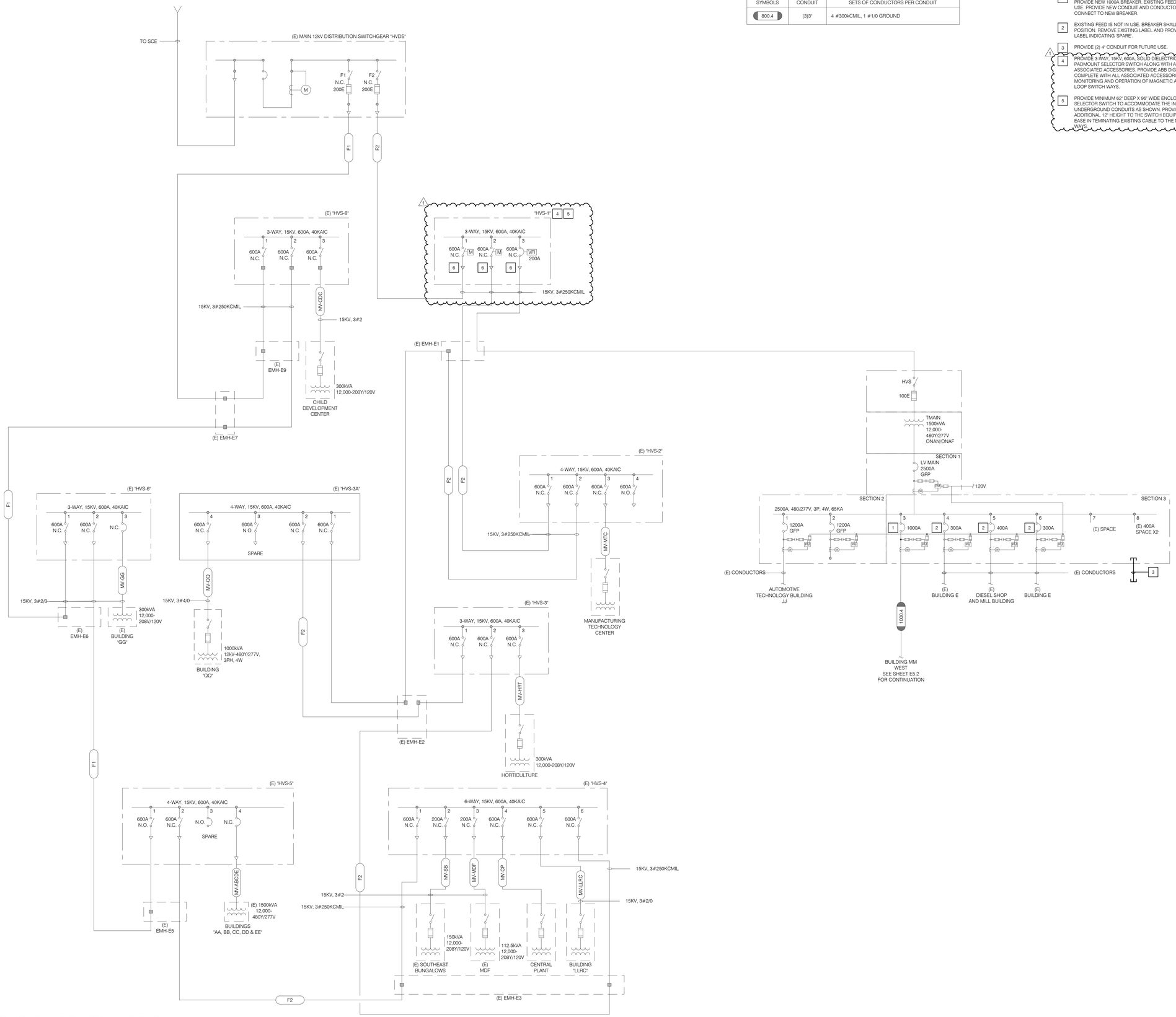
FEEDER SCHEDULE

SYMBOLS	CONDUIT	SETS OF CONDUCTORS PER CONDUIT
800.4	(3)3"	4 #300kCMIL, 1 #1/0 GROUND

NOTES

1. DISCONNECT AND REMOVE EXISTING BREAKER AND PROVIDE NEW 1000A BREAKER. EXISTING FEED IS NOT IN USE. PROVIDE NEW CONDUIT AND CONDUCTORS AND CONNECT TO NEW BREAKER.
2. EXISTING FEED IS NOT IN USE. BREAKER SHALL BE IN 'OFF' POSITION. REMOVE EXISTING LABEL AND PROVIDE NEW LABEL INDICATING 'SPARE'.
3. PROVIDE (2) 4" CONDUIT FOR FUTURE USE.
4. PROVIDE 3-WAY, 15KV, 600A, SOLID DIELECTRIC PADMOUNT SELECTOR SWITCH ALONG WITH ALL ASSOCIATED ACCESSORIES. PROVIDE ABB DIGITAL RELAY COMPLETE WITH ALL ASSOCIATED ACCESSORIES FOR MONITORING AND OPERATION OF MAGNETIC ACTUATED LOOP SWITCH WAYS.
5. PROVIDE MINIMUM 62" DEEP X 96" WIDE ENCLOSURE FOR SELECTOR SWITCH TO ACCOMMODATE THE INCOMING UNDERGROUND CONDUITS AS SHOWN. PROVIDE ADDITIONAL 12" HEIGHT TO THE SWITCH EQUIPMENT FOR EASE IN TEMINATING EXISTING CABLE TO THE NEW SWITCH WAYS.



1 12KV SINGLE LINE DIAGRAM - RENO

NO SCALE

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SCALE

DRAWN BY Author

DESIGNED BY Designer

CHECKED BY Checker

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SHEET TITLE

MEDIUM VOLTAGE SINGLE LINE DIAGRAM

SHEET NUMBER

2

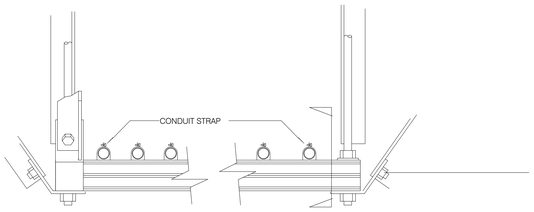
E5.11

ADDENDUM#1

CONDUIT SIZES				
TRADE SIZE	APPROX. QUANTITY	OUTSIDE DIAMETER	NOMINAL WALL THICKNESS	APPROX. WEIGHT PER 100FT.
3/4"	6	1.050"	0.107"	109 LB
1"	2	1.315"	0.126"	161 LB
2"	2	2.375"	0.146"	350 LB

RACK SIZE IS BASED ON A GENERIC CONFIGURATION OF THE FOLLOWING. IF RACK HAS MORE CONDUIT THAN SHOWN CONTRACTOR SHALL PROVIDE DETAILED LAYOUT WITH SIZE AND WEIGHT FOR APPROVAL BY STRUCTURAL ENGINEER AND DSA.

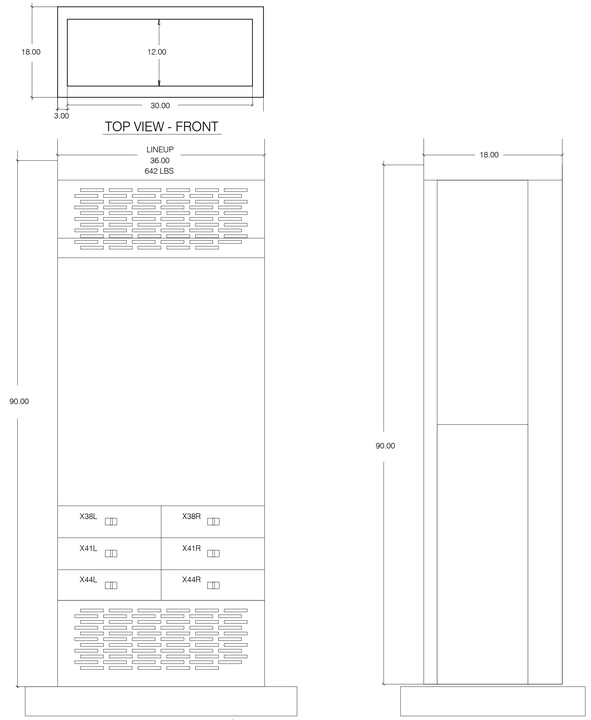
WIRE SIZES				
TRADE SIZE	WIRE SIZE	QUANTITY	APPROX. WEIGHT PER 100FT.	APPROX. WEIGHT PER 100FT PER QUANTITY.
3/4"	#12	5	2.3 LB	11.5 LB
1"	#6	5	9.48 LB	47.4 LB
2"	2/0	4	46.11 LB	184.44 LB



REFER TO DETAIL8/S9.1 FOR TRAPEZE CONSTRUCTION, ATTACHMENT, AND SPACING.

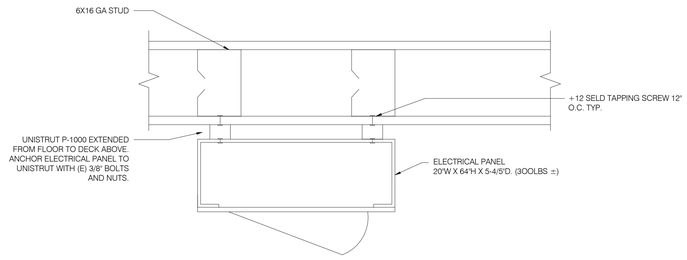
6 TYPICAL CONDUIT SUPPORT

NO SCALE



4 DISTRIBUTION BOARD "2DB2"

NO SCALE



2 SURFACE MOUNTED PANELBOARD

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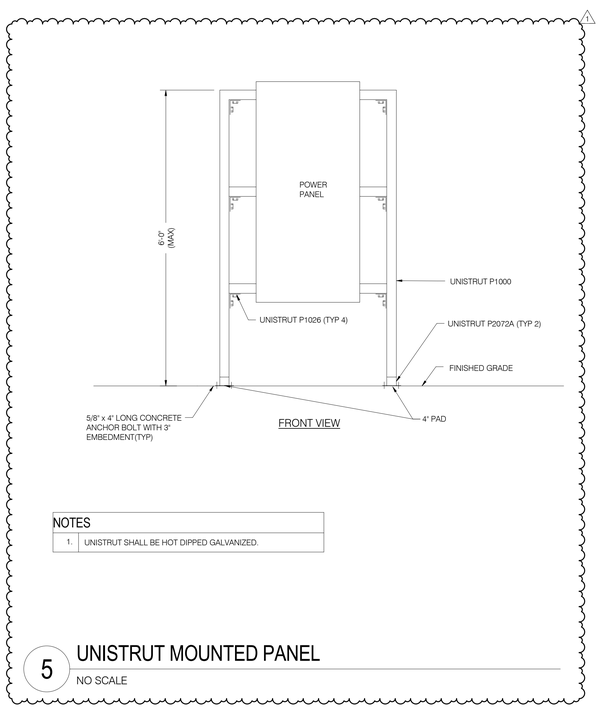
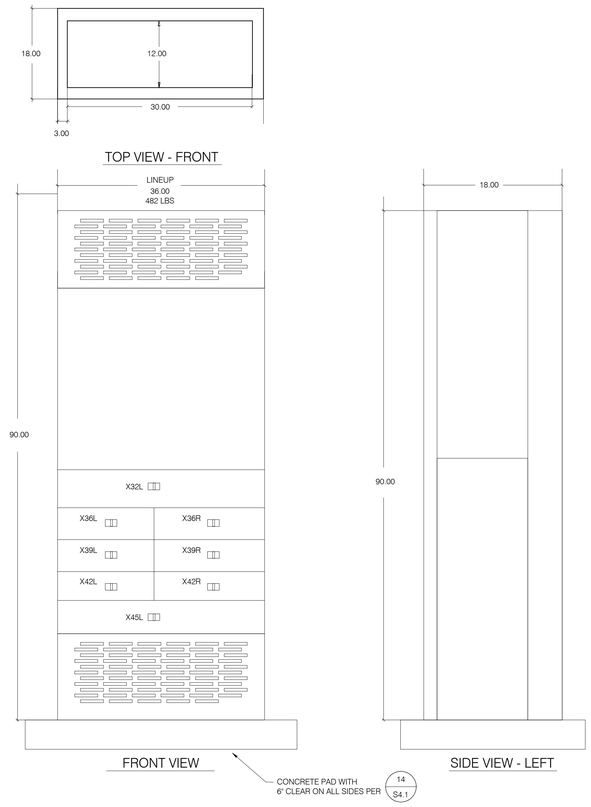
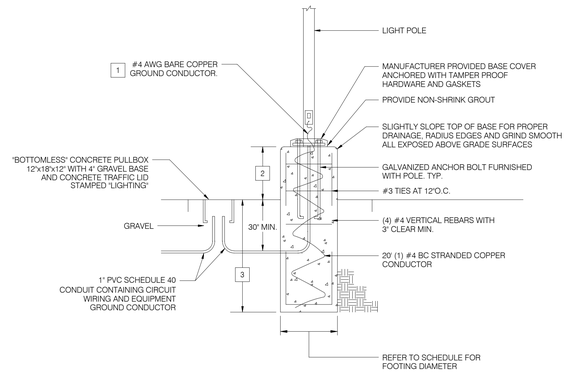


NOTES	
1.	UNISTRUT SHALL BE HOT DIPPED GALVANIZED.

5 UNISTRUT MOUNTED PANEL

NO SCALE





LIGHT POLE FOOTING SCHEDULE			
POLE HEIGHT	FOOTING HEIGHT BELOW GRADE	FOOTING DIAMETER	FOOTING HEIGHT ABOVE GRADE
25' MAX	6'-0"	2'-6"	6"

NOTES	
1	GROUND POLE TO GROUND CONDUCTORS IN CONDUITS.
2	REFER TO SCHEDULE FOR ABOVE GRADE HEIGHT.
3	REFER TO SCHEDULE FOR FOOTING LENGTH BELOW GRADE.

GENERAL NOTES	
1.	REFER TO CALCULATION SHEETS G-B1 TO G-B7 FOR LIGHT POLE FOUNDATION CALCULATIONS.

1 LIGHT POLE FOOTING

NO SCALE

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PROJECT TITLE

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SCALE Not To Scale
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CHECKED BY M Cabbibo

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DETAILS

SHEET NUMBER

E6.5

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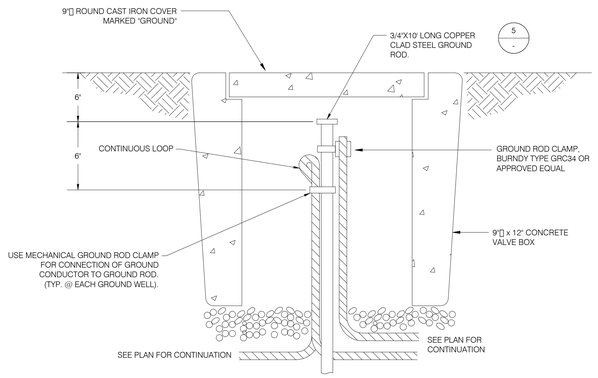
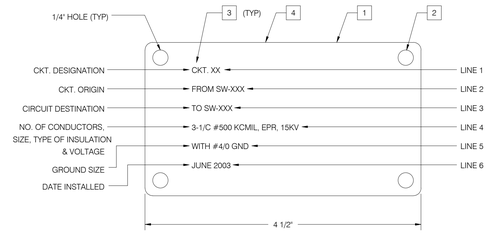


4 GROUND ROD AND WELL

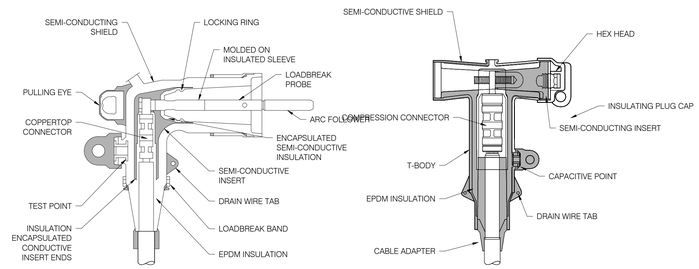
NO SCALE



NOTES	
1	1/8" THICK LAMINATED WHITE MELAMINE (WITH BLACK CORE) PLASTIC TAG WITH MATTE WHITE FINISH, WITH CHARACTERS CUT THROUGH THE WHITE PLASTIC.
2	USE LOCK-ON TYPE NYLON TIES TO ATTACH TAG TO CABLE.
3	ALL LETTERS & NUMBERS ARE 1/4" HIGH.
4	FEEDER CIRCUITS IN EACH MANHOLE SHALL BE TAGGED.

2 MEDIUM VOLTAGE CABLE TAG

NO SCALE

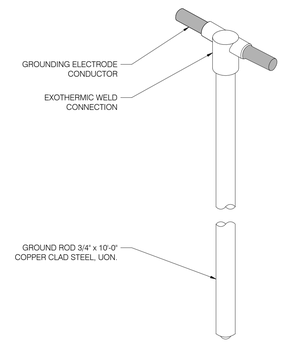


200A, 15KV LOAD BREAK CONNECTOR

600A, 15KV DEAD BREAK CONNECTOR

3 LOAD BREAK AND DEAD BREAK CONNECTORS

NO SCALE



1 GROUND ROD

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DRAWN BY Author

DESIGNED BY Designer

CHECKED BY Checker

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SHEET TITLE

DETAILS

SHEET NUMBER

E6.6

ADDENDUM#1

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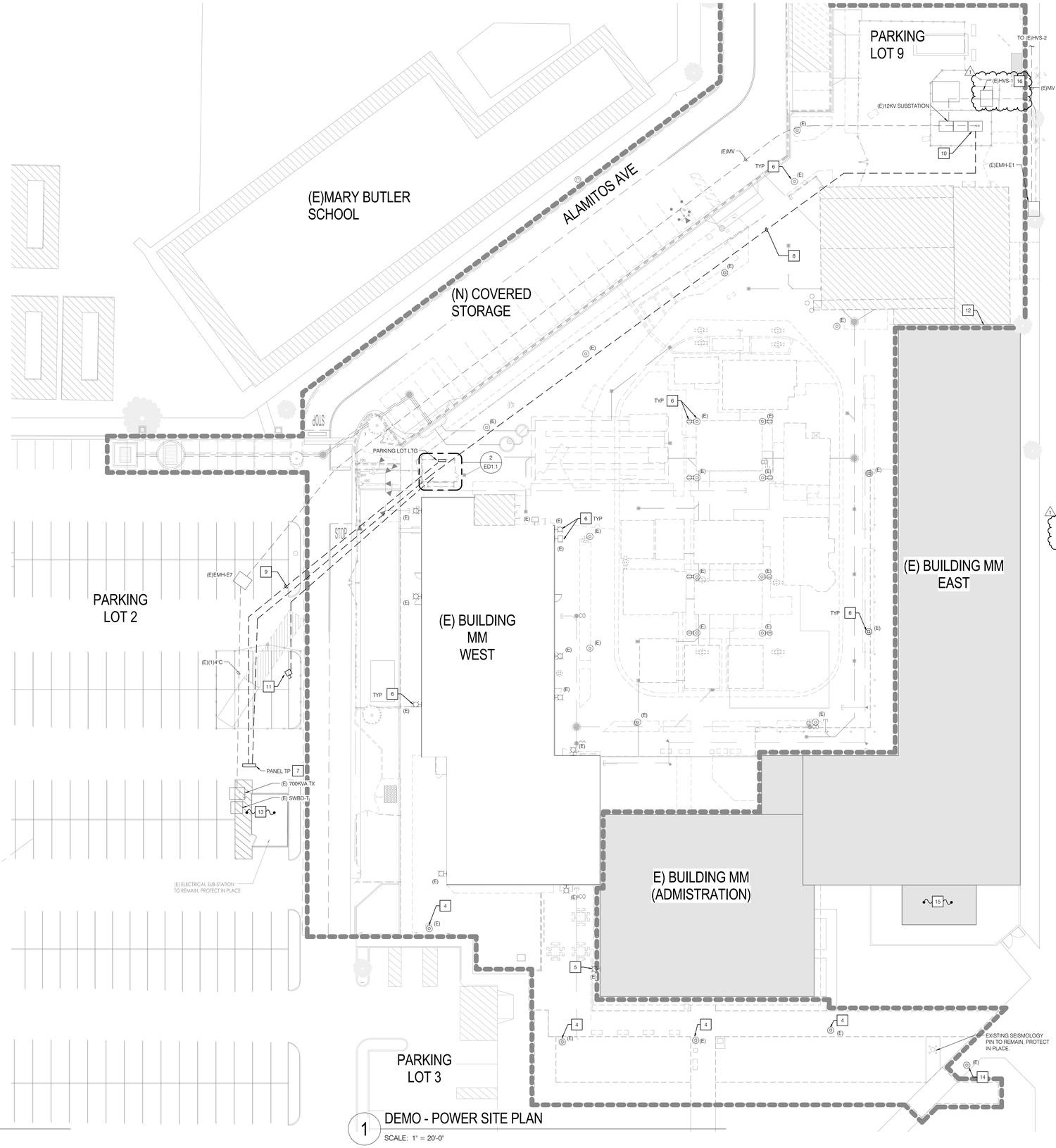

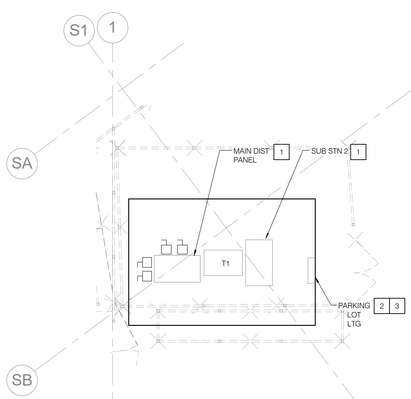

2 DEMO - ENLARGED ELECTRICAL YARD

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

1 DEMO - POWER SITE PLAN

SCALE: 1" = 20'-0"

GENERAL NOTES

1. REFER TO SHEET E1.1 AND E1.2 FOR ADDITIONAL INFORMATION.

NOTES

1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING EQUIPMENT IN ITS ENTIRETY. DISCONNECT FEEDERS TO ORIGIN AND ABANDON EXISTING CONDUIT. CONTRACTOR SHALL RETURN EQUIPMENT TO COLLEGE.
2. EXISTING PARKING LOT LIGHTING CIRCUITS LOCATED HERE. PARKING LOT LIGHTING SHALL REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION. PROVIDE TEMPORARY CONNECTION PER NOTES 7 AND 8 THIS SHEET. AFTER CONSTRUCTION IS COMPLETE, PARKING LOT LIGHTING SHALL BE FED FROM NEW ELECTRICAL ROOM. REFER TO E1.2 FOR ADDITIONAL INFORMATION.
3. AFTER TEMPORARY PANEL AND FEEDERS ARE INSTALLED, DEMO EXISTING LIGHTING PANEL. REFER TO NOTES 2, 7, 8, AND 9 FOR ADDITIONAL INFORMATION.
4. CAREFULLY DISCONNECT POLE AND HEAD AND RETURN TO COLLEGE. DEMO EXISTING BASE IN ITS ENTIRETY. REMOVE EXISTING CONDUCTORS BACK TO NEAREST POLE TO REMAIN. ABANDON EXISTING CONDUIT.
5. REMOVE AND REPLACE WALL PACK, RECONNECT TO EXISTING CIRCUIT. REFER TO SHEE E1.2 FOR ADDITIONAL INFORMATION.
6. DISCONNECT AND REMOVE EXISTING LIGHT, POLE, AND BASE IN ITS ENTIRETY. DISCONNECT AND REMOVE EXISTING CONDUCTORS BACK TO SOURCE. ABANDON EXISTING CONDUIT.
7. DURING CONSTRUCTION THE PARKING LOT LIGHTS MUST REMAIN OPERATIONAL. PROVIDE A 480/277V, 14KAIC, 3PH, 4W ELECTRICAL PANEL TP WITH (2) 30A/3P, (3) 30A 13P, (1) 15A/3P, (6) 20A, 1P, (1) 60A/3P, AND (1) 100A/3P BREAKER FOR TEMPORARY POWER. PROVIDE STRUT STRUCTURE ATTACHED TO CONCRETE BASE FOR PANEL. FIELD COORDINATE EXACT LOCATION PRIOR TO INSTALLATION.
8. PROVIDE TEMPORARY UNDERGROUND FEED TO SERVE TEMP PANEL TP.VIA (2)2"C. CONDUCTORS SHALL BE MINIMUM #2. COORDINATE EXACT ROUTING WITH EXISTING UTILITIES. TEMPORARY FEED SHALL BE PROTECTED DURING THE LENGTH OF CONSTRUCTION TO ENSURE PARKING LOT LIGHTING REMAINS OPERATIONAL.
9. PROVIDE (4) 1"C - 4#8, 1#10 GND EACH AND RE-CONNECT LIGHTING AND CONTROL CIRCUITS. CIRCUITS SHALL BE ROUTED THROUGH EXISTING CONTACTORS.
10. PROVIDE 100A/3P BREAKER IN EXITING 480V SITCHBOARD TO SERVE TEMPORARY POWER.
11. PROVIDE TEMPORARY CONNECTION TO TRASH COMPACTOR. COMPACTOR SHALL REMAIN OPERATIONAL THROUGHOUT PROJECT. FOR BID PURPOSES CONTRACTOR SHALL INCLUDE 2"C - (4) #2, 1#6 GND FOR TEMPORARY POWER. FIELD AND VERIFY COMPACTOR SIZE PRIOR TO ROUGH-IN. TEMPORARY POWER SHALL BE RUN UNDERGROUND.
12. EXISTING SERVICE FOR BUILDING MM EAST LOCATED HERE. PRIOR TO ANY DEMO, CONTRACTOR SHALL INCLUDE TIME IN THEIR BID TO VERIFY EXISTING SERVICE ORIGIN AND PROTECT IN PLACE. THIS SERVICE SHALL REMAIN AND BE OPERATIONAL THROUGHOUT.
13. EXISTING BOLLARDS SHALL BE PROTECTED IN PLACE.
14. EXISTING POLE LIGHT TO REMAIN AND BE PROTECTED IN PLACE.
15. EXISTING FORKLIFT CHARGING STATIONS, QTY. 6, LOCATED HERE. CONTRACTOR SHALL CAREFULLY DISCONNECT FOR RE-INSTALLATION. REFER TO SHEET E1.1 FOR NEW LOCATION. REMOVE EXISTING CONDUCTORS BACK TO SOURCE. ABANDON EXISTING CONDUIT.
16. DISCONNECT AND REMOVE EXISTING SELECTOR SWITCH ALONG WITH ALL ASSOCIATED ACCESSORIES. EXISTING FEEDERS SHALL BE PROTECTED IN PLACE AND BE REUSED.

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/22/20	Addendum #1

PROJECT IDENTIFICATION J9099

THE DRAWINGS IN THIS SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE	As indicated
DRAWN BY	G Jacob
DESIGNED BY	M Klug
CHECKED BY	M Cabbibo

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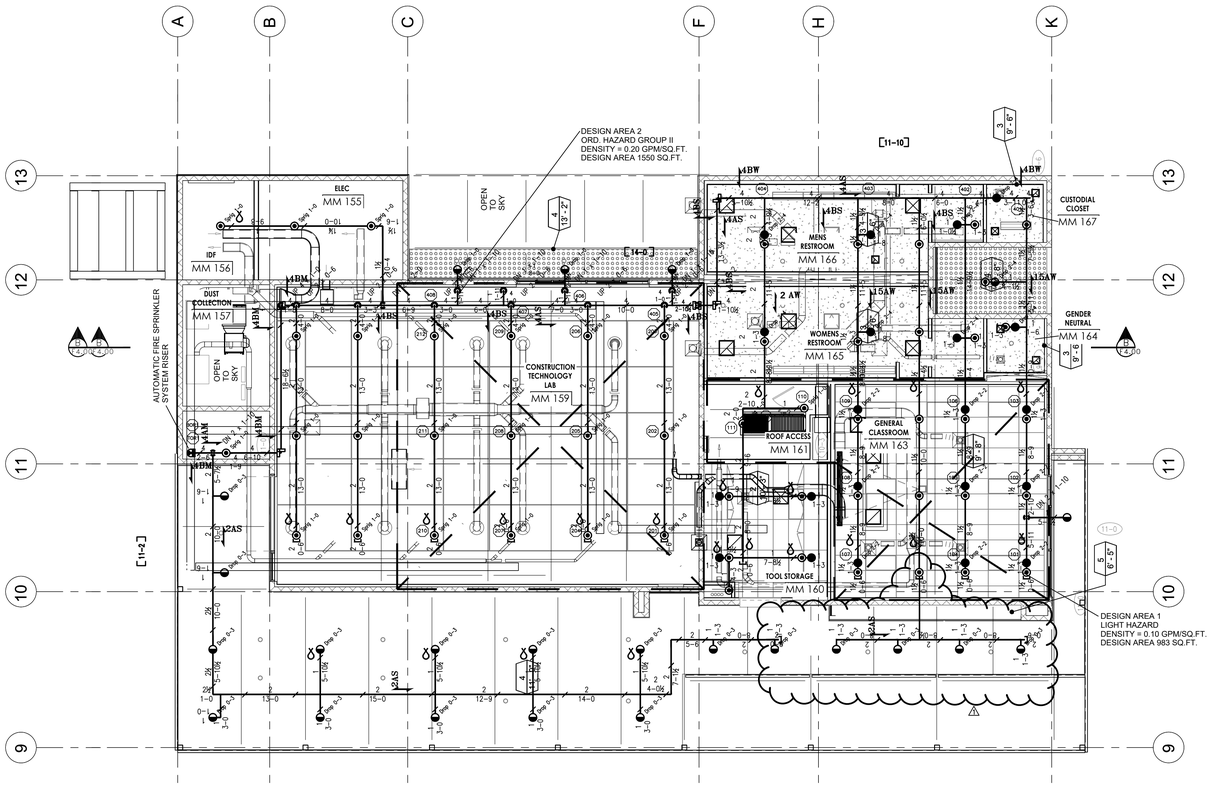
SHEET TITLE

SITE - DEMO PLAN

SHEET NUMBER

ED1.1

ADDENDUM#1



SCALE 1/8"=1'-0"

LEGEND

SYMBOL FOR SWAY BRACE
SEE DETAILS ON SHEET F5.02

SYMBOL FOR PIPE SUPPORT HANGER
SEE DETAILS ON SHEET F5.01

DENOTES LINE RESTRAINT WITH SPLAY WIRE, SURGE RESTRAINER, RING HANGER, HANGER ROD AND BEAM CLAMP ASSEMBLY
FIELD VERIFY WITH INSPECTOR FOR ADDITION OR DELETION OF LINE RESTRAINTS AS REQUIRED BY UNFORESEEN FIELD CONDITIONS.
SEE DETAILS ON SHEET F5.01

LINE SIZE
4 = 4"
25 = 2 1/2"
2 = 2"
15 = 1 1/2"
BRACE TYPE
A=LONG.,B=LATERAL
STRUCTURAL POINT OF CONNECTION
M= CMU WALL, S=STEEL, W=WOOD
XXX

MAXIMUM BRACE SPACING	MAXIMUM BRACE LOAD
4AM = 30'	4AM = 300 LBS.
4AS = 60'	4AS = 600 LBS.
4AW = 30'	4AW = 300 LBS.
4BM = 30'	4BM = 300 LBS.
4BS = 40'	4BS = 674 LBS.
4BW = 30'	4BW = 300 LBS.
25AS = 80'	25AS = 400 LBS.
25BM = 40'	25BM = 200 LBS.
2AS = 80'	2AS = 287 LBS.
2AW = 80'	2AW = 287 LBS.
2BM = 40'	2BM = 143 LBS.
2BS = 30'	2BS = 108 LBS.
15AW = 30'	15AW = 155 LBS.

SEE SEISMIC BRACE DETAILS ON SHEET F5.02 FOR BRACE DETAILS.

MAXIMUM BRACE LINE RESTRAINT SPACING

1" PIPE = 26'
1 1/4" PIPE = 27'
1 1/2" PIPE = 29'
2" PIPE = 31'

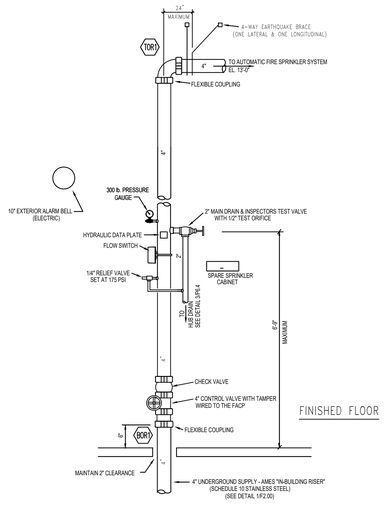
(NFPA 13, 2016, TABLE 9.3.6.4(a)

Hydraulic Design Information Sign

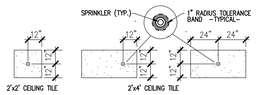
Location of the Design Area REMOTE AREA 1
Designed to discharge at a rate of 0.10 gpm/ 900 sq.ft.
Required flow & pressure @ the Base of the Riser: 263.49 gpm at 33.996 psi
Required flow & pressure @ the Water Supply Source 363.49 gpm at 40.632 psi
Required flow & pressure @ the Discharge side of the Pump N/A gpm at N/A psi
Type of Sprinklers Installed:
Orifice size, Temperature, K– Factor, SIN & Response type of sprinklers Installed:
(1/2",K=5.6) VIKING MIRAGE Q.R. CONCEALED PENDENT VK462
The minimum discharge flow & pressure required from the hydraulically most demanding sprinkler: 15.0 gpm @ 7.14 psi
The required pressure setting for pressure reducing valve: N/A
For Deluge Sprinkler System, the required flow & pressure @ the most demanding sprinkler: N/A
The protection area per sprinkler based on the hydraulic calculations: 150
System was design & installed per NFPA 13, 2016 edition.
Occupancy classification LIGHT HAZARD
Commodity classification N/A
Maximum storage height N/A
Hose stream allowance of 100 gpm
Installing Contractor

Hydraulic Design Information Sign

Location of the Design Area REMOTE AREA 2
Designed to discharge at a rate of 0.20 gpm/ 1500 sq.ft.
Required flow & pressure @ the Base of the Riser: 313.62 gpm at 34.784 psi
Required flow & pressure @ the Water Supply Source 363.62 gpm at 43.668 psi
Required flow & pressure @ the Discharge side of the Pump N/A gpm at N/A psi
Type of Sprinklers Installed:
Orifice size, Temperature, K– Factor, SIN & Response type of sprinklers Installed:
(1/2",K=5.6) VIKING MICROFAST Q.R. UPRIGHT VK300
The minimum discharge flow & pressure required from the hydraulically most demanding sprinkler: 26.0 gpm @ 21.56 psi
The required pressure setting for pressure reducing valve: N/A
For Deluge Sprinkler System, the required flow & pressure @ the most demanding sprinkler: N/A
The protection area per sprinkler based on the hydraulic calculations: 130
System was design & installed per NFPA 13, 2016 edition.
Occupancy classification ORDINARY HAZARD GROUP II
Commodity classification N/A
Maximum storage height N/A
Hose stream allowance of 250 gpm
Installing Contractor



1 WORK SHOP BUILDING
AUTOMATIC FIRE SPRINKLER SYSTEM RISER
N.T.S.



NOTE SPRINKLERS SHALL BE POSITIONED AS SHOWN CENTERED WITHIN A 2" TOLERANCE CIRCLE LOCATED AT THE QUARTER TILE POINT OR AT THE CENTER OF A 2'x2' OR 2'x4' CEILING TILE.

TYPICAL SPRINKLER LOCATIONS
(IN 24"x48" or 24"x24" CEILING TILE) NOT TO SCALE

SPRINKLER SCHEDULE & LEGEND

SYMBOL	SPRINKLER DESCRIPTION	SIN	THREAD SIZE	TEMP.	K-FACTOR	TRIM	FINISH	TOTAL
◐	VIKING "MICROFAST" Q.R. PENDENT ON 1" DROP	VK302	1/2"	200°	5.6	REC.	CHROME	23
⊙	VIKING "MICROFAST" Q.R. UPRIGHT ON 1" SPRIG	VK300	1/2"	200°	5.6	––	BRASS	52
●	VIKING "MIRAGE" Q.R. CONCEALED PEND. ON 1" DROP	VK462	1/2"	155°	5.6	CONC.	**	21
							TOTAL REQUIRED FOR WORKSHOP BUILDING	96

** NOTE: CONCEALED SPRINKLERS LOCATED IN WHITE ACOUSTIC TILE CEILINGS SHALL BE WHITE, ALL OTHERS SHALL BE CUSTOM FINISHED TO MATCH COLOR OF CEILING SURFACE. SEE ARCHITECTURAL PLANS FOR COLOR SCHEDULE.

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SEALS / APPROVALS

PROJECT TITLE
BUILDING MM - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS		
#	DATE	DESCRIPTION
	12/09/2019	DSA RESUBMITTAL
1	05/22/2020	ADDENDUM#1

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DRAWN BY RJM
CHECKED BY RJM

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SHEET TITLE
WORK SHOP BUILDING FIRE SPRINKLER PLAN

SHEET NUMBER
F3.12

ADDENDUM#1

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Motion Detector Schedule

Motion Detector #	Ref. Sheet #	Room# - Location	Detector Type	Height
MA-001	T2.1	MM-149 - B/3	ISC-CDL1-W15G	8 ft
MA-002	T2.1	MM-148 - B/5	ISC-CDL1-W15G	8 ft
MA-003	T2.1	MM-147 - B-C/5-7	ISC-CDL1-W15G	8 ft
MA-004	T2.1	MM-147 - D-E/5-7	ISC-CDL1-W15G	8 ft
MA-005	T2.1	MM-151 - D-E/1	ISC-CDL1-W15G	8 ft
MA-006	T2.1	MM-150 - D-E/3	ISC-CDL1-W15G	8 ft
MA-007	T2.1	MM-146 - E-G/1	ISC-CDL1-W15G	8 ft
MA-008	T2.1	MM-146 - J/2-3	ISC-CDL1-W15G	8 ft
MA-009	T2.1	MM-140 - M/5	ISC-CDL1-W15G	8 ft
MA-010	T2.1	MM-140 - M/7-8	ISC-CDL1-W15G	8 ft
MA-011	T2.1	MM-140 - P/7-8	ISC-CDL1-W15G	8 ft
MA-012	T2.1	MM-157 - A/11-12	ISC-CDL1-W15G	8 ft
MA-013	T2.1	MM-159 - B/11	ISC-CDL1-W15G	8 ft
MA-014	T2.1	MM-155 - C/12-13	ISC-CDL1-W15G	8 ft
MA-015	T2.1	MM-159 - E-F/12	ISC-CDL1-W15G	8 ft
MA-016	T2.1	MM-160 - F/10-11	ISC-CDL1-W15G	8 ft
MA-017	T2.1	MM-161 - F-G/11	ISC-CDL1-W15G	8 ft
MA-018	T2.1	MM-165 - J/11-12	ISC-CDL1-W15G	8 ft
MA-019	T2.1	MM-166 - J/12-13	ISC-CDL1-W15G	8 ft
MA-020	T2.2	MM-145 - L/3	ISC-CDL1-W15G	8 ft
MA-021	T2.2	MM-LOBBY - L-M/5-7	ISC-CDL1-W15G	8 ft
MA-022	T2.2	MM-163 - J/11	ISC-CDL1-W15G	8 ft

Camera Schedule

Camera #	Ref. DWG. #	Type	Room # - Location	Mount/Housing	Mounting height	Camera Label	Notes	Device Termination
SC-01	T2.1	Axis - P3707-PE	Outside mounted Grid: B/1	7" Arm - Outside	120"	MM-001	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-02	T2.1	Axis - P3707-PE	Outside mounted Grid: J/1	7" Arm - Outside	120"	MM-002	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-03	T2.1	Axis - P3707-PE	Outside mounted Grid: M/1	7" Arm - Outside	120"	MM-003	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-04	T2.1	Axis - P3707-PE	Outside mounted Grid: P/2	7" Arm - Outside	120"	MM-004	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-05	T2.1	Axis - P3707-PE	Outside mounted Grid: P/8	7" Arm - Outside	120"	MM-005	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-06	T2.1	Axis - P3707-PE	Outside mounted Grid: M/8	7" Arm - Outside	120"	MM-006	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-07	T2.1	Axis - P3707-PE	Outside mounted Grid: E/7	7" Arm - Outside	120"	MM-007	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-08	T2.1	Axis - P3707-PE	Outside mounted Grid: B/5-6	7" Arm - Outside	120"	MM-008	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-09	T2.1	Axis - P3707-PE	Outside mounted Grid: B/10	7" Arm - Outside	144"	MM-009	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-10	T2.1	Axis - P3707-PE	Outside mounted Grid: E/10	7" Arm - Outside	144"	MM-010	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-11	T2.1	Axis - P3707-PE	Outside mounted Grid: L/11-12	7" Arm - Outside	120"	MM-011	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-12	T2.1	Axis - P3707-PE	Outside mounted Grid: F/13	7" Arm - Outside	120"	MM-012	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-13	T2.1	Axis - P3707-PE	Outside mounted Grid: A/13	7" Arm - Outside	120"	MM-013	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-14	T2.1	Axis - P3707-PE	Outside mounted Grid: A/11	7" Arm - Outside	120"	MM-014	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
SC-15	T2.1	Axis - P3707-PE	Outside mounted Grid: J/12	7" Arm - Outside	120"	MM-015	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP

Access Control Schedule

Access Control #	Ref. Sheet #	Door #	Room# - Location	OMNILOCK	Reader Type	Door Controller	Lock Type	Door Switch	REX	Notes
CA-01	T2.1		MM-147	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-02	T2.1		MM-146	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-03	T2.1		MM-141	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-04	T2.1		MM-141	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-05	T2.1		MM-159	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-06	T2.1		MM-163	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-07	T2.1		MM-159	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-08	T2.1		MM-140	3000	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	SEE DETAIL #3/T6.8
CA-09	T2.1		MM-165	NA	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	AUTO OPERATOR
CA-10	T2.1		MM-166	NA	KEYFOB PROX	OMX-12811 / PK-K-64 PORTAL GATEWAY	PER DIVISION 8	INTEGRAL TO LOCKSET	INTEGRAL TO LOCKSET	AUTO OPERATOR

1. CONTRACTOR SHALL COORDINATE WITH LBCC FACILITIES FOR OMNILOCK MOUNTING DETAILS
2. DISTRICT'S FUTURE USE FOR TRADITIONAL ACCESS CONTROL SEE DETAIL 3/T6.8

Wireless Access Point Schedule

WAP #	Ref. DWG. #	Type	Room # - Location	Mount/Housing	Mounting Height	WAP-Label	Notes	Device Termination
AP-01	T2.1	IAP-277	Outside mounted Grid: J/7	Outside Arm	120"	WAP-001	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
AP-02	T2.1	IAP-277	Outside mounted Grid: B/5-6	Outside Arm	120"	WAP-002	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
AP-03	T2.1	IAP-277	Outside mounted Grid: B-C/10	Outside Arm	120"	WAP-003	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
AP-04	T2.1	IAP-277	Outside mounted Grid: K/13	Outside Arm	120"	WAP-004	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
AP-05	T2.1	IAP-277	Outside mounted Grid: B/13	Outside Arm	120"	WAP-005	Weather rated Back-box and pathway - (2) OSP Cat6A	FTP
AP-06	T2.1	AP-225	MM-147 Grid: C-D/3	Wall	144"	WAP-006		FTP
AP-07	T2.1	AP-225	MM-147 Grid: C-D/7	Wall	144"	WAP-007		FTP
AP-08	T2.1	AP-225	MM-146 Grid: G-J/1	Wall	144"	WAP-008		FTP
AP-09	T2.1	AP-225	MM-146 Grid: E-G/7	Wall	144"	WAP-009		FTP
AP-10	T2.1	AP-225	MM-140 Grid: M-N/2	Wall	144"	WAP-010		FTP
AP-11	T2.1	AP-225	MM-140 Grid: N-P/2	Wall	144"	WAP-011		FTP
AP-12	T2.1	AP-225	MM-140 Grid: M-N/8	Wall	144"	WAP-012		FTP
AP-13	T2.1	AP-225	MM-140 Grid: N-P/8	Wall	144"	WAP-013		FTP
AP-14	T2.2	AP-225	MM-163 Grid: H/11	Ceiling	116"	WAP-014	Requires Oberion Enclosure - (2) CMP Cat6A	FTP
AP-15	T2.2	AP-225	MM-163 Grid: K/11	Ceiling	116"	WAP-015	Requires Oberion Enclosure - (2) CMP Cat6A	FTP
AP-16	T2.1	AP-225	MM-159 Grid: B/11	Wall	144"	WAP-016		FTP
AP-17	T2.1	AP-225	MM-159 Grid: F/11	Wall	144"	WAP-017		FTP
AP-18	T2.2	AP-225	MM-145 Grid: L-M/2	Ceiling	120"	WAP-018	Requires Oberion Enclosure - (2) CMP Cat6A	FTP
AP-19	T2.2	AP-225	MM-145 Grid: J-L/3	Ceiling	120"	WAP-019	Requires Oberion Enclosure - (2) CMP Cat6A	FTP
AP-20	T2.2	AP-225	MM-LOBBY Grid: L-M/5-6	Ceiling	132"	WAP-020	Requires Oberion Enclosure - (2) CMP Cat6A	FTP

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SEALS / APPROVALS

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LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/20/20	Addendum #1

PROJECT IDENTIFICATION J9099

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30' X 42'.

SCALE Not To Scale
DRAWN BY G Jacob
DESIGNED BY J Kacperski
CHECKED BY -

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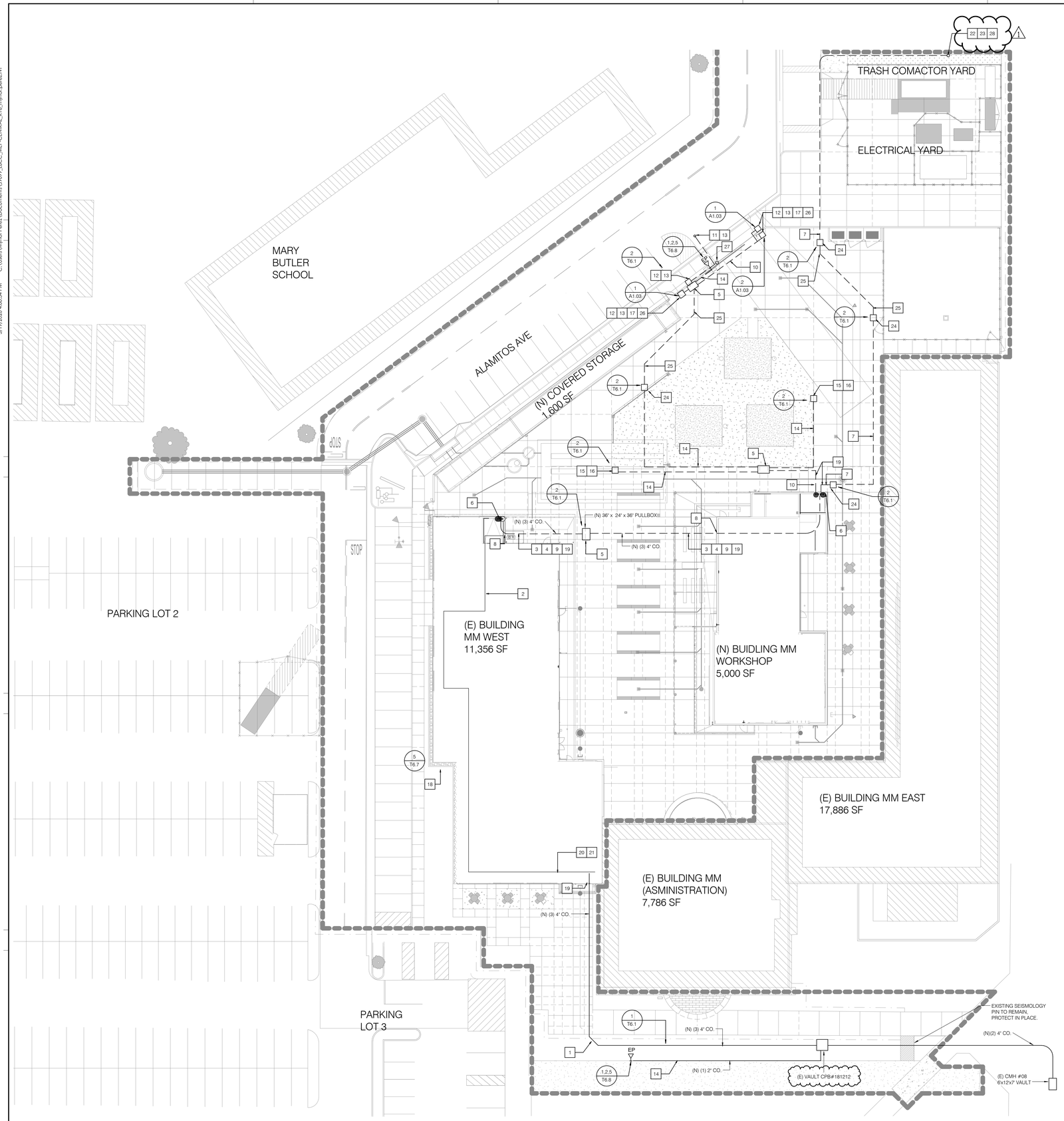
SHEET TITLE
SCHEDULES

SHEET NUMBER
T0.2

ADDENDUM#1

5/19/2020 4:08:34 PM C:\Users\Myrnor.Perez\Documents\J9099_LBCC_AEP-CENTRAL_R16_myrnor.perez.rvt



GENERAL NOTES

1. PROVIDE AND INSTALL (2) 3-CELL FABRIC INNERDUCT PER ALL 4" OSP CONDUITS SEGMENTS USED THROUGHOUT PROJECT.
2. ALL HORIZONTAL CABLING AND INNER-DUCT SHALL MEET OR EXCEED CMP RATING.
3. CMP CABLING FOR CAMERA OR WAP SHALL NOT BE PERMITTED TO BE EXPOSED TO DIRECT SUNLIGHT UNLESS PRIOR APPROVAL IN WRITING AND APPROVED BY GENERAL CONTRACTOR.
4. ALL OSP CONDUITS SHALL START WITH BELL END LEAVING THE MAINTENANCE SPACE.
5. ALL OSP CONDUITS SHALL TRANSITION TO RGD FOR LAST STICK PLUS SWEEP UP.
6. ALL CONDUICTIVE CONDUIT ENDS SHALL BE FITTED WITH BONDING RING.
7. ALL CONDUITS SHALL HAVE NON-SNAG BUSHINGS AND FITTED WITH COTTON MEASURING CORD (AKA MULE TAPE).
8. ALL "Y" PULLBOXES SHALL HAVE A COMMON BONDING BUS BY CONTRACTOR.
9. ALL CAT6A CABLES WITH END TERMINATED PLUGS SHALL BE REQUIRED TO BE TESTED WITH TESTOR CABLES OF MTPL TEST.
10. ALL TRENCH LINES SHALL BE ENCASED WITH A FULL-LENGTH LOCATION TAPE, AND LOCATORS PLACED AT 10' INCREMENTS.
11. ALL END DEVICE CABLES SHALL BE TERMINATED TO A 4 Tii PRIMARY PROTECTOR BEFORE CONNECTING TO NETWORK PORT.

NOTES

1. PAIR 45 DEGREE SWEEP PLACED FOR 90-DEGREE CHANGE OF DIRECTION.
2. FURNISH AND INSTALL 12" X 6'CABLE BASKET TRAY TO IDF ROOM MM 148.
3. FURNISH AND INSTALL (3) 4" BELL ENDED PVC CONDUITS.
4. FURNISH AND INSTALL A 2-SACK SLURRY FOR ALL TRENCH ROUTES AND PAINT TOP RED IN COLOR AND EXTEND MAGNETIC LOCATOR TAPE THE LENGTH OF THE TRENCH AND GPS-PING LOCATOR'S EVERY 10' AND AT ALL CONDUIT INTERSECTIONS.
5. FURNISH AND INSTALL (1) 36" X 24" X 36" PULLBOX OR LBCC APPROVED EQUAL.
6. FURNISH AND INSTALL CONDUIT BONDING RINGS, NON-SNAG BUSHINGS, RE-ENTERABLE DUCT PLUGS, AND COTTON PULL CORD WITH MEASURING MARKS (AKA MULE-TAPE). ALL CONDUIT SHALL FINISH 4' A.F.F.
7. FURNISH AND INSTALL (1) 2" BELL ENDED PVC CONDUITS.
8. LOCATION OF FOOTER PENETRATION
9. FURNISH AND INSTALL (1) 3-CELL FABRIC INNER DUCTS IN ALL CONDUITS WITH BACK BONE.
10. PROVIDE AND INTALL (2) 2" CONDUITS
11. BOLLARD FOR KEY ACCESS TO GATE
12. ACCESS CONTROL TO GATE MOTOR CONTROL
13. PROVIDE CABLES TO CONTROL MOTORIZED GATE AND WALK-UP GATE
14. PROVIDE AND INSTALL (1) 2" CONDUIT
15. PROVIDE AND INSTALL (1) 1-1/2" RGD TRANSITION FROM PVC WITH (1) WEATHER RATED SSJ-BOX FOR OUT DOOR RATED WAP.
16. PROVIDE AND INSTALL 1" CONNECTION FROM 17 ABOVE TO (1) WEATHER RATED SS J-BOX FOR CAMERA MOUNT
17. PROVIDE SS WEATHER RATED J-BOX FOR OMNI LOCK CONNECTION FOR WALK-UP GATE
18. PROVIDE CONNECTION THROUGH WALL WITH CAT6A CABLE. COORDINATE CONDUIT AND CABLE TERMINATION WITH LANDSCAPE CONTROL CONTRACTOR.
19. PROVIDE CONDUIT TRANSITION TO RGD
20. PROVIDE 200 PR. PE-89- TO ARM M 710 SPLICE WITH RE-ENTERABLE SPLICE CASE. ALL BONDING SHALL BE REQUIRED
21. PROVIDE 48-STRAND FUSION SPLICE WITH RE-ENTERABLE CASE ALL OS2 GLASS SHALL BE ALTOS PLUS MINIMUM.
22. COORDINATE "J-BOX" LOCATION WITH IRRIGATION CONTROL CONTRACTOR. CONNECTION SHALL BE LOCATED ON BUILDING II PER LBCC FACILITIES.
23. PROVIDE MEDIA CONVERTER, AND CAT6A UV-RATED PATCH-CORD FOR CONNECTION TO IRRIGATION CONTROLS
24. FURNISH AND INSTALL (1) 2x3' PULLBOX OR LBCC APPROVED EQUAL.
25. CHANGE OF DIRECTION 45-DEGREES
26. PROVIDE IP PORT VIA OSP CAT6A CABLE.
27. PROTECT EXISTING CAMERA POLE CONNECTIVITY AND CABLE IN PLACE.
28. PROVIDE AND INSTALL 12-STRAND OS2 TERMINATED IN A CORNING APPROVED WALL MOUNTED OUTDOOR TERMINATION BOX ON FAR END AND ON CCH APC-LC MODULE IN IDF. PROVDE COORDINATION AND CONNECTION FOR MEDIA CONVERTER TO CAT-6 IP CONNECTION.

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CONSULTANTS

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Long Beach | Los Angeles
San Diego | San Jose
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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/20/20	Addendum #1

PROJECT IDENTIFICATION J9099

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE	1" = 20'-0"
DRAWN BY	G Jacob
DESIGNED BY	J Kacpenski
CHECKED BY	-

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SHEET TITLE

SITE PLAN

SHEET NUMBER

T1.1

ADDENDUM#1

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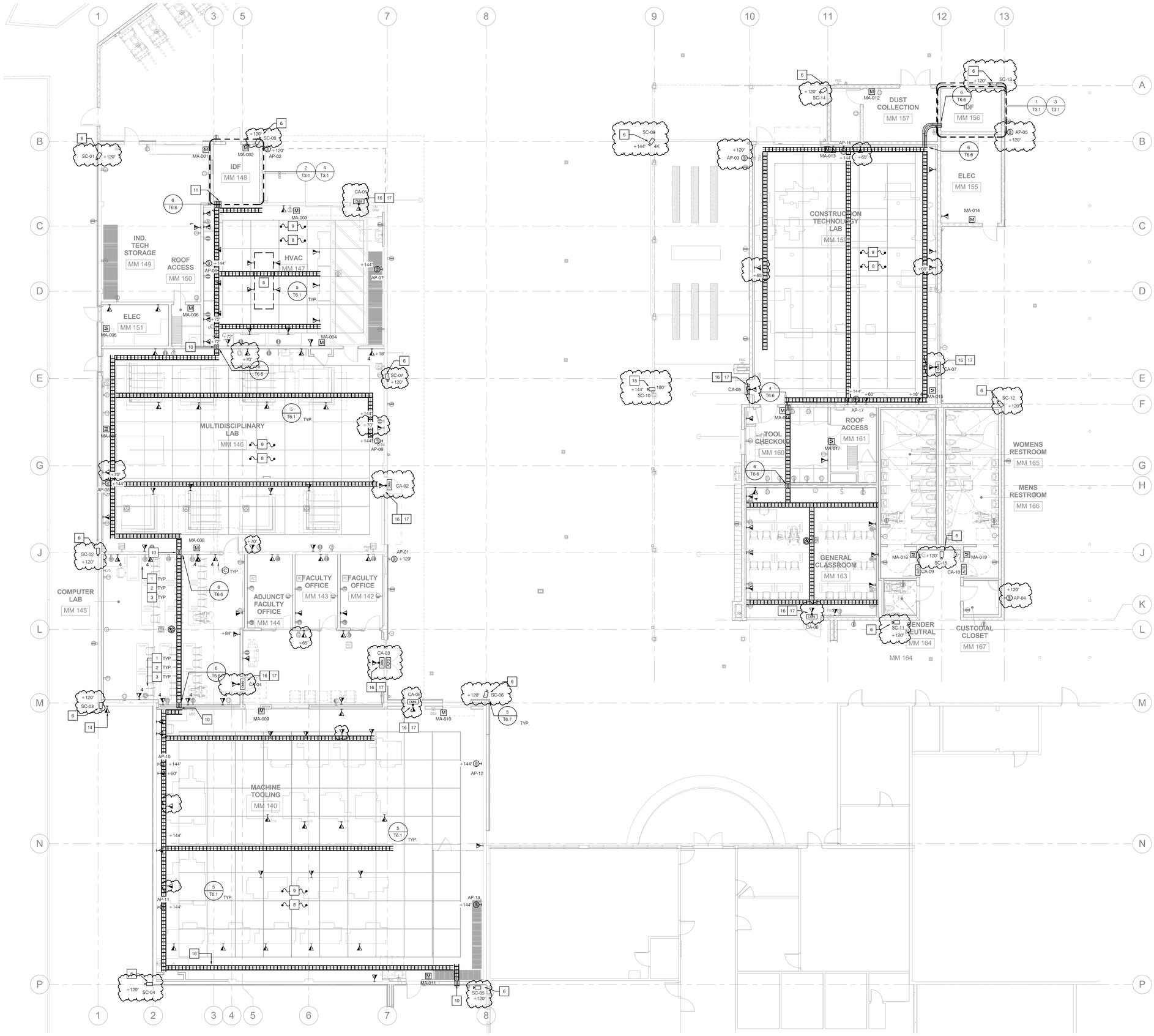

GENERAL NOTES

1. ALL WAO CABLES SHALL BE TERMINATED IN THE BDF/IDF ON THE SAME FLOOR UNLESS OTHERWISE NOTED. ON THE NORTH SIDE OF BUILDING ON LEVEL 1 AND LEVEL 2 THE DESIGN INCLUDES FOR YOU TO FINISH AND INSTALL 1.5" CONDUITS PENETRATING THE DECK THAT ARE TO BE HOME-RUN TO THE CABLE TRAY IN THE CEILING BELOW. PULL BOXES TO BE INSTALLED IN THE CONDUIT ROUTE WHERE RECOMMENDED BY INDUSTRY BEST PRACTICES AND STANDARDS.
2. ALL CONDUITS ENTERING THE BDF SHALL HAVE A MINIMUM 3" PENETRATION INSIDE THE ROOM AND NEED TO BE FITTED WITH A BONDING RING THAT WILL ACCOMMODATE A MINIMUM #6 BONDING CONDUCTOR AND A NON-SNAG BUSHING ON BOTH ENDS OF THE CONDUIT.
3. ALL O.F. CABLE SHALL BE FUSION SPLICED TO FACTORY TERMINATED MPO CONNECTORIZED PIG-TAIL.
4. ALL O.F. STRANDS SHALL BE TESTED BI-DIRECTIONAL.
5. ALL OUTSIDE END DEVICES SHALL BE ATTACHED NEAR WEATHER RATED BACK-BOX FOR THE PURPOSE OF PROVIDING A FIELD TERMINATED PLUG ON THE END OF A UV RATED OSP CABLE. CABLES THAT ARE NOT EXPOSED TO OUTSIDE ELEMENTS SHALL BE ALLOWED TO BE CMP OR CMR CAT-6A CABLE.
6. LOW VOLTAGE AND A/V CONDUITS SHALL MATCH ELECTRICAL CONDUIT INSTALLATION PER DIV. 26 SPECS FOR THIS PROJECT.
   a. (E) WALLS SURFACE-MOUNT CONDUIT
   b. (N) CMU-WALLS EMBEDED CONDUIT IN WALL

NOTES

1. PROVIDE 3 1/4" SS BACKBOX WITH 2" CONDUIT EXTENDED UP WALL TO CABLE TRAY WITH BONDING RING AND NON-SNAG BUSHING.
2. PROVIDE (4) CMP CAT 6A CABLES WITH 6-PORT FACEPLATE. INSTALL SLACK-LOOP AT CABLE TRAY END OF 2" CONDUIT.
3. PROVIDE (4) CAT6A PATCH CORDS ESTIMATED AT: 5', 7', 10', 12'. DO NOT ORDER UNTIL FURNITURE LAYOUT HAS BEEN CONFIRMED BY GC.
4. ALL FLOOR BOX CONDUITS SHALL TERMINATE IN CEILING AT CABLE TRAY.
5. PROVIDE (4) DATA OUTLETS AT WORK TABLE.
6. PROVIDE 4K DOME CAMERA SUPPORTED BY A 1-1/4" IN A 4S X 2-7/8' WEATHER RATED BACK-BOX WITH SINGLE-GANG RING AND GASKETED COVER PLATE WITH RE-ENTERABLE PORT FOR INDOOR/OUTDOOR UV RATED CABLE CONNECTION INTO CAMERA PORT VIA A FIELD TERMINATED PLUG AND TESTED WITH AN ANSI/TIA-568D.2 TESTER WITH MPTL ADAPTER.
7. PROVIDE 12" CABLE BASKET TRAY SUSPENDED ON 2" U-CHANNEL TRAPEZE SUPPORTED BY 3/8" THREADED ROD TO SADDLE BRACKET ATTACHED TO LID. TRAY SHALL SET AT A HEIGHT WHERE IT DOES NOT INTERFERE WITH LIGHTING AND HAS A 8' WORKING SPACE ABOVE. TRAY SHALL RING ROOM AND CROSS FROM OUTSIDE WALL TO WALL OVER EQUIPMENT MAINTAIN WORKING SPACE AROUND TRAY FOR LADDER. TRAY SHALL SUPPORT WAO CONDUIT AND THE BACK-BOX SHALL HAVE TO BE COORDINATED WITH MACHINE INSTALLER WE DO NOT WANT THE FACEPLATE FACING WHERE THE EQUIPMENT CORD COULD CAUSE ANY INTERFERENCE WITH MACHINE OR OPERATOR. INSTALL SEAL-TIGHT CONDUIT SECTION BETWEEN HORIZONTAL AND VERTICAL SEGMENTS OF CONDUIT WITH CONDUIT BRACKETS ON BOTH SIDES OF THE SEAL-TIGHT FITTINGS.
8. PROVIDE FIELD TERMINATED PLUGS ON WAO CABLING AND TAG CABLE, BACK-BOX, AND FACEPLATE WITH CABLE ID TAG. CABLE TESTER SHALL BE UPGRADED FOR MPTL TESTING ADAPTER.
9. PROVIDE 1-1/4" CONDUIT DOWN TO MANUFACTURERS APPROVED MOUNTING LOCATION FOR A 4S X 2-7/8" DEEP BACK-BOX. THE BACK-BOX SHALL BE COORDINATED WITH MACHINE INSTALLER DO NOT FACE FACEPLATE WHERE THE EQUIPMENT CORD COULD CAUSE ANY INTERFERENCE WITH MACHINE OR OPERATOR. INSTALL SEAL-TIGHT CONDUIT SECTION BETWEEN HORIZONTAL AND VERTICAL SEGMENTS OF CONDUIT WITH CONDUIT BRACKETS ON BOTH SIDES OF THE SEAL-TIGHT FITTINGS.
10. PROVIDE (2) 4" SLEEVES FOR THRU PENETRATION. PROVIDE LBCC APPROVED FIRE STOP SYSTEM.
11. PROVIDE (3) 4" SLEEVES FOR THRU PENETRATION. PROVIDE LBCC APPROVED FIRE STOP SYSTEM.
12. PROVIDE (1) 4" CONDUIT WITH (2) 3-CELL FABRIC INNERDUCT AND 24" X 36" X 10" PULL-BOX WITH HINGED LID AND CLASP MOUNT PULL-BOX TO 2" U-CHANNEL ATTACHED TO WALL. VERIFY HEIGHT AFF WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
13. PROVIDE 2" U-CHANNEL WITH CONDUIT STRAPS SPACES A MAXIMUM OF 5' APART, AT ALL CHANGES OF DIRECTION, WITHIN 1' OF WALL/PULL-BOX.
14. PROVIDE CONNECTION THROUGH WALL WITH CAT6A CABLE. COORDINATE CONDUIT AND CABLE TERMINATION WITH LANDSCAPE CONTROL CONTRACTOR.
15. PROVIDE MULTI-LENS 180° DOME CAMERA SUPPORTED BY A 1-1/4" IN A 4S X 2-7/8" WEATHER RATED BACK-BOX WITH SINGLE-GANG RING AND GASKETED COVER PLATE WITH RE-ENTERABLE PORT FOR INDOOR/OUTDOOR UV RATED CABLE CONNECTION INTO CAMERA PORT VIA A FIELD TERMINATED PLUG AND TESTED WITH AN ANSI/TIA-568D.2 TESTER WITH MPTL ADAPTER.
16. PROVIDE AND INSTALL CONDUIT AND PATHWAY FROM FRAME SIDE OF MIDDLE DOOR HINGE TO CLOSET ACCESSIBLE CABLE TRAY. REFER TO DETAIL #3 & #4 /T6.8.
17. PROVIDE AND INSTALL (1) CAT6A CABLE ABOVE DOOR FOR EVERY OMNI-LOCK DOOR.

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CONSULTANTS

P2S ENG
Long Beach | Los Angeles
San Diego | San Jose
p2sinc.com
SIGNED: 12/04/2019

SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/20/20	Addendum #1
3	02/06/2020	LBCC Future Req. for Access Control

PROJECT IDENTIFICATION *19099*

THE DRAWINGS IN THE SHEET INDEX WERE ORIGINALLY CREATED IN AUTODESK REVIT V. 2016 UNLESS OTHERWISE NOTED.

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SCALE	1/8" = 1'-0"
DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE

FIRST FLOOR TELECOM PLAN

SHEET NUMBER

T2.1

ADDENDUM#1

GENERAL NOTES

1. ALL WAO CABLES WILL BE TERMINATED IN THE BDF/IDF ON THE SAME FLOOR UNLESS OTHERWISE NOTED. ON THE NORTH SIDE OF BUILDING ON LEVEL 1 AND LEVEL 2 THE DESIGN INCLUDES FOR YOU TO FINISH AND INSTALL 1.5" CONDUITS PENETRATING THE DECK THAT ARE TO BE HOME-RUN TO THE CABLE TRAY IN THE CEILING BELOW. PULL BOXES TO BE INSTALLED IN THE CONDUIT ROUTE WHERE RECOMMENDED BY INDUSTRY BEST PRACTICES AND STANDARDS. CABLES ARE TO BE EXTENDED UP THROUGH SLEEVES AND TERMINATED IN THE IDF ON THE SAME FLOOR THE WAO IS LOCATED. THE CONDUITS WILL END AT A "J" - BOX AND SERVE TWO (2) WAO FOR TWO (2) WORK STATIONS.
2. ALL CONDUITS ENTERING THE BDF SHALL HAVE A MINIMUM 3" PENETRATION INSIDE THE ROOM AND NEED TO BE FITTED WITH A BONDING RING THAT WILL ACCOMMODATE A MINIMUM #6 BONDING CONDUCTOR AND A NON-SNAG BUSHING ON BOTH ENDS OF THE CONDUIT.
3. ALL O.F. CABLE SHALL BE FUSION SPLICED TO FACTORY TERMINATED MPO CONNECTORIZED PIG-TAIL.
4. ALL O.F. STRANDS SHALL BE TESTED BI-DIRECTIONAL.
5. COORDINATION REQUIRED WITH ARCHITECT AND GENERAL CONTRACTOR FOR INTERIOR ELEVATIONS FOR TEACHER'S STATION AND WAO PLACEMENT.
6. CABLE TRAY SHALL BE SUPPORTED BY A 2 INCH U-CHANNEL TRAPEZE SUPPORTED BY 3/8 INCH TREADED ROD PLACED NO MORE THAN 5 FEET INCREMENTS AND REQUIRED AT ALL CHANGES OF DIRECTION AND AT END OF EACH RUN.

NOTES

1. FURNISH AND INSTALL 12" x 6" CABLE BASKET TRAY AT 11' AFF.
2. FURNISH AND INSTALL (2) 4" SLEEVES FOR THRU PENETRATION. PROVIDE LBCC APPROVED FIRE STOP SYSTEM.
3. FURNISH AND INSTALL (3) 4" SLEEVES FOR THRU PENETRATION. PROVIDE LBCC APPROVED FIRE STOP SYSTEM.

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CONSULTANTS

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SEALS / APPROVALS

PROJECT TITLE
MM BUILDING - CONSTRUCTION TRADES I
1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/20/20	Addendum #1

PROJECT IDENTIFICATION J9099

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SHEET TITLE
TELECOM RCP

SHEET NUMBER
T2.2

ADDENDUM#1

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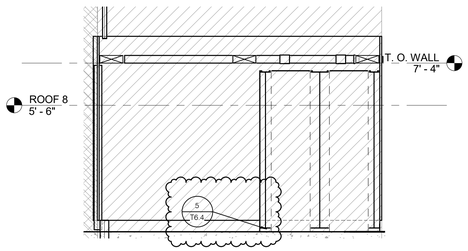
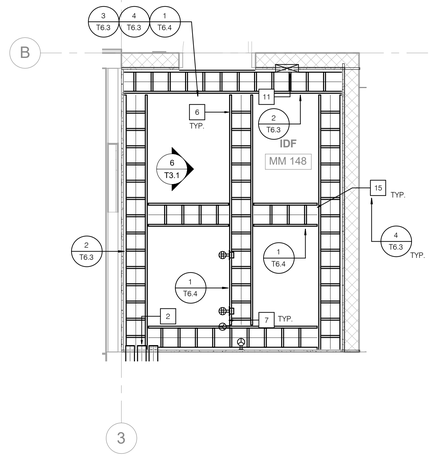


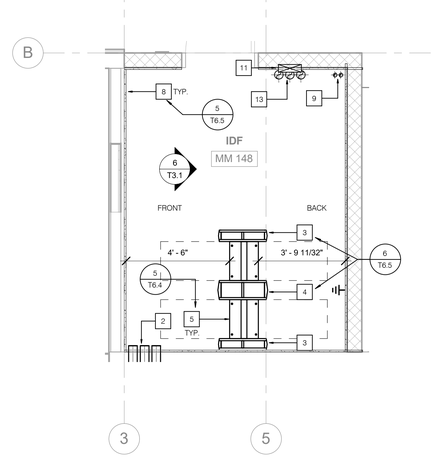
6 BUILDING MM IDF ROOM 148 - ELEVATION

SCALE: 3/8" = 1'-0"



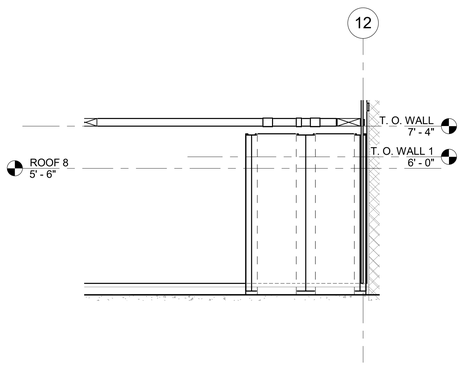
4 BUILDING MM IDF ROOM 148 - LADDER RACK PLAN

SCALE: 3/8" = 1'-0"



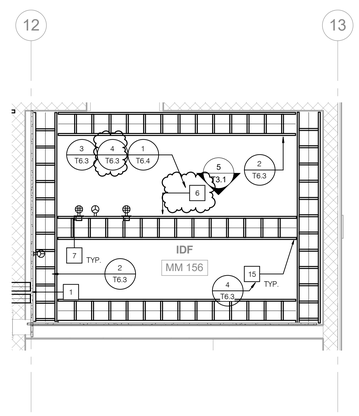
2 BUILDING MM IDF ROOM 148 - ENLARGED FLOOR PLAN

SCALE: 3/8" = 1'-0"



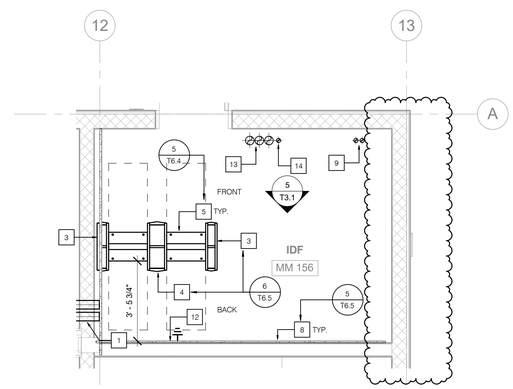
5 BUILDING MM IDF ROOM 156 - ELEVATION

SCALE: 3/8" = 1'-0"



3 BUILDING MM IDF ROOM 156 - LADDER RACK PLAN

SCALE: 3/8" = 1'-0"



1 BUILDING MM IDF ROOM 156 - ENLARGED FLOOR PLAN

SCALE: 3/8" = 1'-0"

GENERAL NOTES

1. ALL EQUIPMENT IS TO BE INSTALLED BY MANUFACTURER INSTALLATION REQUIREMENTS AND INDUSTRY BEST PRACTICES.
2. ALL CONDUITS LONGER THAN 48" REQUIRE BONDING CONNECTIONS ON BOTH ENDS. BONDING CONNECTED SHALL BE MADE WITH A MINIMUM #6 BONDING CONDUCTOR TO THE TMGB/TBB FOR THE TELECOMMUNICATIONS ROOM THE BONDING CONNECTION IS LOCATED IN. ALL CONDUIT ENDS REQUIRE A NON-SNAG BUSHING ON EACH END.
3. ALL CONDUIT SLEEVES REQUIRE NON-SNAG BUSHINGS ON BOTH ENDS.
4. LBCC STANDARD AND INDUSTRY BEST PRACTICES FOR PROJECT SUBMITTALS AND SHOP DRAWINGS ARE IDENTIFIED IN SPECIFICATIONS SECTIONS LISTED IN DIVISION 27 OF THE PROJECT CONTRACT DOCUMENTATION SET.
5. ALL ENTRANCE CONDUITS SHALL TRANSITION FROM PVC TO RGD BEFIRE THE LAST 10' STICK OF CONDUIT, PLUS THE SWEEP UP INTO THE IDF ROOM. RVD CONDUIT SHALL EXTEND 4" ABOVE THE FINISHED DECK AND BE FITTED WITH A BONDING RING AND NON-SNAG BUSHING.
6. ALL OSP CONDUITS SHALL BE FITTED WITH RE-ENTRANCE DUCT-PLUGS WITH APPROPRIATE PORTS FOR (3) CABLES WITH PLUGS FOR UN-USED PORTS.
7. ALL CONDUCTS SHALL BE FITTED WITH COTTON MEASURED PULL CORD (AKA MULE TAPE).
8. ALL NON-CURRENT CARRYING METAL COMPONENTS SHALL BE BONDED TO THE TBB OR TMGB AS PER LBCC STANDARD AND ANSI/NECA/BICSI-607-2011 FOR THE RACKS, WIRE-MANAGERS, AND CABLE RUNWAYS. COMPONENTS SHALL BE UL LISTED AND MATCH LBCC STANDARD BLACK FINISH.

NOTES

1. FURNISH AND INSTALL (2) 4" SLEEVES EXTENDED TO CABLE TRAY. INCLUDE FIRE STOPPING AND/OR CAPS FOR SPARE SLEEVES.
2. FURNISH AND INSTALL (3) 4" SLEEVES EXTENDED TO CABLE TRAY. INCLUDE FIRE STOPPING AND/OR CAPS FOR SPARE SLEEVES.
3. FURNISH AND INSTALL (1) 7' x 6" DOUBLE SIDED VERTICAL WIRE MANAGER.
4. FURNISH AND INSTALL (1) 7' x 10" DOUBLE SIDED VERTICAL WIRE MANAGER.
5. FURNISH AND INSTALL (1) 7' x 19" WIDE 2-POST EQUIPMENT RACK AND WIRE MANAGER ABOVE.
6. FURNISH AND INSTALL 12" WIDE LADDER RACK WITH CABLE RUNWAY ELEVATION KIT ATTACHED TO RACK TOP MOUNTING PLATE. MOUNT AT 90" AFF. REFER TO DETAILS #1,2,3/T6.4
7. FURNISH AND INSTALL, (1) DEDICATED 20A, 208V L6-30A-208V TYPE RECEPTACLE WITH PLUG KEEPER AND CORD STRAIN-RELIEF DEVICE.
8. FURNISH AND INSTALL 5/8" x 8' AC-GRADE PLYWOOD WITH (2) COATS OF FIRE RATED PRIMER (WHITE) AND (2) COATS OF FIRE RATED PAINT THAT RINGS THE ROOM 8' ABOVE THE DECK AND UP 8' 8" A.F.F. EACH SHEET OF PLYWOOD SHALL BE ATTACHED TO A MINIMUM OF (2) STUDS EACH WITH A MINIMUM OF (4) SCREWS SPACED 1-1/2' APART. SEE SHEET T6.5 DETAIL #5 FOR MOUNTING AND FASTENER SCHEDULE.
9. FURNISH AND INSTALL (2) 2" CONDUITS UP THROUGH ROOF. SEAL PENETRATION AS PER INDUSTRY BEST PRACTICES AND PROVIDE LBCC CONSTRUCTION MANAGER AND/OR THEIR REPRESENTATIVES WITH SHOP DRAWING THAT INCLUDE PENETRATION TYPE, SUPPORT ATTACHMENT FOR CONDUITS ON ROOF, AND PROPER ROOF SEALING PROCEDURES INCLUDING ALL PRODUCT DESCRIPTIONS AND SAMPLES. PROVIDE WEATHER-HEADS ON THE CONDUITS ABOVE ROOF. PROVIDED RE-ENTERABLE DUCT PLUG IN THE IDF. CONDUITS SHALL BE CLEARLY LABELED FOR WHERE THEY END OUTSIDE THE IDF WITH A MACHINE GENERATED LABEL. IDF END OF THIS CONDUIT IS REQUIRED TO BE BONDED TO BUILDING STEEL (IF PERMMITED BY CONSTRUCTION MANAGER AND THE AHJ).
10. FURNISH AND INSTALL (1) DEDICATED 20A, 120V QUAD RECEPTACLE WITH PLUG KEEPER AND CORD STRAIN-RELIEF DEVICE.
11. FURNISH AND INSTALL 12' CABLE RUNWAY MOUNTED TO WALL VERTICAL FROM OSP CONDUITS.
12. FURNISH AND INSTALL TELECOMMUNICATIONS IDF BONDING SOLUTION FOR ALL NON-CURRENT CARRYING EQUIPMENT IN ROOM. INSTALLED AS PER ANSI/NSCA/BICSI-607-2011.
13. FURNISH AND INSTALL (3) 4" CONDUITS BETWEEN IDF ROOM MM148 AND IDF ROOM MM156 WITH (2) (3)-CELL FABRIC INNERDUCT IN EACH CONDUIT.
14. FURNISH AND INSTALL (1) 2" OSP CONDUIT BETWEEN IDF ROOM MM156 AND BUILDING II FOR IRRIGATION CONTROL. FURNISH AND INSTALL (1) 6-STRAND OSP OPTICAL FIBER.
15. SEE SHEET T6.3 DETAIL #4 FOR RACEWAY JUNCTION SPLICE AND BONDING.

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/20/20	Addendum #1

PROJECT IDENTIFICATION	J9099
SCALE	3/8" = 1'-0"
DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE

ENLARGED PLANS

SHEET NUMBER

T3.1

ADDENDUM#1

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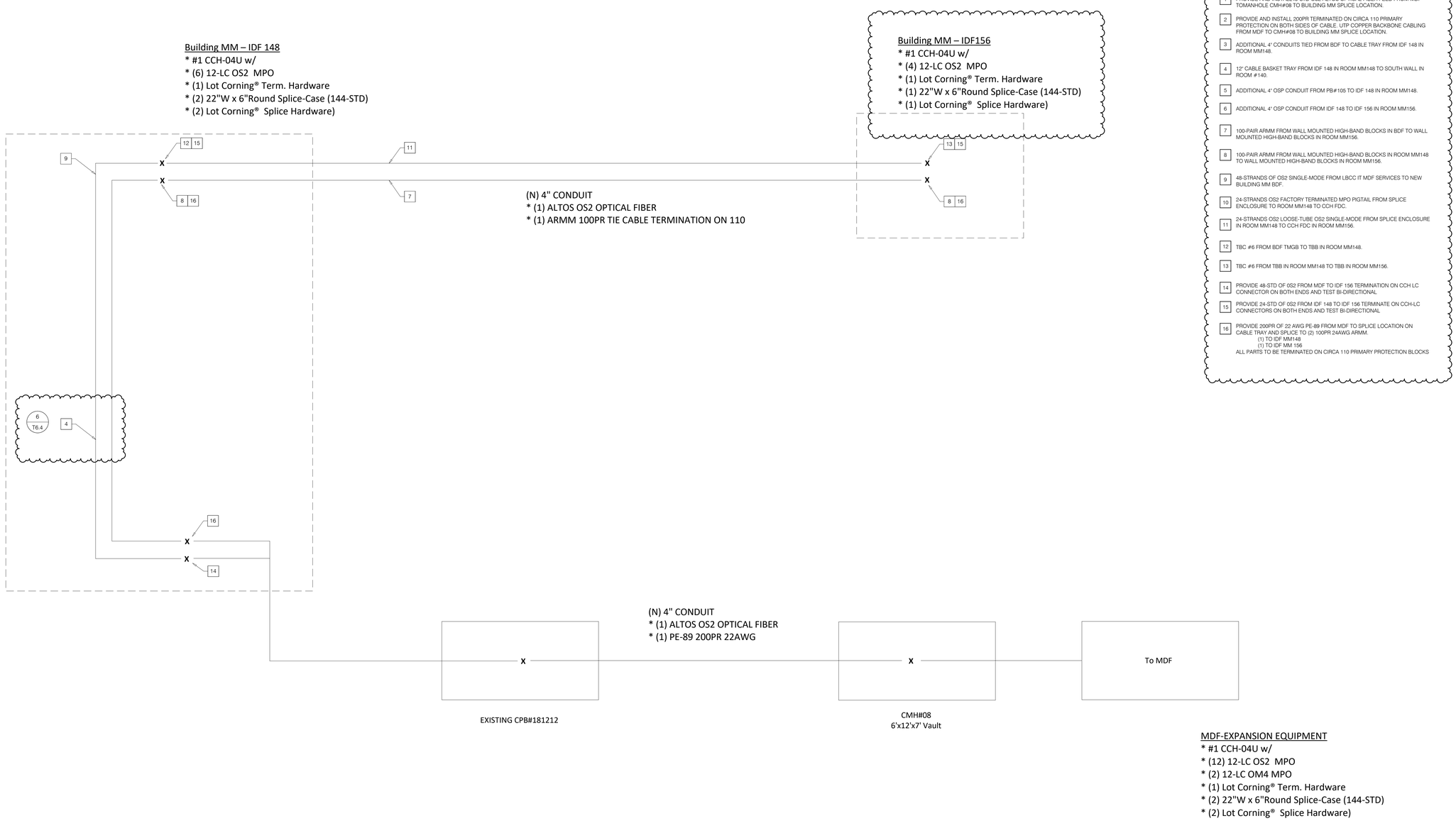
GENERAL NOTES

1. ALL CONDUIT AND CABLE BASKET TRAY SHALL BE BONDED AS PER ANSI/NECA/BICSI-607
2. ALL CONDUITS AND SLEEVES SHALL BE FITTED WITH BONDING RINGS AND NON-SNAG BUSHINGS.
3. ALL CONDUITS SHALL BE FITTED WITH COTTON-MEASURING LINE (MULE-TAPE).
4. ALL OSP CONDUITS SHALL BE FITTED WITH RE-ENTERABLE DUCT-PLUGS.
5. ALL SLEEVES SHALL BE FIRE-STOPPED WITH APPROPRIATE UL LISTED ASSEMBLE FOR THE TYPE OF MATERIAL BEING PENETRATED.
6. ALL SLEEVES SHALL BE SUPPORTED WITH 2" U-CHANNEL ON BOTH SIDES OF THE BARRIER BEING PENETRATED.
7. ALL OPTICAL FIBER SPLICING SHALL BE FUSION SPLICED. NO MECHANICAL SPLICES SHALL BE PERMITTED ON THIS PROJECT UNLESS PRIOR WRITTEN APPROVAL FROM LBCC IT SERVICES.
8. ALL OPTICAL FIBER STRANDS SHALL BE TESTED BI-DIRECTIONALLY.
9. ALL COPPER PAIRS SHALL BE TESTED FOR CONTINUITY AND SHORTS.
10. LOOSE-TUBE O.F. SHALL BE INSTALLED WITH FURCATION TUBES AND CONNECTORIZED ONTO CCH PANEL WITH LC CONNECTOR.

NOTES

1. PROVIDE AND INSTALL48-STD OS2 ALTOS OPTICAL FIBER FEED FROM MDF TOMANHOLE CMH#08 TO BUILDING MM SPLICE LOCATION.
2. PROVIDE AND INSTALL 200PR TERMINATED ON CIRCA 110 PRIMARY PROTECTION ON BOTH SIDES OF CABLE. UTP COPPER BACKBONE CABLING FROM MDF TO CMH#08 TO BUILDING MM SPLICE LOCATION.
3. ADDITIONAL 4" CONDUITS TIED FROM BDF TO CABLE TRAY FROM IDF 148 IN ROOM MM148.
4. 12" CABLE BASKET TRAY FROM IDF 148 IN ROOM MM148 TO SOUTH WALL IN ROOM #140.
5. ADDITIONAL 4" OSP CONDUIT FROM PB#105 TO IDF 148 IN ROOM MM148.
6. ADDITIONAL 4" OSP CONDUIT FROM IDF 148 TO IDF 156 IN ROOM MM156.
7. 100-PAIR ARMM FROM WALL MOUNTED HIGH-BAND BLOCKS IN BDF TO WALL MOUNTED HIGH-BAND BLOCKS IN ROOM MM156.
8. 100-PAIR ARMM FROM WALL MOUNTED HIGH-BAND BLOCKS IN ROOM MM148 TO WALL MOUNTED HIGH-BAND BLOCKS IN ROOM MM156.
9. 48-STRANDS OF OS2 SINGLE-MODE FROM LBCC IT MDF SERVICES TO NEW BUILDING MM BDF.
10. 24-STRANDS OS2 FACTORY TERMINATED MPO PIGTAIL FROM SPLICE ENCLOSURE TO ROOM MM148 TO CCH FDC.
11. 24-STRANDS OS2 LOOSE-TUBE OS2 SINGLE-MODE FROM SPLICE ENCLOSURE IN ROOM MM148 TO CCH FDC IN ROOM MM156.
12. TBC #6 FROM BDF TMGB TO TBB IN ROOM MM148.
13. TBC #6 FROM TBB IN ROOM MM148 TO TBB IN ROOM MM156.
14. PROVIDE 48-STD OF OS2 FROM MDF TO IDF 156 TERMINATION ON CCH LC CONNECTOR ON BOTH ENDS AND TEST BI-DIRECTIONAL
15. PROVIDE 24-STD OF OS2 FROM IDF 148 TO IDF 156 TERMINATE ON CCH-LC CONNECTORS ON BOTH ENDS AND TEST BI-DIRECTIONAL
16. PROVIDE 200PR OF 22 AWG PE-89 FROM MDF TO SPLICE LOCATION ON CABLE TRAY AND SPLICE TO (2) 100PR 24AWG ARMM.
    (1) TO IDF MM148
    (1) TO IDF MM 156
    ALL PARTS TO BE TERMINATED ON CIRCA 110 PRIMARY PROTECTION BLOCKS



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1	05/20/20	Addendum #1

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SCALE	Not To Scale
DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE
RISER DIAGRAMS

SHEET NUMBER
T5.1

ADDENDUM#1

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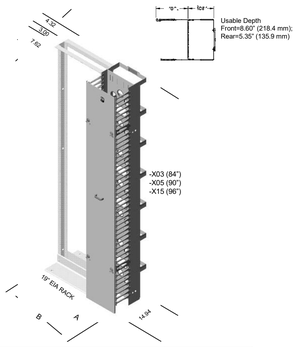
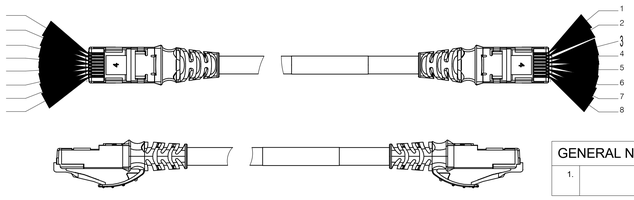


Part Number			Width	
7'H (84")	7'-6"H (90")	8'H (96")	A	B
40098-X03	40098-X05	40098-X15	6.00	26.31
40099-X03	40099-X05	40099-X15	10.00	30.31
40100-X03	40100-X05	40100-X15	12.00	32.31

Part Number	Height ft (m)	Depth in (mm)	Shipping Weight lb (kg)
6"W (150 mm)			
40098-X03	7 (2.1)	14.94 (379.5)	38 (17.2)
40098-X05	7.6 (2.3)	14.94 (379.5)	41 (18.6)
40098-X15	8 (2.4)	14.94 (379.5)	44 (20.0)
10"W (250 mm)			
40099-X03	7 (2.1)	14.94 (379.5)	52 (23.6)
40099-X05	7.6 (2.3)	14.94 (379.5)	56 (25.4)
40099-X15	8 (2.4)	14.94 (379.5)	60 (27.2)
12"W (300 mm)			
40100-X03	7 (2.1)	14.94 (379.5)	56 (25.4)
40100-X05	7.6 (2.3)	14.94 (379.5)	60 (27.2)
40100-X15	8 (2.4)	14.94 (379.5)	64 (29.0)

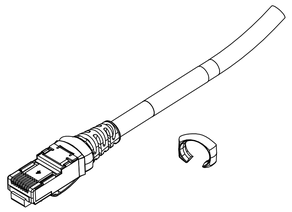
6 TYPICAL DOUBLE SIDED WIDE MANAGER

NO SCALE



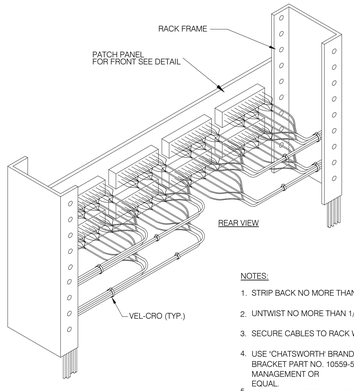
GENERAL NOTES	
1.	

MODULAR CORD WIRING CHART		
CONDUCTOR COLORS	PIN # (8 POSITION PLUG)	
	STRAIGHT THROUGH (T568A/B), SEE NOTE 6	
	END A	END B
BLUE/ STRIPED	5	5
BLUE	4	4
ORANGE/ STRIPED	1	1
ORANGE	2	2
GREEN/ STRIPED	3	3
GREEN	6	6
BROWN/ STRIPED	7	7
BROWN	8	8



4 SKINNY PATCH CAT6A, 28 AWG STRANDED, SHIELDED PATCH CORDS

NO SCALE

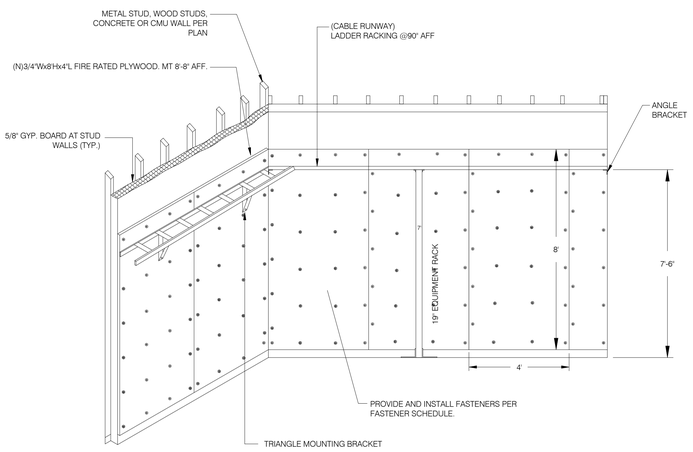


NOTES:

1. STRIP BACK NO MORE THAN 1" OF CABLE JACKET.
2. UNTWIST NO MORE THAN 1/2" TWISTED PAIR.
3. SECURE CABLES TO RACK WITH VEL-CRO.
4. USE "CHATSWORTH' BRAND, CABLE RETAINING BRACKET PART NO. 10559-500 FOR CABLE BUNDLE MANAGEMENT OR EQUAL.
5. TAG & DOCUMENT EACH TERMINATION.

2 TYPICAL DATA PATCH PANEL

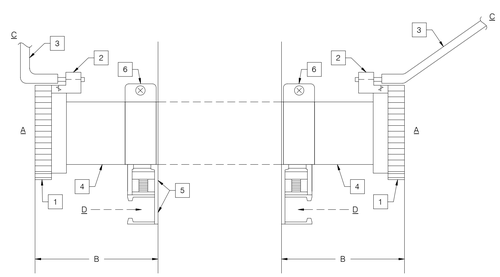
NO SCALE



SUBSTRATE	FASTENER TYPE	FASTENER SIZE/DIAMETER	FASTENER LENGTH	FASTENER SPACING	ICC ESR
WOOD STUDS	WOOD SCREW	#10	1-1/2"	8" OC EDGE AND 12" OC FIELD	-
METAL STUDS	SHEET METAL SCREW	#10	2"	8" OC EDGE AND 12" OC FIELD	-
CONCRETE	ITW BUILDEX TAPCON	3/16"	3"	12" OC ALONG EDGE AND 24" OC MAX EA WAY	2202
CMU	ITW BUILDEX TAPCON	3/16"	3"	12" OC ALONG EDGE AND 24" OC MAX EA WAY	1670

5 TYPICAL BACKBOARD INSTALLATION

NO SCALE



DEFINITION: SLEEVE IS ANY CONDUIT LESS THAN 48" THAT SHALL REQUIRE BRACING ON BOTH SIDES OF PENETRATION.

GENERAL NOTES

A. ALL SLEEVES REQUIRE FIRE STOP U.O.N.

B. THIS DISTANCE IS MANDATED BY THE RATING OF THE BARRIER BEING PENETRATED.

C. TELECOMMUNICATIONS BONDING CONDUCTOR (TBC) SHALL BE A MINIMUM #6 STRAND CONDUCTOR. JACKET OF TBC SHALL BE MANDATED BY THE ENVIRONMENT IT WILL BE INSTALLED IN.

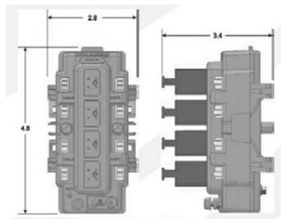
D. U-CHANNEL ATTACHMENT SHALL BE LOCATED AT A STUD OR FOR THROUGH PENETRATIONS THIS CAN BE ATTACHED VIA A 3/8" THROUGH BOLT.

NOTES

1. NON-SNAG BUSHING
2. CONDUIT BOND RING THAT SHALL ACCOMMODATE A MINIMUM #6 AWG TBC.
3. TBC
4. SLEEVE
5. 2" U-CHANNEL
6. CONDUIT CLAMP

3 TYPICAL CONDUIT - SLEEVE PENETRATION

NO SCALE



Dimensions are in Inches

ORDERING INFORMATION

Model No.	Pair Count	Modules	Module Model#	Cover
606-18	110	18V	LVP18	Yes
606-27	110	27V	LVP27	Yes
606-65	110	65V	LVP65	Yes

R1

1 TYPICAL TII CAT 6 PROTECTOR MODULES

NO SCALE

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PROJECT TITLE

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DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE

DETAILS

SHEET NUMBER

T6.5

ADDENDUM#1

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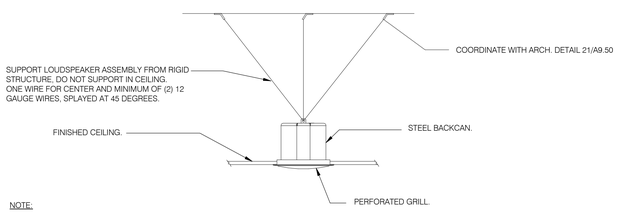
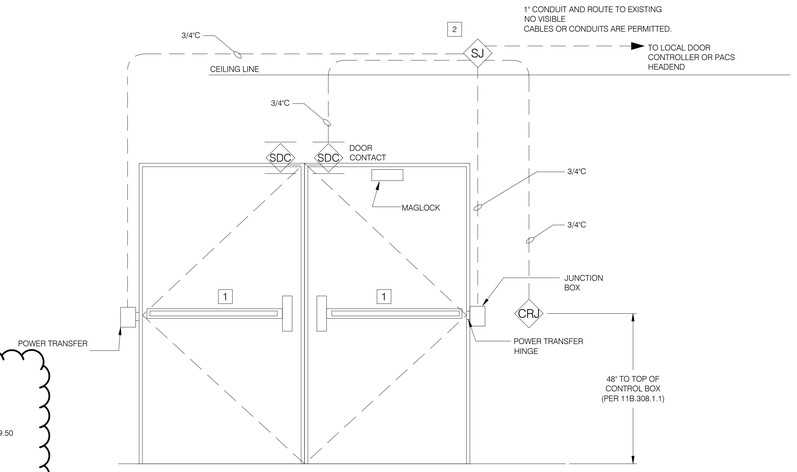


NOTE:

1. SPEAKER WEIGHT IS APPROXIMATELY 10 LBS.

6 TYPICAL CEILING MOUNTED SPEAKER DETAIL

NO SCALE



LEGEND

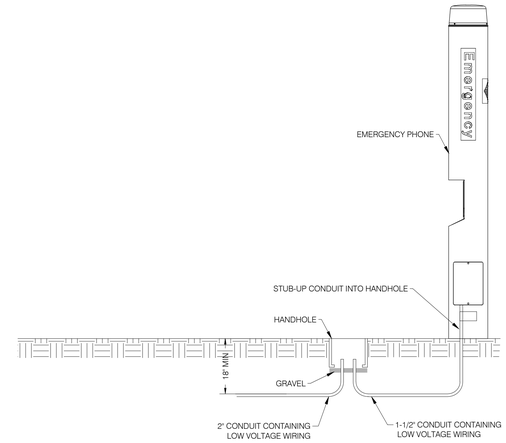
SYMBOL	DESCRIPTION
SDC	SECURITY DOOR CONTACT.
SJ	SECURITY JUNCTION BOX 4-11/16" SQ.
CRJ	CARD READER JUNCTION BOX 4"SQ. WITH SINGLE GANG MUD RING AND STAINLESS STEEL COVER.

NOTES

1. PANIC/EXIT DEVICE WITH INTEGRAL REQUEST TO EXIT FUNCTIONALITY
2. CONTRACTOR SHALL PROVIDE AND INSTALL A CATEGORY 6A CABLE FROM NEAREST IDF TO THIS BOX WITH A 3 METER SLACK LOOP.

4 TYPICAL ELECTRIFIED LOCKSET W/ POWER TRANSFER HINGE - DOUBLE DOOR

NO SCALE



2 TYPICAL EMERGENCY PHONE CONDUIT PATH

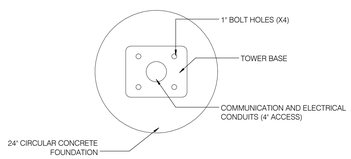
NO SCALE

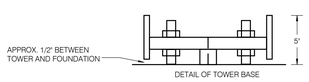
WIRING

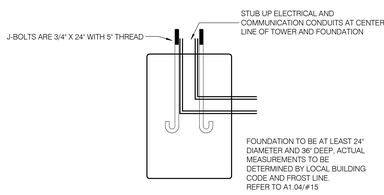
1. PULL POWER AND PHONE LINE UP THROUGH THE CONDUITS - A MINIMUM OF TWO FEET OF WIRE MUST BE AVAILABLE FROM THE CONDUIT FOR ELECTRICAL AND COMMUNICATIONS WIRING.

FOUNDATION

1. CONDUIT - ELECTRICAL AND TELEPHONE LINE CONDUIT, WITH A MAXIMUM COMBINED DIAMETER OF FOUR (4) INCHES, SHOULD BE RUN UP THROUGH THE CENTER OF THE FOUNDATION HOLE. A MINIMUM OF FOUR (4) INCHES AND A MAXIMUM OF SIX (6) INCHES OF CONDUIT ABOVE THE FINISHED GRADE LEVEL IS REQUIRED. TO ENSURE PROPER GROUNDING, A 1/2" X 8' COPPER ROD SHOULD BE INSERTED IN THE CENTER OF THE FOUNDATION AND TIED TO THE STEEL BOLLARD. (NOTE: FOLLOW ALL NATIONAL AND LOCAL CODES GOVERNING THIS INSTALLATION)
2. POUR THE FOUNDATION - THE FOUNDATION SHOULD BE AT LEAST 24" IN DIAMETER, WITH A MINIMUM DEPTH OF AT LEAST THREE (3) FEET BELOW GRADE. CONCRETE MIX-MINIMUM 3000 PSI.
3. SET THE ANCHOR BOLTS IN THE WET FOUNDATION - FOUR (4) 24" L-SHAPED ANCHOR BOLTS AND AN ALIGNING TEMPLATE ARE SUIPPLIED FOR ANCHORING THE CODE BLUE UNIT. THE BOLTS SHOULD BE SET INTO THE FOUNDATION SO THAT SIX (6") ARE LEFT SHOWING ABOVE THE FINISHED GRADE LEVEL. THE ANCHOR BOLTS SHOULD BE ALIGNED, USING THE SUPPLIED TEMPLATE, IN SUCH A WAY THAT THE PHONE FACEPLATE ON THE UNIT WILL FACE IN THE DESIRED DIRECTION.

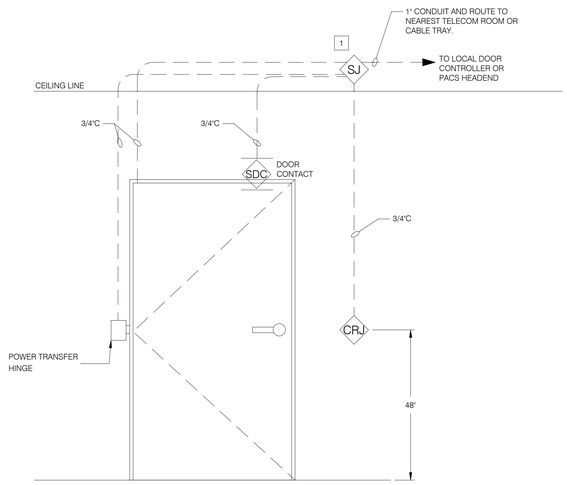






5 EMERGENCY PHONE TOWER ANCHOR BOLT MOUNTING DETAIL

SCALE: NONE



LEGEND

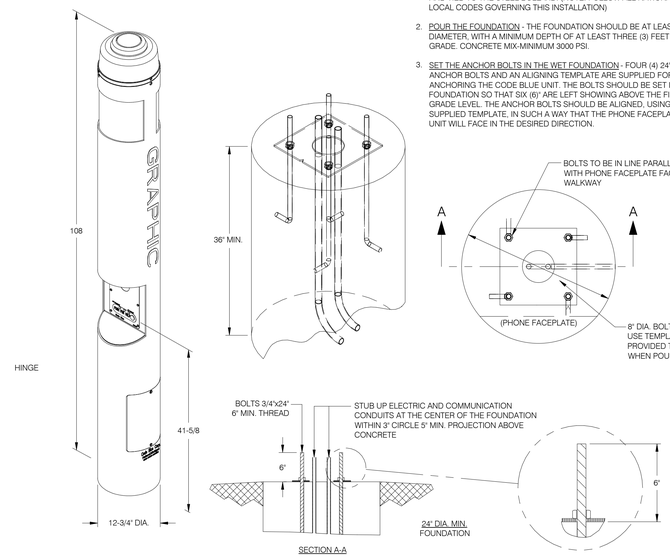
SYMBOL	DESCRIPTION
SDC	SECURITY DOOR CONTACT.
SJ	SECURITY JUNCTION BOX 4-11/16" SQ.
CRJ	CARD READER JUNCTION BOX 4"SQ. WITH SINGLE GANG MUD RING AND STAINLESS STEEL COVER.

NOTES

1. CONTRACTOR SHALL PROVIDE AND INSTALL A CATEGORY 6A CABLE FROM NEAREST IDF TO THIS BOX WITH A 3 METER SLACK LOOP.

3 TYPICAL ELECTRIFIED LOCKSET W/ POWER TRANSFER HINGE - SINGLE DOOR

NO SCALE



EMERGENCY PHONE FOUNDATION DETAIL

1 TYPICAL PEDESTAL MOUNT EMERGENCY PHONE

NO SCALE

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SHEET TITLE

DETAILS

SHEET NUMBER

T6.8

ADDENDUM#1

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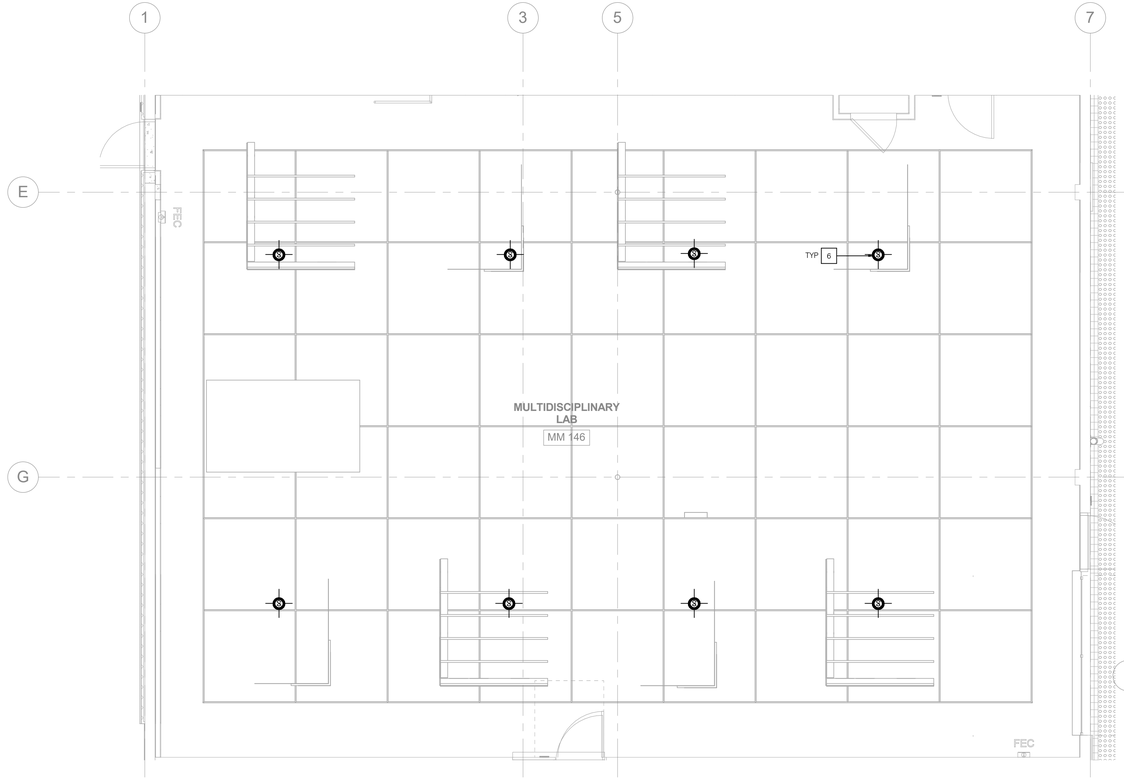
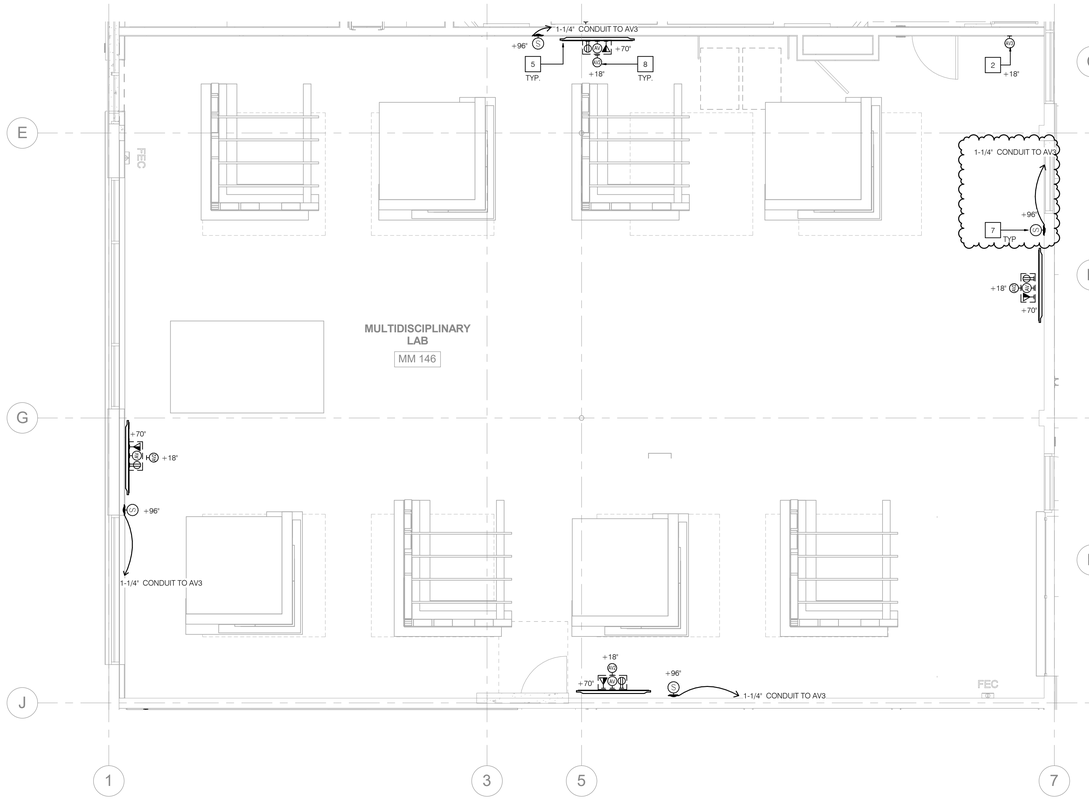


3 MULTIDISCIPLINARY LAB ROOM MM146 - RCP

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

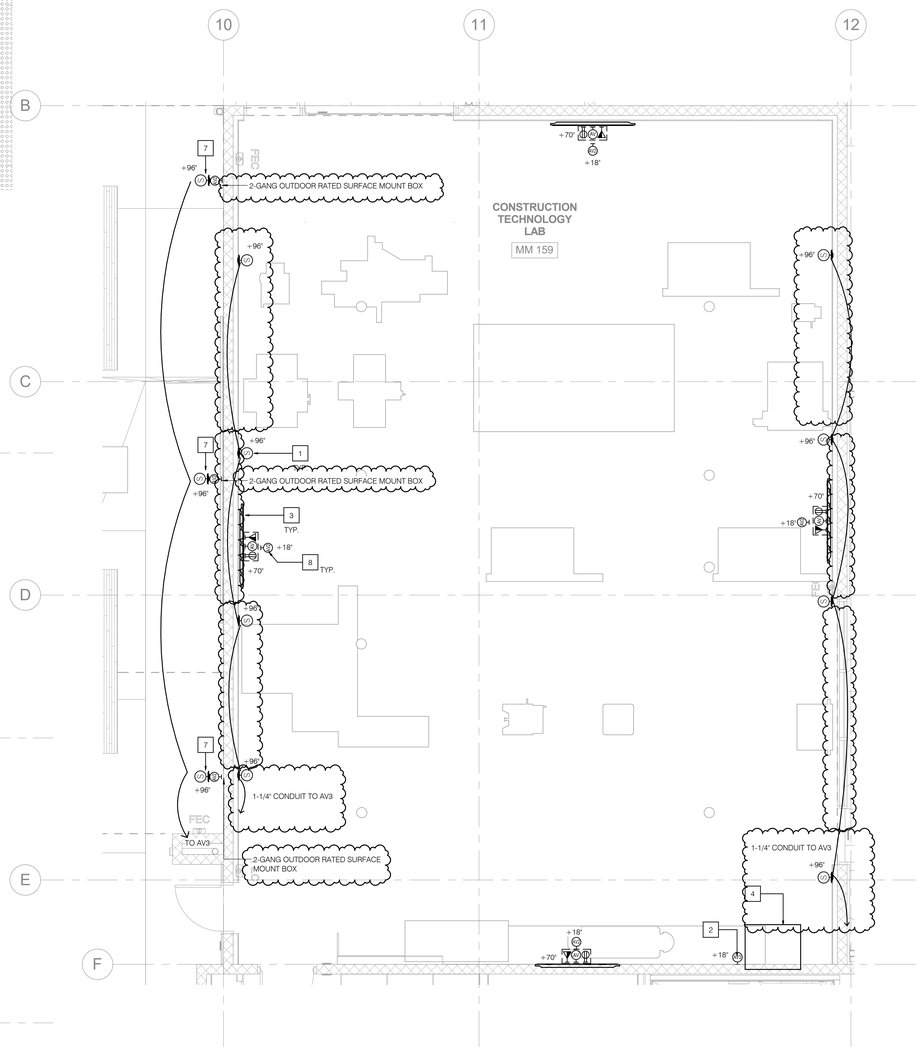


2 MULTIDISCIPLINARY LAB ROOM MM146 - ENLARGED FLOOR PLAN

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

NOTES

1. WALL MOUNTED SPEAKERS. REFER TO #4/TAV6.1. PROVIDE 2-GANG BOX WITH SCREW COVER.
2. AV CONDUIT COLLECTOR BOX. FURNISH AND INSTALL (1) 3-GANG BOX WITH COVER AND (3) 1-1/4" CONDUIT STUBBED ABOVE ACCESIBLE CEILING. MOUNT AT 18" A.F.F.
3. 75" WALL MOUNTED FLAT PANEL DISPLAY MOUTNED AT +70" A.F.F. REFER TO #3/TAV6.1
4. INSTRUCTORS DESK WITH BUILT IN AV EQUIPMENT RACK. MOBILE. LECTURN/RACKS FURNISHED AND INSTALLED BY COLLEGE.
5. 65" WALL MOUNTED FLAT PANEL DISPLAY MOUNTED AT +70" A.F.F. REFER TO #3/TAV6.1
6. PENDANT MOUNTED SPEAKER AT +90" A.F.F. TO SPEAKER BOTTOM. REFER TO #1/TAV6.1
7. OUTDOOR RATED WALL MOUNTED SPEAKERS WITH 2-GANG BOX MOUNTED AT +96". REFER TO #4/TAV6.1
8. MEDIA INPUT PLATE BACK BOX. 2-GANG BOX WITH (1) 1-1/4" CONDUIT TO DISPLAY BACK BOX.



1 CONSTRUCTION TECHNOLOGY LAB MM159 - ENLARGED AV FLOOR PLAN

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

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SEALS / APPROVALS

PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

1305 EAST PACIFIC COAST HIGHWAY
LONG BEACH CA 90806

LONG BEACH CITY COLLEGE

SUBMITTALS

#	DATE	DESCRIPTION
	12/09/19	DSA RESUBMITTAL
1	05/20/20	Addendum #1

PROJECT IDENTIFICATION J9099

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THE ORIGINAL SIZE OF THIS SHEET IS 30" X 42".

SCALE	1/4" = 1'-0"
DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE

MULTIDISCIPLINARY ROOM MM146 AND CONSTRUCTION TECH. LAB MM159 AV PLAN

TAV3.1

ADDENDUM#1

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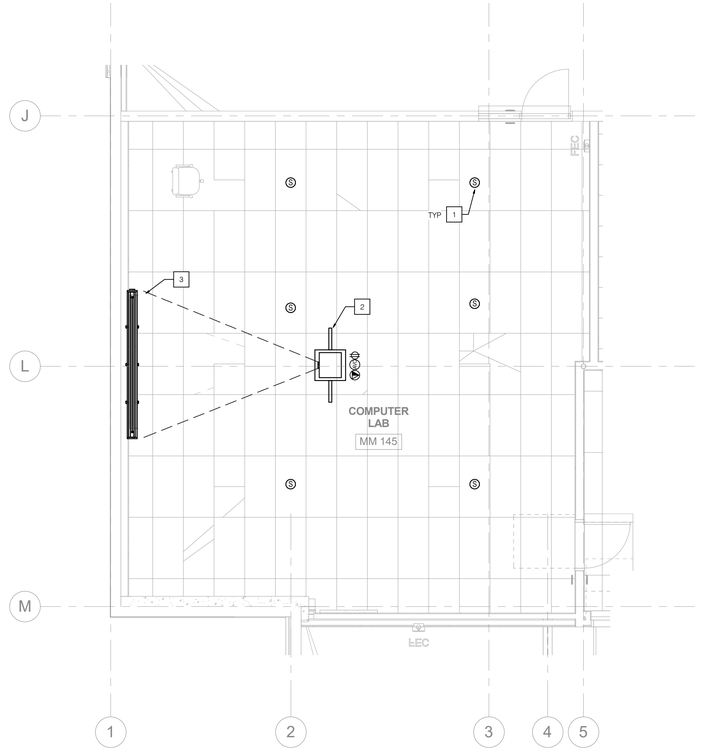
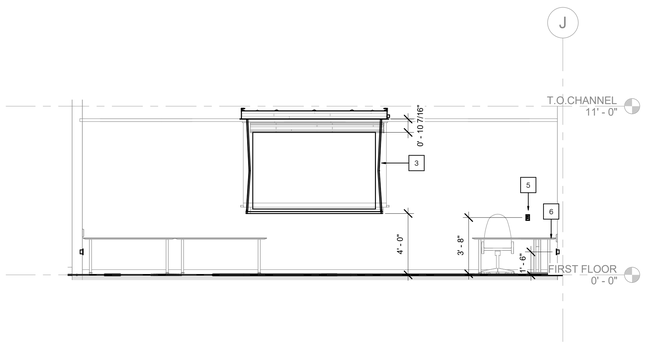


3 COMPUTER LAB MM145 - AV RCP

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

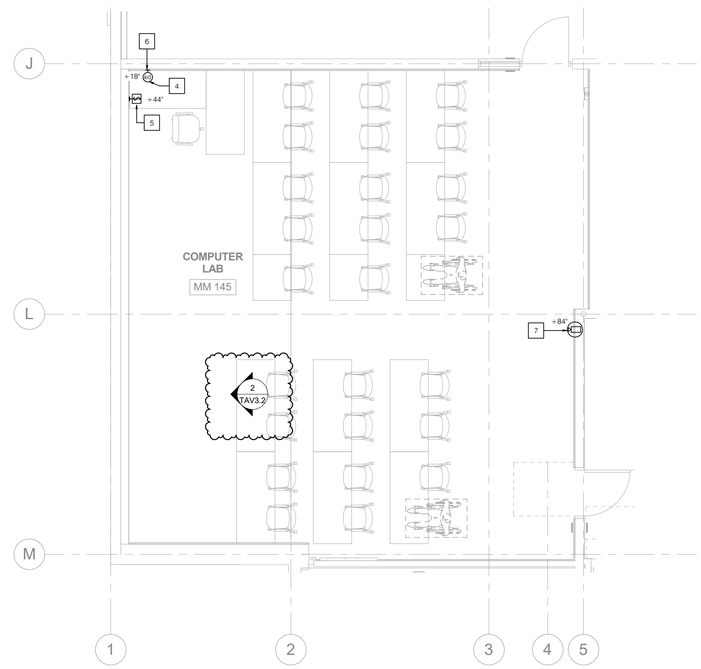
NOTES

1. CEILING MOUNTED SPEAKER.
2. CEILING MOUNTED PROJECTOR WITH VIBRATION ABSORBER MOUNT. REFER TO #5/TAV6.1.
3. 60"H X 96"W CEILING RECESSED MOTORIZED PROJECTION SCREEN. REFER TO #6/TAV6.1.
4. AV CONDUIT COLLECTOR BOX. FURNISH AND INSTALL (1) 3-GANG WITH COVER AND (3) 1-1/4" CONDUITS STUBBED ABOVE ACCESSIBLE CEILING. MOUNT AT 18" A.F.F.
5. PROJECTION SCREEN RAISE/LOWER LOW VOLTAGE SWITCH.
6. INSTRUCTORS DESK WITH BUILT IN AV EQUIPMENT RACK.
7. LECTURE CAPTURE CAMERA INFRASTRUCTURE 2-GANG BOX WITH 1-1/4" CONDUIT STUB ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING.



2 COMPUTER LAB MM145 - AV ELEVATION

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



1 COMPUTER LAB MM145 - ENLARGED AV FLOOR PLAN

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

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PROJECT TITLE

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DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE

COMPUTER LAB MM145 AV PLAN

SHEET NUMBER

TAV3.2

ADDENDUM#1

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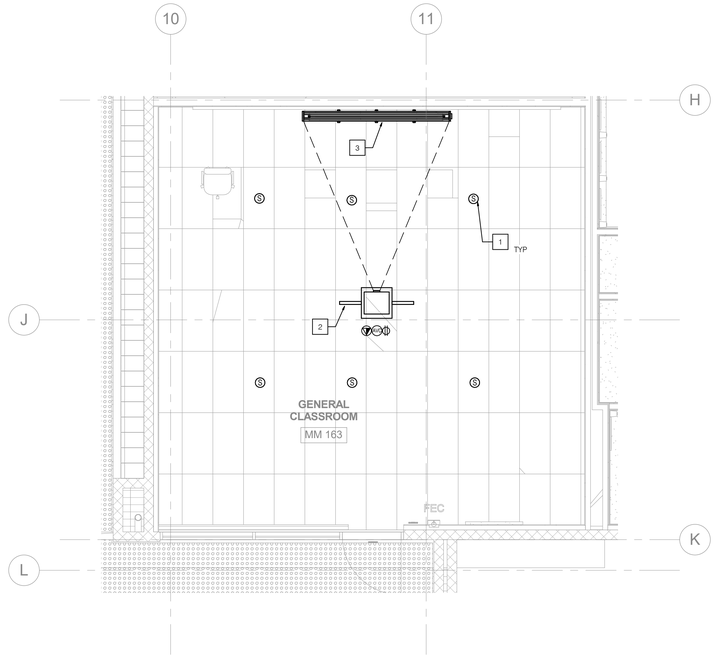
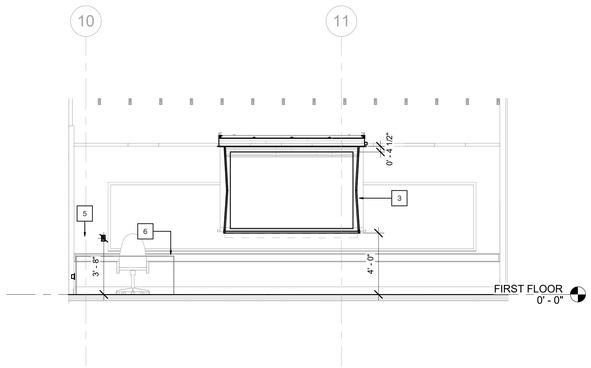
NOTES

1. CEILING MOUNTED SPEAKER. SEE 6/T6.8
2. CEILING MOUNTED PROJECTOR WITH VIBRATION ABSORBER MOUNT. REFER TO #5/TAV6.1.
3. 60"H X 96"W CEILING RECESSED MOTORIZED PROJECTION SCREEN. REFER TO #6/TAV6.1.
4. AV CONDUIT COLLECTOR BOX. FURNISH AND INSTALL (1) 3-GANG WITH COVER AND (3) 1-1/4" CONDUITS STUBBED ABOVE ACCESSIBLE CEILING. MOUNT AT 18" A.F.F.
5. PROJECTION SCREEN RAISE/LOWER LOW VOLTAGE SWITCH.
6. INSTRUCTORS DESK WITH BUILT IN AV EQUIPMENT RACK.
7. LECTURE CAPTURE CAMERA INFRASTRUCTURE 2-GANG BOX WITH 1'-1/4" CONDUIT STUB ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING.



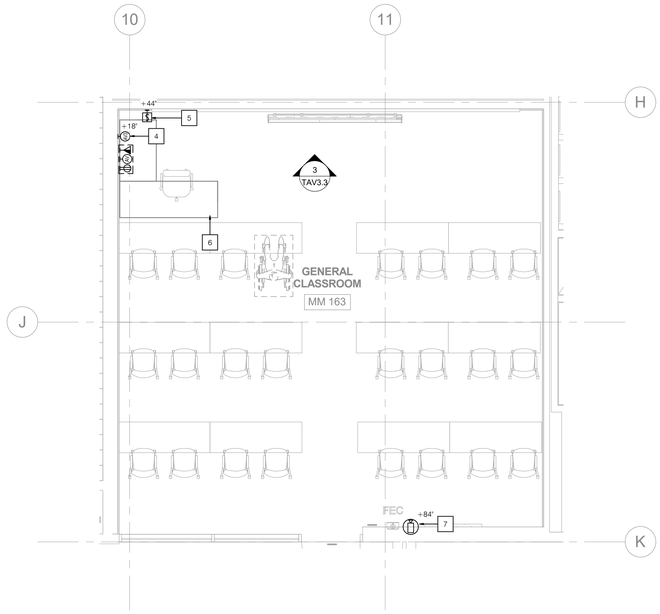
2 GENERAL CLASSROOM MM163 - AV RCP

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



3 GENERAL CLASSROOM MM163 - AV ELEVATION

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



1 GENERAL CLASSROOM MM163 - ENLARGED AV FLOOR PLAN

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

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PROJECT TITLE

MM BUILDING - CONSTRUCTION TRADES I

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SCALE	1/4" = 1'-0"
DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
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SHEET TITLE

GENERAL CLASSROOM MM163 AV PLAN

SHEET NUMBER

TAV3.3

ADDENDUM#1

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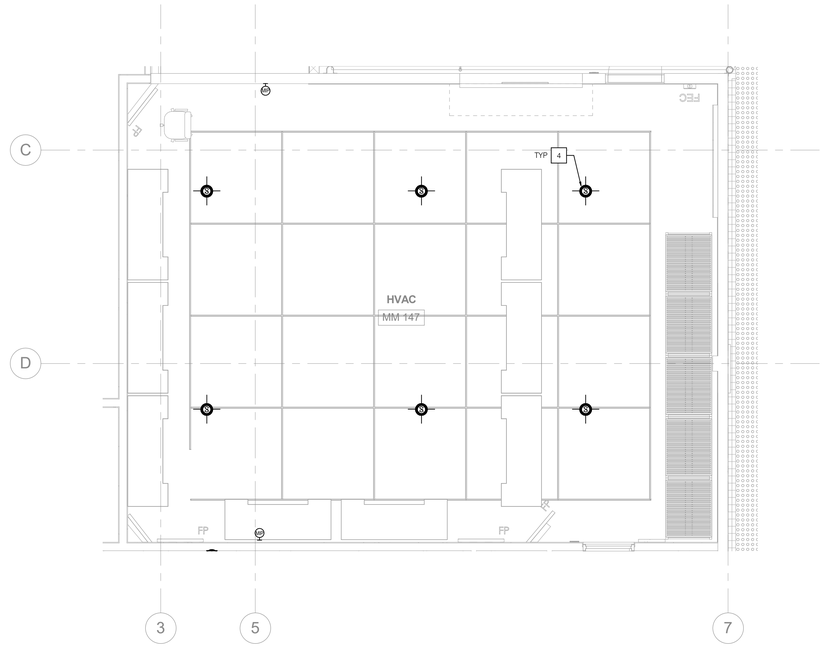
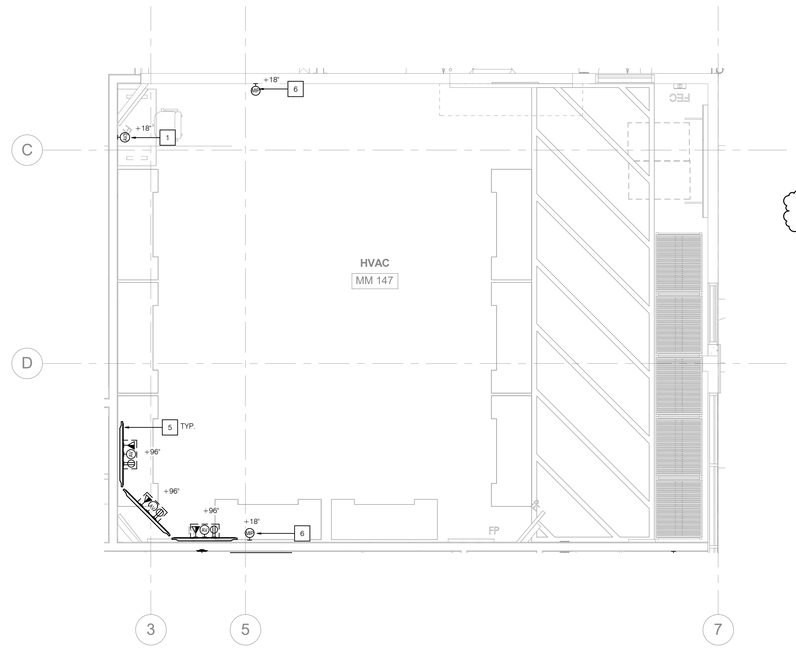


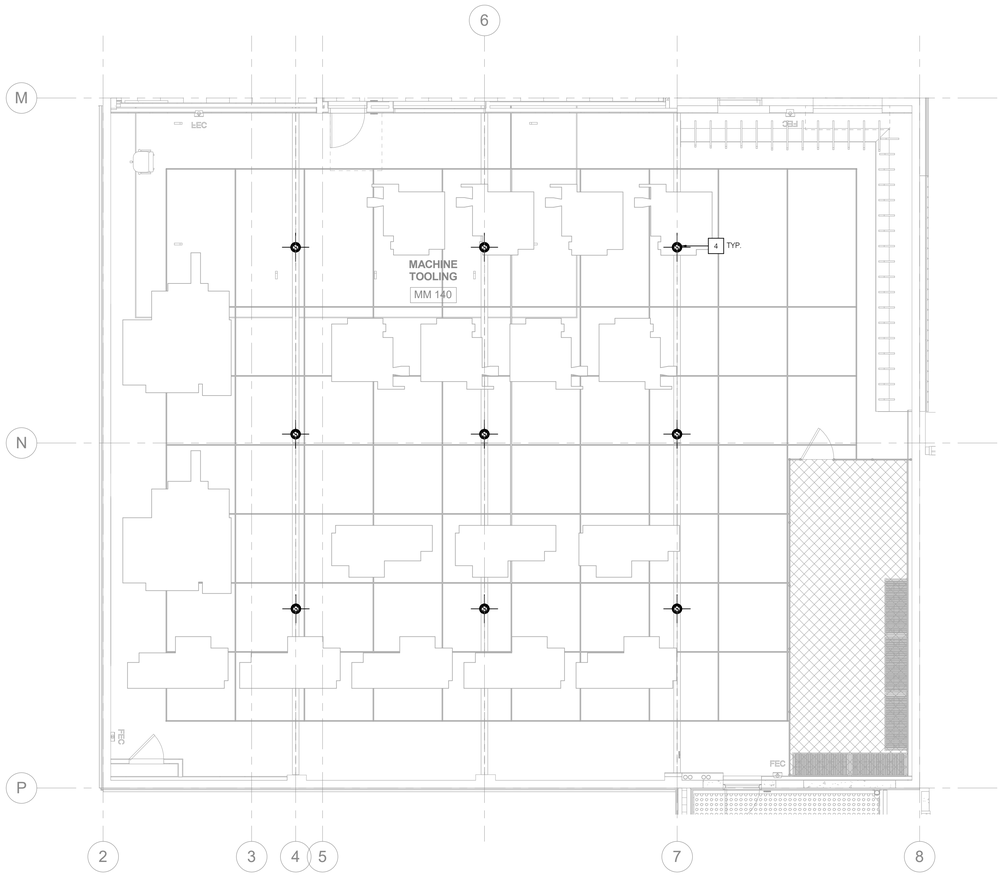
4 AV REFLECTED CEILING PLAN ROOM MM147

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



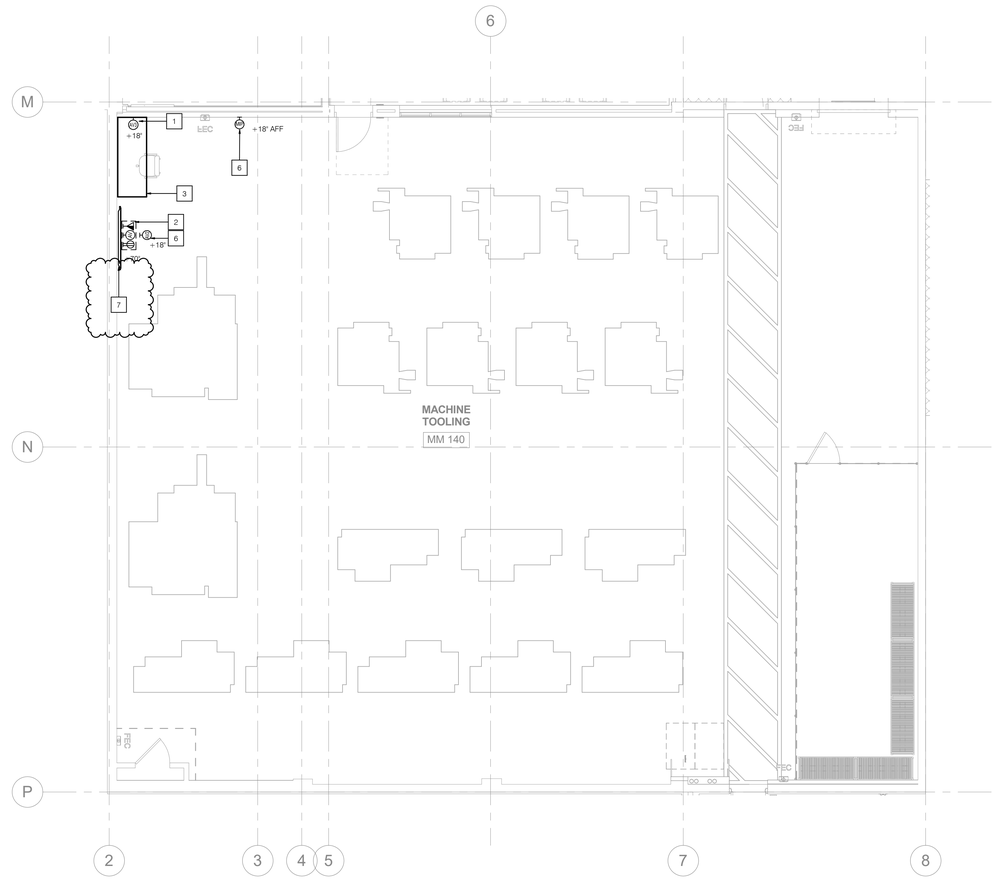
3 AV FLOOR PLAN ROOM MM147

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



2 MACHINE TOOLING MM140 - AV RCP

SCALE: 3/16" = 1'-0"



1 MACHINE TOOLING MM140 - ENLARGED AV FLOOR PLAN

SCALE: 3/16" = 1'-0"

NOTES

1. AV CONDUIT COLLECTOR BOX. FURNISH AND INSTALL (1) 3-GANG WITH COVER AND (3) 1-1/4" CONDUITS STUBBED ABOVE ACCESIBLE CEILING. MOUNT AT 18" A.F.F.
2. 75" WALL MOUNTED FLAT PANEL DISPLAY MOUNTED AT +70" A.F.F.
3. INSTRUCTORS DESK WITH BUILT IN AV EQUIPMENT RACK.
4. PENDANT MOUNTED SPEAKER AT +90" A.F.F. TO SPEAKER BOTTOM. REFER TO #1/TAV6.1.
5. 55" CEILING POLE MOUNTED FLAT PANEL DISPLAY MOUNTED AT +96" A.F.F. REFER TO #2/TAV6.1.
6. MIP, MEDIA INPUT PANEL (WITH HDMI). FURNISH AND INSTALL (1) 2-GANG WITH 2-GANG RING AND (1) 1-1/4" CONDUITS STUBBED ABOVE ACCESSIBLE CEILING TIED-BACK TO AV3. REFER TO #1/TAV6.1.
7. WALL MOUNTED FLAT PANEL DISPLAY. SEE #3/TAV6.Q

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SCALE	As indicated
DRAWN BY	G Jacob
DESIGNED BY	J Kacperski
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SHEET TITLE

MACHINE TOOLING LAB MM140 & HVAC LAB MM147 AV PLAN

SHEET NUMBER

TAV3.4

ADDENDUM#1

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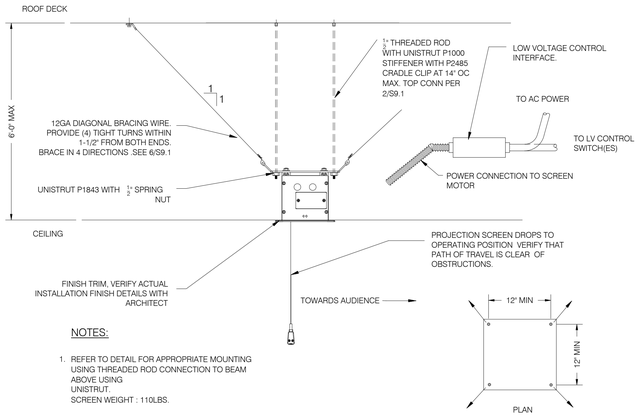
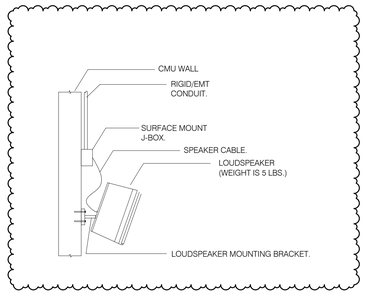


NOTES:

1. REFER TO DETAIL FOR APPROPRIATE MOUNTING USING THREADED ROD CONNECTION TO BEAM ABOVE USING UNISTRUT.
SCREEN WEIGHT : 110LBS.

6 PROJECTION SCREEN MOUNTED OVERHEAD

NO SCALE



NOTE:
1. FINISH REQUIREMENTS AS SPECIFIED BY ARCHITECT.

2. SPEAKER WEIGHT IS APPROXIMATELY 15 LBS.

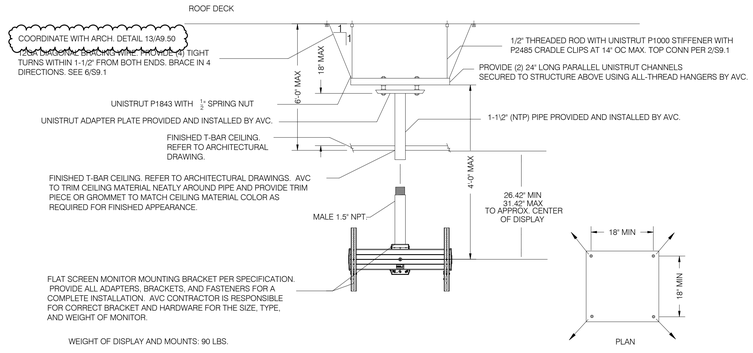
4 TYPICAL WALL MOUNTED SPEAKER

NO SCALE

NOTES:

1. MONITOR STRUCTURAL SUPPORT TO BE RIGID AND FREE FROM ANY PERCEPTIBLE VIBRATION IN STRUCTURE TO PREVENT MOVEMENT OF MONITOR.

2. REFER TO AV EQUIPMENT PLAN(S) FOR POSITION OF STRUCTURAL SUPPORT ABOVE CEILING, FOR EACH MONITOR LOCATION.



WEIGHT OF DISPLAY AND MOUNTS: 90 LBS.

2 TYPICAL LCD/LED DISPLAY MOUNTED OVERHEAD

NO SCALE

NOTES:

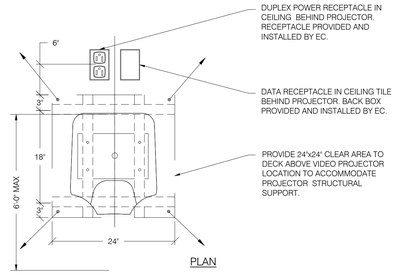
1. PROJECTOR STRUCTURAL SUPPORT TO BE RIGID AND FREE FROM ANY PERCEPTIBLE VIBRATION IN STRUCTURE TO PREVENT MOVEMENT OF PROJECTED IMAGE.

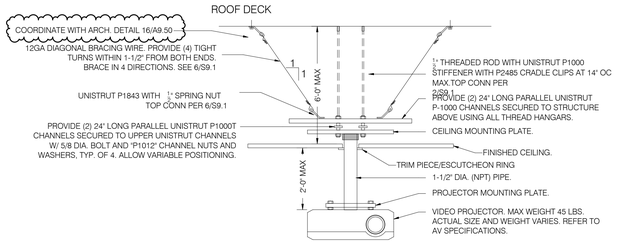
2. GENERAL CONTRACTOR TO VERIFY POSITION OF STRUCTURAL SUPPORT ABOVE CEILING AND CEILING PIPE FOR EACH PROJECTOR LOCATION W/OWNER REP PRIOR TO INSTALLATION.

3. AVC TO CALCULATE THROW DISTANCE AND VERIFY FIELD CONDITIONS FOR APPROPRIATE PROJECTOR PURCHASING LENS PRIOR TO PLACEMENT.

4. REFER TO ARCHITECTURAL DETAIL FOR MORE INFORMATION ON THE PROJECTOR MOUNT DETAIL.

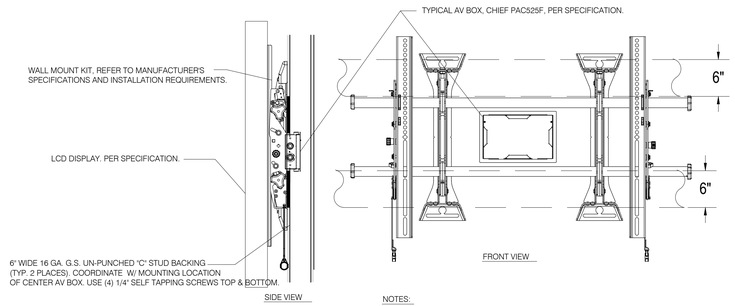
5. FOR FIRST FLOOR APPLICATIONS, REFER TO ARCHITECTURAL DETAIL FOR MORE INFORMATION ON THE WIRE CONNECTION TO DECK ABOVE.





5 VIDEO PROJECTOR MOUNTED OVERHEAD

NO SCALE

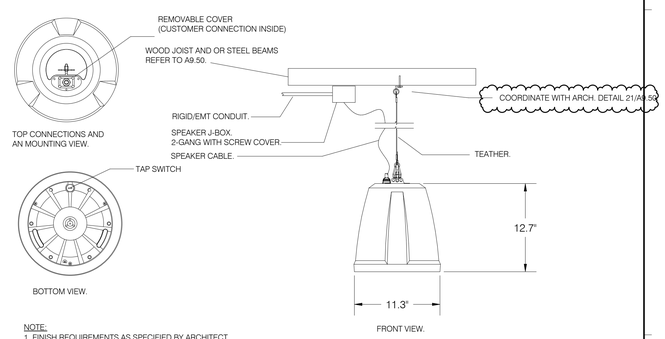


NOTES:
1. A CLEAR SPACE OF 2" IS REQUIRED BY THE MANUFACTURER AROUND THE PERIMETER OF THE FLAT PANEL MONITOR FOR VENTILATION.

2. WEIGHT OF MONITOR AND MOUNT 90 LBS.

3 TYPICAL LCD/LED DISPLAY WALL MOUNT

NO SCALE



NOTE:
1. FINISH REQUIREMENTS AS SPECIFIED BY ARCHITECT.

2. EXAMPLE, QSC AD-P6T PENDANT SPEAKER

2. SPEAKER WEIGHT IS APPROXIMATELY 12 LBS.

1 TYPICAL QSC CEILING MOUNTED PENDANT SPEAKER

NO SCALE

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SCALE	Not To Scale
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DESIGNED BY	J Kacperski
CHECKED BY	-

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SHEET TITLE
DETAILS

SHEET NUMBER
TAV6.1

ADDENDUM#1