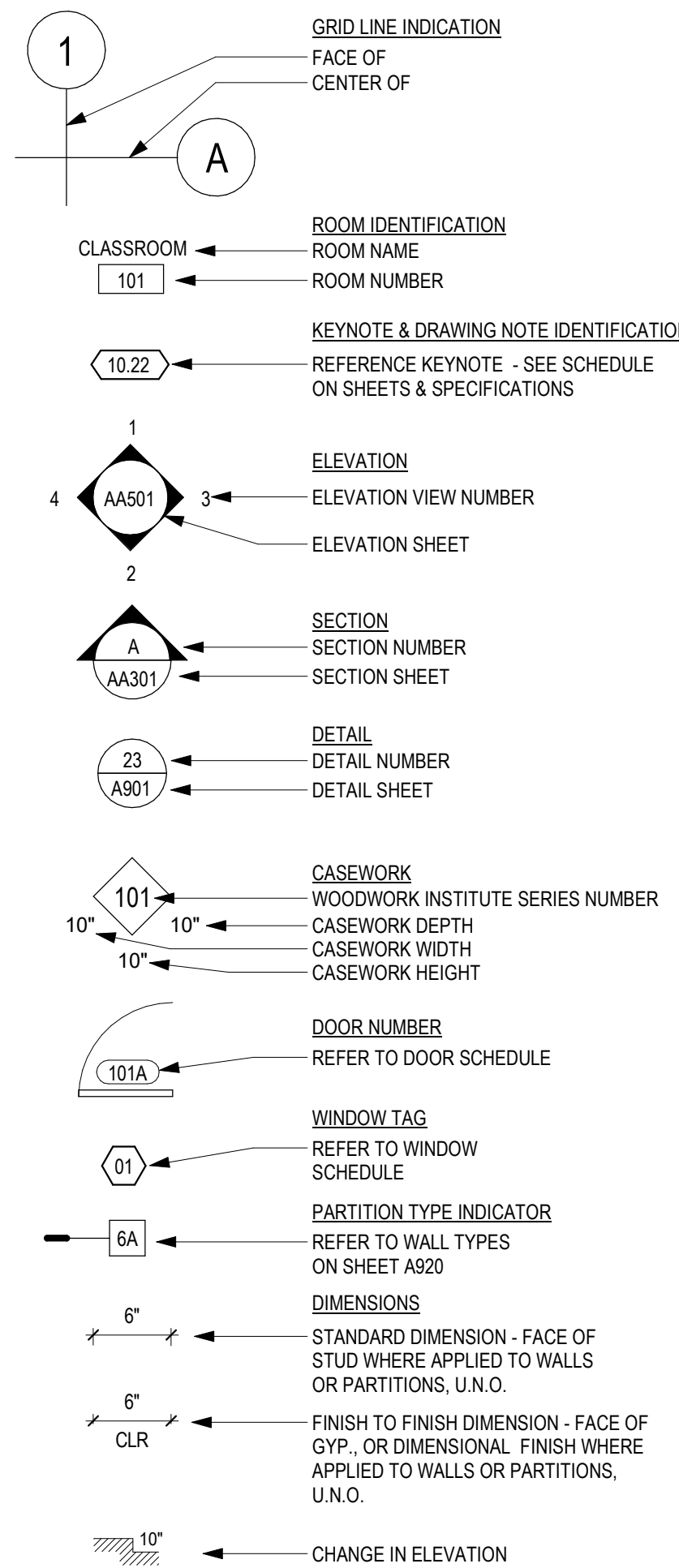




**ABBREVIATIONS**

CFCI - CONTRACTOR FURNISH CONTRACTOR INSTALL	MECH - MECHANICAL
OFCI - OWNER FURNISH CONTRACTOR INSTALL	MED - MEDIUM
OFOI - OWNER FURNISH OWNER INSTALL	MFR - MANUFACTURER
	MIN - MINIMUM
@ - AT	MIR - MIRROR
A/C - AIR CONDITIONING	MISC - MISCELLANEOUS
AC - ASPHALT CONCRETE	MTL - METAL
AC - ACCESSIBLE	
ACP - ACOUSTICAL CEILING PANEL	(N) - NEW
ACT - ACOUSTICAL CEILING TILE	N - NORTH
ADA - AMERICANS W/ DISABILITIES ACT	NIC - NOT IN CONTRACT
ADD - ADDITIONAL	NO - NUMBER
ADJ - ADJUSTABLE	NTS - NOT TO SCALE
AFF - ABOVE FINISH FLOOR	
ALUM - ALUMINUM	OC - ON CENTER
	OFS - OUTSIDE FACE OF STUD
BD - BOARD	P - PAINT
BFC - BELOW FINISH CEILING	P.A. - PLANTING AREA
BLD - BOLLARD	PH - PANIC HARDWARE
BLDG - BUILDING	PLWD - PLYWOOD
BLK - BLOCK	PROP - PROPERTY
BLKG - BLOCKING	PSF - POUNDS PER SQUARE FOOT
BM - BEAM	PSI - POUNDS PER SQUARE INCH
BO - BOTTOM OF	PVMT - PAVEMENT
BOS - BOTTOM OF STEEL	
BOT - BOTTOM	RB - RESILIENT BASE
	RCP - REFLECTED CEILING PLAN
C - COMPACT	REF - REFERENCE
CAB - CABINET	RES - RESILIENT
CBC - CALIFORNIA BUILDING CODE	RGD - RIGID
CLR - CLEAR	RM - ROOM
CMU - CONCRETE MASONRY UNIT	RO - ROUGH OPENING
CONT - CONTINUOUS	
CTR - CENTER	S - SOUTH
	SC - SOLID CORE
DBL - DOUBLE	SCD - SEE CIVIL DRAWINGS
DEG - DEGREE	SEAL - SEALANT
DEMO - DEMOLISH	SECT - SECTION
DEPT - DEPARTMENT	SED - SEE ELECTRICAL DRAWINGS
DET - DETAIL	SF - SQUARE FOOT (FEET)
DIA - DIAMETER	SFAD - SEE FIRE ALARM DRAWINGS
DIAG - DIAGONAL	SHT - SHEET
DIM - DIMENSION	SIM - SIMILAR
DIV - DIVISION	SING - SINGLE
DN - DOWN	SLD - SEE LANDSCAPE DRAWINGS
DS - DOWNSPOUT	SOG - SLAB ON GRADE
DTL - DETAIL	SPD - SEE PLUMBING DRAWINGS
	SPEC - SPECIFICATION
(E) - EXISTING	SQ - SQUARE
E - EAST	SSD - SEE STRUCTURAL DRAWINGS
EA - EACH	STD - STANDARD
EF - EXHAUST FAN	STL - STEEL
ELEC - ELECTRICAL	STRUC - STRUCTURAL
ELEV - ELEVATION	
ENCL - ENCLOSURE	TO - TOP OF
EQ - EQUAL	TOC - TOP OF CURB
EXP - EXPANSION	TOF - TOP OF FLOOR
EXT - EXTERIOR	TOP - TOP OF PLATE
	TYP - TYPICAL
FA - FIRE ALARM	
FE - FIRE EXTINGUISHER	UNF - UNFINISHED
FEC - FIRE EXTINGUISHER CABINET	UTIL - UTILITY
FF - FINISH FLOOR	
FG - FINISH GRADE	VCT - VINYL COMPOSITION TILE
FIN - FINISH	VIF - VERIFY IN FIELD
FLR - FLOOR	VT - VINYL TILE
FNC - FENCE	
FOB - FACE OF BUILDING	W - WEST
FOC - FACE OF CONCRETE	WI - WITH
FOF - FACE OF FINISH	WIO - WITHOUT
FOM - FACE OF MASONRY	WAB - WATER RESISTANT BARRIER
FOS - FACE OF STUD	WC - WATER CLOSET
FOS - FACE OF SLAB	WH - WATER HEATER
FUT - FUTURE	WP - WATER PROOF
	WR - WATER RESISTANT
GND - GROUND	WRB - WATER RESISTIVE BARRIER
GR - GRADE	WT - WEIGHT
GYP BD - GYPSUM BOARD	
HB - HOSE BIB	
HC - HOLLOW CORE	
HDR - HEADER	
HGT - HEIGHT	
HH - HEAD HEIGHT	
HM - HOLLOW METAL	
HORZ - HORIZONTAL	
HSS - HOLLOW STRUCTURAL STEEL	
HVAC - HEATING, VENTILATION & AIR CONDITIONING	
INFO - INFORMATION	
INSUL - INSULATION / INSULATED	
INT - INTERIOR	
IRR - IRRIGATION	
JST - JOIST	
JT - JOINT	
LN - LENGTH	
LT - LIGHT	
LTG - LIGHTING	

**SYMBOLS LEGEND**



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**SHEET INDEX**

TOTAL: 184

TOTAL: 184

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021



4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S. Flower St #1200 Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL ARCHITECT  
 LICENSED ARCHITECT  
 LINDA T. WILSON  
 C 23260  
 Exp. Apr. 30, 2021

CONSULTANT:

ITEM	REVISION / ISSUE	DATE



**FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL**

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

Page 1 of the completed form must be imaged onto the fire access site plan. When an alternate design/means is proposed, completed pages 1 and 2 are to be imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy PL 09-01: Fire Flow for Buildings.

**PROJECT INFORMATION**

School District/Owner: CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT

Project Name/School: LAS POSITAS COLLEGE HORTICULTURE FACILITY

Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**FIRE & LIFE SAFETY INFORMATION**

1. Has a fire hydrant flow test been performed within the past 12 months? Yes  No   
(If yes, provide a copy of the test data.)

2. Was the fire hydrant water flow test performed as part of this LFA review? Yes  No

3. Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? Yes  No   
(If yes, indicate FHSZ classification below.)

Refer to the following website for FHSZ locations: <http://eqis.fire.ca.gov/FHSZ/> Moderate  High  Very High

Wildland Interface Area (WIFA) (If any designations are checked, project design must meet the requirements of CBC Chapter 7A.) WIFA

**LOCAL FIRE AUTHORITY (LFA) INFORMATION**

LFA Agency Name: Livermore-Pleasanton FD

LFA Review Official: Ryan Tucker

Title: Fire Marshal Work Phone: (925) 454-2330

Work Email:

LFA Reviewer's Signature: [Signature] Date: 7-7-20

DSA 810  
**FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL**

CONDITION MEANS AND METHODS RESOLUTION	ALTERNATE ACCEPTED			
	Yes	No	N/A	N/R
4. Emergency vehicle access roadways do not meet CFC requirements.				
4a. <b>Acceptable Alternate:</b> Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.	<input checked="" type="checkbox"/>			
5. <b>Fire Hydrants:</b> Number and spacing does not meet CFC requirements.				
5a. <b>Acceptable Alternate:</b> Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.	<input checked="" type="checkbox"/>			
6. <b>Fire Hydrants:</b> Water flow and pressure are less than CFC minimum.				
6a. <b>Acceptable Alternate:</b> The available flow and pressure is acceptable for providing fire suppression and protection of life and property.	<input checked="" type="checkbox"/>			
7. Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.				
7a. <b>Acceptable Alternate:</b> The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.	<input checked="" type="checkbox"/>			

**School District Acceptance of Acceptable Design Alternates**  
By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**LOCAL FIRE AUTHORITY (LFA) INFORMATION**

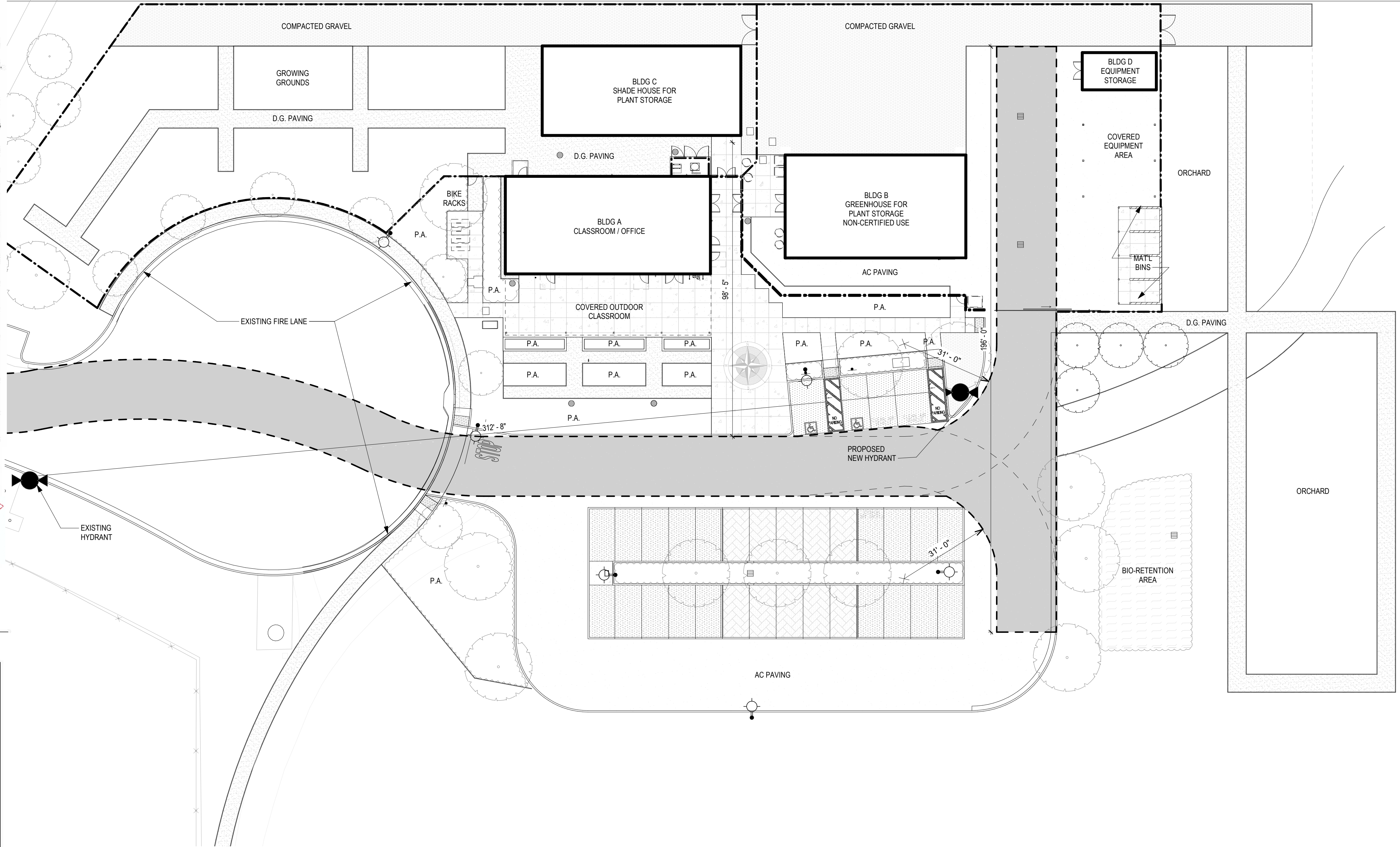
LFA Agency Name:

LFA Review Official:

Title: \_\_\_\_\_ Work Phone: \_\_\_\_\_

Work Email:

LFA Reviewer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**1 FIRE ACCESS SITE PLAN**  
1" = 20'-0"

**FIRE ACCESS LEGEND**

- FIRE HYDRANT
- FIRE LANE
- EXISTING FENCE
- NEW FENCE

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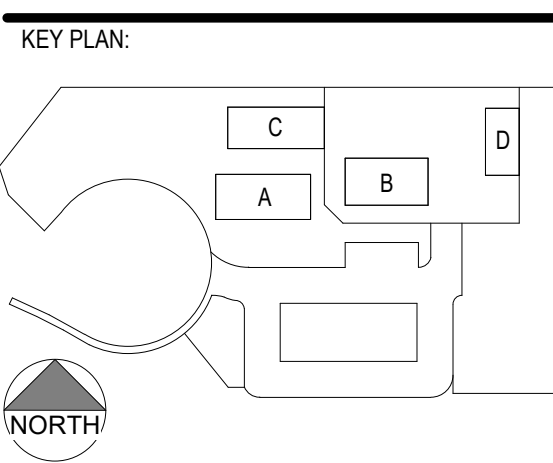
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PROFESSIONAL STAMP:  
LIZABETH T. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

ITEM	REVISION / ISSUE	DATE



CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**FIRE ACCESS SITE PLAN**

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

CODE ANALYSIS - CBC 2019										
LABEL	USE	DSA APPL#	OCC.	# OF STORIES	CONSTRUCTION TYPE	AREA PROVIDED (SQ. FT.)	BASIC ALLOWABLE AREA (SQ. FT.)	MAX HEIGHT PROVIDED (FT.)	ALLOWABLE HEIGHT (FT.)	
AGGREGATED AS SINGLE BUILDING CBC 903.1.2	BLDG A **	CLASSROOM / OFFICE	01-119056	B	1	V-B (NOT SPRINKLERED)	3,680 *	9,000	20.42	40
	BLDG C **	SHADE HOUSE PLANT STORAGE	01-119056	S-1	1	V-B (NOT SPRINKLERED)	1,980			
BLDG B	GREENHOUSE PLANT STORAGE	NON-CERTIFIED	U	1	V-B (NOT SPRINKLERED)	2,040				
BLDG D	EQUIPMENT STORAGE / CAR PORT	01-119056	S-1 / U	1	V-B (NOT SPRINKLERED)	S-1: 270 U: 910	5,500	11.25	40	

\* INCLUDES COVERED OUTDOOR CLASSROOM AREA CALCULATED AS ONE BUILDING  
 \*\* INCLUDES COVERED OUTDOOR CLASSROOM AREA CALCULATED AS ONE BUILDING

**EXIT REQUIREMENTS**

ROOM NAME	ROOM NO.	AREA	OLF	# OCC	REQ'D EXITS	REQ'D EXIT WIDTH (IN)
<b>BUILDING A</b>						
CLASSROOM	102	957 SF	20	48	2	9.6
OFFICE	101	379 SF	100	4	1	0.8
LACTATION ROOM	101A	84 SF	100	1	1	0.2
HEAD HOUSE	103	174 SF	100	2	1	0.4
CUSTODIAL	102A	80 SF	300	1	1	0.2
ELECTRICAL	107	58 SF	300	1	1	0.2
IDF	107A	70 SF	300	1	1	0.2
MECHANICAL	106	33 SF	300	1	1	0.2
<b>BUILDING B</b>						
GREENHOUSE		2,040 SF.	300	7	1	1.4
<b>BUILDING C</b>						
SHADE HOUSE		1,980 SF.	300	7	1	1.4
<b>BUILDING D</b>						
EQUIPMENT STORAGE		270 SF.	300	1	1	0.2

**PLUMBING COUNT (PER CPC 2019 SEC. 422.0)**

BUILDING	OLF Table A	MALE	FEMALE
CLASSROOM	50	10	10
OFFICE	200	1	1

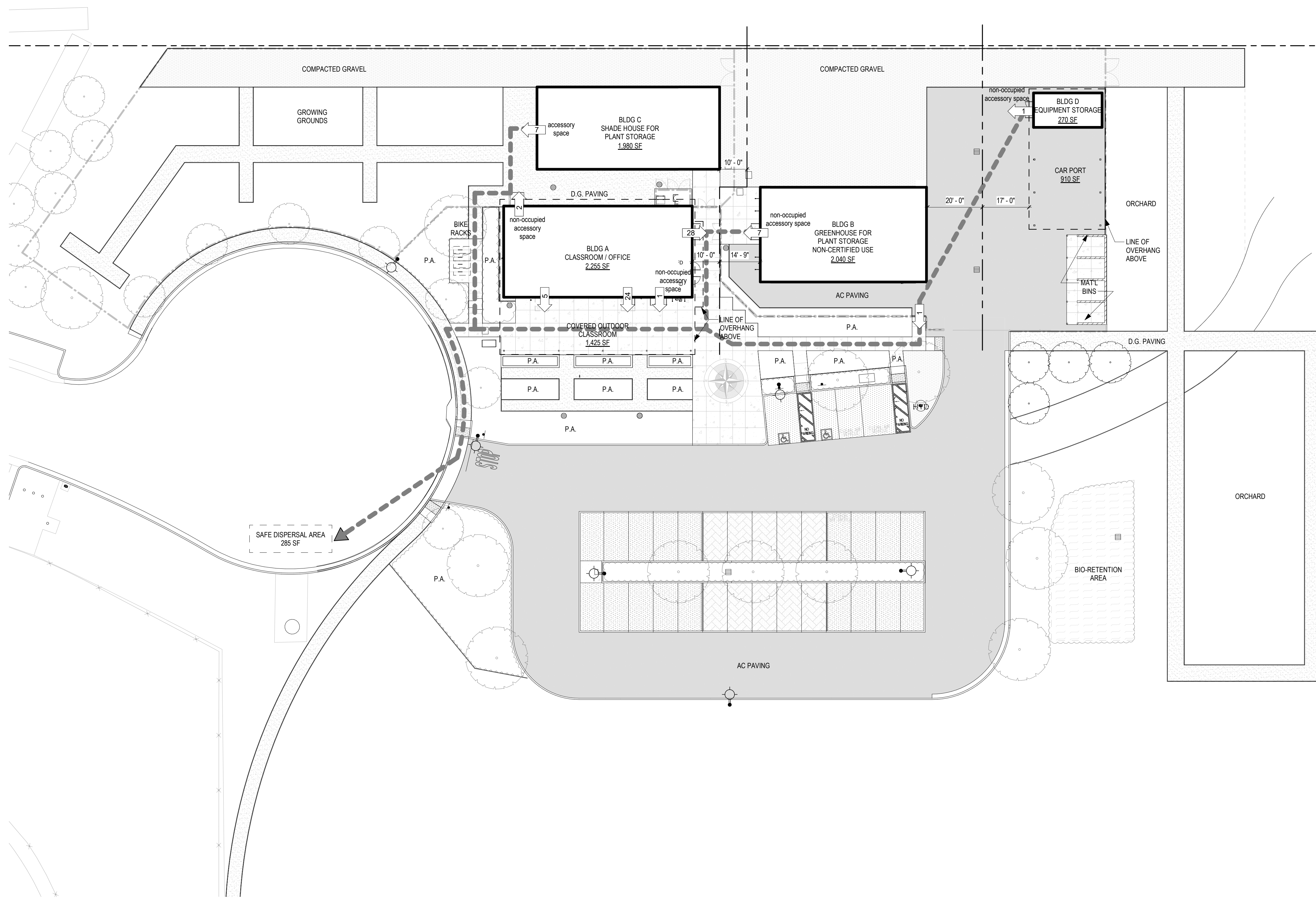
PROJECT PROVIDES:  
 - TWO SINGLE-USER GENDER NEUTRAL RESTROOMS EACH WITH WATER CLOSET AND LAVATORY  
 - HI-LO DRINKING FOUNTAIN IS PROVIDED WITH BOTTLE FILLER

	Male		Female		1 per 150 1 service sink or laundry tray
	1-150	16-300	1-150	16-300	
B Business occupancy (office, professional or service type transactions)-banks, vet clinics, hospitals, car wash, banks, beauty salons, ambulatory health care facilities, laundries and dry cleaning, educational institutions (above high school), or training facilities not located within school, post offices and printing shops	2: 16-30	3: 31-50	2: 16-30	3: 31-50	
	3: 101-200	4: 201-400	3: 101-200	4: 201-400	
	4: 201-400	8: 101-200	4: 201-400	8: 101-200	
	5: 101-200	11: 201-400	5: 101-200	11: 201-400	
	Over 400, add 1 fixture for each additional 500 males and 1 fixture for each additional 150 females.		Over 600, add 1 fixture for each additional 300 males.		
			Over 400, add 1 fixture for each additional 250 males and 1 fixture for each additional 200 females.		

|| (BSC, DSA-AC, DSA-SS, DSA-SS/CC, HCD 1 & HCD 2, OSHPD 1, 1R, 2, 3, 4 & 5) In accordance with Sections 1.8.7 and 301.3, the Authority Having Jurisdiction may approve alternative design criteria when determining the minimum number of plumbing fixtures.

**CODE ANALYSIS LEGEND**

- ASSUMED PROPERTY LINE
- PROPERTY LINE
- ROOF LINE ABOVE
- PATH OF EGRESS
- AC PAVING



DSAs:

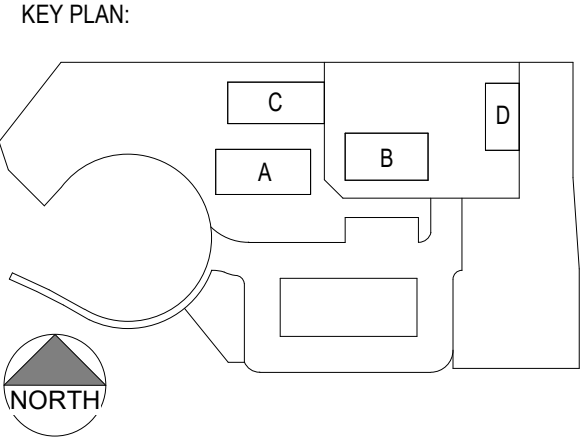
IDENTIFICATION STAMP  
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 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021

4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
 444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
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 STATE OF CALIFORNIA  
 C 23260  
 Exp. Apr. 30, 2021

CONSULTANT:

ITEM	REVISION / ISSUE	DATE



CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

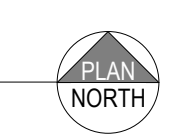
**BUILDING CODE ANALYSIS**

DRAWN BY: EA CHECKED BY: AW  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**G004**

C:\Revit\Local\Files\C9508\_LPC-Horticulture\_sandersen.rvt 10/17/2021 12:51:31 PM

**1 EGRESS SITE PLAN**  
 1" = 20'-0"













LEGEND

Table with 3 columns: EXISTING, PROPOSED, and descriptions for various construction elements like retaining walls, pavement, gutters, pipes, and conduits.

ABBREVIATIONS

Table listing abbreviations for materials and construction terms such as aggregate base, asphalt concrete, area drain, and various pipe types.

ADA NOTES

- List of 7 ADA compliance notes regarding site work, curb ramps, ramps to buildings, maximum slope landings, and sidewalk clear widths.

EARTHWORK NOTE

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE ALL MATERIAL AND LABOR REQUIRED WITHIN THE BID PRICE. FOR EARTHWORK CONSTRUCTION, TO CARRY OUT THE CUT/FILL AND/OR IMPORT/EXPORT AS NECESSARY TO MEET THE DESIGN GRADES SHOWN ON THE PLANS.

DISCREPANCIES

IF THERE ARE ANY DISCREPANCIES BETWEEN DIMENSIONS IN DRAWINGS AND EXISTING CONDITIONS WHICH WILL AFFECT THE WORK, THE CONTRACTOR SHALL BRING SUCH DISCREPANCIES TO THE ATTENTION OF THE ENGINEER FOR ADJUSTMENT BEFORE PROCEEDING WITH THE WORK.

PROJECT DESCRIPTION

THE HORTICULTURE PROJECT WILL BE LOCATED ALONG THE NORTHERN EDGE OF THE CAMPUS AND THE EASTERN END OF THE MAINTENANCE AND OPERATIONS ROAD CUL-DE-SAC. THE PROJECT WILL INCLUDE A NEW CLASSROOM BUILDING, SHADE HOUSE, GREEN HOUSE, PARKING LOT, STORMWATER MANAGEMENT ELEMENTS, AND CONNECTIONS TO CAMPUS UTILITY SYSTEMS.

UTILITY/POTHOLE NOTE

THE TYPES, LOCATIONS, SIZES AND /OR DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES.

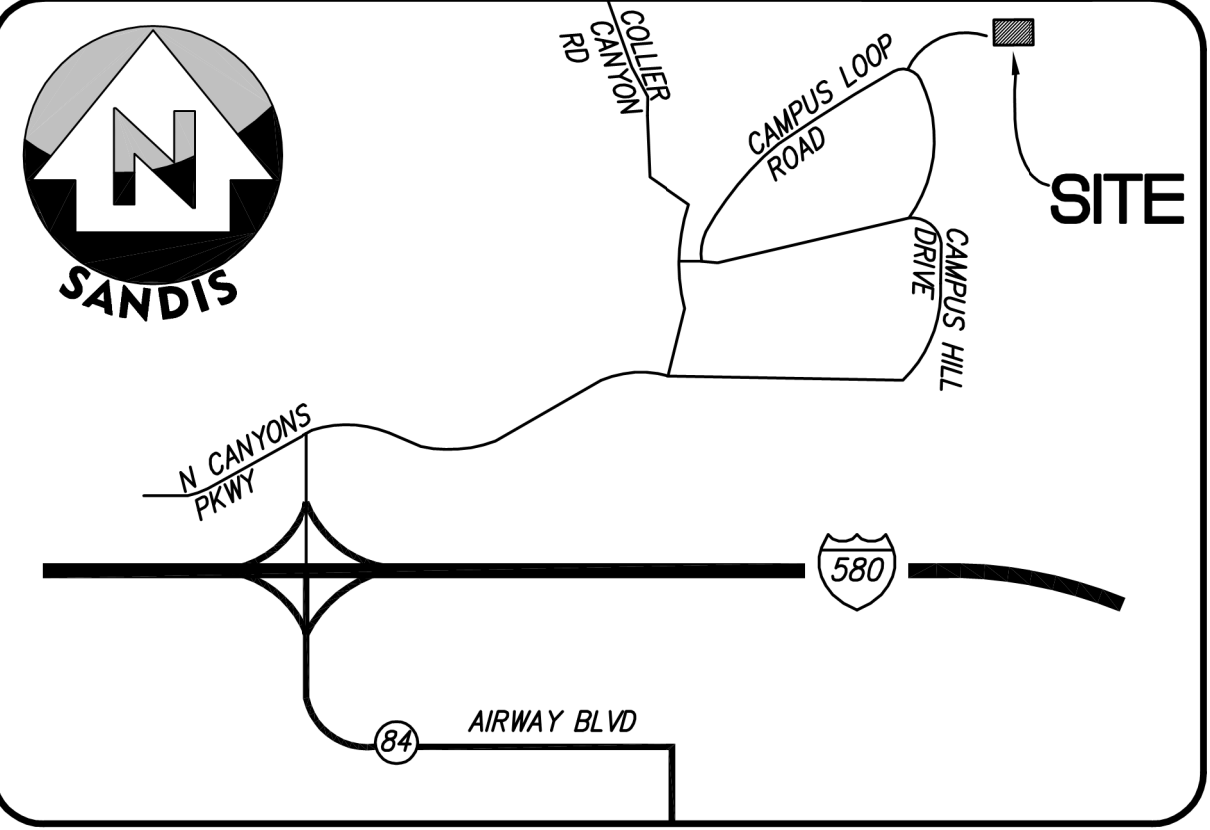
SURVEY NOTES

- List of 3 survey notes regarding distances, field survey dates, and coordinate/bearing information.

SURVEY CONTROL TABLE

Table with 5 columns: Point #, Elevation, Northing, Easting, and Description. Lists survey points 1, 3, 35, 37, and 38.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT.



VICINITY MAP NOT TO SCALE

FIRE SAFETY NOTES:

- List of applicable codes and standards including California Building Standards Administrative Code, California Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Elevator Safety Orders, and California Fire Code.

PARTIAL LIST OF APPLICABLE STANDARDS:

- List of NFPA standards including NFPA 13 (Automatic Sprinkler Systems), NFPA 14 (Standpipe Systems), NFPA 17A (Wet Chemical Systems), NFPA 24 (Private Fire Mains), NFPA 72 (National Fire Alarm Code), NFPA 253 (Critical Radiant Flux), NFPA 20 (Stationary Pumps), NFPA 99 (Health Care Facilities), NFPA 24, SEC. 10.1.6.1 (Ferrorous Metal Pipe), NFPA 24, SEC. 10.3.6.2 (Bolted Joint Accessories), and NFPA 24, SEC. 10.8.3.5 (Corrosion Resistance).

- Additional NFPA standards including NFPA 24, SEC. 10.8.2 (Thrust Blocks), NFPA 24, SEC. 10.10.2.1 (Underground Piping), and NFPA 24, SEC. 10.10.2.2.1 (Piping and Attached Appurtenances).

- Additional NFPA standards including NFPA 24, SEC. 10.4 (Depth of Cover) and NFPA 24, SEC. 10.6.1 (Pipe under Buildings).

CONSTRUCTION NOTES

- List of 15 construction notes covering off-site construction, contractor posting, utility notification, grading standards, street cleaning, and various safety and equipment requirements.

CATHODIC PROTECTION NOTE

THE EXISTING SOILS ON-SITE ARE KNOWN TO BE CORROSIVE TO BURIED METALLIC ELEMENTS. AN ANALYSIS OF AN EXISTING SOIL SAMPLE PROVIDES THE FOLLOWING CORROSION DATA:

Table with 2 columns: SOIL CHARACTERISTICS and TEST RESULTS/CONDITION. Lists Chloride (160 PPM), PH (6.8), Resistivity (900 OHM-CM), Sulfide (40 PPM), and Moisture (Fair Drainage).

THESE PLANS ASSUME THAT ALL NEW PIPING WILL BE PVC WITH DIP FITTINGS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO INCLUDE ALL COMPONENTS OF THE CATHODIC PROTECTION SYSTEM, INCLUDING TEST STATION LOCATIONS, NUMBER, SIZE, AND TYPE OF ANODES, DIELECTRIC ISOLATING JOINTS, CABLES, COATING REPAIR, JOINT BONDS AND ANY OTHER WORK NECESSARY TO COMPLETE THE INSTALLATION FOR ALL UNDERGROUND PIPES, FITTINGS, VALVES, AND APPURTENANCES.

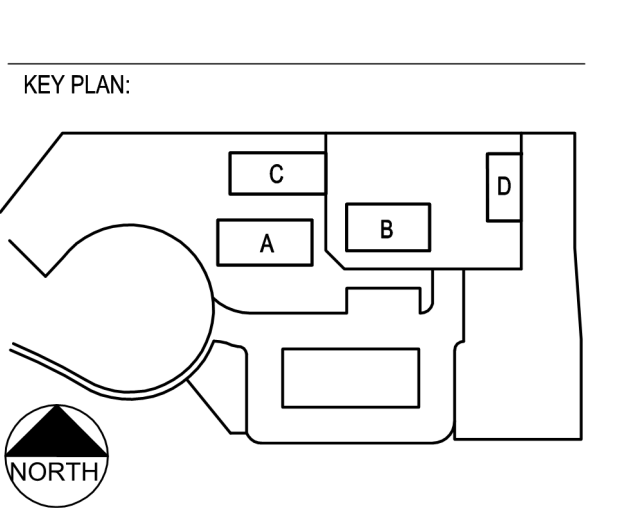
CIVIL SHEET INDEX

Table listing sheet numbers and titles from C001 to C804, including cover sheet, topographic survey, demolition plans, control plans, and construction details.

Professional stamp for ATi Architects + Engineers, including identification stamp, project information, and professional seal for Michael A. Kuykendall.

SANDIS logo and contact information for East Bay/SF office.

Table with 3 columns: ITEM, REVISION / ISSUE, and DATE. Used for tracking project changes.

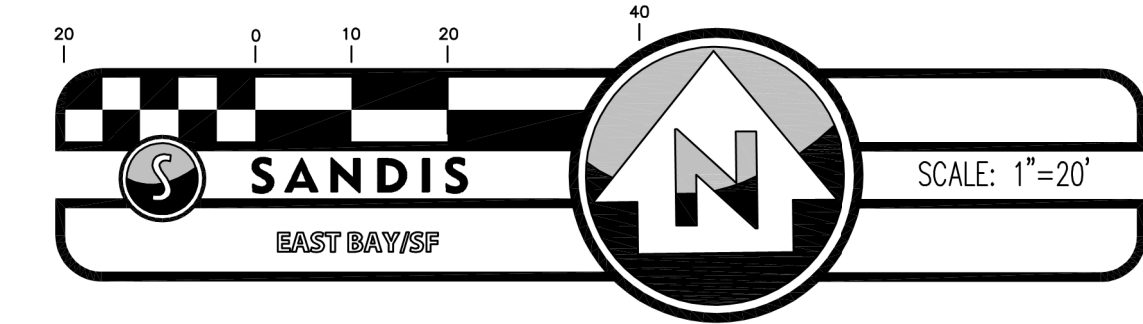


CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

COVER SHEET

Project information including drawing by (JR), checked by (IW), date (01/14/2021), project number (C9508), sheet number (C001), and a large 'C001' graphic.

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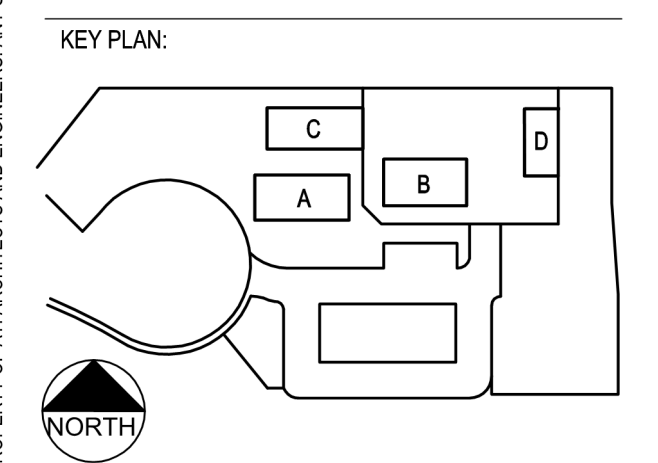


PROFESSIONAL STAMP:  
DATE: 10/30/2020  
*Christian Cinteau*  
CHRISTIAN CINTEAU  
L.S. NO. 8941, EXPIRES 9-30-22

SANDIS CIVIL ENGINEERS  
SURVEYORS  
PLANNERS  
336 Ninth Street | Oakland, CA 94607 | P. 510.873.8866 | www.sandis.com  
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ITEM	REVISION / ISSUE	DATE

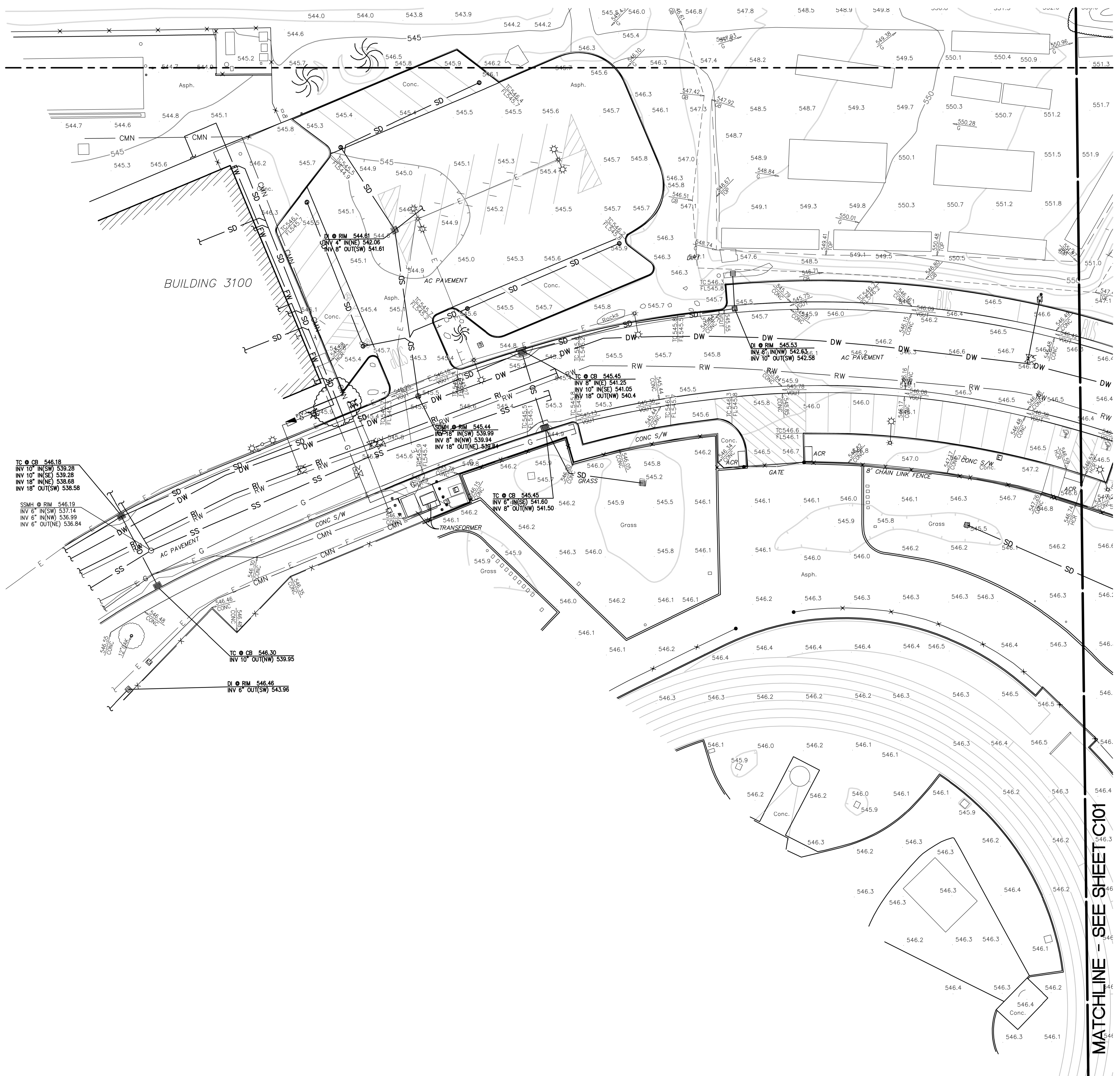


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SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

### TOPOGRAPHIC SURVEY

DRAWN BY: JR CHECKED BY: IW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

# C100



### SURVEY NOTES

- ALL DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
- DATES OF FIELD SURVEY: 08/08/2019, 08/09/2019, 08/16/2019, 08/26/2019, 09/05/2019, 10/03/2019, 10/04/2019, 02/28/2020.
- COORDINATES, BEARINGS, AND DISTANCES SHOWN ARE BASED ON AN ASSUMED COORDINATE SYSTEM. SEE SURVEY CONTROL TABLE BELOW FOR PROJECT COORDINATES. THE VERTICAL DATUM FOR THE SURVEY IS BASED ON LAS POSITAS COLLEGE BENCHMARK NO. 22 - 3/4" IRON PIPE WITH PLUG ON THE SOUTH SIDE OF THE LOOP ROAD, APPROX. 1100' FROM THE WEST ENTRY TO THE CAMPUS FROM COLLIER CANYON ROAD.  
ELEVATION = 466.71

### SURVEY CONTROL TABLE

Point #	Elevation	Northing	Eastng	Description
1	544.08	13183.80	13290.31	CUT X
3	540.66	13065.26	12784.71	CNTL
35	530.04	12503.70	12911.45	CUT X
37	537.93	12217.93	13008.92	60D FEATHER
38	515.89	11929.30	12605.77	CUT X

### LEGEND

- ALL DISTANCES AND DIMENSIONS ARE SHOWN IN FEET AND DECIMALS THEREOF.
- BUILDING FACE
  - BUILDING OVERHANG
  - CURB LINE
  - RETAINING / SCREENING WALL, HEIGHT AS INDICATED
  - 195
  - 194
  - CONTOURS
  - X FENCE LINE, TYPE / HEIGHT AS INDICATED
  - SD STORM DRAIN LINE
  - SS SANITARY SEWER LINE
  - WTR WATER LINE
  - FW FIRE WATER LINE
  - RW RECLAIMED WATER
  - G NATURAL GAS LINE
  - E UNDERGROUND ELECTRIC LINE
  - CMN COMMUNICATION LINE
  - SPOT ELEVATION
  - TREE WITH DRIPLINE, SIZE AS INDICATED

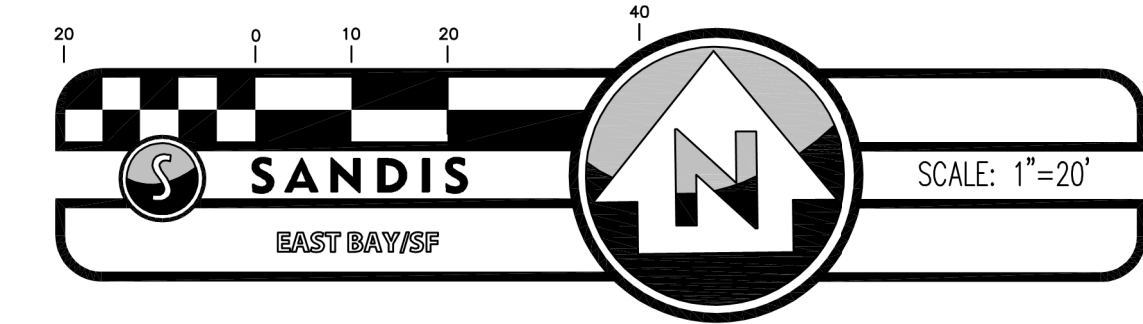
### SYMBOLS & ABBREVIATIONS

- AC ASPH ASPHALTIC CONCRETE
- ADR ACCESSIBLE CURB RAMP
- AD AREA DRAIN
- ANODE ANODE PULLBOX
- BFP BACK FLOW PREVENTOR
- BOL BOLLARD
- BW BACK OF WALK
- CB CATCH BASIN
- CLF CHAINLINK FENCE
- CLUST TREE CLUSTER
- COM-MH COMMUNICATION MANHOLE
- COM-PB COMMUNICATION PULLBOX
- CONC CONCRETE
- DI DRAIN INLET
- ELEC-MH ELECTRIC MANHOLE
- EP EDGE OF PAVEMENT
- EPB ELECTRIC PULLBOX
- FDC FIRE DEPARTMENT CONNECTION
- FG DOOR FINISHED GRADE AT DOOR
- FH FIRE HYDRANT
- FL FLOW LINE
- FLP FLOWLINE OF PIPE
- G GROUND
- GB GRADE BREAK
- GM GAS METER
- GV GAS VALVE
- HB HOSE BIBB
- H-SYM ACCESSIBLE SYMBOL
- IRR IRRIGATION CONTROL VALVE
- JB JUNCTION BOX
- LIP LIP OF GUTTER
- L/S LANDSCAPE
- MISC-CO MISCELLANEOUS CLEANOUT
- MISC-MH MISCELLANEOUS MANHOLE
- MISC-PB MISCELLANEOUS PULLBOX
- MISC-V MISCELLANEOUS VALVE
- OAK OAK TREE
- P PAVEMENT
- PALM PALM TREE
- PIV POST INDICATOR VALVE
- SDCO STORM DRAIN CLEANOUT
- SDMH STORM DRAIN MANHOLE
- SGN SIGN
- SPV SPRINKLER VALVE
- SSCO SANITARY CLEANOUT
- SSMH SANITARY MANHOLE
- STL-D STREET LIGHT DOUBLE ARM
- STL-S STREET LIGHT SINGLE ARM
- STPB STREET LIGHT PULLBOX
- SW SIDEWALK
- TC TOP OF CURB
- TOE TOE OF SLOPE
- TOP TOP OF SLOPE
- TRANS TRANSFORMER
- TREE TREE SYMBOL
- TYP TYPICAL
- VGUT FLOWLINE VALLEYGUTTER
- VLT ELEC. VAULT
- WM WATER METER
- WV WATER VALVE

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LEGEND

- SAWCUT
APPROXIMATE LIMIT OF DEMOLITION
DEMO AND REMOVE EX. ASPHALT PAVEMENT AND EX. BASE MATERIAL
DEMO AND REMOVE EX. CONCRETE AND BASE MATERIAL
CLEAR AND GRUB
DEMO & REMOVE EX. CURB AND GUTTER
PROTECT EXISTING UTILITY TO REMAIN
DEMO AND REMOVE EX. UTILITY STRUCTURE
EXISTING TREE TO BE REMOVED
PROTECT EXISTING TREE TO REMAIN

GENERAL NOTES

- A. EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LOCATIONS PRIOR TO DEMOLITION AND REPORT FINDINGS TO ENGINEER.
B. ALL EXISTING STRUCTURES AND UTILITIES ARE TO BE PROTECTED UNLESS OTHERWISE NOTED.
C. CONTRACTOR TO PLATE ALL OPEN TRENCHES AND MAINTAIN 20-FT WIDE ACCESS AISLE FOR SERVICE VEHICLES AT ALL TIMES EXCEPT WHEN EXCAVATION AND PIPE WORK ARE ON-GOING.
D. EXTENTS OF PAVEMENT REMOVAL FOR UTILITY TRENCHING IS SHOWN FOR CONTEXT ONLY. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL SURFACING NECESSARY TO PROPERLY INSTALL UTILITIES PER PLANS, DETAILS, AND SPECIFICATIONS.
E. ALL MATERIAL STOCKPILES ON SITE WILL BE REMOVED PRIOR TO CONSTRUCTION BY THE CAMPUS M&O STAFF.
F. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES. RESTORE TO EXISTING FINISH CONDITION UNLESS OTHERWISE DEPICTED.

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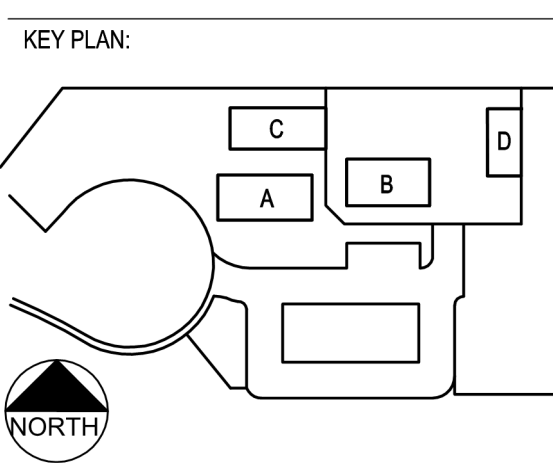


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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:
DATE 10/30/2020
MICHAEL A. KUYKENDALL
REGISTERED PROFESSIONAL ENGINEER
No. 70870
Exp. 6/30/21
R.C.E. NO. 70870, EXPIRES 6/30/21

SANDIS CIVIL ENGINEERS
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636 Ninth Street | Oakland, CA 94607 | P. 510.873.8866 | www.sandis.net
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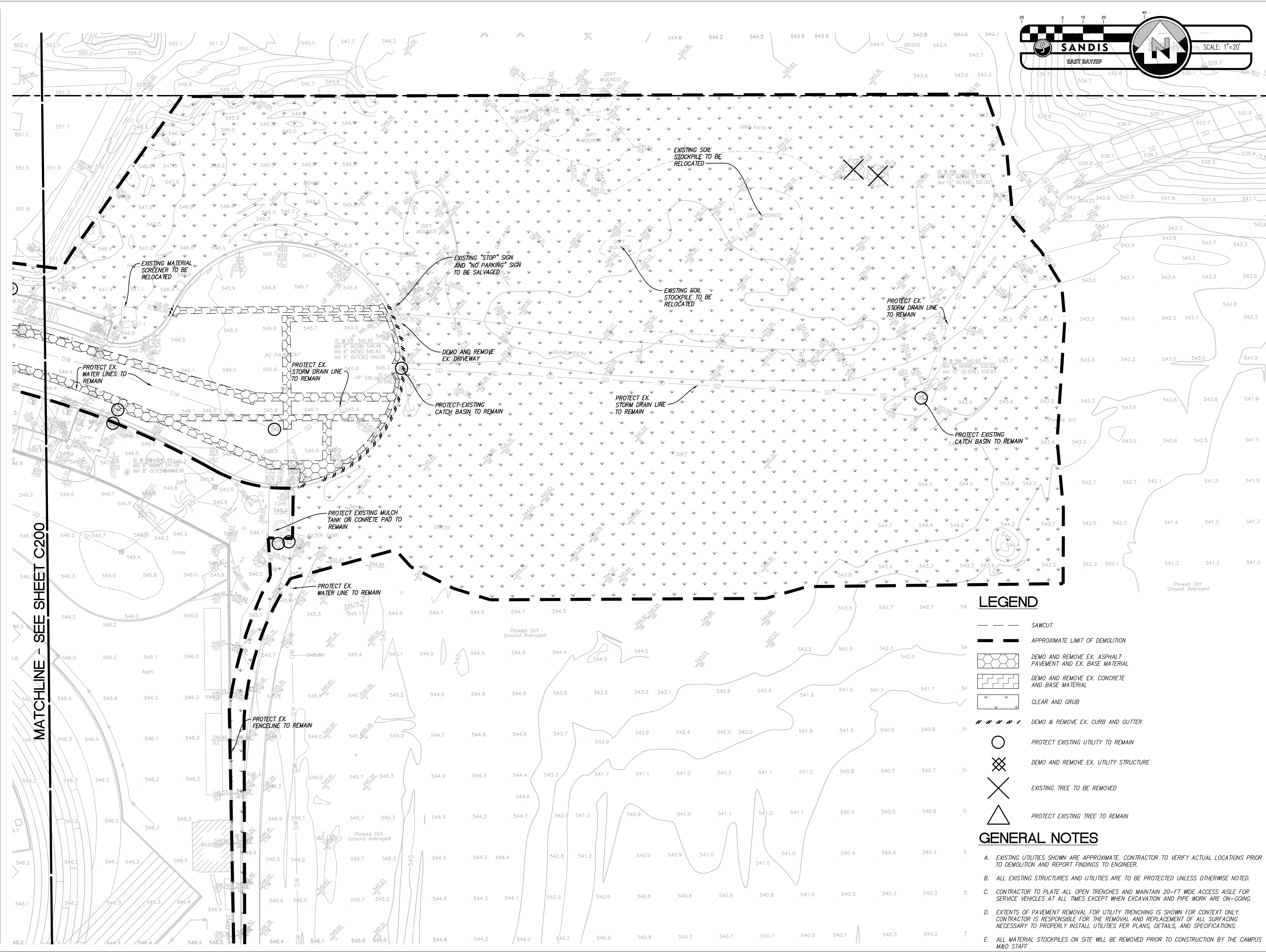
CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

DEMOLITION PLAN

DRAWN BY: JR CHECKED BY: IW
DATE: 01/14/2021 PROJECT NO: C9508
SHEET NO:

C200

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SCALE: 1"=20'

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DATE: 10/30/2020

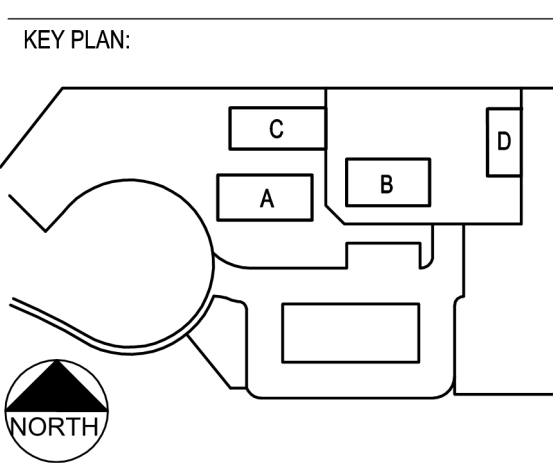
MICHAEL A. KUYKENDALL  
R.C.E. NO. 70870, EXPIRES 6/30/21

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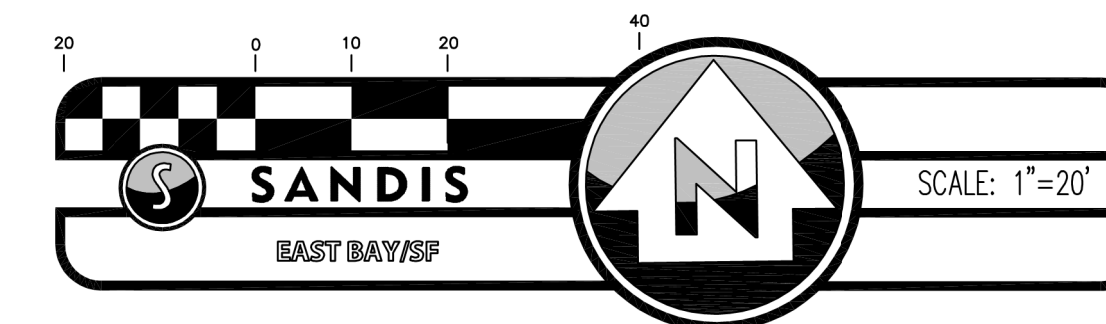
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AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**DEMOLITION PLAN**

DRAWN BY: JR CHECKED BY: IW  
DATE: 01/14/2021 PROJECT NO: C9908  
SHEET NO:

**C201**



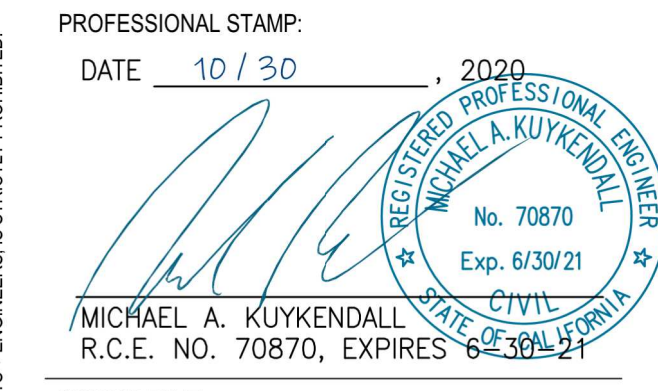


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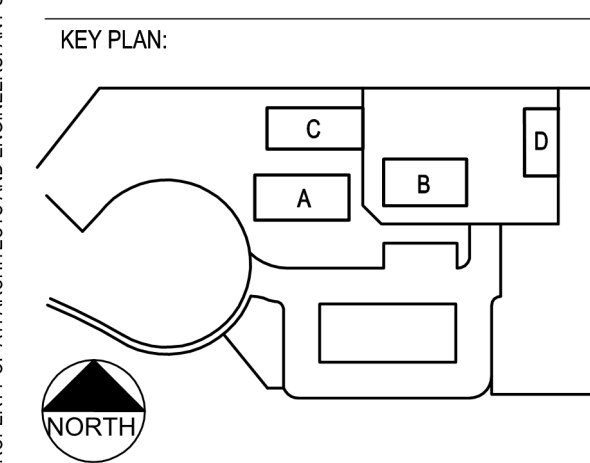
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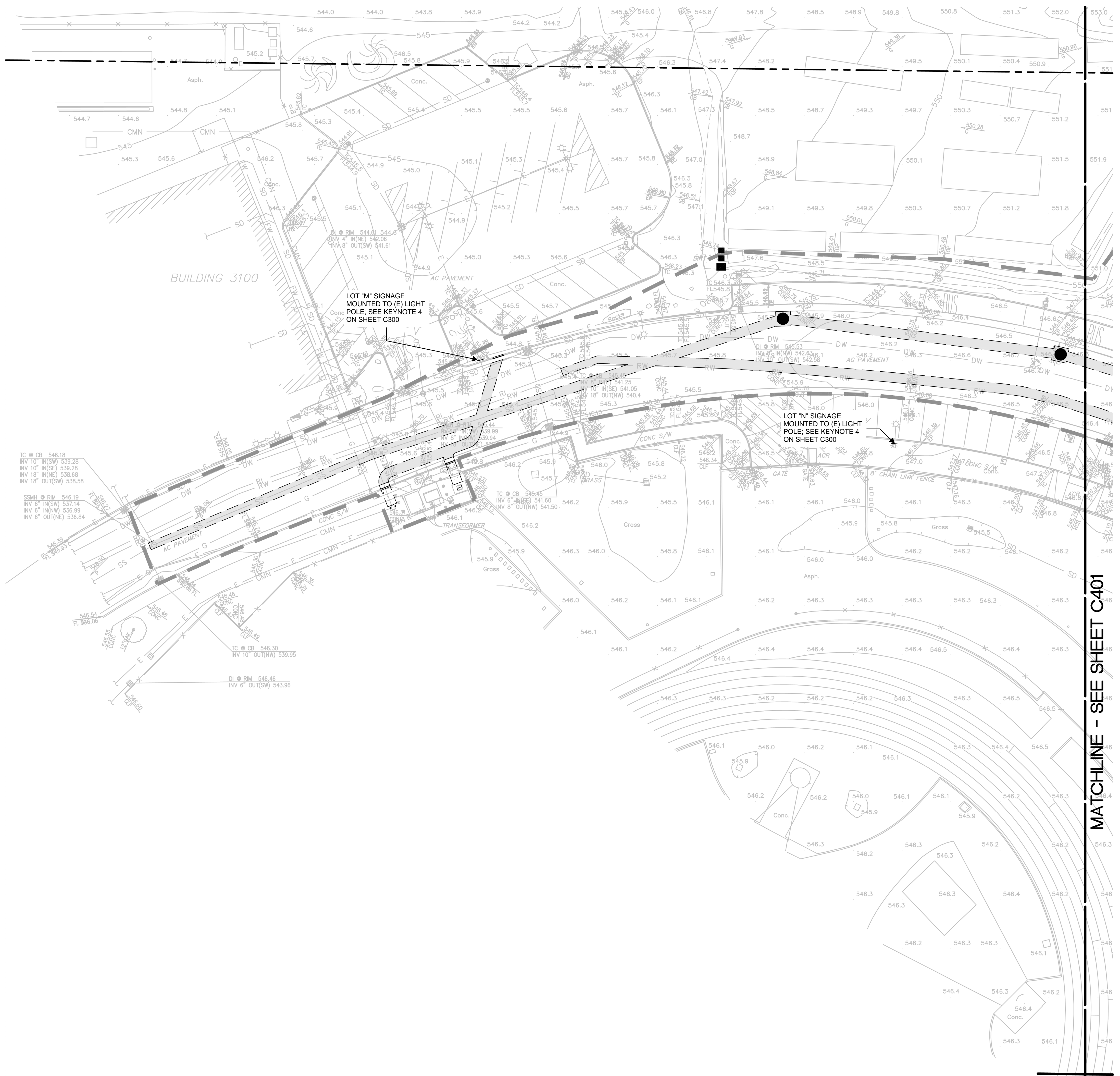


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 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**GRADING AND DRAINAGE PLAN**

DRAWN BY: JR CHECKED BY: IW  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**C400**



**LEGEND**

- FENCE, SEE LANDSCAPE PLANS FOR DETAILS
- PROPERTY LINE
- APPROXIMATE LIMIT OF WORK
- SAWCUT LINE
- DIRECTION OF STEEP SLOPE
- FLOW LINE
- GRADE BREAK
- PROPOSED CONTOURS
- EX. CONTOURS
- AC PAVEMENT (1) C800
- VEHICULAR CONCRETE (3) C800
- CONCRETE SIDEWALK (2) C800
- DECOMPOSED GRANITE PAVING, SEE LANDSCAPE PLANS FOR DETAILS. (5) C801
- PERVIOUS CONCRETE (5) C801
- PERVIOUS PAVERS (4) C801
- CRUSHED STONE PAVING, SEE LANDSCAPE PLANS FOR DETAILS.
- BIO-RETENTION AREA (1) C804
- DEEP LIFT (2) C801

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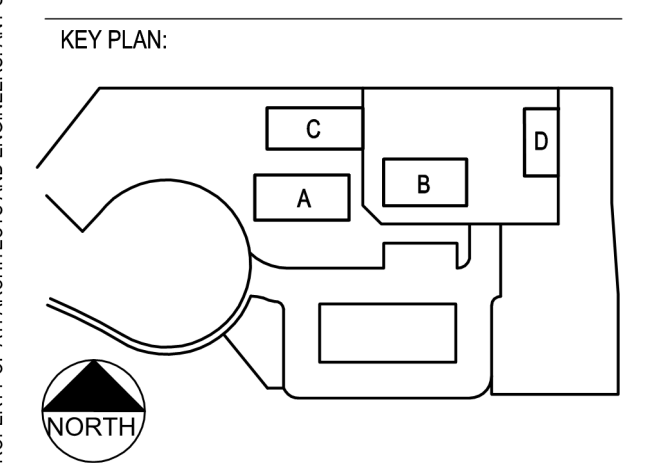
REGISTERED PROFESSIONAL ENGINEER  
 MICHAEL A. KUYKENDALL  
 R.C.E. NO. 70870, EXPIRES 6/30/21

CONSULTANT:

**SANDIS** CIVIL ENGINEERS  
 SURVEYORS & PLANNERS

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 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**GRADING AND  
 DRAINAGE PLAN**

DRAWN BY: JR CHECKED BY: IW  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

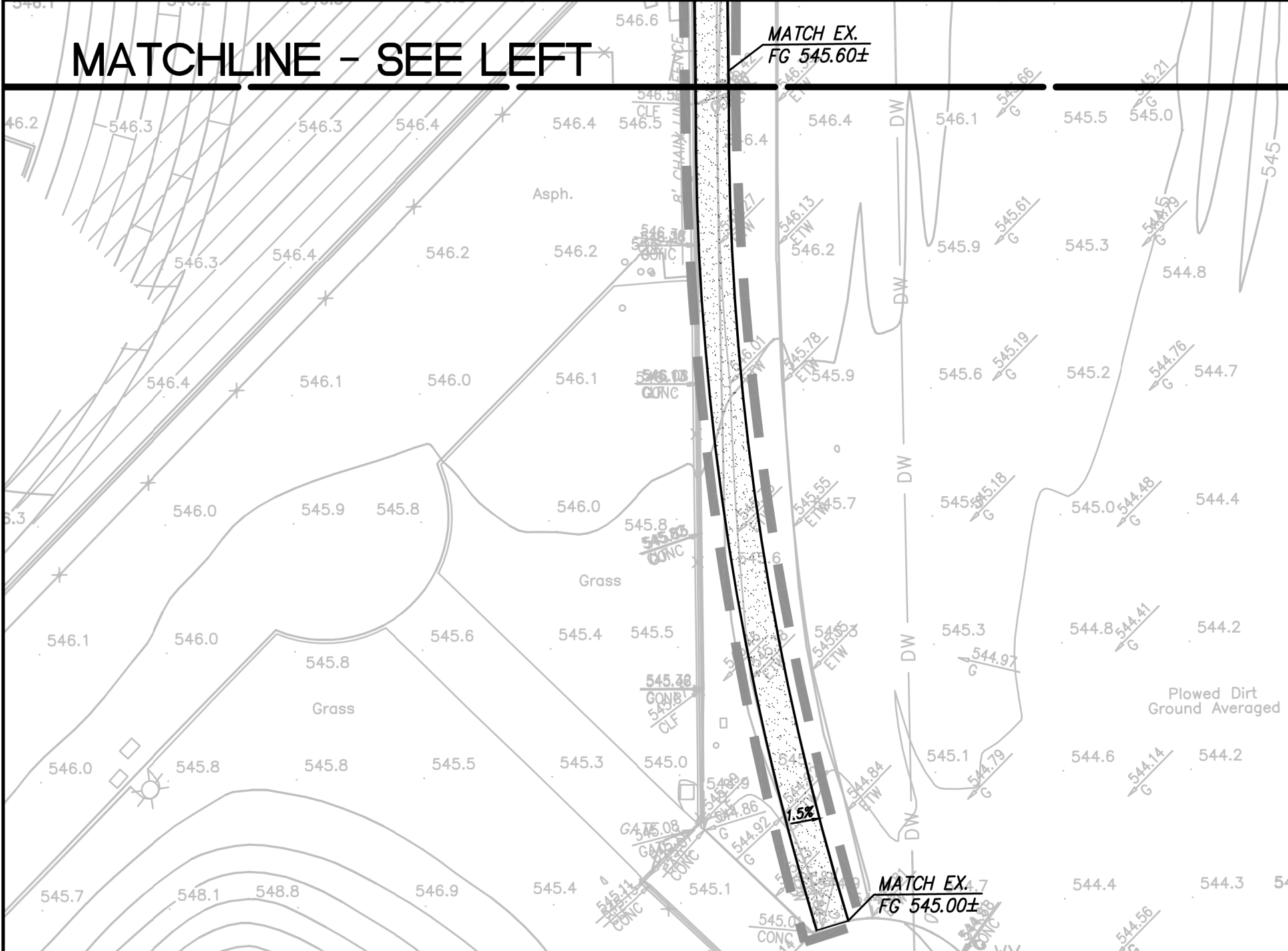
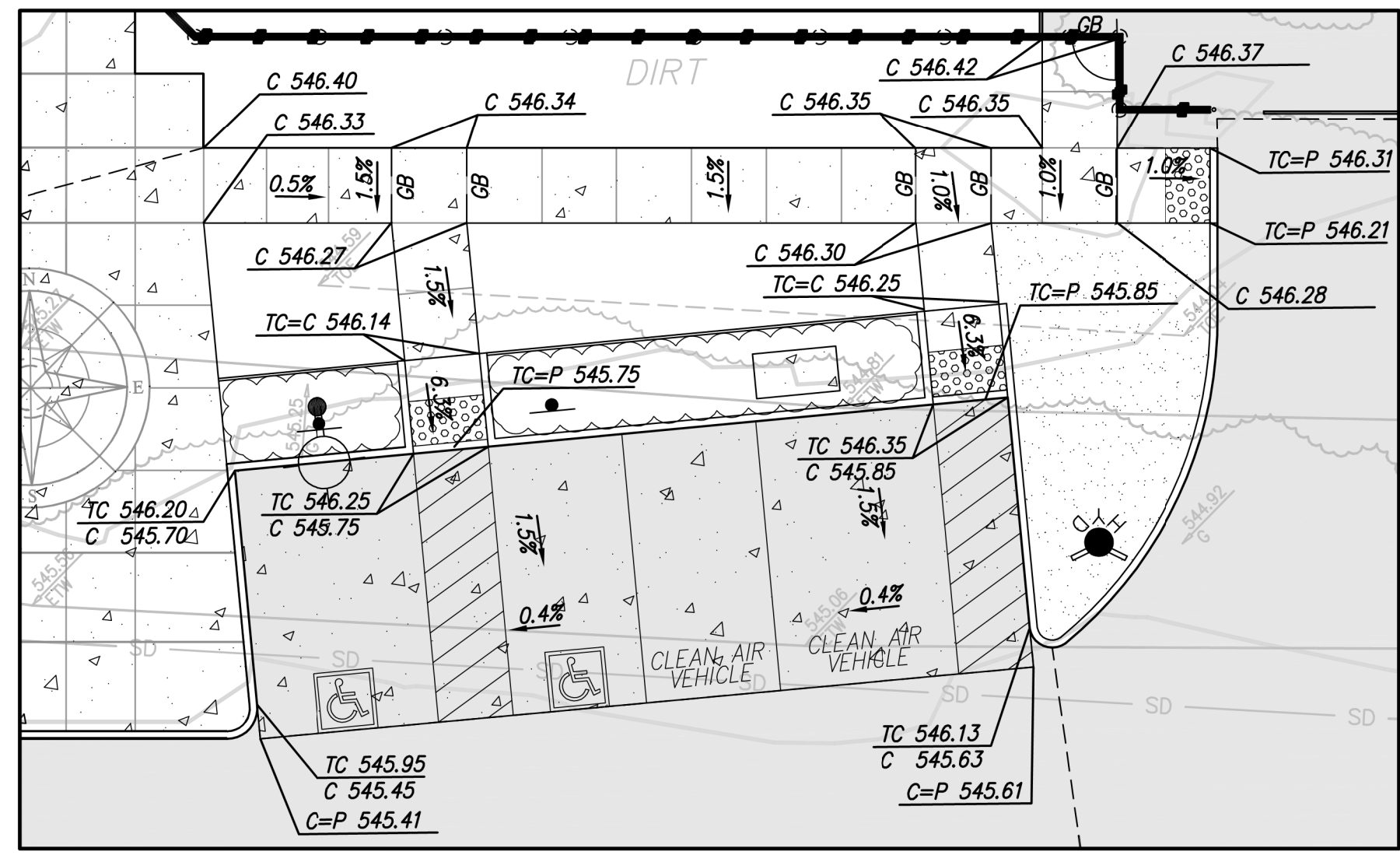
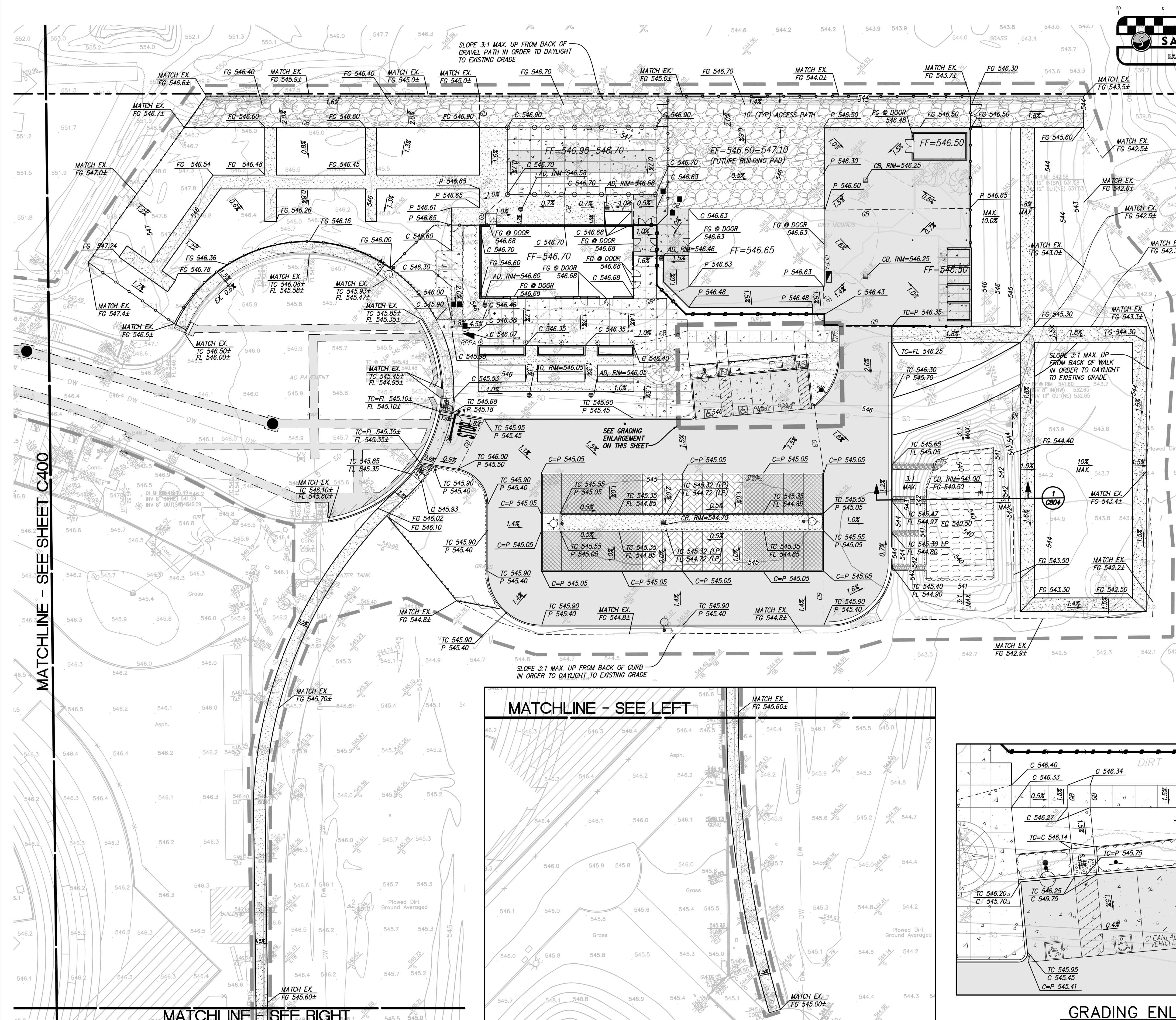
**C401**

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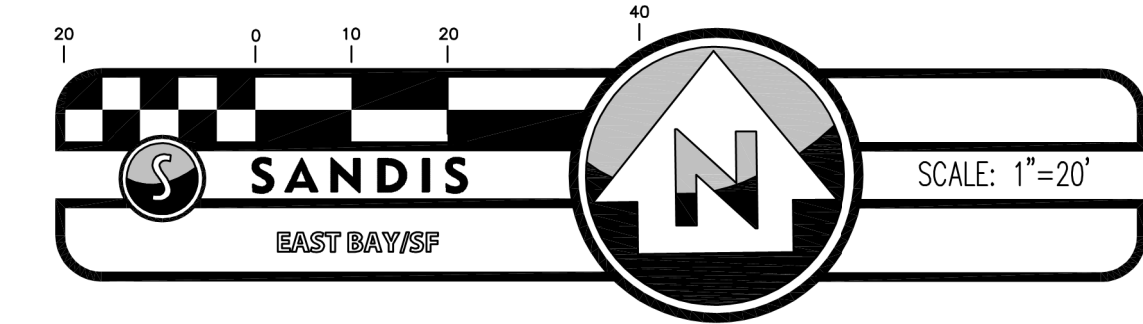
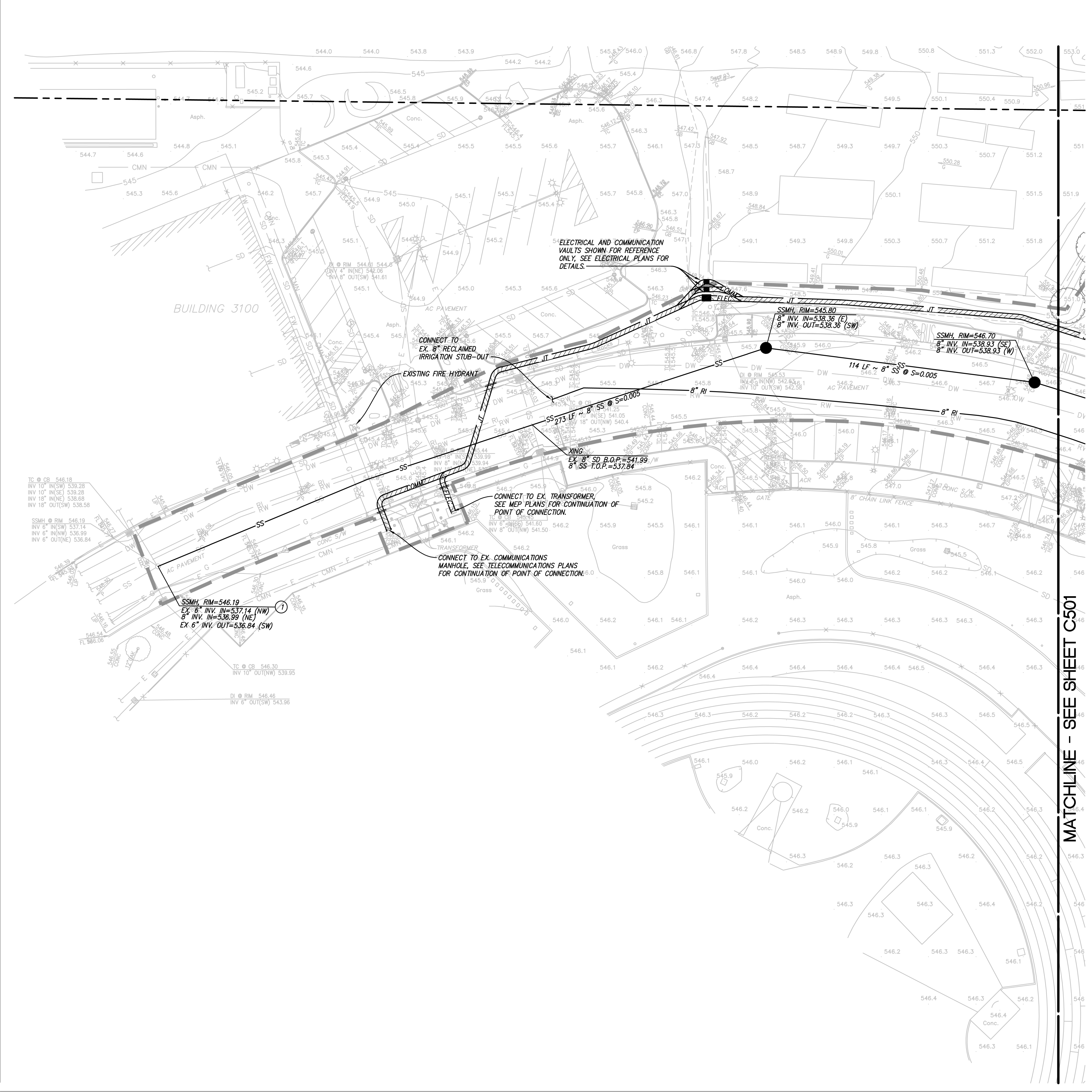
- FENCE, SEE LANDSCAPE PLANS FOR DETAILS
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- SAWCUT LINE
- DIRECTION OF STEEP SLOPE
- FLOW LINE
- GRADE BREAK
- PROPOSED CONTOURS
- EX. CONTOURS
- AC PAVEMENT (1) (C800)
- VEHICULAR CONCRETE (3) (C800)
- CONCRETE SIDEWALK (2) (C800)
- DECOMPOSED GRANITE PAVING, SEE LANDSCAPE PLANS FOR DETAILS.
- PERVIOUS CONCRETE (5) (C801)
- PERVIOUS PAVERS (4) (C801)
- CRUSHED STONE PAVING, SEE LANDSCAPE PLANS FOR DETAILS.
- BIO-RETENTION AREA (1) (C804)
- DEEP LIFT (2) (C801)



MATCHLINE - SEE SHEET C400

MATCHLINE - SEE RIGHT

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 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
 DATE: 10/30/2020

MICHAEL A. KUYKENDALL  
 R.C.E. No. 70870, EXPIRES 6/30/21

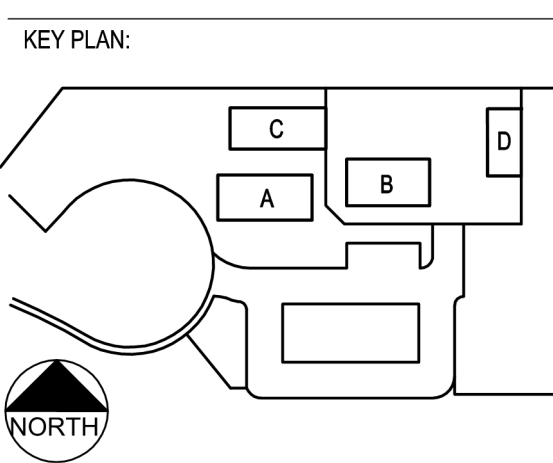
CONSULTANT:

**SANDIS** CIVIL ENGINEERS  
 SURVEYORS  
 PLANNERS

636 Ninth Street | Oakland, CA 94607 | P. 510.873.8866 | www.sandis.com

**EAST BAY/SF**

ITEM	REVISION / ISSUE	DATE



CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**UTILITY PLAN**

DRAWN BY: JR CHECKED BY: IW  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**C500**

**STORM DRAIN NOTES**

- PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 GREEN PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELLS AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS, 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
- PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, OBTUSE ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
- ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
- ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES. RESTORE TO EXISTING FINISH CONDITION UNLESS OTHERWISE DEPICTED.
- FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
- DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- INSTALL SEPARATE SUB-DRAIN SYSTEM BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT AND CONNECT TO STORM DRAIN SYSTEM AS SHOWN ON PLANS.
- ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT PERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.
- REFER STRUCTURAL DRAWING S-701 FOR DETAIL ON DRAINS CONSTRUCTED UNDER CLASSROOM BUILDINGS STRUCTURAL TIE BEAMS

**SANITARY SEWER NOTES**

- ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT STANDARDS.
- PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH BELL AND SPIGOT CONNECTIONS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45° ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
- ALL LATERALS SHALL HAVE A TWO WAY CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS.
- IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL VIDEO INSPECT, PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS.
- REFER STRUCTURAL DRAWING S-701 FOR DETAIL ON DRAINS CONSTRUCTED UNDER CLASSROOM BUILDINGS STRUCTURAL TIE BEAMS

**WATER SYSTEM NOTES**

- MAINTAIN WATER MAIN LINES 10' AWAY FROM SANITARY SEWER MAIN LINES. LATERALS SHALL BE SEPARATED PER PLAN DIMENSIONS.
- WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER LINES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES.
- ALL WATER SERVICE CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE WATER DISTRICT STANDARDS.
- ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER.
- THRUST RESTRAINTS SHALL BE DESIGNED AND INSTALLED AT ALL TEES, CROSSES, BENDS (HORIZONTAL AND VERTICAL), AT SIZE CHANGES AND AT FIRE HYDRANTS.
- WATER UTILITIES CROSSING UNDER CLASSROOM BUILDINGS STRUCTURAL TIE BEAMS ARE TO BE CONSTRUCTED WITH MIN. 1' COVER BELOW BASE OF TIE BEAM
- CONTRACTOR TO COORDINATE WITH CAMPUS FACILITY STAFF FOR ASSIGNING IDENTIFICATION NUMBERS TO WATER VALVE BOX LIDS.

**UTILITY NOTES:**

- CONNECT TO EXISTING SANITARY SEWER MANHOLE. CONTRACTOR TO CONFIRM IN FIELD BEFORE CONSTRUCTION. AS-BUILT DOCUMENTS INDICATE EXISTING SANITARY SEWER LINE IS SLOPED AT 2% AND STUBBED OUT. PROJECT PROPOSES TO DEMO AND REBUILDING EXISTING SANITARY SEWER LINE AT SLOPE 1%. CONTRACTOR TO POTHOLE AND CONFIRM EXISTING SANITARY SEWER LINE LOCATION AND INVERT. REPORT FINDINGS TO ENGINEER.

**GENERAL NOTES**

- CONSTRUCT SDCO AND SSCO PER DETAIL 4, SHEET C802.
- CONSTRUCT CATCH BASIN PER DETAIL 2, SHEET C802.
- CONSTRUCT AREA DRAIN PER DETAIL 1, SHEET C802.

























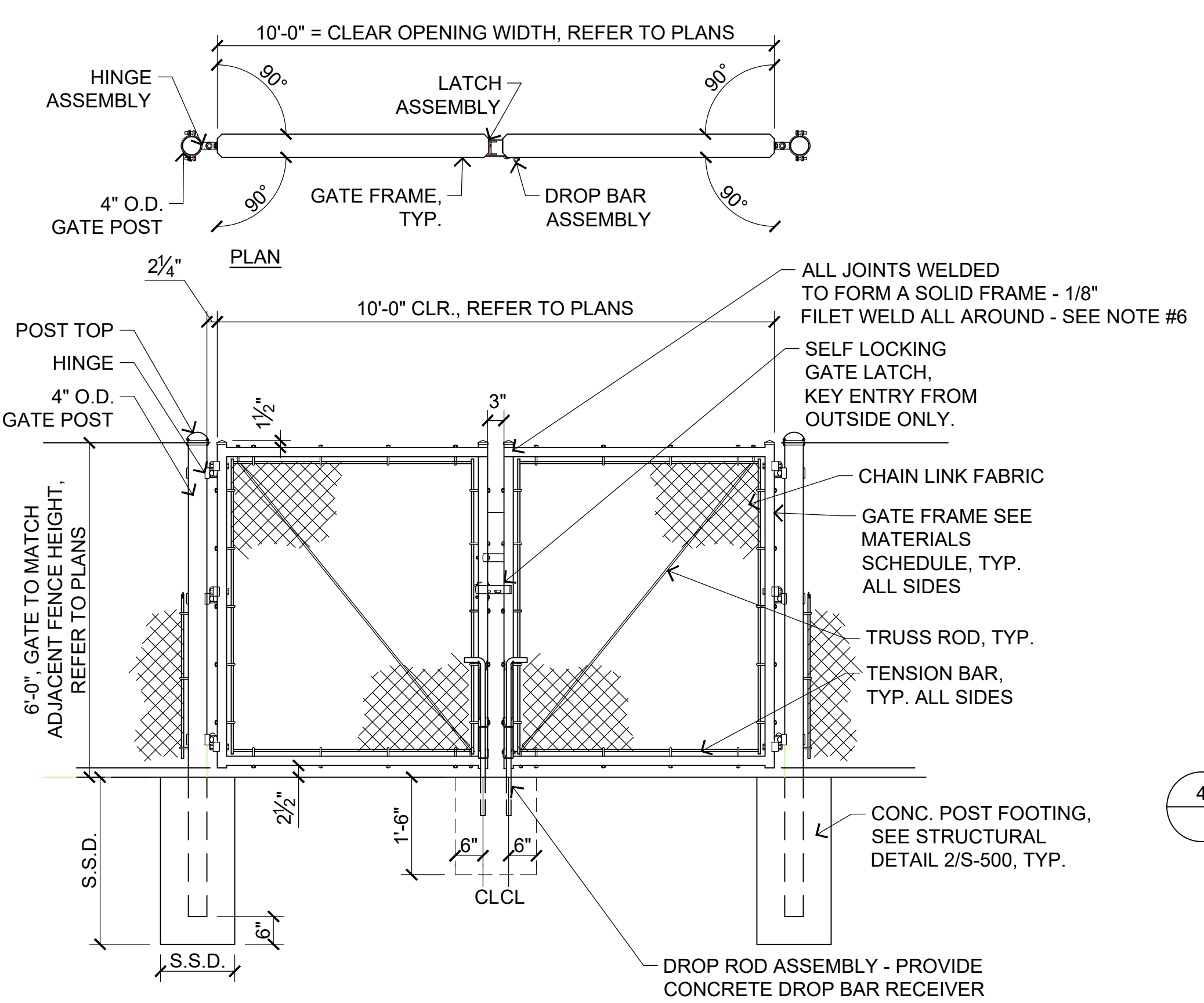








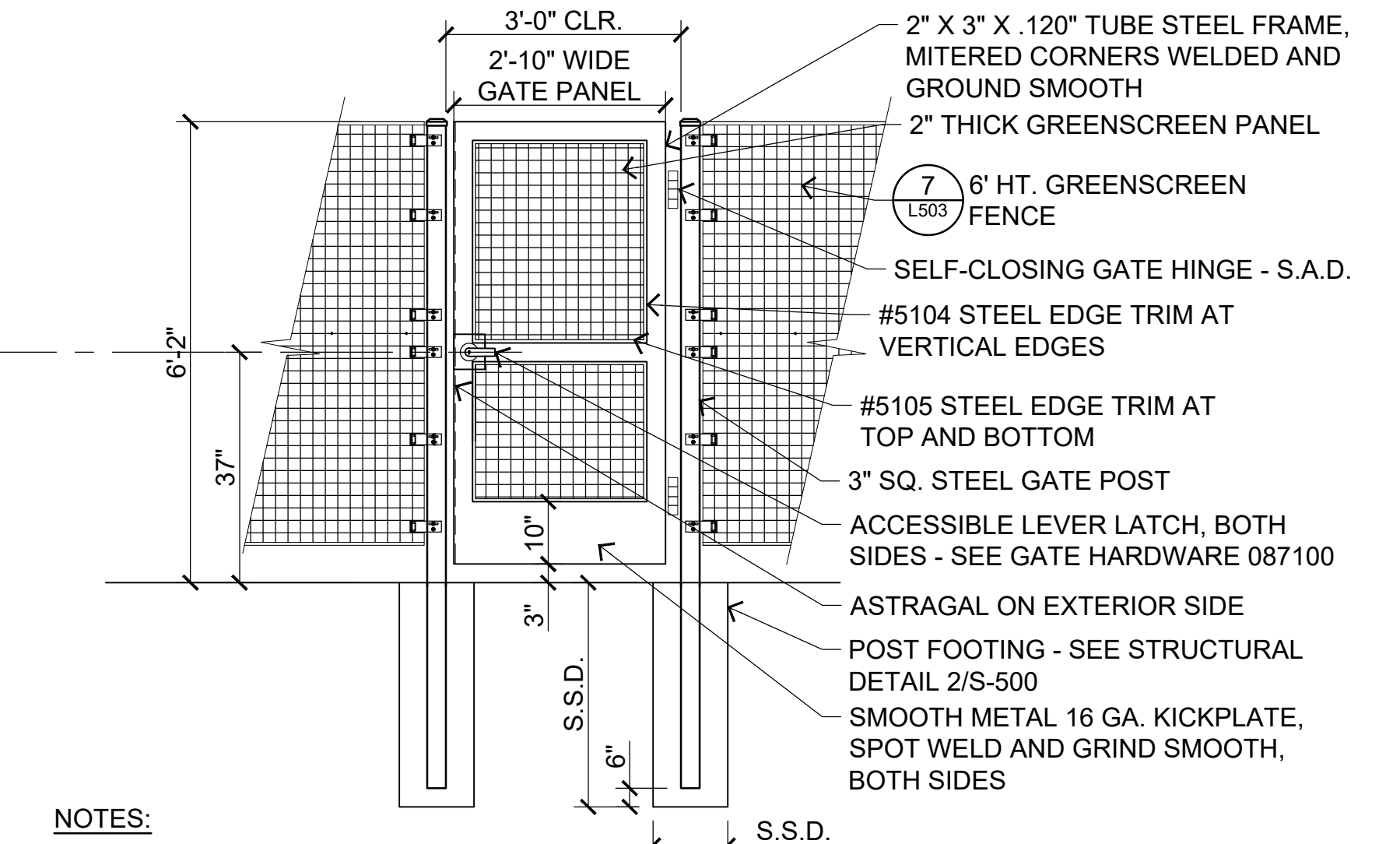




**NOTES:**

1. PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION. INCLUDE ALL HARDWARE TYPES AND MANUFACTURER'S INFORMATION WITHIN SHOP DRAWINGS.
2. SWING GATE SHALL BE INDUSTRIAL DOUBLE SWING GATE, MANUFACTURED BY MASTER HALCO
3. SEE LAYOUT PLANS FOR GATE POST LOCATIONS.
4. ALL TUBULAR STEEL ELEMENTS SHALL HAVE A MINIMUM 1/4" WALL THICKNESS.
5. SEE STRUCTURAL DRAWINGS FOR POST AND FOOTING INFORMATION.
6. ALL WELDS TO BE GROUND SMOOTH AND FINISHED TO MATCH GATE.

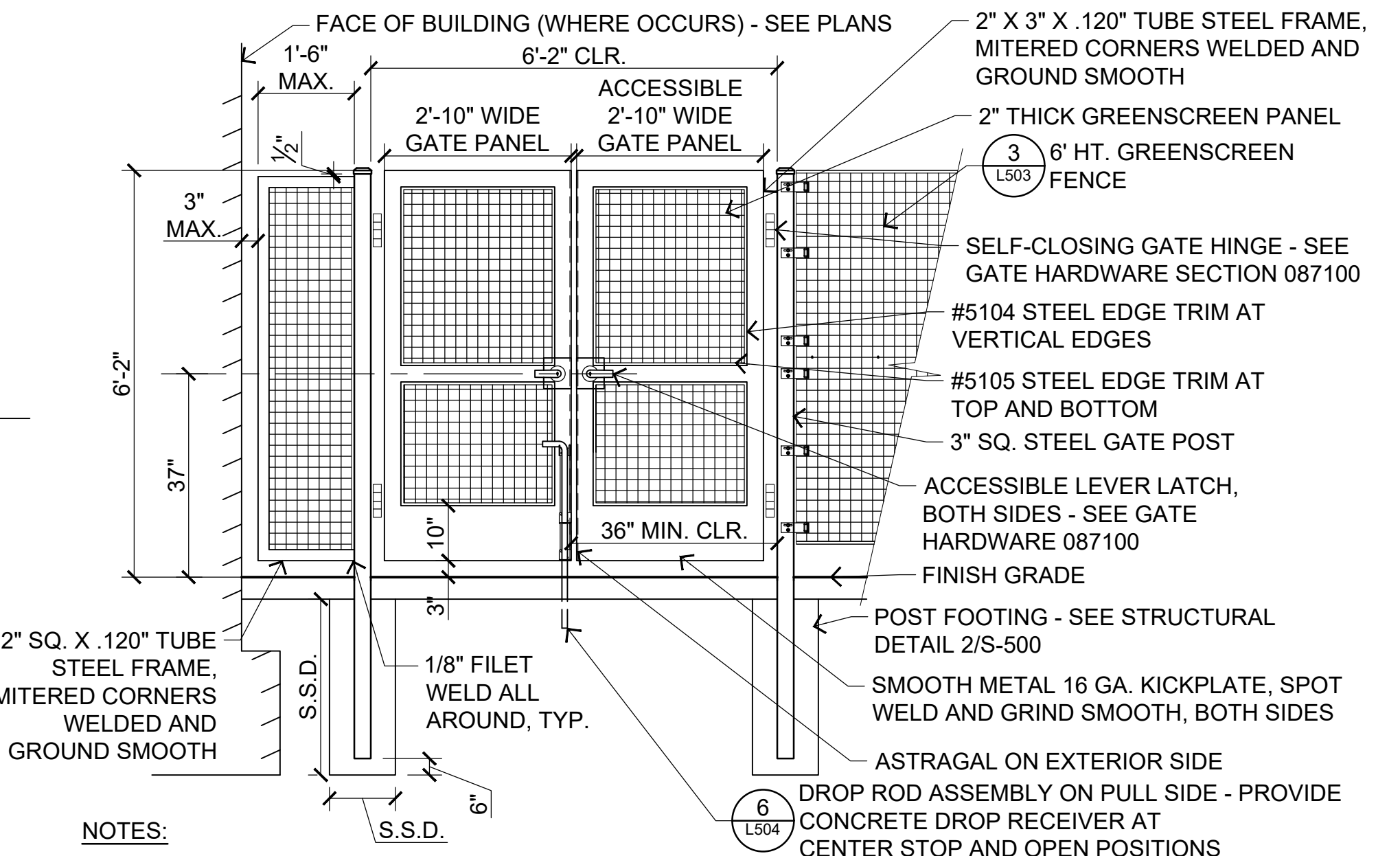
**6 6' HT. DOUBLE VEH. C.L. GATE**  
SCALE: 1/2"-1'-0"



**NOTES:**

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION FOR APPROVAL BY THE DISTRICT. CONTRACTOR SHALL INCLUDE ALL HARDWARE TYPES AND MANUFACTURER'S INFORMATION WITHIN SHOP DRAWINGS.
2. ALL GATE HARDWARE TO BE COMMERCIAL/INDUSTRIAL QUALITY. ALL GATE HINGE HARDWARE TO HAVE A 90 DEGREE TURNING ANGLE.

**4 6' HT. SINGLE PED. GREENSCREEN EGRESS GATE**  
SCALE: 1/2"-1'-0"

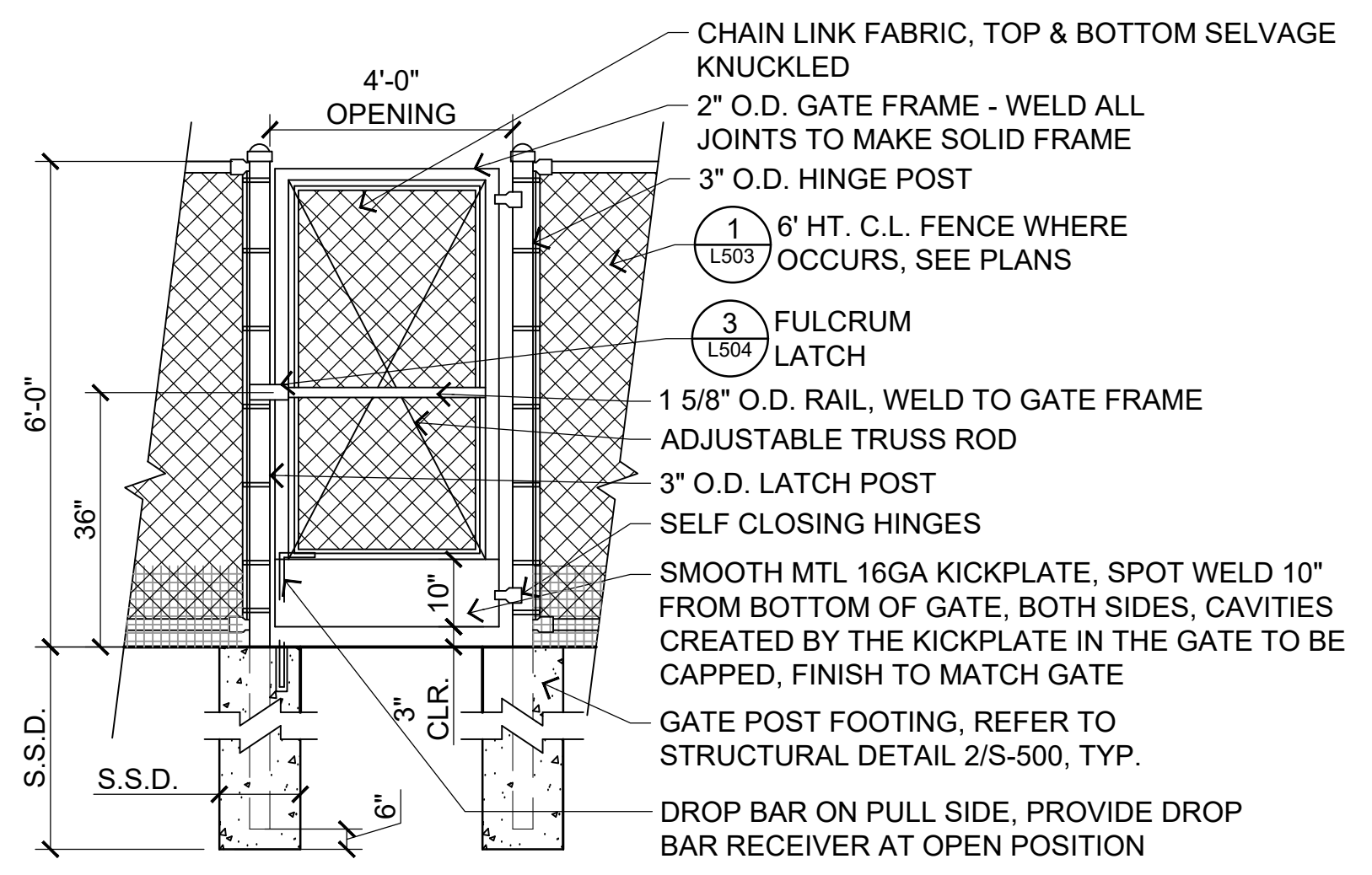


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2. ALL GATE HARDWARE TO BE COMMERCIAL/INDUSTRIAL QUALITY. ALL GATE HINGE HARDWARE TO HAVE A 90 DEGREE TURNING ANGLE.

**5 6' HT. DOUBLE PED. GREENSCREEN GATE**  
SCALE: 1/2"-1'-0"

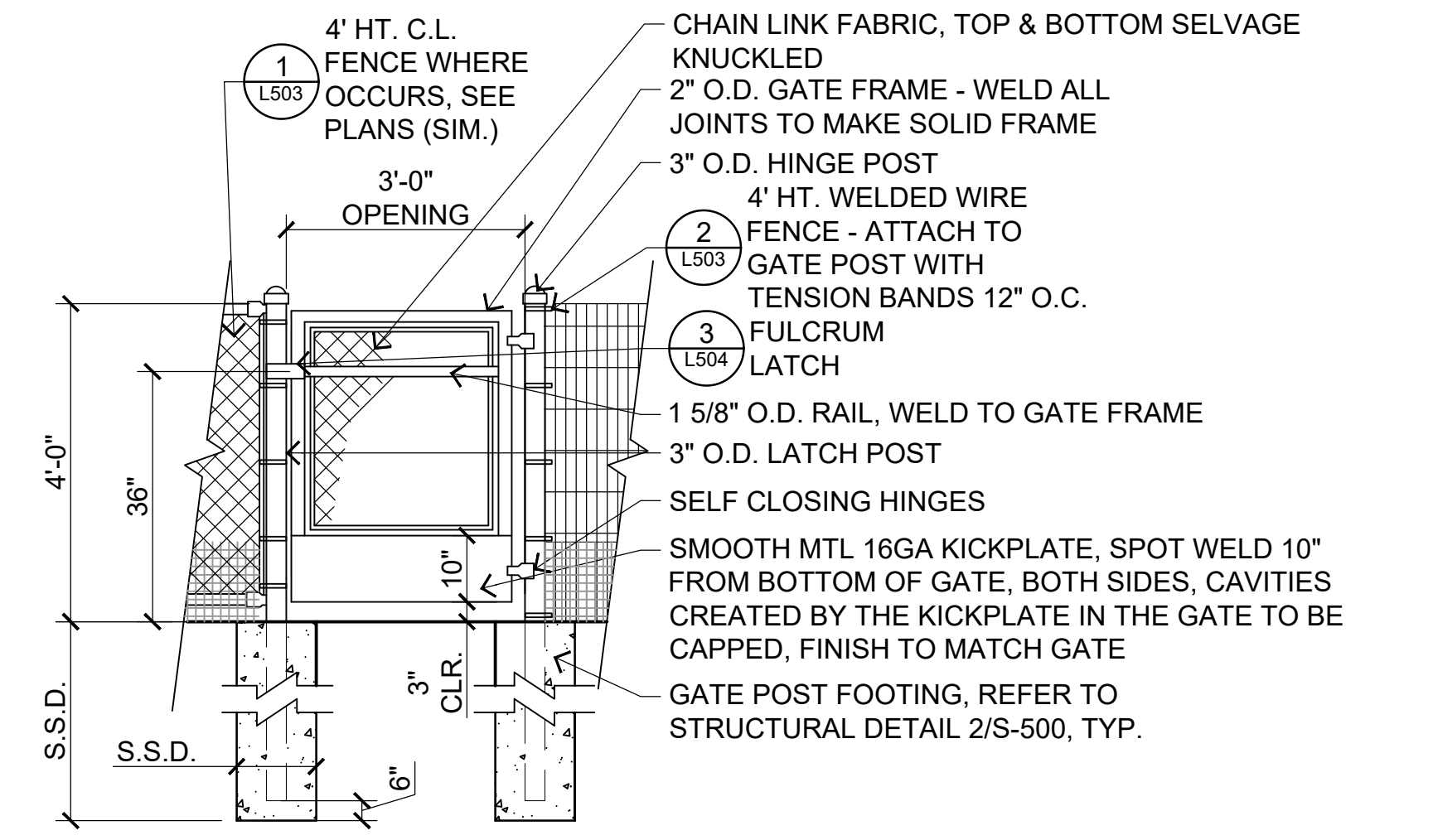
**NOTE:** GRIND ALL WELDS SMOOTH AND FINISH TO MATCH GATE



**NOTES:**

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION FOR APPROVAL BY THE DISTRICT. CONTRACTOR SHALL INCLUDE ALL HARDWARE TYPES AND MANUFACTURER'S INFORMATION WITHIN SHOP DRAWINGS.
2. ALL GATE HARDWARE TO BE COMMERCIAL/INDUSTRIAL QUALITY. ALL GATE HINGE HARDWARE TO HAVE A 180 DEGREE TURNING ANGLE.

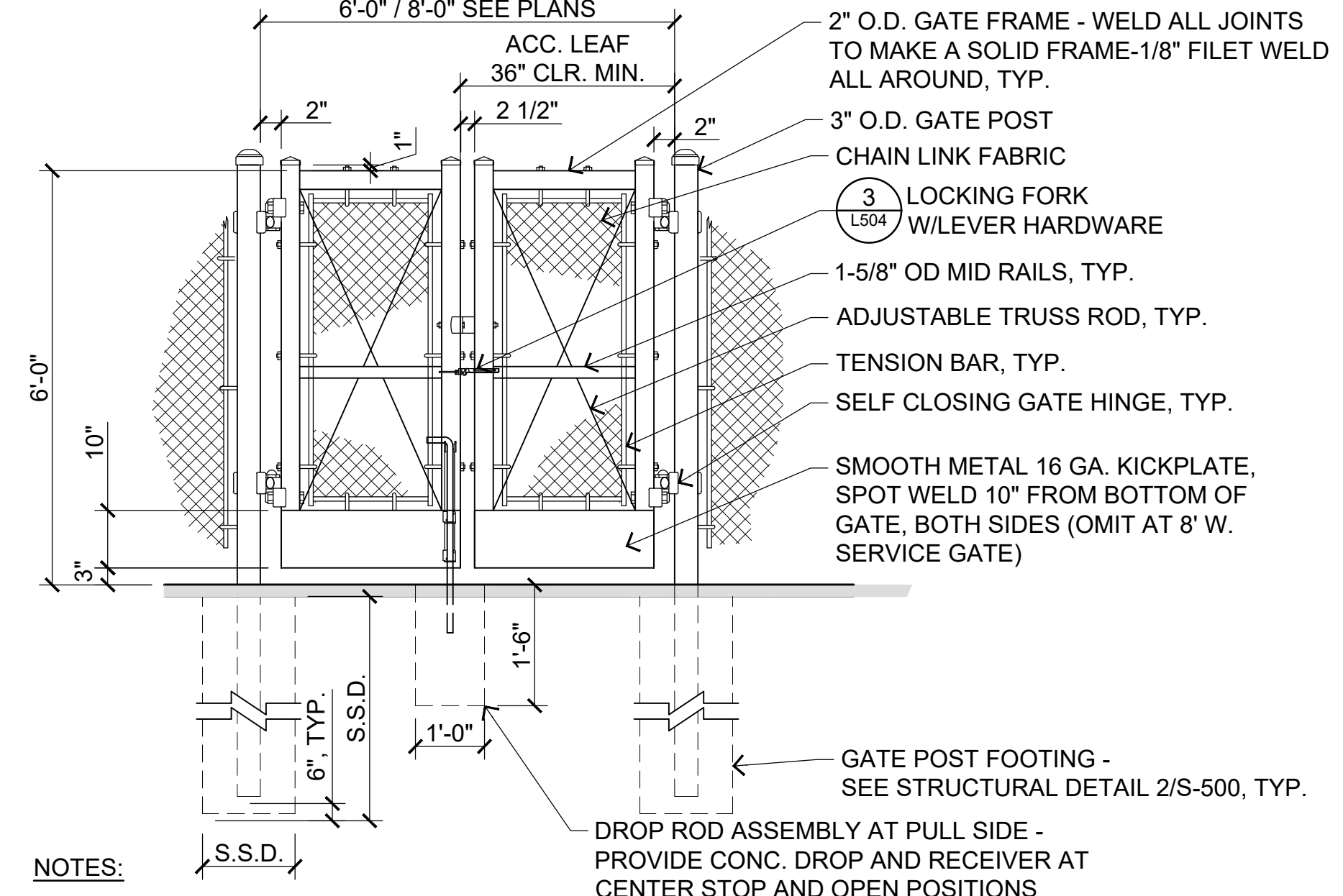
**7 6' HT. X 4' W. SINGLE PED. SERVICE C.L. GATE**  
SCALE: 1/2"-1'-0"



**NOTES:**

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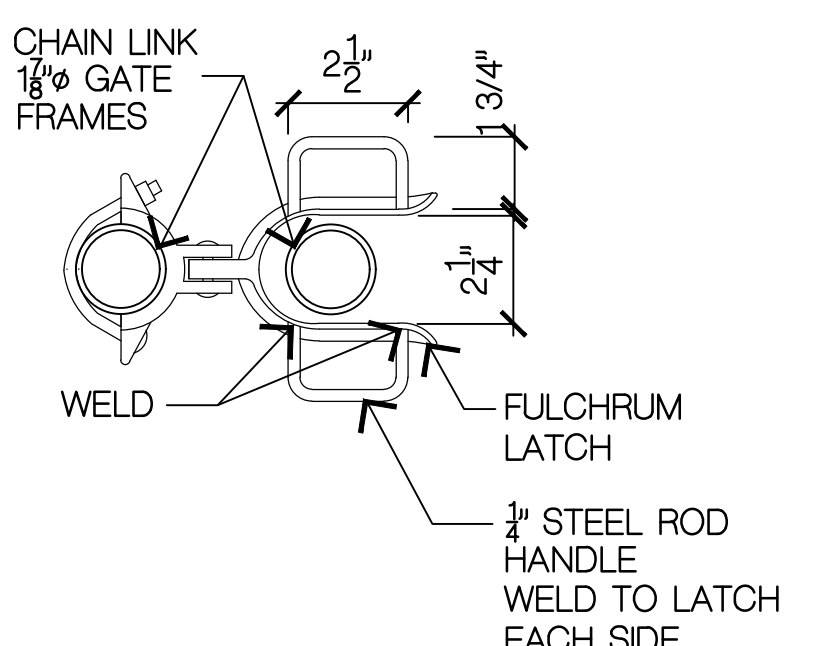
**1 4' HT. X 3' W. SINGLE PED. C.L. GATE**  
SCALE: 1/4"-1'-0"



**NOTES:**

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO CONSTRUCTION FOR APPROVAL BY THE DISTRICT. CONTRACTOR SHALL INCLUDE ALL HARDWARE TYPES AND MANUFACTURER'S INFORMATION WITHIN SHOP DRAWINGS.
2. ALL GATE HARDWARE TO BE COMMERCIAL/INDUSTRIAL QUALITY. ALL GATE HINGE HARDWARE TO HAVE A 180 DEGREE TURNING ANGLE.
3. GRIND ALL WELDS SMOOTH AND FINISH TO MATCH GATE.

**2 6' HT. DOUBLE PED. C.L. GATE**  
SCALE: 1/2"-1'-0"



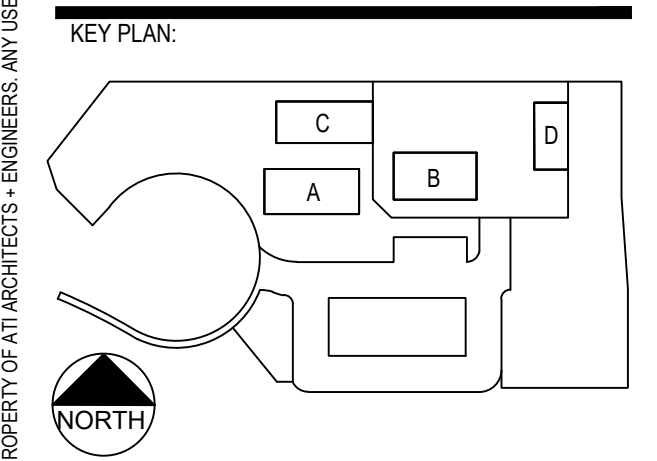
**3 ACCESSIBLE LATCH DROP FORK**  
SCALE: 1/2"-1'-0"

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC.  
REVIEWED FOR:  
SS  FLS  ACS   
DATE: 01/19/2021

PROFESSIONAL STAMP:  
Keller Mitchell & Co. Landscape Architecture  
302 Fourth Street  
Oakland, CA 94607  
510/451-9887

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**LANDSCAPE DETAILS**

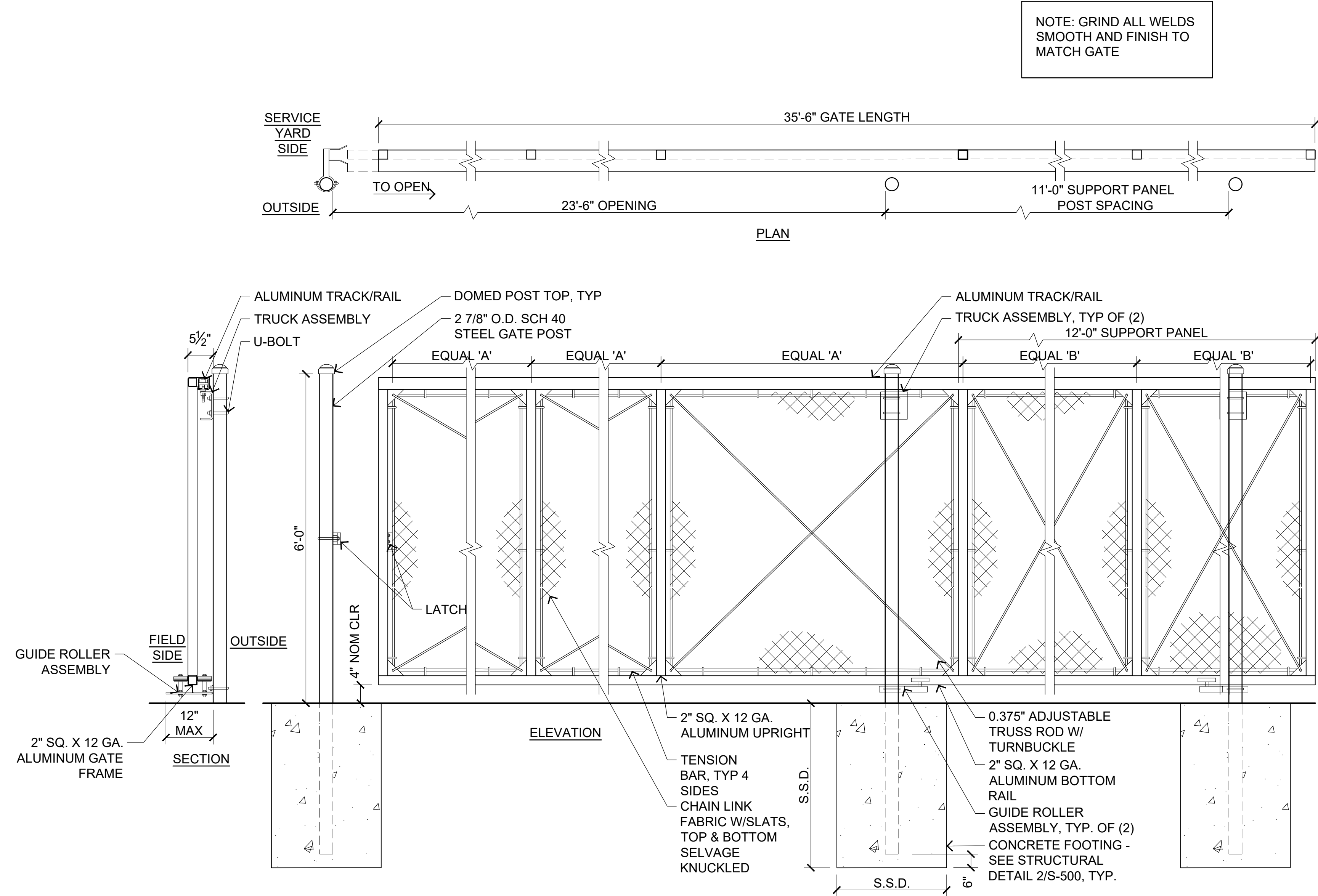
DRAWN BY: CHECKED BY:  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**L504**

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1 6' HT. VEHICULAR CANTILEVER SLIDING C.L. GATE  
SCALE: 3/4"-1'-0"

DSA:

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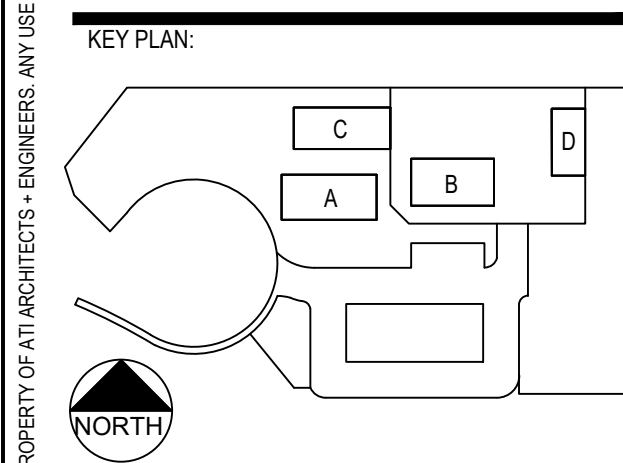
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+ ENGINEERS  
AN AC MARTIN COMPANY

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444 S Flower St #1200, Los Angeles, CA 90011 - T 714 538 1600

PROFESSIONAL STAMP:  
C 23260  
Exp: Apr.30, 2021

CONSULTANT:  
**KELLER MITCHELL & CO.**  
Landscape Architecture  
302 Fourth Street  
Oakland, CA 94607  
510/451-9987

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CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
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LIVERMORE, CA 94551

**LANDSCAPE DETAILS**

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DATE: 01/14/2021                          PROJECT NO: C9508  
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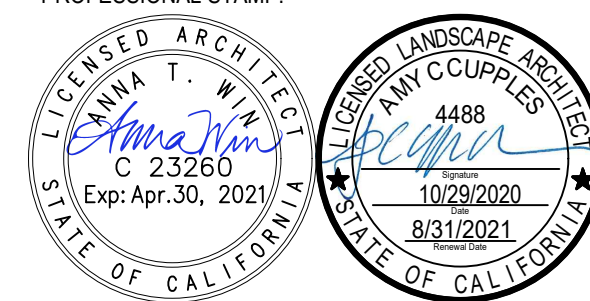
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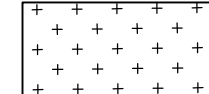
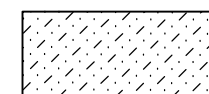
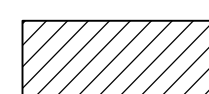


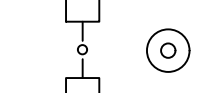



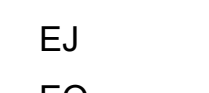

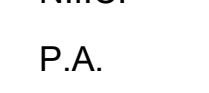
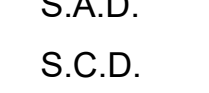
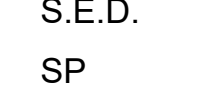
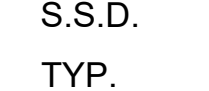



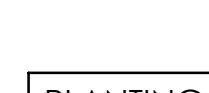
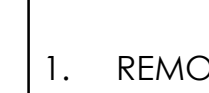
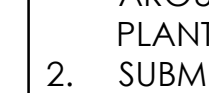
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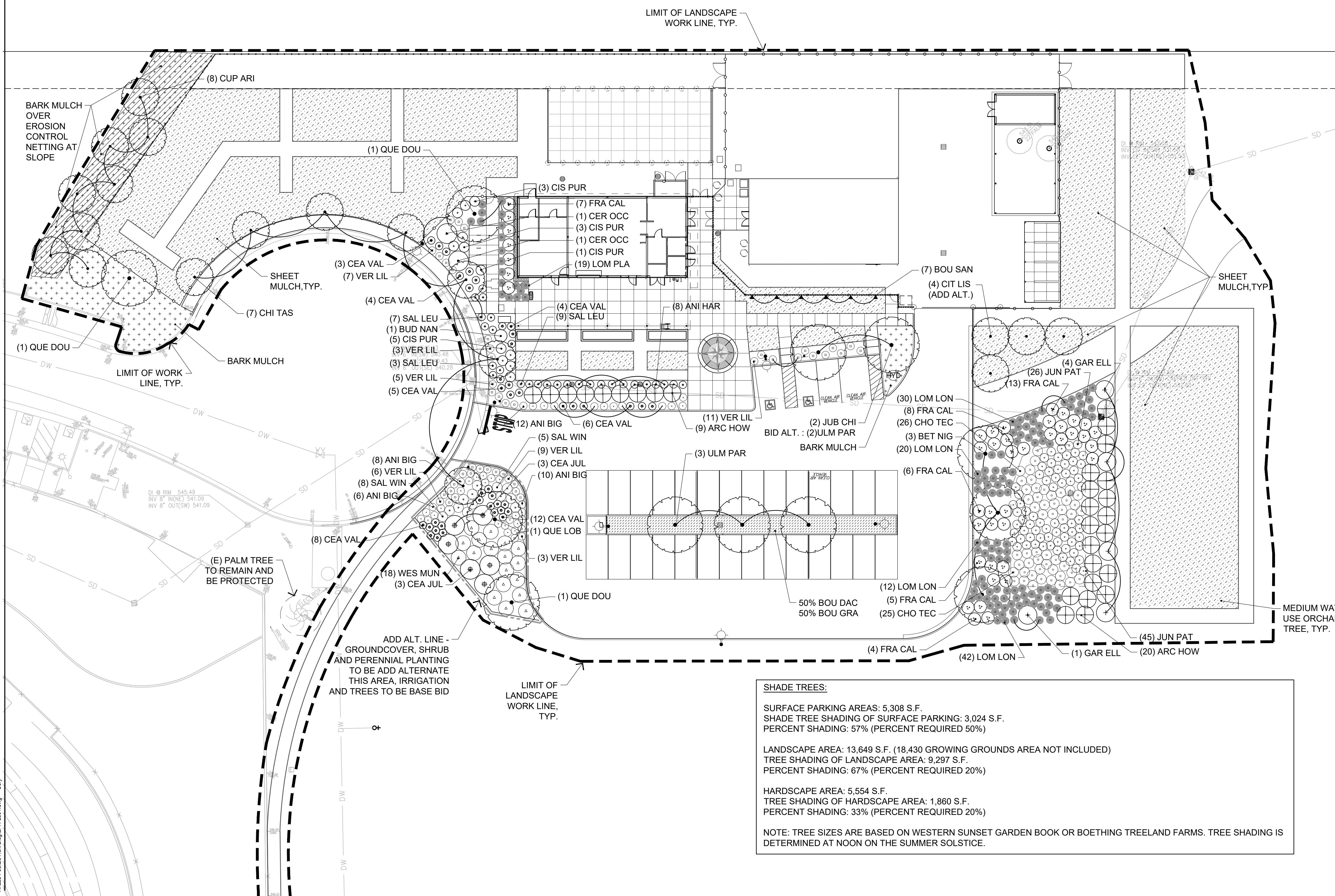
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 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  


CONSULTANT:  
  
**KELLER MITCHELL & CO.**  
 Landscape Architecture  
 302 Fourth Street  
 Oakland, CA 94607  
 510/451-9987

LEGEND:

-  BARK MULCH
-  3" DEPTH BARK MULCH & SHEET MULCHING
-  EROSION CONTROL NETTING
-  PROPOSED TREE
-  ALIGN
-  POLE LIGHT, S.E.D.
-  DRAIN INLET, S.C.D.
-  UTILITY COVER, S.C.D.
-  WHEELCHAIR CLEAR ZONE - 30" W. X 48" D.
-  TRASH/RECYCLING RECEPTACLES
-  EXPANSION JOINT
-  EQUAL
-  F.D.C. FIRE DEPARTMENT CON.
-  N.I.C. NOT IN CONTRACT
-  P.A. PLANTING AREA
-  S.A.D. SEE ARCHITECTURAL DWG
-  S.C.D. SEE CIVIL DRAWINGS
-  S.E.D. SEE ELECTRICAL DRAWINGS
-  SP SPACE
-  S.S.D. SEE STRUCTURAL DWGS.
-  TYP. TYPICAL



- PLANTING NOTES:
- REMOVE COMPACTED SOIL AROUND BUILDING IN AREAS TO BE PLANTED.
  - SUBMIT SOIL AND SOIL AMENDMENT TEST REPORT FOR ARCHITECT'S REVIEW PRIOR TO PURCHASE OF PLANTS.
  - REMOVE ALL LIME TREATED SOIL IN ALL PLANT AREAS TO A DEPTH OF THREE FEET AND DISPOSE OF OFF SITE.
  - ALL PLANTING AREAS, GROWING GROUNDS, AND ORCHARD AREAS TO BE SHEET MULCHED.
  - FURNISH ALL NEW PLANTING AREAS WITH WOOD CHIP MULCH 3" DEEP.
  - INSTALL ROOT BARRIER AROUND PAVING EDGE OF ALL NEW TREES PLANTED WITHIN 5' OF PAVING. DO NOT WRAP ROOT BARRIER AROUND ROOTBALL.
  - ALL NEW PLANTING AREAS SHALL RECEIVE AUTOMATIC IRRIGATION. SEE IRRIGATION SHEETS.
  - DO NOT PLANT NEW TREES DIRECTLY ABOVE UNDERGROUND SITE UTILITY LINES AND PIPING.

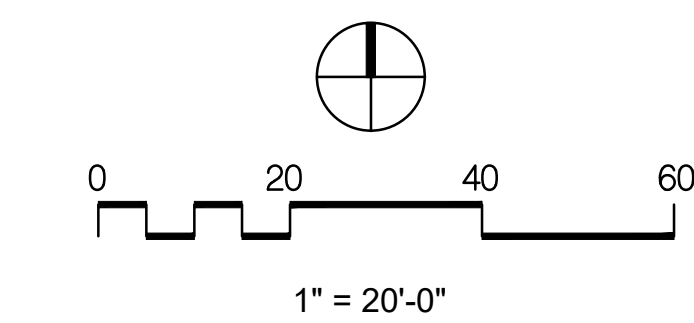
SHADE TREES:  
 SURFACE PARKING AREAS: 5,308 S.F.  
 SHADE TREE SHADING OF SURFACE PARKING: 3,024 S.F.  
 PERCENT SHADING: 57% (PERCENT REQUIRED 50%)

LANDSCAPE AREA: 13,649 S.F. (18,430 GROWING GROUNDS AREA NOT INCLUDED)  
 TREE SHADING OF LANDSCAPE AREA: 9,297 S.F.  
 PERCENT SHADING: 67% (PERCENT REQUIRED 20%)

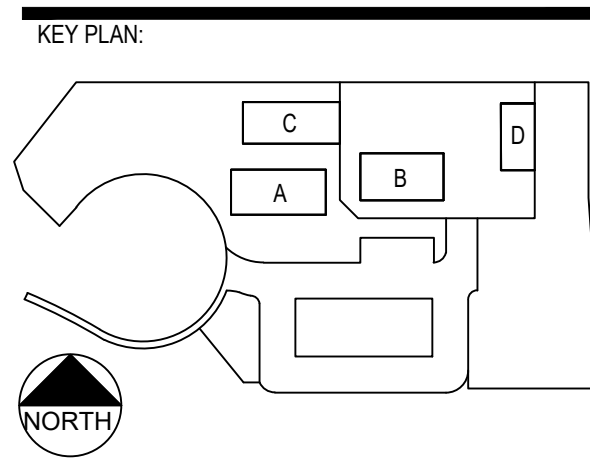
HARDSCAPE AREA: 5,554 S.F.  
 TREE SHADING OF HARDSCAPE AREA: 1,860 S.F.  
 PERCENT SHADING: 33% (PERCENT REQUIRED 20%)

NOTE: TREE SIZES ARE BASED ON WESTERN SUNSET GARDEN BOOK OR BOETHING TREELAND FARMS. TREE SHADING IS DETERMINED AT NOON ON THE SUMMER SOLSTICE.

REFER TO SHEET L701 FOR PLANT LIST AND DETAILS



ITEM	REVISION / ISSUE	DATE



CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**PLANTING PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
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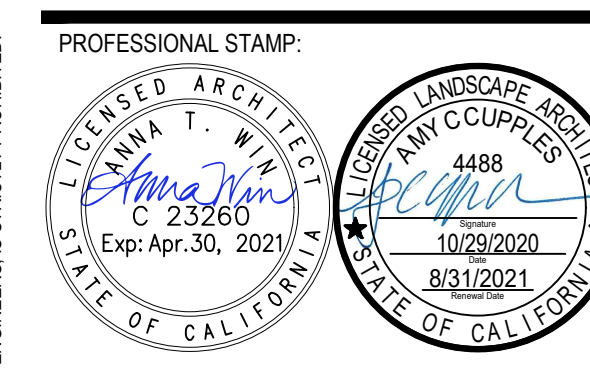
**L601**



IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
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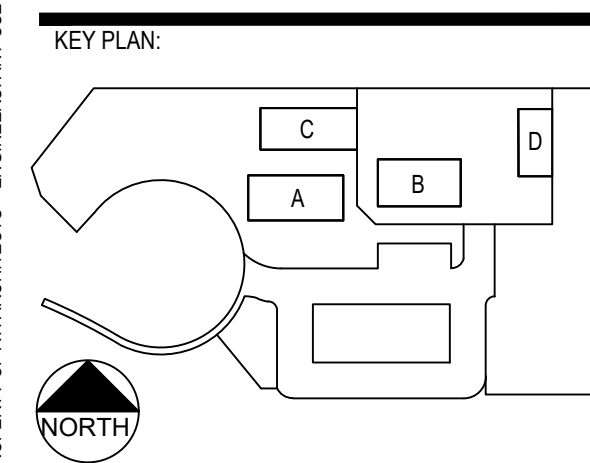


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 COLLEGE  
 AGRICULTURE  
 SCIENCE  
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 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**IRRIGATION PLAN**

DRAWN BY: ABD/LMD CHECKED BY: MD  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**L801A**

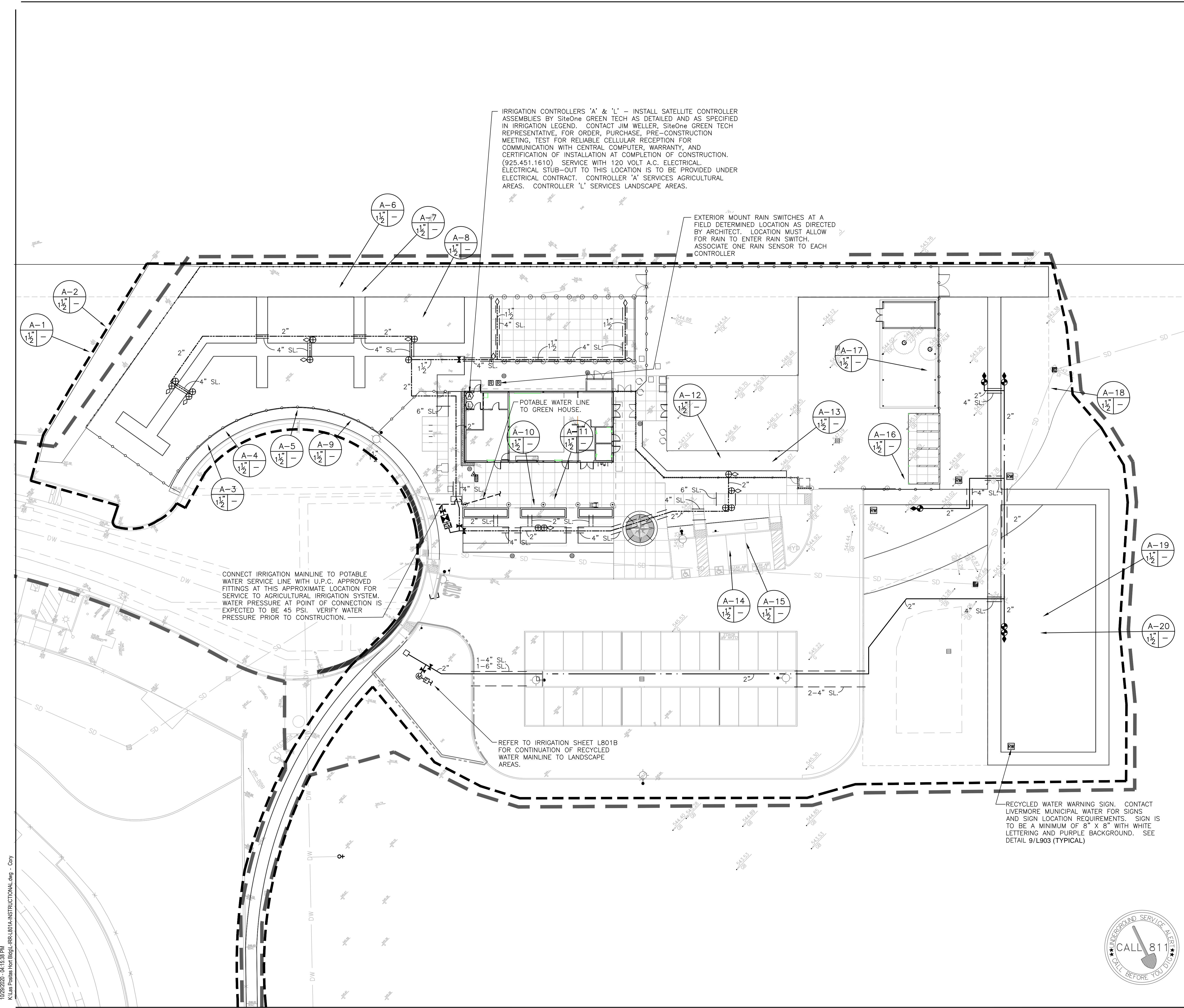
IRRIGATION CONTROLLERS 'A' & 'L' - INSTALL SATELLITE CONTROLLER ASSEMBLIES BY SiteOne GREEN TECH AS DETAILED AND AS SPECIFIED IN IRRIGATION LEGEND. CONTACT JIM WELLS, SiteOne GREEN TECH REPRESENTATIVE, FOR ORDER, PURCHASE, PRE-CONSTRUCTION MEETING, TEST FOR RELIABLE CELLULAR RECEPTION FOR COMMUNICATION WITH CENTRAL COMPUTER, WARRANTY, AND CERTIFICATION OF INSTALLATION AT COMPLETION OF CONSTRUCTION. (925.451.1610) SERVICE WITH 120 VOLT A.C. ELECTRICAL. ELECTRICAL STUB-OUT TO THIS LOCATION IS TO BE PROVIDED UNDER ELECTRICAL CONTRACT. CONTROLLER 'A' SERVICES AGRICULTURAL AREAS. CONTROLLER 'L' SERVICES LANDSCAPE AREAS.

EXTERIOR MOUNT RAIN SWITCHES AT A FIELD DETERMINED LOCATION AS DIRECTED BY ARCHITECT. LOCATION MUST ALLOW FOR RAIN TO ENTER RAIN SWITCH. ASSOCIATE ONE RAIN SENSOR TO EACH CONTROLLER

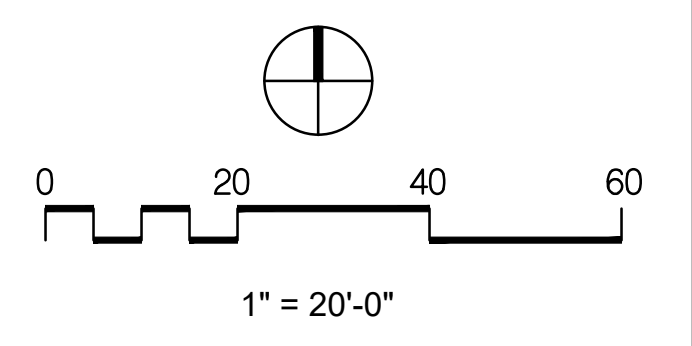
CONNECT IRRIGATION MAINLINE TO POTABLE WATER SERVICE LINE WITH U.P.C. APPROVED FITTINGS AT THIS APPROXIMATE LOCATION FOR SERVICE TO AGRICULTURAL IRRIGATION SYSTEM. WATER PRESSURE AT POINT OF CONNECTION IS EXPECTED TO BE 45 PSI. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION.

REFER TO IRRIGATION SHEET L801B FOR CONTINUATION OF RECYCLED WATER MAINLINE TO LANDSCAPE AREAS.

RECYCLED WATER WARNING SIGN. CONTACT LIVERMORE MUNICIPAL WATER FOR SIGNS AND SIGN LOCATION REQUIREMENTS. SIGN IS TO BE A MINIMUM OF 8" X 8" WITH WHITE LETTERING AND PURPLE BACKGROUND. SEE DETAIL 9/L903 (TYPICAL)



1/20/2021 04:15:38 PM K:\Las Positas\bid\Bagel\_LRR\L801A\INSTRUCTIONAL.dwg - Copy



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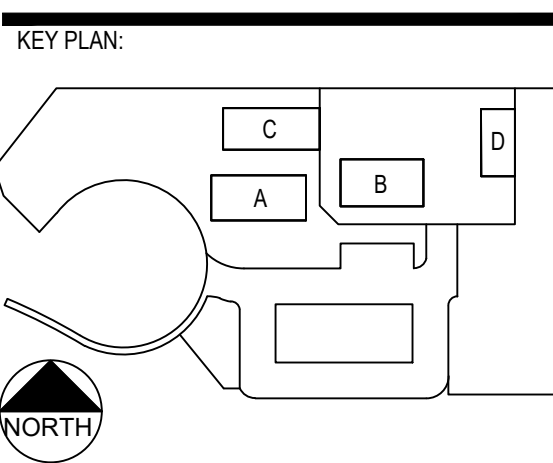


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 3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90011 - T 714.338.1600

PROFESSIONAL STAMP:  
 LICENSED ARCHITECT  
 Anna M. W. W.  
 C 23260  
 Exp. Apr. 30, 2021  
 LICENSED LANDSCAPE ARCHITECT  
 4488  
 10/29/2020  
 8/31/2021  
 STATE OF CALIFORNIA

CONSULTANT:  
 KELLER MITCHELL & CO.  
 Landscape Architecture  
 302 Fourth Street  
 Oakland, CA 94607  
 510/451-9987

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**IRRIGATION PLAN**

DRAWN BY: ABOLMD CHECKED BY: MD  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**L801B**

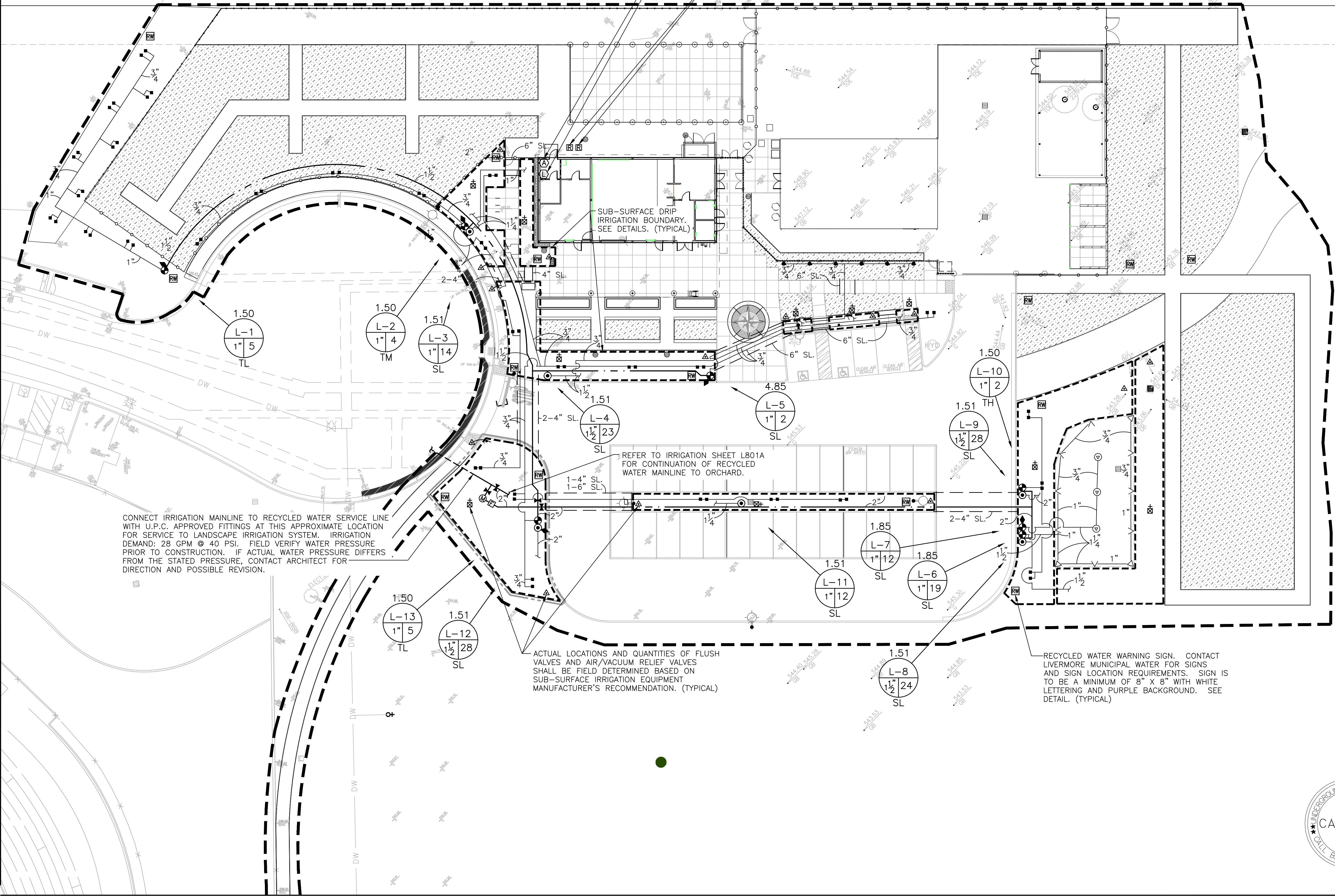
**COMMISSIONING AND MANAGEMENT OF SUB-SURFACE DRIP IRRIGATION SYSTEMS**

1. PRIOR TO PLANTING, CONTRACTOR SHALL PREPARE SOIL FOR PLANTING BY HAND WATERING TO BRING SOIL MOISTURE CONTENT UP TO AN IDEAL GROWING CONDITION THROUGHOUT THE INTENDED ROOT ZONE. OPERATE SUB-SURFACE DRIP SYSTEM AS NECESSARY TO MAINTAIN MOISTURE LEVEL IN SOIL. DO NOT LET SOIL DRY OUT. MOISTURE DEPLETION SHOULD NOT EXCEED 20% DEPLETION (80% OF DESIRED MOISTURE CONTENT REMAINS). CONTRACTOR SHALL MONITOR MOISTURE CONTENT TO ENSURE DESIRED MOISTURE CONTENT IS MAINTAINED WITHOUT OVER-SATURATION. USE CARE TO NOT DAMAGE SUB-SURFACE DRIP TUBING WHEN PROBING SOIL FOR MOISTURE CONTENT TESTING.

2. INSTALL TUBING ACCORDING TO SPACING SPECIFIED IN THE DRAWINGS AND DETAILS. DRIP TUBING MUST REMAIN AS CLOSE AS POSSIBLE TO THE SPACING IDENTIFIED IN THE DRAWINGS. THE GRID OF EMITTERS ARE INTENDED TO IRRIGATE THE ENTIRE PLANTED AREA (NOT INDIVIDUAL PLANTS). LIKewise, DO NOT MOVE PLANTS FROM THEIR DESIGNED SPACING TO BE CLOSER TO AN EMITTER. WHEN PROPERLY MANAGED, THE DRIP SYSTEM WILL PROVIDE WATER TO THE ENTIRE PLANTED AREA, CREATING AN INVITING CONDITION FOR THE ROOTS TO GROW AND THE PLANTS TO THRIVE.

IRRIGATION CONTROLLERS 'A' & 'L' - INSTALL SATELLITE CONTROLLER ASSEMBLIES BY SiteOne GREEN TECH AS DETAILED AND AS SPECIFIED IN IRRIGATION LEGEND. CONTACT JIM WELLER, SiteOne GREEN TECH REPRESENTATIVE, FOR ORDER, PURCHASE, PRE-CONSTRUCTION MEETING, TEST FOR RELIABLE CELLULAR RECEPTION FOR COMMUNICATION WITH CENTRAL COMPUTER, WARRANTY, AND CERTIFICATION OF INSTALLATION AT COMPLETION OF CONSTRUCTION. (925.451.1610) SERVICE WITH 120 VOLT A.C. ELECTRICAL. ELECTRICAL STUB-OUT TO THIS LOCATION IS TO BE PROVIDED UNDER ELECTRICAL CONTRACT. CONTROLLER 'A' SERVICES AGRICULTURAL AREAS. CONTROLLER 'L' SERVICES LANDSCAPE AREAS.

EXTERIOR MOUNT RAIN SWITCHES AT A FIELD DETERMINED LOCATION AS DIRECTED BY ARCHITECT. LOCATION MUST ALLOW FOR RAIN TO ENTER RAIN SWITCH. ASSOCIATE ONE RAIN SENSOR TO EACH CONTROLLER

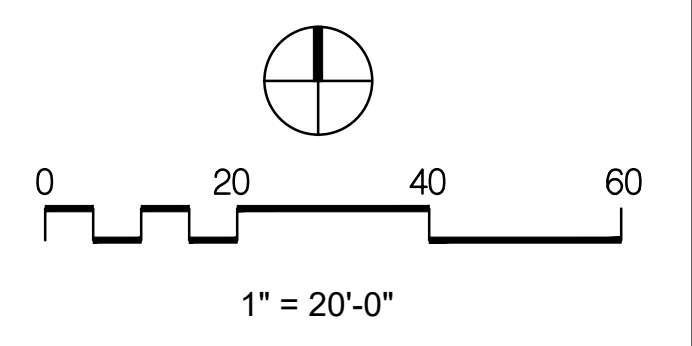


CONNECT IRRIGATION MAINLINE TO RECYCLED WATER SERVICE LINE WITH U.P.C. APPROVED FITTINGS AT THIS APPROXIMATE LOCATION FOR SERVICE TO LANDSCAPE IRRIGATION SYSTEM. IRRIGATION DEMAND: 28 GPM @ 40 PSI. FIELD VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. IF ACTUAL WATER PRESSURE DIFFERS FROM THE STATED PRESSURE, CONTACT ARCHITECT FOR DIRECTION AND POSSIBLE REVISION.

ACTUAL LOCATIONS AND QUANTITIES OF FLUSH VALVES AND AIR/VACUUM RELIEF VALVES SHALL BE FIELD DETERMINED BASED ON SUB-SURFACE IRRIGATION EQUIPMENT MANUFACTURER'S RECOMMENDATION. (TYPICAL)

RECYCLED WATER WARNING SIGN. CONTACT LIVERMORE MUNICIPAL WATER FOR SIGNS AND SIGN LOCATION REQUIREMENTS. SIGN IS TO BE A MINIMUM OF 8" X 8" WITH WHITE LETTERING AND PURPLE BACKGROUND. SEE DETAIL. (TYPICAL)

**DICKSON & ASSOCIATES, INC.**  
 LANDSCAPE IRRIGATION  
 (530) 547-5515 www.dicksoninc.net  
 P.O. BOX 416  
 PALO CEDRO, CALIFORNIA 96073  
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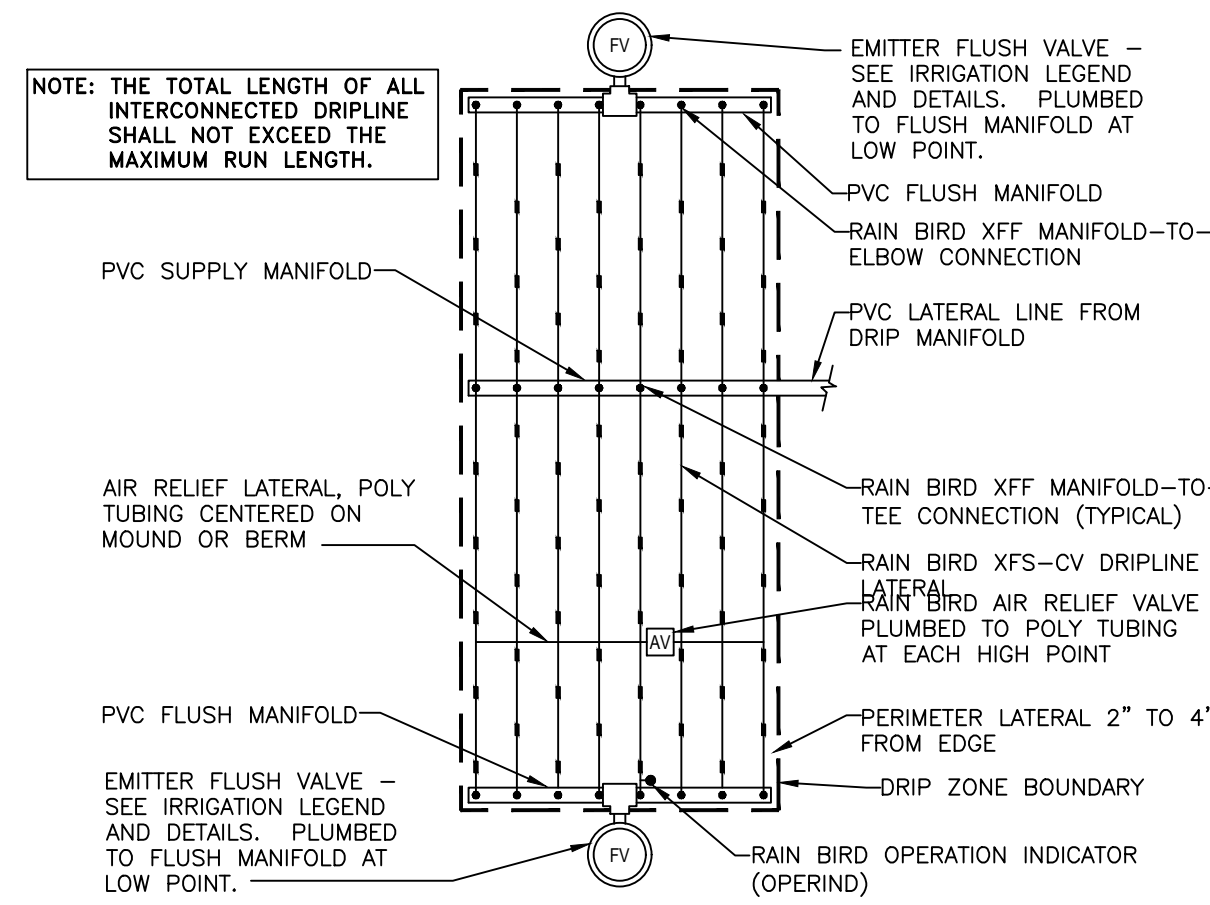




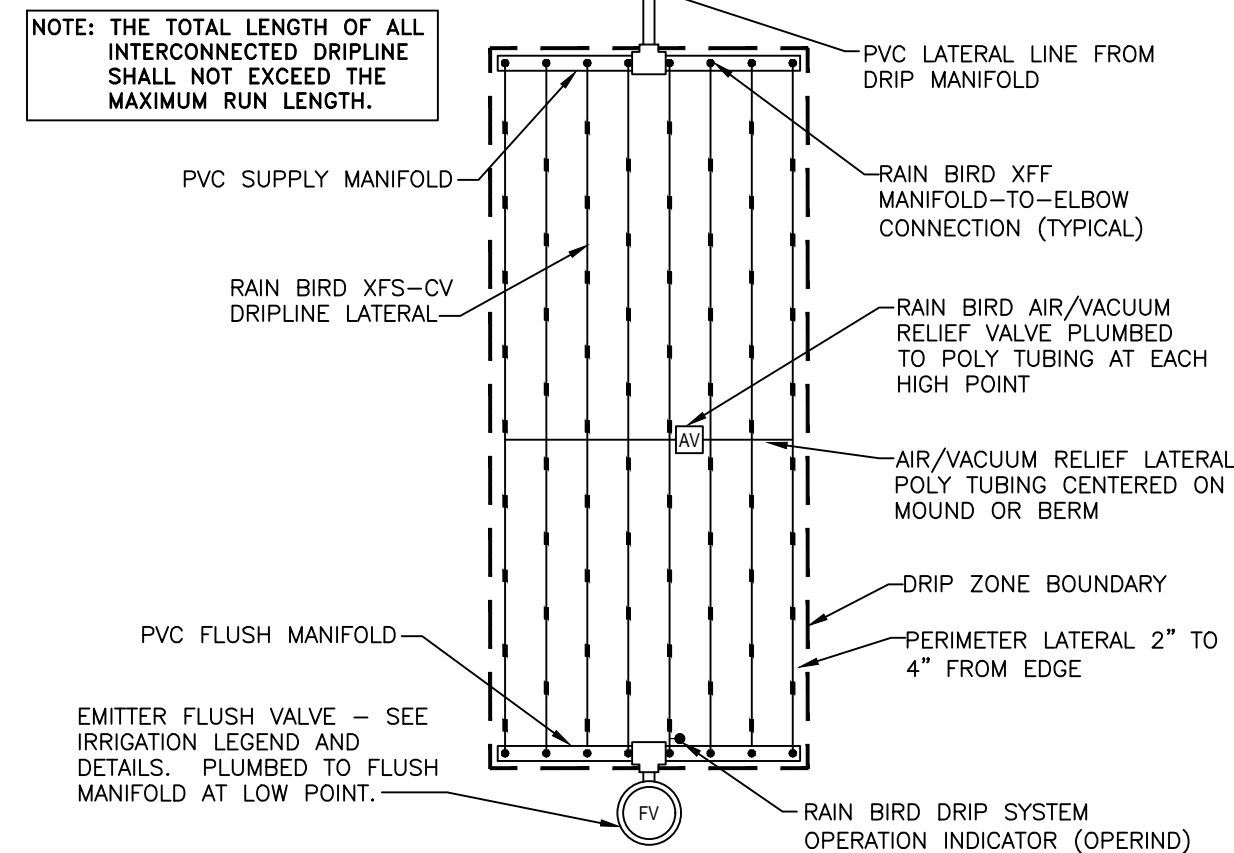




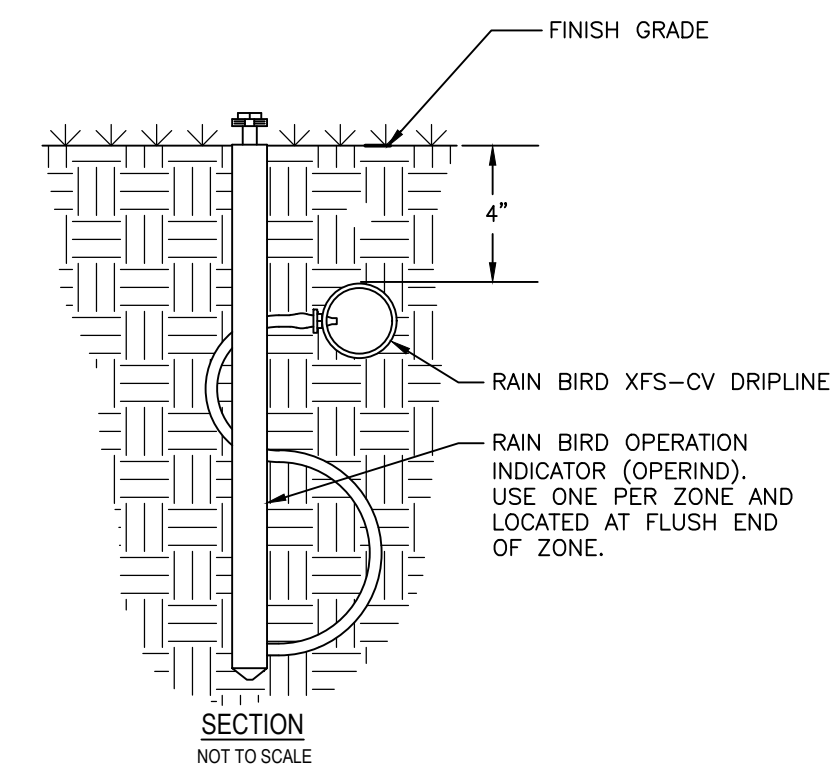
9 RECYCLED WATER ADVISORY SIGN  
NOT TO SCALE



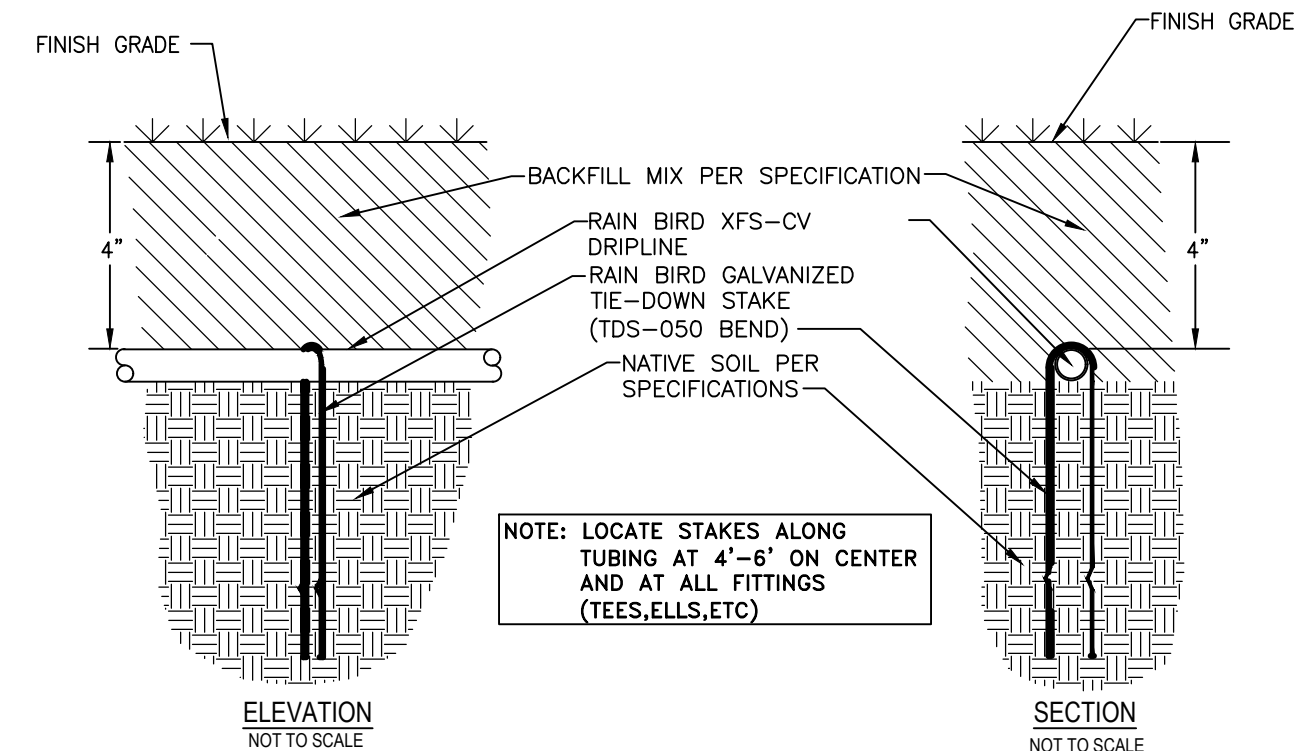
5 CENTER FEED LAYOUT FOR SUB-SURFACE DRIP  
NOT TO SCALE



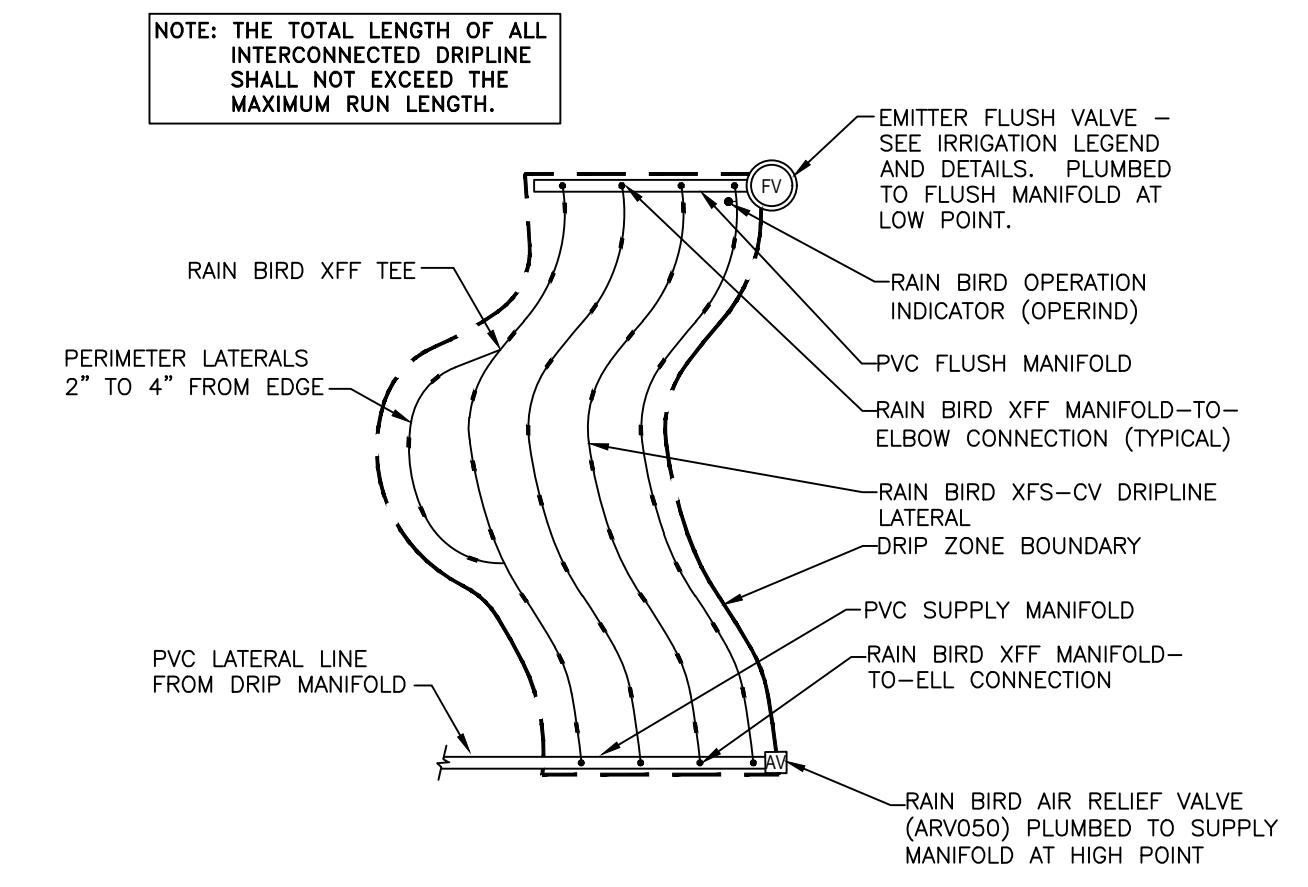
6 END FEED LAYOUT FOR SUB-SURFACE DRIP  
NOT TO SCALE



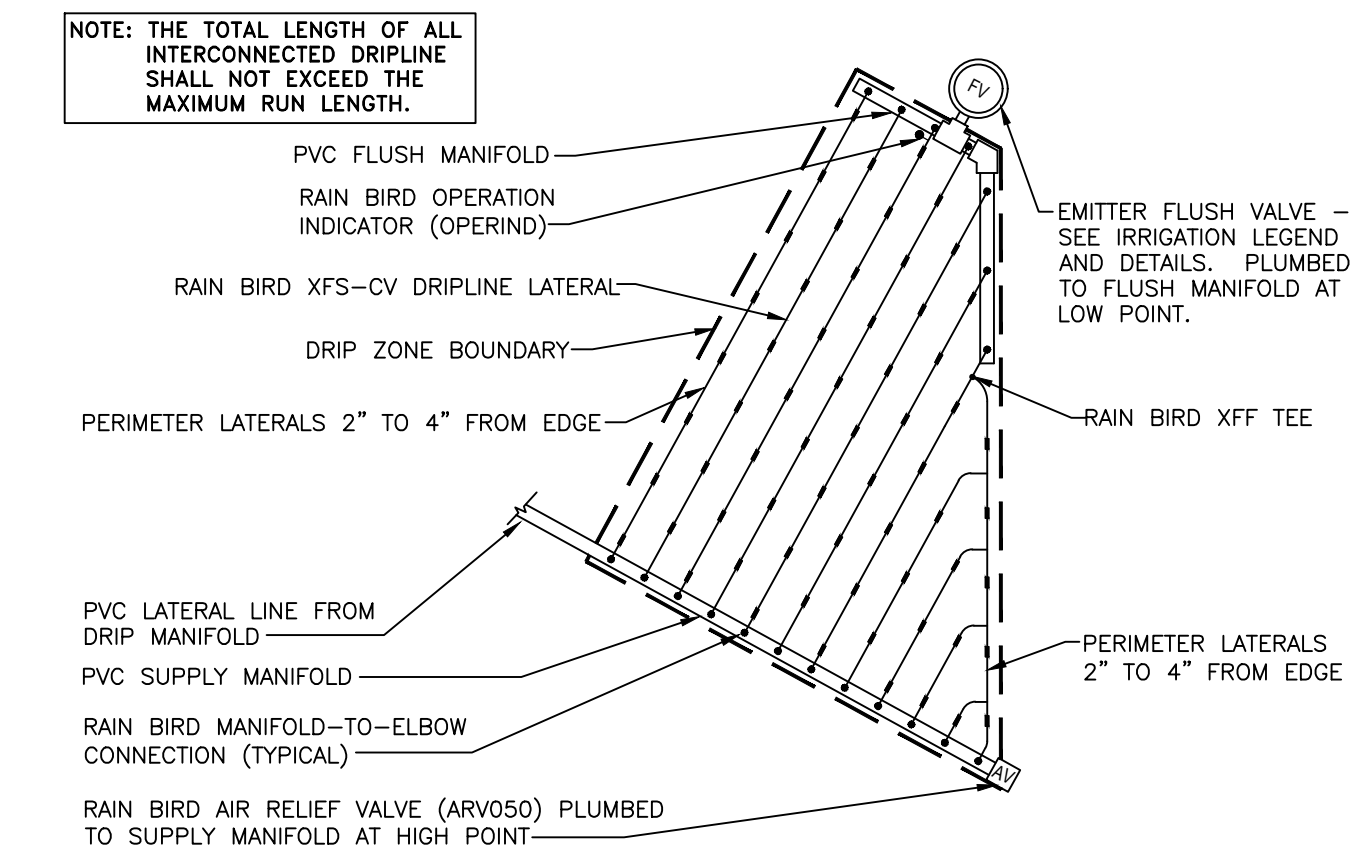
7 POP-UP OPERATION INDICATOR  
NOT TO SCALE



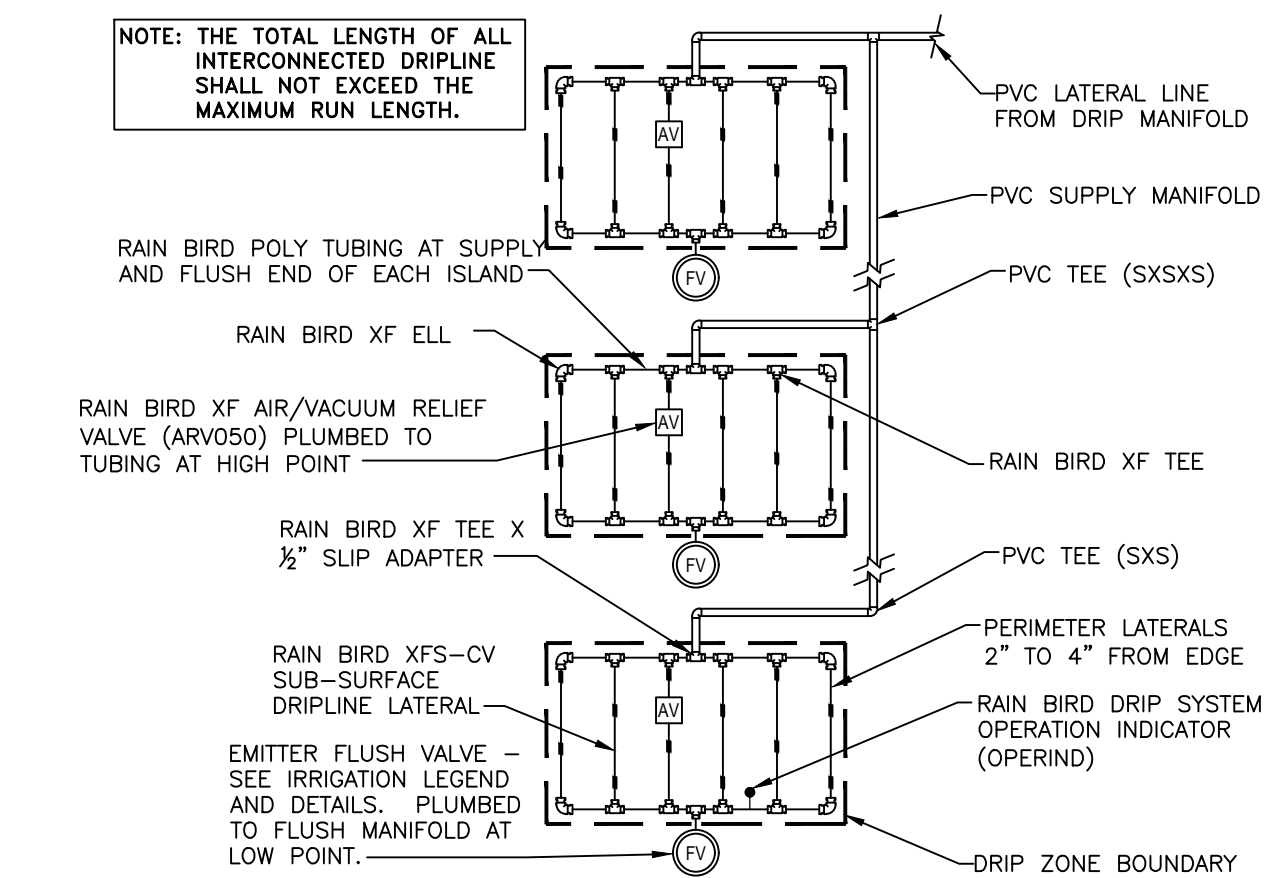
8 GALVANIZED TIE-DOWN STAKE  
NOT TO SCALE



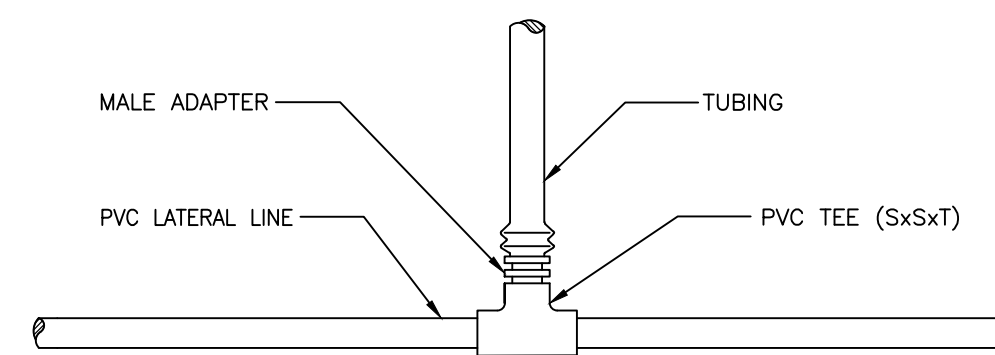
1 ODD CURVES LAYOUT FOR SUB-SURFACE DRIP  
NOT TO SCALE



2 TRIANGULAR LAYOUT FOR SUB-SURFACE DRIP  
NOT TO SCALE



3 ISLAND LAYOUT FOR SUB-SURFACE DRIP  
NOT TO SCALE



4 TUBING TO PVC CONNECTION  
NOT TO SCALE

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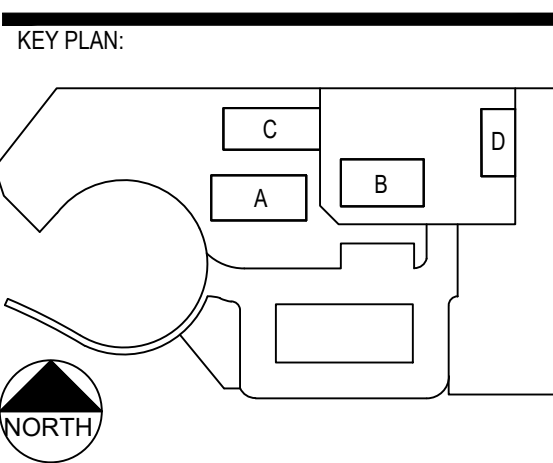
LICENSURE ARCHITECT  
STATE OF CALIFORNIA  
C 23260  
Exp: Apr. 30, 2021

LICENSURE LANDSCAPE ARCHITECT  
STATE OF CALIFORNIA  
4488  
C 4488  
Exp: 10/29/2020  
8/31/2021

CONSULTANT:

**KELLER MITCHELL & CO.**  
Landscape Architecture  
302 Fourth Street  
Oakland, CA 94607  
510/451-9987

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FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

IRRIGATION  
DETAILS

DRAWN BY: LMD  
DATE: 01/14/2021

CHECKED BY: MD  
PROJECT NO: C9508  
SHEET NO:

**L903**

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**GATE SCHEDULE**

GATE NO.	GATE TYPE	WIDTH	HEIGHT	GATE MAT'L	Hardware Set	COMMENTS
G1	PEDESTRIAN GATE	3' - 0"	4' - 0"	CL	15	LATCH; SEE DETAIL 1/L504
G2	PEDESTRIAN GATE	6' - 0"	6' - 0"	GR. SCN.	16	LOCK; SEE DETAIL 2/L504
G3	PEDESTRIAN GATE	6' - 0"	6' - 0"	GR. SCN.	16	LOCK; SEE DETAIL 2/L504
G4	PEDESTRIAN GATE	3' - 0"	6' - 0"	CL	17	LOCK; SEE DETAIL 1/L504
G5	SLIDING VEHICLE GATE	20' - 0"	6' - 0"	CL	18	
G6	VEHICLE GATE	10' - 0"	6' - 0"	CL	20	SEE DETAIL 4/L504
G7	VEHICLE GATE	10' - 0"	6' - 0"	CL	20	SEE DETAIL 4/L504
G8	PEDESTRIAN GATE	6' - 0"	10' - 0"	CL	--	

**GENERAL SHEET NOTES**

- REFER TO CIVIL SHEET C300 FOR SITE HORIZONTAL CONTROL.
- REFER TO CIVIL SHEET C801 FOR ENLARGED ACCESSIBLE PARKING AND SIGNAGE DETAILS.
- REFER TO LANDSCAPE PLAN SHEET L202 FOR HARDSCAPE AND WALKWAY DIMENSIONS.

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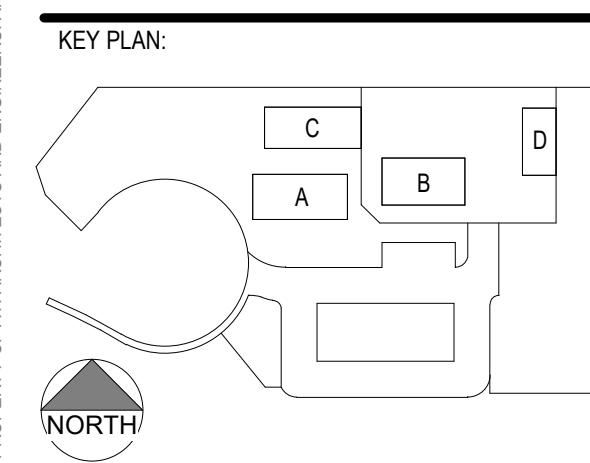
PROFESSIONAL STAMP:  
L. ANNA T. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

**SHEET KEYNOTES**

- 02.07 NEW FIRE HYDRANT, SEE C803
- 10.19 VEHICULAR SITE SIGNAGE - ACCESSIBLE PARKING SPACE, SEE C801
- 12.20 IN-GROUND BICYCLE RACKS, SEE L502

CONSULTANT:

ITEM	REVISION / ISSUE	DATE

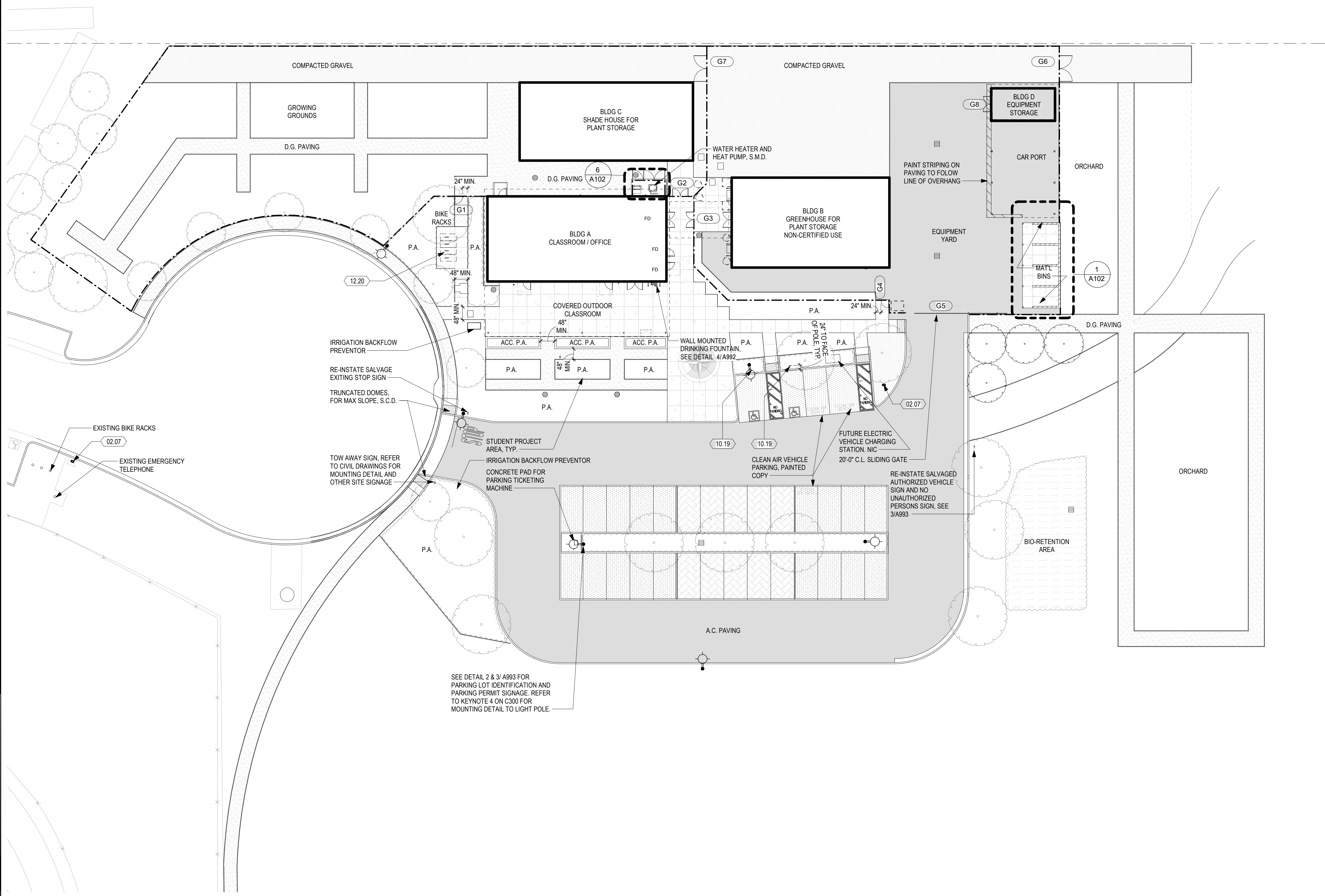


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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**SITE PLAN**

DRAWN BY: EA      CHECKED BY: AW  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

**A101**



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

**LEGEND**

- AC PAVING
- EXISTING FENCE
- NEW FENCE

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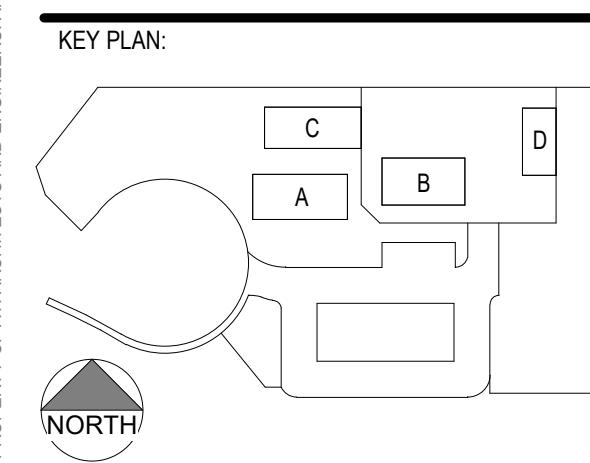


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*Anna T. Willett*  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

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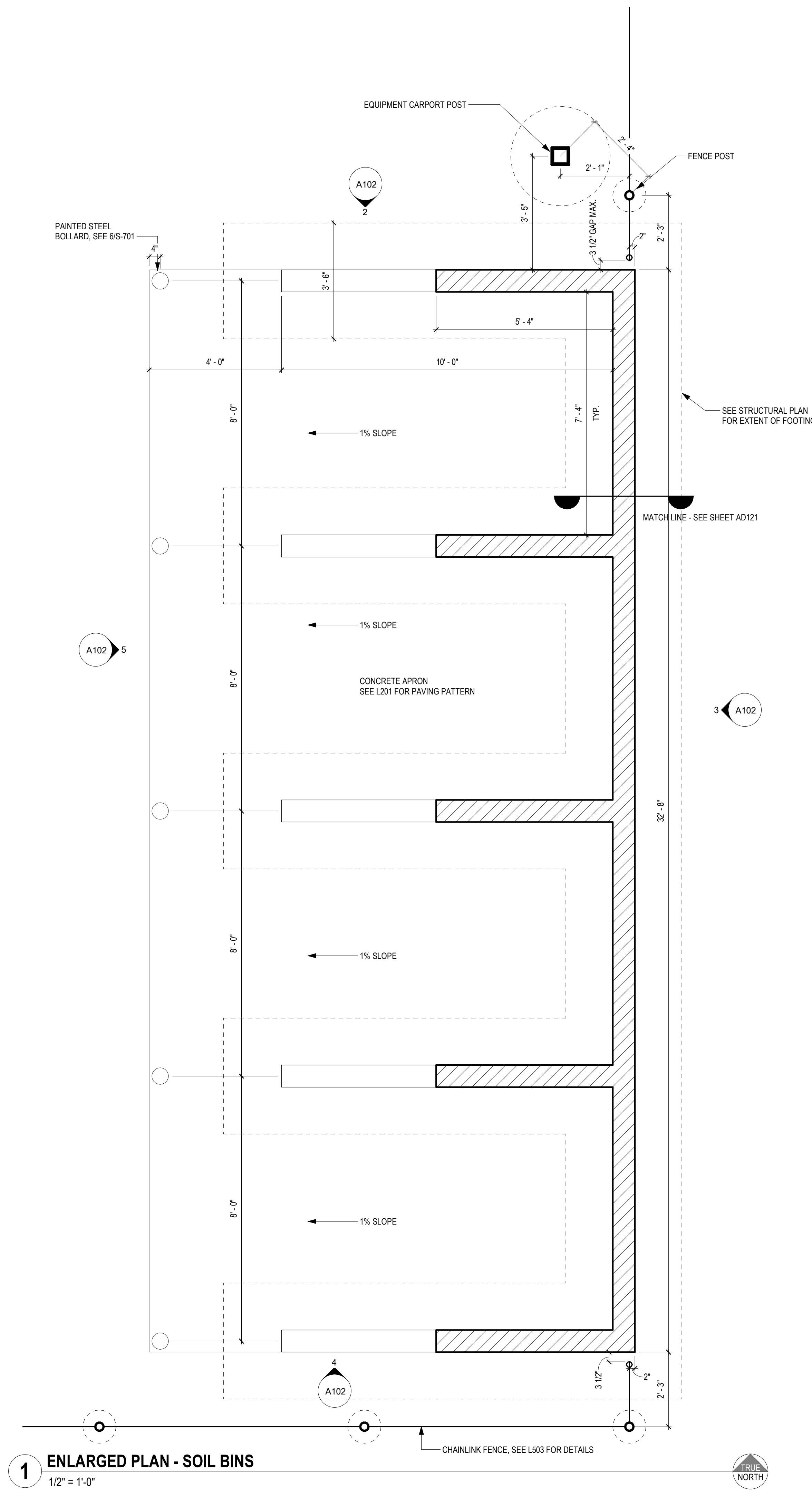


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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

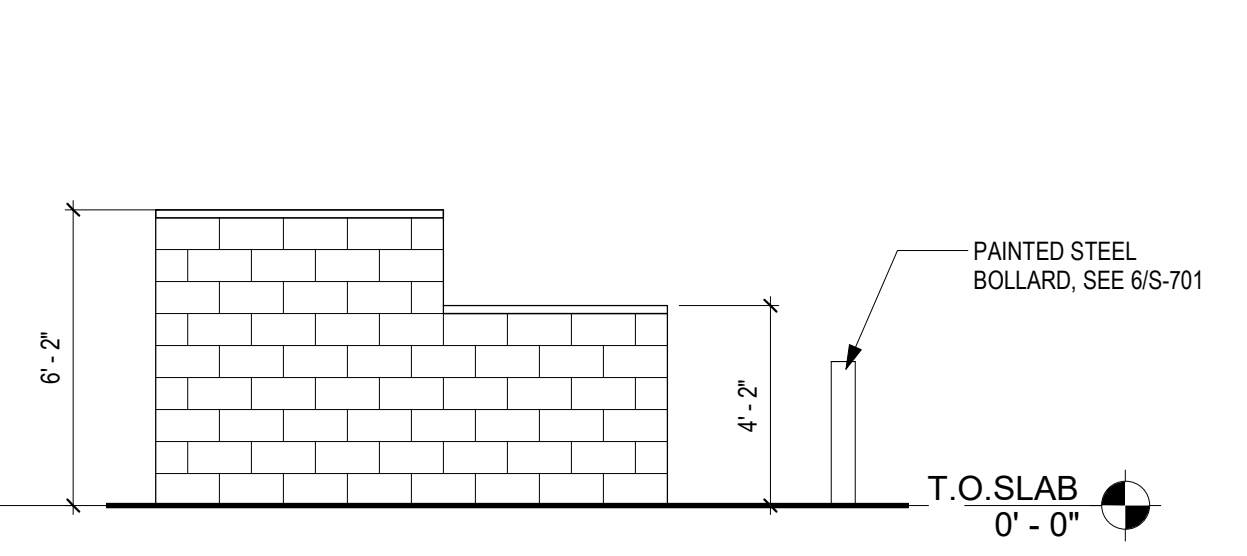
**ENLARGED SITE PLAN AND ELEVATIONS**

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

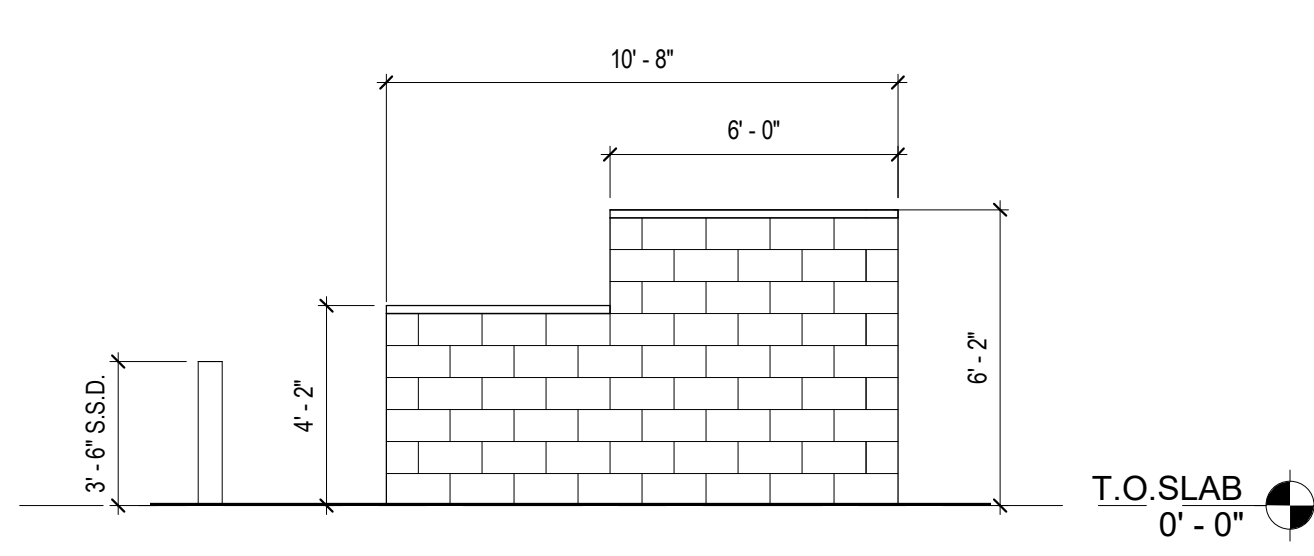
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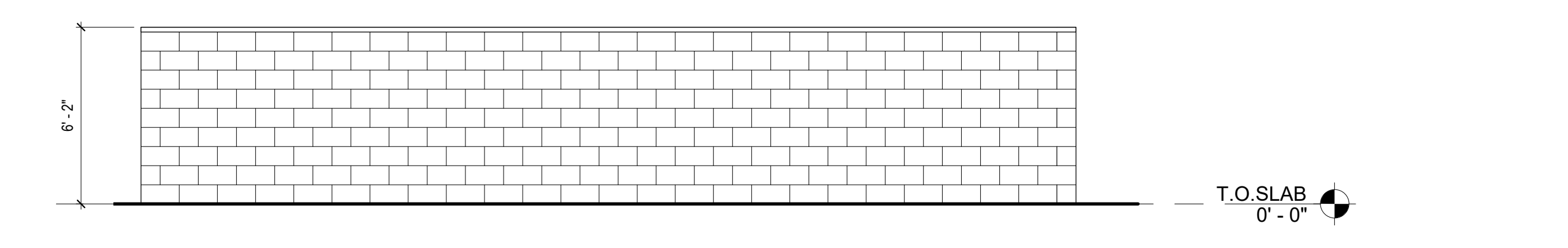
**1 ENLARGED PLAN - SOIL BINS**  
1/2" = 1'-0"



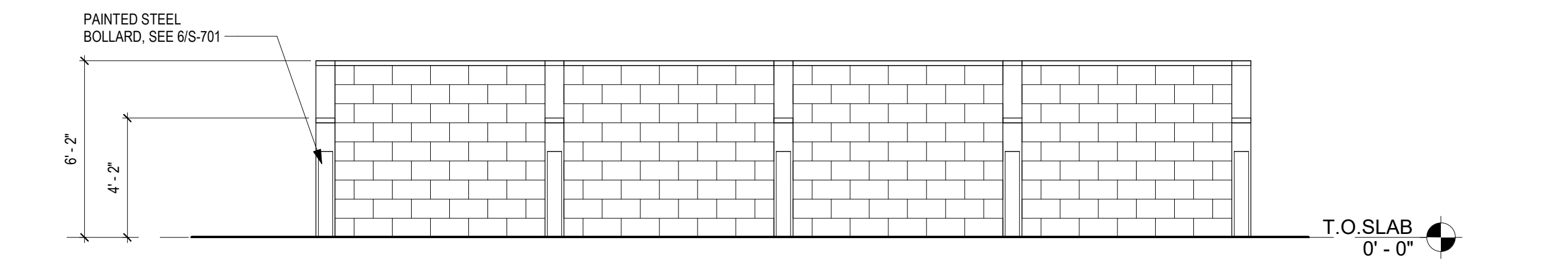
**2 ELEVATION - NORTH**  
1/4" = 1'-0"  
NOTE: SEE S-710 FOR CMU DETAILS



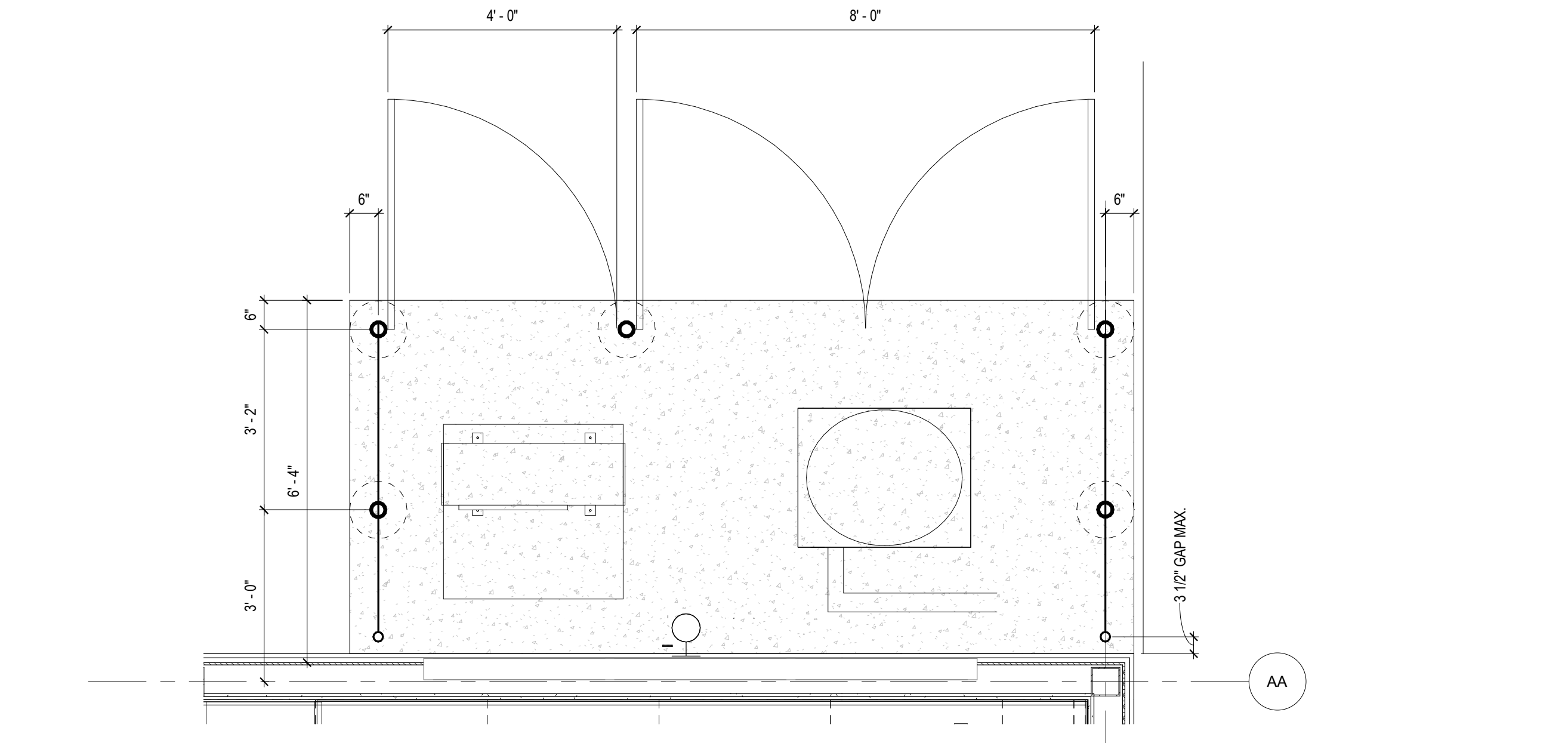
**4 ELEVATION - SOUTH**  
1/4" = 1'-0"  
NOTE: SEE S-710 FOR CMU DETAILS



**3 ELEVATION - EAST**  
1/4" = 1'-0"  
NOTE: SEE S-710 FOR CMU DETAILS



**5 ELEVATION - WEST**  
1/4" = 1'-0"  
NOTE: SEE S-710 FOR CMU DETAILS



**6 ENLARGED PLAN - MECHANICAL FENCE**  
1/2" = 1'-0"

CONSULTANT:

### SHEET NOTES

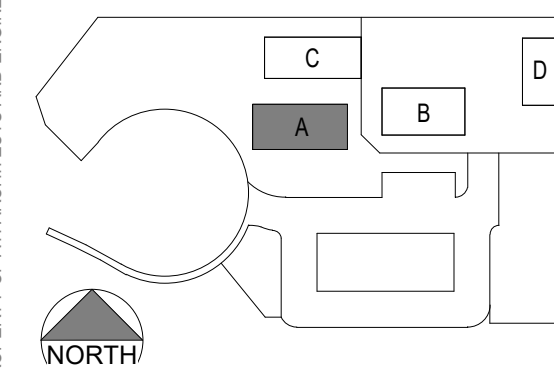
1. REFER TO CIVIL DRAWINGS FOR FINISH SLAB ELEVATIONS.
2. SLOPE DOOR LANDINGS AWAY FROM BUILDING, MAX 1/4" PER FT. IN ALL DIRECTIONS 2'-0" ON STRIKE SIDE AND 5'-0" ON FORWARD APPROACH OF ALL EXTERIOR DOORS.
3. COORDINATE LOCATION AND PROVIDE BLOCKING, BACKING AND/OR REINFORCEMENT IN PARTITIONS FOR CABINETS, COUNTERTOPS AND WALL-MOUNTED ITEMS.
4. WALLS ARE DIMENSIONED FROM GRIDLINE, CENTER OF STEEL COLUMN OR FACE OF STUD. U.O.N.
5. ALL "CLEAR" DIMENSIONS ARE LOCATED FROM FACE OF FINISH TO FACE OF FINISH.
6. ALL FIXTURES ARE DIMENSIONED FROM FACE OF FINISH. U.O.N.
7. DOORS ARE LOCATED 4" AWAY FROM WALL ON HINGED SIDE. U.O.N.

### SHEET KEYNOTES

- 01.18 SOFFIT ABOVE
- 01.22 OUTLINE OF FOUNDATION BELOW, S.S.D.
- 06.26 3/4" 1-HR RATED FIRE-TREATED PLYWOOD @ ALL WALLS TO +8'-6" A.F.F., PAINT WHITE, SEE 1/A1A121
- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL, SEE DETAIL 9/A921 AND 3/A921
- 09.59 SLIP-RESISTANT TEXTURED EPOXY FLOORING
- 09.60 EPOXY FLOORING
- 09.65 PRE-MOLDED VINYL TRANSITION STRIP
- 10.02 TACKBOARD
- 10.11 PROJECTION MARKERBOARD, 8W X 5H TYP.
- 10.26 FIRE EXTINGUISHER IN RECESSED MOUNTED CABINET, SEE DETAIL 2/A992
- 10.40 STAINLESS STEEL CORNER GUARD
- 10.66 78" 4-TIER 12" METAL LOCKERS
- 10.73 78" 4-TIER 15" METAL LOCKERS
- 10.74 LAPTOP CART, N.I.C.
- 22.13 DECK-MOUNTED EMERGENCY EYEWASH STATION
- 22.15 FLOOR DRAIN
- 22.23 24"X24" SOLIDS INTERCEPTOR WITH GRATE
- 22.26 WATER PRESSURE REGULATOR IN CHRISTY BOX, SEE SH. PA122

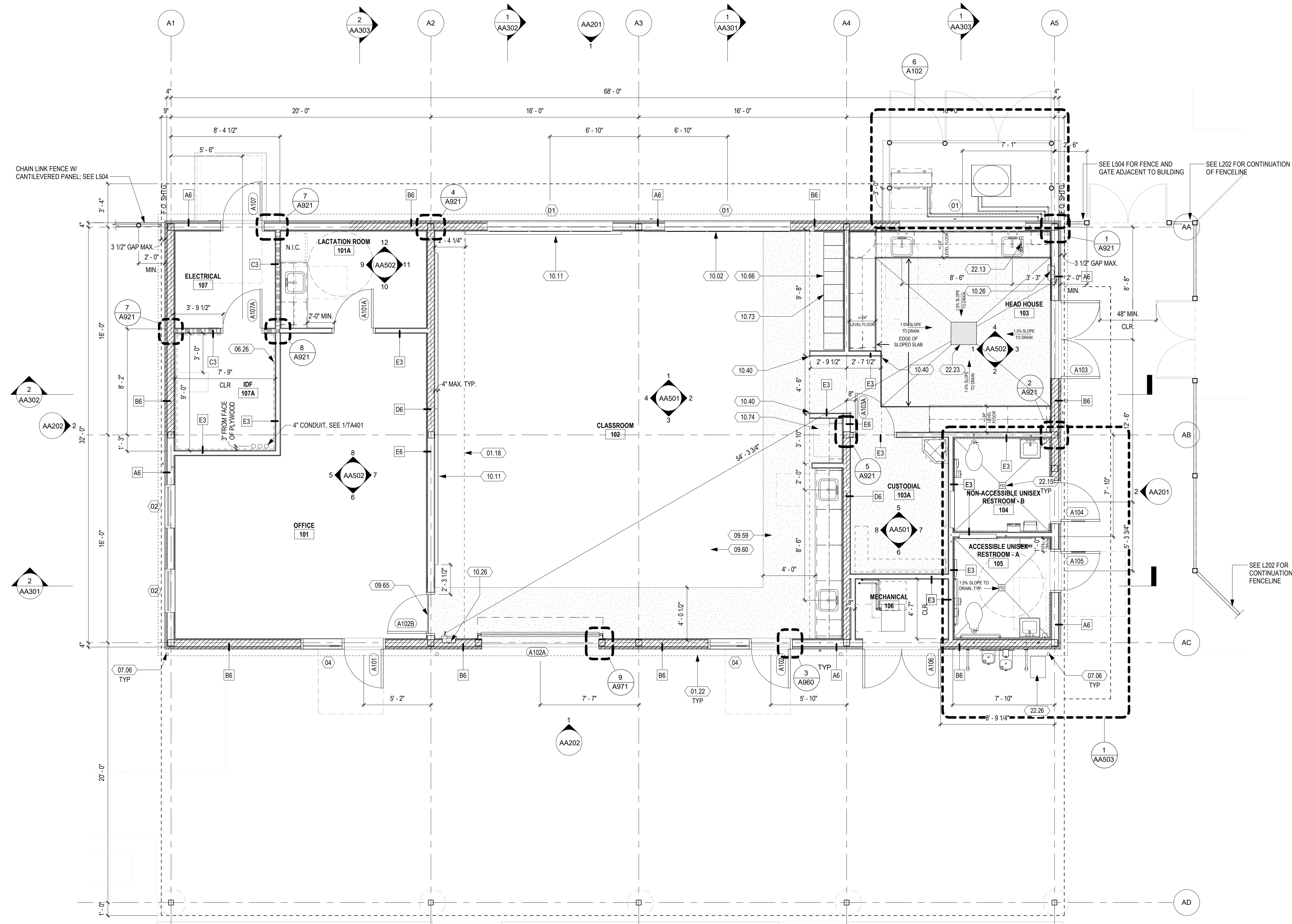
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### KEY PLAN:



### LEGEND

- SHEAR WALL
- 1-HR RATED WALL
- NON-RATED WALL

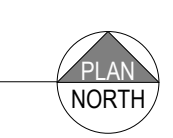


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3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

### CLASSROOM BUILDING FLOOR PLAN

DRAWN BY: EA      CHECKED BY: AW  
DATE: 01/14/2021      PROJECT NO: 09508  
SHEET NO:

**1** Level 1  
1/4" = 1'-0"



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SHEET KEYNOTES

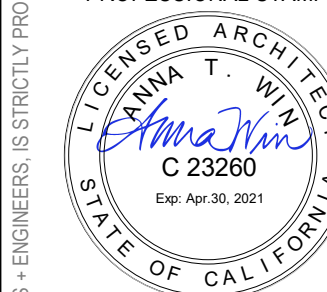
- 10.54 ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 6/G007 AND 9/G007
- 10.55 ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 6/G007 INCLUDE ISA SYMBOL
- 10.83 RESTROOM DOOR SIGNAGE, SEE DETAIL 3/G007
- 10.84 RESTROOM DOOR SIGNAGE, SEE DETAIL 3/G007 INCLUDE ISA SYMBOL
- 10.85 EXIT SIGNAGE, SEE DETAIL 1/G007
- 10.86 EXIT ROUTE SIGNAGE, SEE DETAIL 4/G007
- 10.87 ASSISTED LISTENING DEVICE SIGNAGE, SEE DETAIL 5/G007
- 10.88 MAXIMUM ROOM OCCUPANCY SIGNAGE, SEE DETAIL 7/G007

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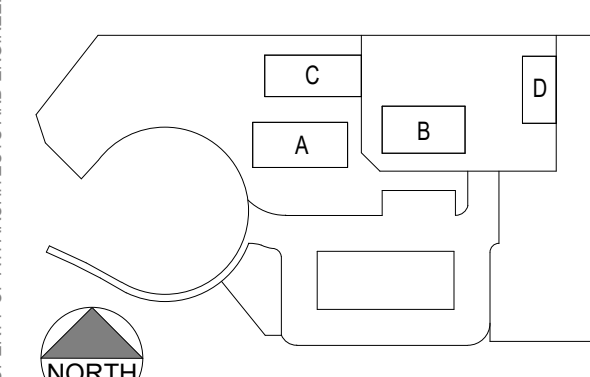
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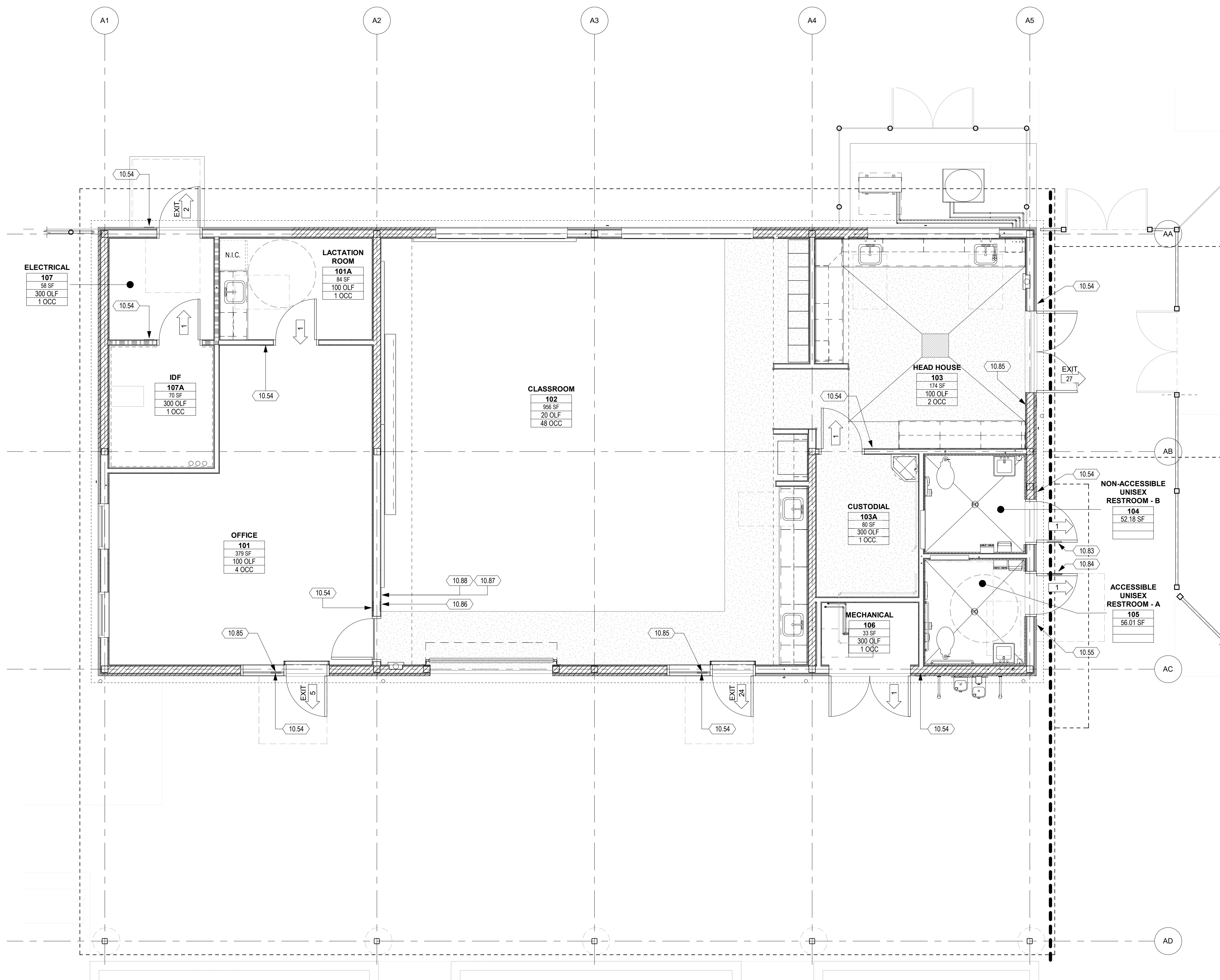
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3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**CLASSROOM BUILDING SIGNAGE & EXITING PLAN**

DRAWN BY: Author CHECKED BY: Checker  
DATE: 01/14/2021 PROJECT NO: C9508

SHEET NO:

**AA122**

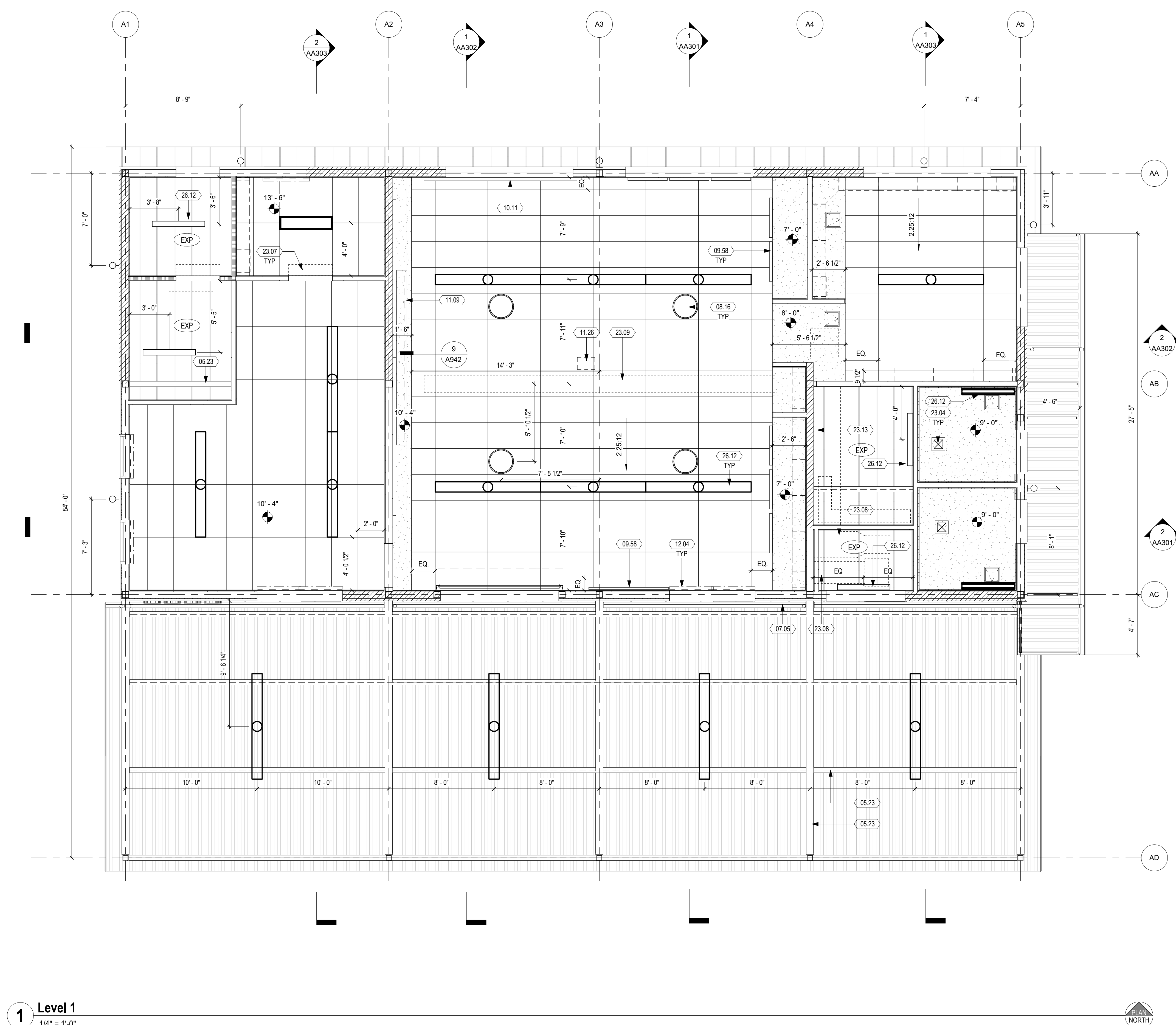


**1 SIGNAGE & EXITING PLAN**  
1/4" = 1'-0"





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**1 Level 1**  
1/4" = 1'-0"

**RCP SHEET NOTES**

- REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES.
- LIGHT FIXTURES ARE LOCATED FROM FACE OF FINISH, U.O.N.
- WALL MOUNTED FIXTURES ARE 6'-8" CLEAR ABOVE FINISH FLOOR, U.O.N.
- REFER TO MECHANICAL DRAWINGS FOR CEILING REGISTERS AND DIFFUSERS.
- REFER TO ELECTRICAL DRAWINGS FOR FIRE ALARM AND EXIT SIGNS NOT DEPICTED ON THIS PLAN. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
- ALL ROOF STRUCTURE, PIPES, CONDUIT, EQUIPMENT AND DEVICES EXPOSED TO ROOM BELOW SHALL BE PRIMED AND PAINTED.
- ALL EXPOSED DUCTWORK, PIPE, EQUIPMENT THAT IS NOT FACTORY FINISHED IS TO BE PAINTED.

**SHEET KEYNOTES**

- 05.23 STRUCTURAL STEEL BEAM, S.S.D.
- 07.05 METAL GUTTER
- 08.16 TUBULAR SKYLIGHT LENS DIFFUSER
- 09.58 ACOUSTICAL WALL PANEL
- 10.11 PROJECTION MARKERBOARD, 8"W X 5"H TYP.
- 11.09 PROJECTION SCREEN
- 11.26 PROJECTOR, SEE DET. 1/TN506 FOR MOUNTING
- 12.04 ROLLER SHADE, FOR MOUNTING SEE DETAIL 5/A970
- 23.04 EXHAUST AIR GRILLE, S.M.D.
- 23.07 FAN COIL UNIT, S.M.D.
- 23.08 MECHANICAL EQUIPMENT, S.M.D., PAINT
- 23.09 EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
- 23.13 MECHANICAL DUCT, S.M.D.
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

**RCP LEGEND**

	10'-0" CEILING HEIGHT TAG
	EXP. EXPOSED STRUCTURE
	2'x4' SUSPENDED ACP-1 DETAIL
	GYPSUM BOARD CEILING ATTACHED TO FRAMING
	EXPOSED METAL DECK
	SUPPLY AIR DIFFUSER
	RETURN REGISTER
	EXHAUST REGISTER
	12"x12" CEILING ACCESS PANEL
	SURFACE MOUNTED FIXTURE, S.E.D.
	LED EXTERIOR LIGHT - WALL MOUNT, S.E.D.
	LED PENDANT STRIP LIGHT, S.E.D.
	WALL MOUNTED FIXTURE, S.E.D.

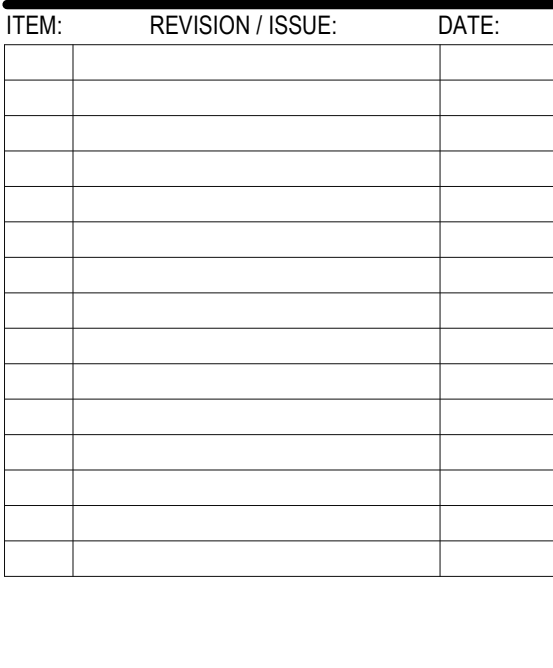
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021

**ATI**  
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+  
ENGINEERS  
AN AC MARTIN COMPANY  
4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
L. J. MARTIN, T. W. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

ITEM	REVISION / ISSUE	DATE



CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**CLASSROOM BUILDING REFLECTED CEILING PLAN**

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

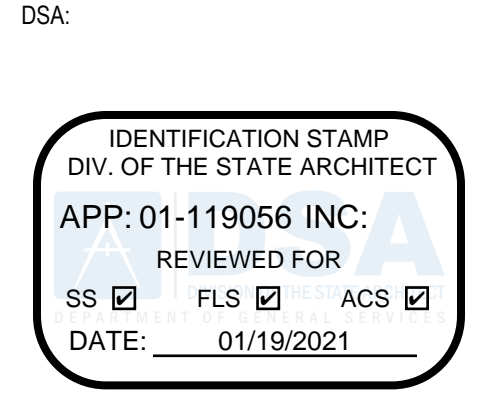
**AA141**



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GENERAL SHEET NOTES

1. FURNITURE AND OTHER ITEMS SHOWN IN FURNITURE PLAN ARE TO BE O.F.O.I., U.O.N.



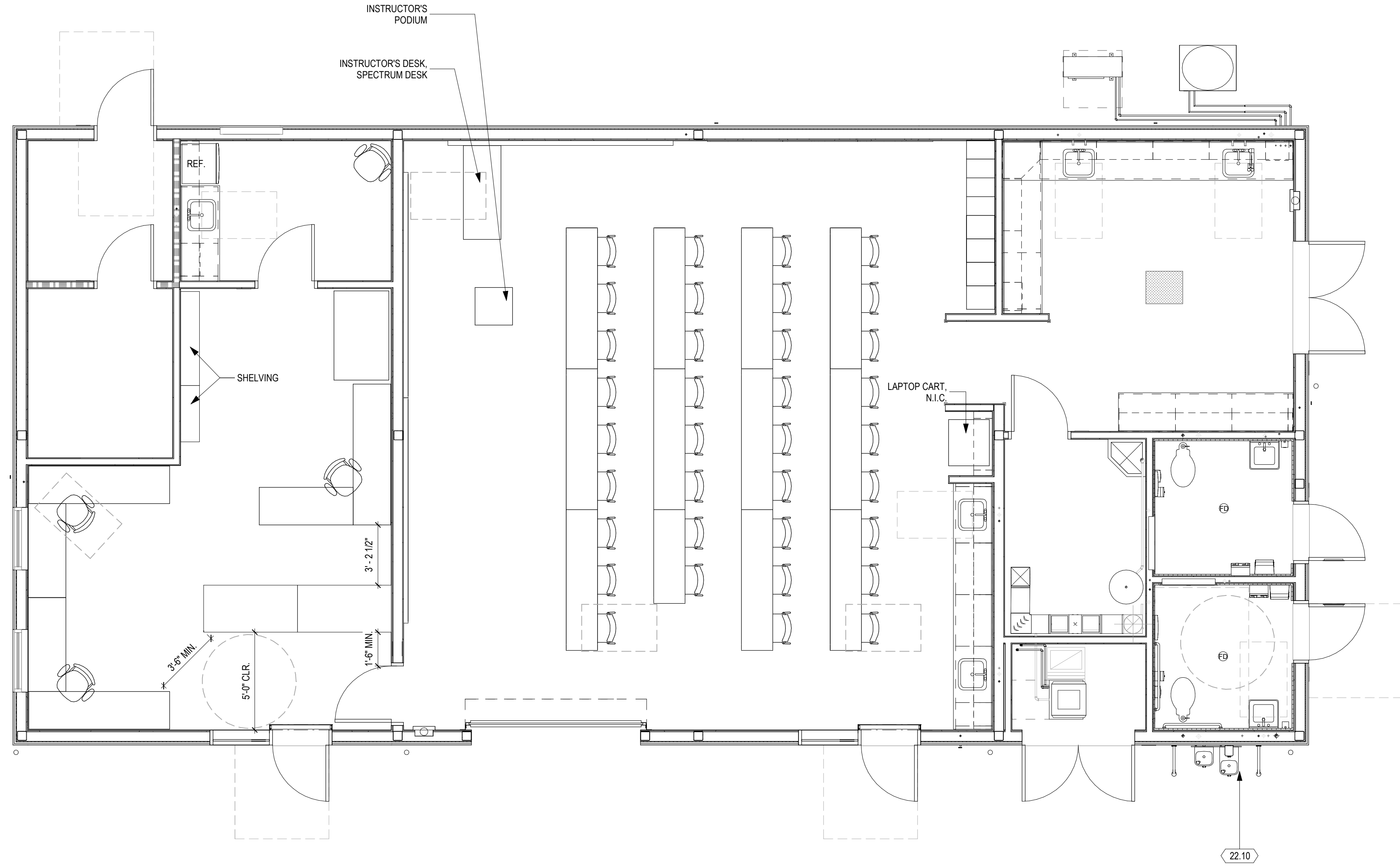
4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:



SHEET KEYNOTES

22.10 HI-LO WATER FOUNTAIN (ADA), S.P.D., SEE DETAIL 4/A992



1 FURNITURE PLAN  
1/4" = 1'-0"

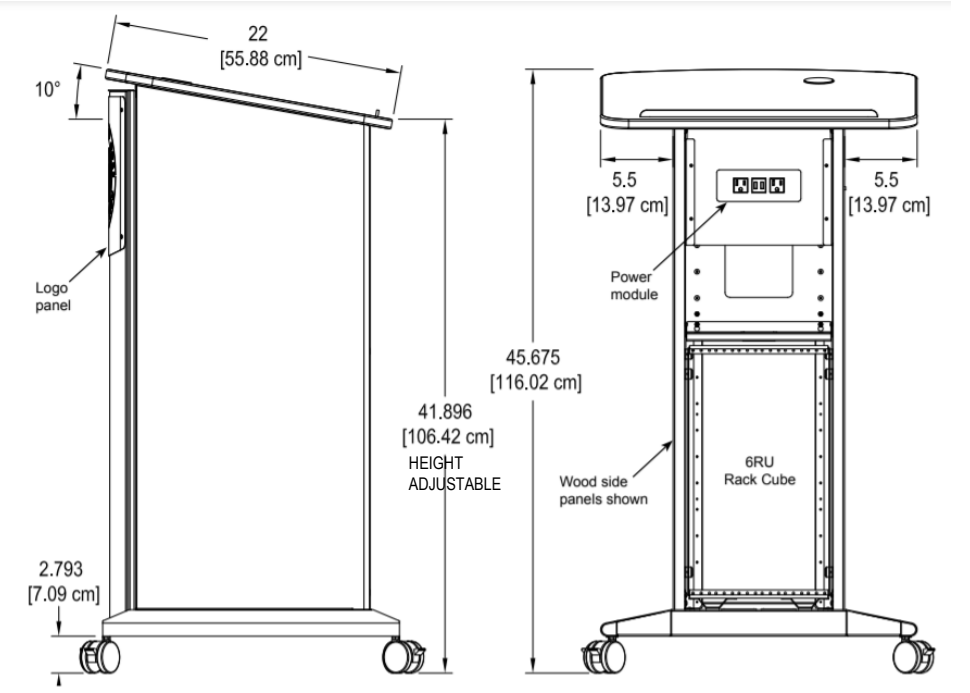


INSTRUCTOR'S DESK  
BASIS OF DESIGN: SPECTRUM INDUSTRIES INC. EVOLUTION COMPUTER DESK

30" Worksurface		24" Worksurface	
38901	36"W x 30"D x 27"H	38912	36"W x 24"D x 27"H
38904	60"W x 30"D x 27"H	38915	60"W x 24"D x 27"H
38905	72"W x 30"D x 27"H	38916	72"W x 24"D x 27"H
38906	inside corner connector	38917	inside corner connector

Height adjustable Worksurface from 24" - 32"H:

30" Worksurface		24" Worksurface	
38901ADJ	36"W x 30"D x 24-32"H	38912ADJ	36"W x 24"D x 24-32"H
38904ADJ	60"W x 30"D x 24-32"H	38915ADJ	60"W x 24"D x 24-32"H
38905ADJ	72"W x 30"D x 24-32"H	38916ADJ	72"W x 24"D x 24-32"H



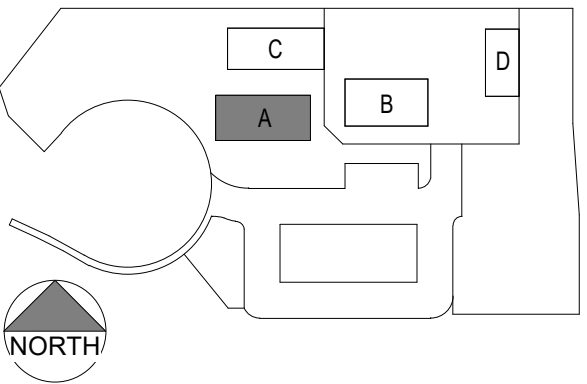
INSTRUCTOR'S LECTERN  
BASIS OF DESIGN: SPECTRUM INDUSTRIES INC. ADJUSTABLE HEIGHT SLIM LECTERN

2 Furniture Basis of Design  
N.T.S.

CONSULTANT:

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KEY PLAN:



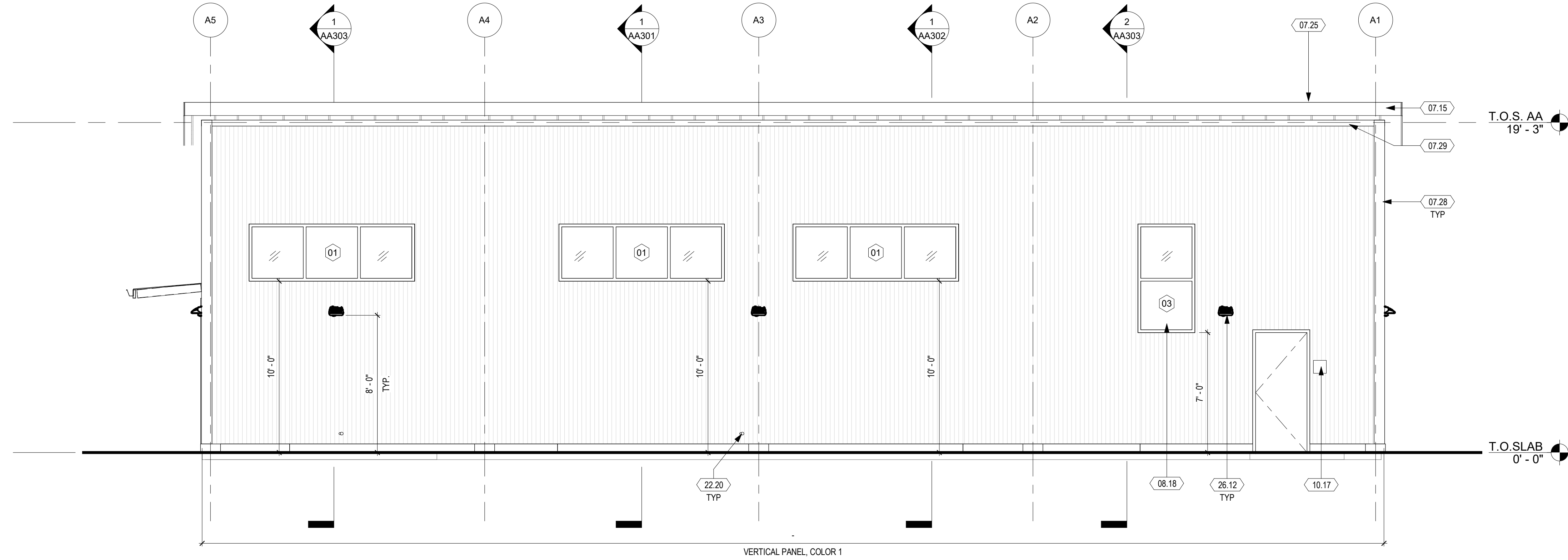
CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

CLASSROOM FURNITURE & EQUIPMENT PLAN

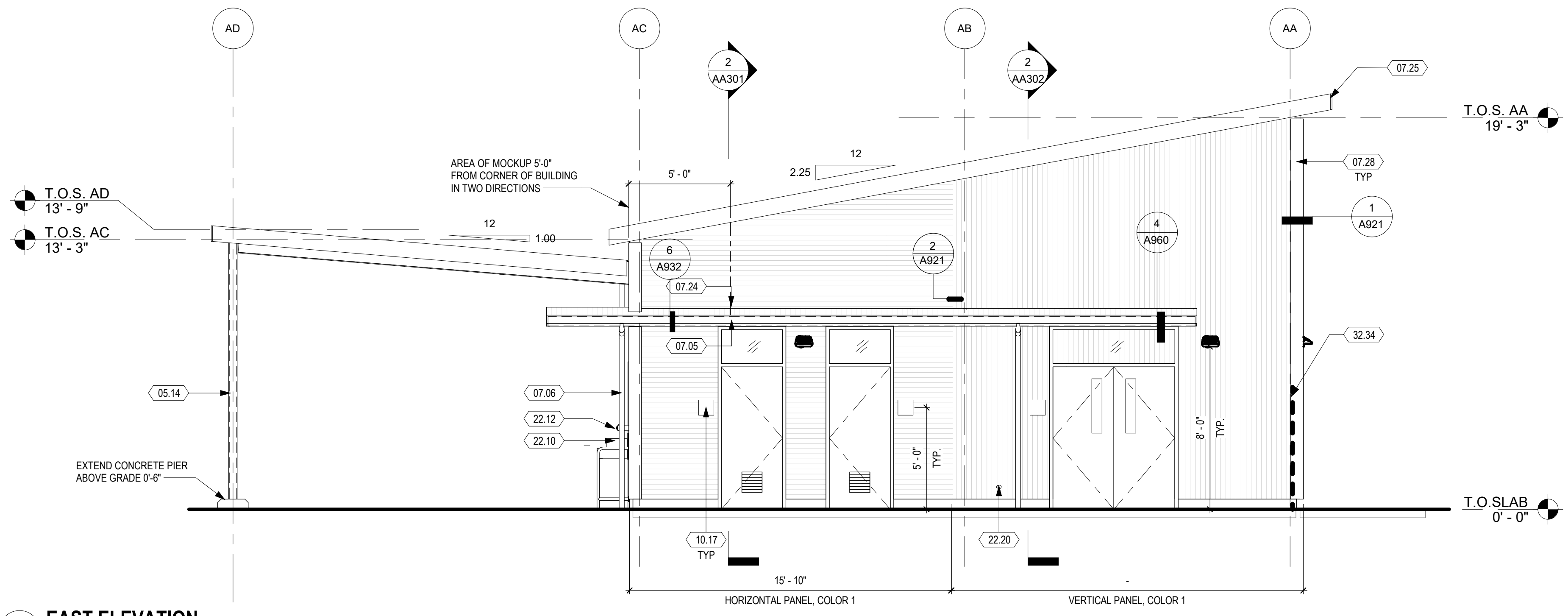
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DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

AA171

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**1 NORTH ELEVATION**  
1/4" = 1'-0"



**2 EAST ELEVATION**  
1/4" = 1'-0"

**SHEET KEYNOTES**

- 05.14 HSS COLUMN, S.S.D., PAINTED - PT-4, SEE FINISH SCHEDULE
- 07.05 METAL GUTTER
- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL, SEE DETAIL 9/A921 AND 9/A921
- 07.15 ALUMINUM FASCIA, COLOR TO MATCH ROOFING
- 07.24 METAL DECK
- 07.25 METAL STANDING SEAM ROOF
- 07.28 CORNER ANGLE, COLOR TO MATCH ADJACENT SIDING PANEL
- 07.29 CLOSURE TRIM, COLOR TO MATCH ADJACENT SIDING PANEL
- 08.18 TRANSLUCENT FILM ON GLAZING, ALL PANES
- 10.17 SIGNAGE PER DOOR SCHEDULE
- 22.10 HI-LO WATER FOUNTAIN (ADA), S.P.D., SEE DETAIL 4/A992
- 22.12 BOTTLE FILLER, S.P.D., SEE DETAIL 4/A992
- 22.20 HOSE BIB
- 23.08 MECHANICAL EQUIPMENT, S.M.D., PAINT
- 23.14 GRAVITY RELIEF, S.M.D.
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE
- 32.34 2" THICK GREEN SCREEN FENCE, 6'-0"

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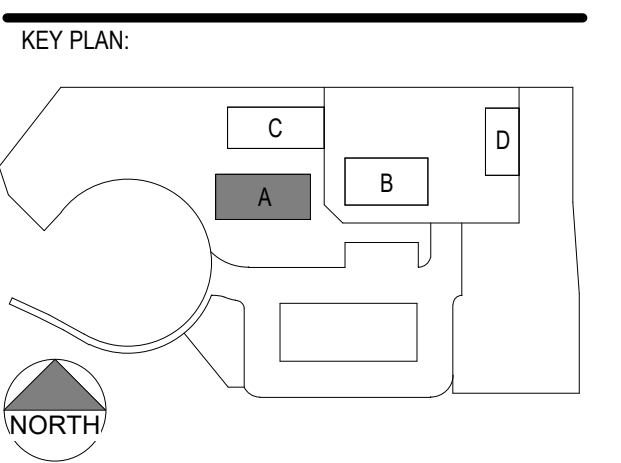
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CONSULTANT:

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**EXTERIOR ELEVATION LEGEND**

- METAL SIDING PANEL -
- PANEL COLOR 1 - AEP SPAN, REGAL WHITE
  - PANEL COLOR 2 - AEP SPAN, SAGE GREEN



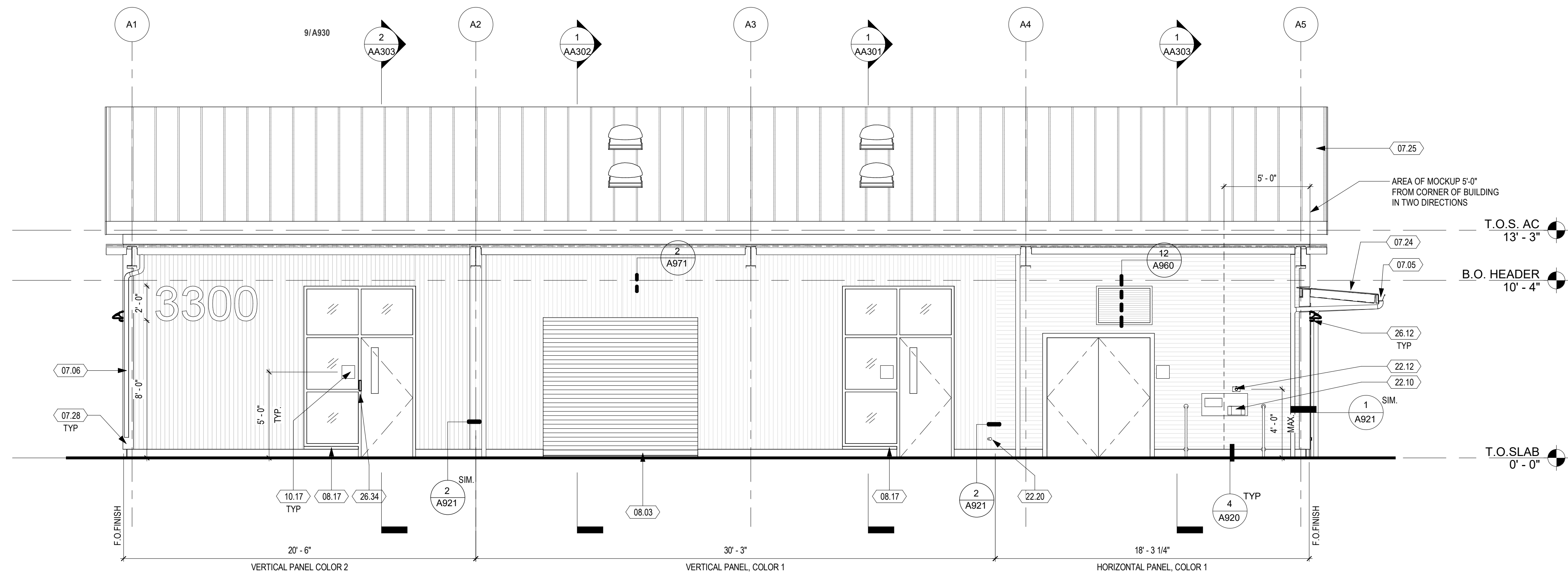
CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**EXTERIOR ELEVATIONS**

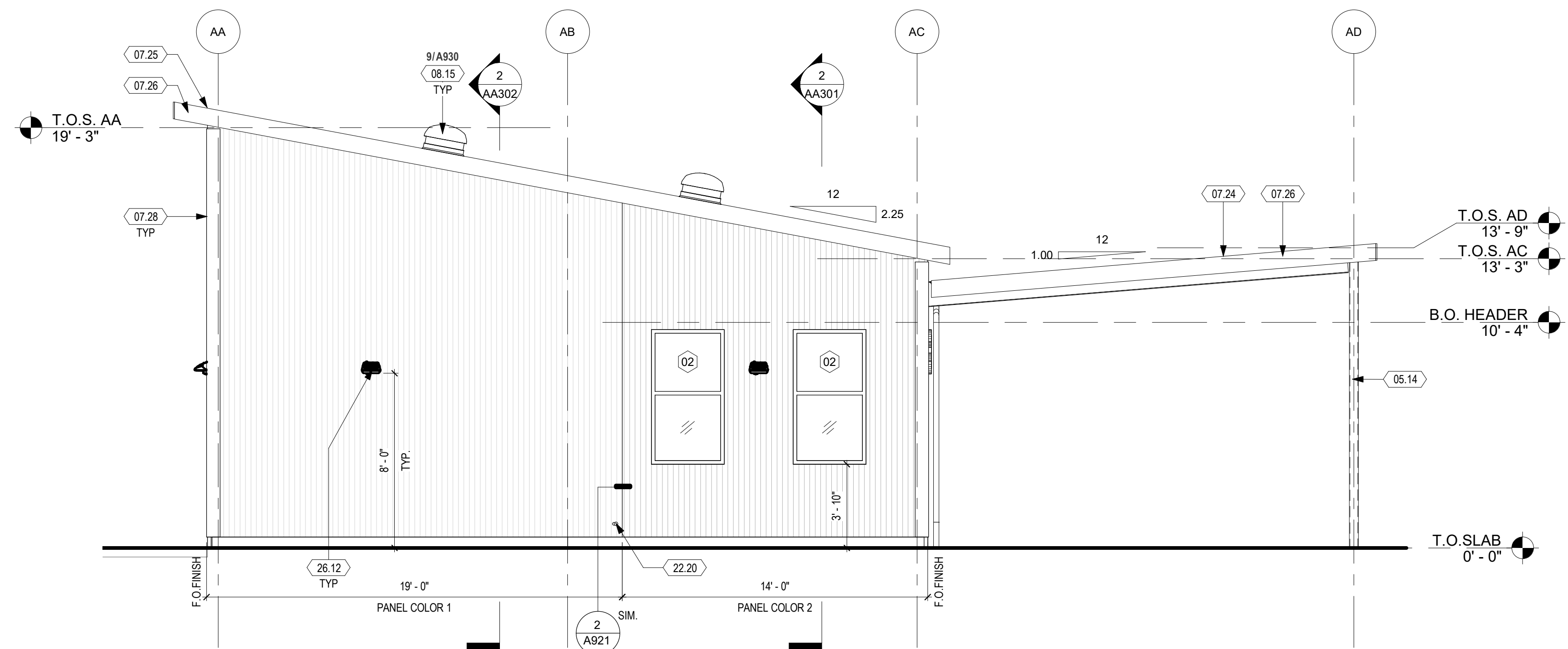
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DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

**AA201**

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**1 SOUTH ELEVATION**  
1/4" = 1'-0"

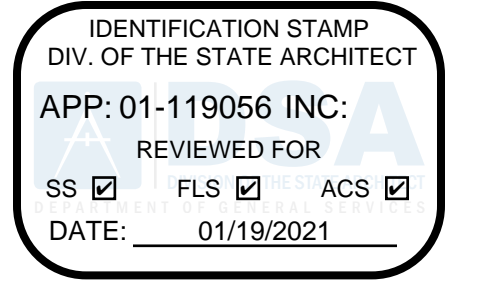


**2 WEST ELEVATION**  
1/4" = 1'-0"

**SHEET KEYNOTES**

- 05.14 HSS COLUMN, S.S.D., PAINTED - PT-4, SEE FINISH SCHEDULE
- 07.05 METAL GUTTER
- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL, SEE DETAIL 9/A921 AND 3/A921
- 07.24 METAL DECK
- 07.25 METAL STANDING SEAM ROOF
- 07.26 ROOF FASCIA, COLOR TO MATCH ROOFING
- 07.28 CORNER ANGLE, COLOR TO MATCH ADJACENT SIDING PANEL
- 08.03 OVERHEAD COILING DOOR
- 08.15 TUBULAR SKYLIGHT, SEE 1/A971
- 08.17 ALUMINUM STOREFRONT SILL EXTENDER
- 10.17 SIGNAGE PER DOOR SCHEDULE
- 22.10 HI-LO WATER FOUNTAIN (ADA), S.P.D., SEE DETAIL 4/A992
- 22.12 BOTTLE FILLER, S.P.D., SEE DETAIL 4/A992
- 22.20 HOSE BIB
- 23.14 GRAVITY RELIEF, S.M.D.
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE
- 26.34 ACCESS CARD READER, S.E.D.

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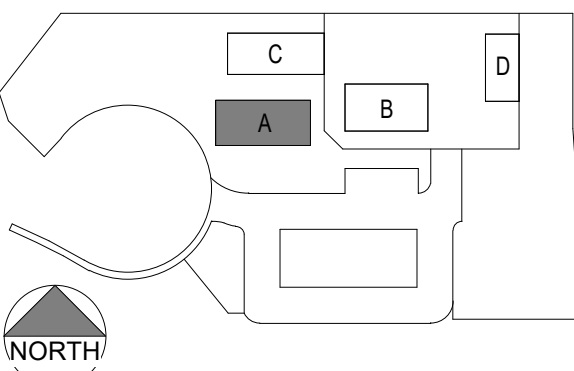
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**EXTERIOR ELEVATION LEGEND**

- METAL SIDING PANEL -**  
 PANEL COLOR 1 - AEP SPAN, REGAL WHITE  
 PANEL COLOR 2 - AEP SPAN, SAGE GREEN

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

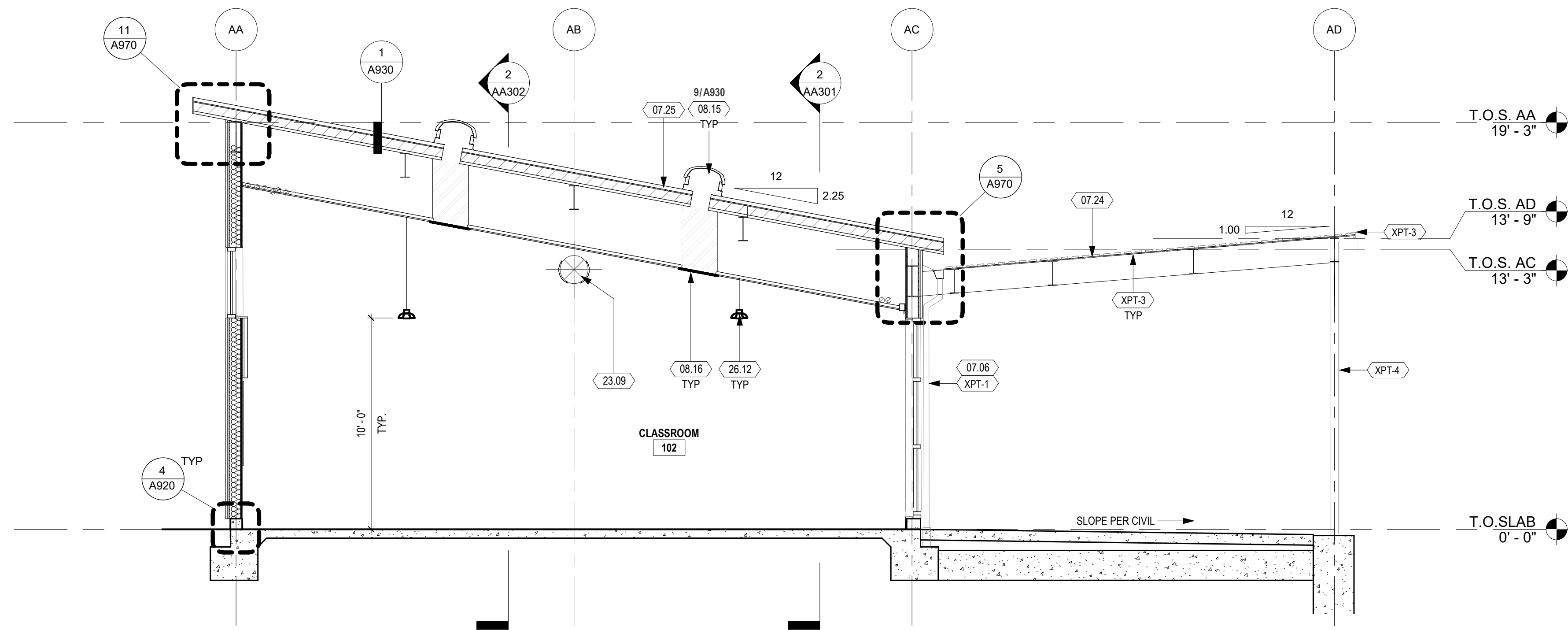
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

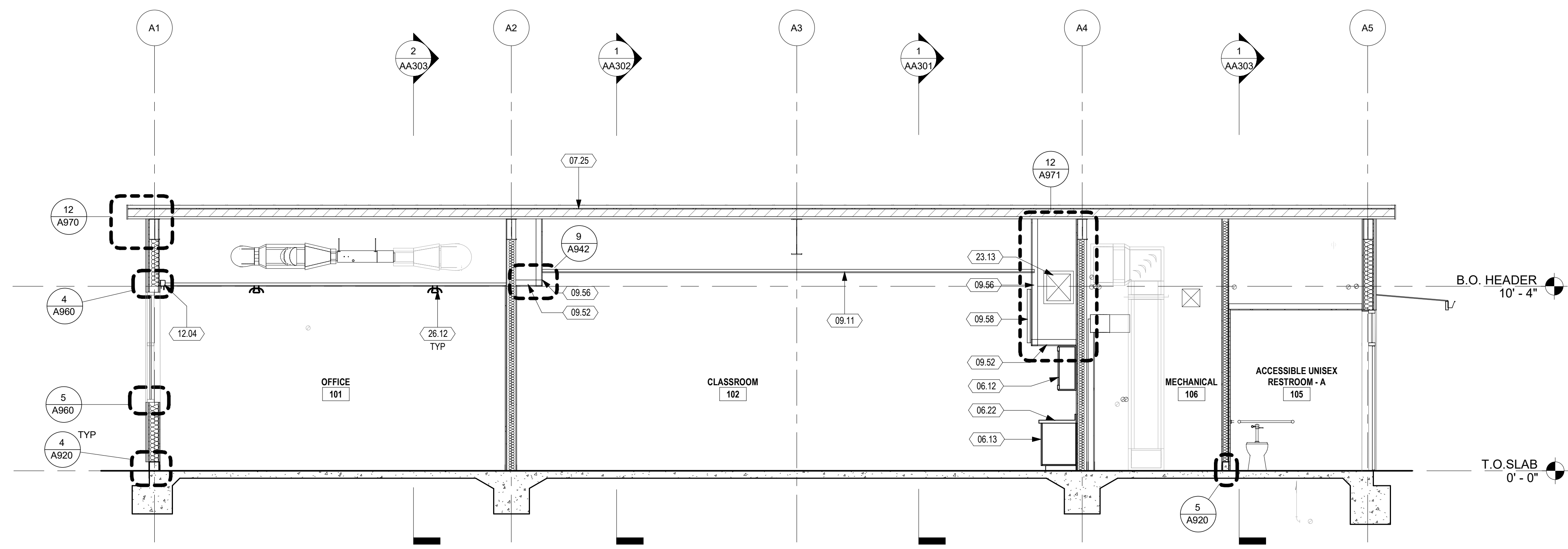
**EXTERIOR ELEVATIONS**

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 DATE: 01/14/2021      PROJECT NO: C9508  
 SHEET NO:

**AA202**



**1 CROSS SECTION**  
1/4" = 1'-0"



**2 LONGITUDINAL SECTION**  
1/4" = 1'-0"

**SHEET KEYNOTES**

- 06.12 UPPER CABINET
- 06.13 LOWER CABINET
- 06.22 RESIN COUNTER TOP
- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL, SEE DETAIL 9/A921 AND 3/A921
- 07.24 METAL DECK
- 07.25 METAL STANDING SEAM ROOF
- 08.15 TUBULAR SKYLIGHT, SEE 1/A971
- 08.16 TUBULAR SKYLIGHT LENS DIFFUSER
- 09.11 ACOUSTICAL CEILING PANEL ACP-1, 24X48
- 09.52 GYPSUM BOARD CEILING/SOFFIT, PAINTED, SEE FINISH SCHEDULE
- 09.56 GYPSUM BOARD, PAINTED, PT-2
- 09.58 ACOUSTICAL WALL PANEL
- 12.04 ROLLER SHADE, FOR MOUNTING SEE DETAIL 5/A970
- 23.09 EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
- 23.13 MECHANICAL DUCT, S.M.D.
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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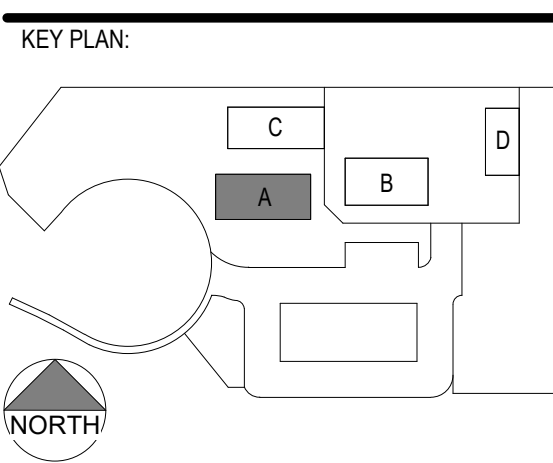
PROFESSIONAL STAMP:  
L. J. MARTIN, T. W. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

**EXTERIOR FINISH LEGEND**

- METAL SIDING PANEL -**
- PANEL COLOR 1 - ARMORTECH "IVORY" (SRI 68)
  - PANEL COLOR 2 - ARMORTECH "SAGE GREEN" (SRI 31)
  - PANEL COLOR 3 - GALVALUME ZINCALUME PLUS AZ-55 SRI-65
- XPT-1: KELLY-MOORE PAINT TO MATCH ARMORTECH "IVORY" DOORS, FRAME, AND LOUVER AT MECH ROOM, DOWNSPOUTS, AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 1.
- XPT-2: KELLY-MOORE PAINT TO MATCH ARMORTECH "SAGE GREEN" DOWNSPOUTS AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 2.
- XPT-3: KM 4909 "METAL CH" EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS AND JOISTS (U.O.N.), EXPOSED METAL DECK, CONDUIT, AND MISC/SHEET METALS ADJACENT TO THESE COMPONENTS
- XPT-4: KM AC214-5 "LEAF RUST" EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE STRUCTURE, STEEL BOLLARDS

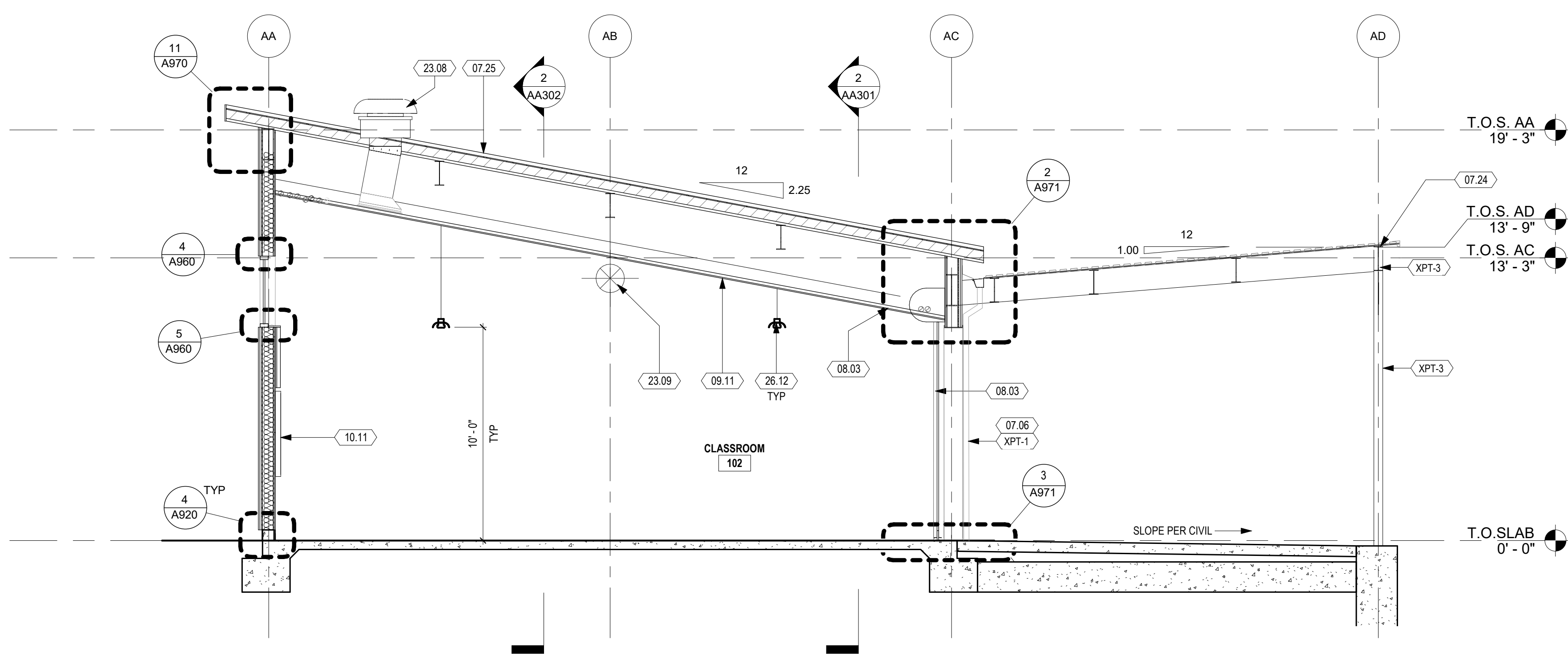


CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

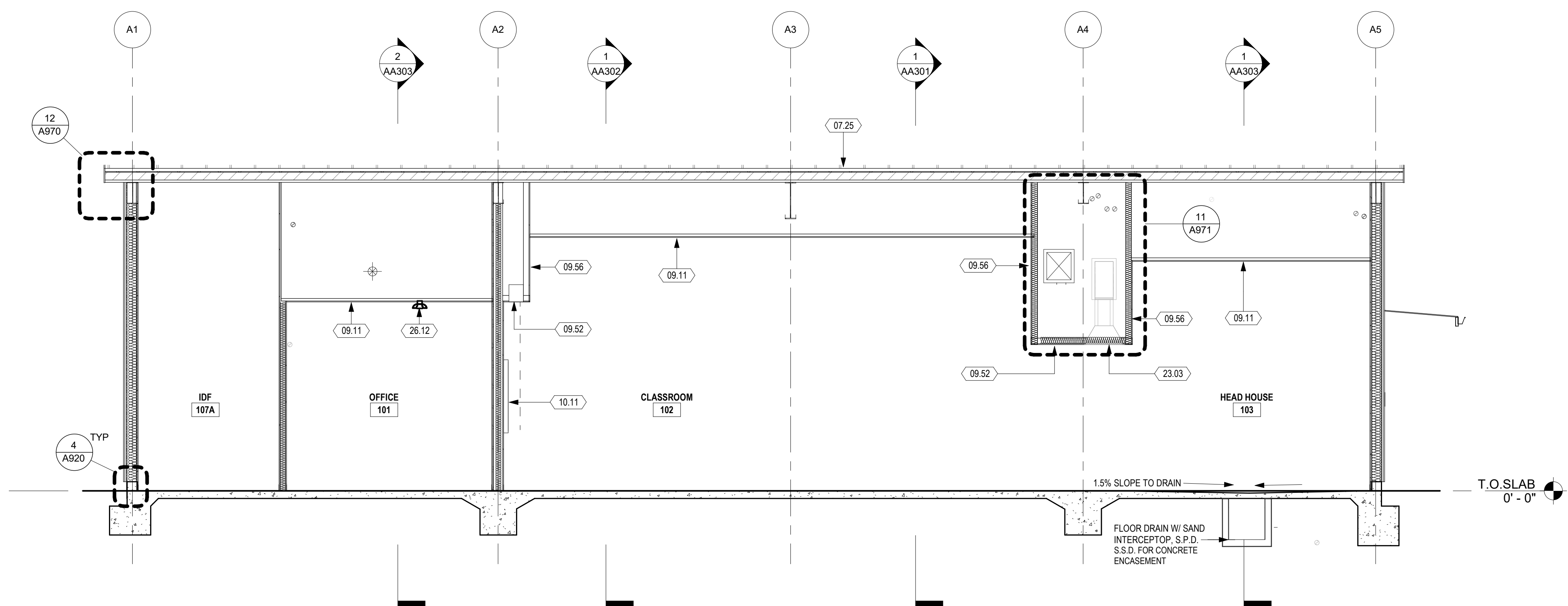
**BUILDING SECTIONS**

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**AA301**



**1** BUILDING SECTION - BETWEEN GRIDS 4 & 5  
1/4" = 1'-0"



**2** BUILDING SECTION - BETWEEN GRIDS A & B  
1/4" = 1'-0"

**SHEET KEYNOTES**

- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL. SEE DETAIL 9/A921 AND 3/A921
- 07.24 METAL DECK
- 07.25 METAL STANDING SEAM ROOF
- 08.03 OVERHEAD COILING DOOR
- 09.11 ACOUSTICAL CEILING PANEL ACP-1, 24X48
- 09.52 GYPSUM BOARD CEILING/SOFT, PAINTED, SEE FINISH SCHEDULE
- 09.56 GYPSUM BOARD, PAINTED, PT-2
- 10.11 PROJECTION MARKERBOARD, 8'W X 5'H TYP.
- 23.03 RETURN AIR GRILLE, S.M.D.
- 23.08 MECHANICAL EQUIPMENT, S.M.D., PAINT
- 23.09 EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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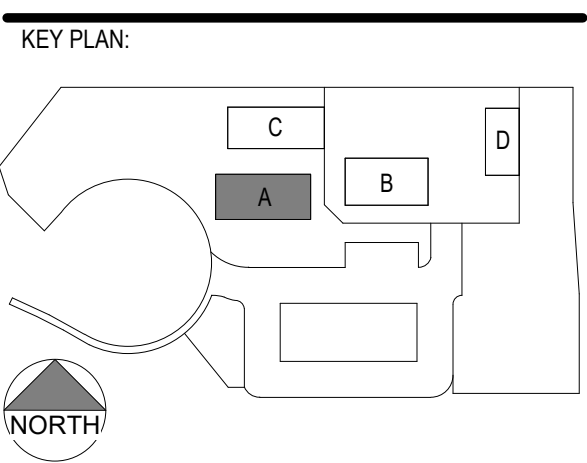
PROFESSIONAL STAMP:  
*Stanna T. Willett*  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

**EXTERIOR FINISH LEGEND**

- METAL SIDING PANEL
- PANEL COLOR 1 - ARMORTECH "IVORY" (SRI 68)
  - PANEL COLOR 2 - ARMORTECH "SAGE GREEN" (SRI 31)
  - PANEL COLOR 3 - GALVALUME ZINCALUME PLUS AZ-55 SRI-65
- XPT-1: KELLY-MOORE PAINT TO MATCH ARMORTECH "IVORY"  
DOORS, FRAME, AND LOUVER AT MECH ROOM, DOWNSPOUTS, AND  
MISC/SHEET METALS ADJACENT TO PANEL COLOR 1.
- XPT-2: KELLY-MOORE PAINT TO MATCH ARMORTECH "SAGE GREEN"  
DOWNSPOUTS AND MISC/SHEET METALS ADJACENT TO PANEL COLOR 2.
- XPT-3: KM 4909 "METAL CH"  
EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS  
AND JOISTS (U.O.N.), EXPOSED METAL DECK, CONDUIT, AND MISC/  
SHEET METALS ADJACENT TO THESE COMPONENTS
- XPT-4: KM AC214-5 "LEAF RUST"  
EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE  
STRUCTURE, STEEL BOLLARDS



CLPCCD - LAS POSITAS  
COLLEGE  
**AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**BUILDING  
SECTIONS**

DRAWN BY: EA      CHECKED BY: AW  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

**AA302**

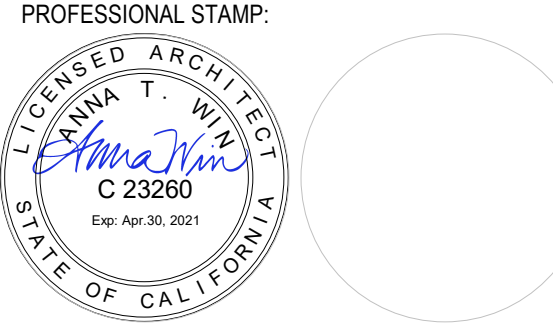
SHEET KEYNOTES

- 06.12 UPPER CABINET
- 06.13 LOWER CABINET
- 06.20 COUNTER APRON, 2'-3" CLR
- 06.22 RESIN COUNTER TOP
- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL. SEE DETAIL 9/A921 AND 3/A921
- 07.24 METAL DECK
- 07.25 METAL STANDING SEAM ROOF
- 09.11 ACOUSTICAL CEILING PANEL ACP-1, 24X48
- 09.52 GYPSUM BOARD CEILING/SOFFIT, PAINTED. SEE FINISH SCHEDULE
- 09.61 FIBER REINFORCED PLASTIC PANELS TO UNDERSIDE OF UPPER CABINETS
- 22.10 HI-LO WATER FOUNTAIN (ADA), S.P.D. SEE DETAIL 4/A992
- 23.07 FAN COIL UNIT, S.M.D.
- 23.08 MECHANICAL EQUIPMENT, S.M.D., PAINT
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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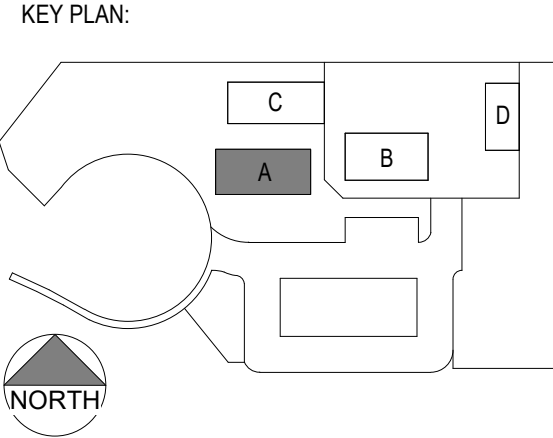


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EXTERIOR FINISH LEGEND

- METAL SIDING PANEL -
- PANEL COLOR 1 - ARMORTECH "IVORY" (SRI 68)
  - PANEL COLOR 2 - ARMORTECH "SAGE GREEN" (SRI 31)
  - PANEL COLOR 3 - GALVALUME ZINCALUME PLUS AZ-55 SRI-65
- XPT-1: KELLY-MOORE PAINT TO MATCH ARMORTECH "IVORY" DOORS, FRAME, AND LOUVER AT MECH ROOM, DOWNSPOUTS, AND MISCSHEET METALS ADJACENT TO PANEL COLOR 1.
- XPT-2: KELLY-MOORE PAINT TO MATCH ARMORTECH "SAGE GREEN" DOWNSPOUTS AND MISCSHEET METALS ADJACENT TO PANEL COLOR 2.
- XPT-3: KM 4909 "METAL CH" EXTERIOR HOLLOW METAL DOORS AND FRAMES, EXPOSED STEEL BEAMS AND JOISTS (U.O.N.); EXPOSED METAL DECK, CONDUIT, AND MISCSHEET METALS ADJACENT TO THESE COMPONENTS
- XPT-4: KM AC214-5 "LEAF RUST" EXPOSED STEEL POSTS, FASCIA BEAMS AT OVERHEAD SHADE STRUCTURE, STEEL BOLLARDS

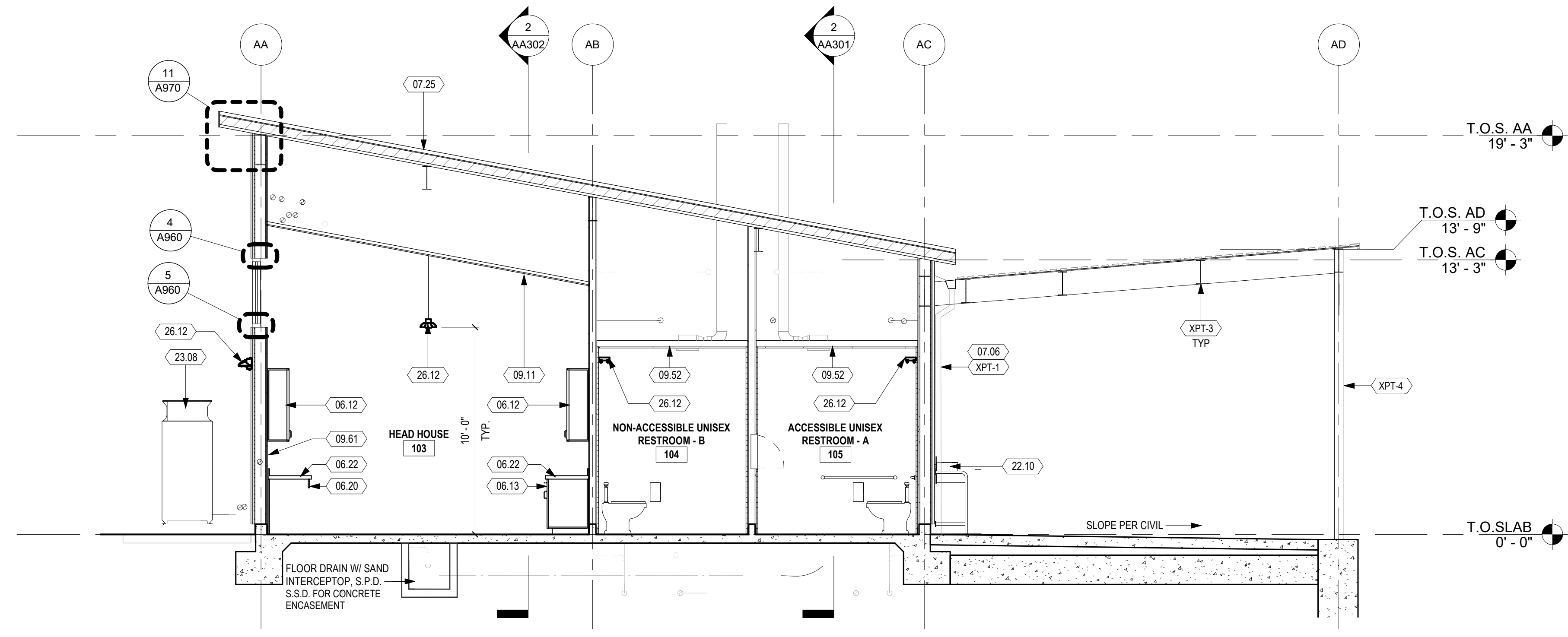


CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

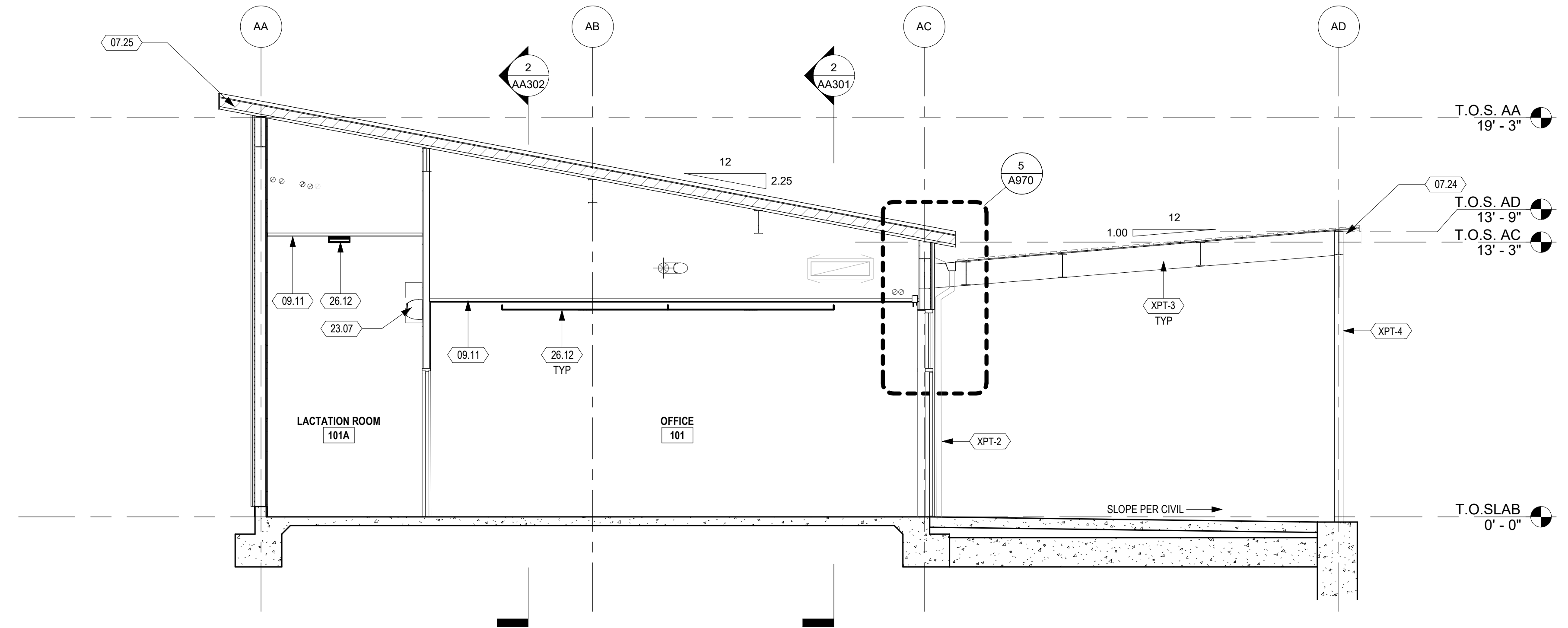
**BUILDING SECTIONS**

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**AA303**



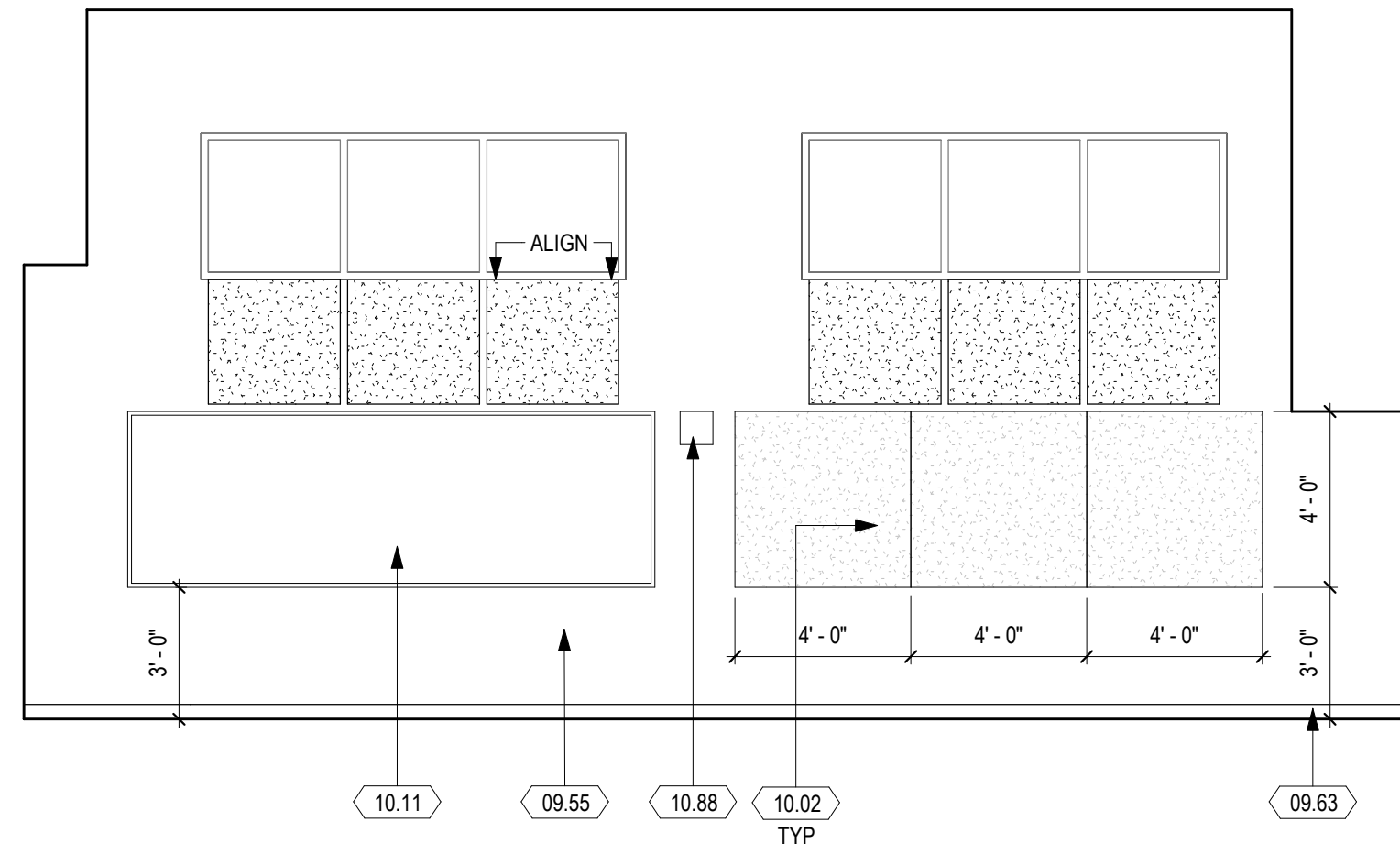
**1 CROSS SECTION**  
1/4" = 1'-0"



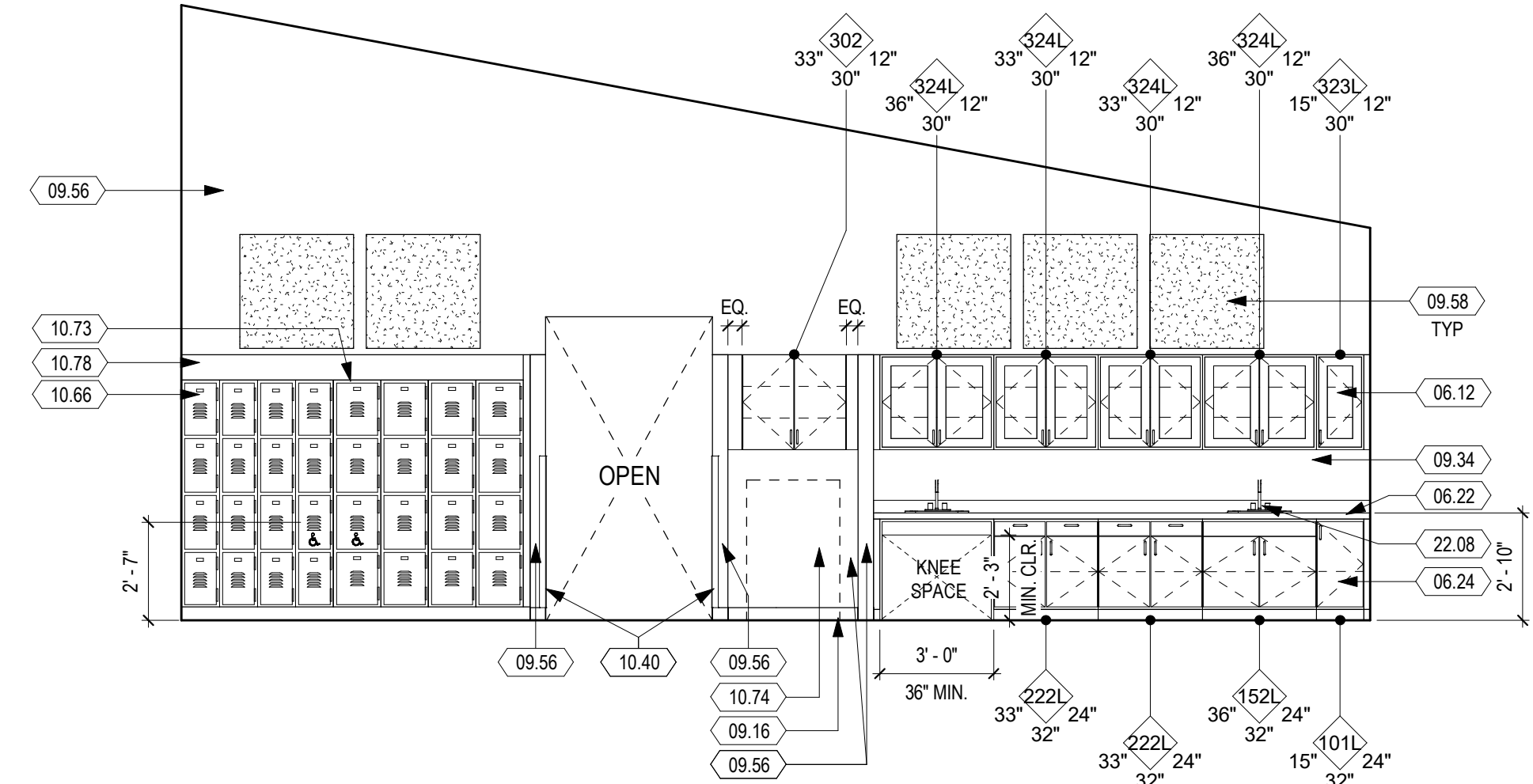
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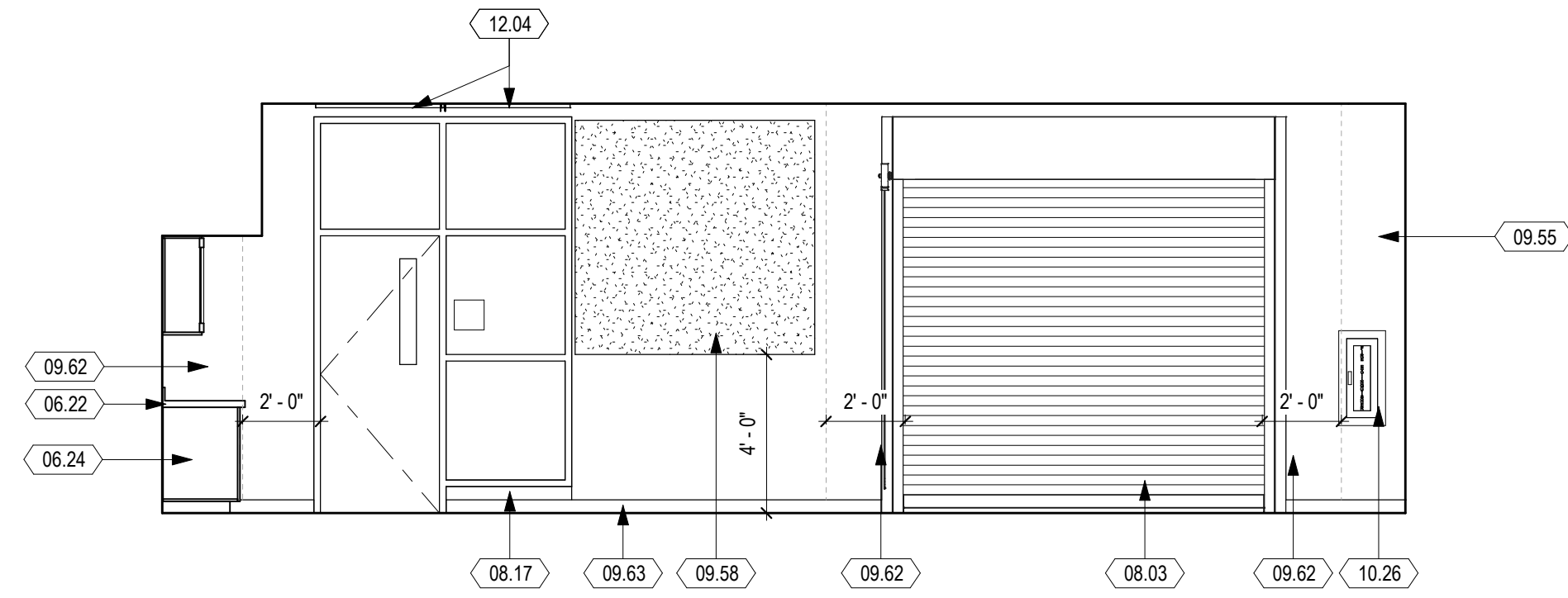




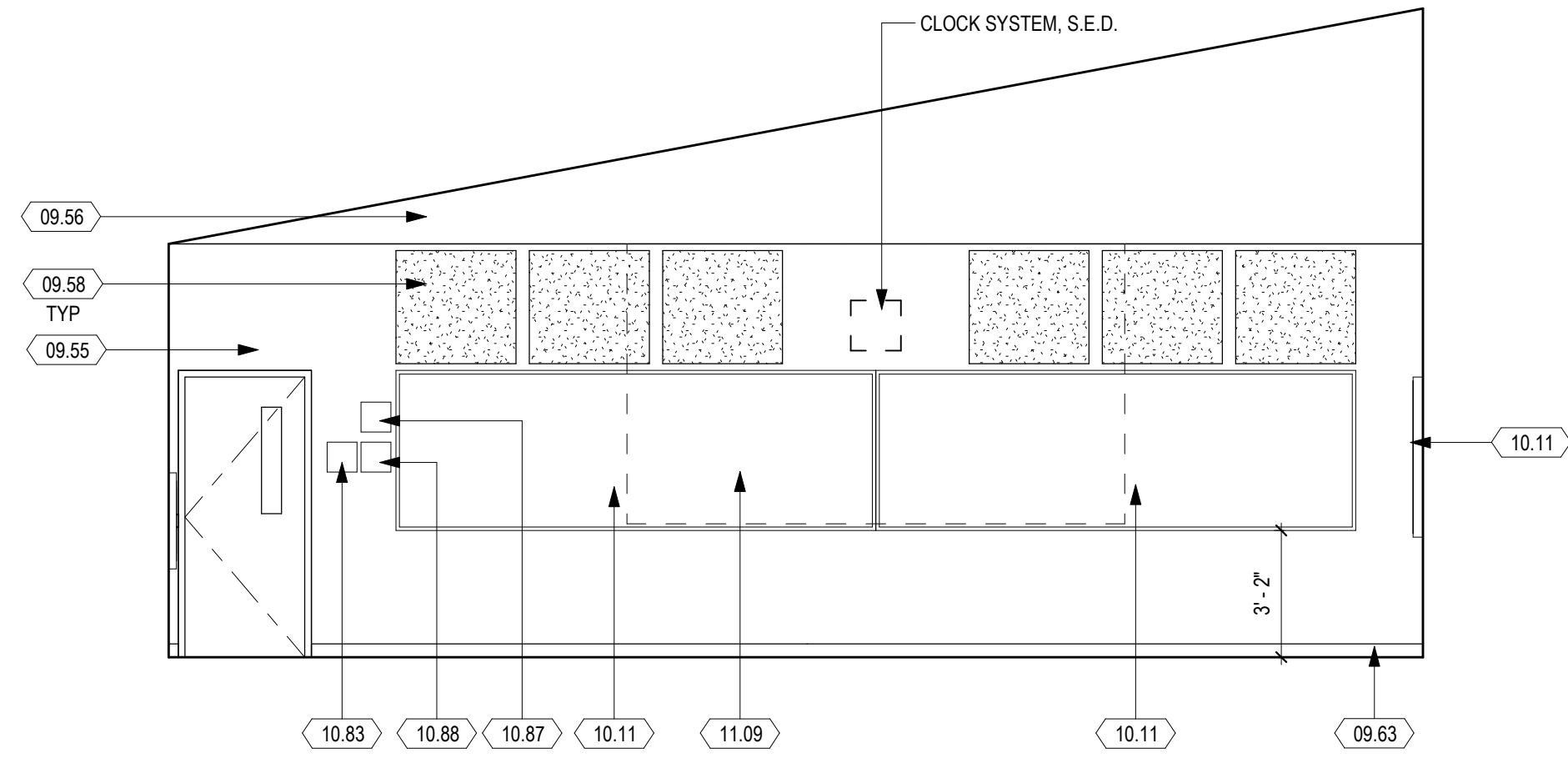
1 CLASSROOM - NORTH  
1/4" = 1'-0"



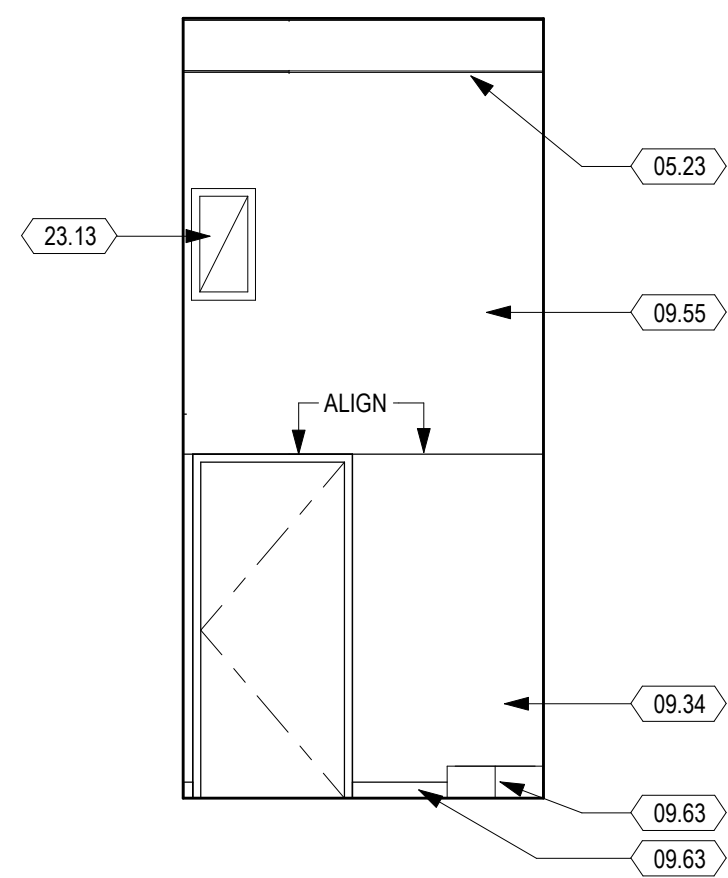
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1/4" = 1'-0"



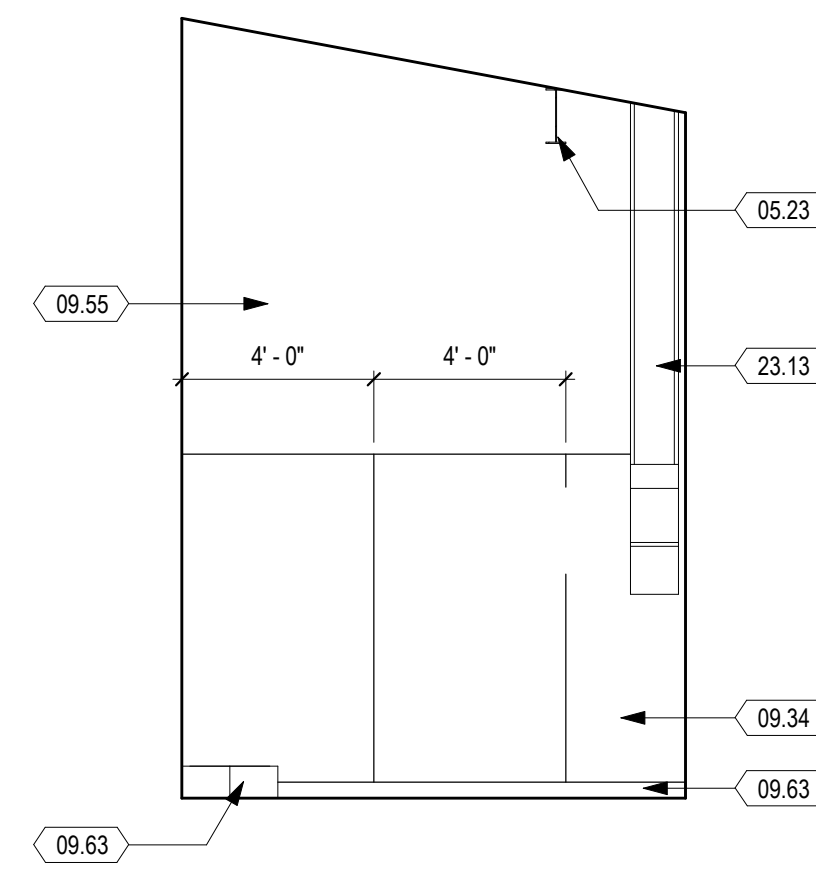
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1/4" = 1'-0"



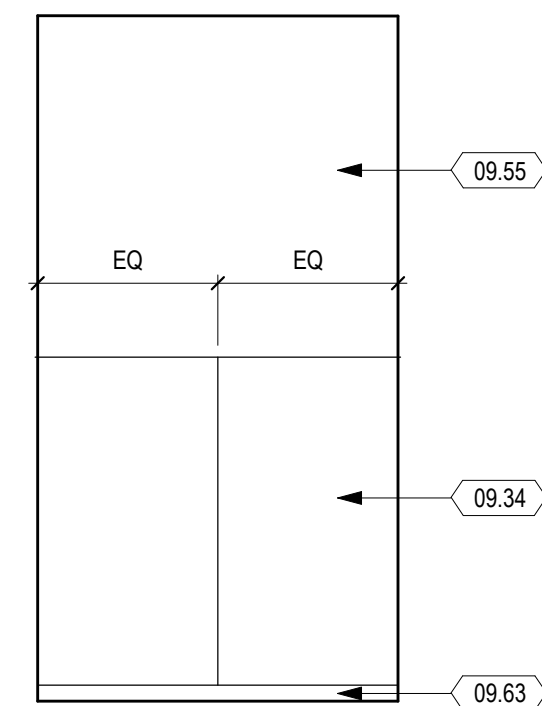
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1/4" = 1'-0"



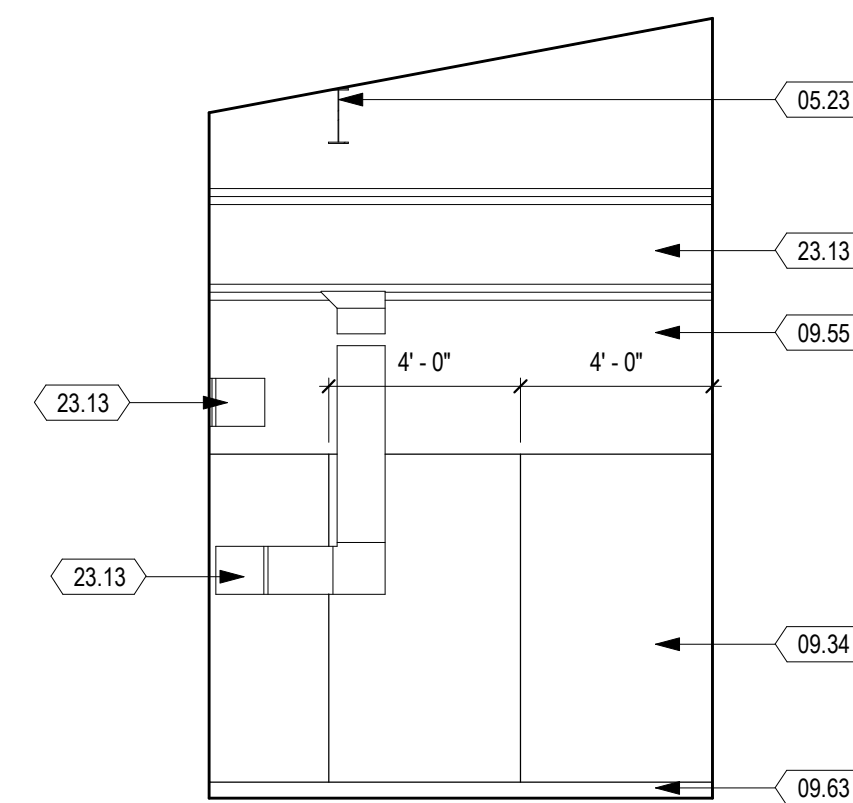
5 CUSTODIAL - NORTH  
1/4" = 1'-0"



7 CUSTODIAL - EAST  
1/4" = 1'-0"



6 CUSTODIAL - SOUTH  
1/4" = 1'-0"



8 CUSTODIAL - WEST  
1/4" = 1'-0"

SHEET KEYNOTES

- 05.23 STRUCTURAL STEEL BEAM, S.S.D.
- 06.12 UPPER CABINET
- 06.22 RESIN COUNTER TOP
- 06.24 LOWER CABINET, LOCKABLE
- 08.03 OVERHEAD COILING DOOR
- 08.17 ALUMINUM STOREFRONT SILL EXTENDER
- 09.16 6" RESILIENT BASE
- 09.34 FIBER REINFORCED PLASTIC PANELS
- 09.55 GYPSUM BOARD, PAINTED, PT-1
- 09.56 GYPSUM BOARD, PAINTED, PT-2
- 09.58 ACOUSTICAL WALL PANEL, 1" THICK, NRC=0.85 MIN.
- 09.62 MOISTURE-RESISTANT GYPSUM BOARD, PAINTED, PT-1
- 09.63 SELF-COVED EPOXY FLOORING
- 10.02 TACKBOARD
- 10.11 PROJECTION MARKERBOARD, 8W X 5H TYP.
- 10.26 FIRE EXTINGUISHER IN RECESSED MOUNTED CABINET, SEE DETAIL 2/A992
- 10.40 STAINLESS STEEL CORNER GUARD
- 10.66 78" 4-TIER 12" METAL LOCKERS
- 10.73 78" 4-TIER 15" METAL LOCKERS
- 10.74 LAPTOP CART, N.I.C.
- 10.78 METAL LOCKER TOP CLOSURE PIECE
- 10.83 RESTROOM DOOR SIGNAGE, SEE DETAIL
- 10.87 ASSISTED LISTENING DEVICE SIGNAGE, SEE DETAIL
- 10.88 MAXIMUM ROOM OCCUPANCY SIGNAGE, SEE DETAIL
- 11.09 PROJECTION SCREEN
- 12.04 ROLLER SHADE, FOR MOUNTING SEE DETAIL 5/A970
- 22.08 DROP-IN STAINLESS STEEL SINK (ADA)
- 23.08 MECHANICAL EQUIPMENT, S.M.D., PAINT
- 23.09 EXPOSED SHEET METAL DUCT, PRIMED AND PAINTED AS SCHEDULED, S.M.D.
- 23.13 MECHANICAL DUCT, S.M.D.

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APP: 01-119056 INC.  
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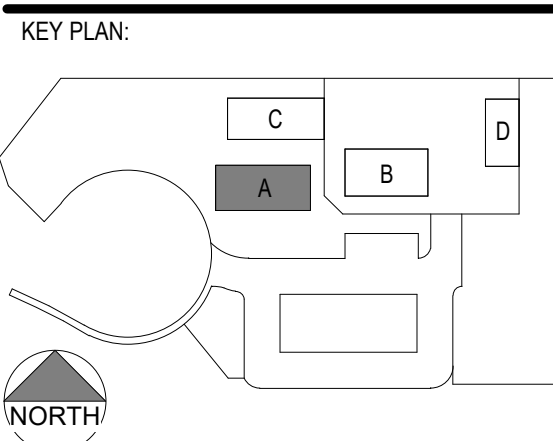
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ENGINEERS  
AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:  
LORNA T. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

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LOCKER COUNT (CBC)11B-811

SIZE	QTY	ACCESSIBLE
12W X 18H X 15D	16	1 (6%)
15W X 18H X 15D	16	1 (6%)

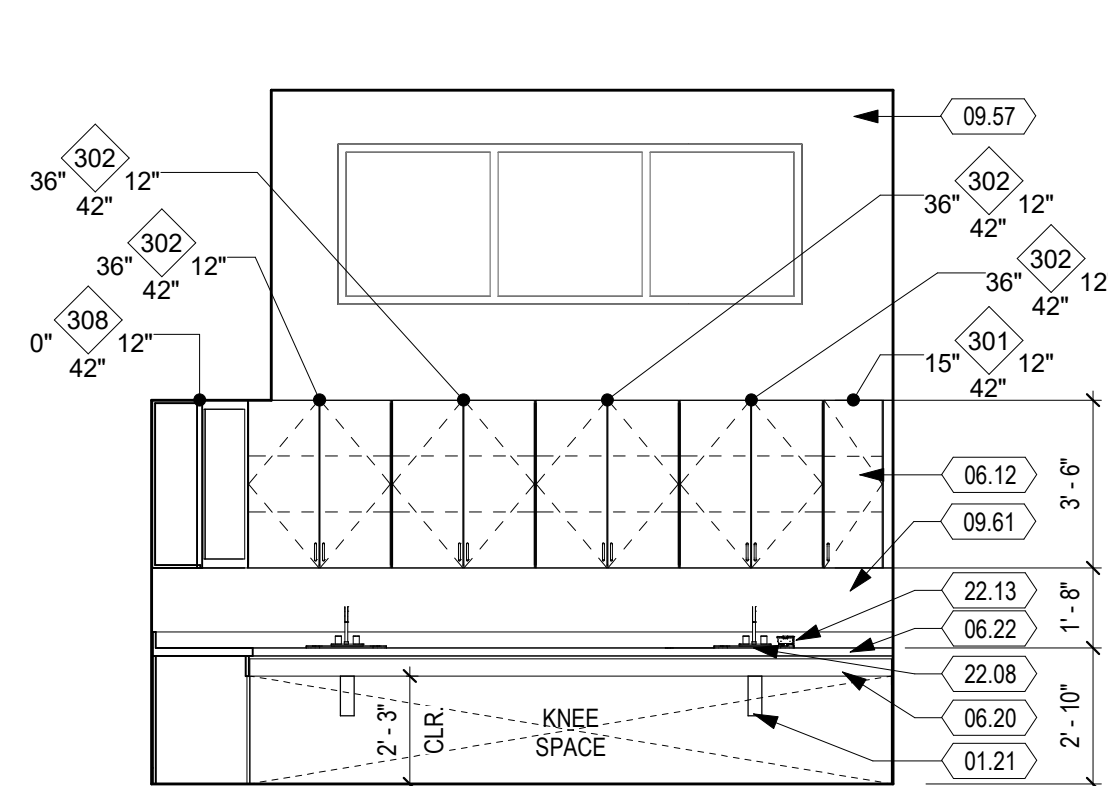
INTERIOR SHEET NOTES

1. FOR TOILET AND ACCESSORY MOUNTING HEIGHTS, SEE 3/G006
2. FOR ACCESSIBLE SINK DETAIL, SEE 1/A981
3. FOR ACCESSIBLE DRINKING FOUNTAIN, SEE 4/A992
4. FOR FIRE EXTINGUISHER CABINET DETAIL, SEE 2/A992
5. FOR CASEWORK ANCHORAGE SEE 4/A981
6. FOR MARKER BOARD MOUNTING, SEE 8/A992
7. FOR TACKBOARD MOUNTING, SEE 10/A992
8. FOR WINDOW SHADE MOUNTING, SEE 5/A970
9. FOR LOCKER DETAIL, SEE 12/A992
10. CASEWORK DESIGNATIONS ARE BASED ON WOODWORK INSTITUTE CABINET SERIES, SEE SPECS.

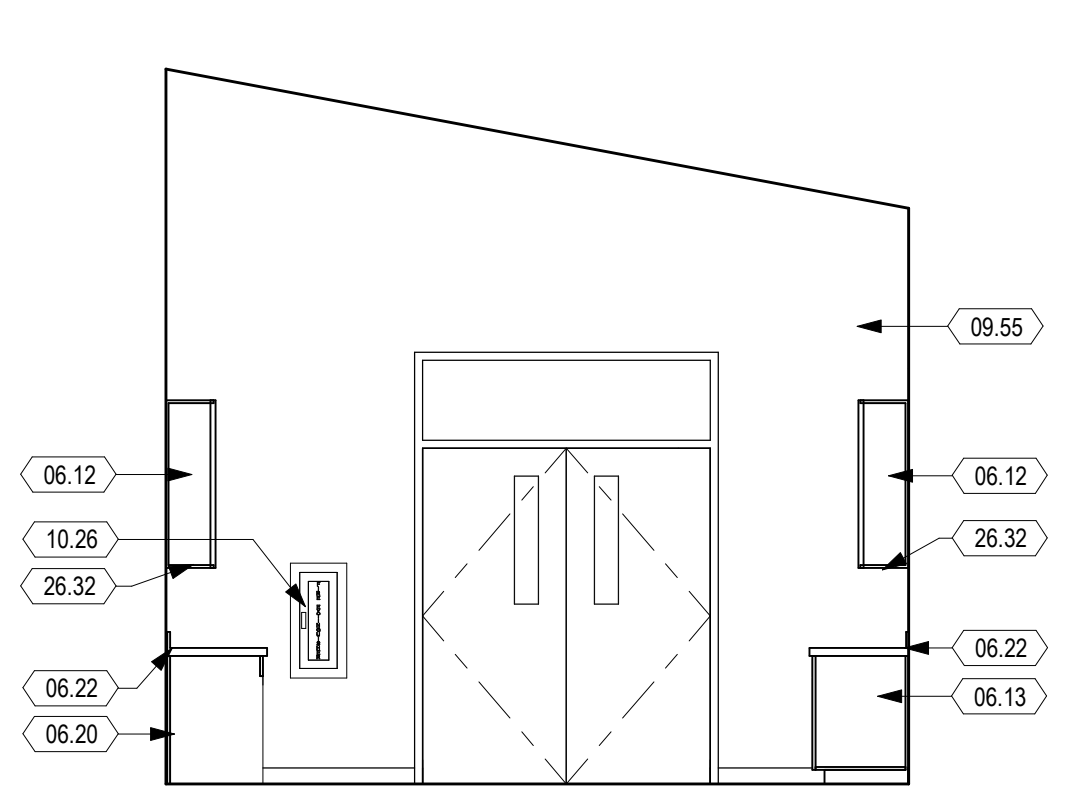
INTERIOR ELEVATIONS

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

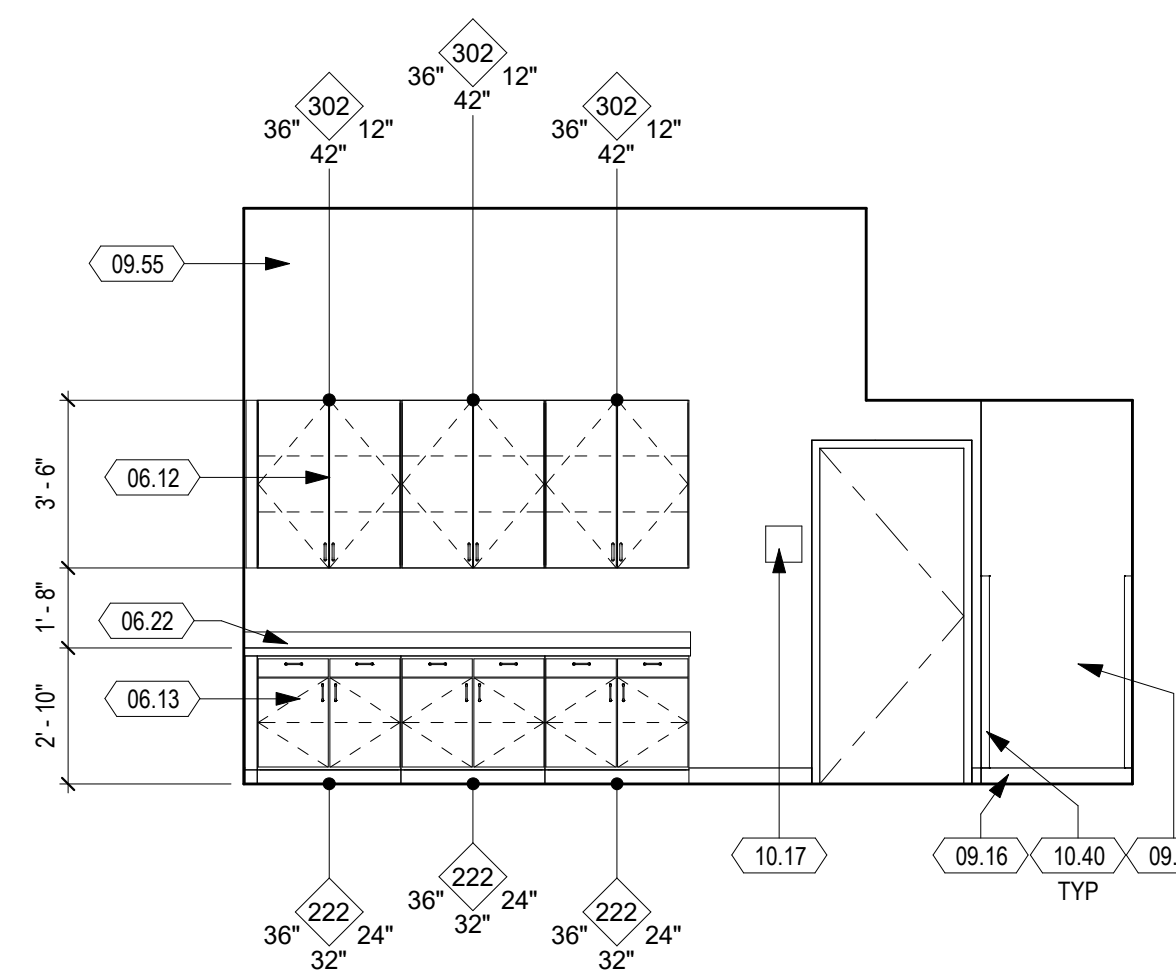
**AA501**



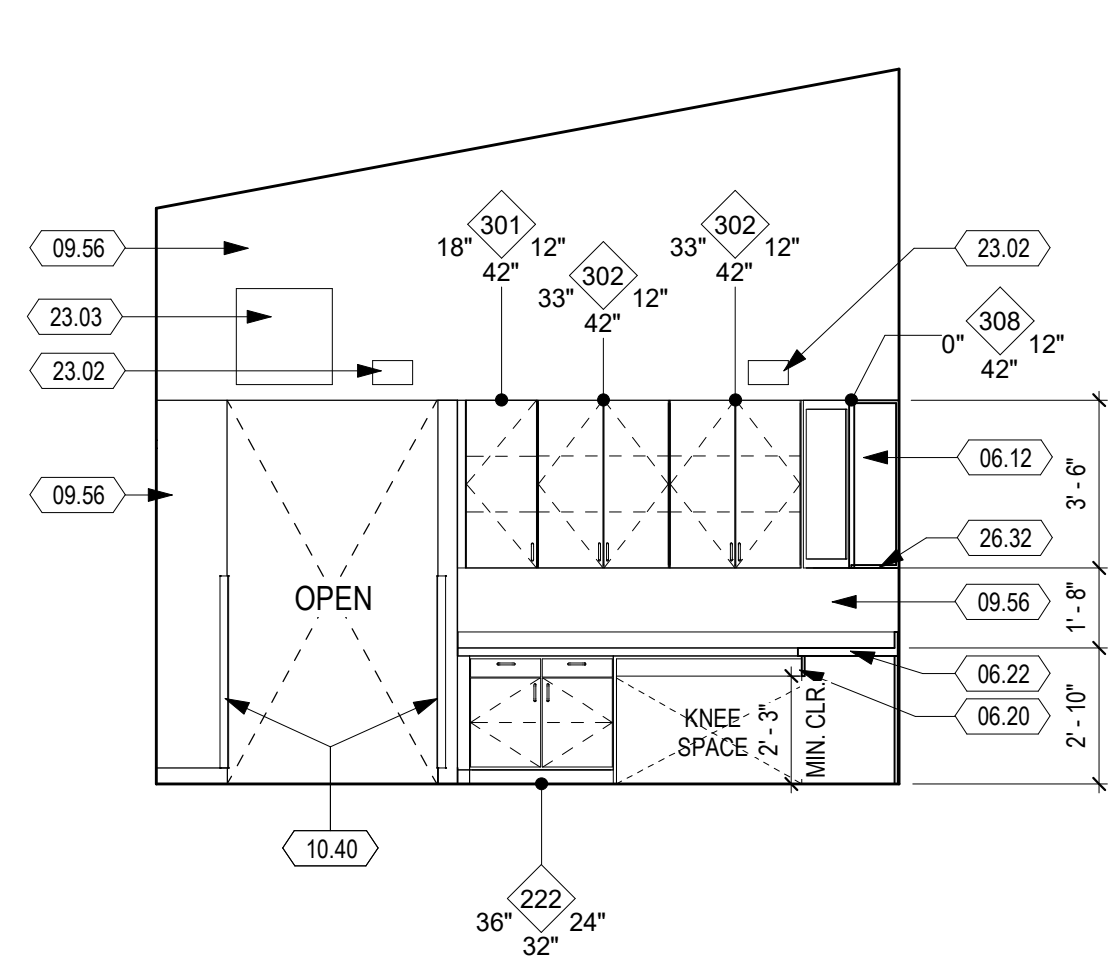
**4 HEAD HOUSE - NORTH**  
1/4" = 1'-0"



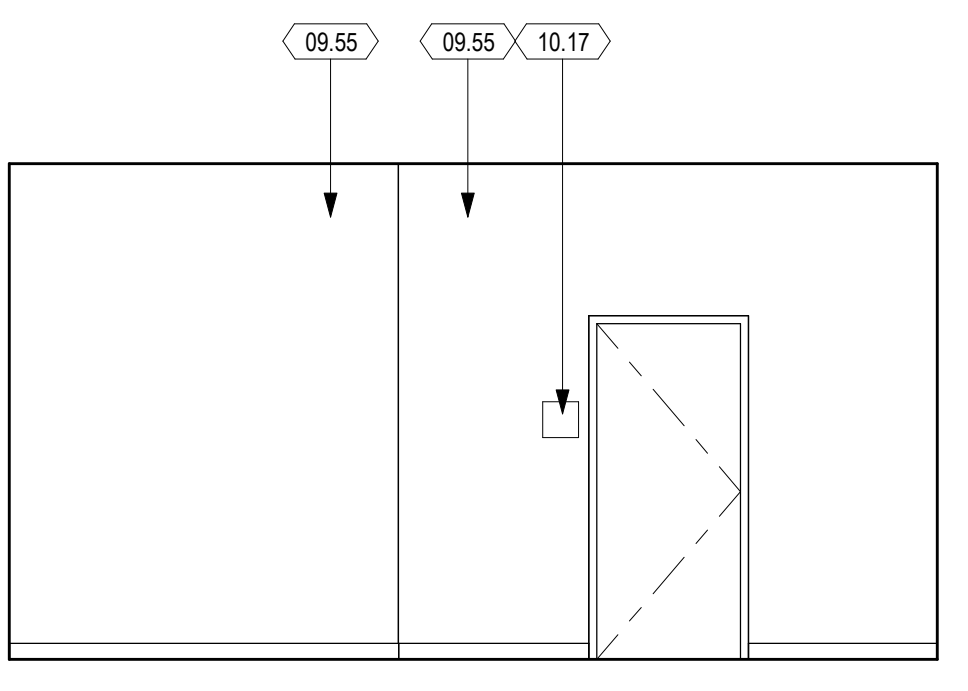
**3 HEAD HOUSE - EAST**  
1/4" = 1'-0"



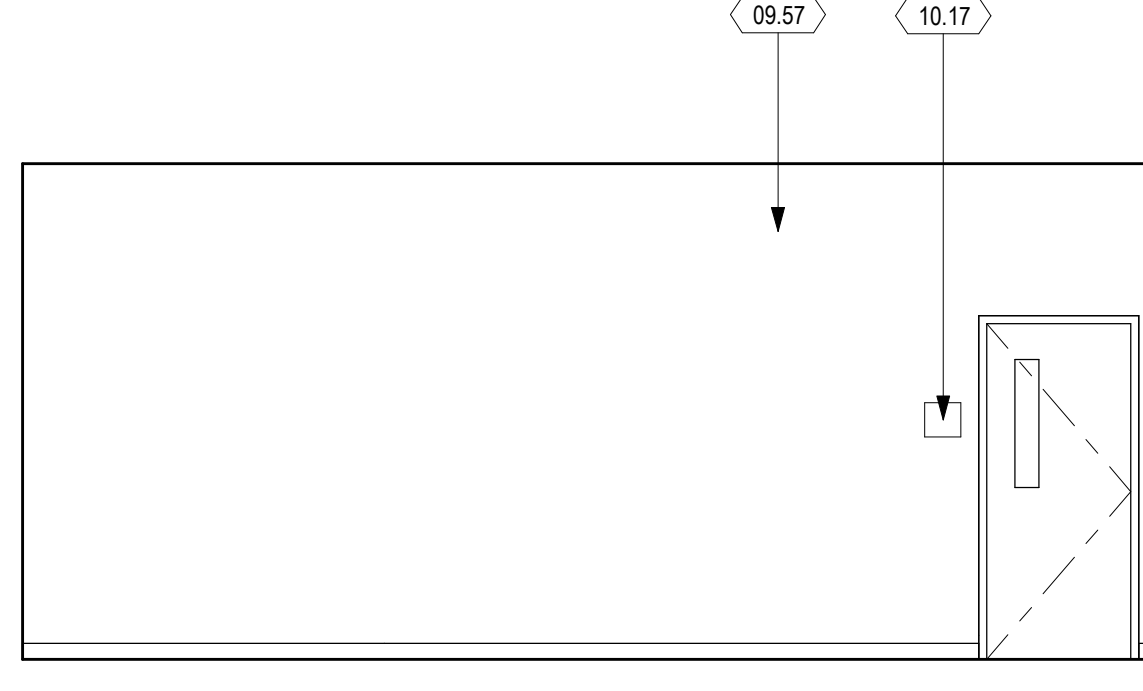
**2 HEAD HOUSE - SOUTH**  
1/4" = 1'-0"



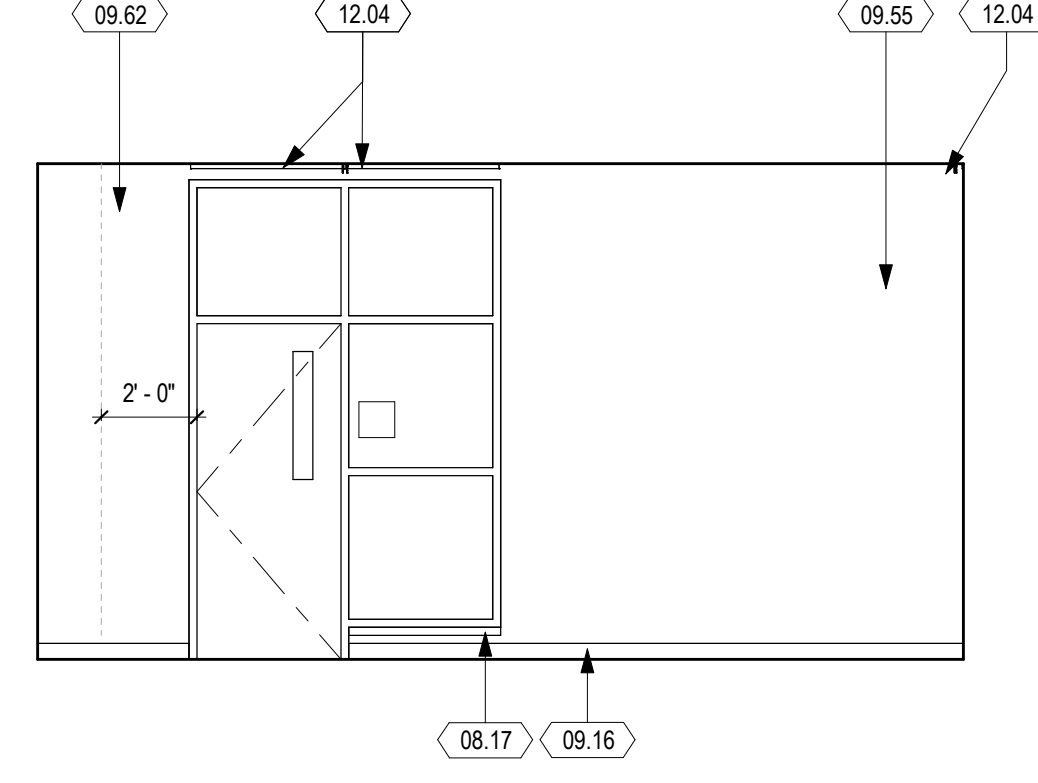
**1 HEAD HOUSE - WEST**  
1/4" = 1'-0"



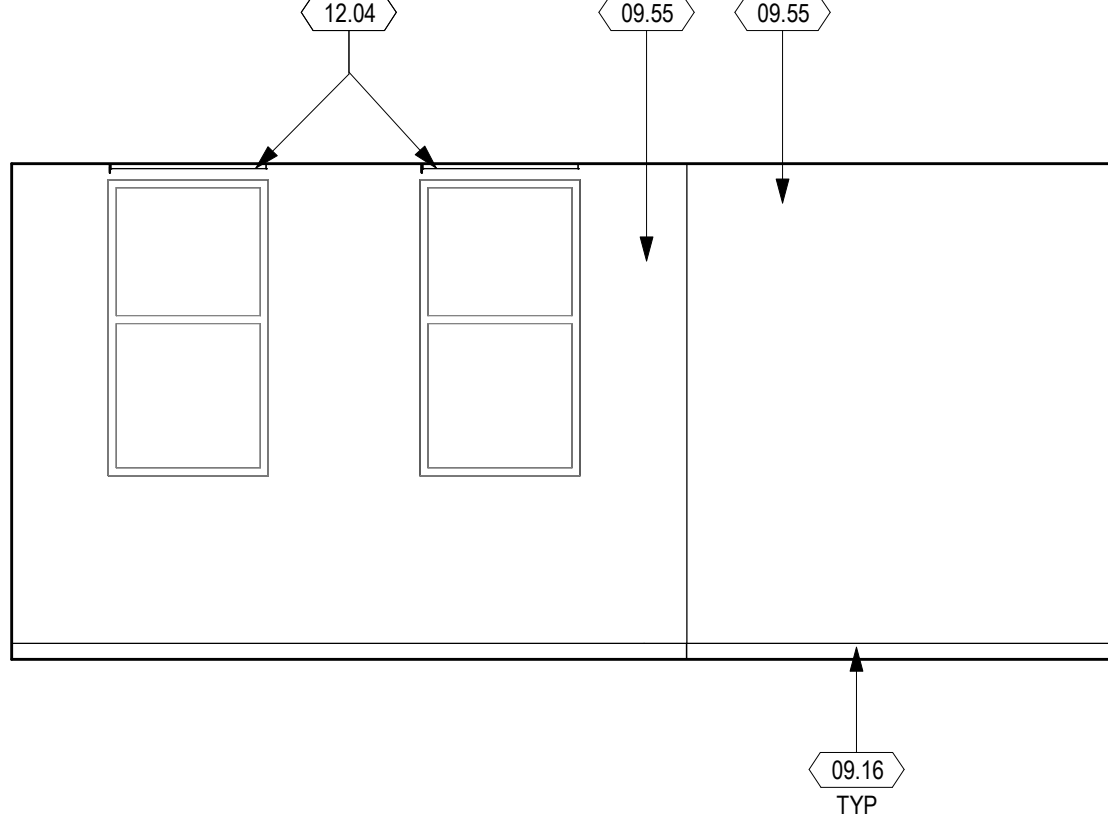
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1/4" = 1'-0"



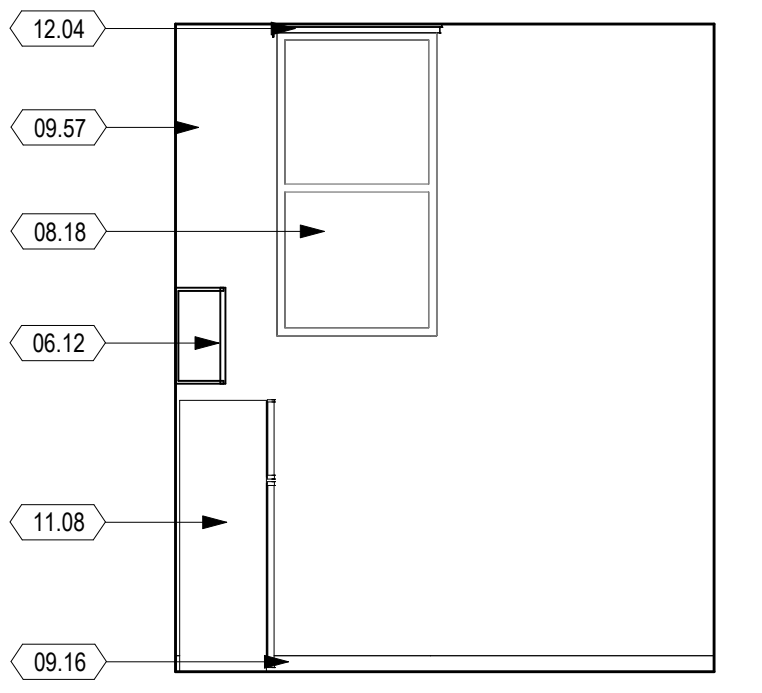
**7 OFFICE - EAST**  
1/4" = 1'-0"



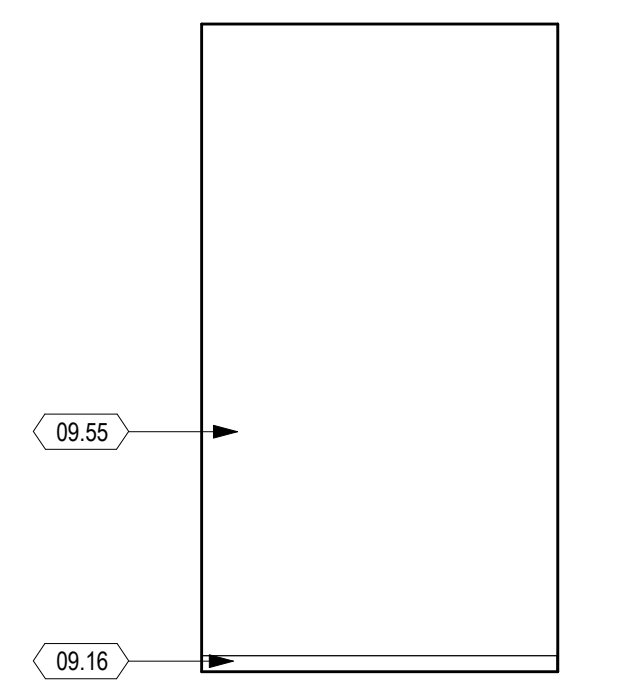
**6 OFFICE - SOUTH**  
1/4" = 1'-0"



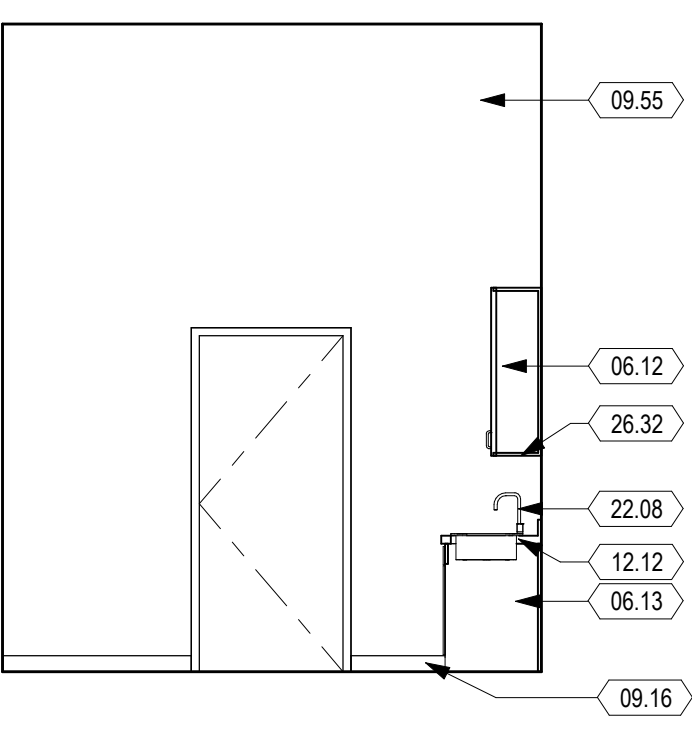
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1/4" = 1'-0"



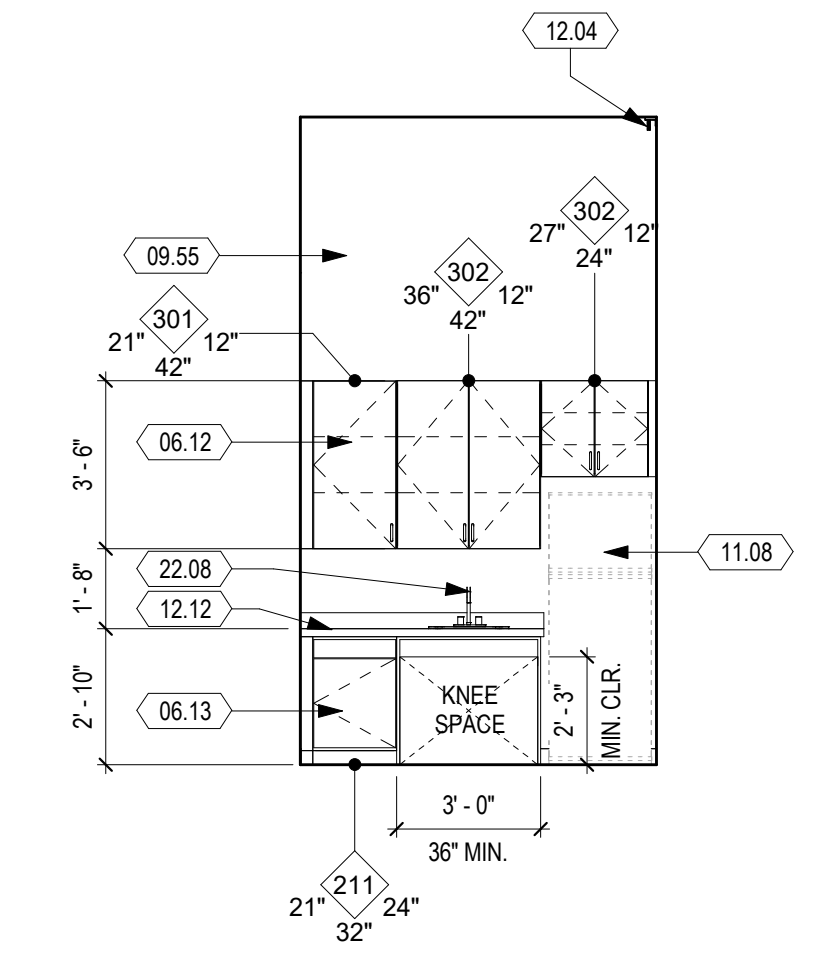
**12 LACTATION ROOM - NORTH**  
1/4" = 1'-0"



**11 LACTATION ROOM - EAST**  
1/4" = 1'-0"



**10 LACTATION ROOM - SOUTH**  
1/4" = 1'-0"



**9 LACTATION ROOM - WEST**  
1/4" = 1'-0"

### SHEET KEYNOTES

- 01.21 INSULATED EXPOSED HOT WATER AND DRAIN PIPES
- 06.12 UPPER CABINET
- 06.13 LOWER CABINET
- 06.20 COUNTER APRON, 2'-3" CLR
- 06.22 RESIN COUNTER TOP
- 08.17 ALUMINUM STOREFRONT SILL EXTENDER
- 08.18 TRANSLUCENT FILM ON GLAZING, ALL PANES
- 09.16 6" RESILIENT BASE
- 09.55 GYPSUM BOARD, PAINTED, PT-1
- 09.56 GYPSUM BOARD, PAINTED, PT-2
- 09.57 GYPSUM BOARD, PAINTED, PT-3
- 09.61 FIBER REINFORCED PLASTIC PANELS TO UNDERSIDE OF UPPER CABINETS
- 09.62 MOISTURE-RESISTANT GYPSUM BOARD, PAINTED, PT-1
- 10.17 SIGNAGE PER DOOR SCHEDULE
- 10.26 FIRE EXTINGUISHER IN RECESSED MOUNTED CABINET, SEE DETAIL 2/A992
- 10.40 STAINLESS STEEL CORNER GUARD
- 11.08 REFRIGERATOR (CFOI)
- 12.04 ROLLER SHADE, FOR MOUNTING SEE DETAIL 5/A970
- 12.12 SOLID SURFACE COUNTERTOP
- 22.08 DROP-IN STAINLESS STEEL SINK (ADA)
- 22.13 DECK-MOUNTED EMERGENCY EYEWASH STATION
- 23.02 SUPPLY AIR DIFFUSER, S.M.D.
- 23.03 RETURN AIR GRILLE, S.M.D.
- 23.07 FAN COIL UNIT, S.M.D.
- 26.32 UNDER-CABINET LIGHTING, S.E.D.

DS: \_\_\_\_\_

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**ARCHITECTS  
+  
ENGINEERS**

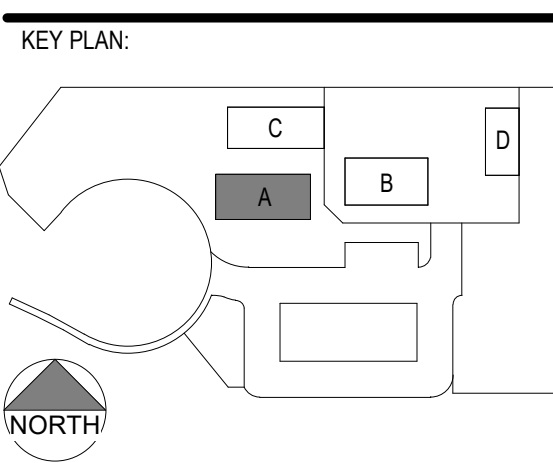
AN AC MARTIN COMPANY

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3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
L. BRANNAN T. WILSON  
EMMA RUIZ  
C 23260  
Exp. Apr. 30, 2021

CONSULTANT:

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CLPCCD - LAS POSITAS COLLEGE

**AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY**

3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

### INTERIOR SHEET NOTES

- 1. FOR TOILET AND ACCESSORY MOUNTING HEIGHTS, SEE 3/G006
- 2. FOR ACCESSIBLE SINK DETAIL, SEE 1/A981 4/A992
- 3. FOR ACCESSIBLE DRINKING FOUNTAIN, SEE 4/A992
- 4. FOR FIRE EXTINGUISHER CABINET DETAIL, SEE 2/A992
- 5. FOR CASEWORK ANCHORAGE SEE 4/A981
- 6. FOR MARKER BOARD MOUNTING, SEE 8/A992
- 7. FOR TACKBOARD MOUNTING, SEE 10/A992
- 8. FOR WINDOW SHADE MOUNTING, SEE 5/A970
- 9. FOR LOCKER DETAIL, SEE 12/A992
- 10. CASEWORK DESIGNATIONS ARE BASED ON WOODWORK INSTITUTE CABINET SERIES, SEE SPECS.

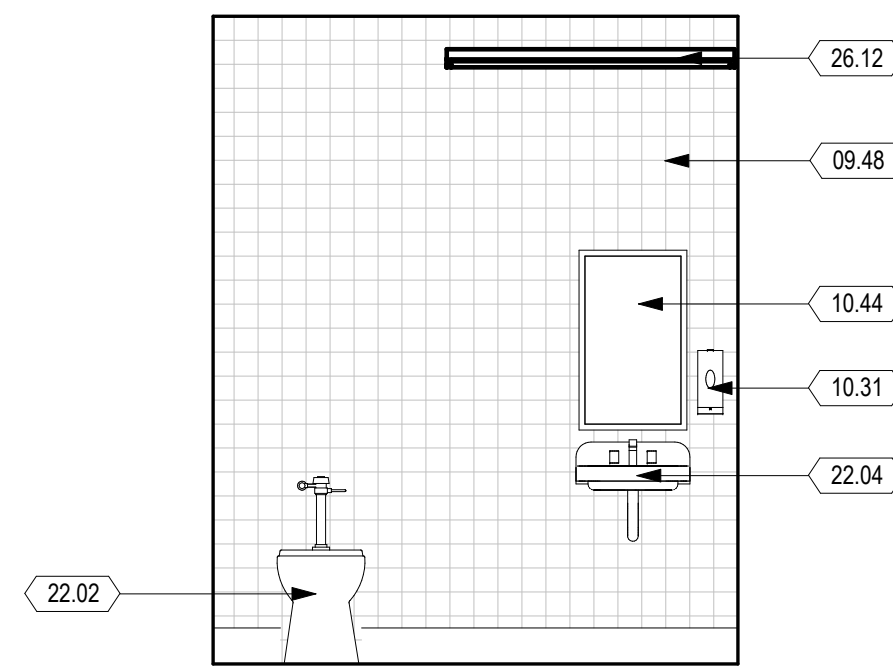
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DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

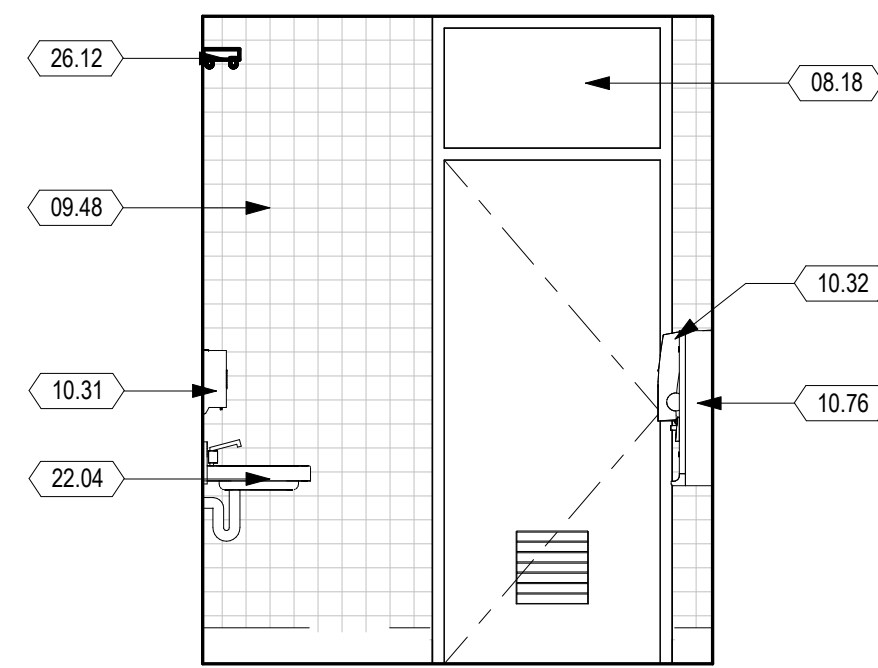
**AA502**

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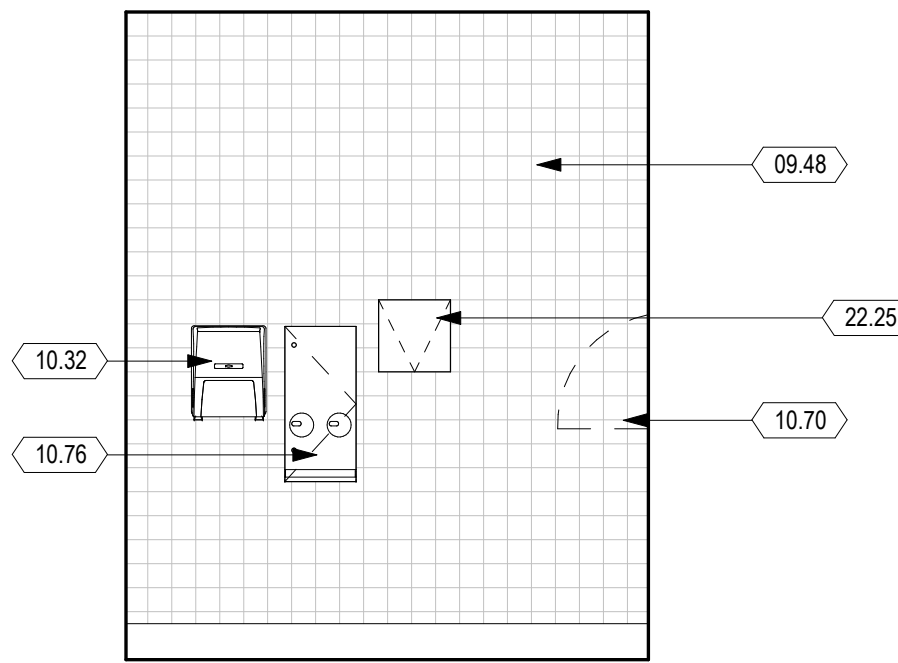
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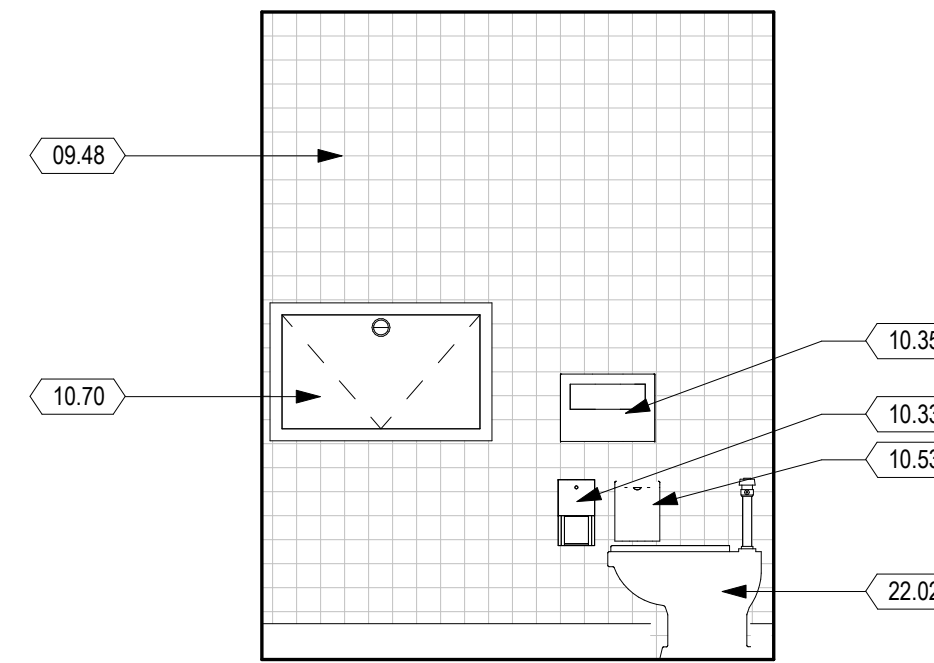
**10 UNISEX B - NORTH**  
3/8" = 1'-0"



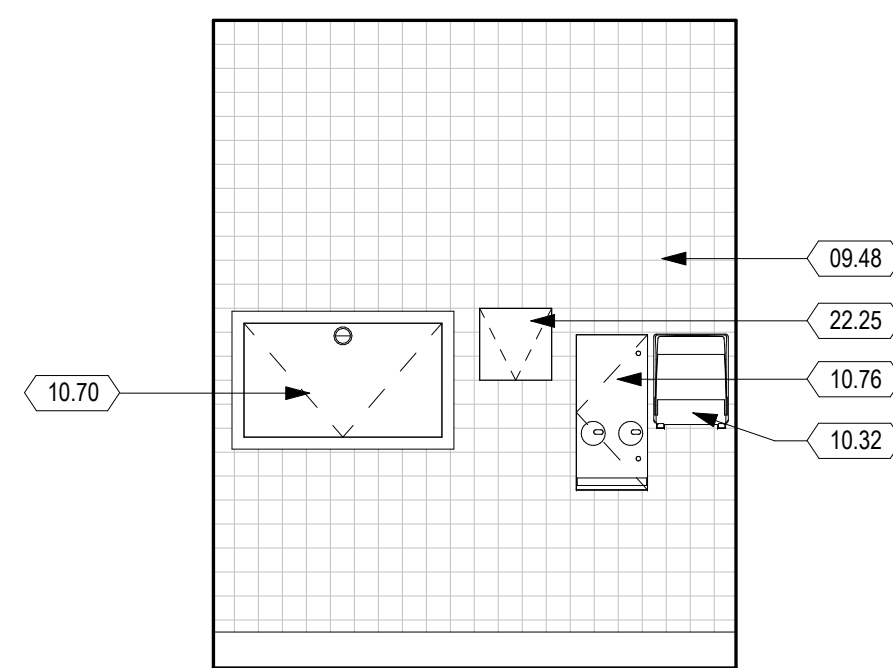
**7 UNISEX B - EAST**  
3/8" = 1'-0"



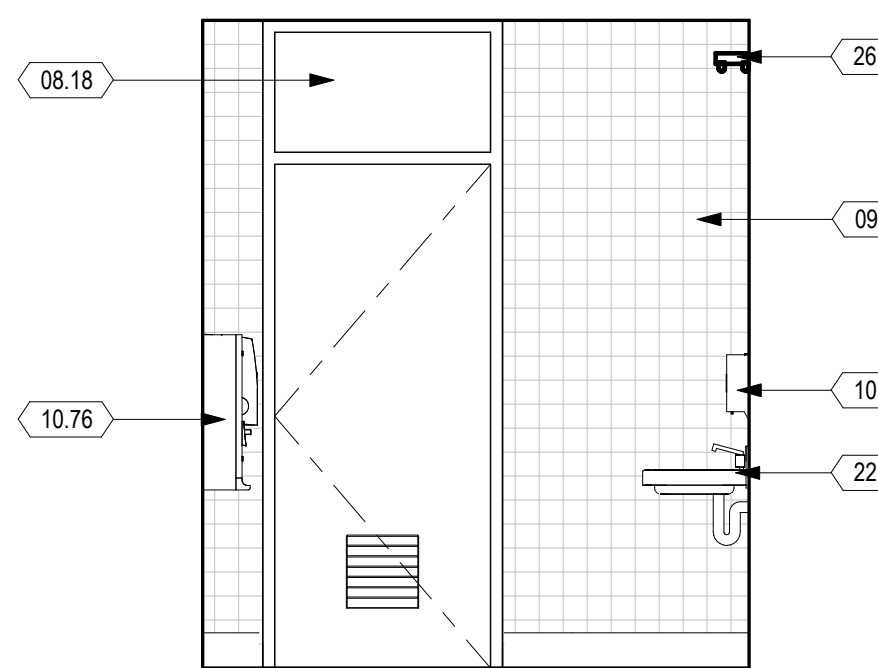
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3/8" = 1'-0"



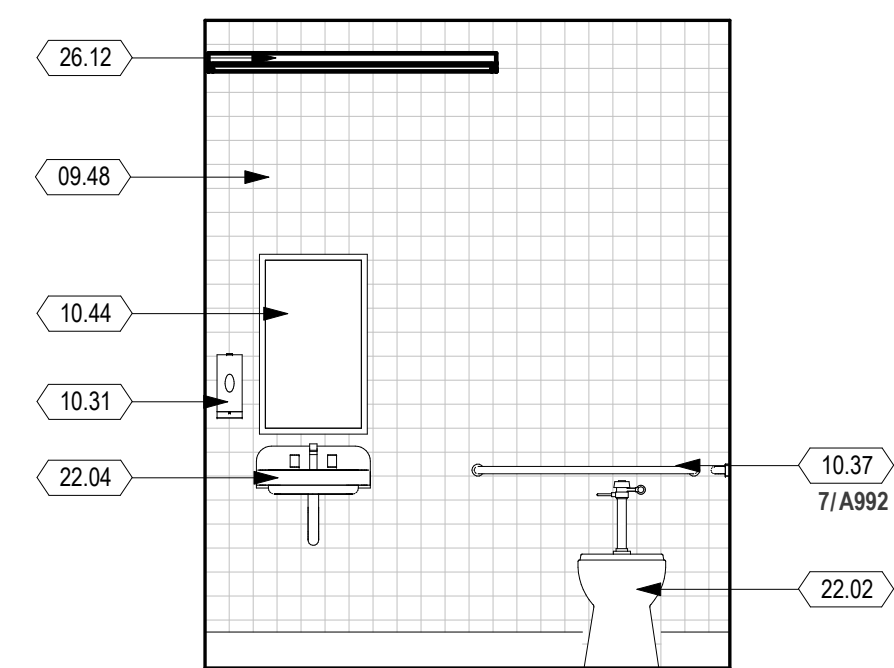
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3/8" = 1'-0"



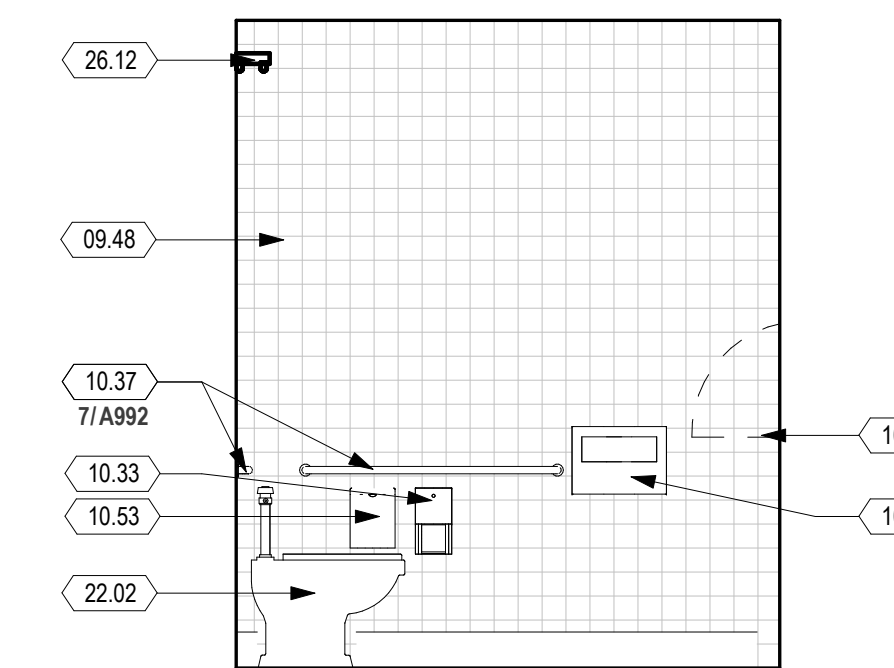
**12 UNISEX A - NORTH**  
3/8" = 1'-0"



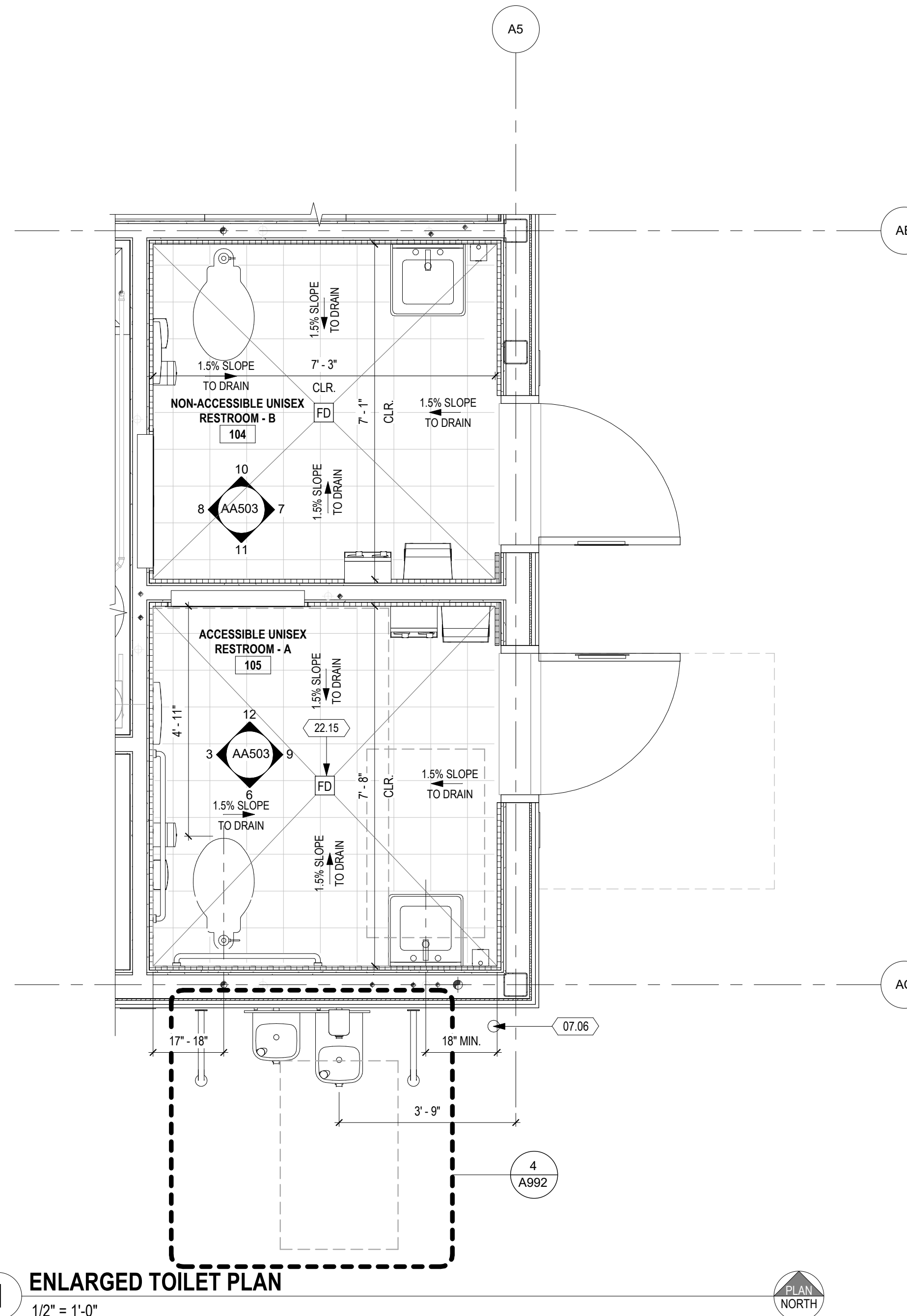
**9 UNISEX A - EAST**  
3/8" = 1'-0"



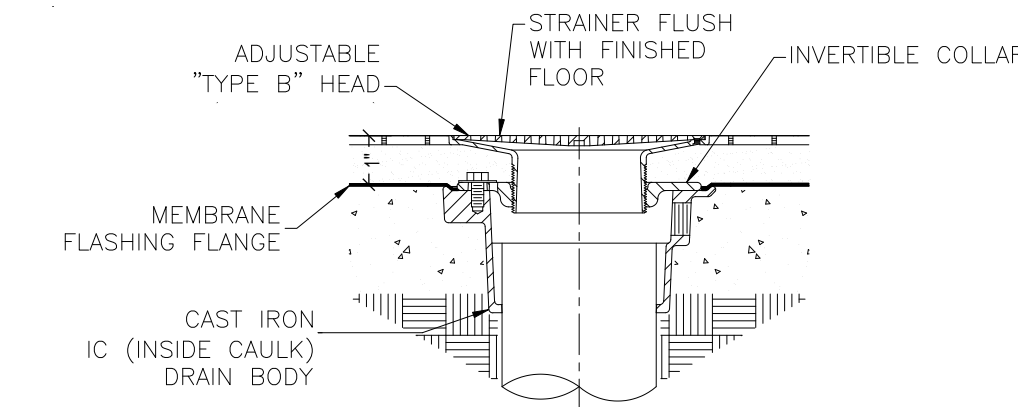
**6 UNISEX A - SOUTH**  
3/8" = 1'-0"



**3 UNISEX A - WEST**  
3/8" = 1'-0"



**1 ENLARGED TOILET PLAN**  
1/2" = 1'-0"



**2 FLOOR DRAIN SECTION**  
NTS

**SHEET KEYNOTES**

- 07.06 3" CAST IRON DOWNSPOUT, PAINTED, COLOR TO MATCH ADJACENT SIDING PANEL, SEE DETAIL 9/A921 AND 9/A921
- 08.18 TRANSLUCENT FILM ON GLAZING, ALL PANGES
- 09.48 CERAMIC TILE, FULL WALL HEIGHT
- 10.31 SOAP DISPENSER, OFCI
- 10.32 PAPER TOWEL DISPENSER, OFCI
- 10.33 TOILET PAPER HOLDER
- 10.35 SEAT COVER DISPENSER
- 10.37 GRAB BAR, 36 inch & 42 inch
- 10.44 MIRROR, 18"X30"
- 10.53 SANITARY NAPKIN DISPOSAL, SURFACE MOUNTED
- 10.70 STAINLESS STEEL DIAPER CHANGING STATION, WALL MOUNTED RECESSED
- 10.76 SURFACE MOUNTED NAPKIN / TAMPON VENDOR
- 22.02 WATER CLOSET (ADA), S.P.D.
- 22.04 LAVATORY (ADA), S.P.D.
- 22.15 FLOOR DRAIN, SEE DET. 2/AA503
- 22.25 12"x12" ACCESS PANEL
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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DATE: 01/19/2021



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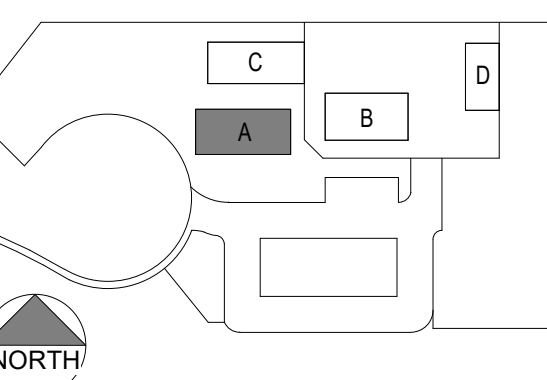
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CONSULTANT:

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KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

**AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY**

3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**INTERIOR  
ELEVATIONS &  
ENLARGED TOILET  
PLANS**

DRAWN BY: EA      CHECKED BY: AW

DATE: 01/14/2021      PROJECT NO: C9508

SHEET NO:

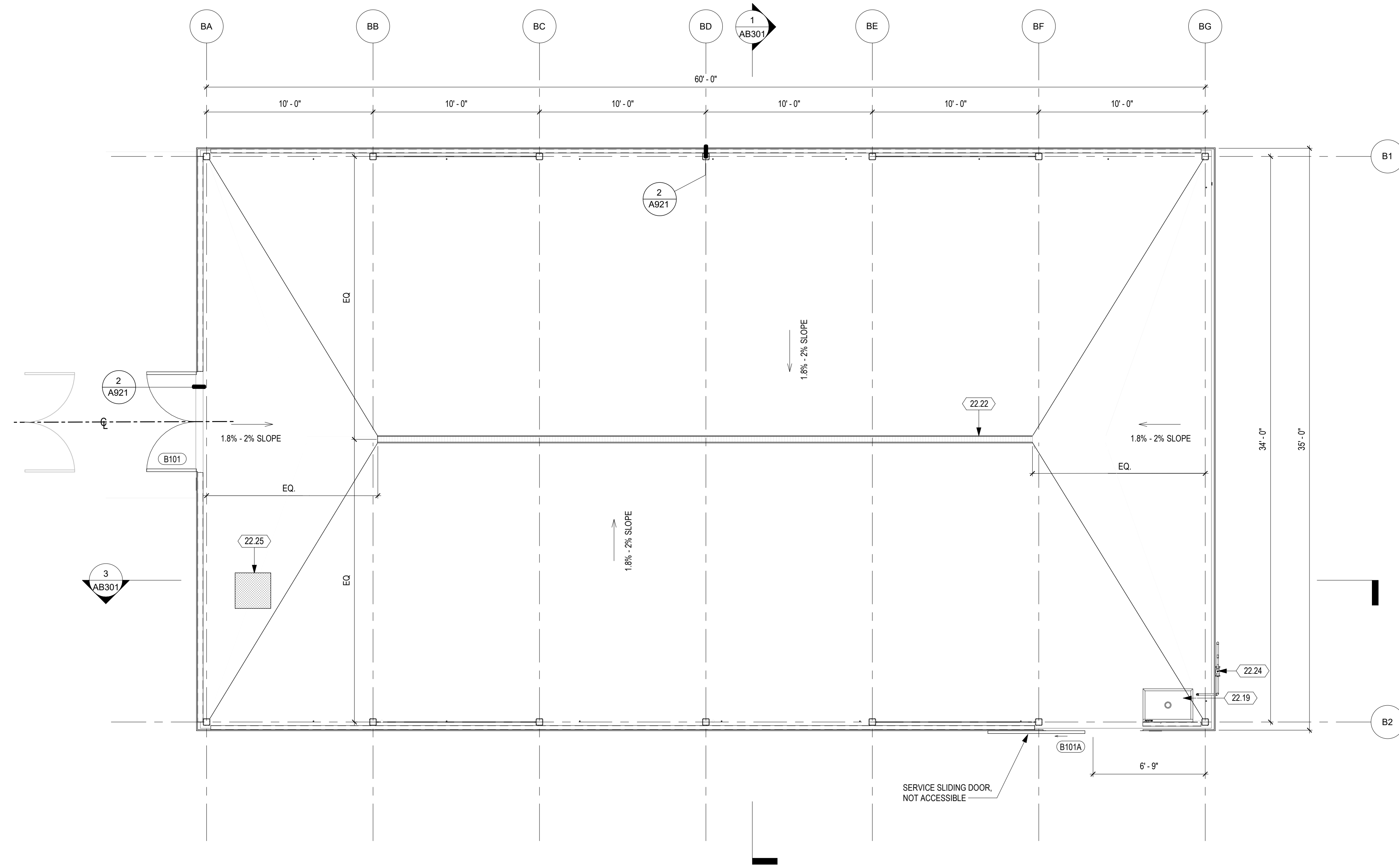
AA503

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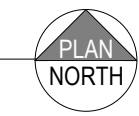
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# 1 GREENHOUSE FLOOR PLAN

1/4" = 1'-0"



THIS SHEET FOR DSA ACCESS REVIEW ONLY PER DSA IR A-22



### GENERAL SHEET NOTES

1. REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION.
2. DIMENSIONS ARE TO FACE OF STUD, TO CENTERLINE OF STUD OR CENTERLINE OF OPENINGS, U.O.N.
3. REFER TO CIVIL ENGINEERING DRAWINGS AND SITE PLAN FOR SITE FEATURES NOT OTHERWISE INDICATED.
4. REFER TO M.E.P. DRAWINGS FOR M.E.P. ITEMS.
5. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL ITEMS.
6. ALL EXTERIOR WALLS ARE POLYCARBONATE U.O.N., SEE GREENHOUSE MANUFACTURER DRAWINGS FOR DETAILS.
7. OPENINGS IN FLOOR OR GROUND SURFACES IN THE PEDESTRIAN WAY SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER. WHEN OPENINGS ARE OBLONG, THE LONG DIMENSION SHALL BE PLACED PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

### SHEET KEYNOTES

- 22.19 UTILITY SINK
- 22.22 TRENCH DRAIN, S.P.D.
- 22.24 BACK-FLOW PREVENTER
- 22.25 FLOOR DRAIN, S.P.D.

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 SS  FLS  ACS   
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 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

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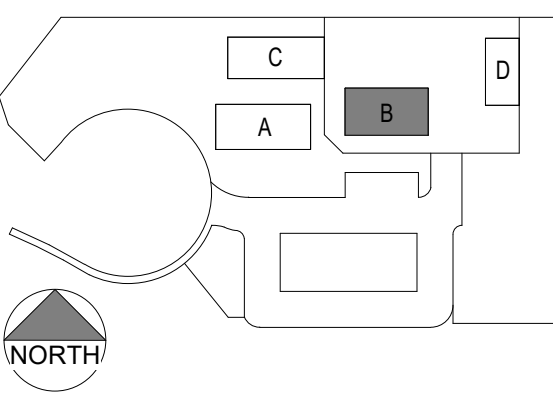
### PROFESSIONAL STAMP:

LICENSED ARCHITECT  
 T. W. WILSON  
 C 23260  
 Exp. Apr. 30, 2021  
 STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

### KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

**AGRICULTURE SCIENCE HORTICULTURE FACILITY**

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

### GREENHOUSE FLOOR PLAN

DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

# AB121

### GENERAL SHEET NOTES

- REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION.
- DIMENSIONS ARE TO FACE OF STUD, TO CENTERLINE OF STUD OR CENTERLINE OF OPENINGS, U.O.N.
- REFER TO CIVIL ENGINEERING DRAWINGS AND SITE PLAN FOR SITE FEATURES NOT OTHERWISE INDICATED.
- REFER TO M.E.P. DRAWINGS FOR M.E.P. ITEMS.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL ITEMS.
- ALL EXTERIOR WALLS ARE POLYCARBONATE U.O.N., SEE GREENHOUSE MANUFACTURER DRAWINGS FOR DETAILS.

DSA:

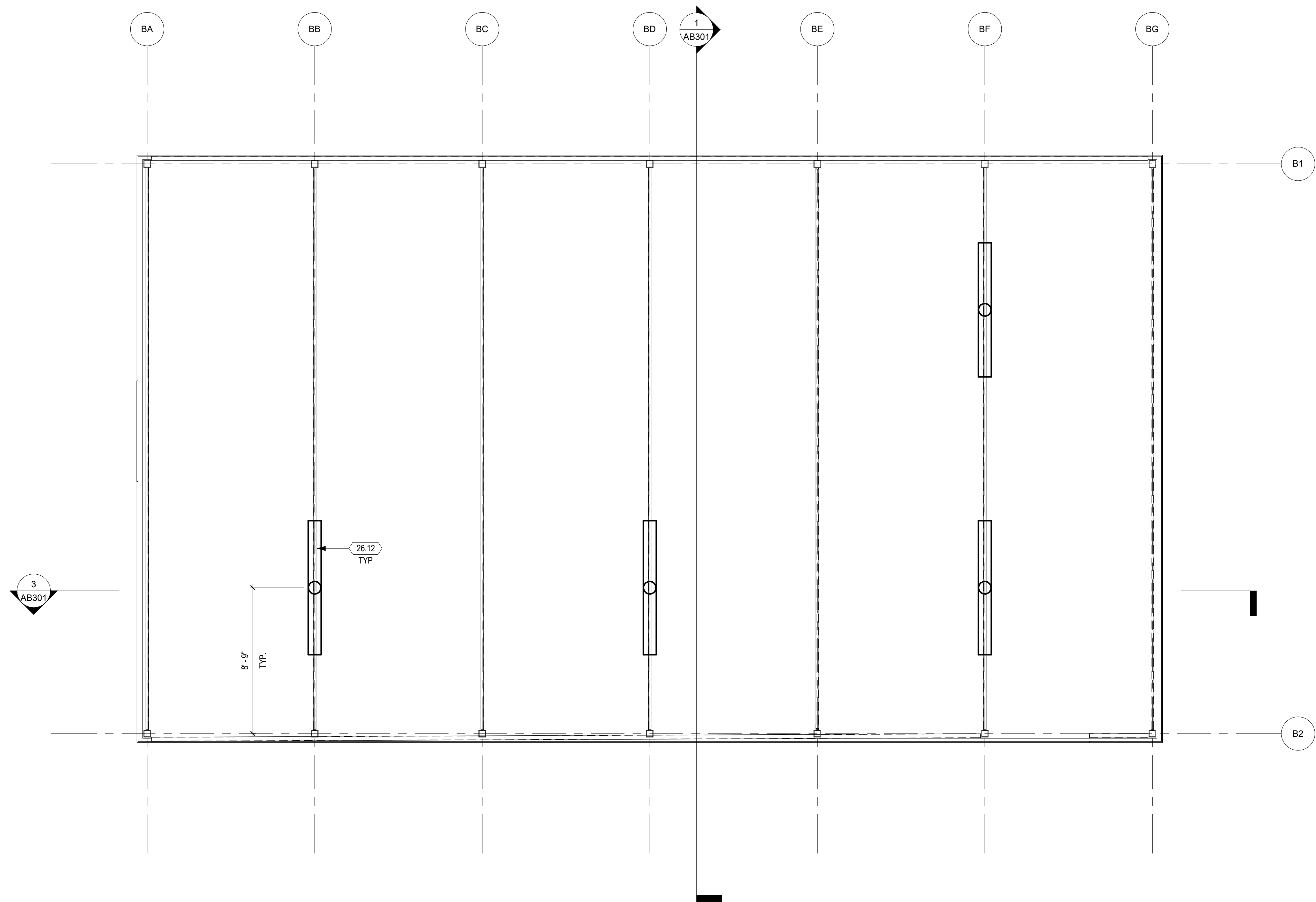
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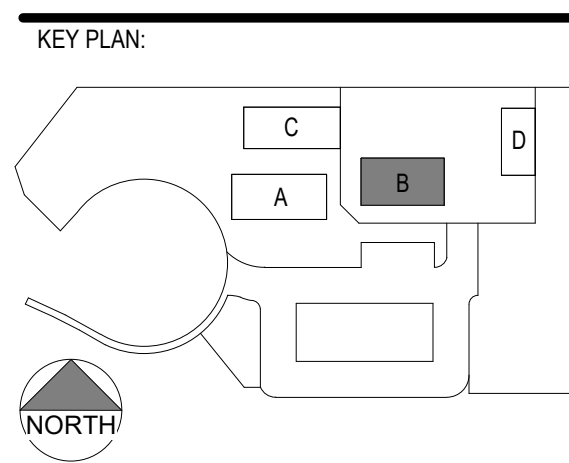
CONSULTANT:



### SHEET KEYNOTES

26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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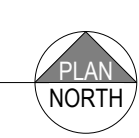
CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

### GREENHOUSE REFLECTED CEILING PLAN

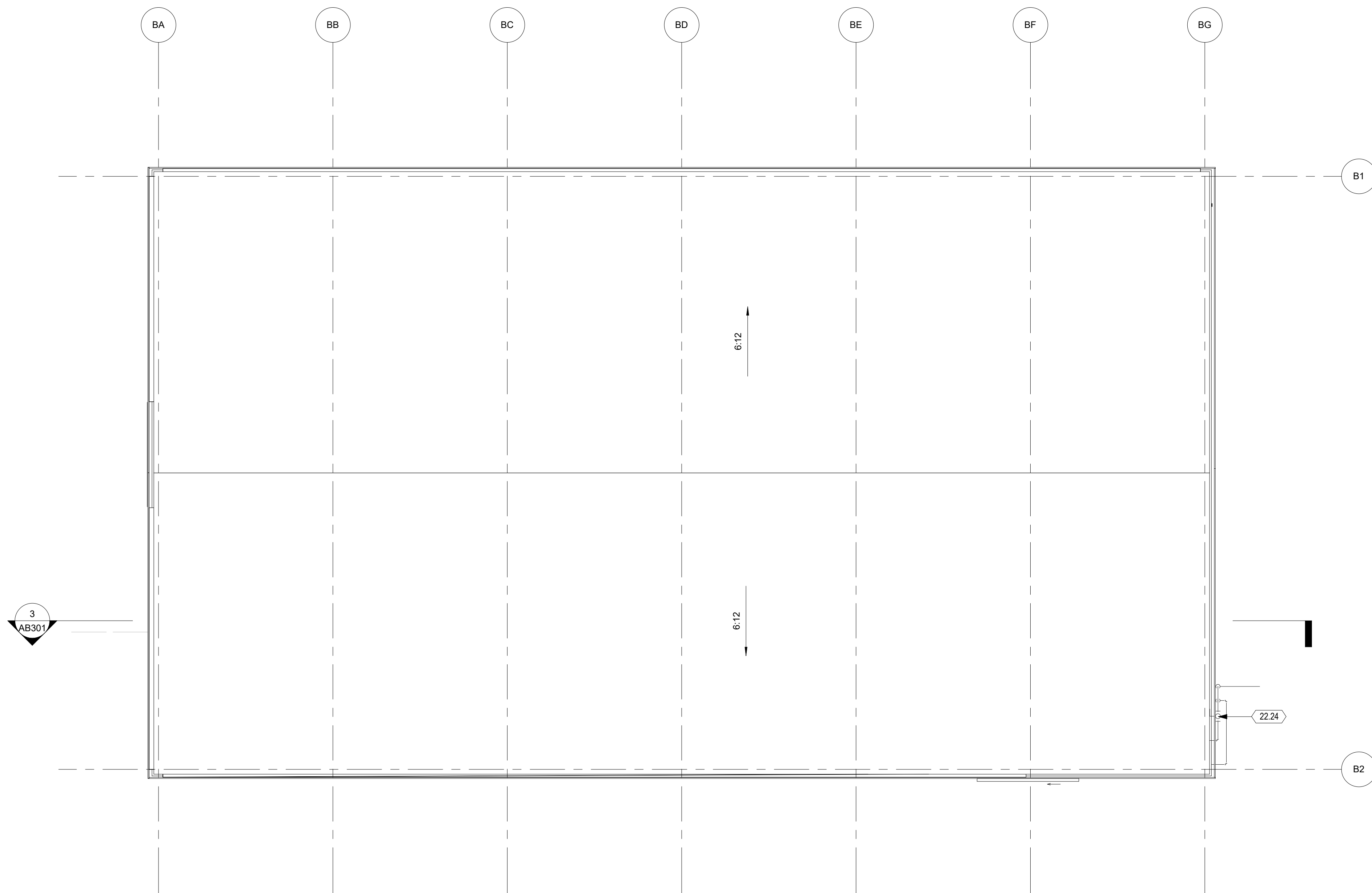
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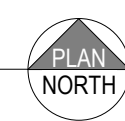
**1 GREENHOUSE REFLECTED CEILING PLAN**  
 1/4" = 1'-0"



1 GREENHOUSE ROOF PLAN  
1/4" = 1'-0"



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GENERAL SHEET NOTES

- 1. REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION.
- 2. REFER TO MANUFACTURER DRAWINGS FOR GUTTER AND DOWNSPOUT LOCATIONS.

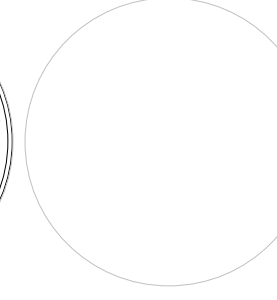
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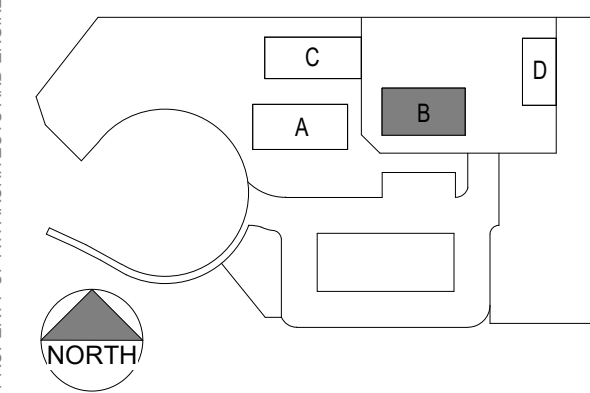
CONSULTANT:

SHEET KEYNOTES

22.24 BACK-FLOW PREVENTER

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



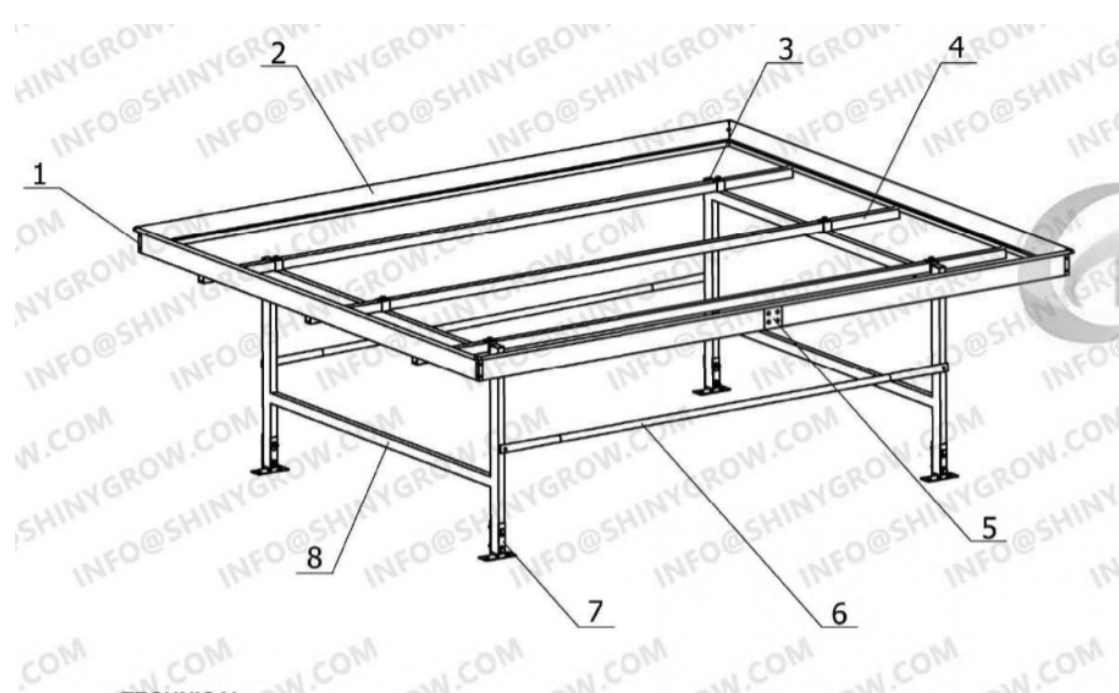
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 3000 CAMPUS HILL DRIVE,  
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GREENHOUSE ROOF PLAN

DRAWN BY: EA CHECKED BY: AW  
 DATE: 01/14/2021 PROJECT NO: 09508  
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AB161

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Item No.	Part Name	Material
1	Corner bracket	ABS
2	Frame	6063-T5 aluminum profile
3	Waterproof cap	Plastic
4	Middle cross beam	Hot dipped galvanized steel pipe
5	Clamp	Aluminium alloy + ABS
6	Horizontal ligament	Hot dipped galvanized steel pipe
7	Feet	Hot dipped galvanized steel plate
8	End braces	Hot dipped galvanized steel pipe
9	Bench top	Carbon steel wire

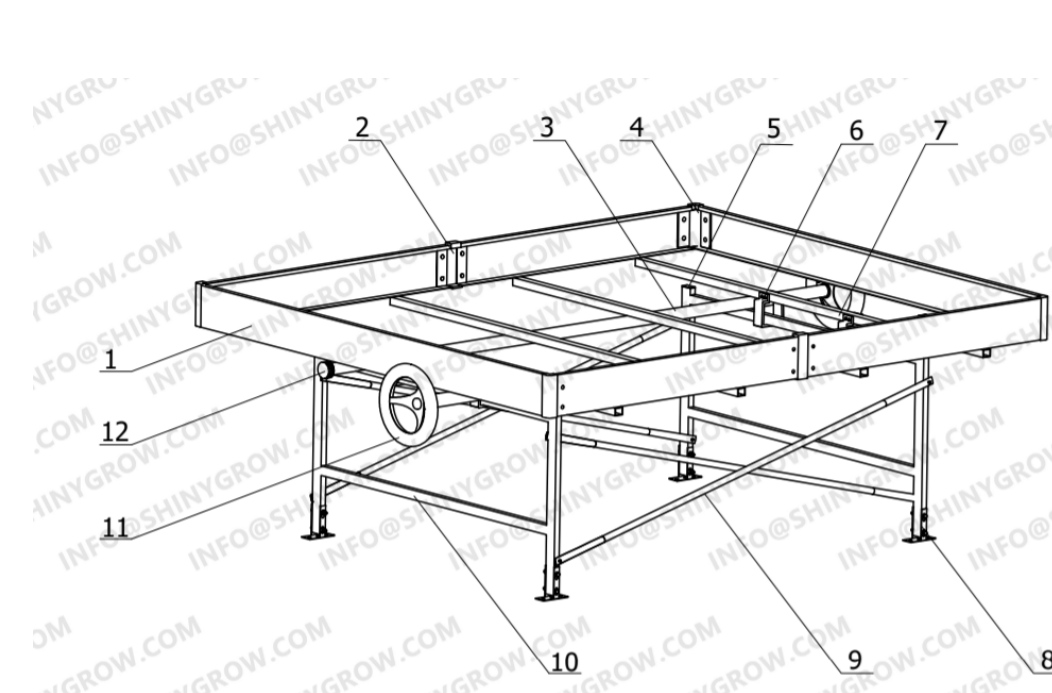
TECHNICAL:  
1. Installation condition: concrete/ground.  
2. Bench sizes can be customized refer to the greenhouse area and layout.

**RADIANT HEATED STEEL NURSERY BENCHES**  
BASIS OF DESIGN: TIAN CHENG STATIONARY GREENHOUSE BENCH



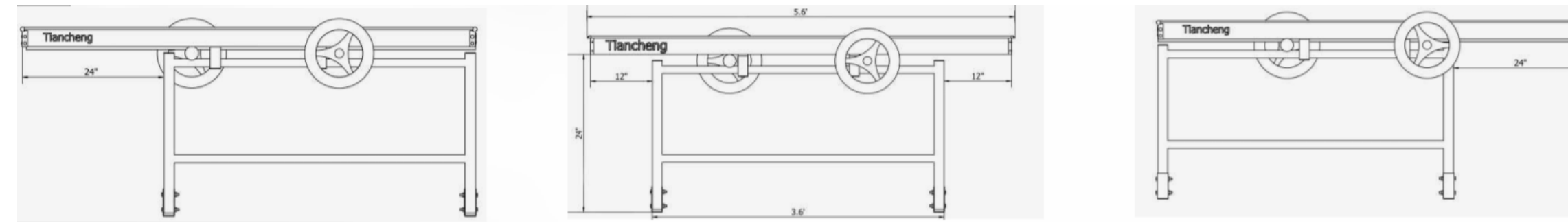
**A-FRAME VERTICAL HYDROPONIC UNIT**  
BASIS OF DESIGN: TIAN CHENG NFT HYDROPONIC SYSTEM

- Material
- Trough: food grade PVC pipe.
- Frame: stainless steel, hot galvanized steel.
- PVC Pipe Thickness: 1/8".
- Frame Size (W x H): 4' x 5.9".
- Frame Length: 6.8', 13', 19.7' or customized..
- Trough Shape: square, round.
- Trough Length: 9.2', 9.8'.
- Trough Size (W x D): 4" x 2", 4" x 2.7", 6.1" x 2.75", 9" x 3".
- Holes: 1.75" spaced every 7.75".
- UV Resistant: yes.
- Bearing Capacity: up to 500 N/m<sup>2</sup>.
- Service Life: 20 years.



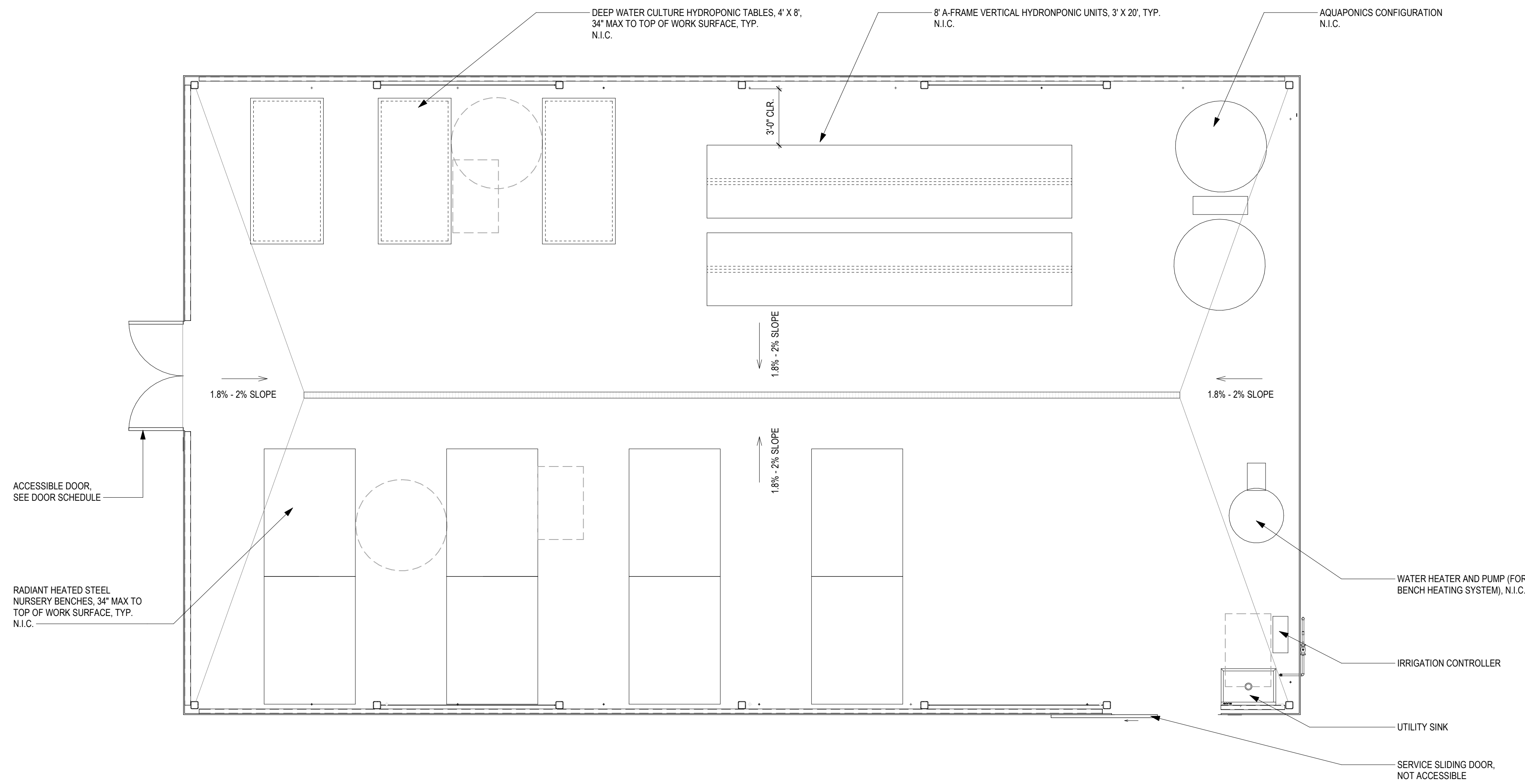
Item No.	Part Name	Material
1	Frame	6063-T5 aluminum profile
2	Clamp	Aluminium alloy + ABS
3	Wheel beam	Hot dipped galvanized steel pipe
4	Corner bracket	ABS
5	Waterproof cap	Plastic
6	Anti-tip bracket	Nylon
7	Middle cross beam	Hot dipped galvanized steel pipe
8	Feet	Hot dipped galvanized steel plate
9	Diagonal ligament	Hot dipped galvanized steel pipe
10	End braces	Hot dipped galvanized steel pipe
11	Steering wheel	Bakelite
12	Wheel beam cap	Plastic
13	Ebb & flow tray	ABS
14	Filter screen	Plastic

TECHNICAL:  
1. Moving space: 300 mm - 500 mm.  
2. Installation condition: concrete/ground.  
3. Bench sizes can be customized refer to the greenhouse area and layout.



**DEEP WATER CULTURE HYDROPONIC TABLES**  
BASIS OF DESIGN: TIAN CHENG EBB AND FLOW BENCH

**2 Greenhouse Equipment - Basis of Design**  
N.T.S.



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**1 GREENHOUSE LAYOUT PLAN**  
1/4" = 1'-0"



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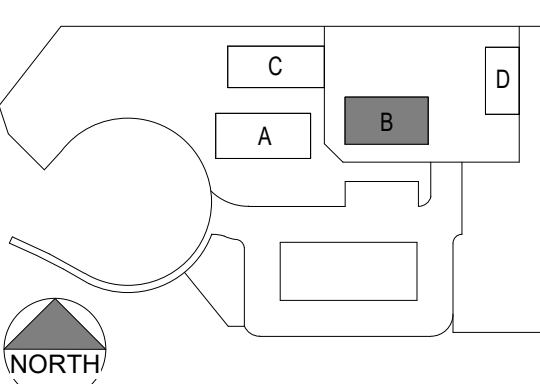
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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**GREENHOUSE FURNITURE & EQUIPMENT PLAN**

DRAWN BY: EA      CHECKED BY: AW  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

**AB171**

**SHEET KEYNOTES**

- 09.64 POLYCARBONATE PANEL
- 22.19 UTILITY SINK
- 22.20 HOSE BIB
- 22.22 TRENCH DRAIN
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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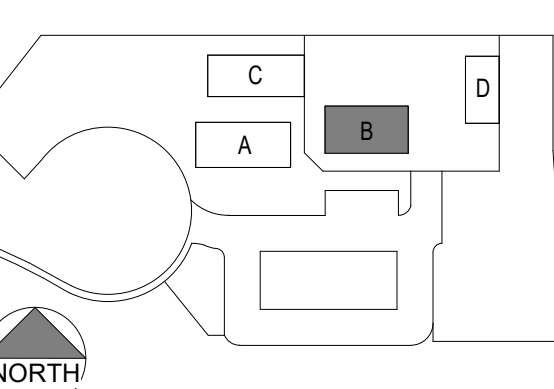
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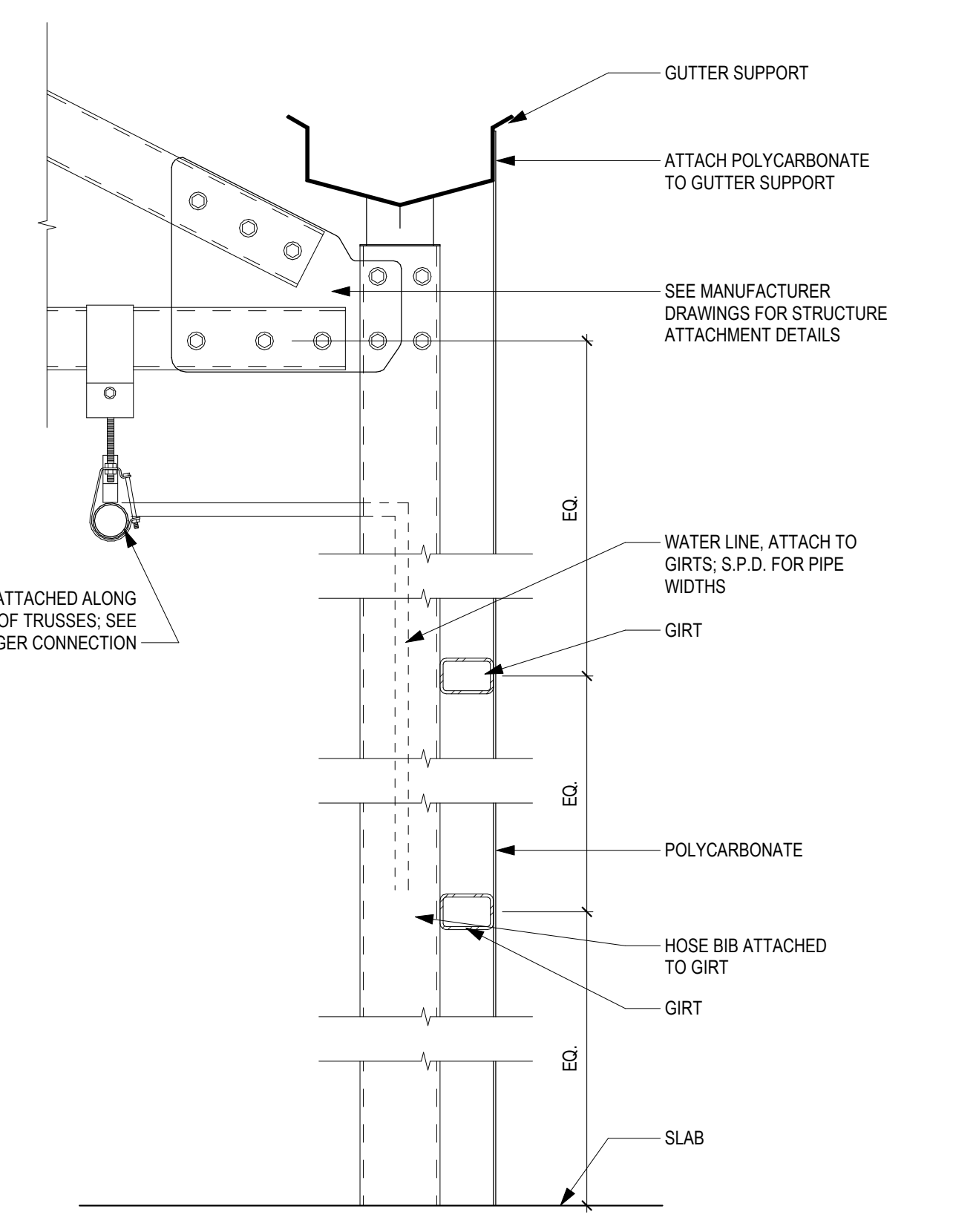


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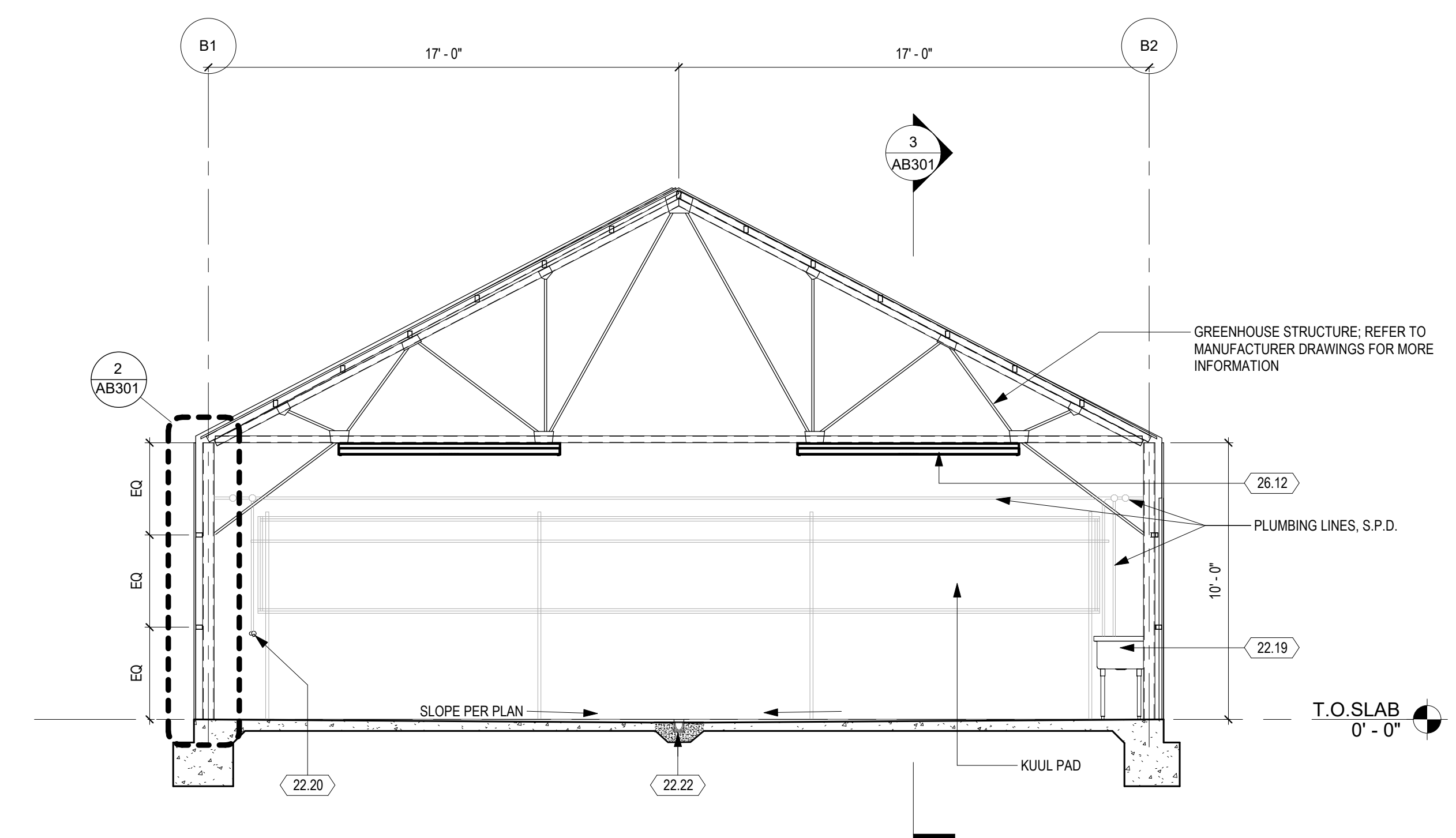
**GREENHOUSE SECTIONS**

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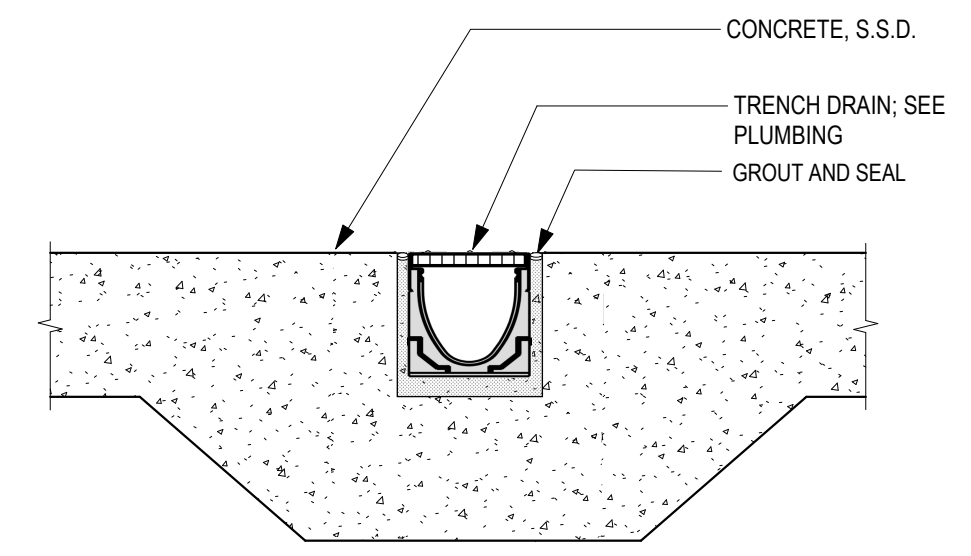
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**2 GREENHOUSE WALL SECTION**  
 1 1/2" = 1'-0"

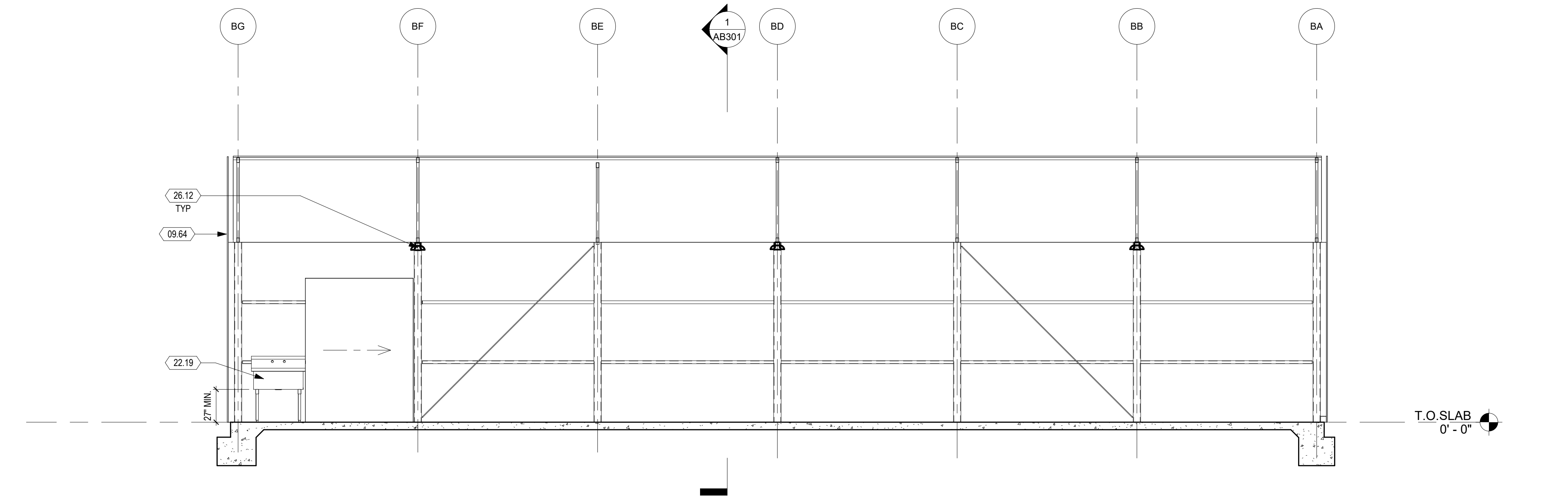


**1 GREENHOUSE CROSS SECTION**  
 1/4" = 1'-0"



**4 TRENCH DRAIN**  
 1 1/2" = 1'-0"

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**3 GREENHOUSE SECTION**  
 1/4" = 1'-0"



**SHADE HOUSE GENERAL NOTES**

1. FOR STRUCTURAL DETAILS, REFER TO MANUFACTURER REFERENCE DRAWINGS

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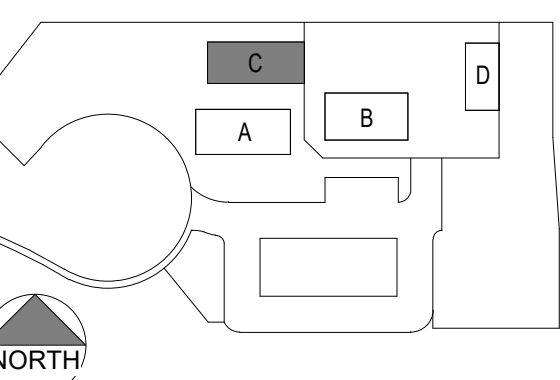
**SHEET KEYNOTES**

32.22 CHAIN LINK FENCE 6'-0"

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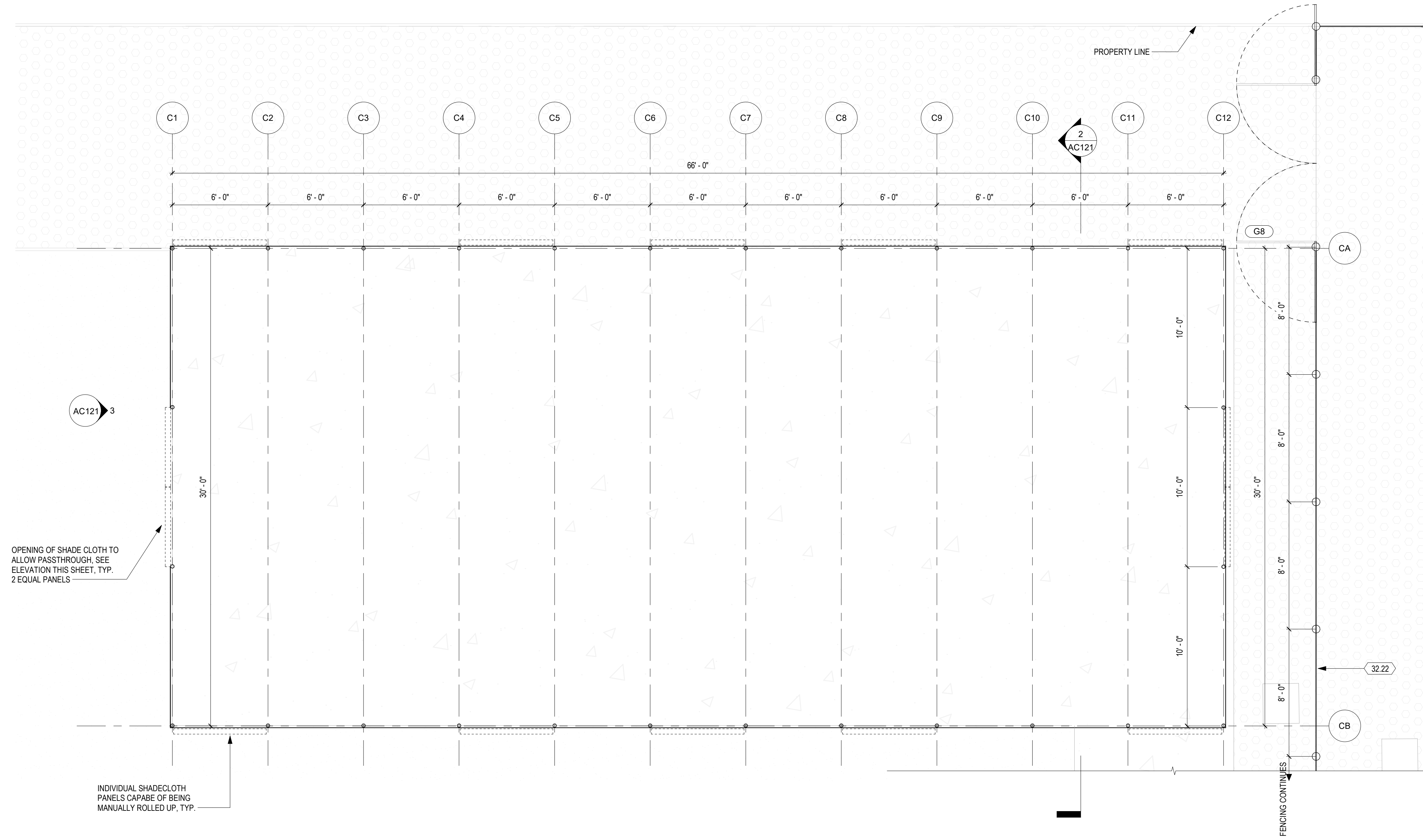
**SHADE HOUSE  
FLOOR PLAN**

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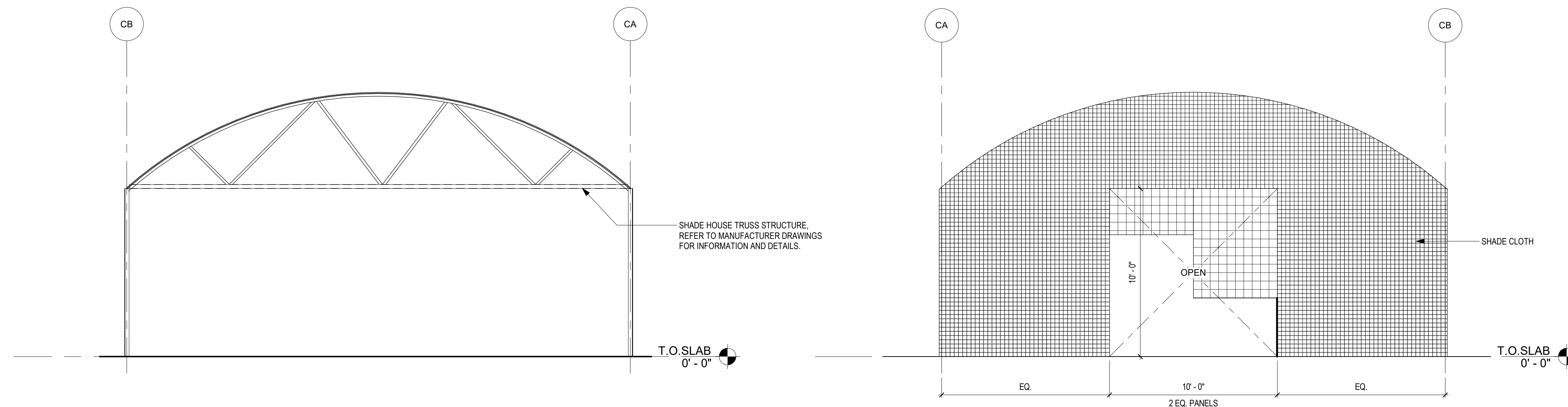
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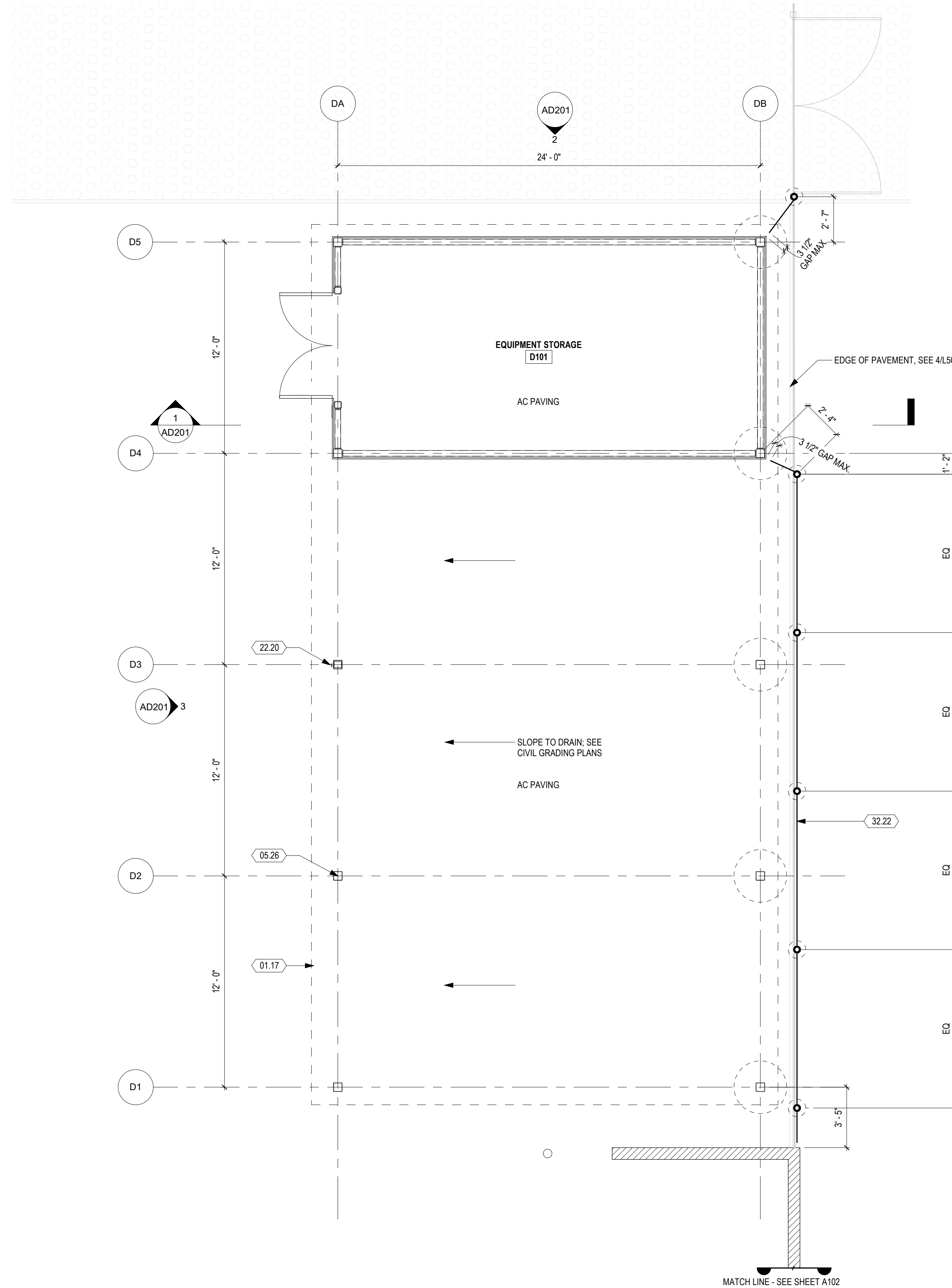


**1 SHADE HOUSE**  
1/4" = 1'-0"

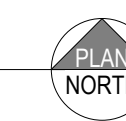


**2 SHADE HOUSE CROSS SECTION**  
1/4" = 1'-0"

**3 SHADE HOUSE - WEST**  
1/4" = 1'-0"



**1** EQUIPMENT STORAGE FLOOR PLAN  
1/4" = 1'-0"



**GENERAL SHEET NOTES**

1. REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION.

**SHEET KEYNOTES**

- 01.17 OUTLINE OF ROOF ABOVE
- 05.26 HSS 6X6 COLUMN, SEE EQUIPMENT STORAGE LS DRAWINGS
- 22.20 HOSE BIB
- 32.22 CHAIN LINK FENCE 6'-0"

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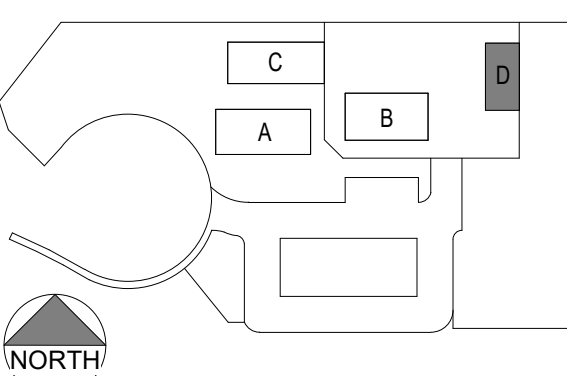
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**AGRICULTURE  
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FACILITY**

3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**EQUIPMENT  
STORAGE FLOOR  
PLAN**

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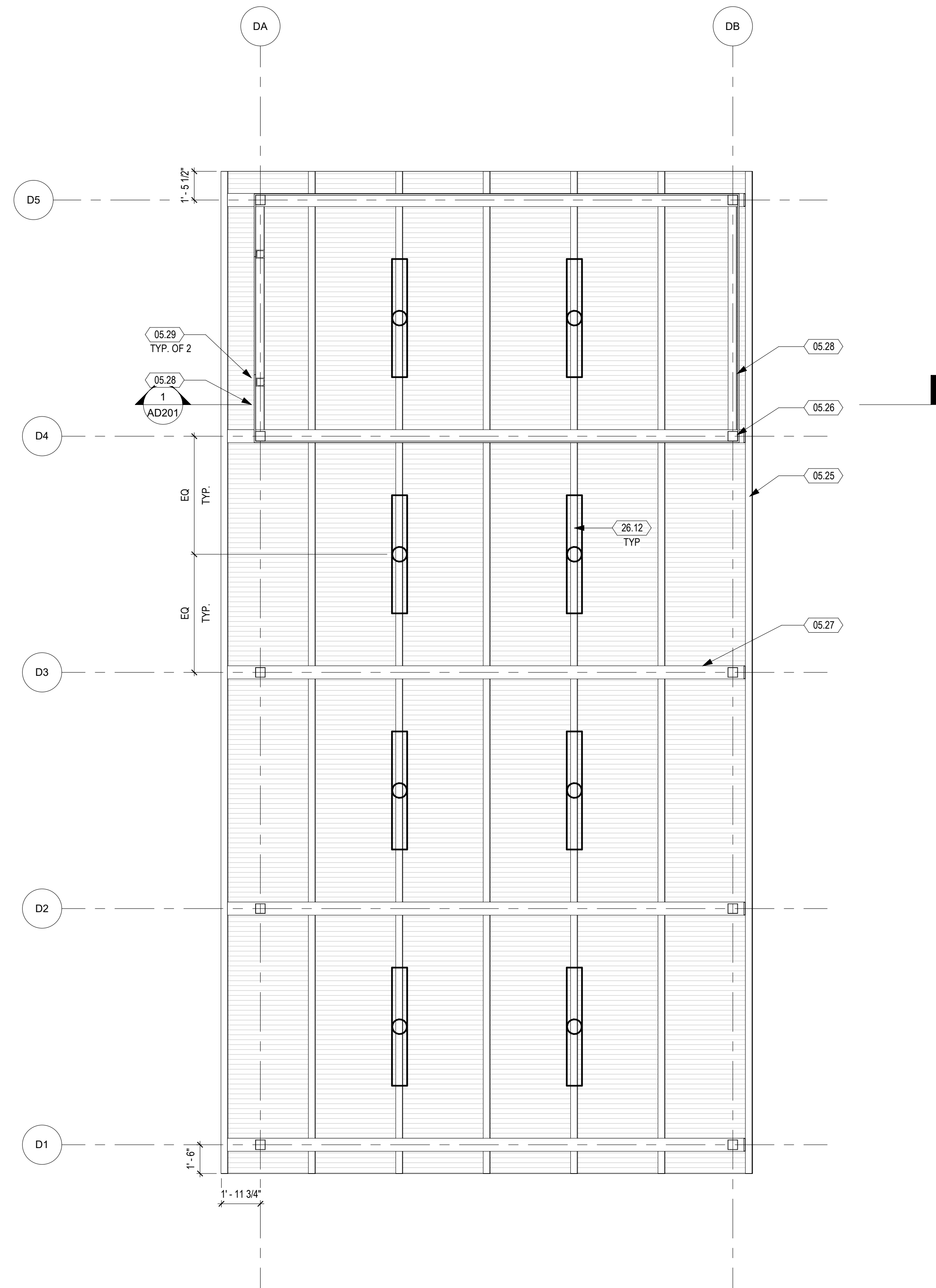
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**1** EQUIPMENT STORAGE REFLECTED CEILING PLAN  
1/4" = 1'-0"



**GENERAL SHEET NOTES**

- REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION.

**SHEET KEYNOTES**

- 05.25 HSS 4X4 PURLIN, SEE EQUIPMENT STORAGE LS DRAWINGS
- 05.26 HSS 6X6 COLUMN, SEE EQUIPMENT STORAGE LS DRAWINGS
- 05.27 HSS 10X8 ROOF RAFTER, SEE EQUIPMENT STORAGE LS DRAWINGS
- 05.28 HSS 5X5 PURLIN, SEE EQUIPMENT STORAGE LS DRAWINGS
- 05.29 HSS 5X5 COLUMN, SEE EQUIPMENT STORAGE LS DRAWINGS
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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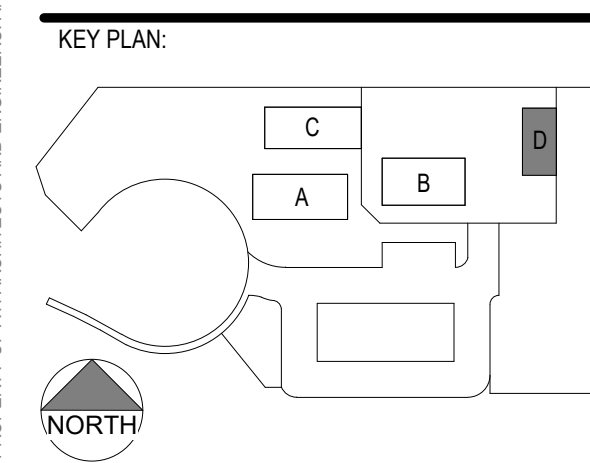
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C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

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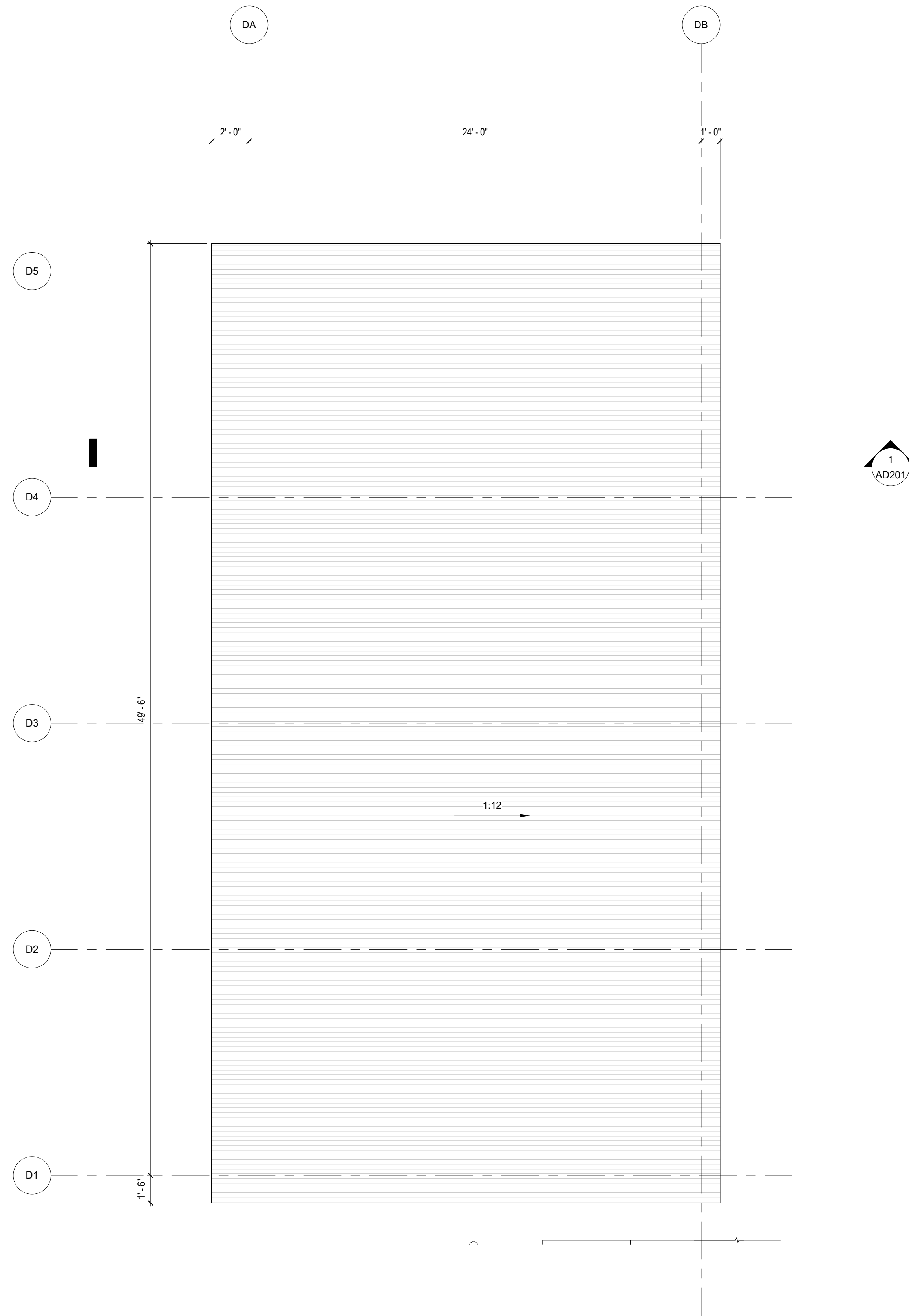
**EQUIPMENT STORAGE REFLECTED CEILING PLAN**  
DRAWN BY: EA CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: CS908  
SHEET NO:

**AD141**

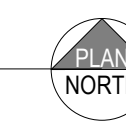
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**1** EQUIPMENT STORAGE ROOF PLAN  
1/4" = 1'-0"



**GENERAL SHEET NOTES**

1. REFER TO MANUFACTURER DRAWINGS FOR STRUCTURAL FRAMING INFORMATION.

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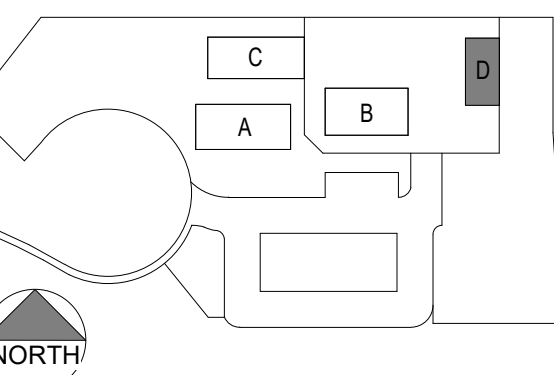
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3000 CAMPUS HILL DRIVE,  
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**EQUIPMENT  
STORAGE ROOF  
PLAN**

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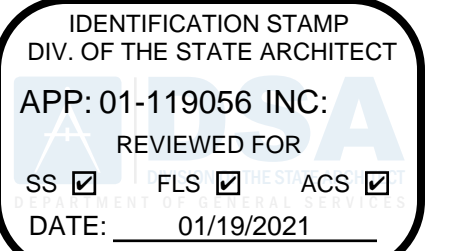
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 ANNA T. WILCOX  
 C 23260  
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 STATE OF CALIFORNIA

CONSULTANT:



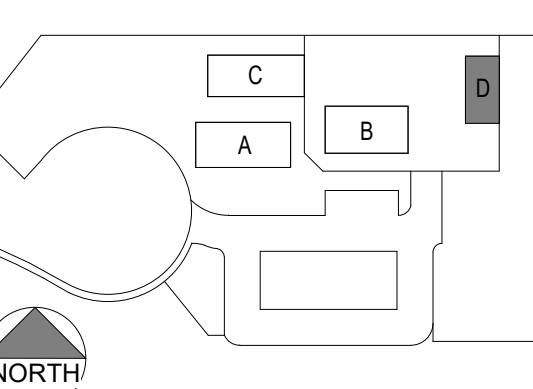
CONSULTANT:

**SHEET KEYNOTES**

- 06.27 4'-0" X 8'-0" 1/2" PLYWOOD
- 10.17 SIGNAGE PER DOOR SCHEDULE
- 22.20 HOSE BIB
- 26.12 LIGHT FIXTURE, S.E.D. AND LUMINAIRE SCHEDULE

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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**

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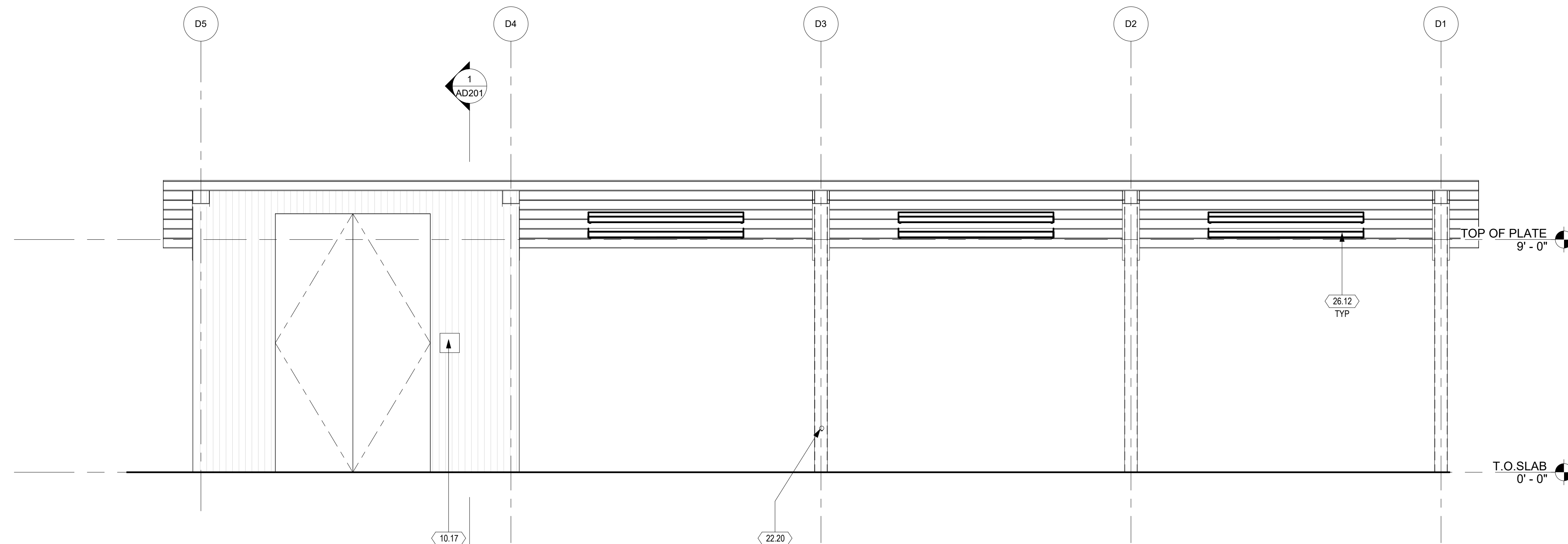
**EQUIPMENT STORAGE EXTERIOR ELEVATIONS & SECTIONS**

DRAWN BY: EA CHECKED BY: AW

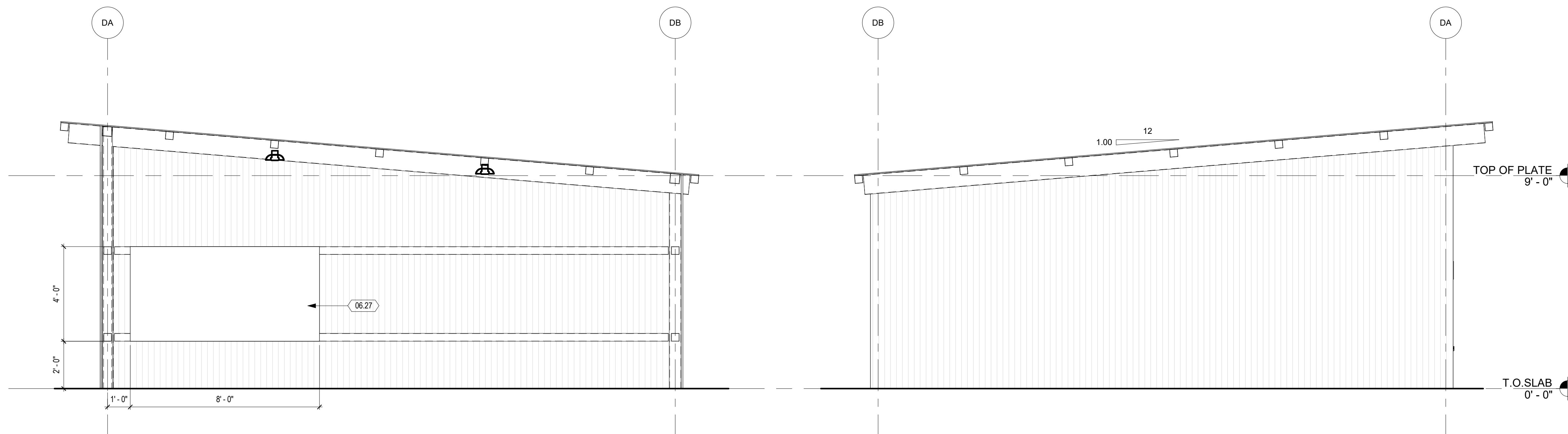
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**AD201**



**3 WEST ELEVATION**  
3/8" = 1'-0"



**1 CROSS SECTION**  
3/8" = 1'-0"

**2 NORTH ELEVATION**  
3/8" = 1'-0"

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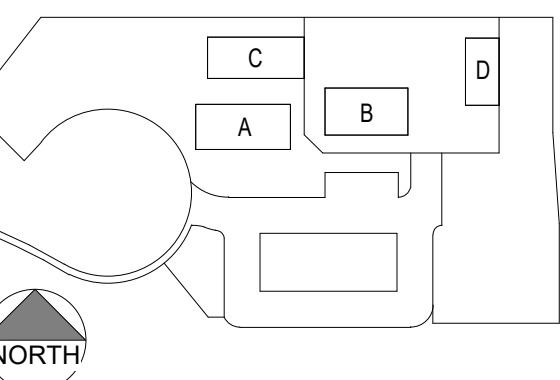
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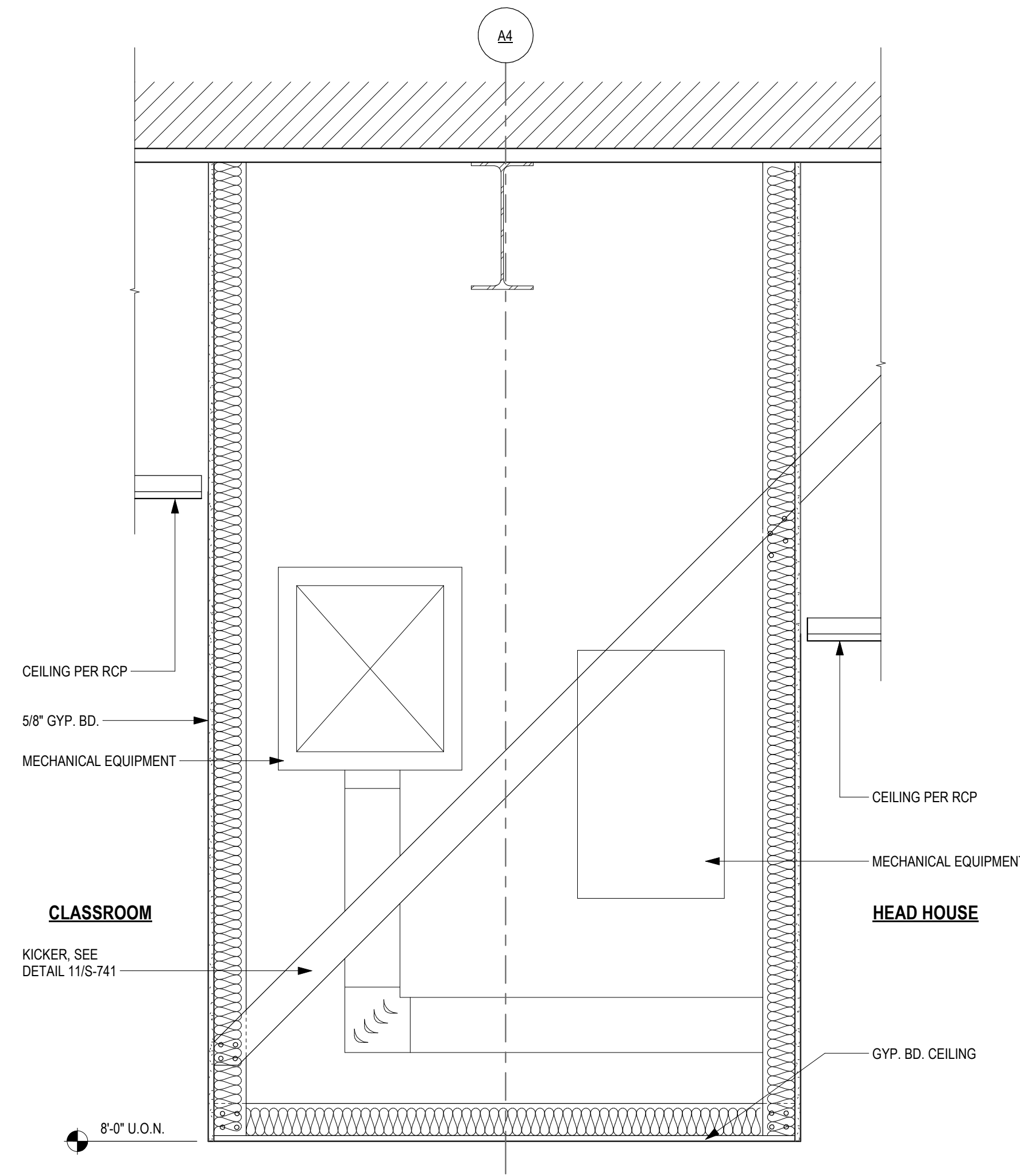
AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY

3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

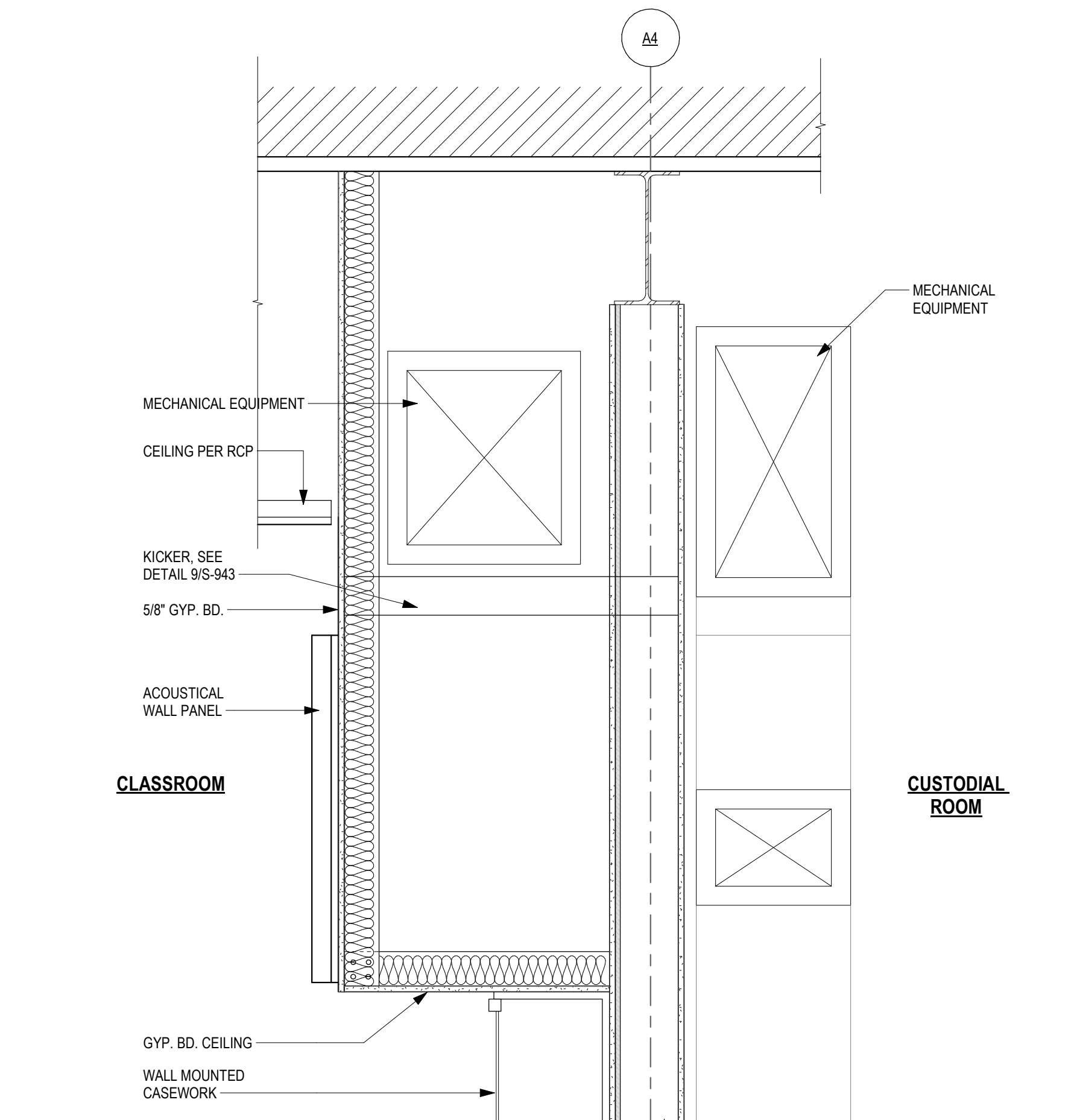
SECTION DETAILS

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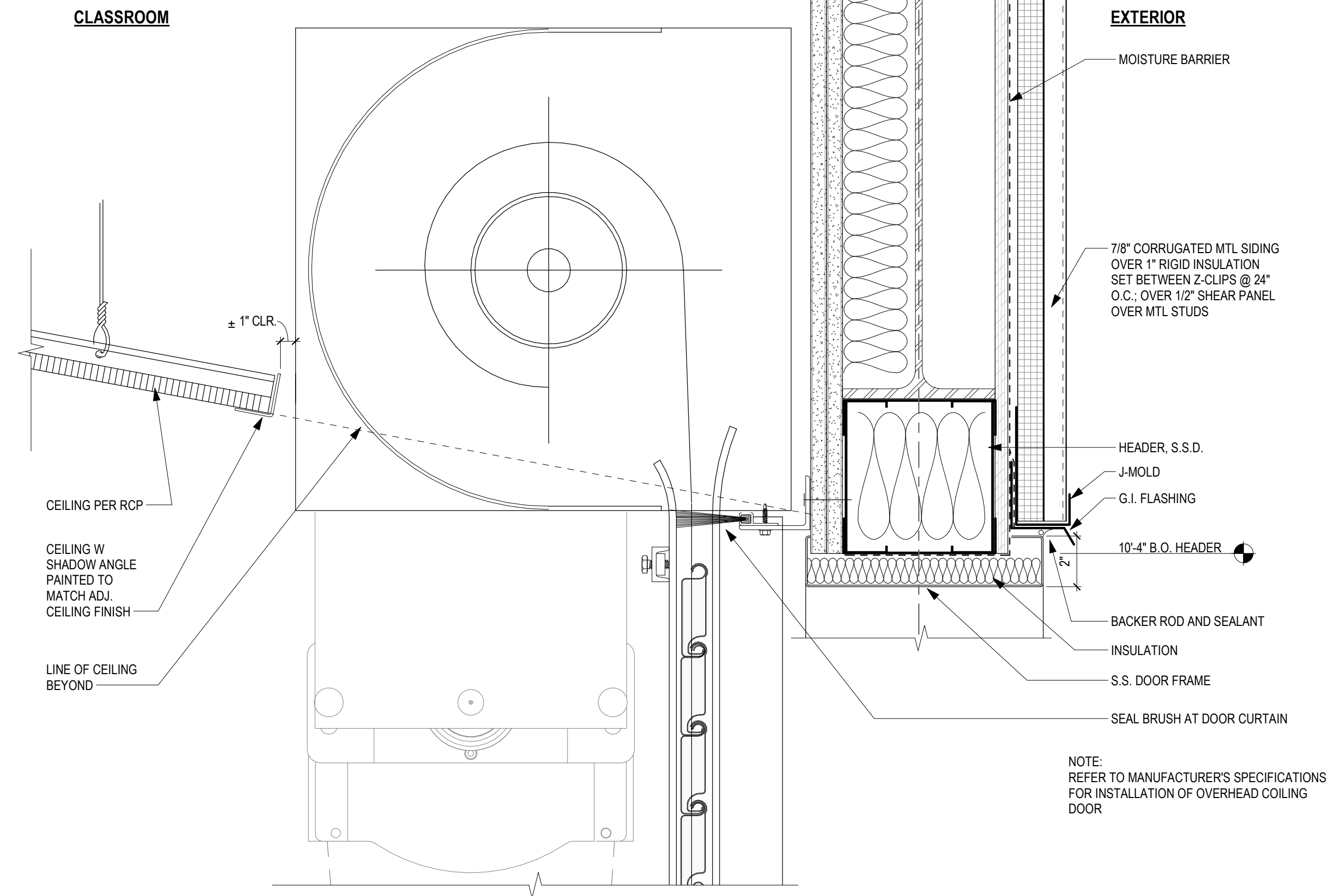
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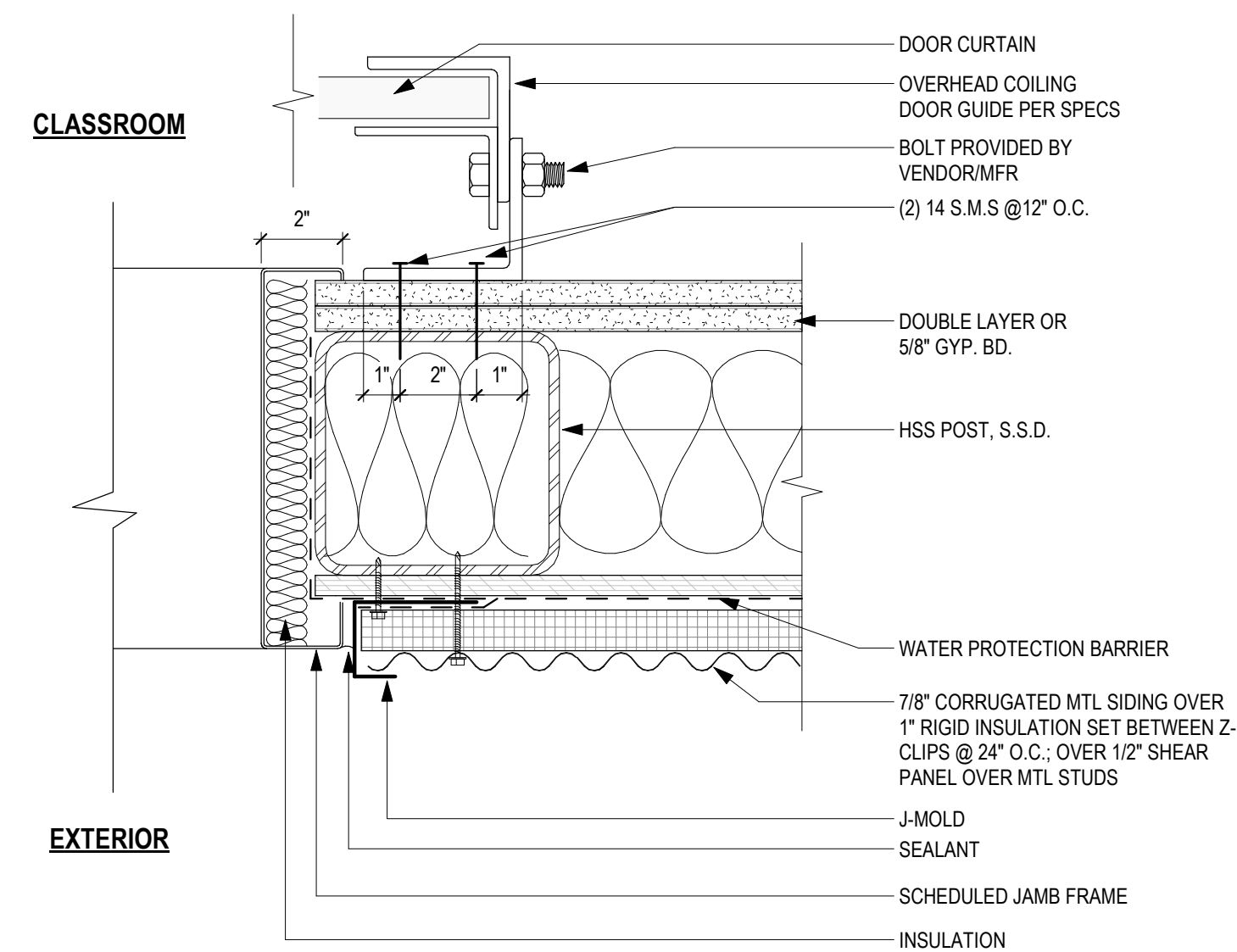
**11 MECHANICAL SOFFIT - HALLWAY** REFER TO 11/S-741 FOR SOFFIT FRAMING AND CONNECTION INFORMATION  
 1" = 1'-0"



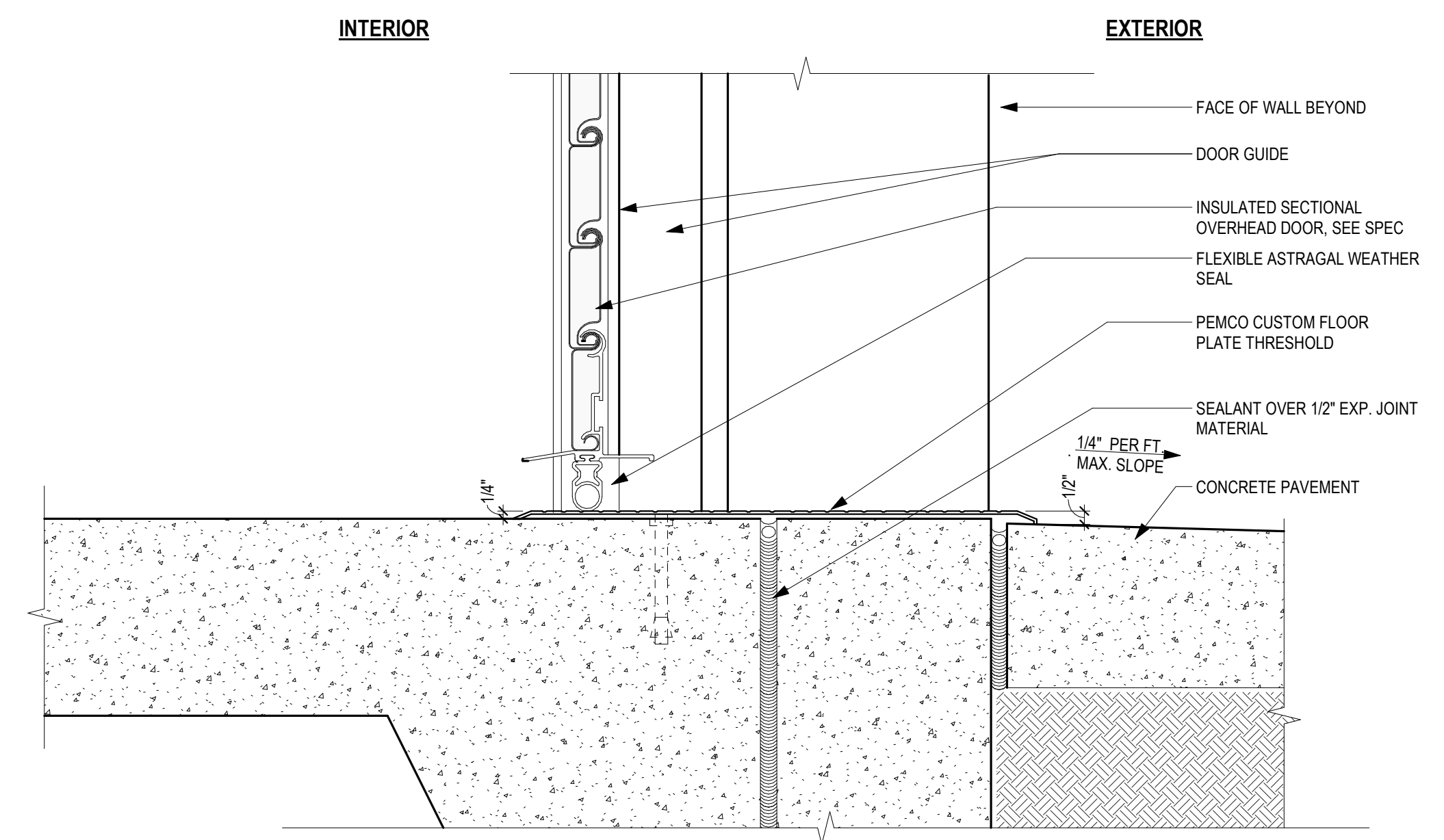
**12 MECHANICAL SOFFIT - CLASSROOM** REFER TO 11/S-741 FOR SOFFIT FRAMING AND CONNECTION INFORMATION  
 1" = 1'-0"



**2 OVERHEAD COILING DOOR HEAD DETAIL**  
 3" = 1'-0"



**3 OVERHEAD COILING DOOR JAMB DETAIL**  
 3" = 1'-0"



**3 OVERHEAD COILING DOOR SILL DETAIL**  
 3" = 1'-0"

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### ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL - NORTH	WALL - EAST	WALL - SOUTH	WALL - WEST	CEILING	COMMENTS
BLDG A - CLASSROOM BUILDING									
101	OFFICE	LIN-1	RB-1	PT-1	PT-3	PT-1	PT-1	ACP-1	
101A	LACTATION ROOM	LIN-1	RB-1	PT-3	PT-1	PT-1	PT-1	ACP-1	
102	CLASSROOM	SEF-1/SEF-2	RB-1/SEF-1	PT-1	PT-2/FRP-1	PT-1	PT-1/PT-2	ACP-1	HIGH GRIT EPOXY AT WET AREAS. SEE FLOOR PLAN. SEE INTERIOR ELEVATIONS FOR FRP LOCATIONS
103	HEAD HOUSE	SEF-2	RB-1	PT-3/FRP-1	PT-1	PT-1	PT-2	ACP-1	SEE INTERIOR ELEVATIONS FOR FRP LOCATIONS
103A	CUSTODIAL	SEF-2	SEF-2	FRP/PT-1	FRP/PT-1	FRP/PT-1	FRP/PT-1	EXP	FRP TO ALIGN WITH TOP OF DOOR FRAME. PAINT ABOVE FRP
104	NON-ACCESSIBLE UNISEX RESTROOM - B	CT-1	CT-3	CT-2	CT-2	CT-2	CT-2	GWB-1	MOISTURE-RESISTANT GYP. BD. AT CEILING; TILE BACKER BOARD ON WALLS. SEE SPECS
105	ACCESSIBLE UNISEX RESTROOM - A	CT-1	CT-3	CT-2	CT-2	CT-2	CT-2	GWB-1	MOISTURE-RESISTANT GYP. BD. AT CEILING; TILE BACKER BOARD ON WALLS. SEE SPECS
106	MECHANICAL	SC-1	SC-1	PT-1	PT-1	PT-1	PT-1	EXP	
107	ELECTRICAL	SC-1	SC-1	PT-1	PT-1	PT-1	PT-1	EXP	
107A	IDF	SC-1	SC-1	PT-1	PT-1	PT-1	PT-1	EXP	
BLDG B - GREENHOUSE									
B101	GREENHOUSE	SC-1							BROOM FINISH IN DIRECTION OF SLOPE
BLDG D - EQUIPMENT STORAGE									
D101	EQUIPMENT STORAGE	AC-1							

### FINISH SCHEDULE LEGEND

- RESILIENT TILE FLOORING: FORBO LINOLEUM, FORBO MARMOLEUM - DOVE GREY 621
- SELF COVED EPOXY FLOORING: 4" BASE SEF-1 STONHARD, SILVER GRAY  
SEF-2 HIGH-GRIT EPOXY, STONHARD, PEWTER
- CONCRETE: SC-1 SEALED CONCRETE, TBD  
AC-1 ASPHALT CONCRETE
- RESILIENT BASE: BURKE 4" RB-1 727 THUNDER
- PAINT: KELLY MOORE  
PT-1 PRIMARY COLOR, OM260-1 - FUZZY SLIPPERS  
PT-2 ACCENT COLOR, KM 3183-3 - LAKE COMO  
PT-3 ACCENT COLOR, KM 3404-2 - GOLDEN SHORE  
PT-4 ACCENT COLOR, KM AC214-6 LEAF RUST
- PORCELAIN CERAMIC TILE: DALTILE  
CT-1 PRIMARY COLOR, MATTE, D317 BUSCUIT, 2' x 2'  
CT-2 PRIMARY COLOR, GLAZED, K775 BISCUIT, 4' x 4'  
CT-3 COVED BASE, GLAZED, K775 BISCUIT
- ACOUSTICAL CEILING: ARMSTRONG - NRC=0.7 MIN. ACP-1 SUSPENDED
- CEILING: GWB-1 GYPSUM WALL BOARD, PAINTED  
EXP EXPOSED
- PLASTIC LAMINATE: WILSONART  
PL-1
- FIBER-REINFORCED PLASTIC PANEL: MARLITE  
FRP-1
- ACOUSTICAL WALL PANEL: ACOUSTICAL SOLUTIONS; SEE SPEC. SECTION 09-8413  
AWP-1 755 LEAF
- TACKBOARD: KOROSEAL SONESTRA  
TB-1 N521-94 GRAYSON

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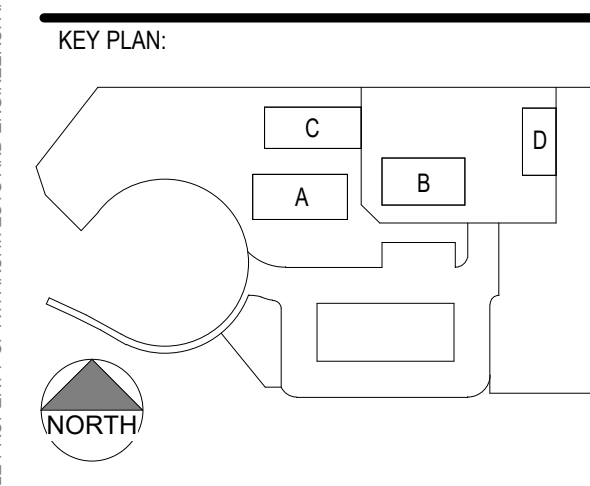
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PROFESSIONAL STAMP:  
LIZANN T. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

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CLPCCD - LAS POSITAS COLLEGE

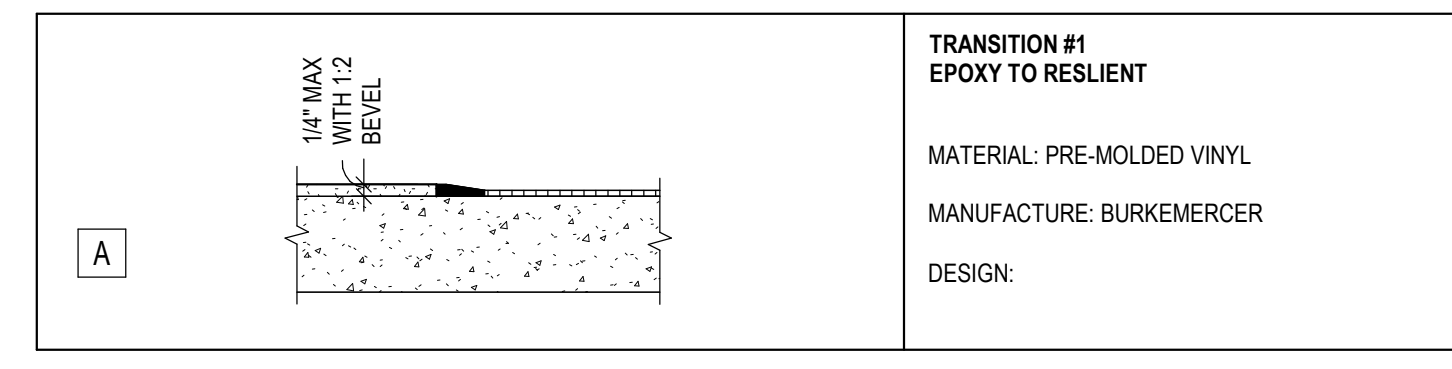
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**FINISH SCHEDULE**

DRAWN BY: EA      CHECKED BY: AW  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

# A802



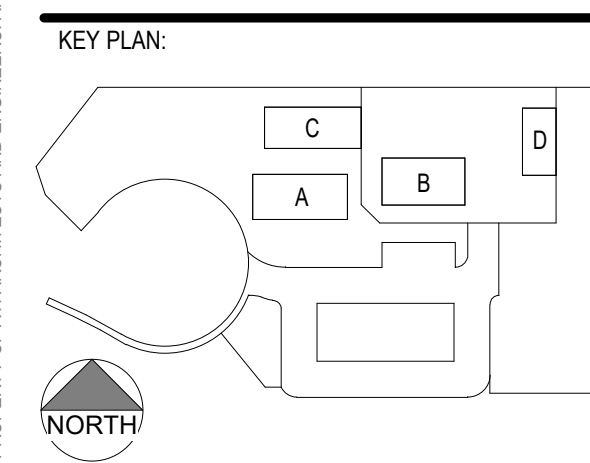
- NOTES:
1. CENTER TRANSITION STRIP AT DOOR OPENINGS WHERE OCCURS.
  2. SUBSTRATE VARIES.
  3. NOT ALL TRANSITION STRIPS USED.

**1 FLOOR FINISH TRANSITIONS**  
3" = 1'-0"



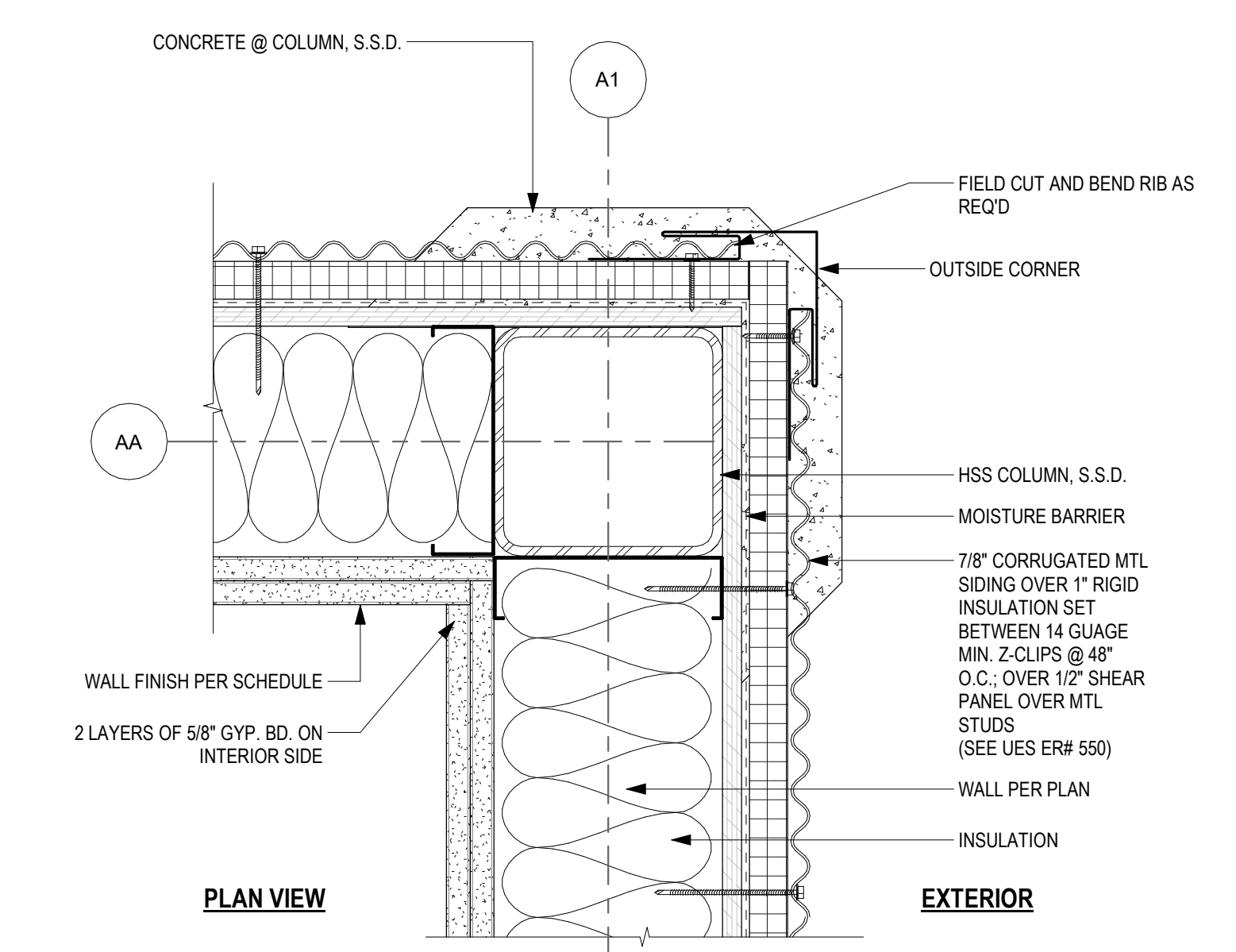


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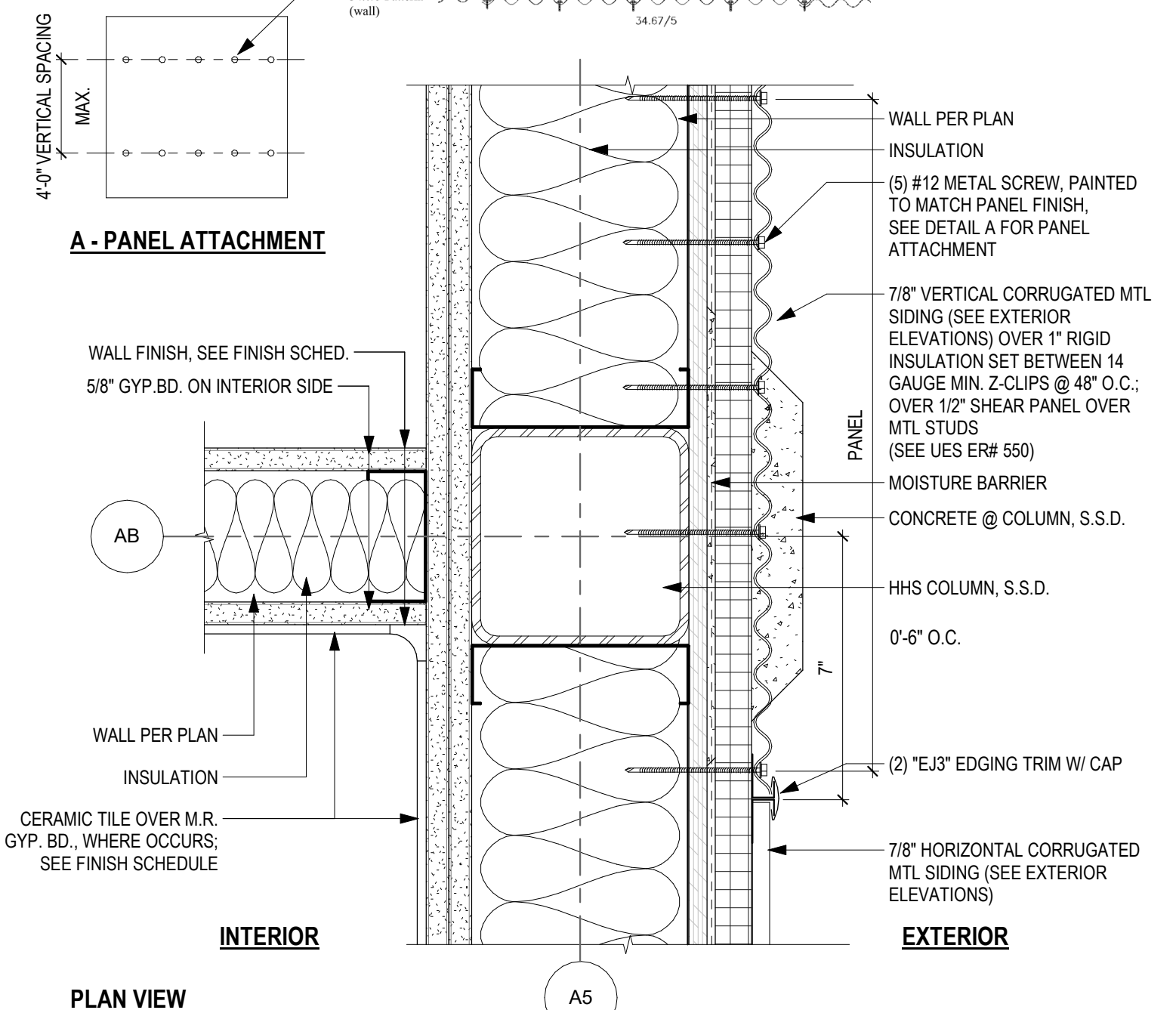


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 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

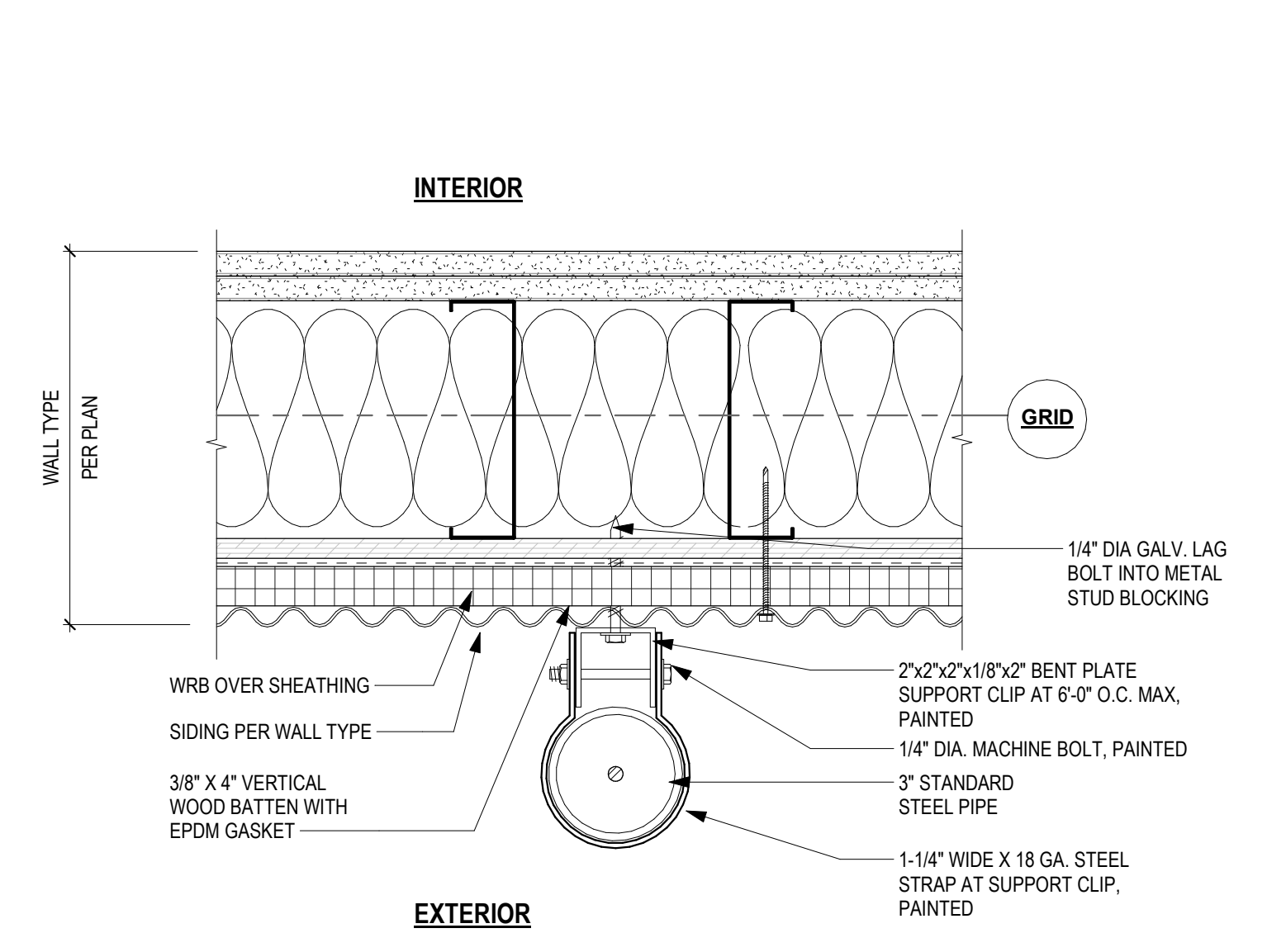
**WALL DETAILS**



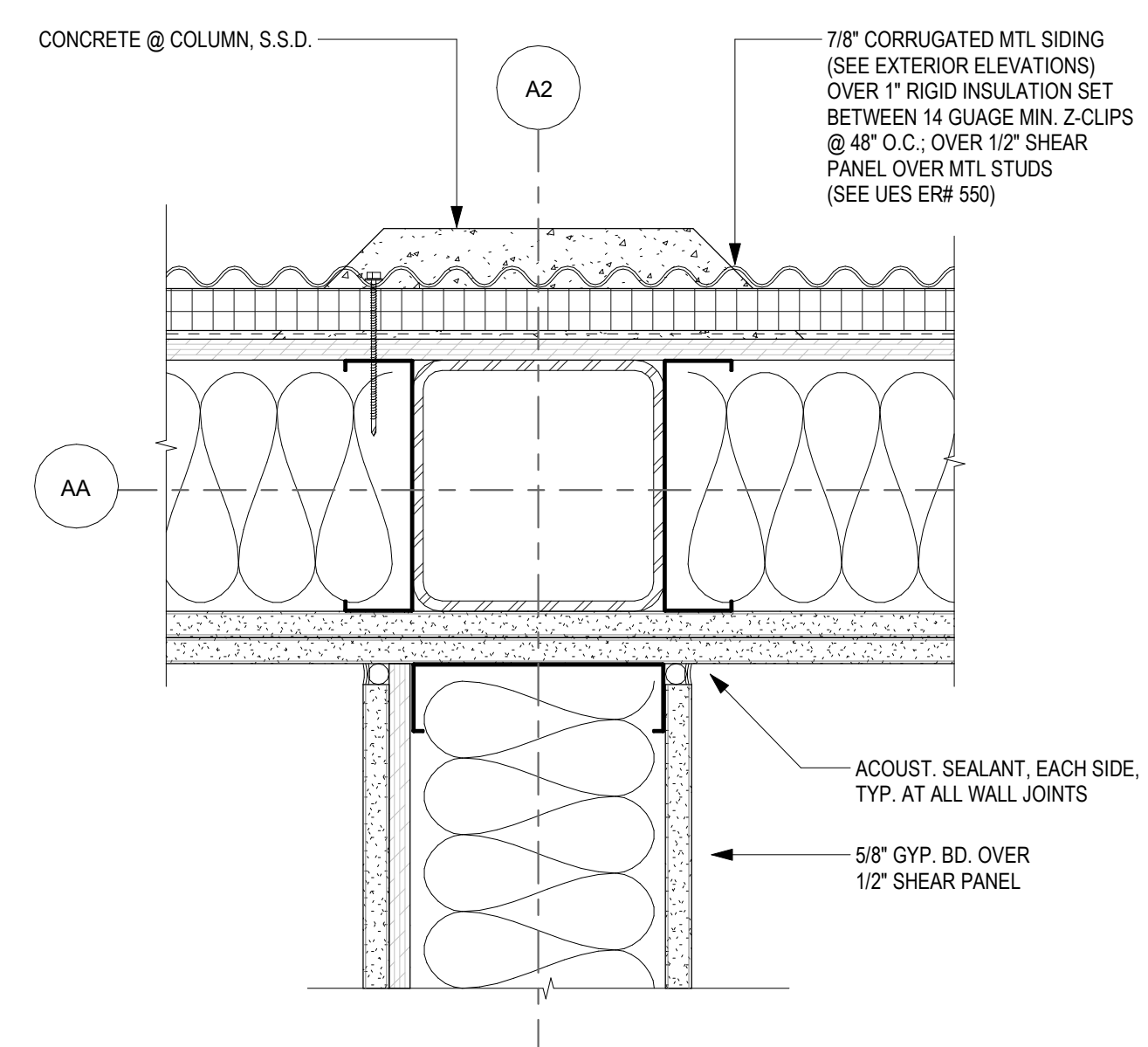
**1 EXTERIOR WALL AT CORNER**  
 3" = 1'-0"



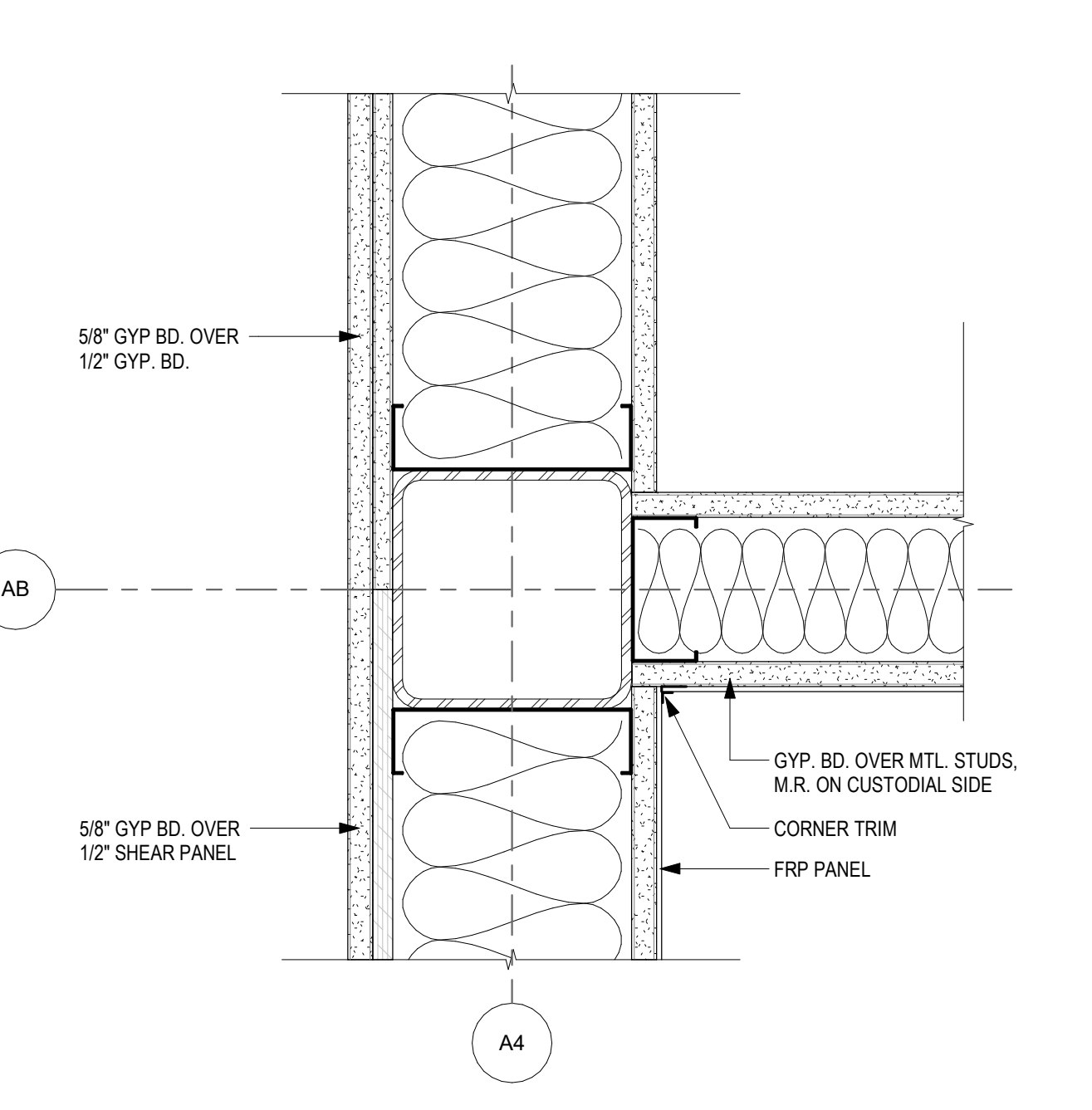
**2 EXTERIOR WALL AT INTERSECTION**  
 3" = 1'-0"



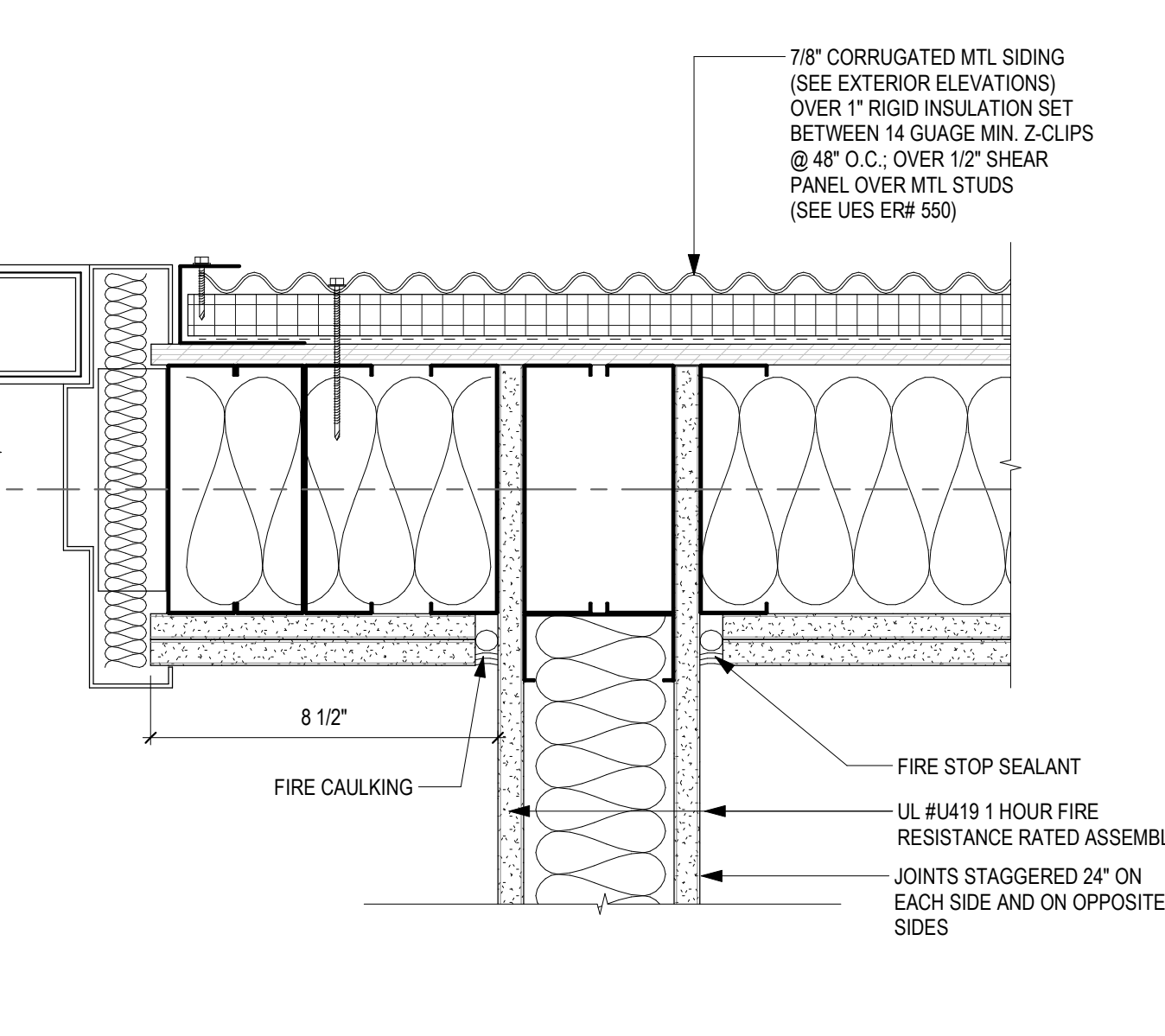
**3 DOWNSPOUT ATTACHMENT AT SIDING**  
 3" = 1'-0"



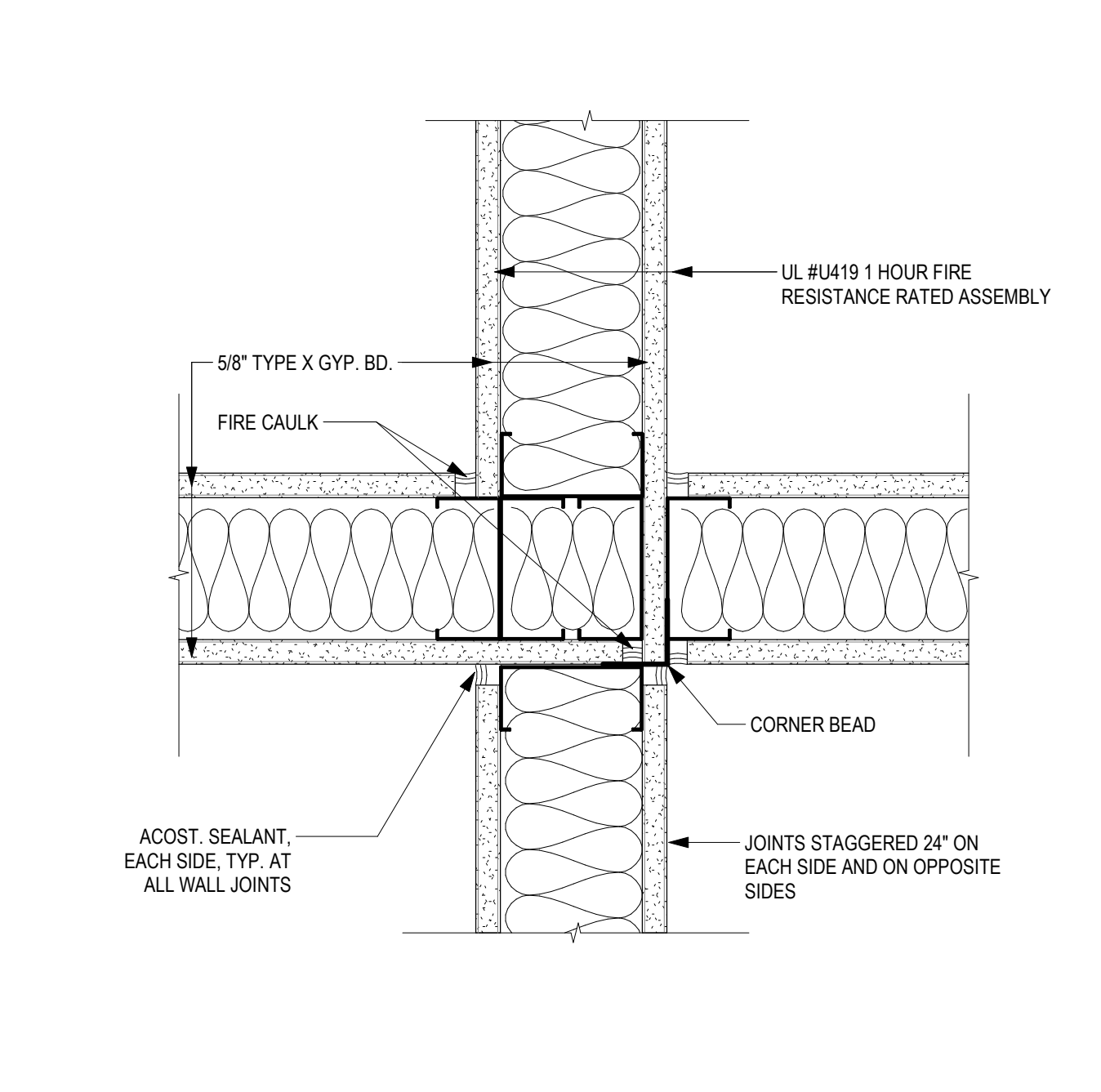
**4 SHEAR WALL AT LACTATION ROOM**  
 3" = 1'-0"



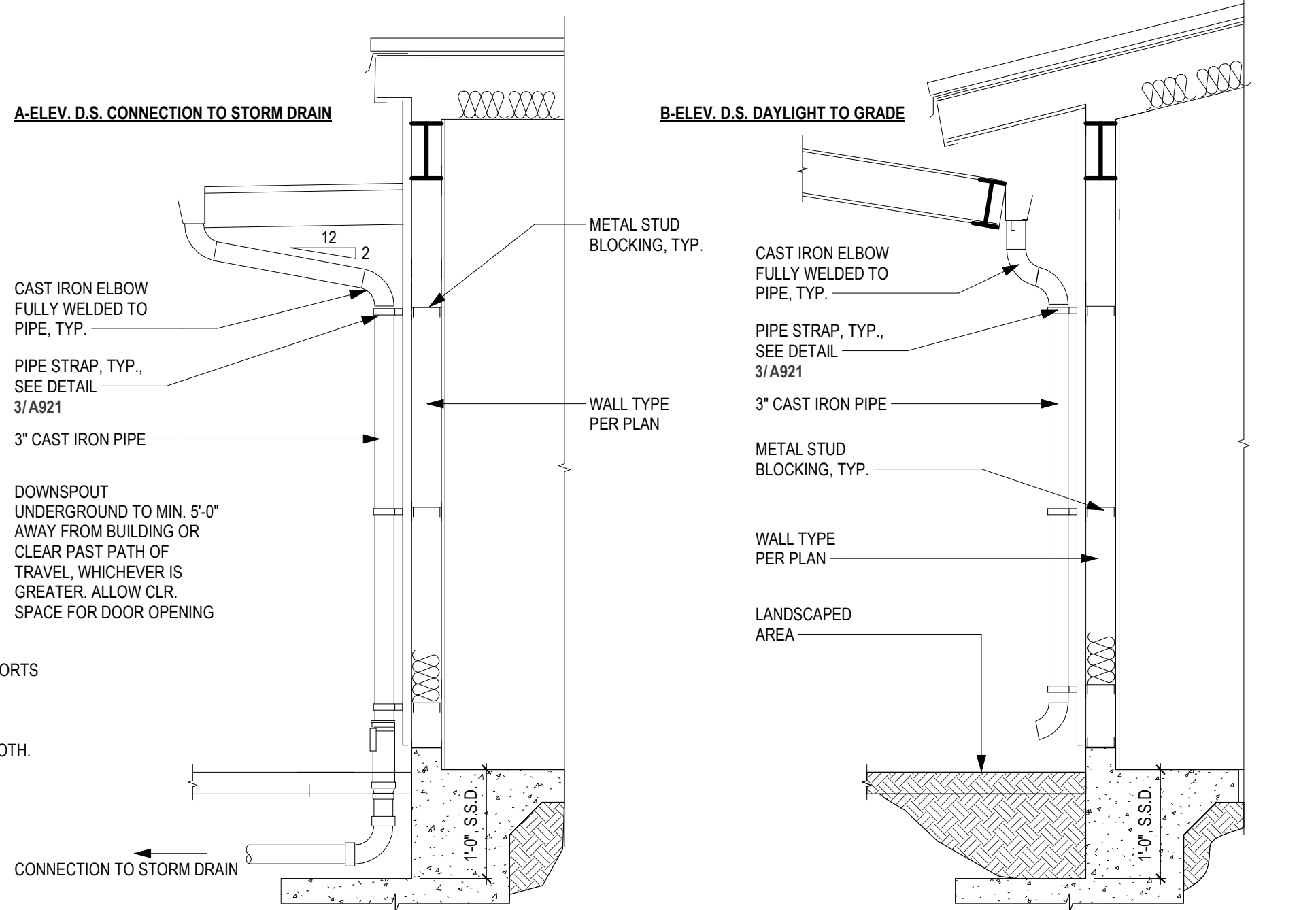
**5 SHEAR WALL AT CUSTODIAL ROOM**  
 3" = 1'-0"



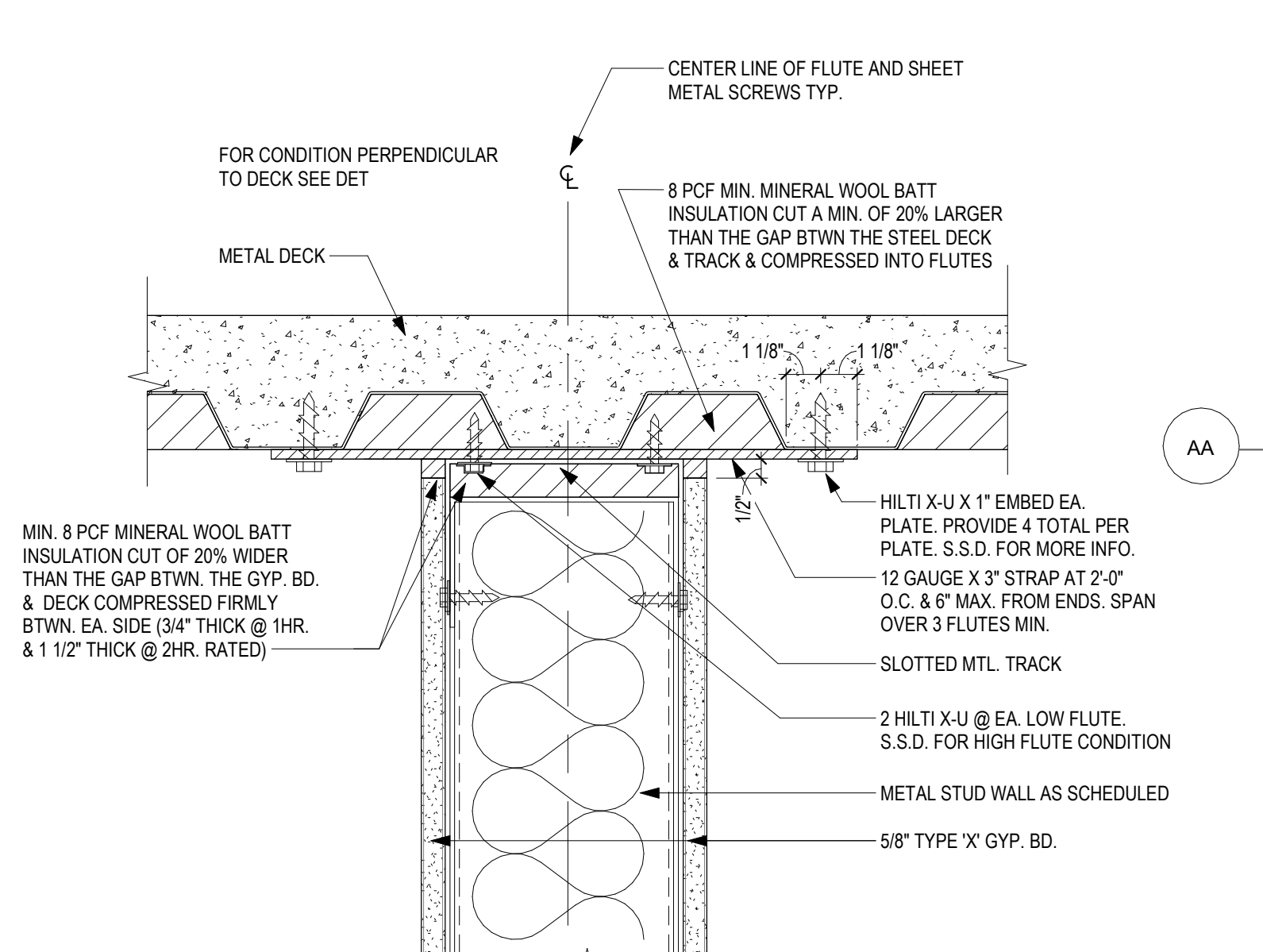
**7 1-HR. FIRE RATED WALL AT ELEC ROOM**  
 3" = 1'-0"



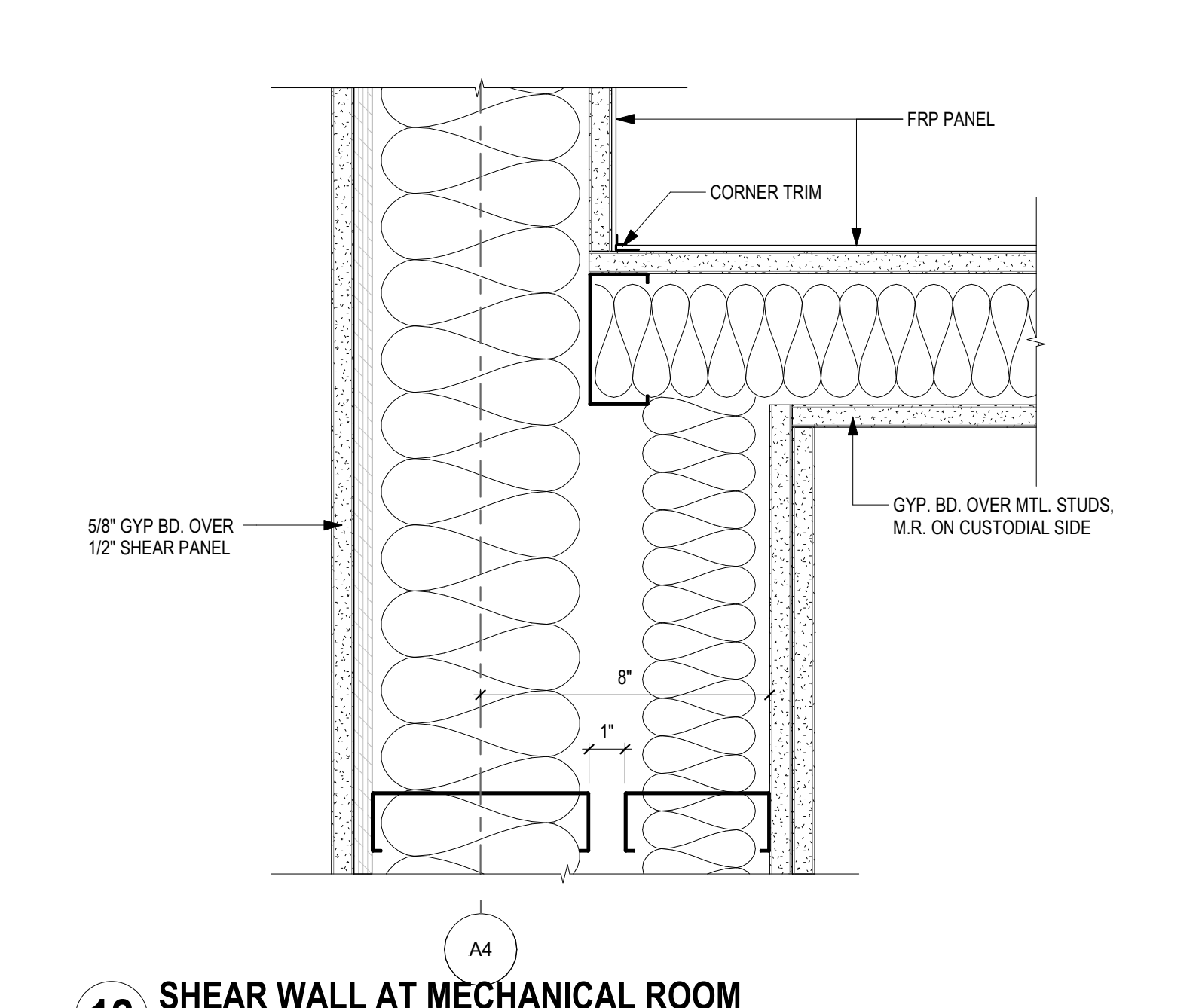
**8 1-HR FIRE RATED WALL INTERSECTION AT ELEC ROOM**  
 3" = 1'-0"



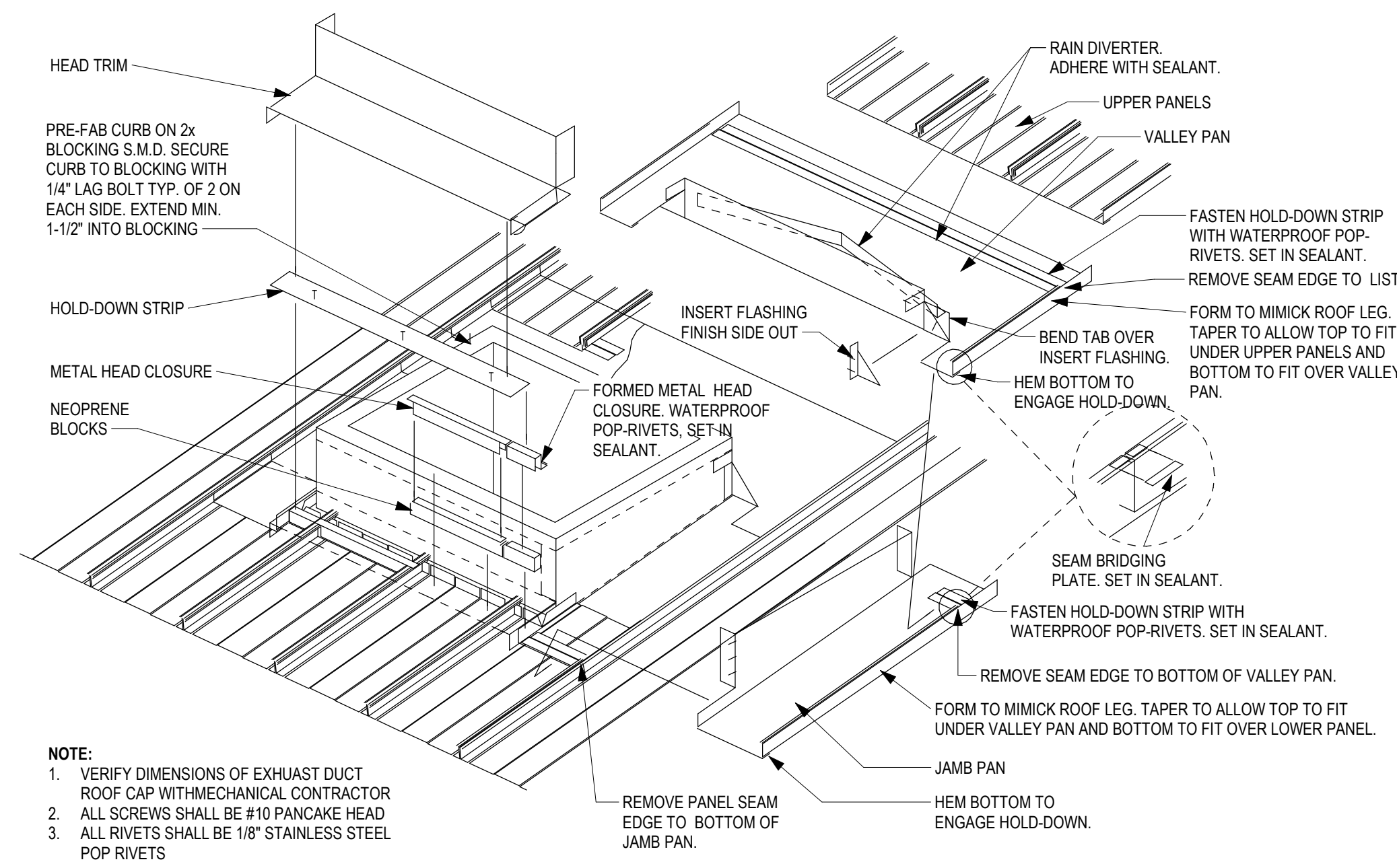
**9 DOWNSPOUT ELEVATIONS**  
 12" = 1'-0"



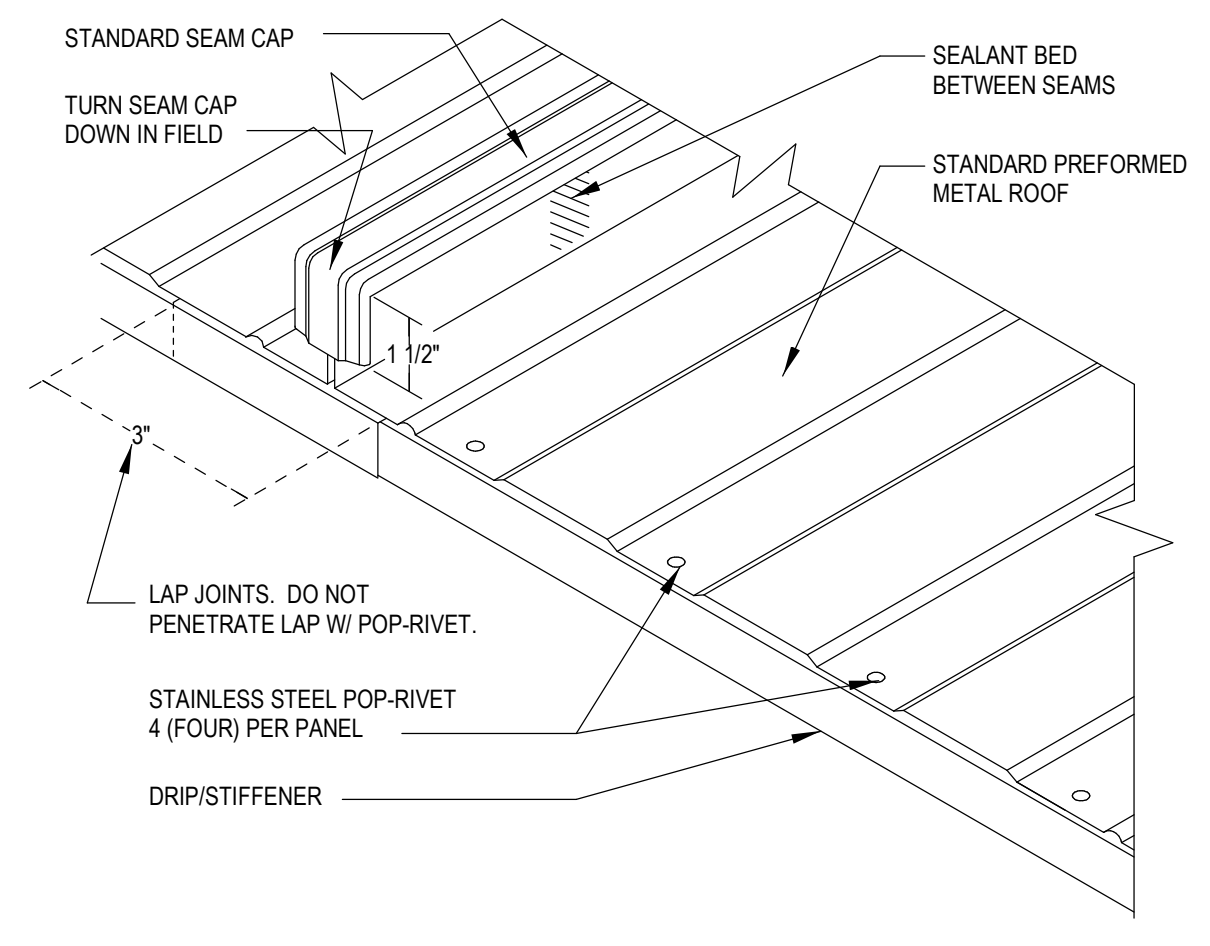
**11 1-HR FIRE RATED WALL HEAD DETAIL**  
 3" = 1'-0"



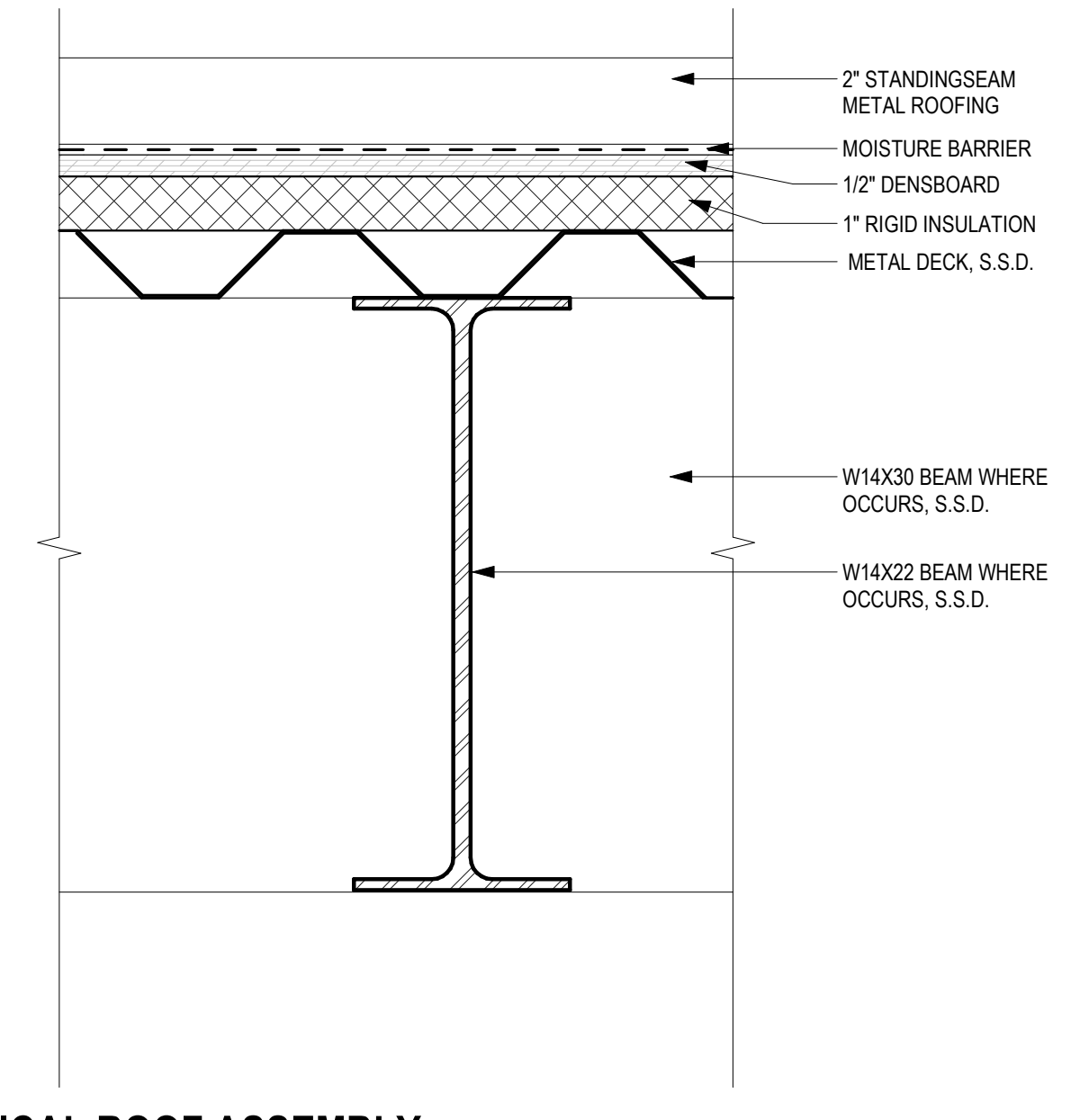
**12 SHEAR WALL AT MECHANICAL ROOM**  
 3" = 1'-0"



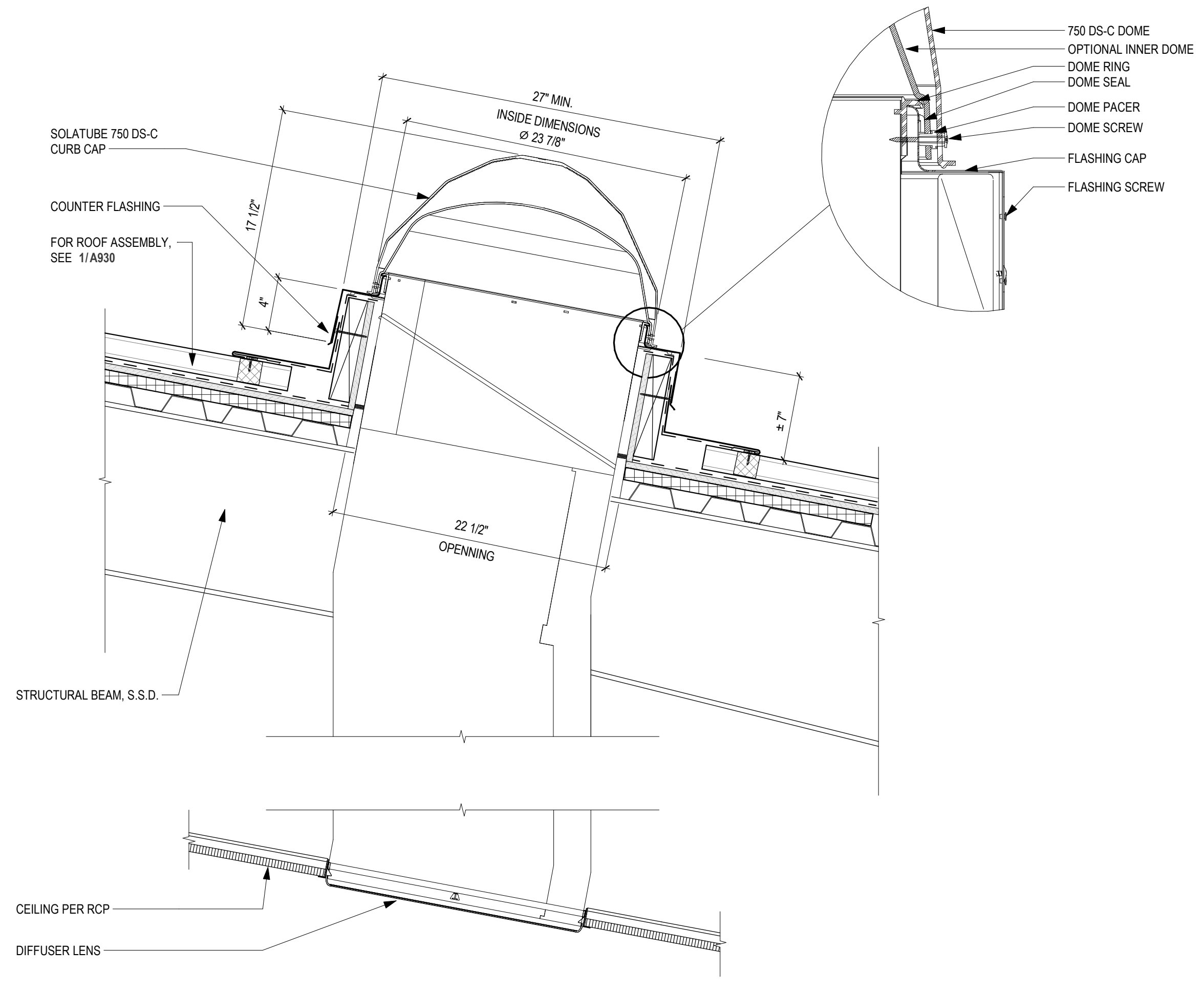
**7 TYP. EXHAUST DUCT CAP FLASHING AT METAL ROOF**  
12" = 1'-0"



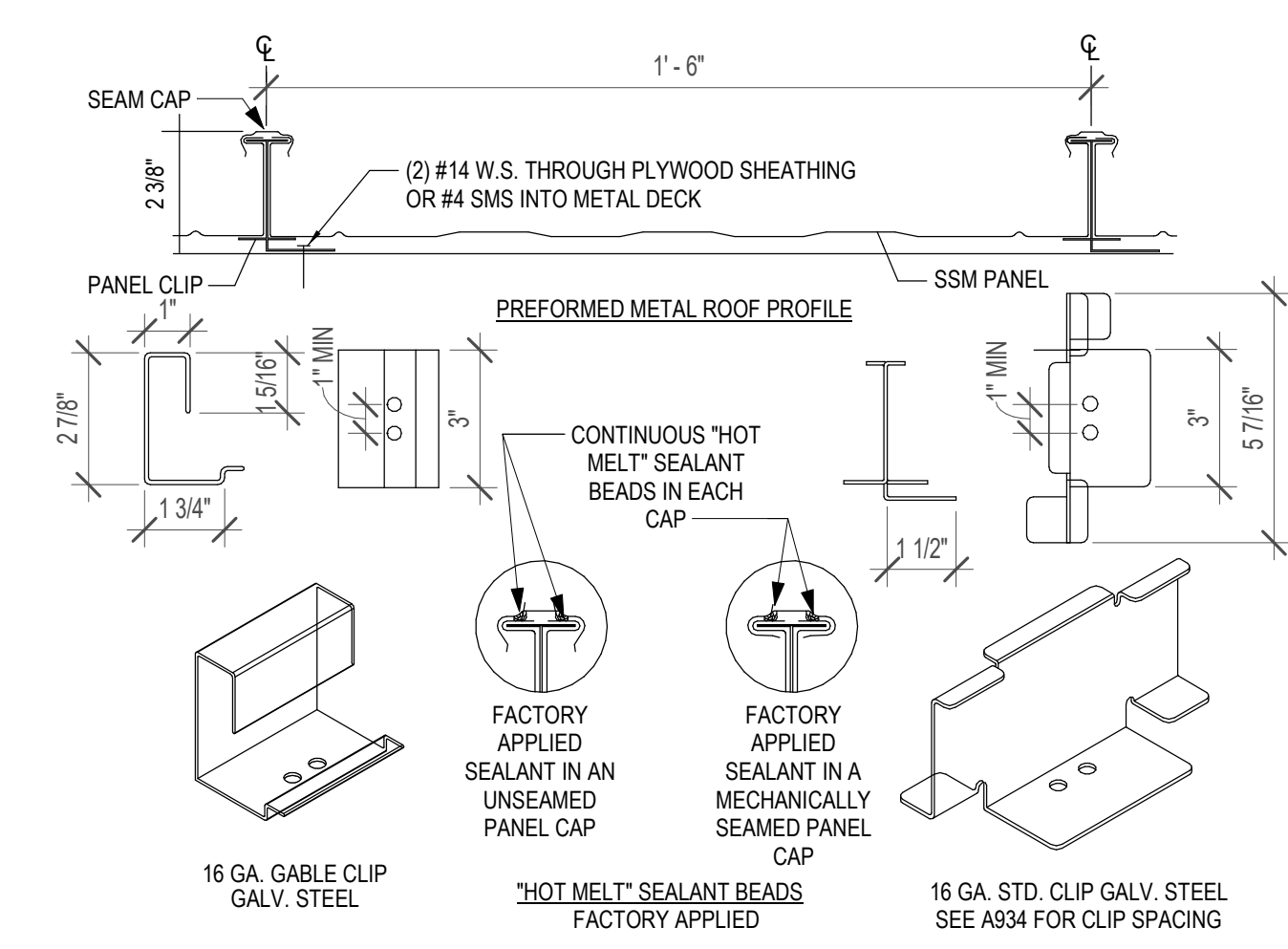
**4 TYP. SEAM END CLOSURE AT METAL ROOF**  
3" = 1'-0"



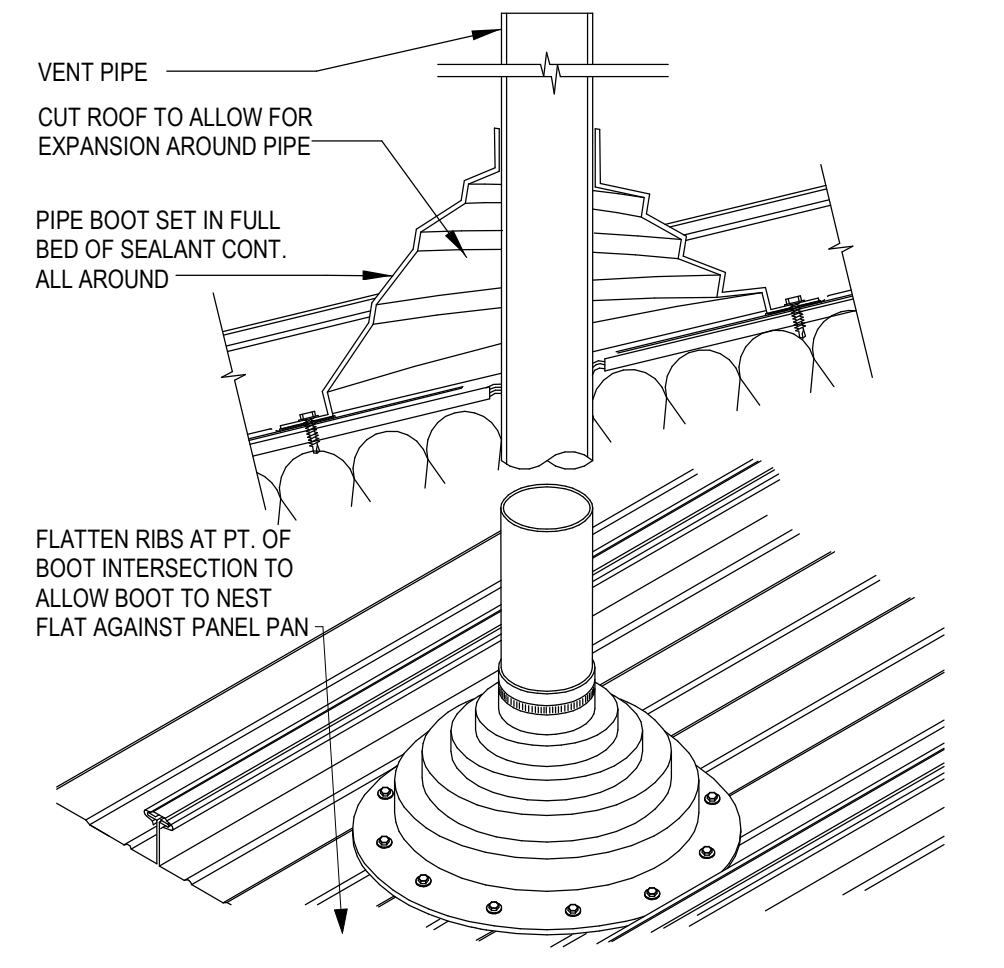
**1 TYPICAL ROOF ASSEMBLY**  
3" = 1'-0"



**9 TUBULAR SKYLIGHT - CURB DETAIL**  
1 1/2" = 1'-0"



**5 TYP. PREFORMED METAL ROOF AND CLIPS**  
3" = 1'-0"



**6 TYP. PREFORMED METAL ROOF PENETRATION**  
1 1/2" = 1'-0"

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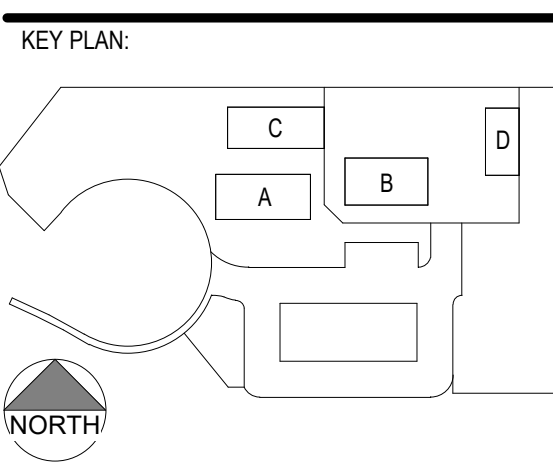
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FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**ROOF DETAILS**

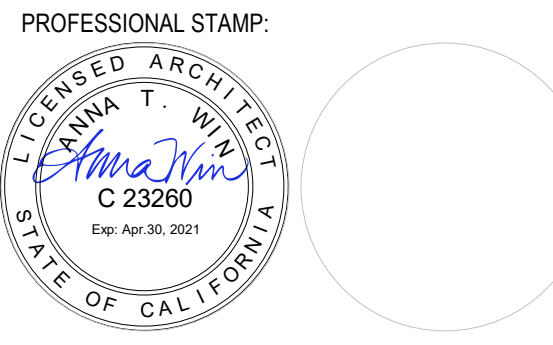
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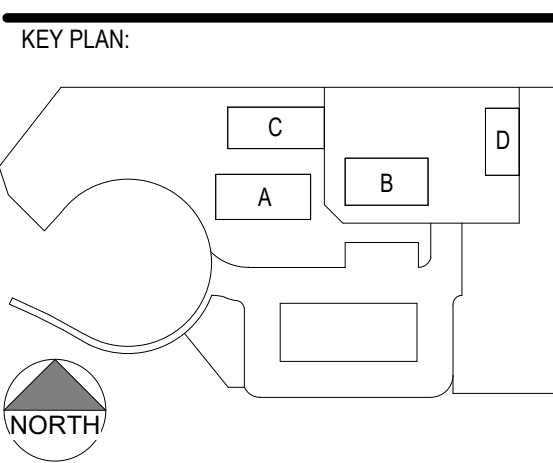


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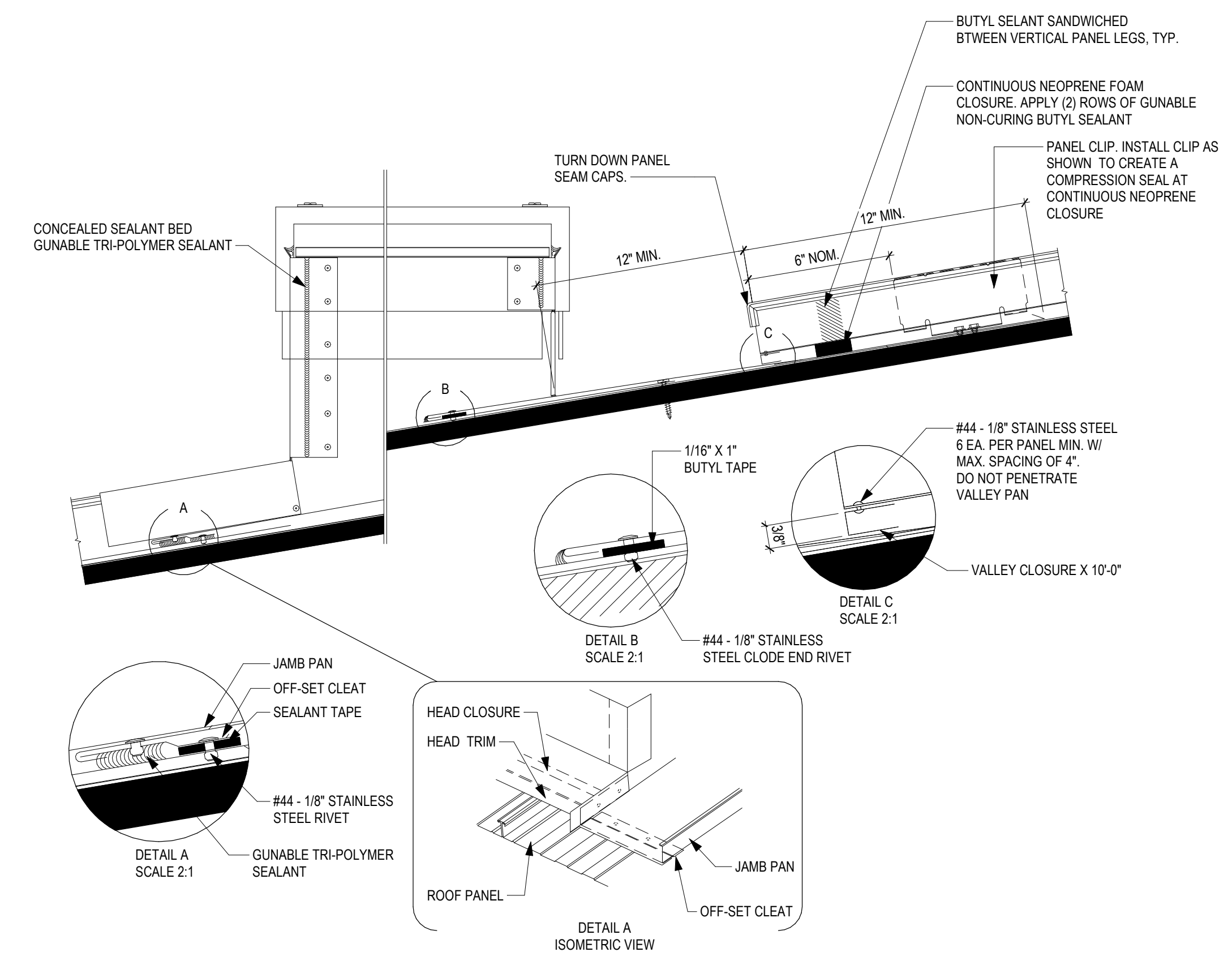


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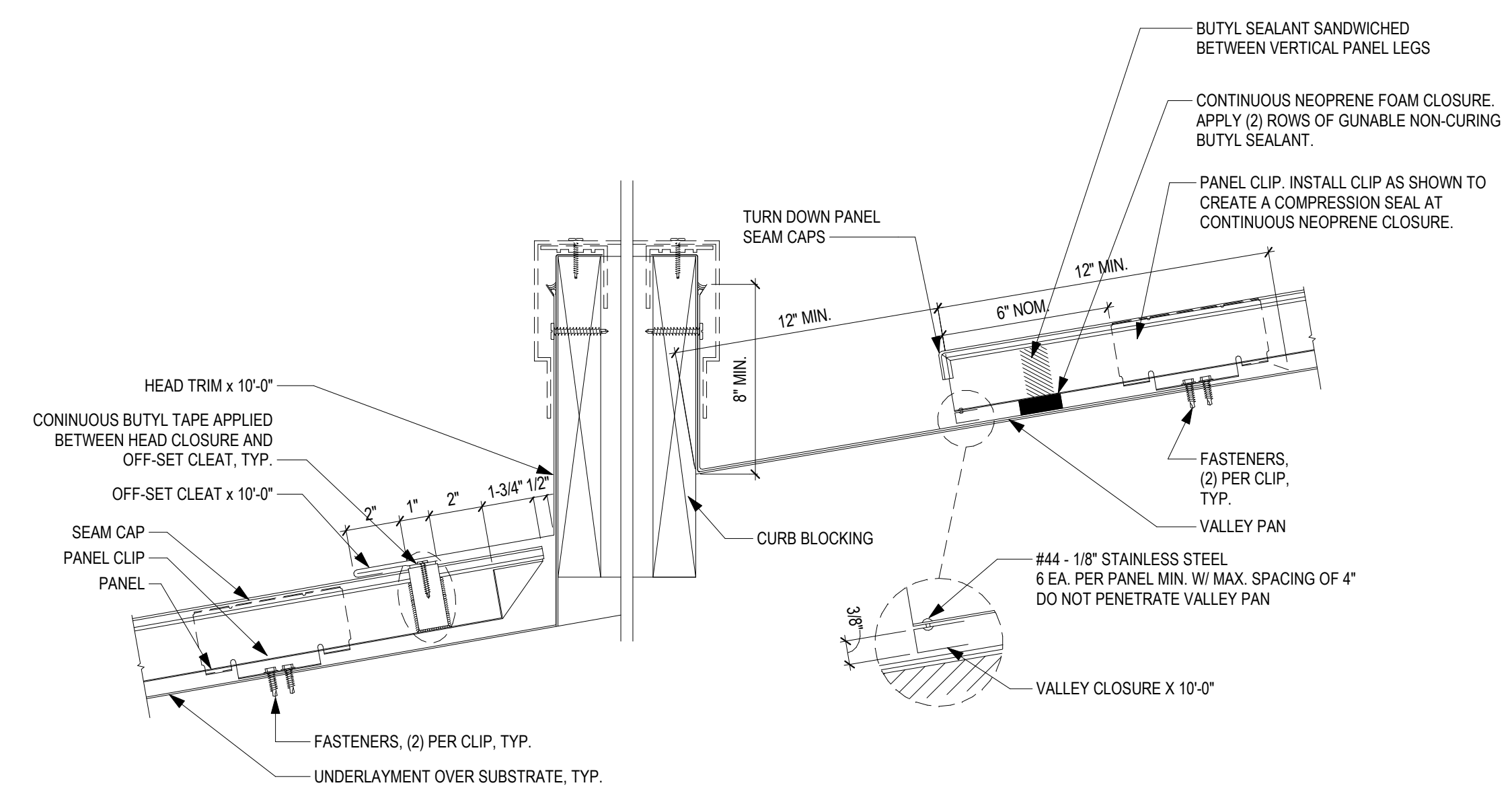
**ROOF DETAILS**

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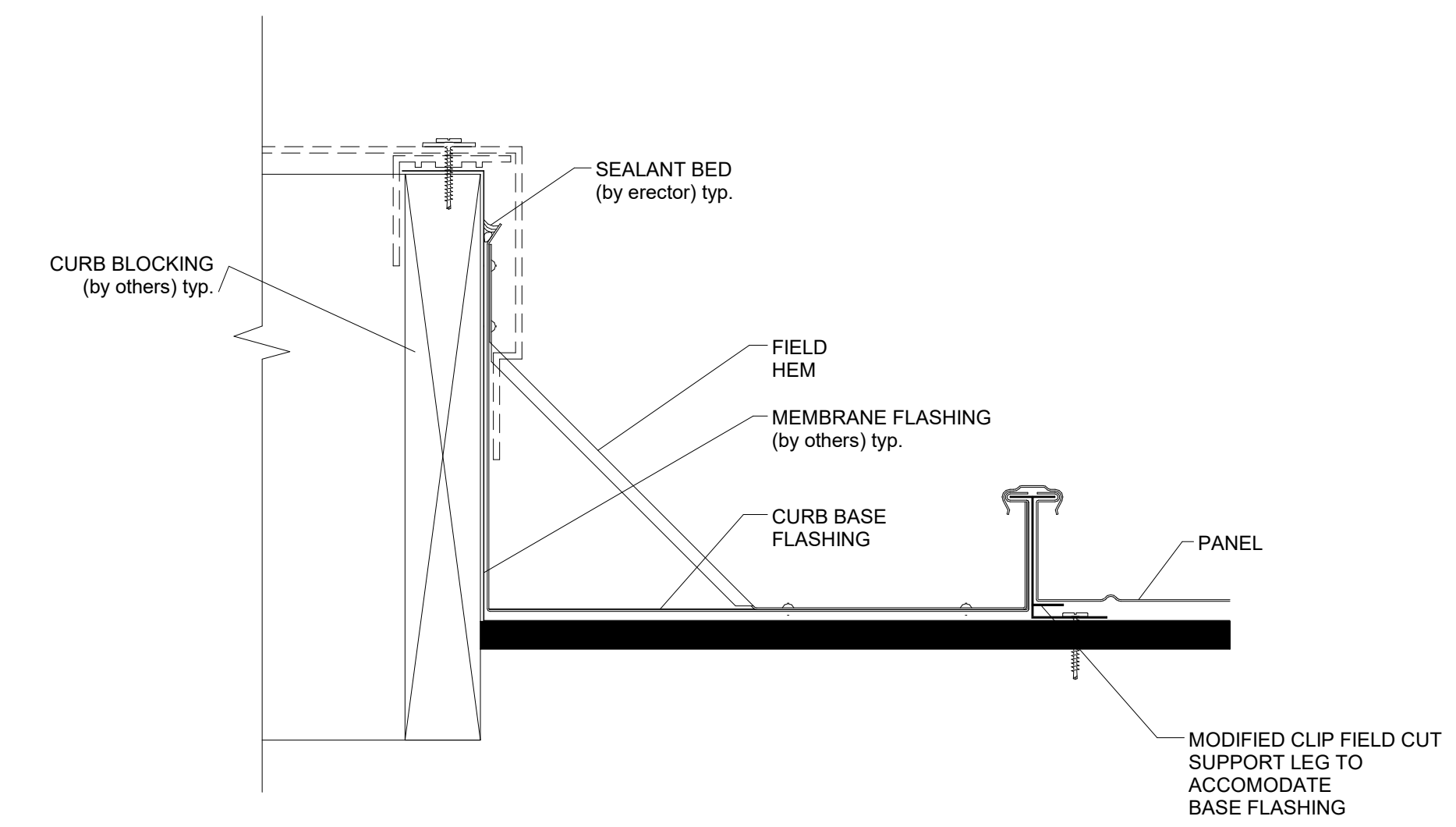
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**2 ROOF CURB AT MECHANICAL EQUIPMENT**  
 N.T.S.



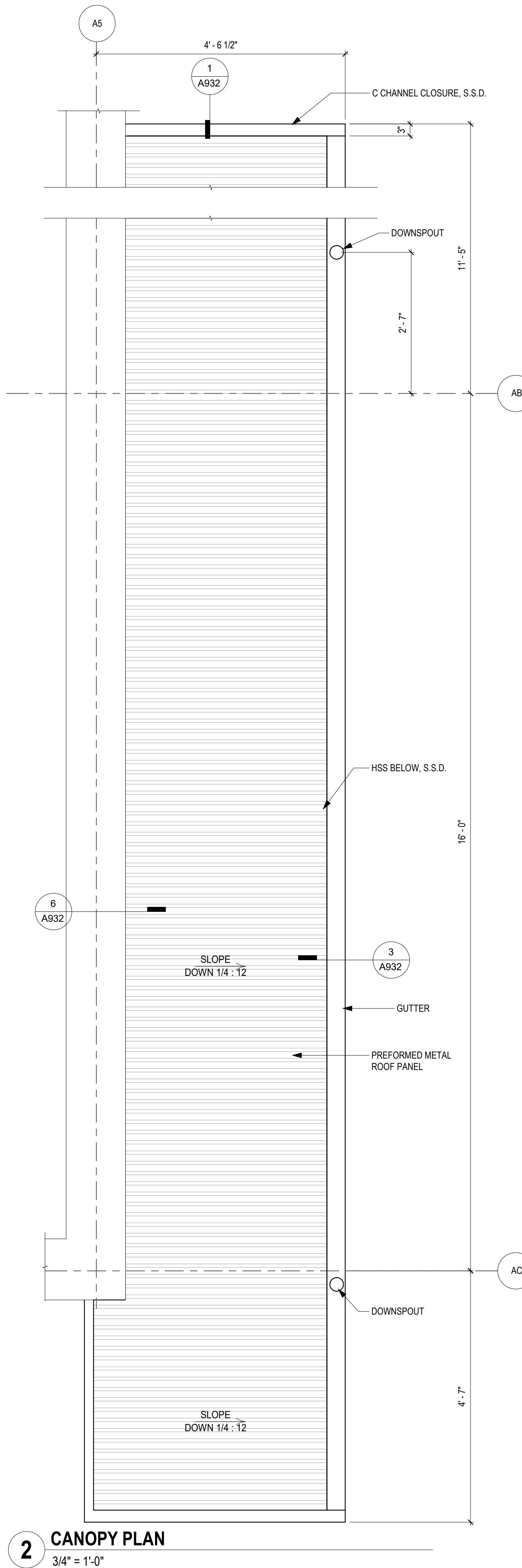
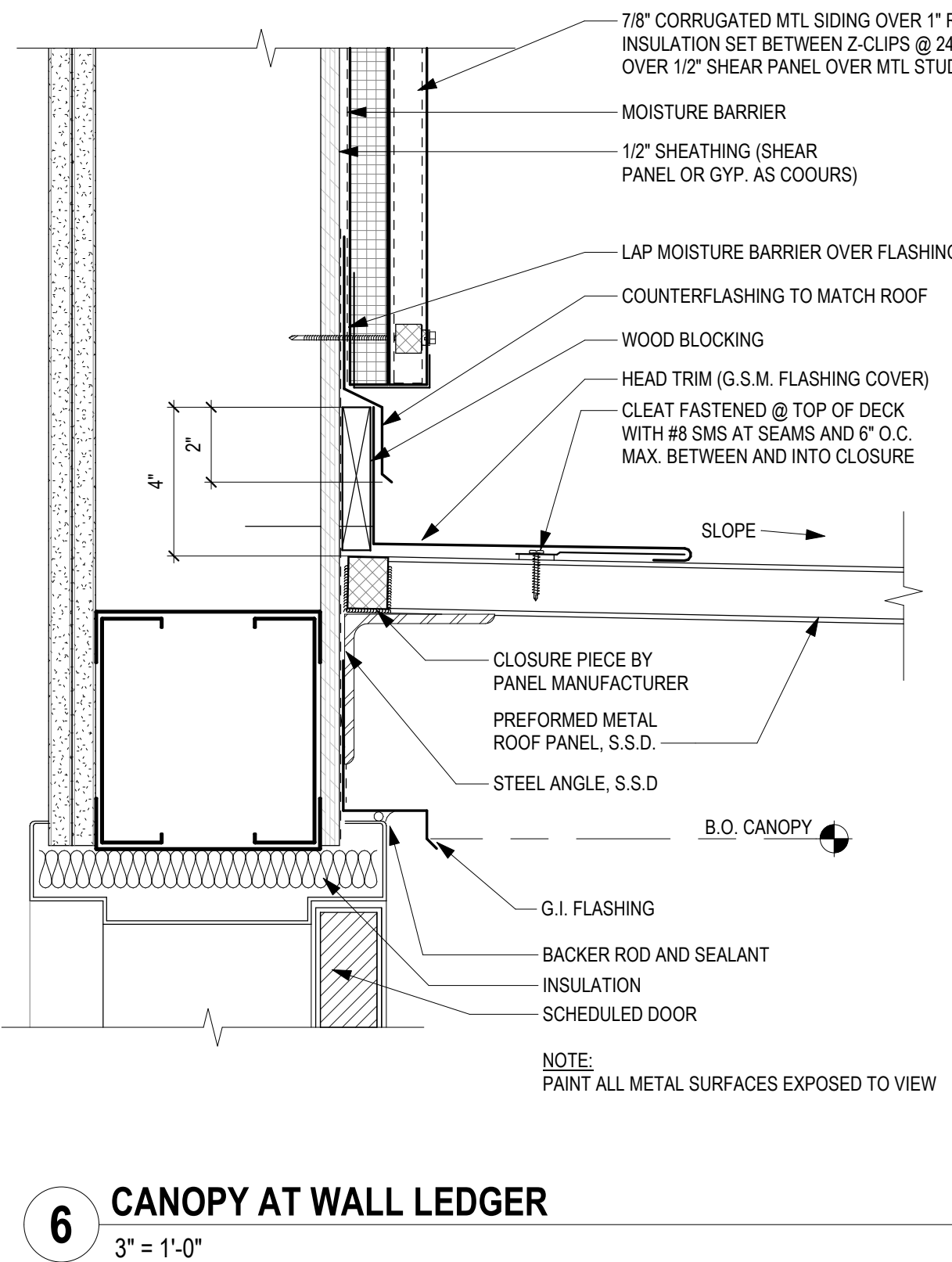
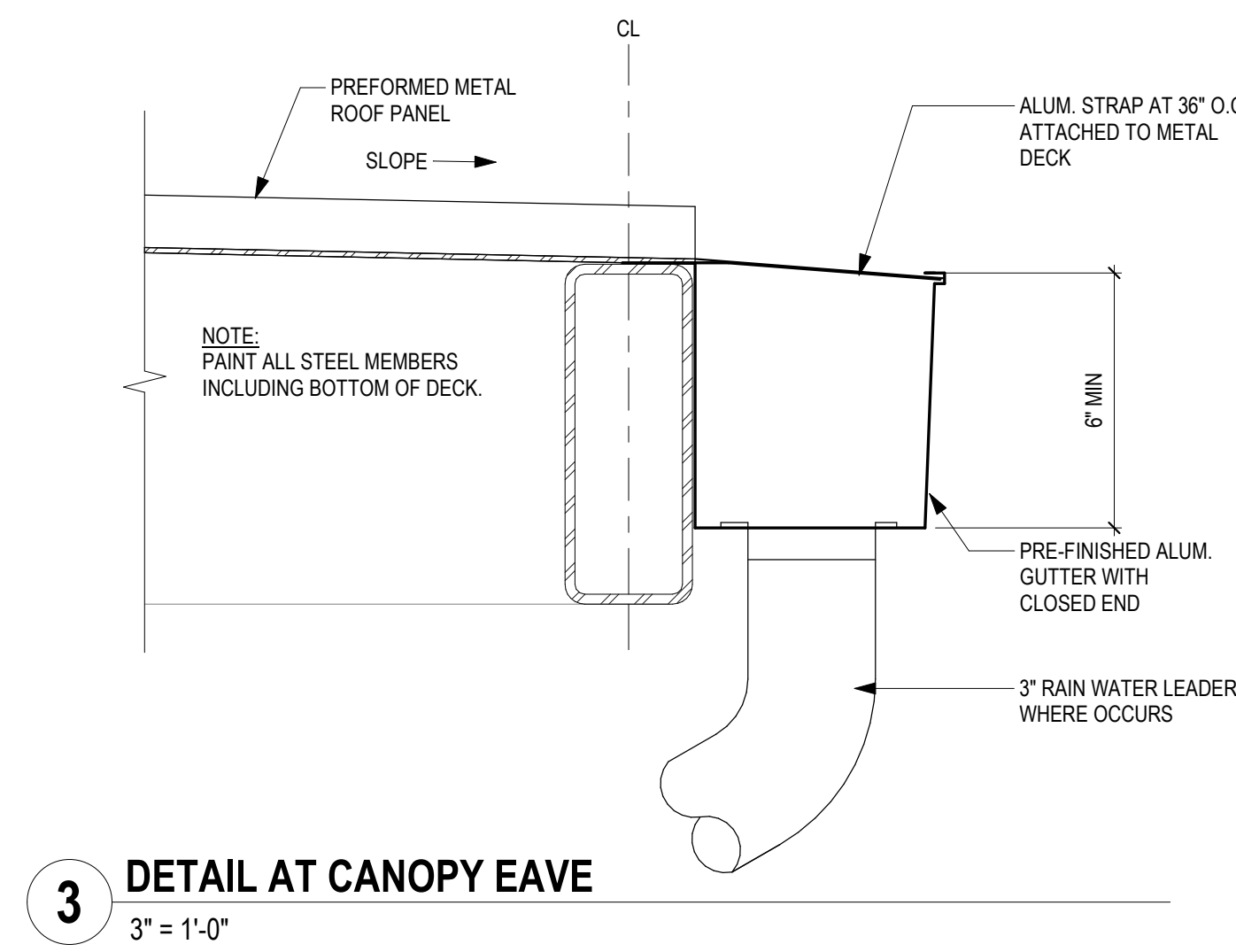
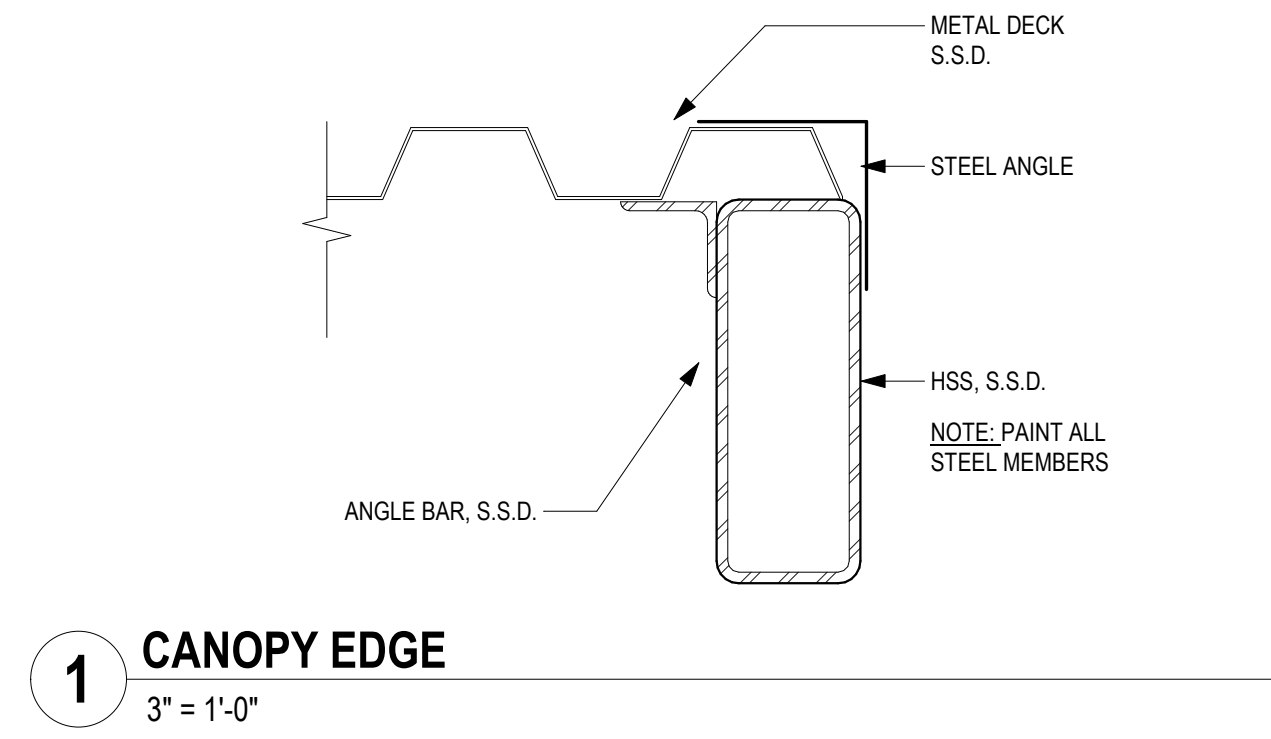
**1 ROOF CURB SECTION DETAIL**  
 N.T.S.



**3 CRICKET AT MECHANICAL CURB**  
 N.T.S.

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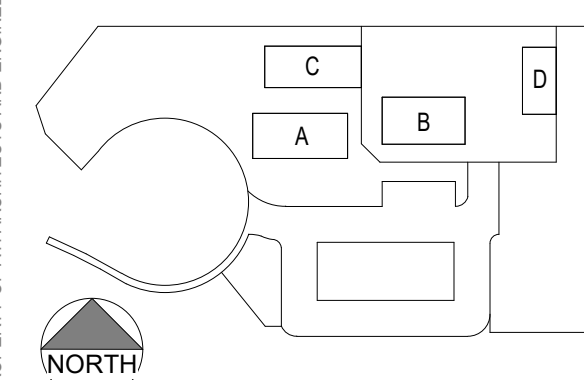
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KEY PLAN:



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**AGRICULTURE  
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FACILITY**

3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**CANOPY DETAILS**

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**COMPRESSION STRUT TABLE**

EMT COMPRESSION STRUT	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	3'-11"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	6'-4"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	16'-10"

CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5'-0"
250S137-33	6'-10"
362S137-33	8'-0"
250137-43	8'-10"
400S137-43	10'-10"

Basis Document: **DSA IR 25-2.13** Sheet No: **3.21**

rev.	09-21-15
rev.	09-10-17

DSA IR 25-2.13 - Appendix A (rev 11/09/17)

21 of 51

STRUCTURAL CONDITION OF FLOOR/ ROOF ABOVE COMPRESSION STRUT	APPLICABLE DETAIL
METAL DECK	5.20
CONCRETE OVER METAL DECK	5.21
CONCRETE SLAB, BEAM, OR JOIST	5.30
STRUCTURAL STEEL	5.40
SAWN TIMBER WITH GYPSUM BOARD	5.50
SAWN TIMBER WITHOUT GYPSUM BOARD	5.60

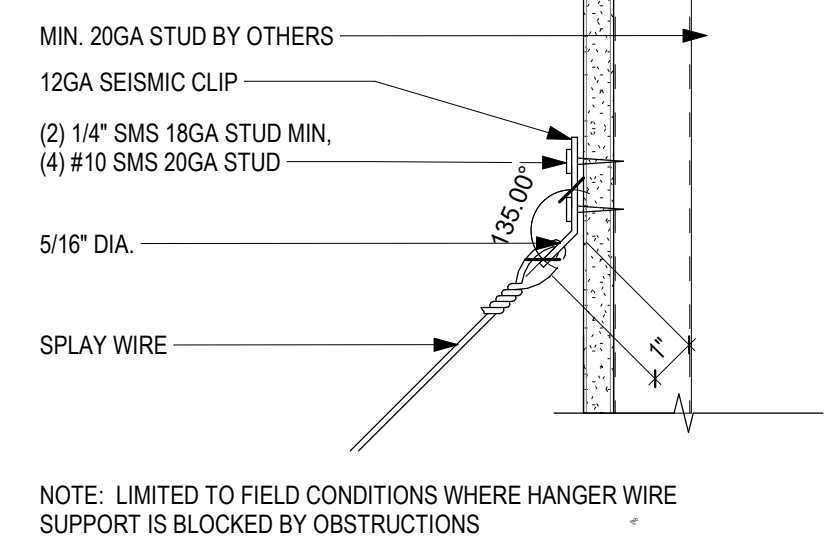
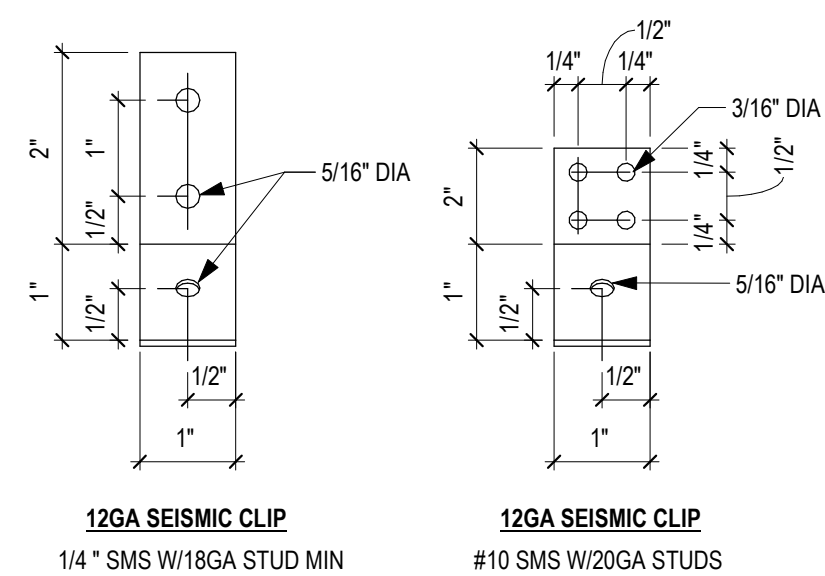
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rev.	09-21-15
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DSA IR 25-2.13 - Appendix A (rev 11/09/17)

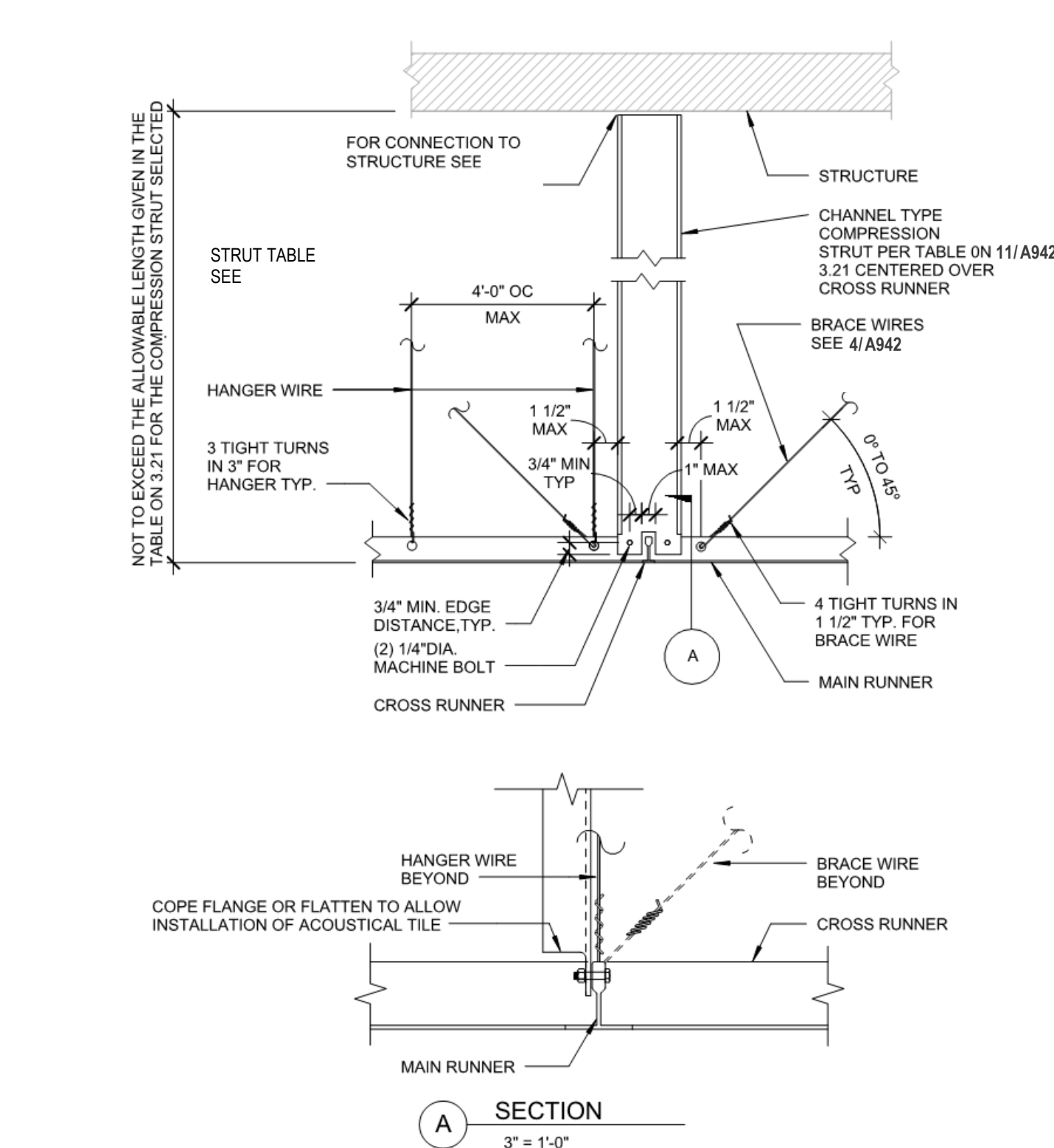
44 of 51

**11 COMPRESSION STRUT**  
N.T.S.

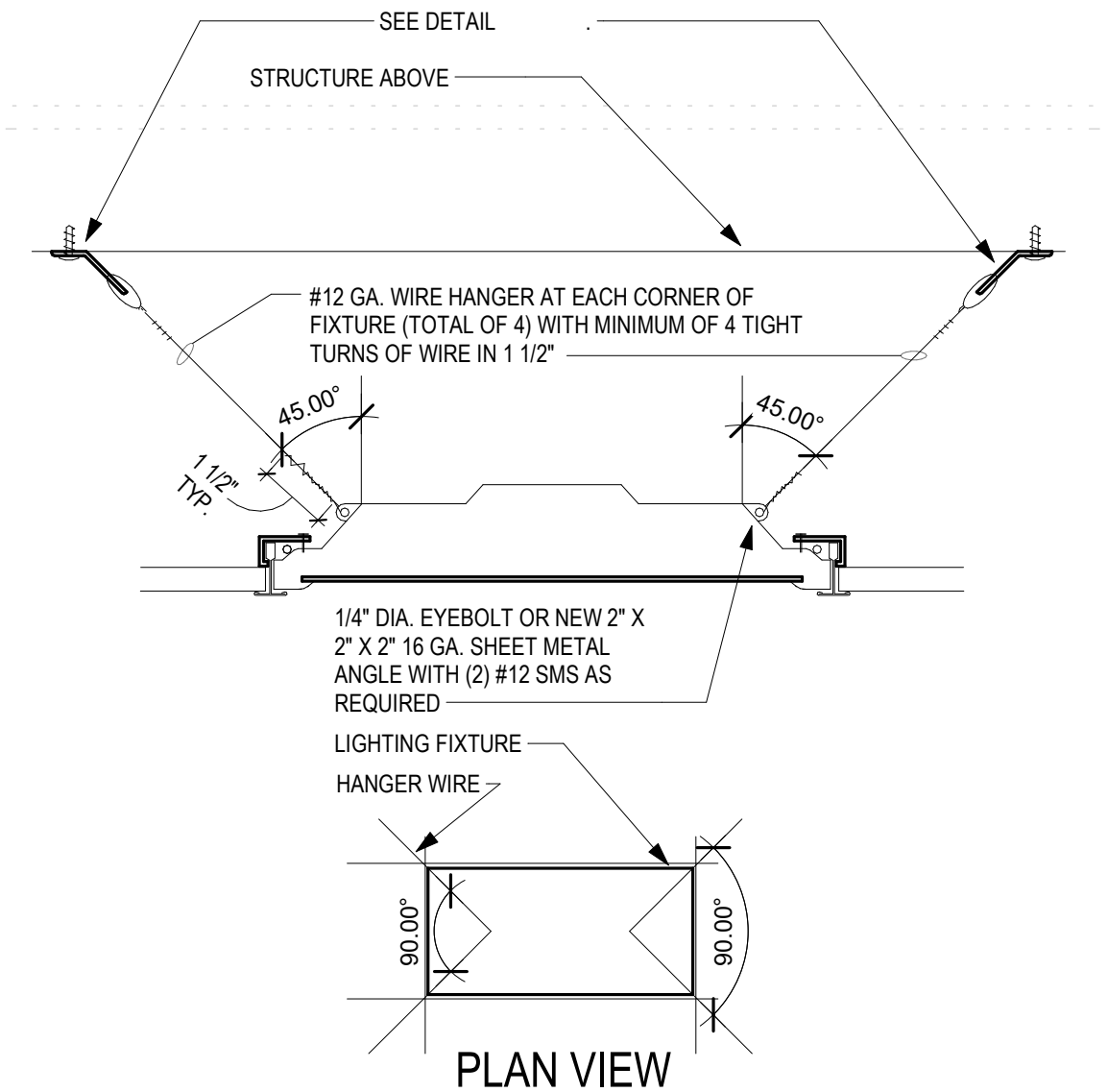


NOTE: LIMITED TO FIELD CONDITIONS WHERE HANGER WIRE SUPPORT IS BLOCKED BY OBSTRUCTIONS

**12 WALL HUNG SEISMIC CLIP**  
3" = 1'-0"

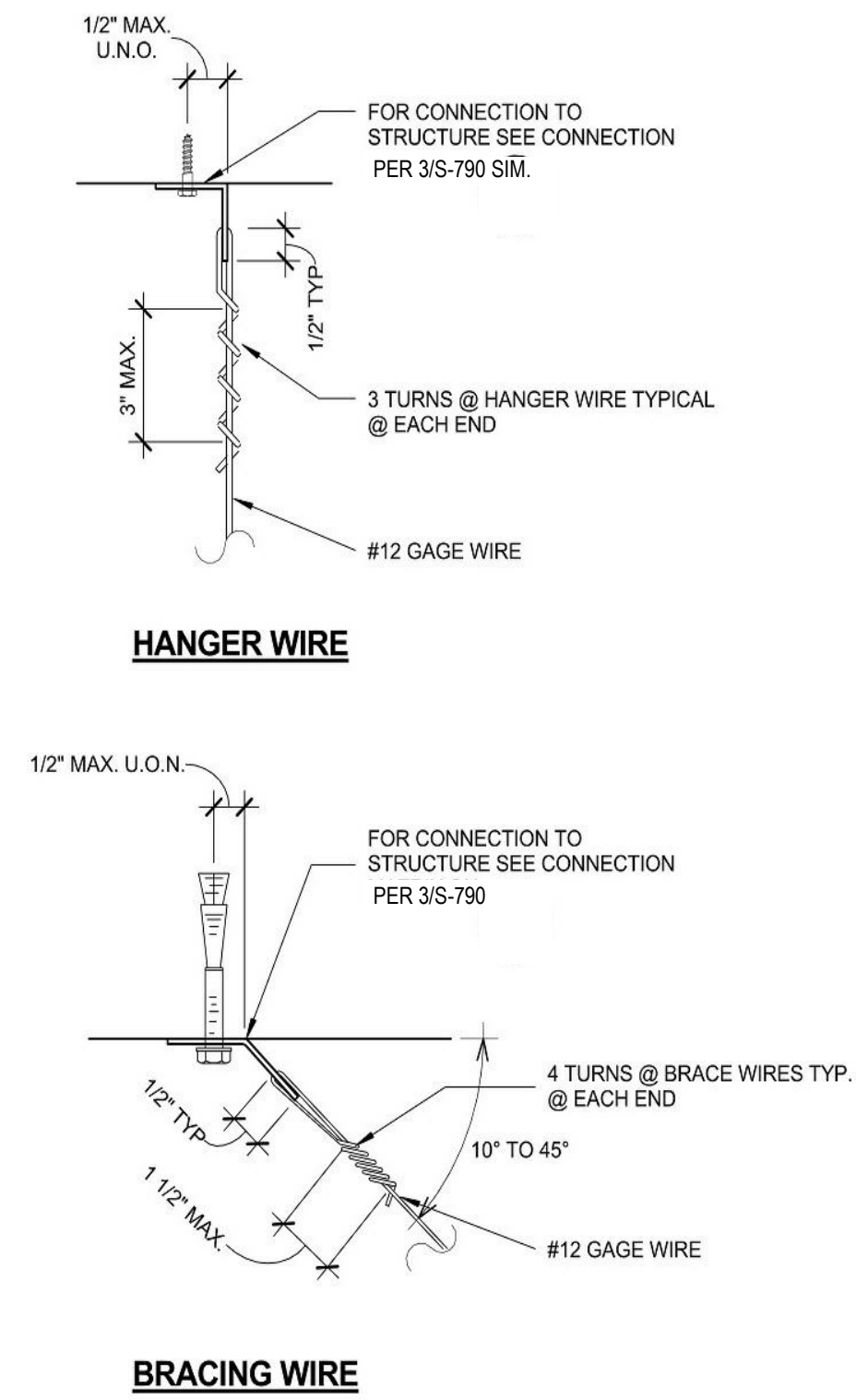


**7 DSA 310 - CHANNEL TYPE STRUT**  
N.T.S.

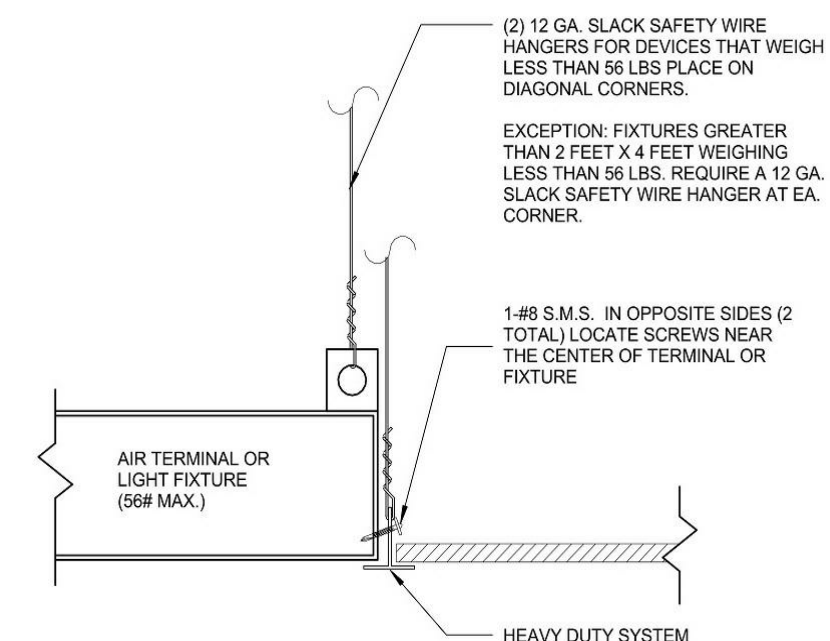


**8 LIGHT FIXTURE BRACING**  
3" = 1'-0"

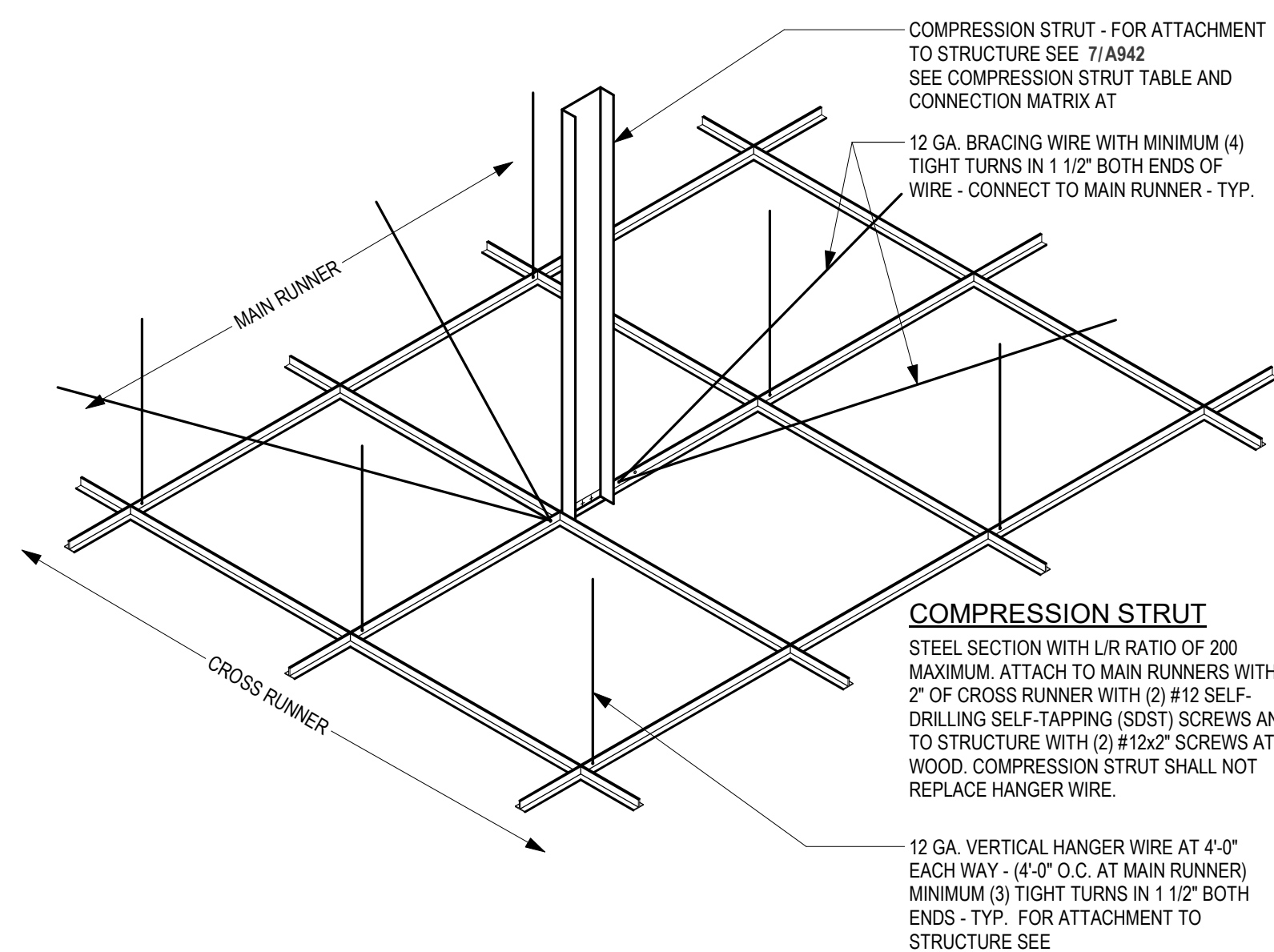
**4 DSA 4.10 - TYPICAL WIRE TURNS**  
N.T.S.



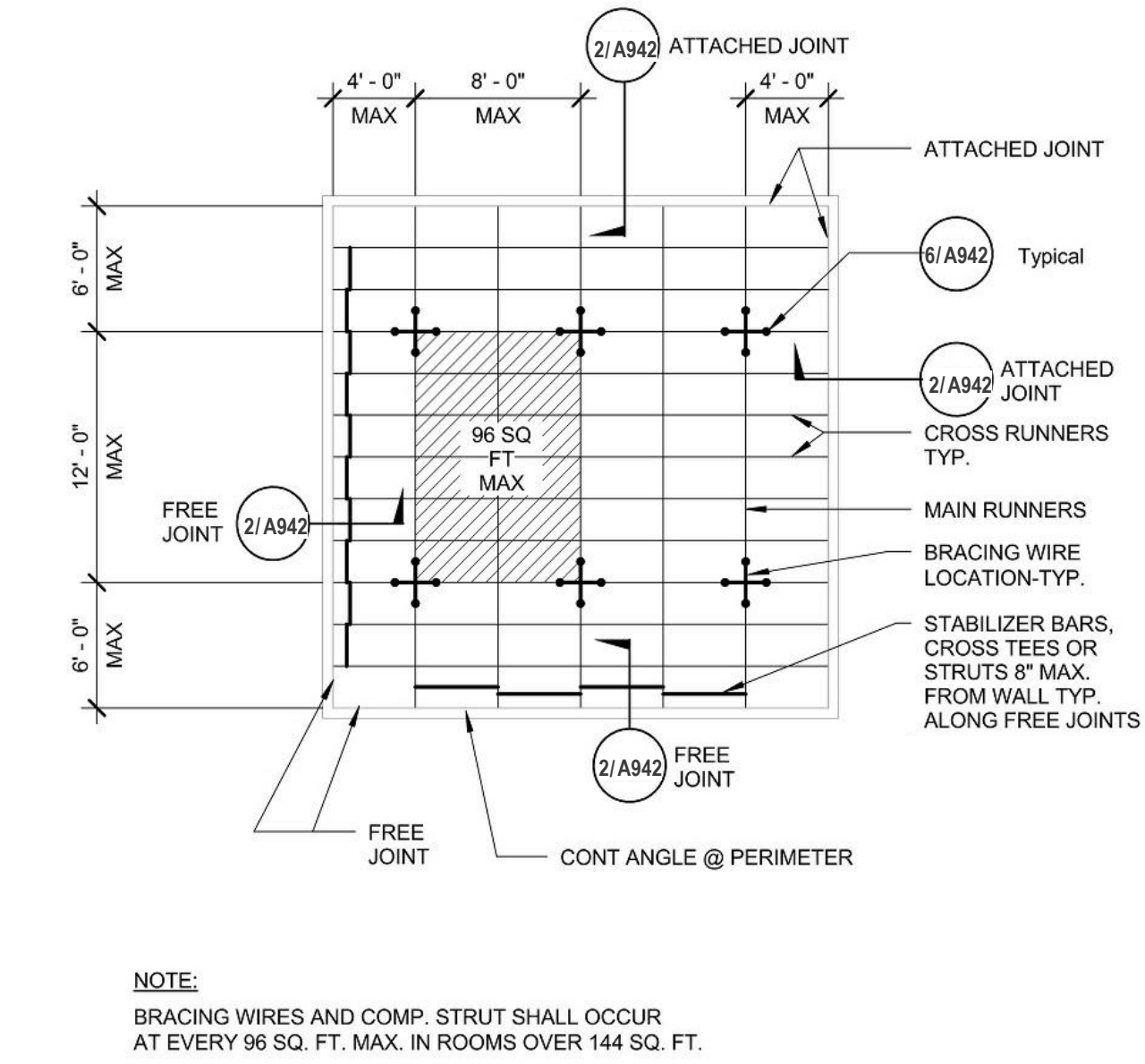
**5 DSA 2.80 - LIGHT FIXTURE SUPPORT**  
N.T.S.



**6 SUSPENDED CEILING BRACING ASSEMBLY**  
N.T.S.

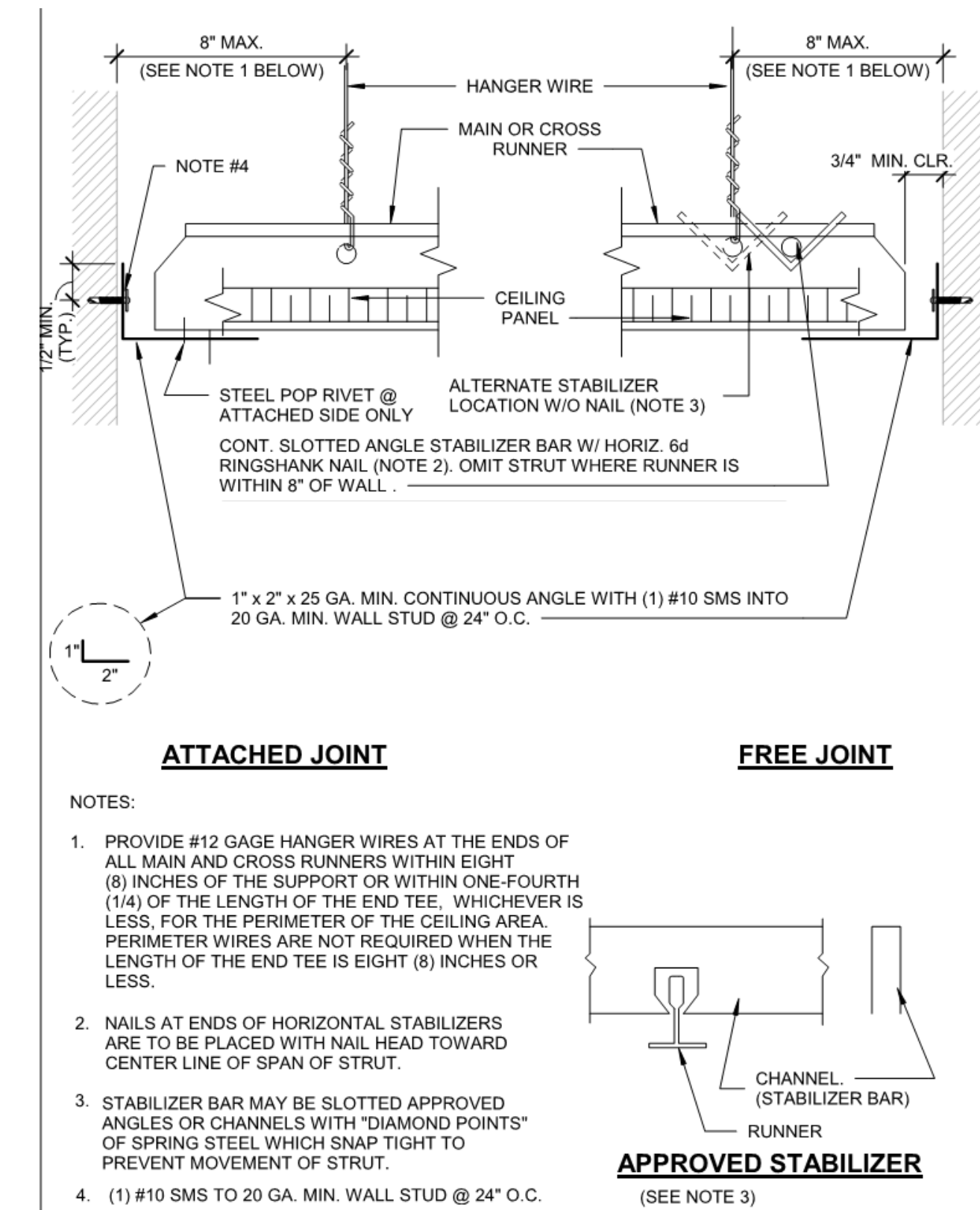


**2 DSA 2.60 - CEILING PERIMETER**  
N.T.S.



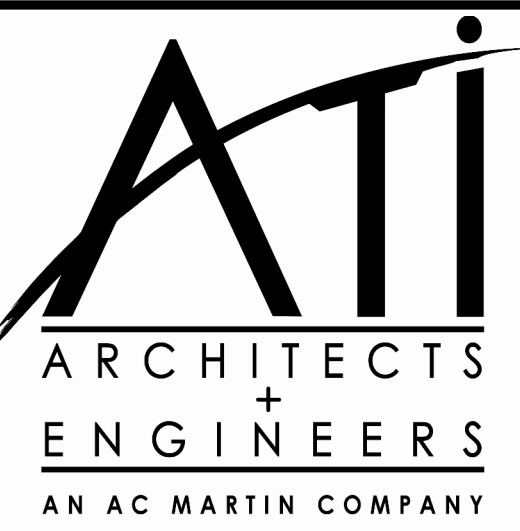
**3 CLG-8' X 12' BRACE ASSEMBLY SPACING - DSA**  
N.T.S.

**1 DSA 6.10 - CEILING WIRE SPLICES**  
N.T.S.



DSA:

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021



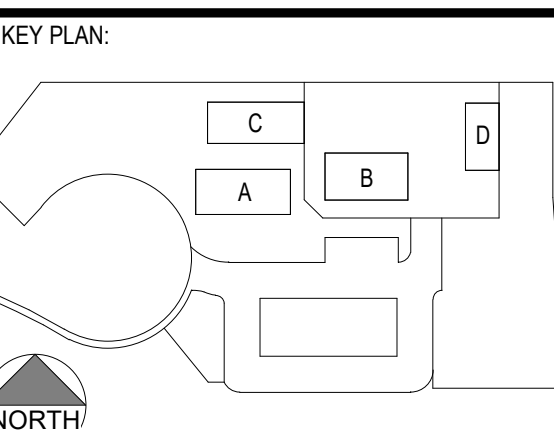
4750 Willow Road #250 Pleasanton, CA 94588 - 925 648 8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:



CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

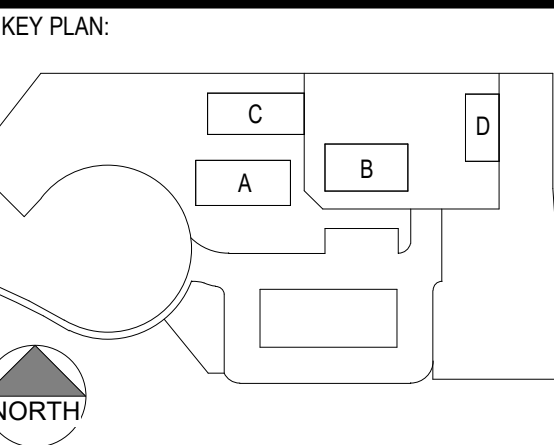
**CEILING DETAILS**

DRAWN BY: VL CHECKED BY: AW  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**A942**

CONSULTANT:

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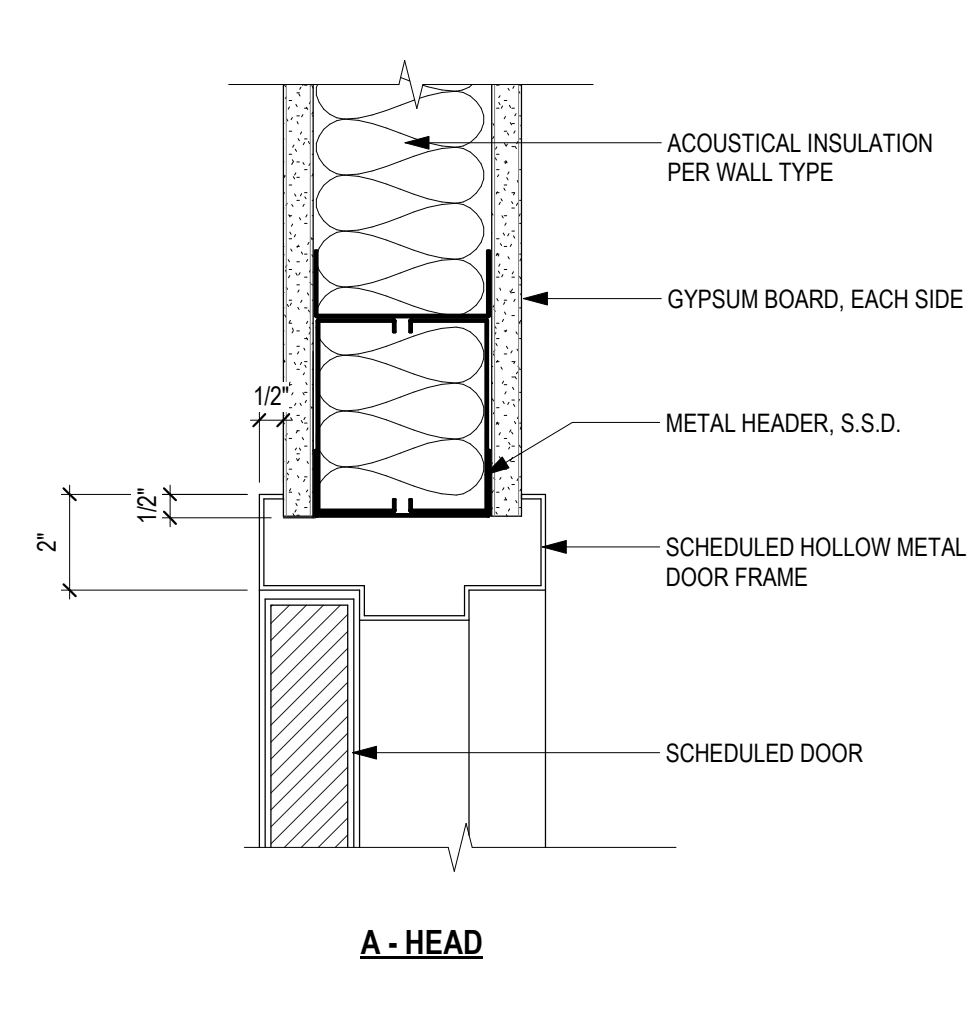
CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

OPENING DETAILS

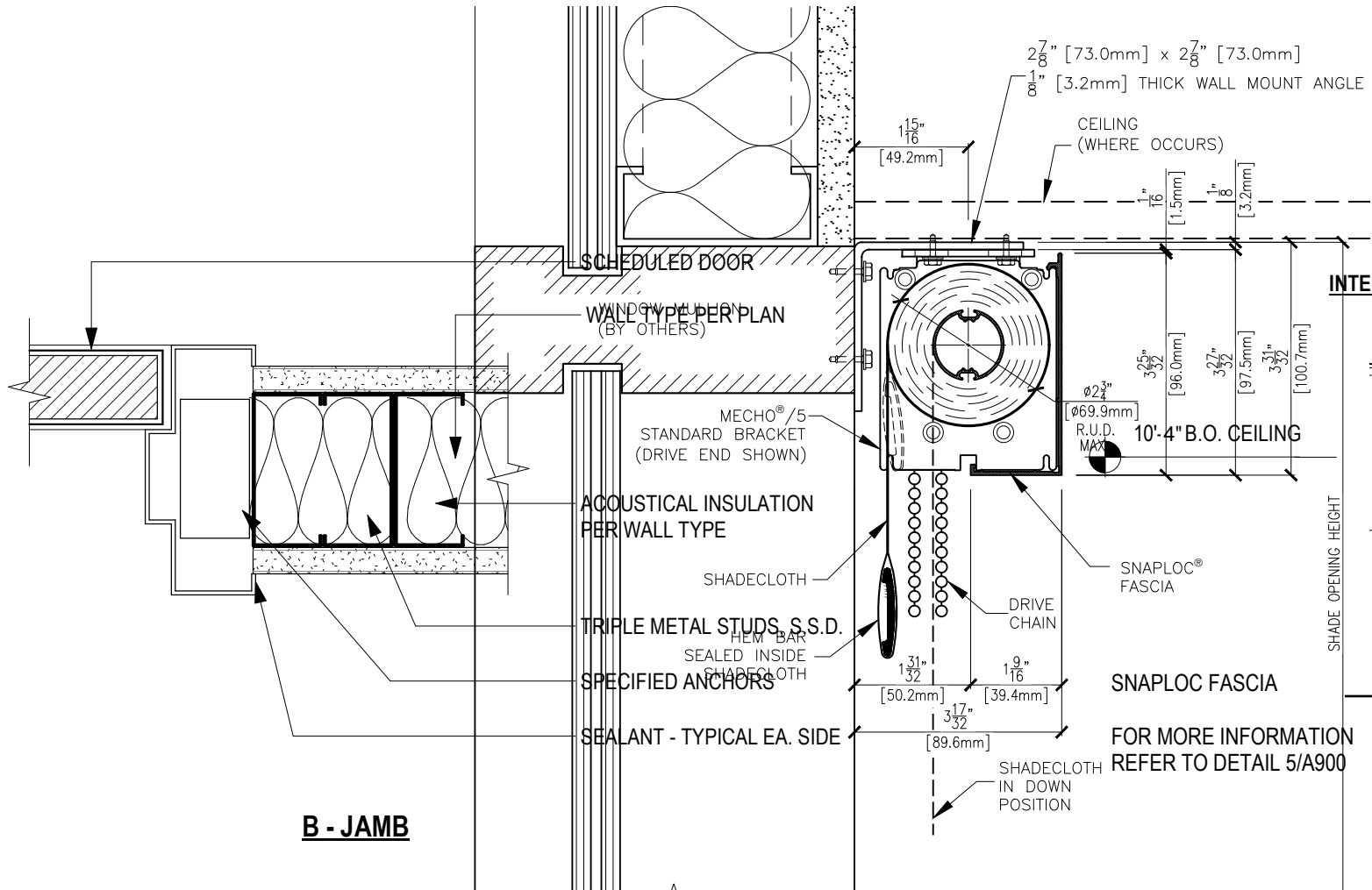
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 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**A960**

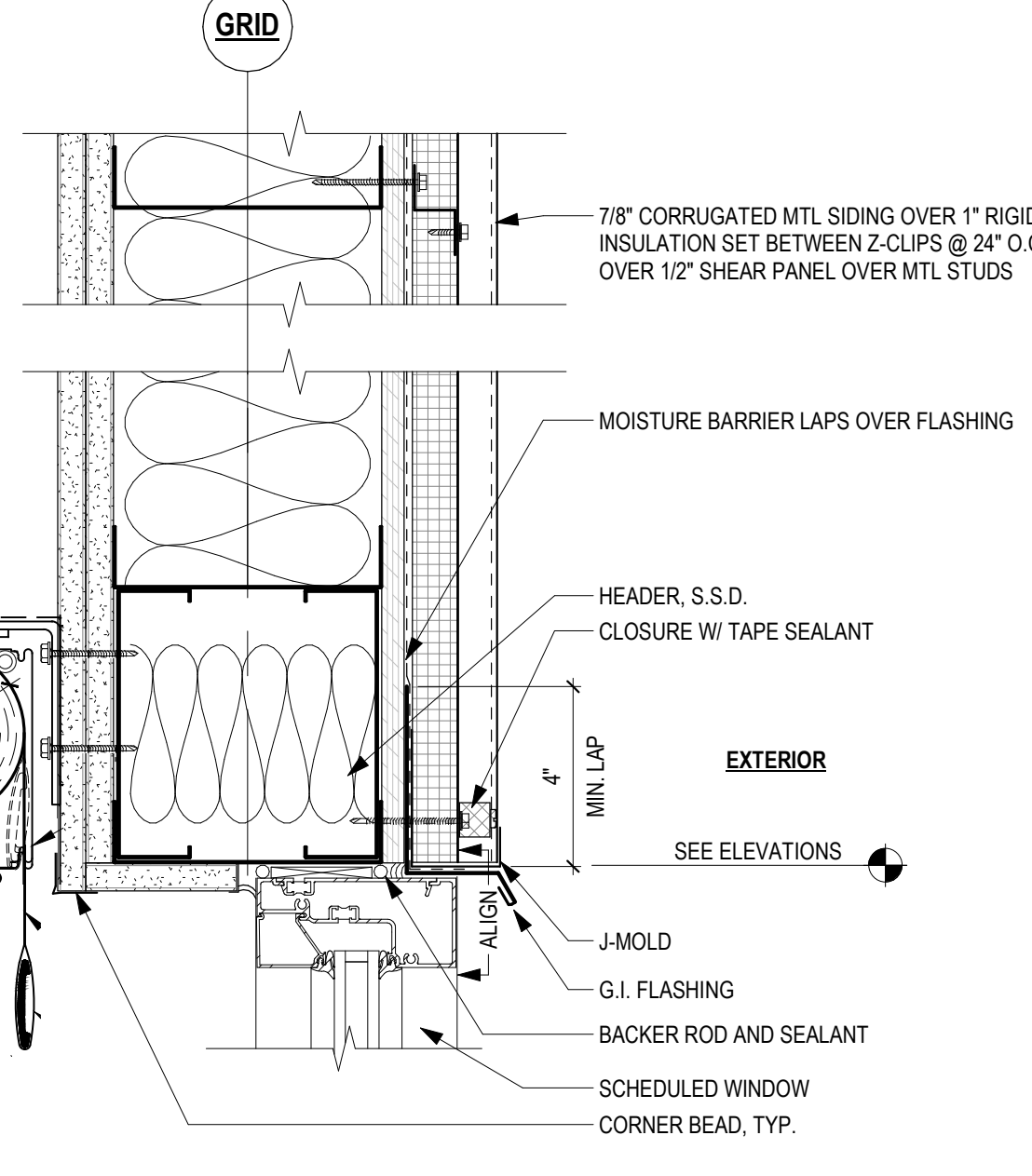
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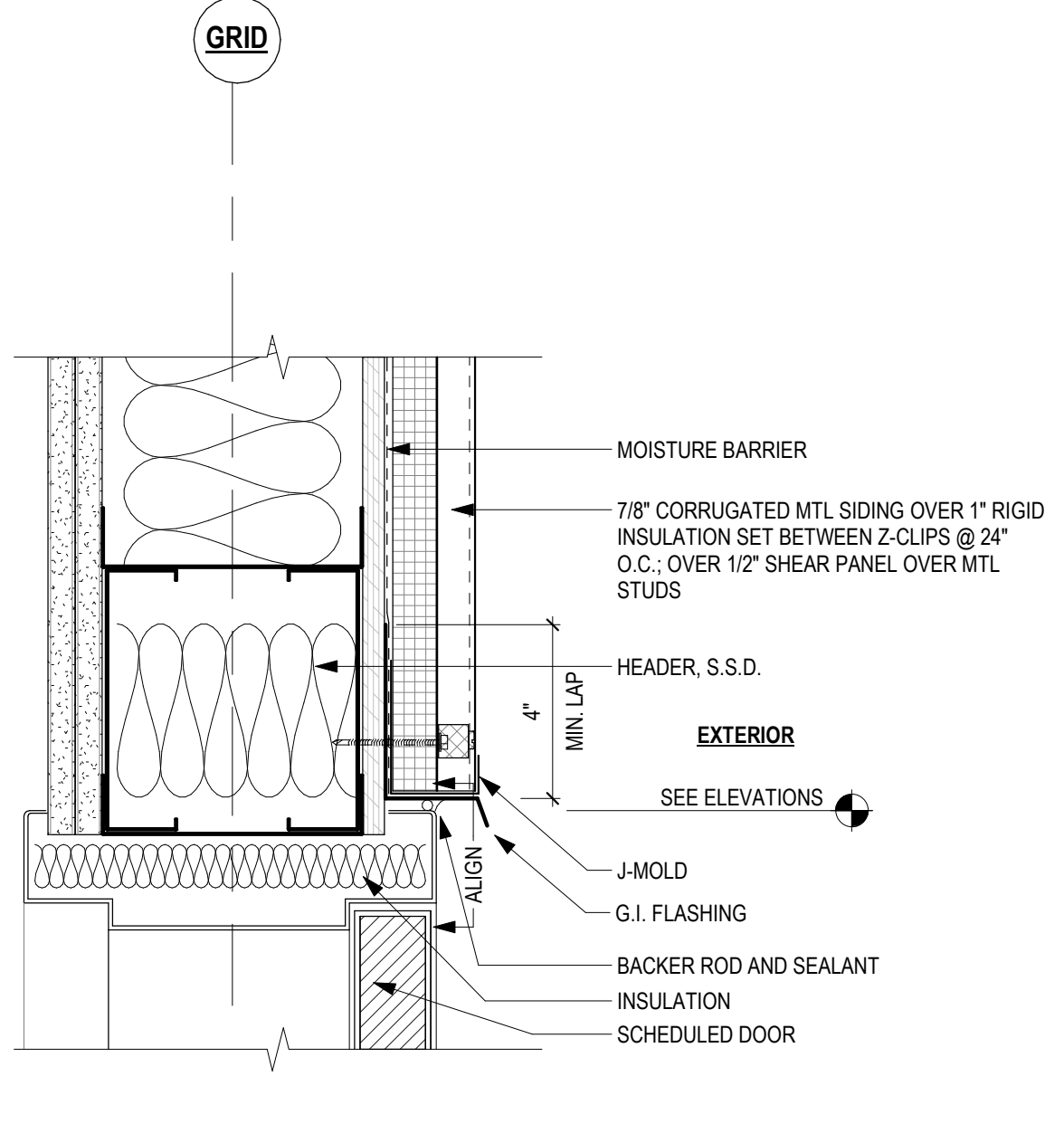
**10 INTERIOR DOOR DETAIL**  
 3" = 1'-0"



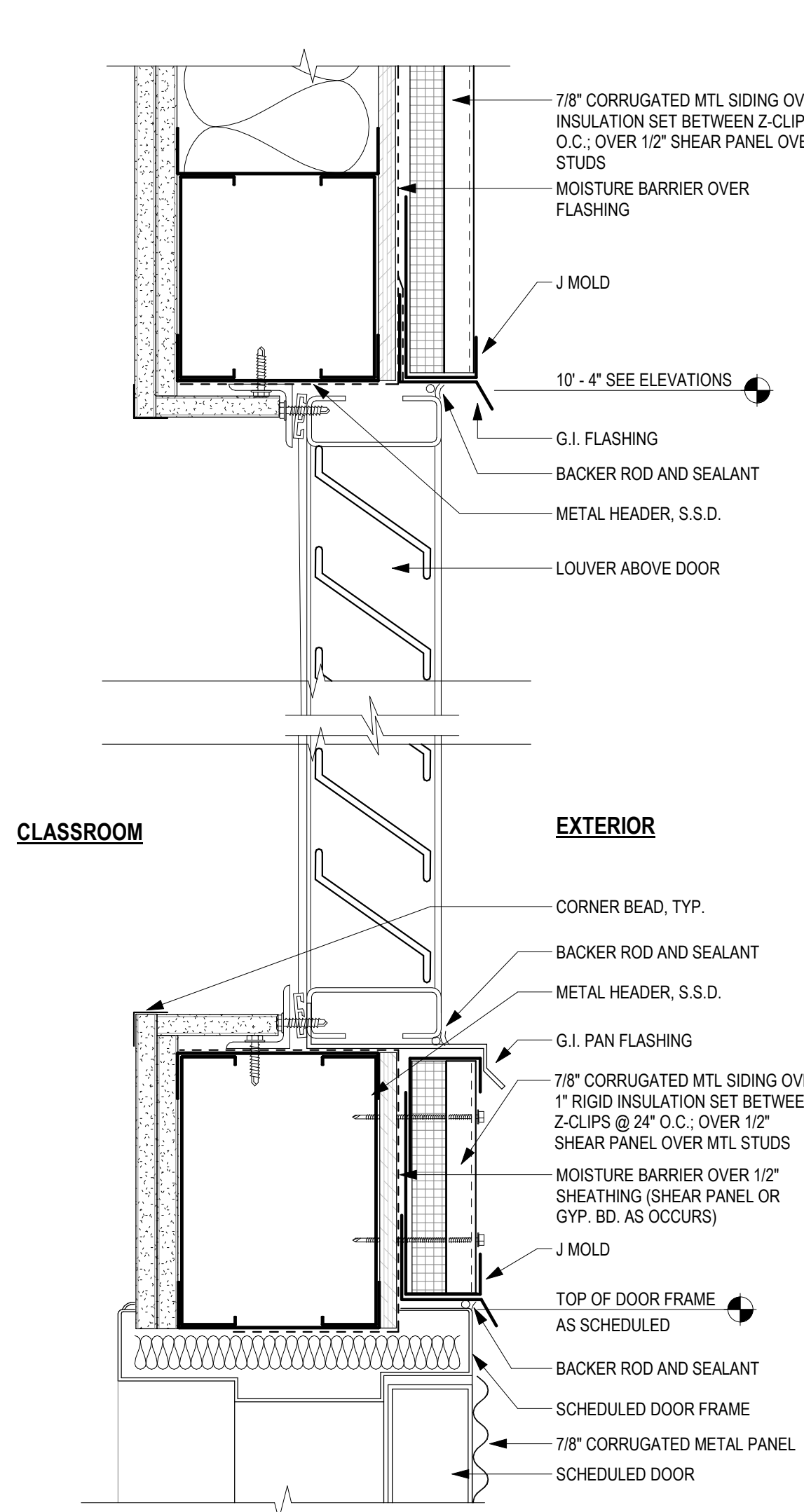
**7 SECTION AT WINDOW HEAD**  
 SCALE: 1/2 FULL SIZE



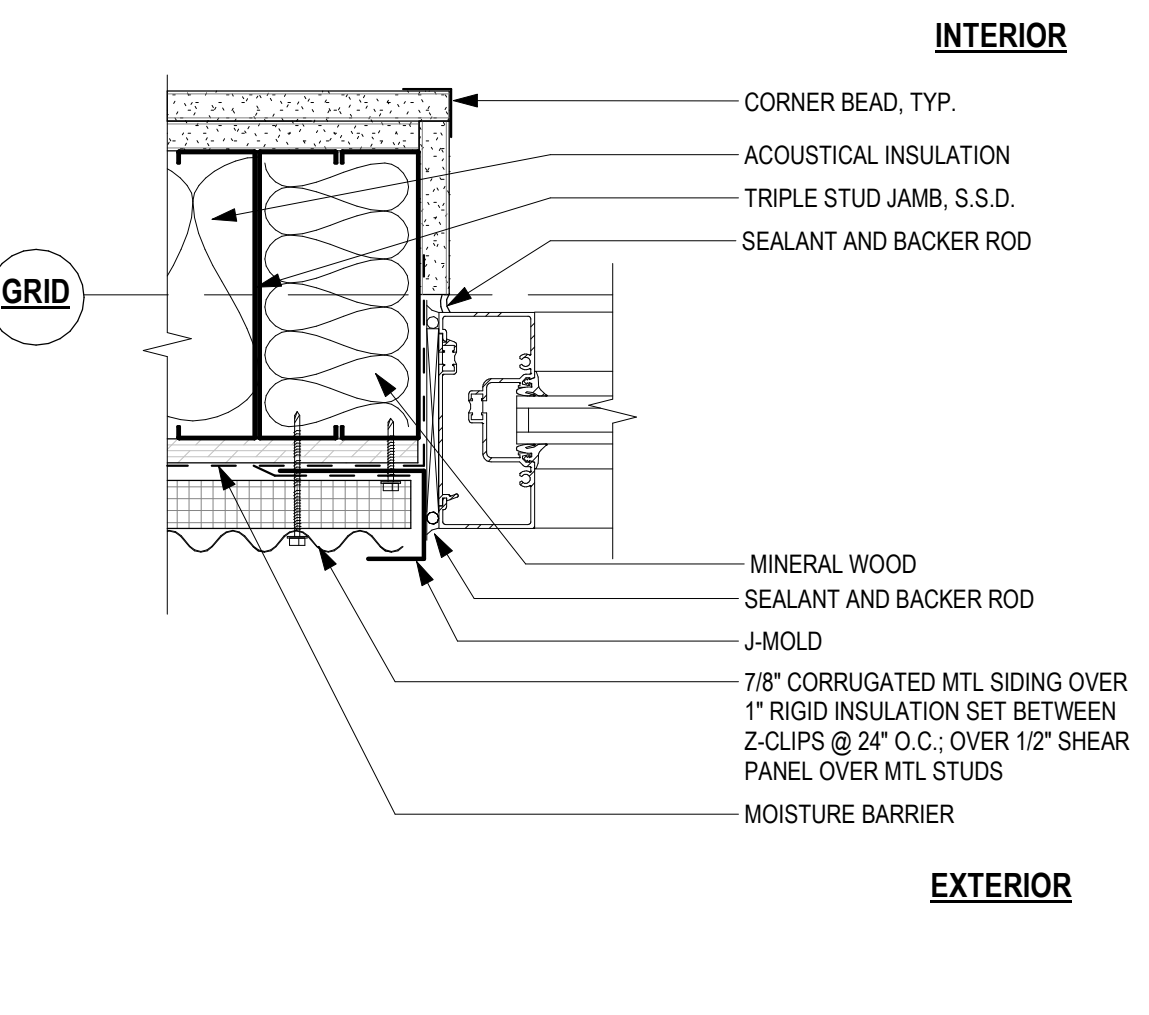
**4 STOREFRONT WINDOW - HEAD**  
 3" = 1'-0"



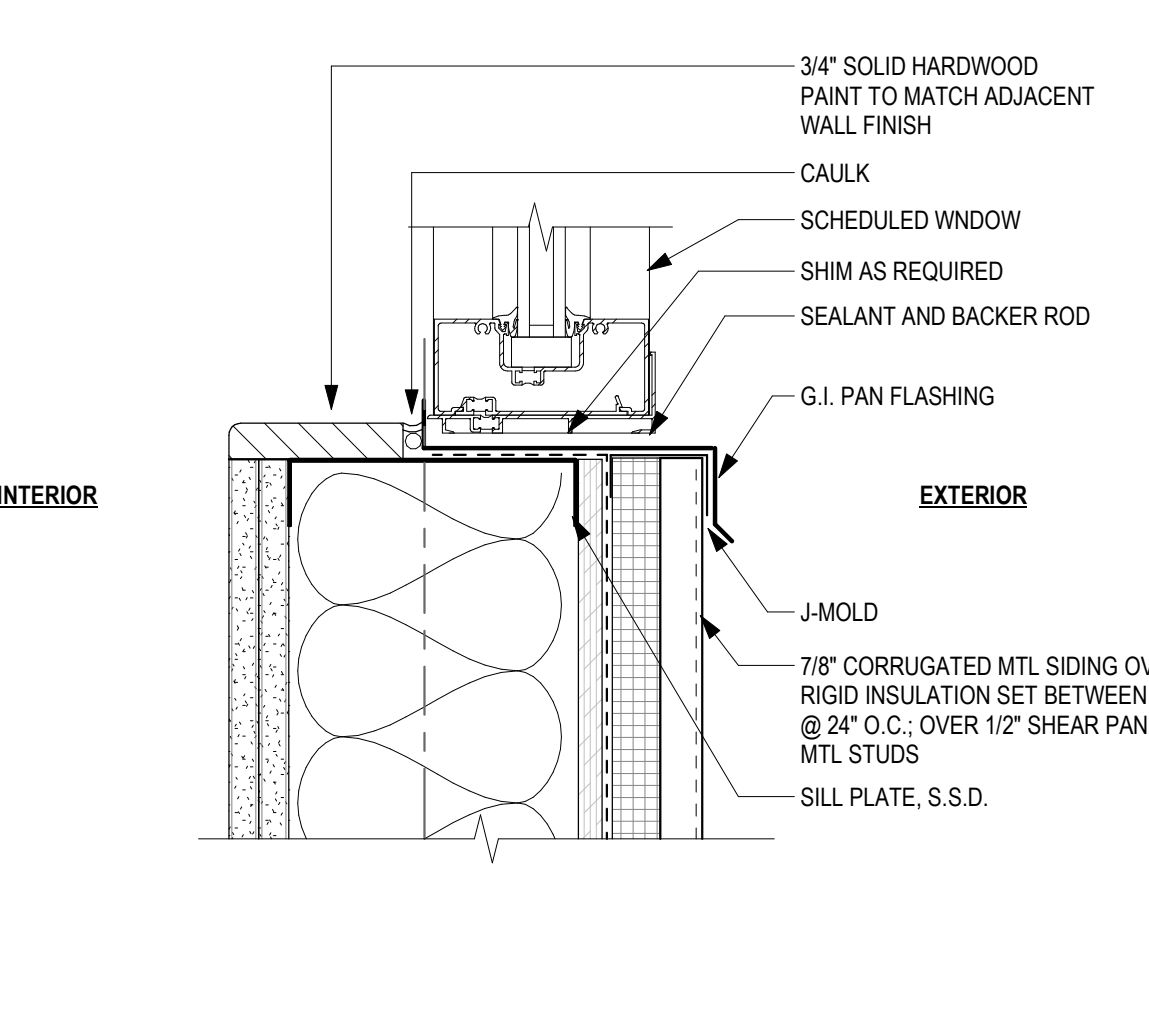
**1 EXTERIOR DOOR HEADER**  
 3" = 1'-0"



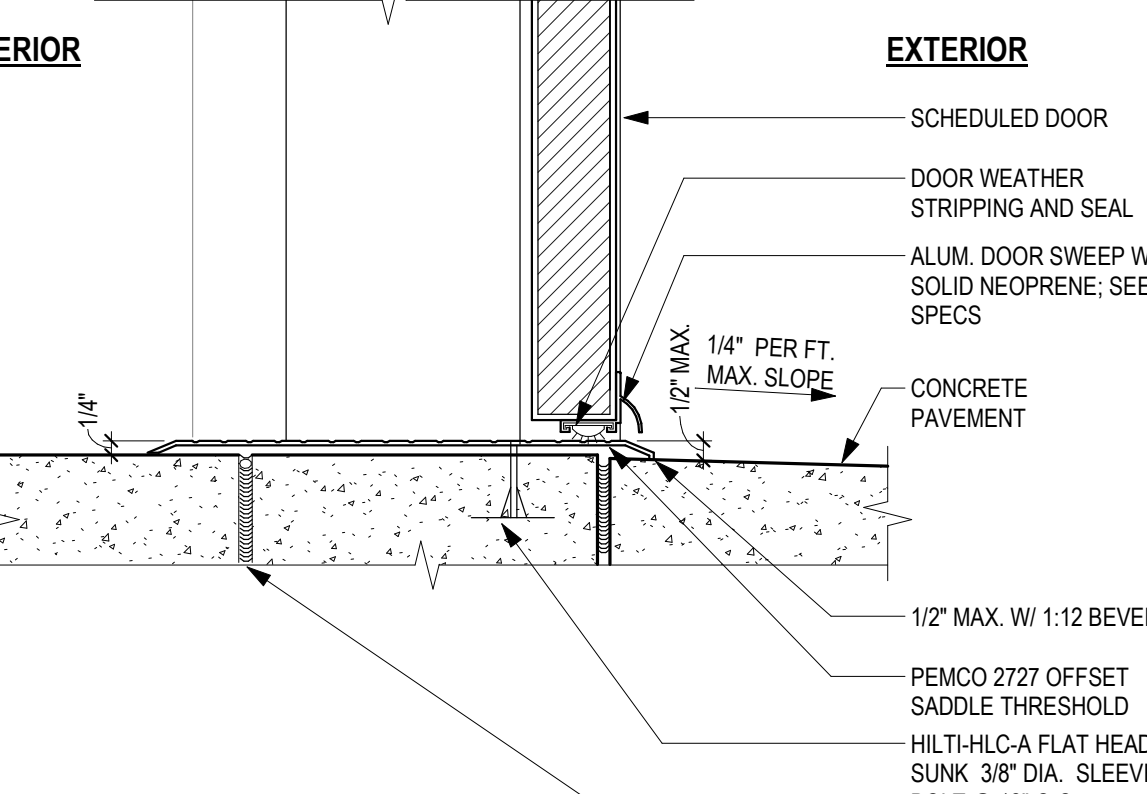
**12 LOUVER ABOVE DOOR @ MECH. ROOM**  
 3" = 1'-0"



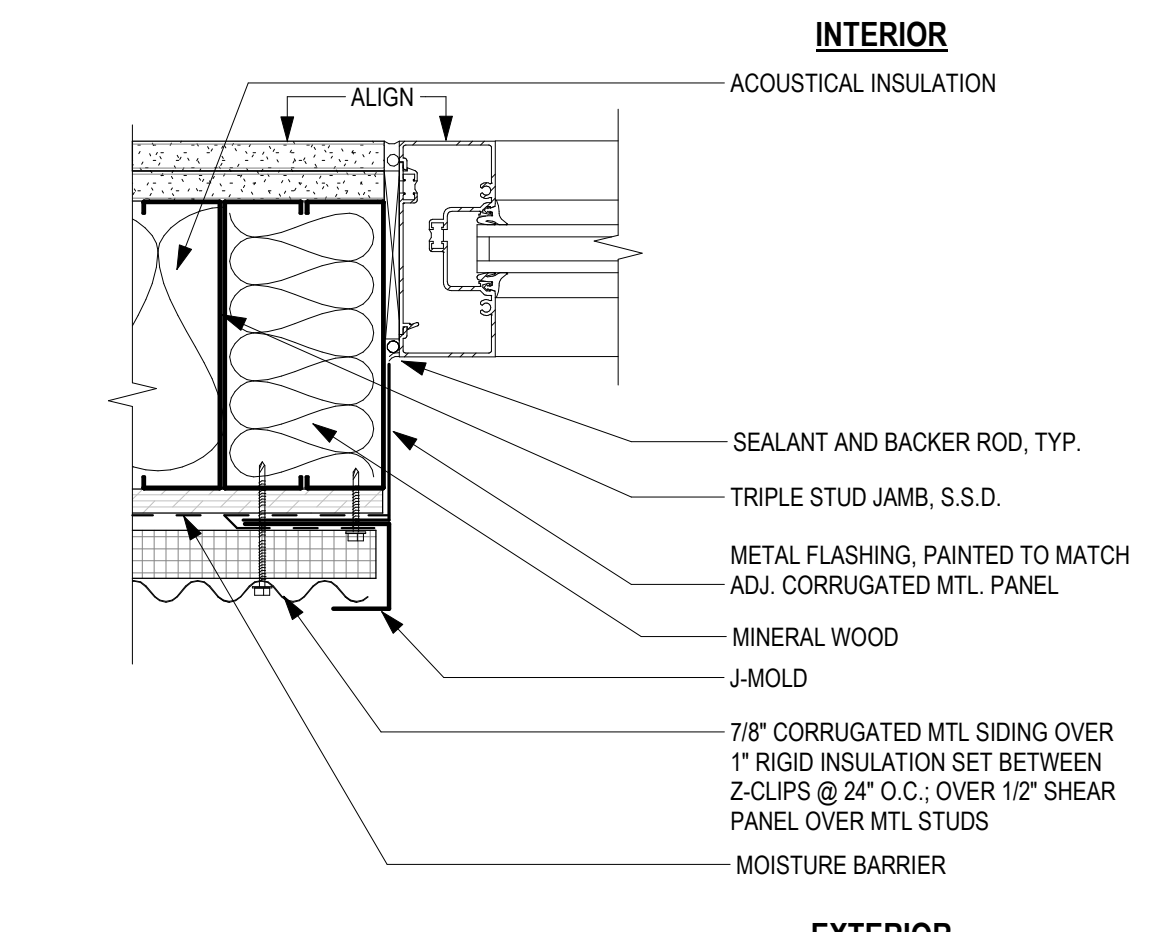
**8 STOREFRONT WINDOW - JAMB**  
 3" = 1'-0"



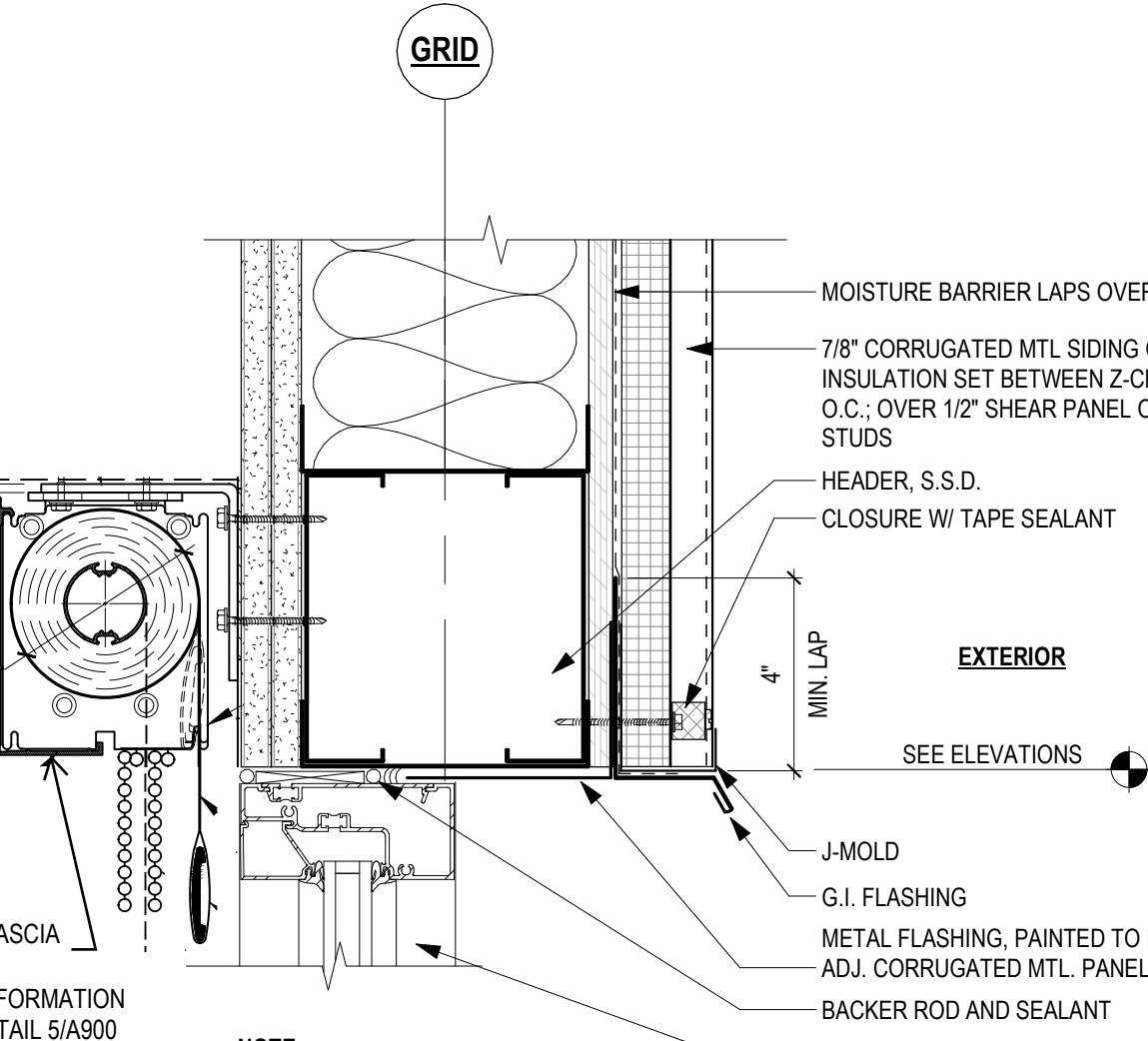
**5 STOREFRONT WINDOW - SILL**  
 3" = 1'-0"



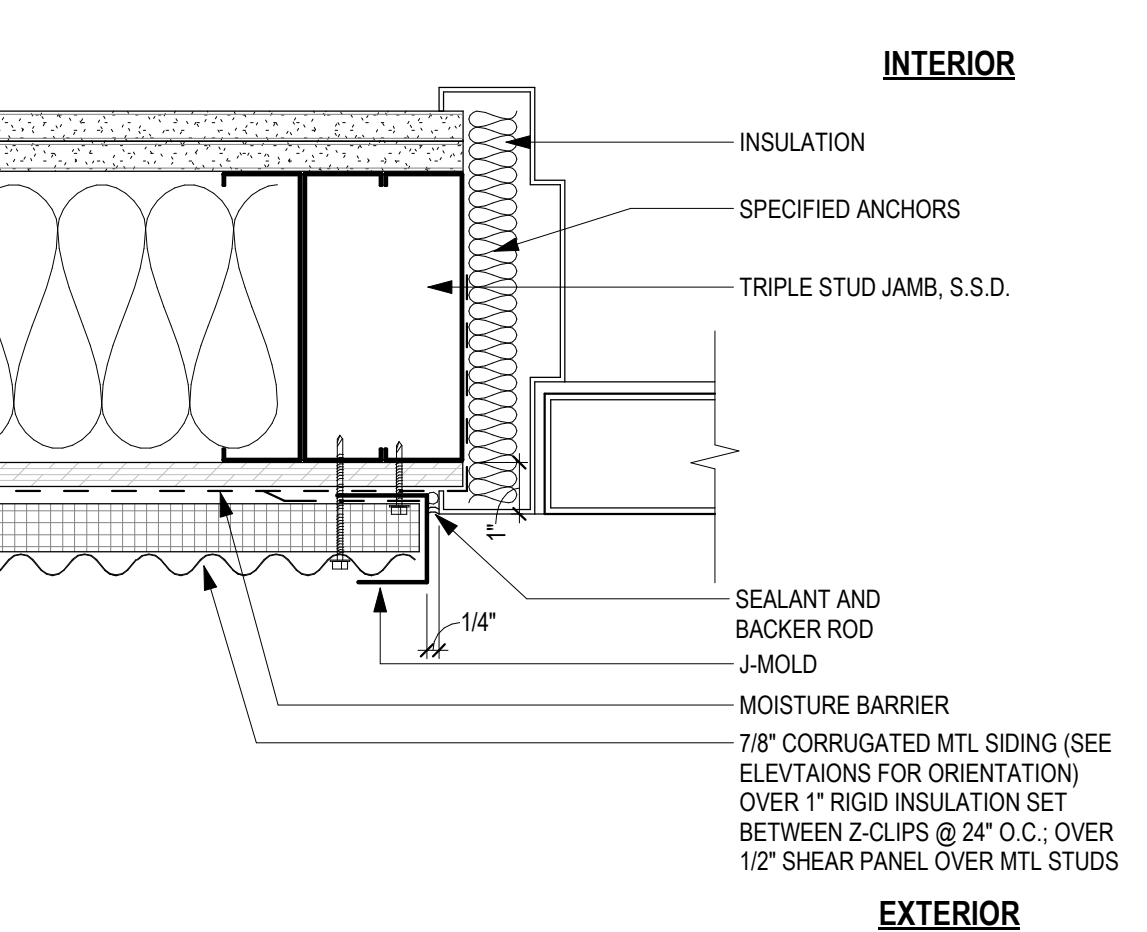
**2 EXTERIOR DOOR TRESHOLD**  
 3" = 1'-0"



**9 STOREFRONT WINDOW - JAMB AT OFFICE**  
 3" = 1'-0"



**7 STOREFRONT WINDOW - HEAD AT OFFICE**  
 3" = 1'-0"

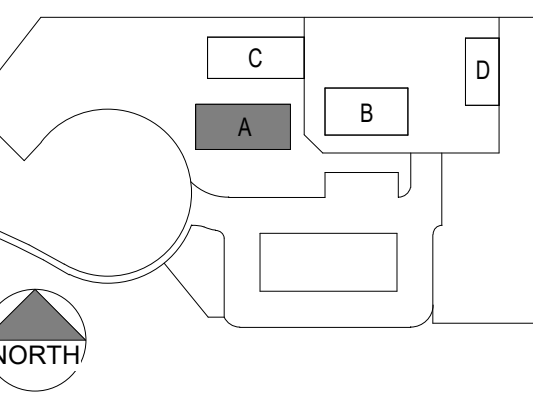


**3 TYPICAL EXTERIOR DOOR JAMB**  
 3" = 1'-0"

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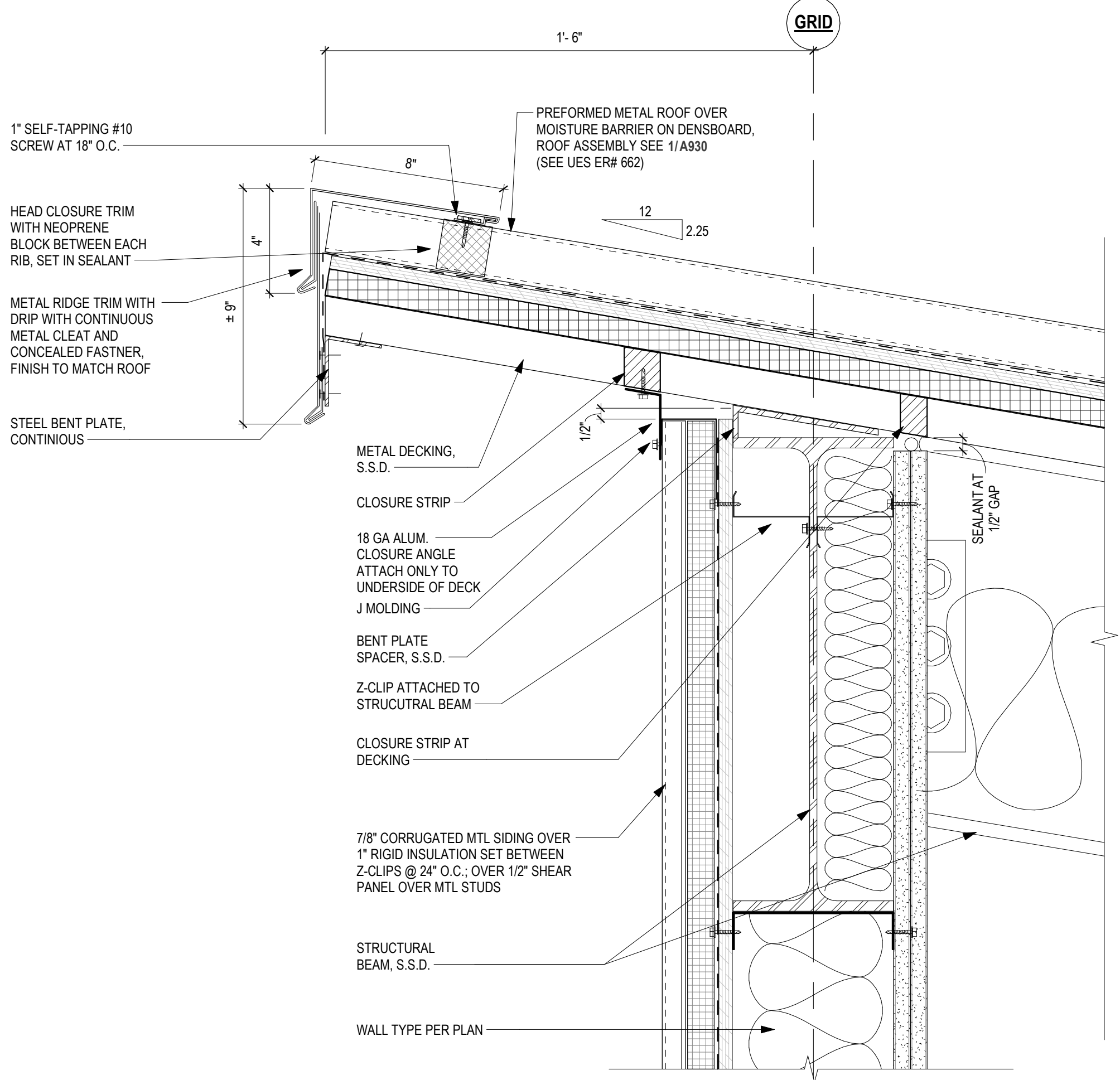
CLPCCD - LAS POSITAS COLLEGE

**AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY**

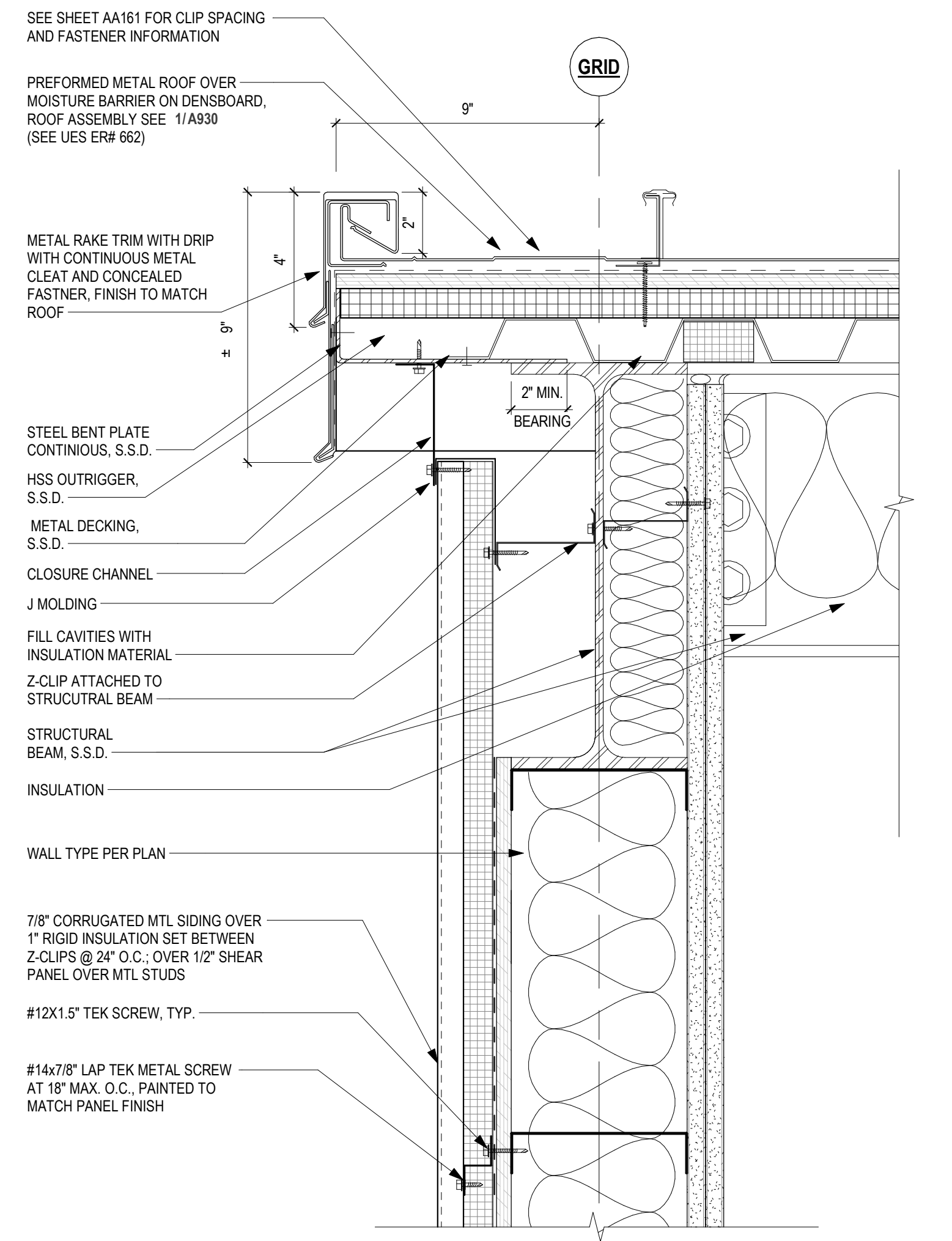
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**SECTION DETAILS**

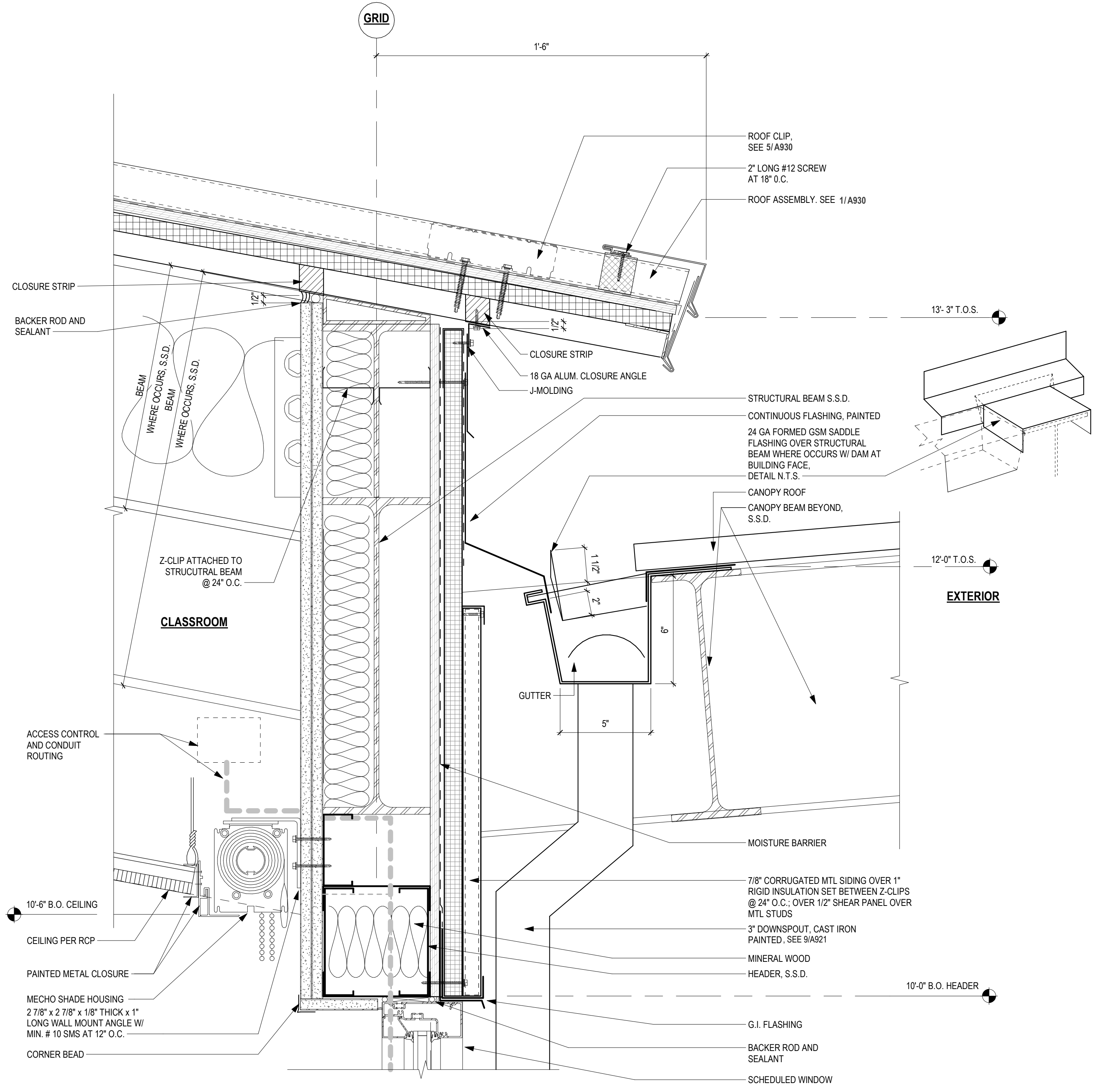
DRAWN BY: Author CHECKED BY: Checker  
DATE: 01/12/2021 PROJECT NO: C9508  
SHEET NO:



**11** TYPICAL EAVE AT HIGH END  
3" = 1'-0"

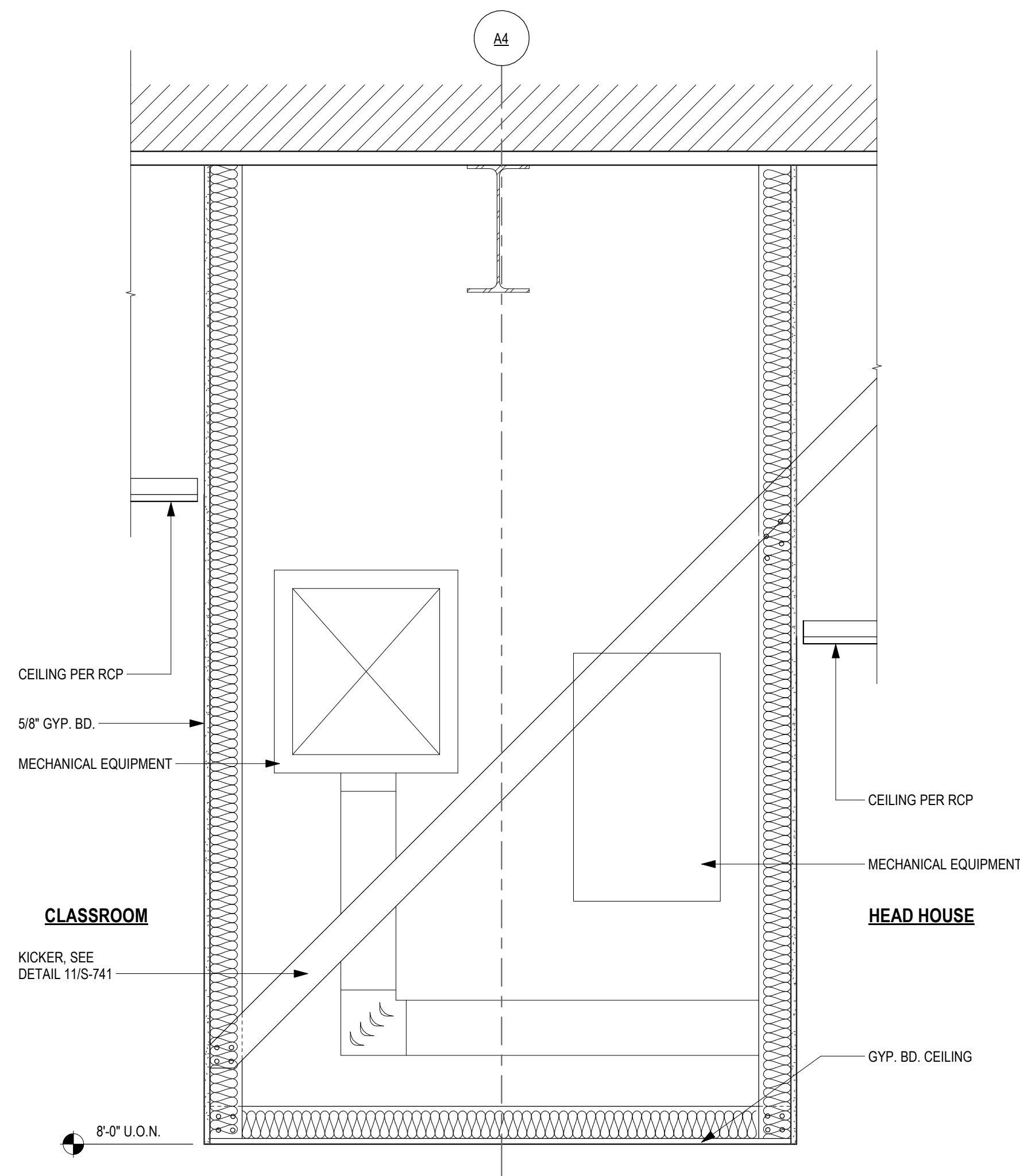


**12** STANDING SEAM RAKE  
3" = 1'-0"

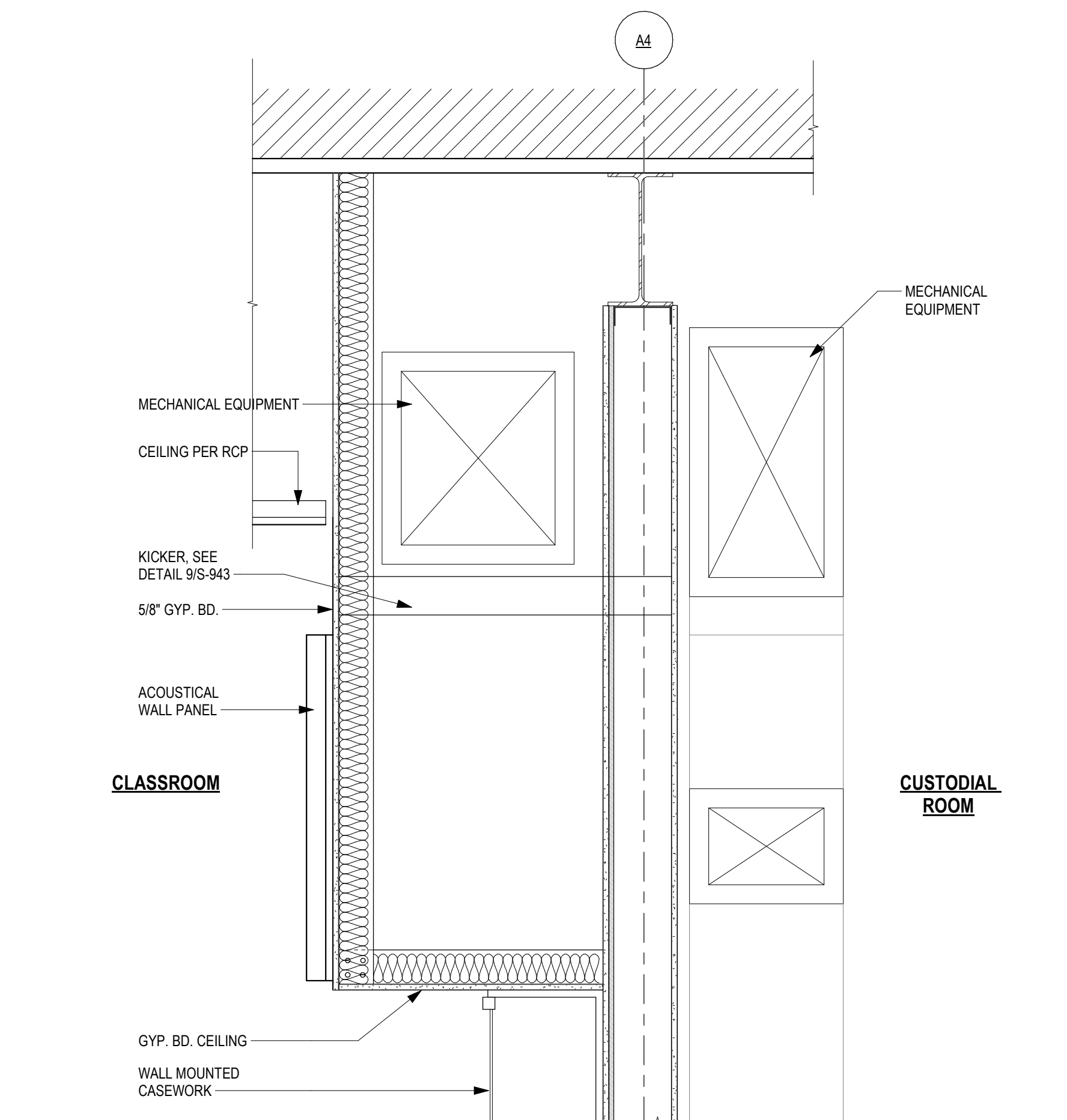


**5** LOW EAVE AT CANOPY GUTTER  
3" = 1'-0"

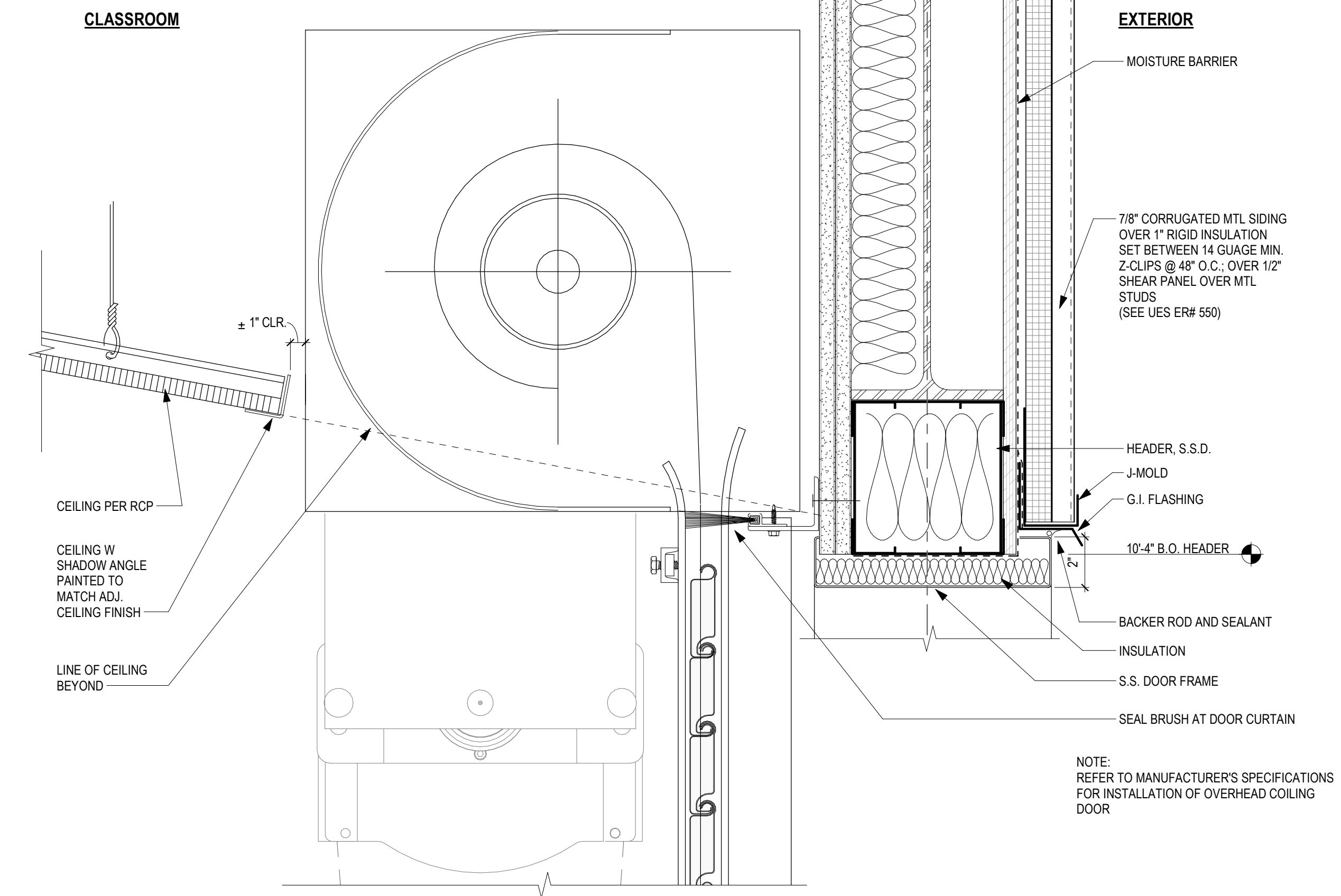
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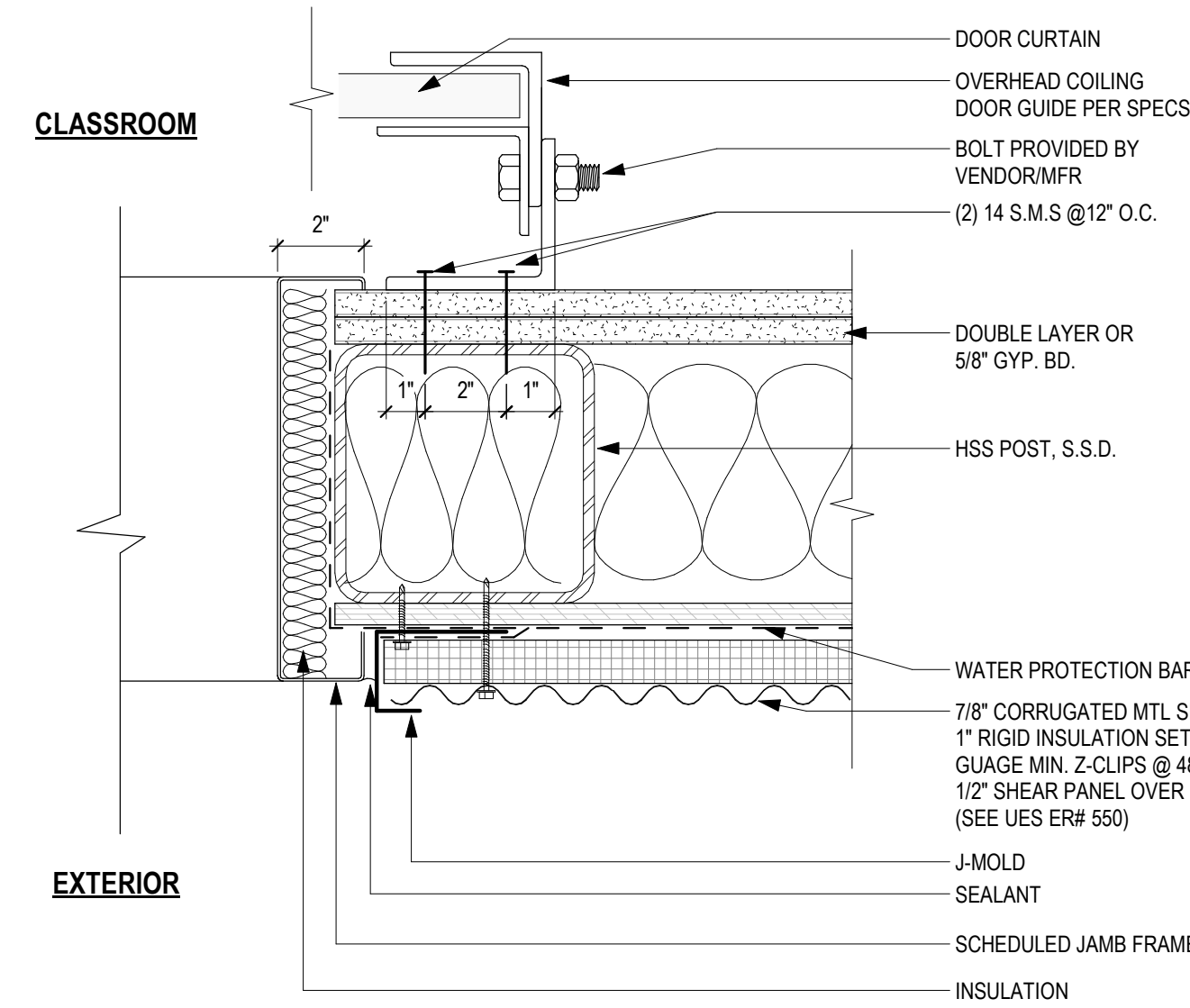
**11 MECHANICAL SOFFIT - HALLWAY** REFER TO 11/S-741 FOR SOFFIT FRAMING AND CONNECTION INFORMATION  
1" = 1'-0"



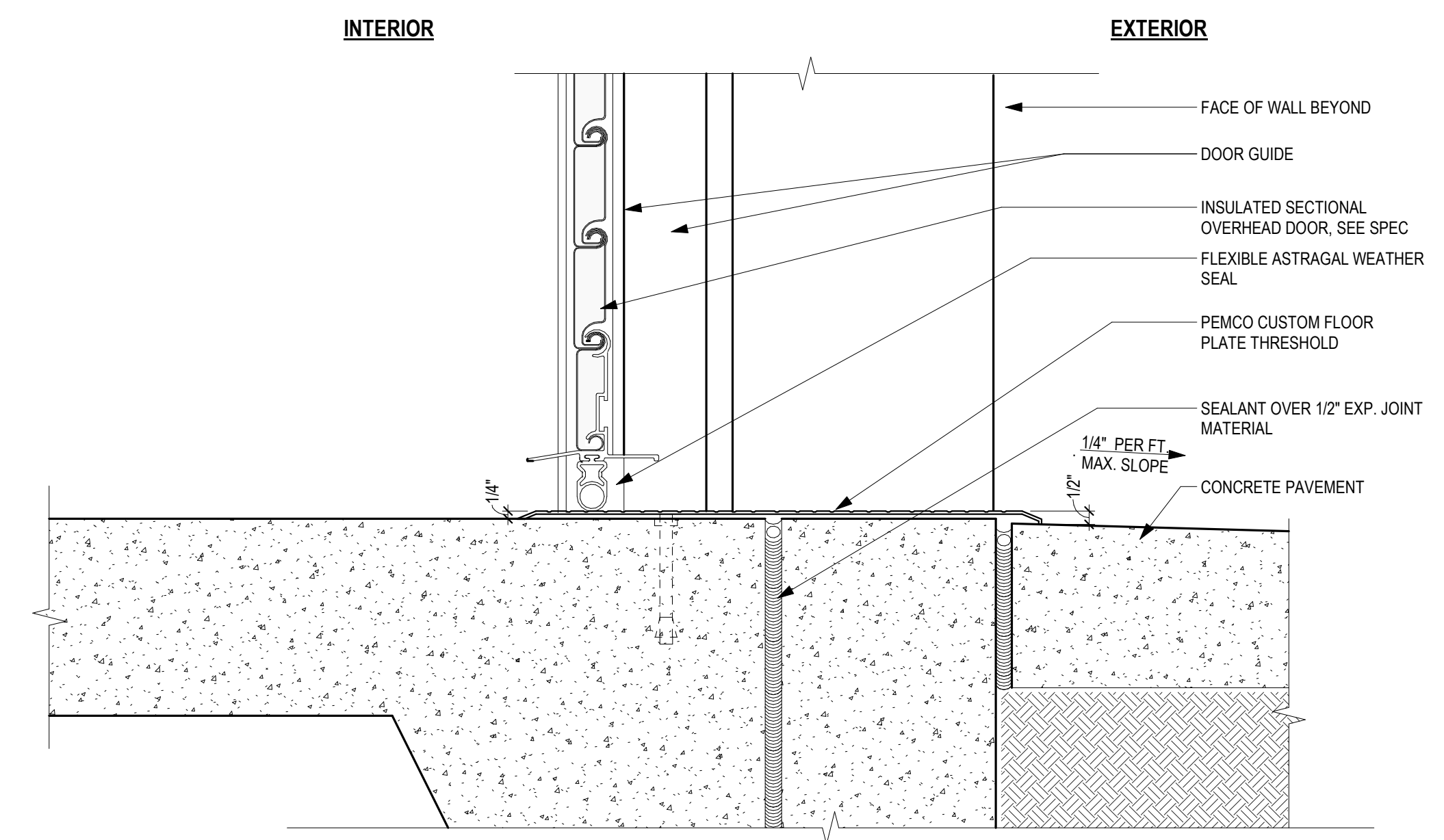
**12 MECHANICAL SOFFIT - CLASSROOM** REFER TO 11/S-741 FOR SOFFIT FRAMING AND CONNECTION INFORMATION  
1" = 1'-0"



**2 OVERHEAD COILING DOOR HEAD DETAIL**  
3" = 1'-0"



**3 OVERHEAD COILING DOOR JAMB DETAIL**  
3" = 1'-0"



**3 OVERHEAD COILING DOOR SILL DETAIL**  
3" = 1'-0"

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DATE: 01/19/2021

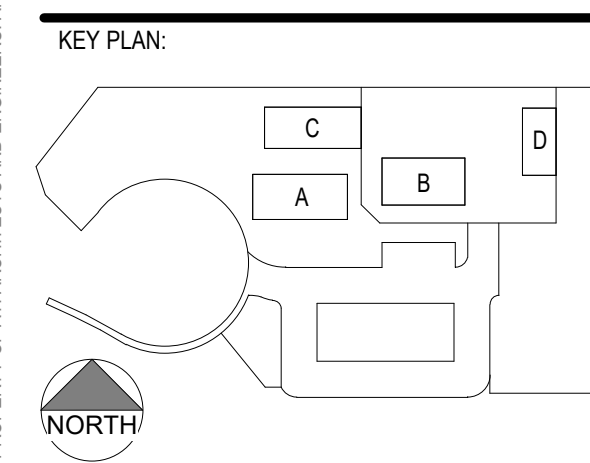
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3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
L. J. MARTIN, T. W. WILSON  
C 23260  
Exp. Apr. 30, 2021  
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

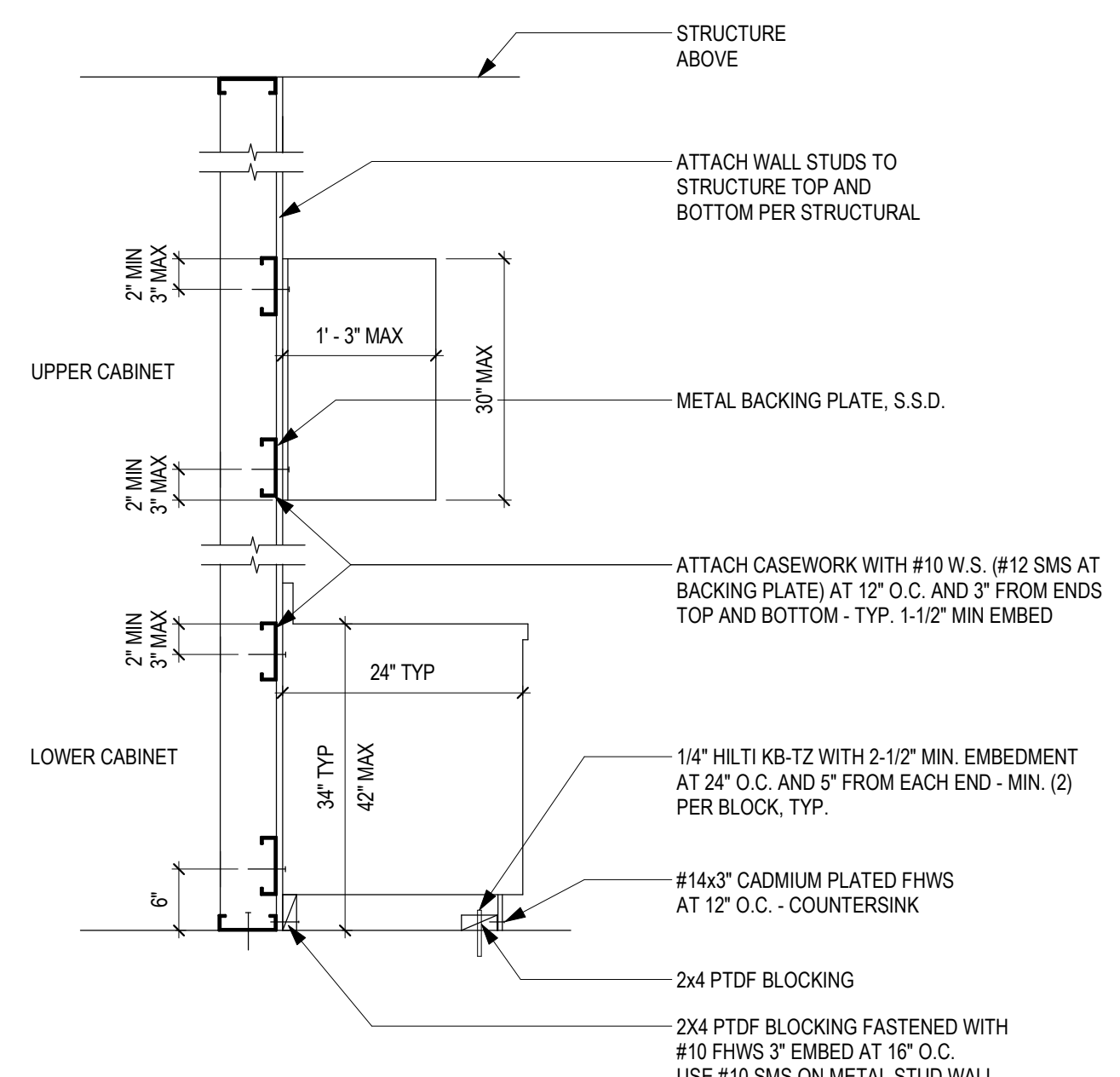


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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

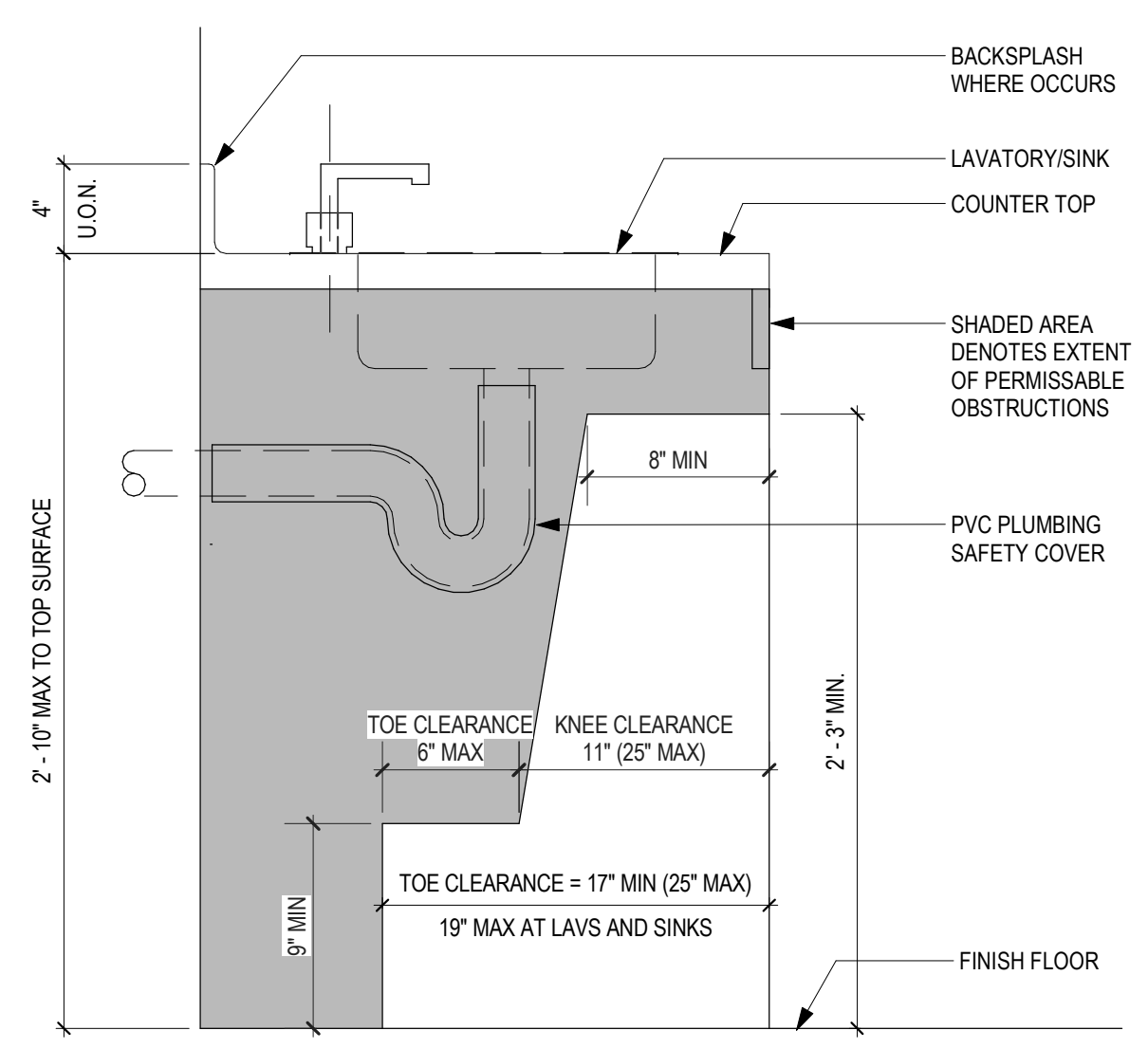
**SECTION DETAILS**

DRAWN BY: Author CHECKED BY: Checker  
DATE: 01/12/2021 PROJECT NO: C9508  
SHEET NO:

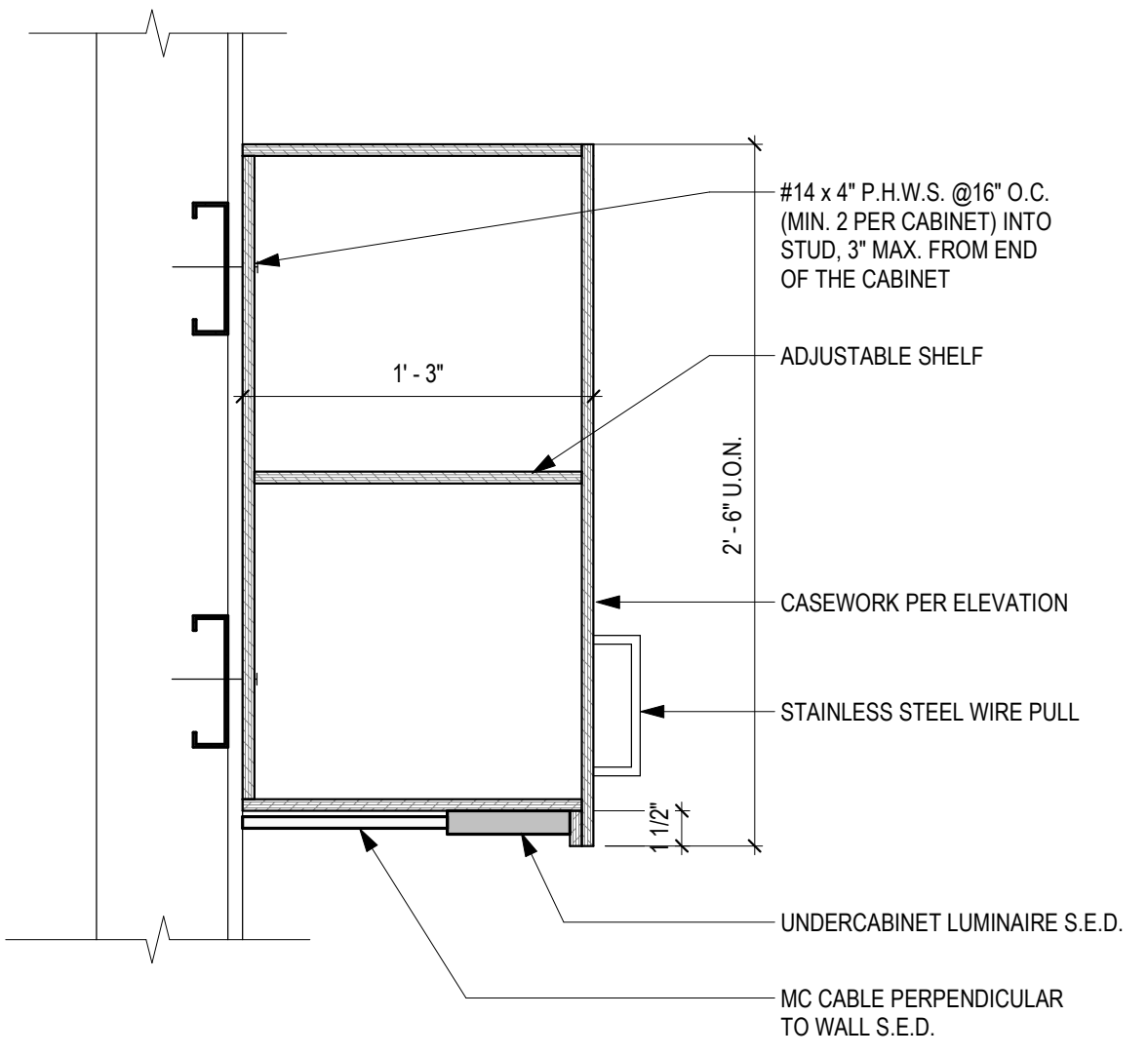
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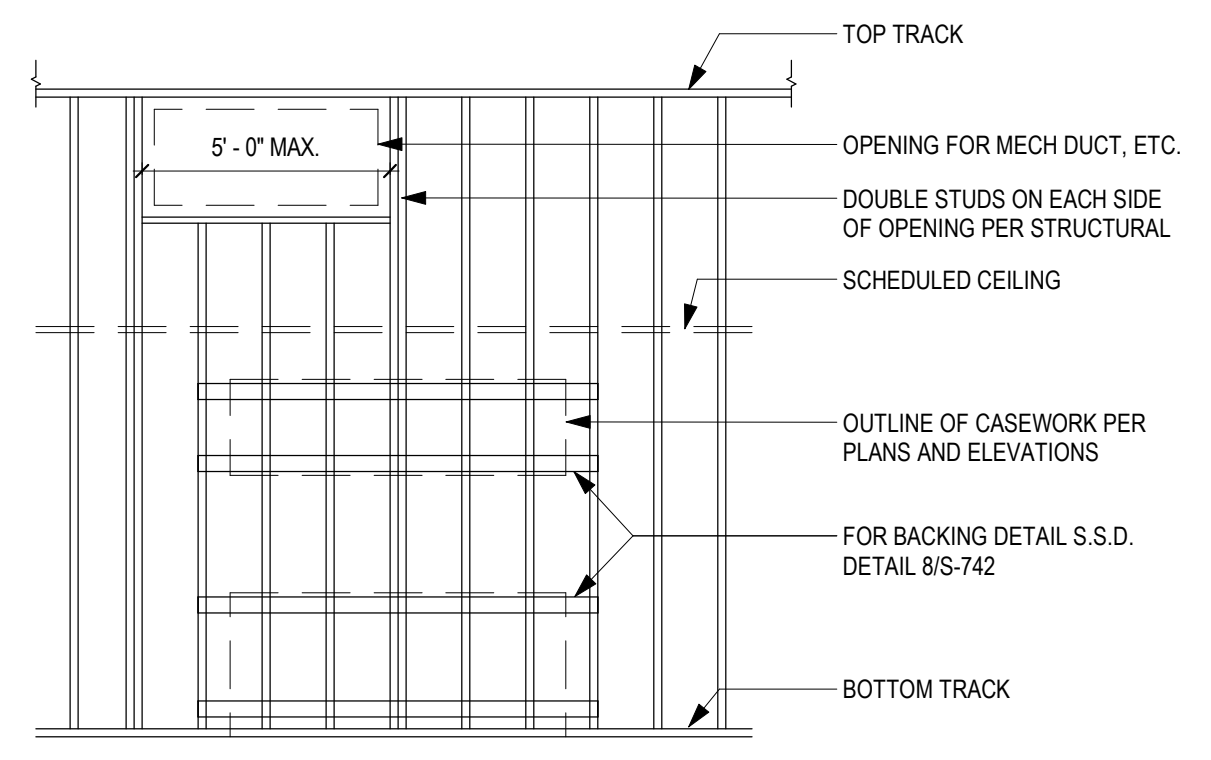
**4 CASEWORK ANCHORAGE**  
3/4" = 1'-0"



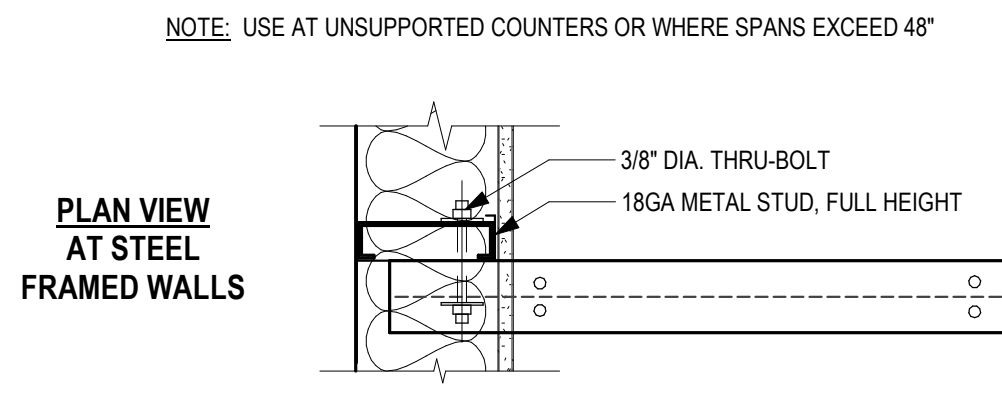
**1 ACCESSIBLE SINK CLEARANCES**  
1 1/2" = 1'-0"



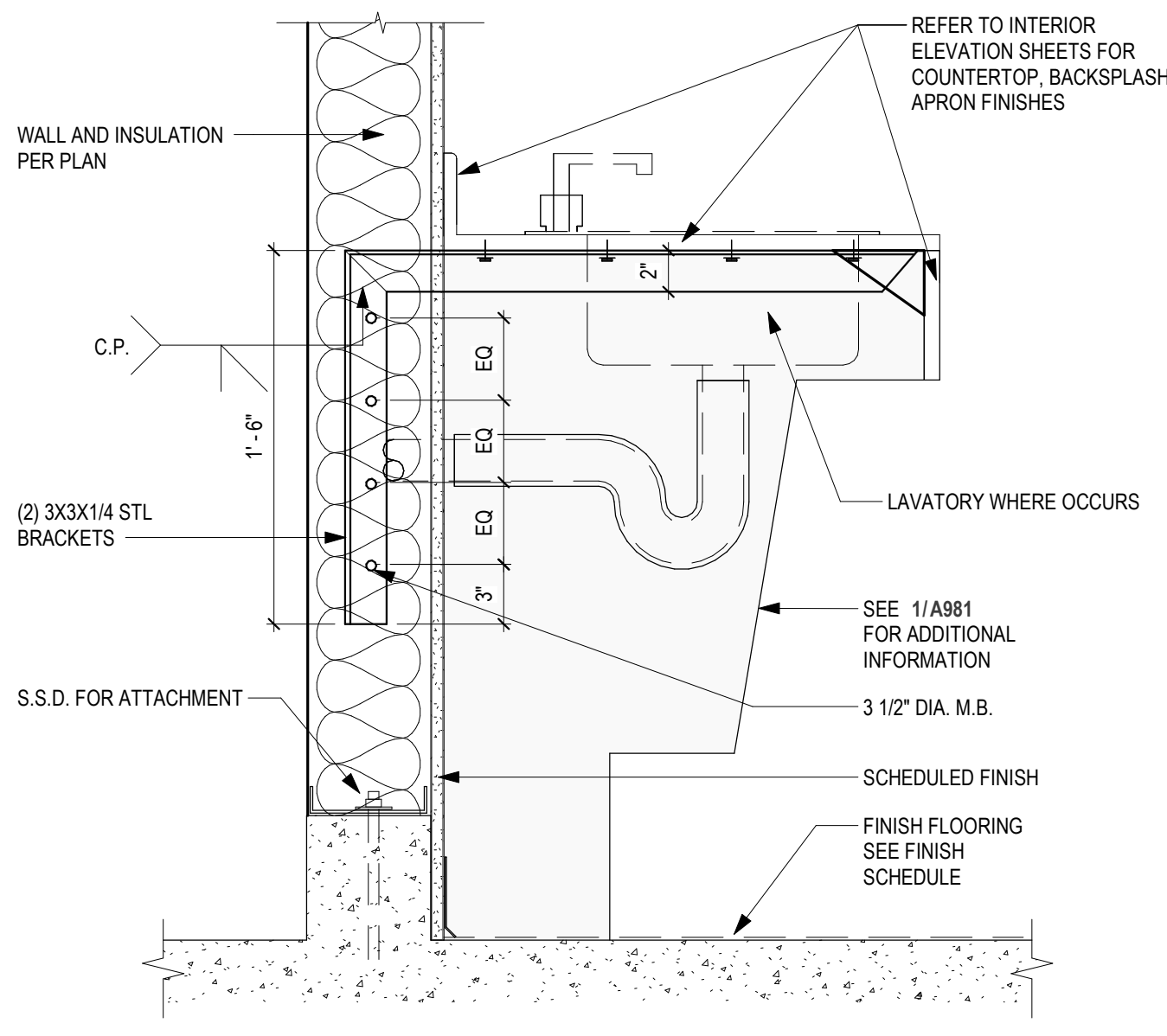
**2 CASEWORK AT HEAD HOUSE**  
1 1/2" = 1'-0"



**6 TYPICAL WALL FRAMING**  
1/4" = 1'-0"



NOTE: USE AT UNSUPPORTED COUNTERS OR WHERE SPANS EXCEED 48"



**3 COUNTER TOP SECTION**  
1 1/2" = 1'-0"

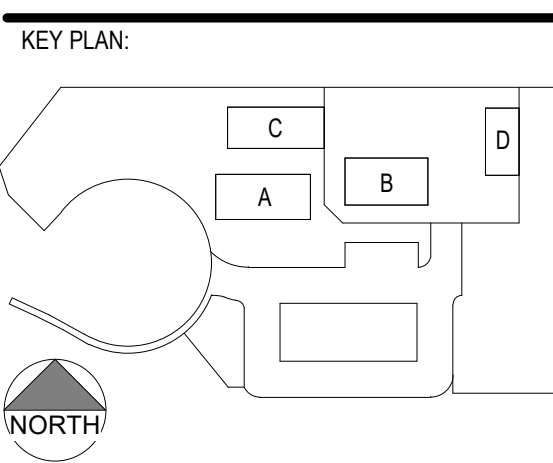
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LIZABETH T. WILKINSON  
C 23260  
Exp. Apr. 30, 2021  
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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**CASEWORK DETAILS**

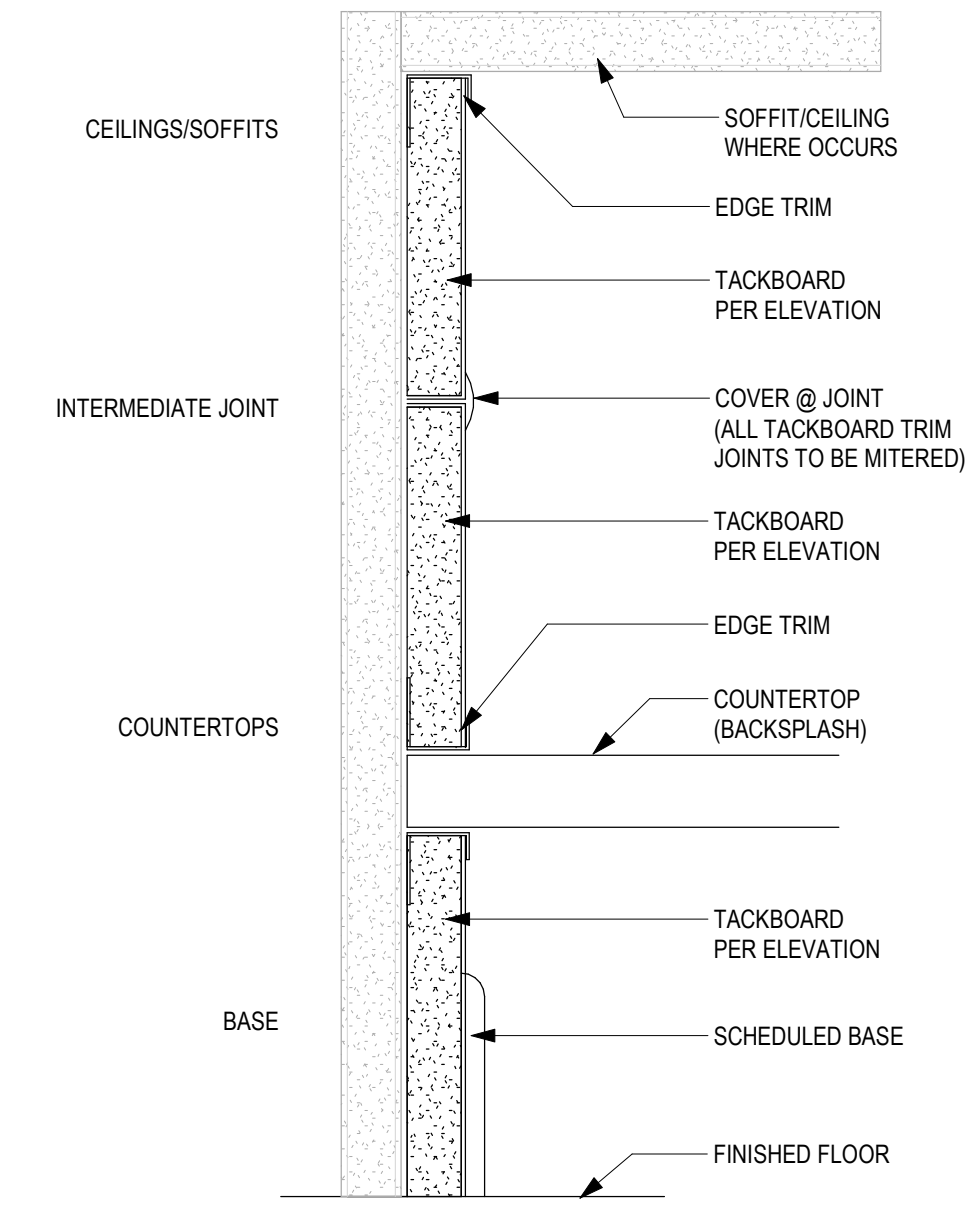
DRAWN BY: EA  
CHECKED BY: AW  
DATE: 01/14/2021  
PROJECT NO: C9508  
SHEET NO:

**A981**

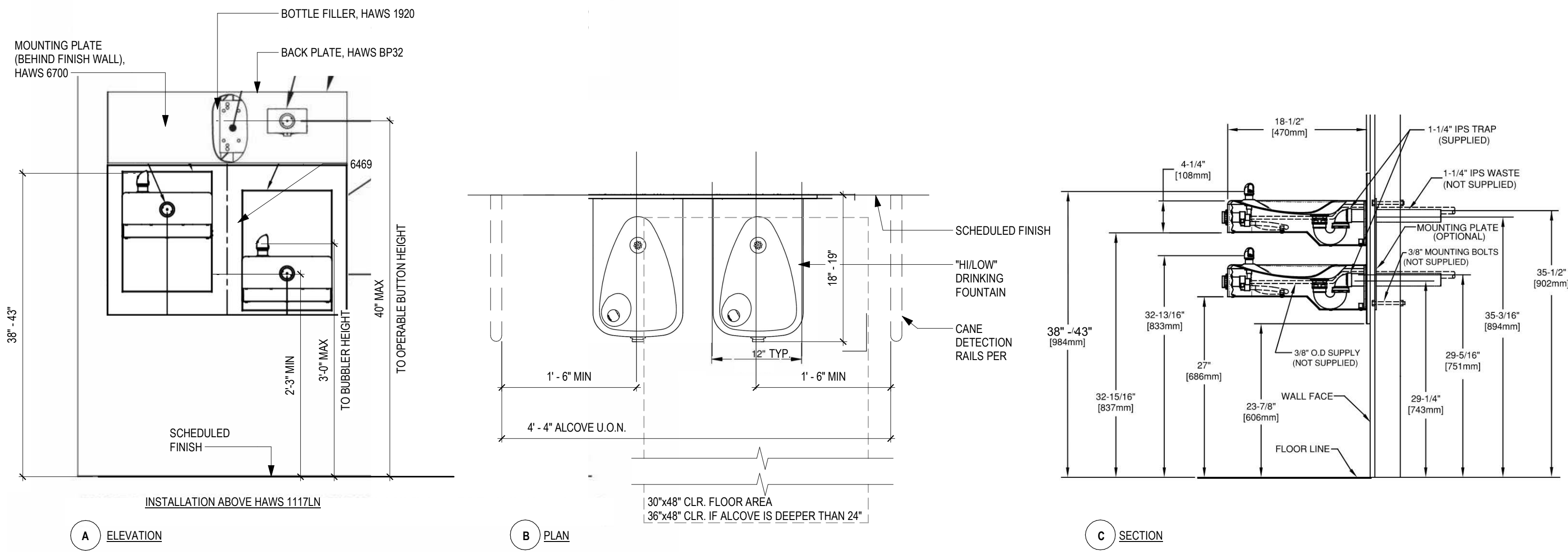
C:\Revit Local Files\C9508\_LPC-Horticulture\_sanderson.rvt  
1/19/2021 4:22:05 PM

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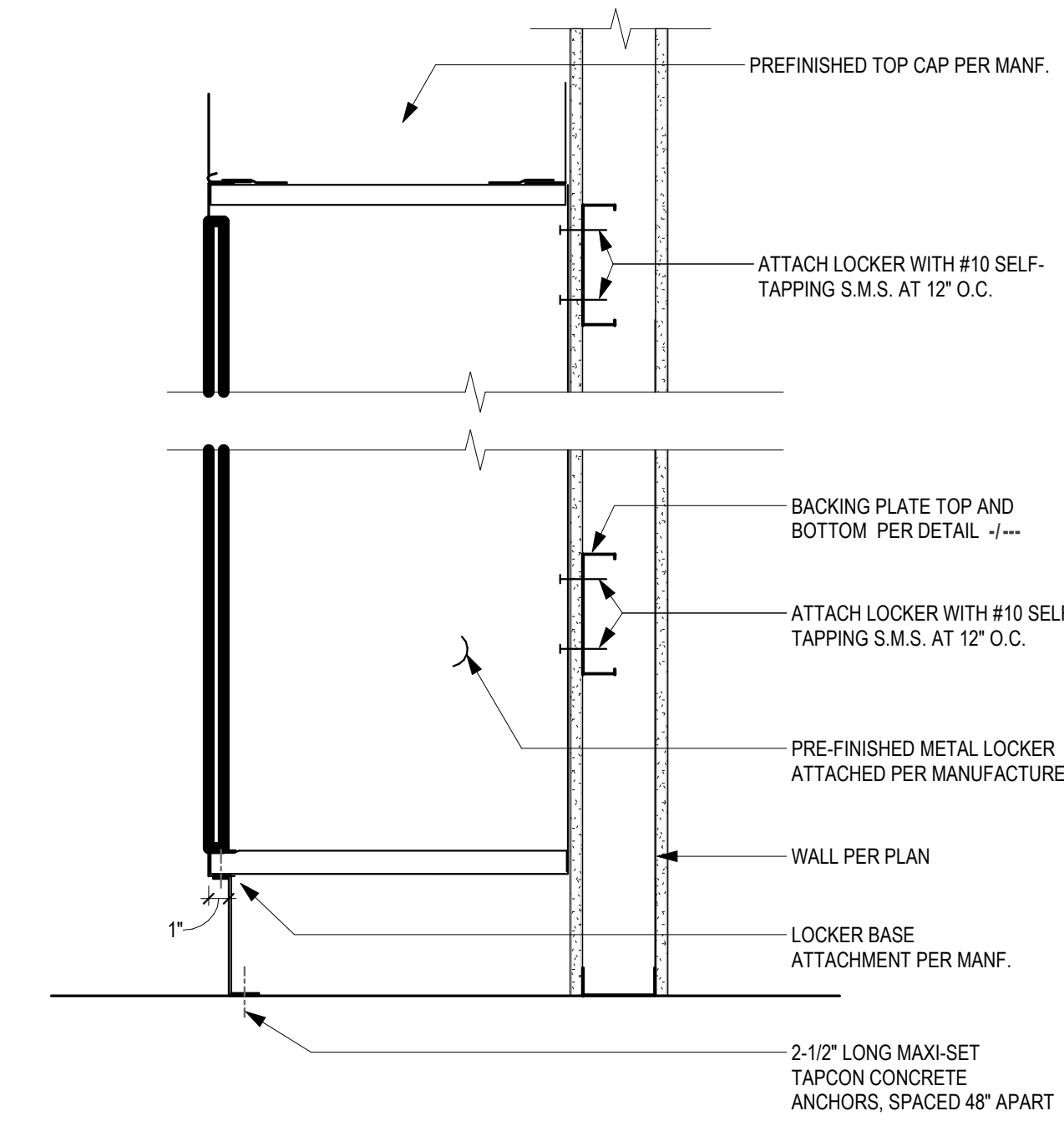
**10 TACK BOARD DETAIL**  
6" = 1'-0"



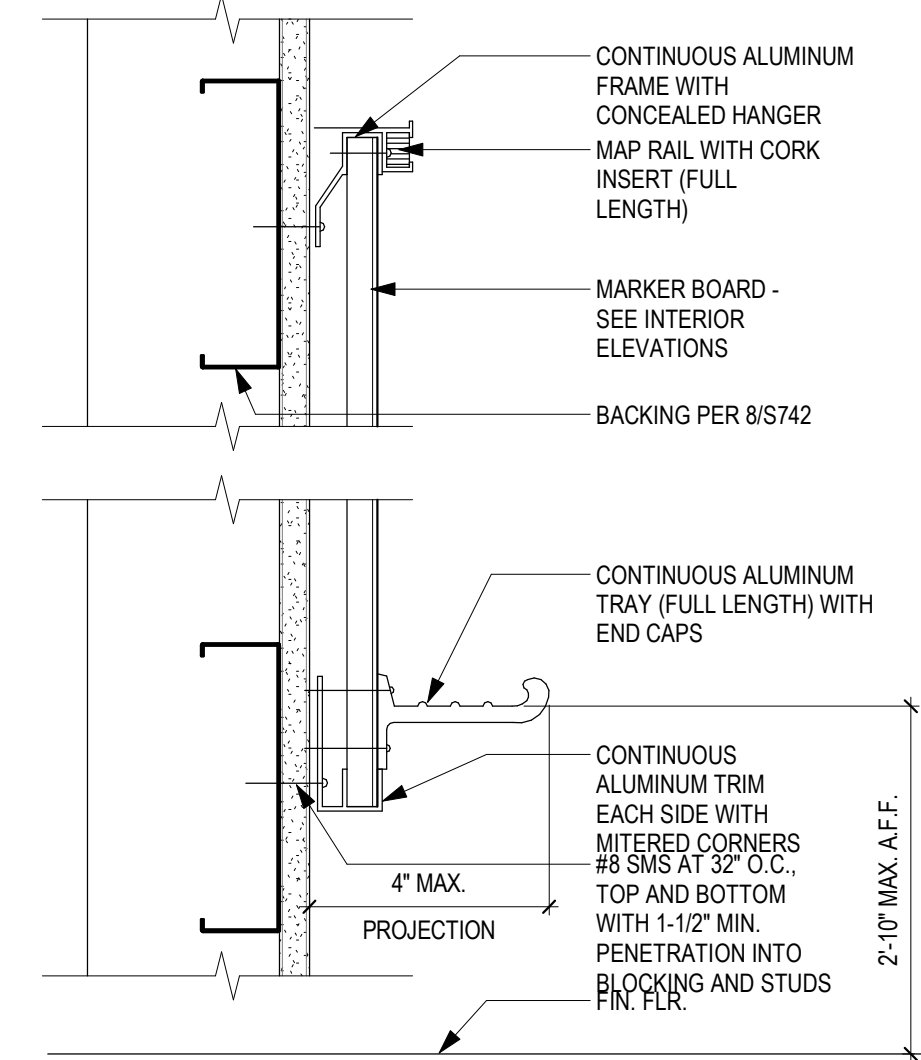
**4 ACCESSIBLE DRINKING FOUNTAIN**  
1" = 1'-0"



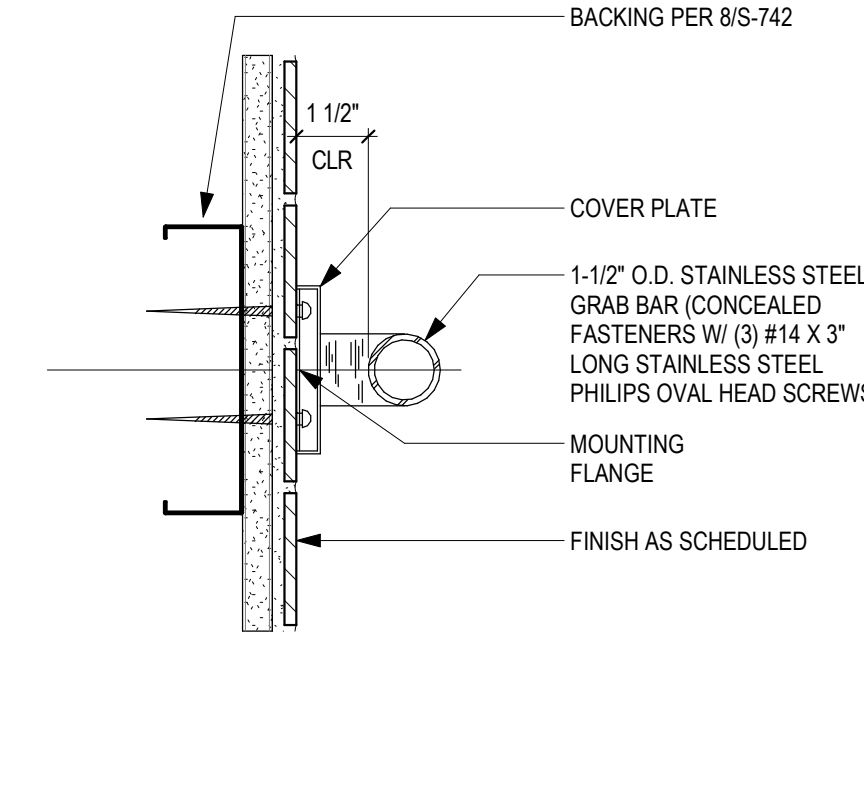
**11 TYP. MIRROR ATTACHMENT**  
3" = 1'-0"



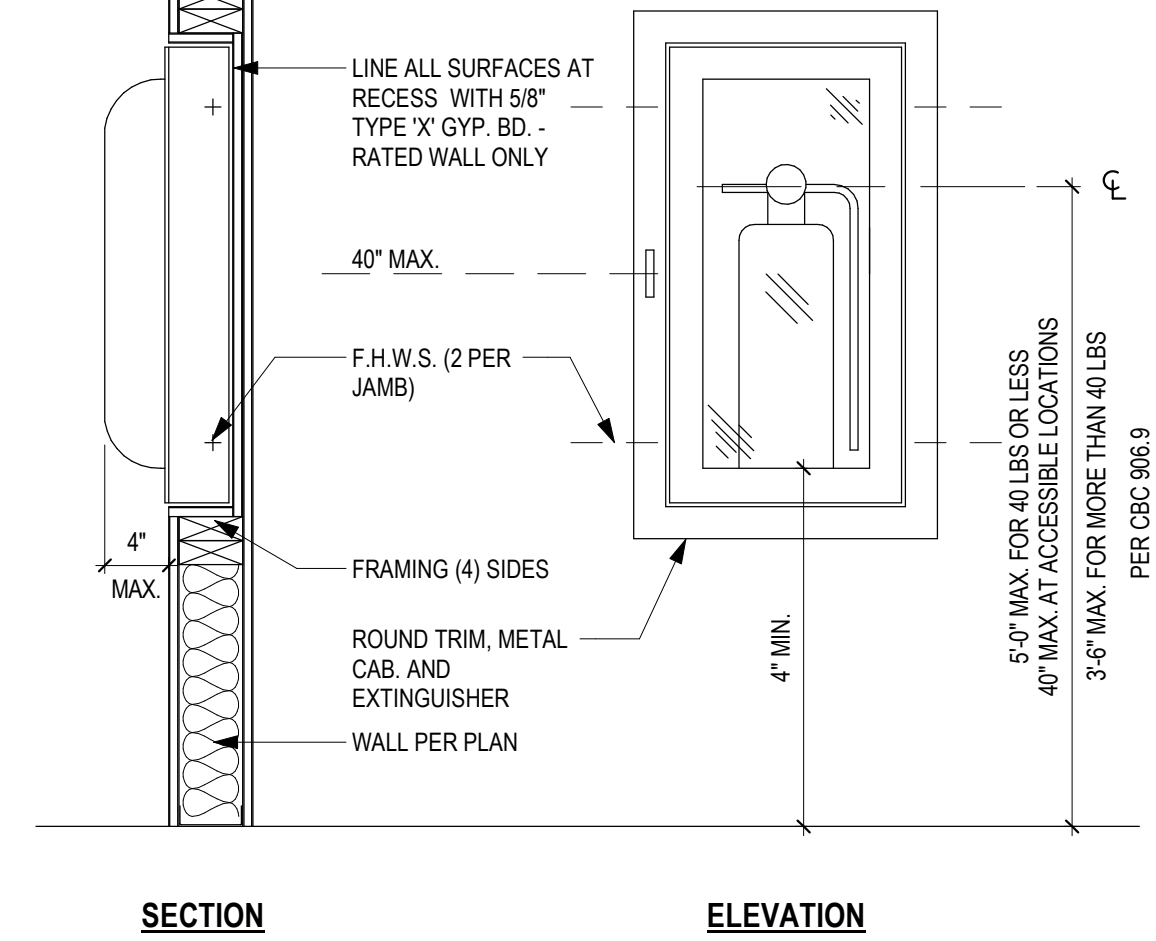
**8 MARKER BOARD**  
3" = 1'-0"



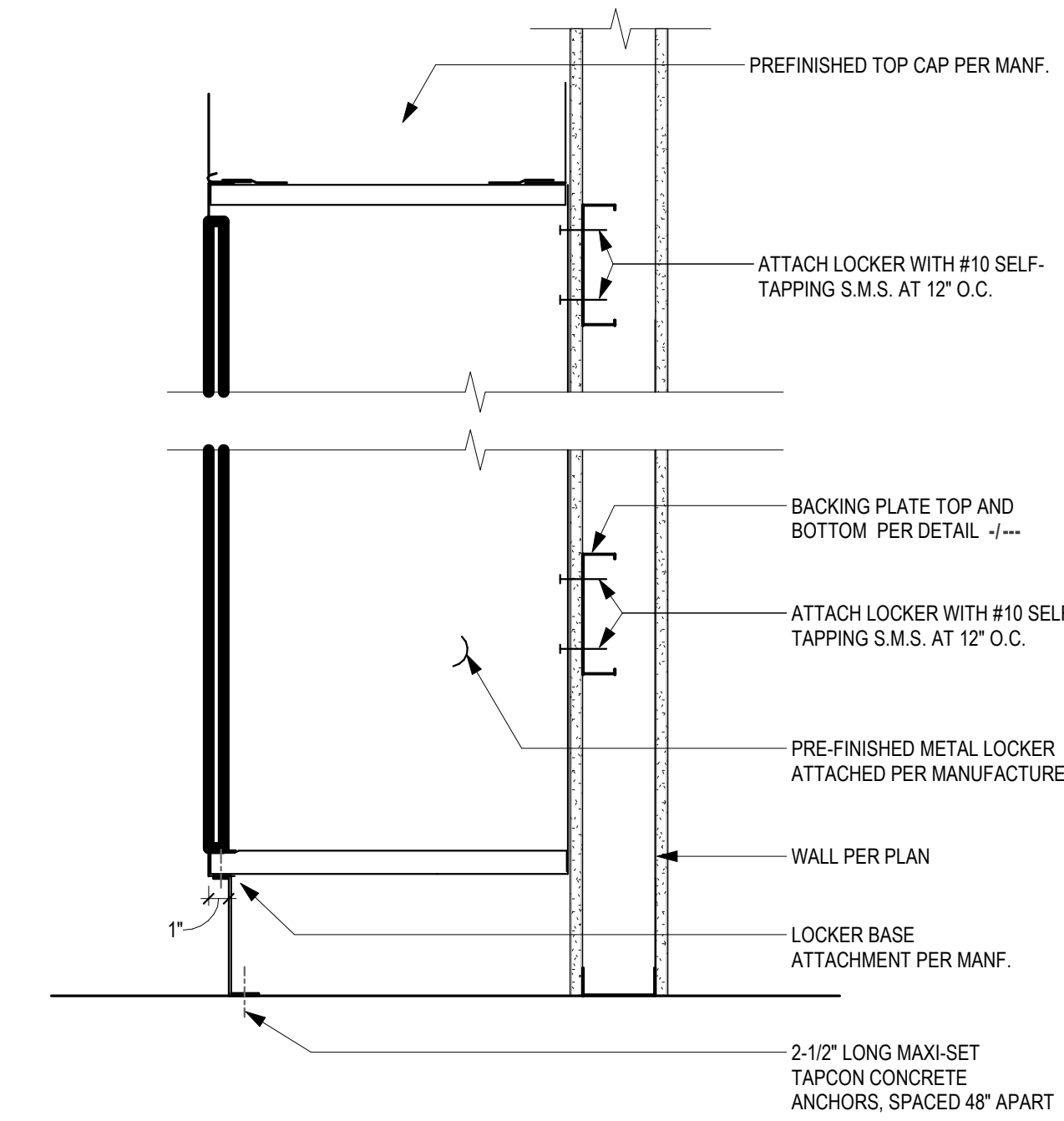
**7 GRAB BAR AT STUD WALL**  
3" = 1'-0"



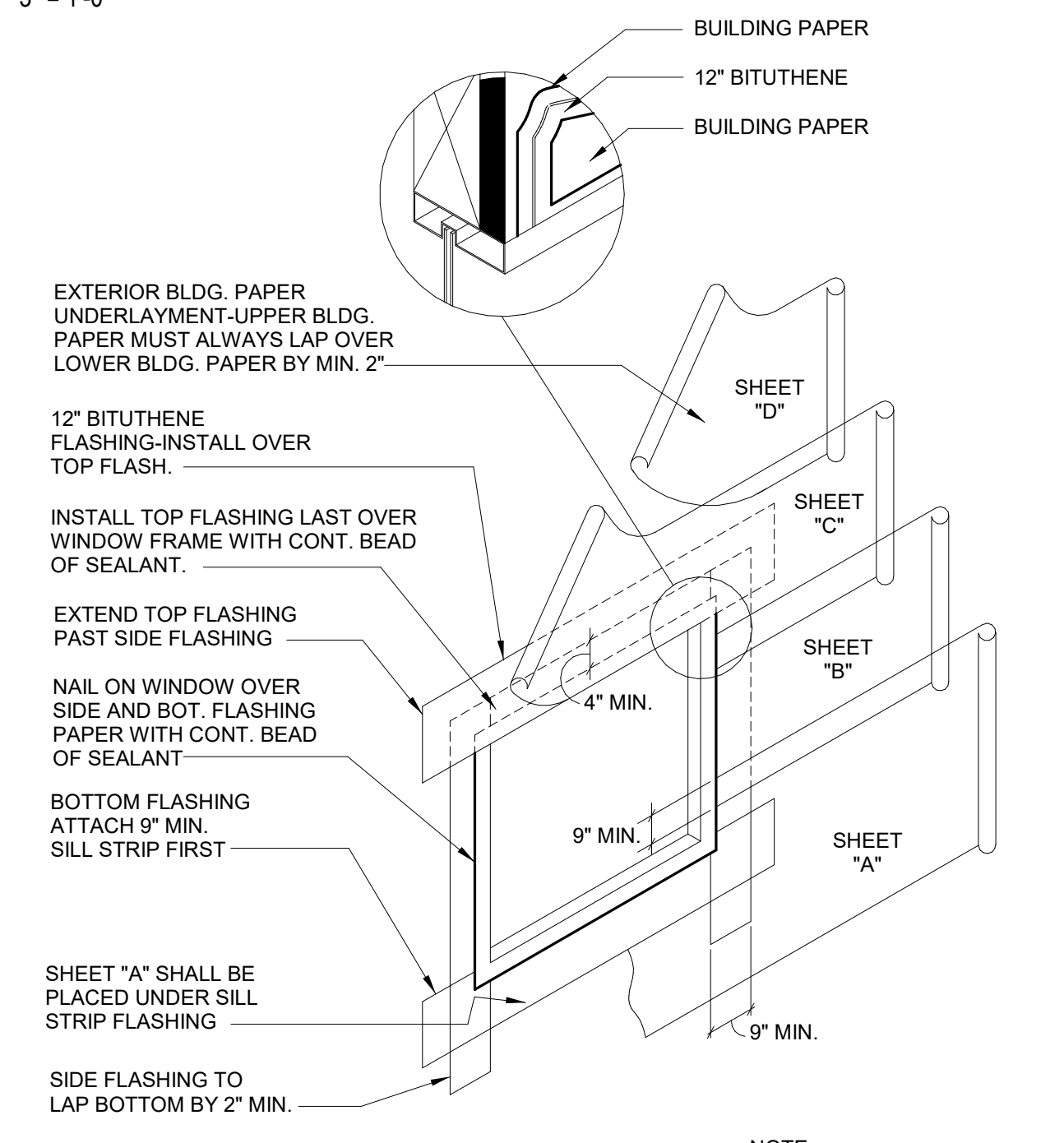
**2 FIRE EXTINGUISHER CABINET**  
1" = 1'-0"



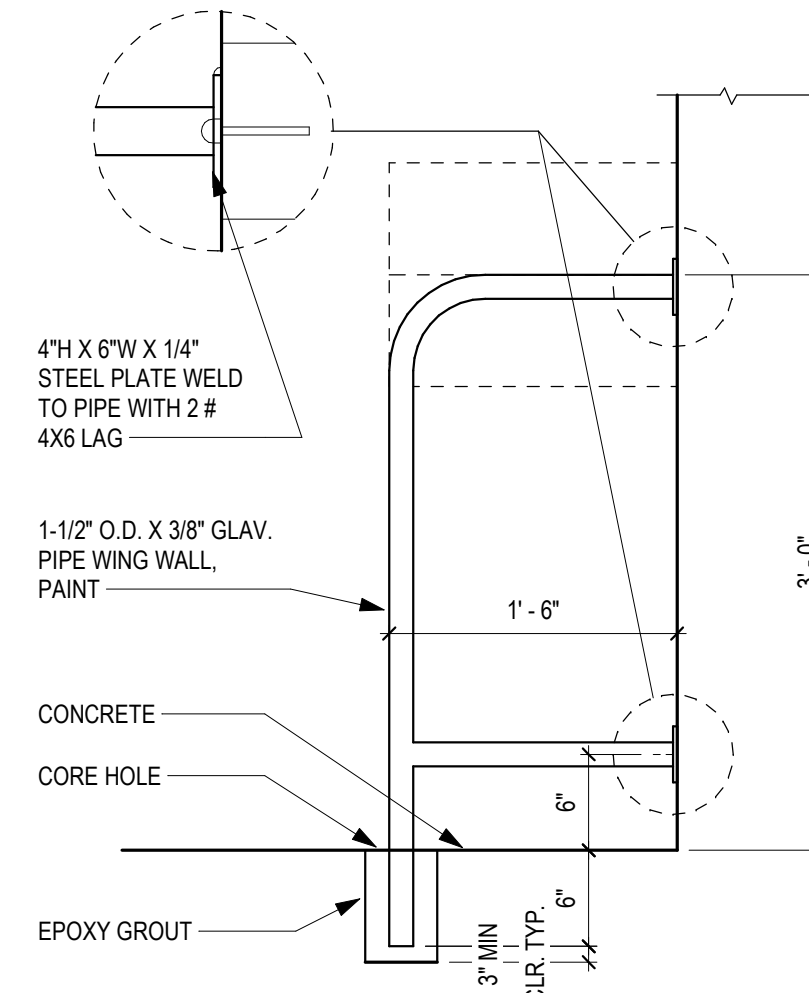
**12 METAL LOCKER**  
1 1/2" = 1'-0"



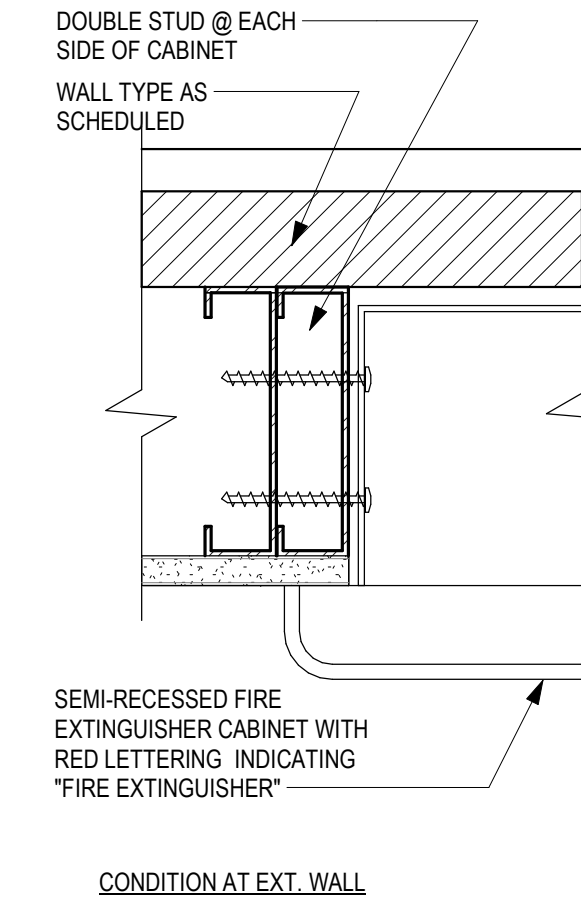
**9 TYP. WINDOW FLASHING**  
N.T.S.



**6 CANE DETECTION**  
1" = 1'-0"



**3 TYP. FIRE EXTINGUISHER CABINET**  
3" = 1'-0"



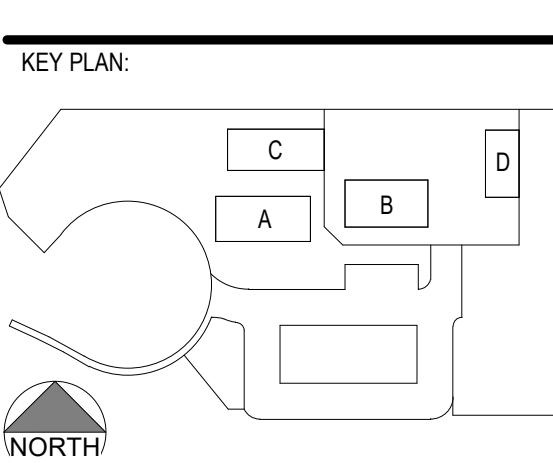
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3000 CAMPUS HILL DRIVE,  
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**MISCELLANEOUS  
DETAILS**

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SHEET NO:

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 DATE: 01/19/2021

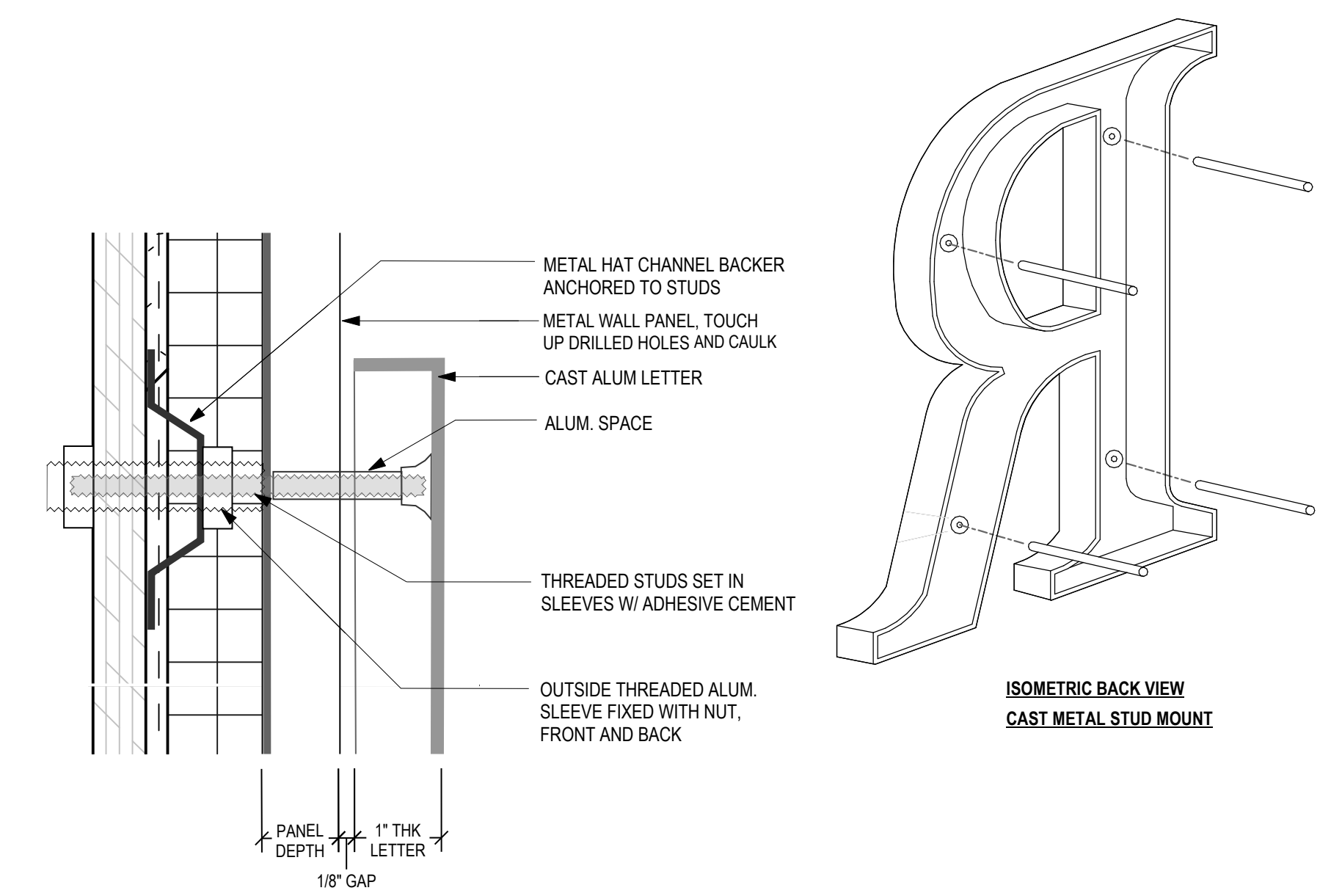


4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S. Flower St #1200 Los Angeles, CA 90071 - T 714 338 1600

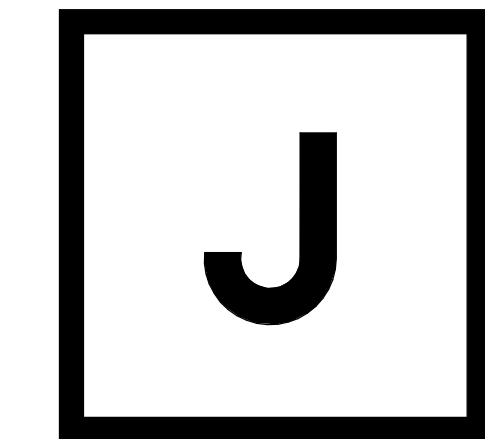
PROFESSIONAL STAMP:



CONSULTANT:



**1 ALUMINUM PIN LETTERS**  
 N.T.S.

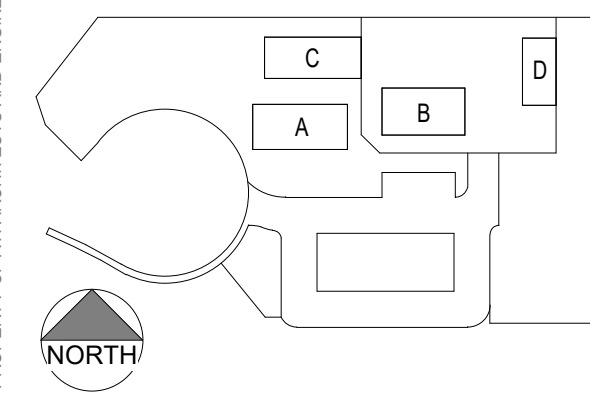


PAINTED METAL SIGN TO MATCH ON-SITE DISTRICT STD.;  
 MOUNT TWO SIGNS FACING OPPOSITE DIRECTIONS ON  
 NEW LIGHT POLE AS DEPICTED ON SITE PLAN  
 MOUNT SINGLE SIDED SIGNS ON TWO EXISTING LIGHT  
 POLES AS DESIGNATED BY DISTRICT  
 "M" AND "N" SIM.

**2 PARKING LOT IDENTIFICATION SIGN**  
 N.T.S.

ITEM:	REVISION / ISSUE:	DATE:

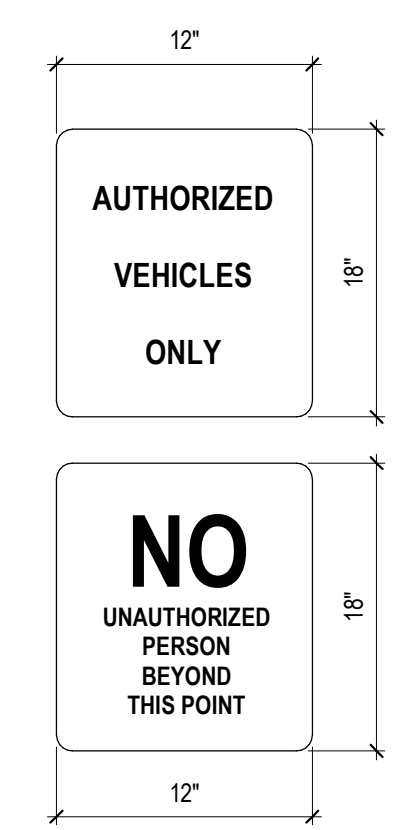
KEY PLAN:



CLPCCD - LAS POSITAS  
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**AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**SIGNAGE DETAILS**

DRAWN BY: Author CHECKED BY: Checker  
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 SHEET NO:



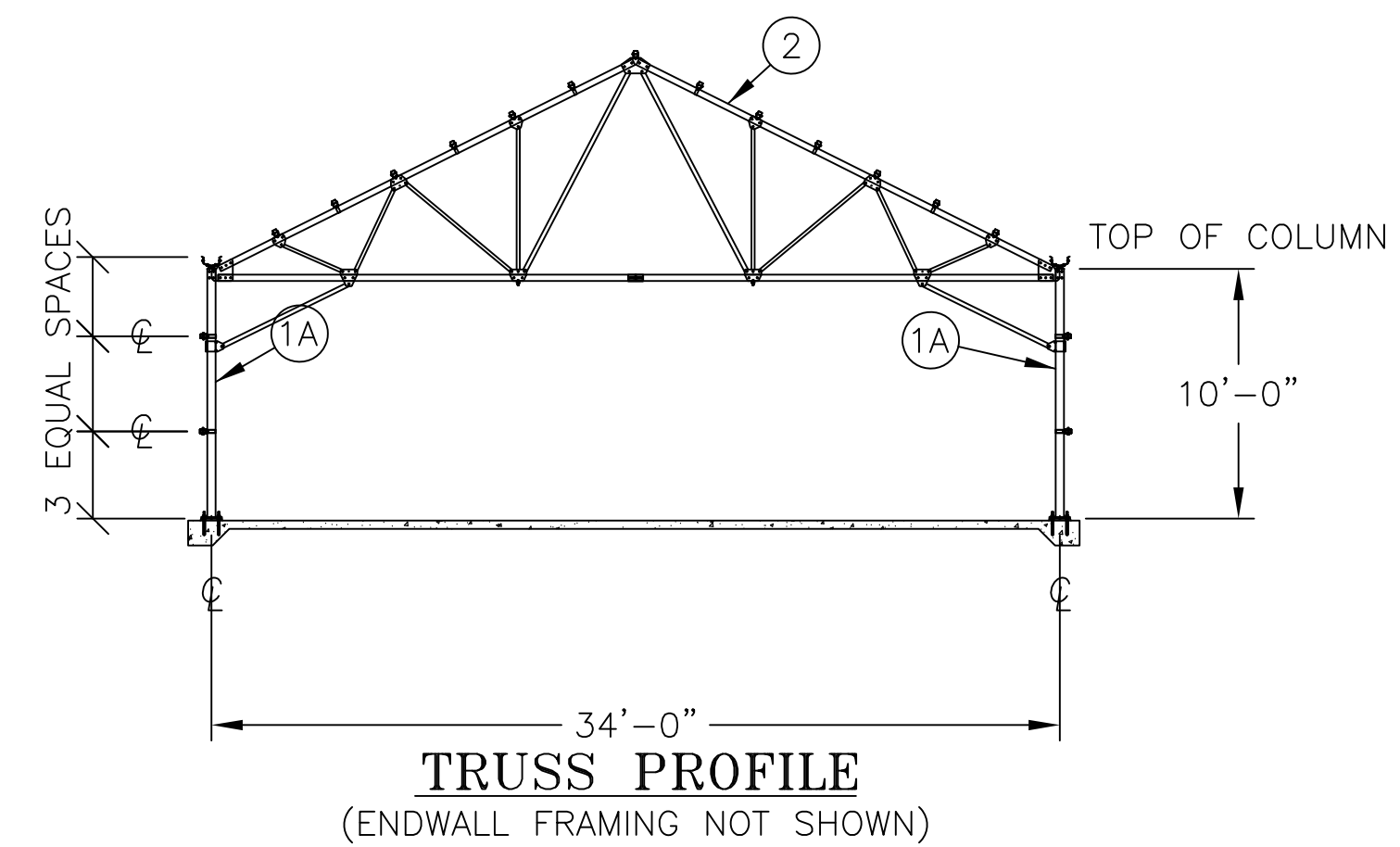
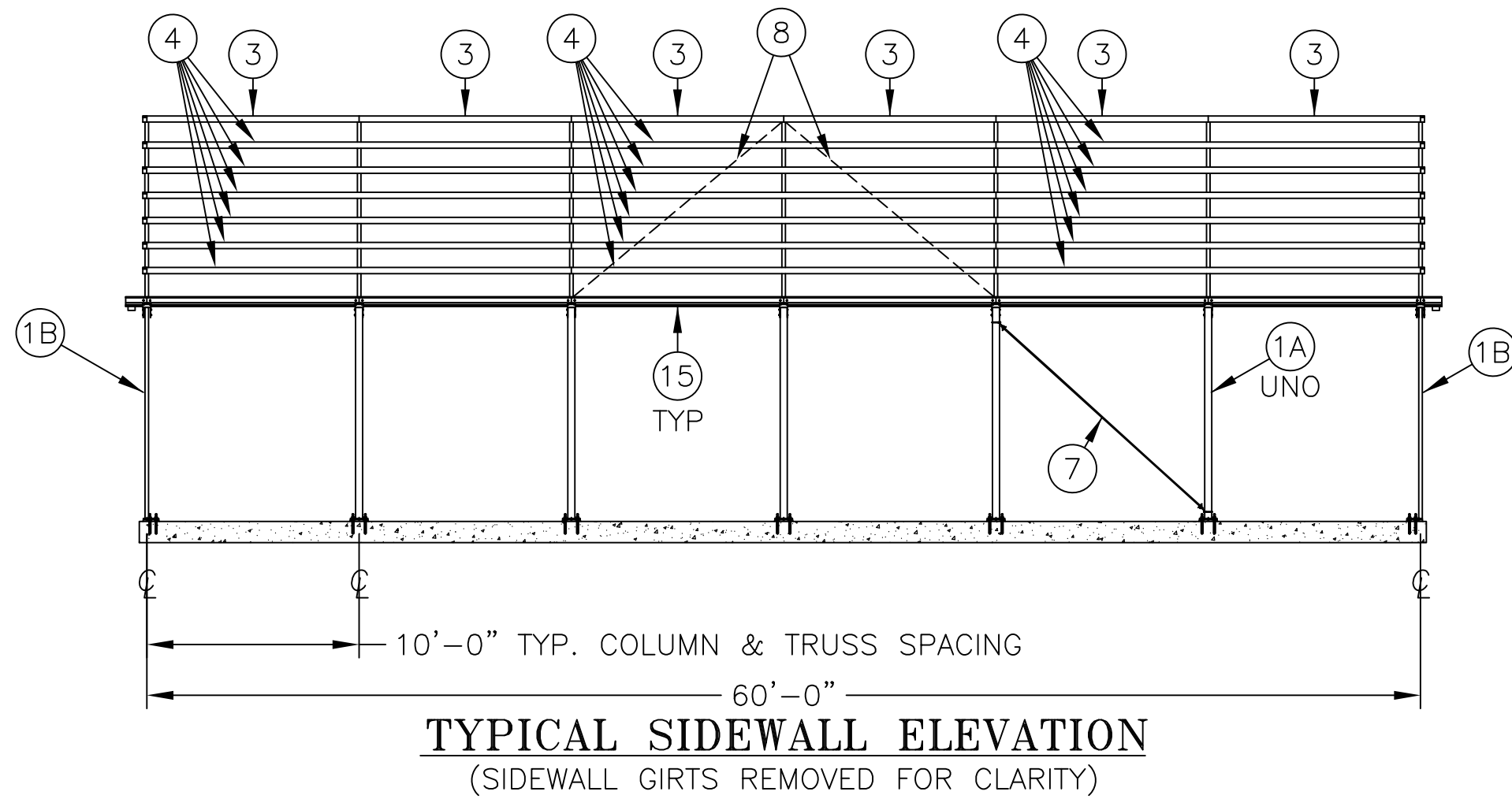
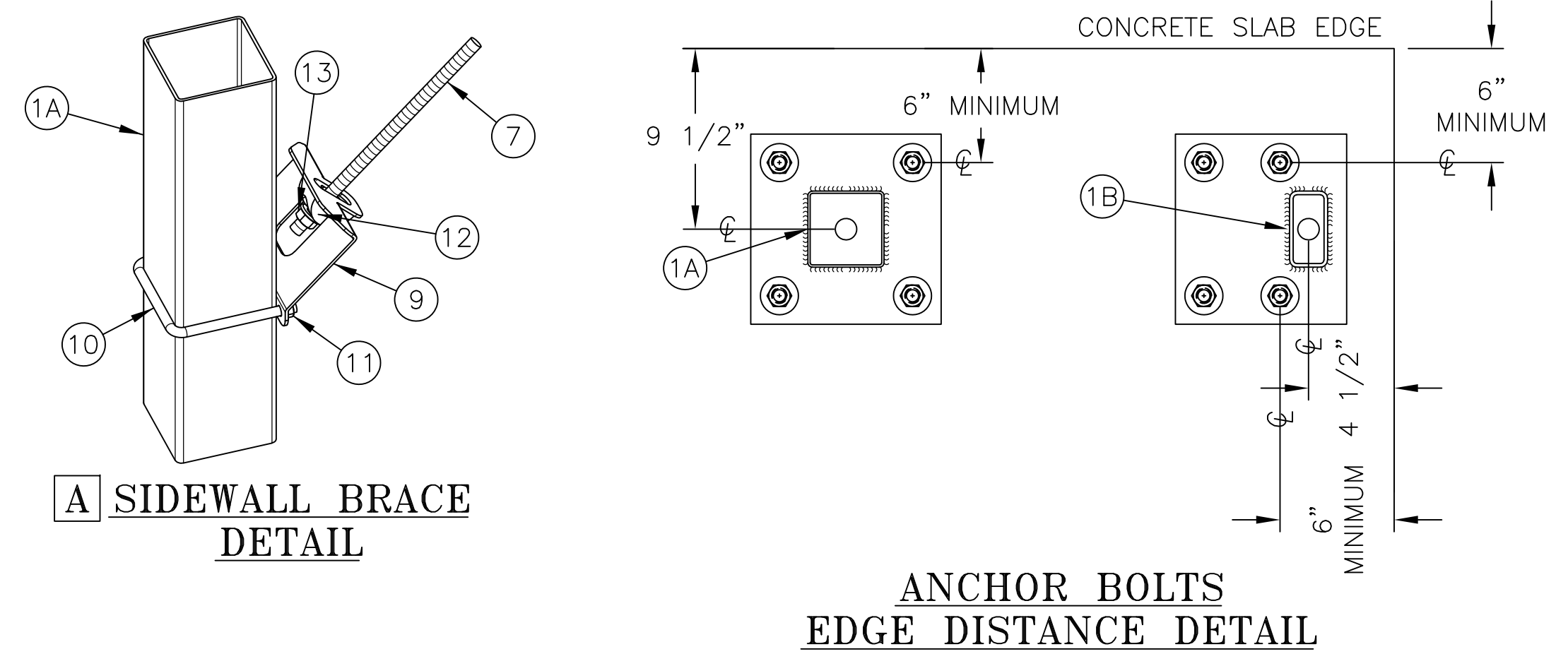
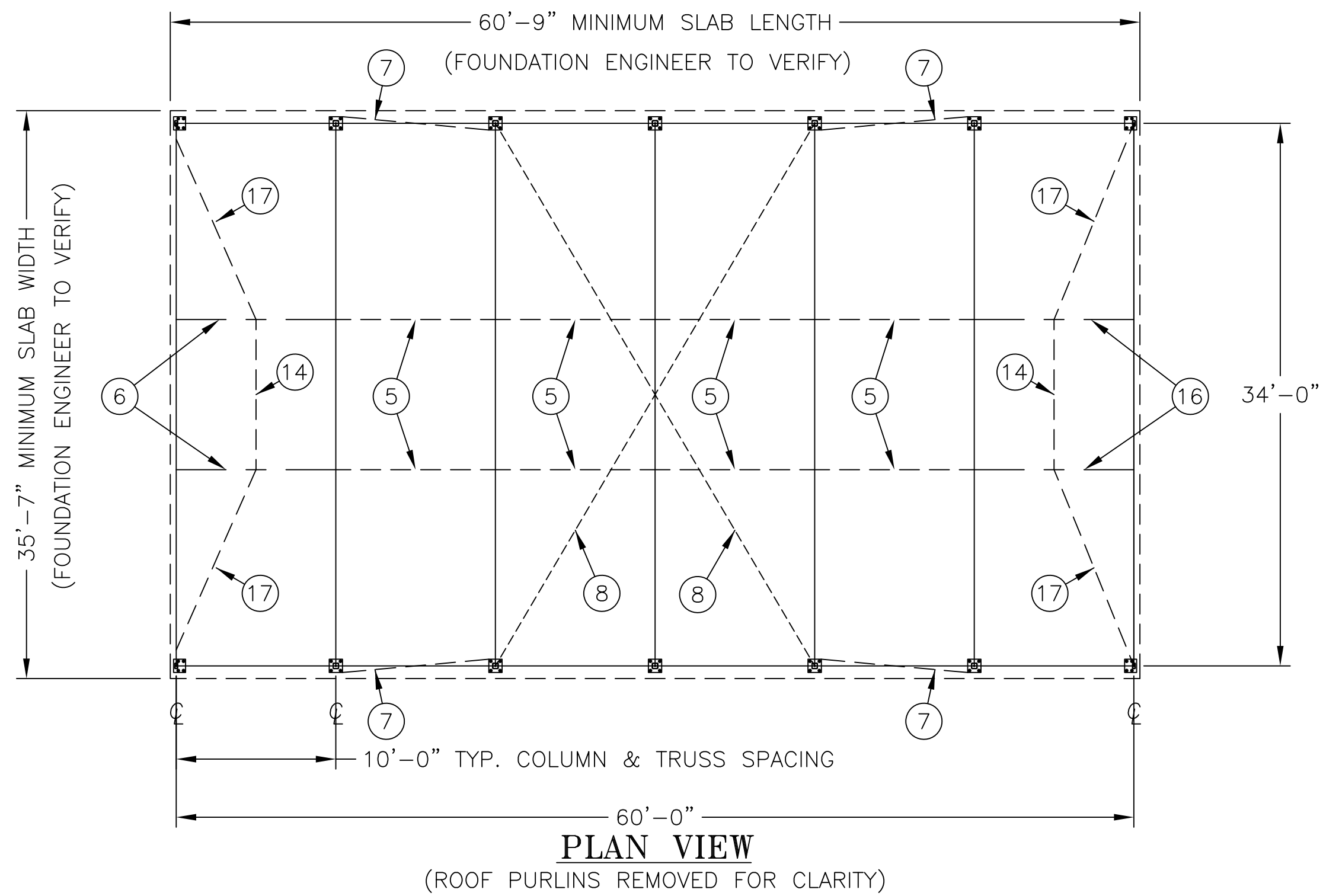
NOTE:  
 APPEARANCE AND VERBIAGE TO MATCH  
 ON SITE DISTRICT STD. SIGNAGE

**6 AUTHORIZATION SIGNAGE**  
 N.T.S.



NOTE:  
 APPEARANCE AND COPY TO MATCH ON  
 SITE DISTRICT STD. SIGNAGE

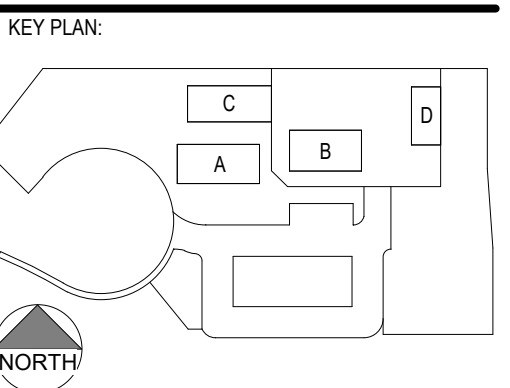
**3 PARKING PERMIT SIGNAGE**  
 N.T.S.



CONSULTANT:

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:



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HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**BLDG B. - GREENHOUSE (NON-CERTIFIED) STRUCTURE PLAN**

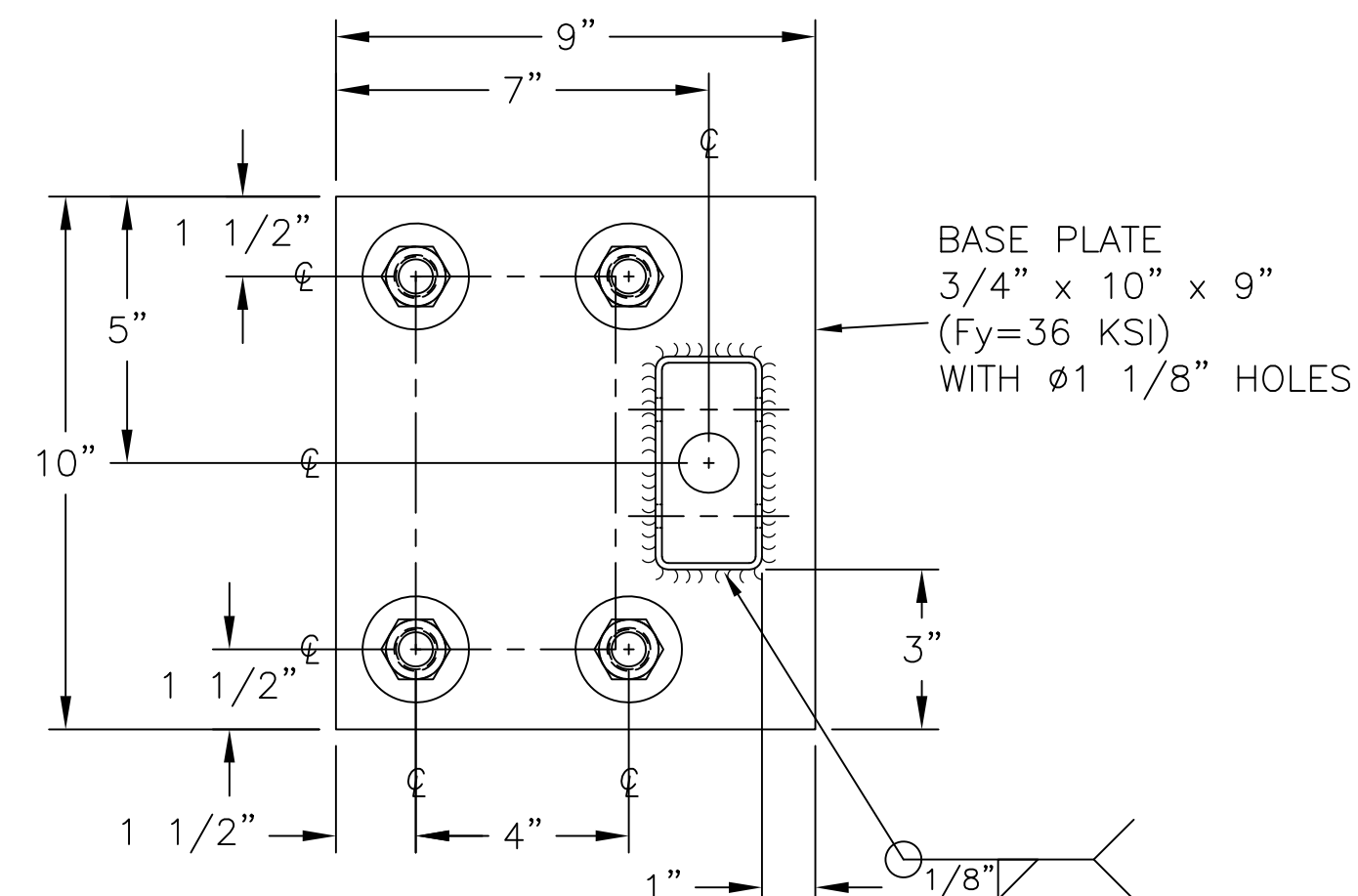
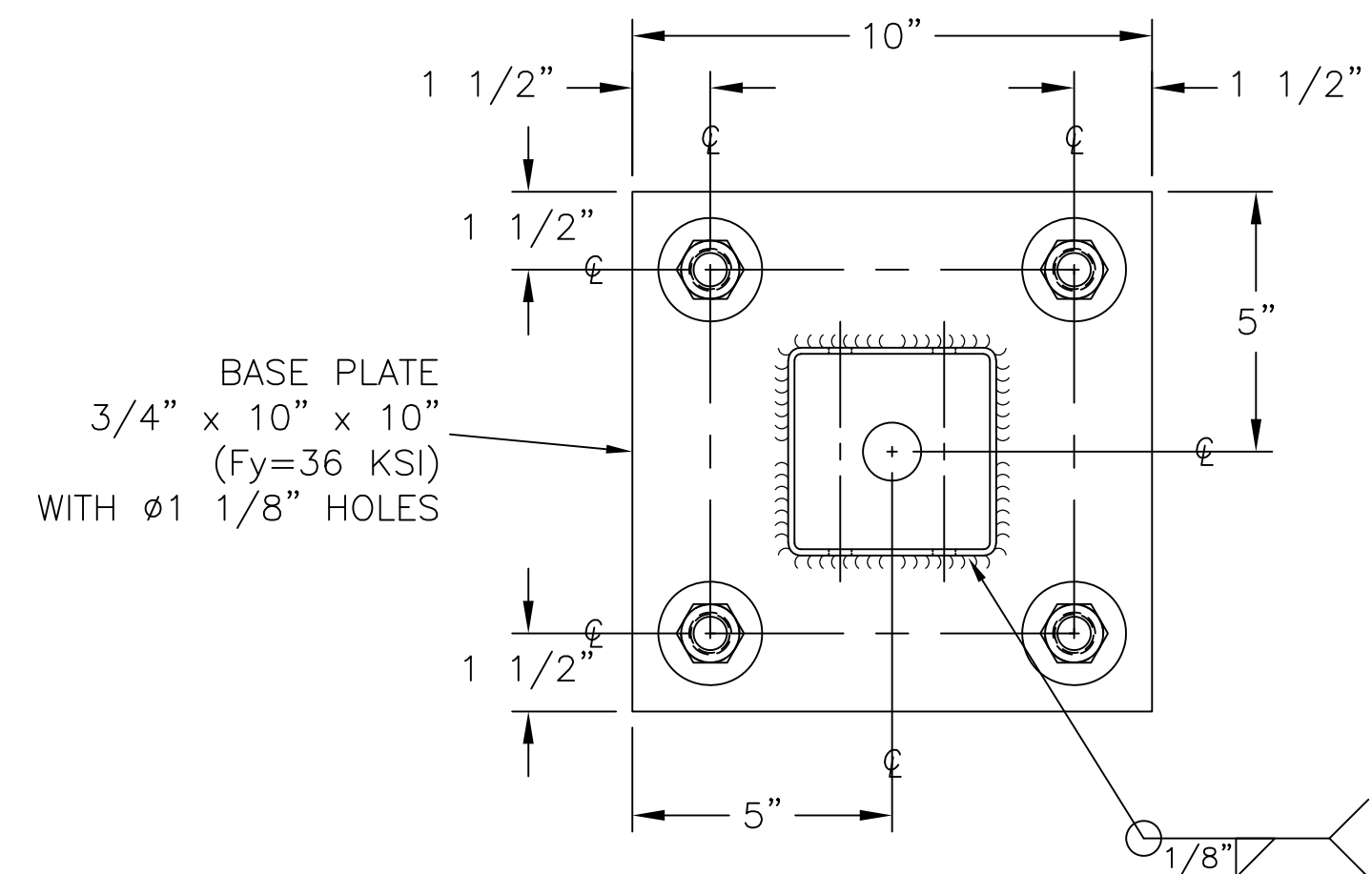
DRAWN BY: TX      CHECKED BY: ECR  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO: NB001

**NB001**

#	ITEM #	MATERIAL LIST -- PART DESCRIPTION	#	ITEM #	MATERIAL LIST -- PART DESCRIPTION
1A	993727	4X4-11 COLUMN W BSPLT 10'SW (REF DWG NB002)	9	993430	CS3 SW BRACING ROD BKT
1B	993730	4X2-11 COLUMN W EW BSPLT 10'SW (REF DWG NB002)	10	13204	3/8-16 4" x 5" SQ. U-BOLT SB ZP
2	---	34' WIDE CS3 TRUSS (REF DWG NB003)	11	1349	3/8-16 HEX LOCK NUT (2 PER BOLT)
3	P2891	3X2 RIDGE PURLIN 10'	12	993449	1/2" HILLSIDE WASHER HDG
4	P2392	3X2 PURLIN GIRT 20' 10'OC	13	1319	1/2-13 HEX FLANGE WHIZ LOCK NUT
5	15379	1.315-16 PURLIN 10'-10'OC	14	995047-11300	1.66-15 113" HH FP
6	994410	1.66-15 10'OC START PURLIN	15	P3000	S2 GUTTER 10'-10'OC
7	993611-17300	1/2" A36 ROD 173" HDG	16	994416	1.66-15 10'OC END PURLIN
8	1385	7 x 7 MAIN CABLE 3/16"	17	995047-14803	1.66-15 148 3/16" HH FP

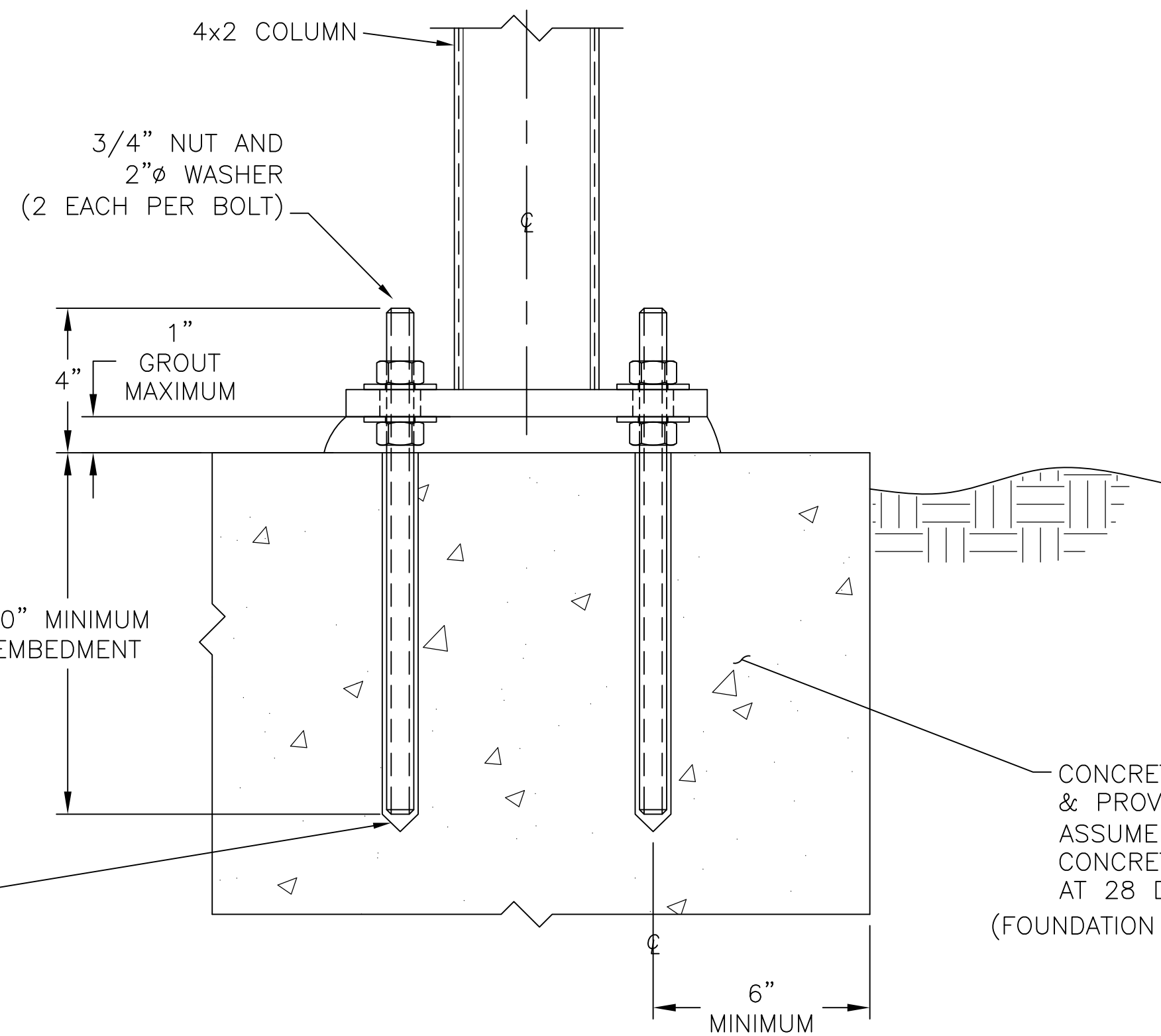
**NOTES:**

1. ALL STEEL FOR GREENHOUSE MEMBERS MEET REQUIREMENTS OF ASTM A1011M-02.
2. MIN. YIELD STRENGTH OF STEEL MEMBERS SHALL BE 50 KSI UNLESS OTHERWISE NOTED.
3. ALL BOLTS SHALL BE SAE GRADE 5 OR ASTM A325 UNLESS OTHERWISE NOTED.



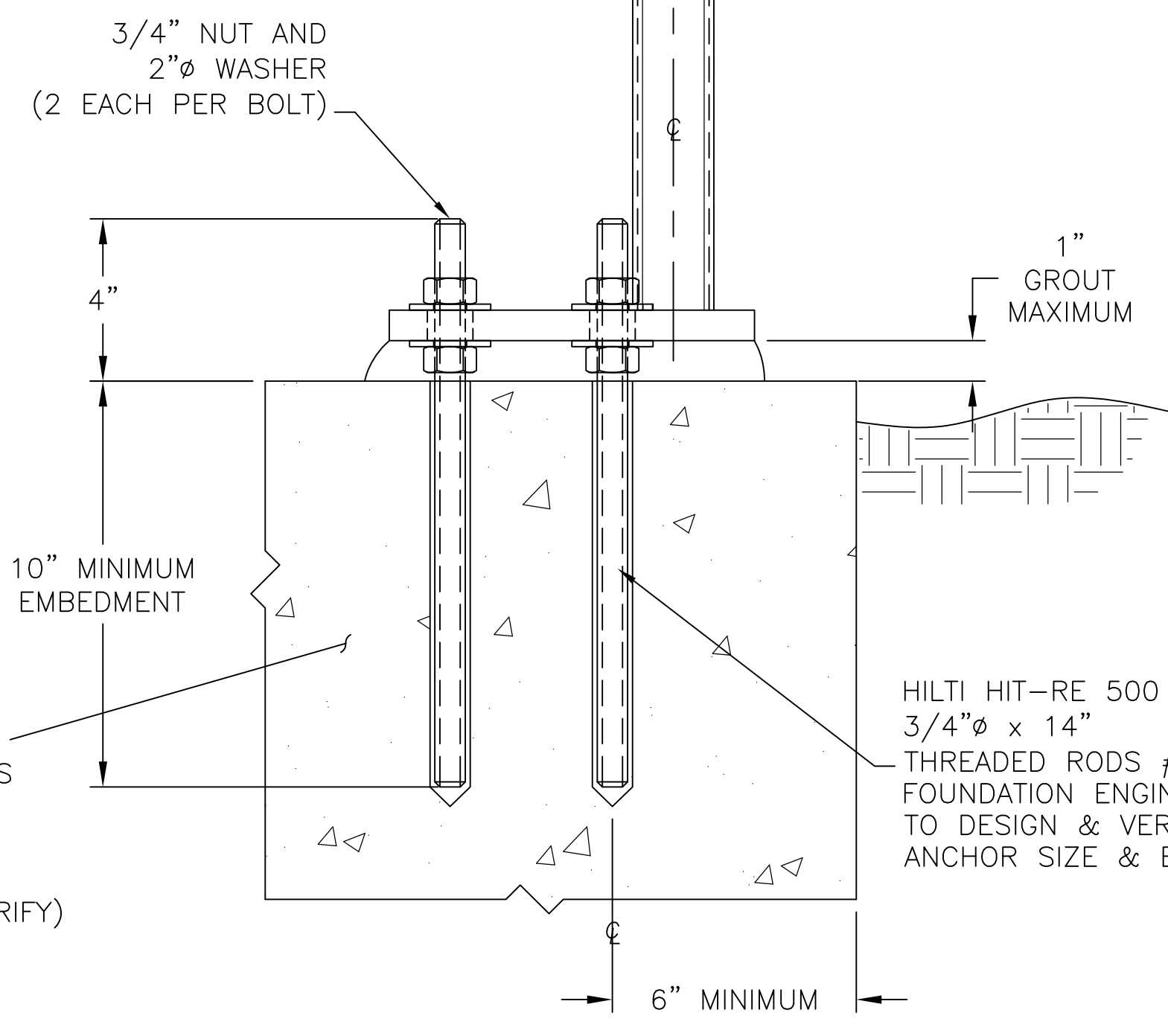
**BASEPLATE @ SIDEWALL**

FOUNDATIONS, REINFORCING, & ANCHOR BOLTS SHOWN ON THIS DRAWING ARE REPRESENTATIVE IN NATURE AND SHALL BE DESIGNED BY OTHERS



HILTI HIT-RE 500 EPOXY  
 3/4"Ø x 14"  
 THREADED RODS #127789  
 FOUNDATION ENGINEER  
 TO DESIGN & VERIFY  
 ANCHOR SIZE & EMBEDMENT

CONCRETE DESIGNED  
 & PROVIDED BY OTHERS  
 ASSUMED f'c OF  
 CONCRETE = 4000 PSI  
 AT 28 DAYS  
 (FOUNDATION EOR SHALL VERIFY)



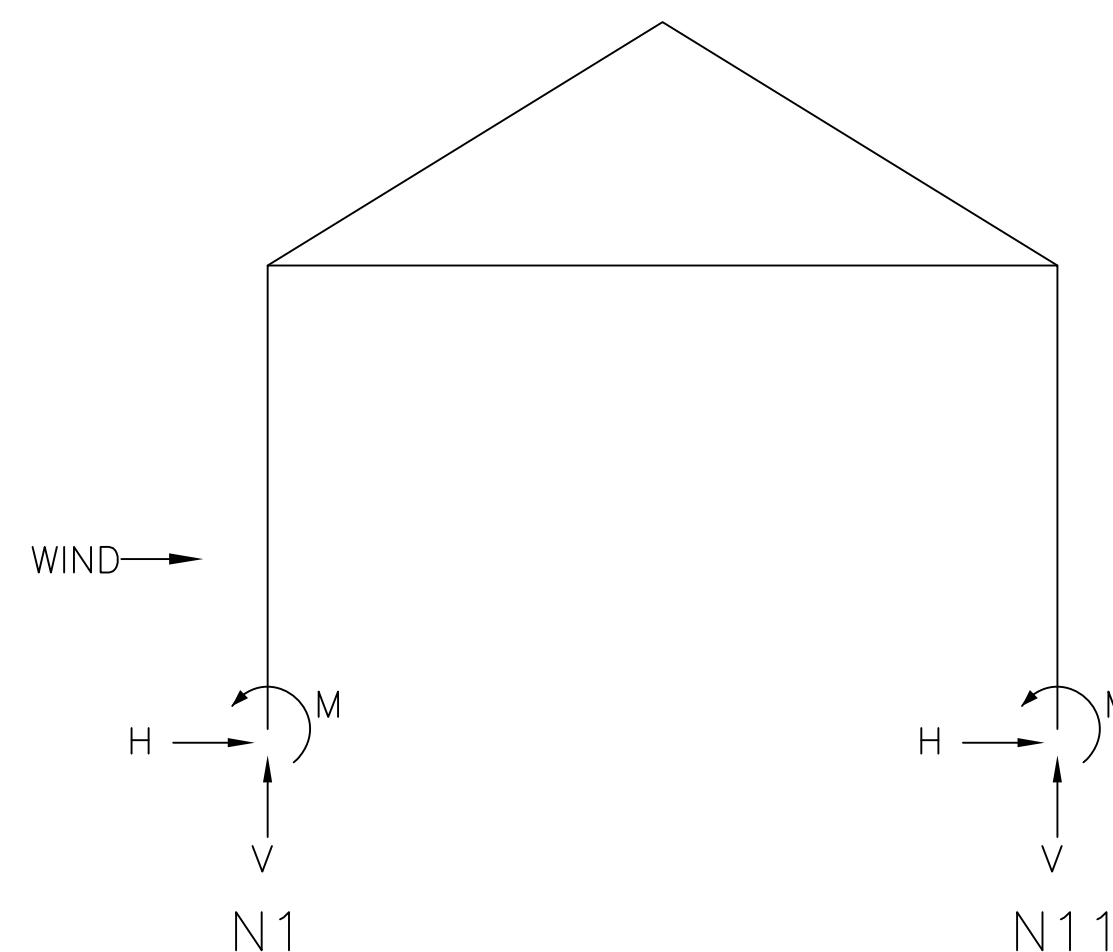
HILTI HIT-RE 500 EPOXY  
 3/4"Ø x 14"  
 THREADED RODS #127789  
 FOUNDATION ENGINEER  
 TO DESIGN & VERIFY  
 ANCHOR SIZE & EMBEDMENT

**BASEPLATE @ CORNER**

FOUNDATIONS, REINFORCING, & ANCHOR BOLTS SHOWN ON THIS DRAWING ARE REPRESENTATIVE IN NATURE AND SHALL BE DESIGNED BY OTHERS

**REACTIONS TABLE**

LOAD CASE	LOAD CASE DESCRIPTION	JOINT N1	JOINT N11
LOAD CASE 1	D+Lr	VERTICAL LOAD = 2.89 KIPS SHEAR = 0.1468 KIPS MOMENT = -0.6007 KIP-FT	VERTICAL LOAD = 2.89 KIPS SHEAR = -0.1468 KIPS MOMENT = 0.6007 KIP-FT
LOAD CASE 2	D+0.6W (GCpi = +0.18)	VERTICAL LOAD = -0.8405 KIPS SHEAR = -0.955 KIPS MOMENT = 3.9285 KIP-FT	VERTICAL LOAD = -0.7609 KIPS SHEAR = -1.0144 KIPS MOMENT = 3.855 KIP-FT
LOAD CASE 3	D+0.6W (GCpi = -0.18)	VERTICAL LOAD = -0.0068 KIPS SHEAR = -1.1705 KIPS MOMENT = 4.2778 KIP-FT	VERTICAL LOAD = 0.0782 KIPS SHEAR = -0.7989 KIPS MOMENT = 3.62 KIP-FT
LOAD CASE 4	D+0.75S+0.75(0.6W) (GCpi=+0.18)	VERTICAL LOAD = 1.4039 KIPS SHEAR = -0.6111 KIPS MOMENT = 2.6421 KIP-FT	VERTICAL LOAD = 1.475 KIPS SHEAR = -0.866 KIPS MOMENT = 3.4318 KIP-FT
LOAD CASE 5	D+0.75S+0.75(0.6W) (GCpi=-0.18)	VERTICAL LOAD = 2.0296 KIPS SHEAR = -0.7734 KIPS MOMENT = 2.8952 KIP-FT	VERTICAL LOAD = 2.104 KIPS SHEAR = -0.7036 KIPS MOMENT = 3.2486 KIP-FT
LOAD CASE 6	0.6D+0.6W (GCpi=+0.18)	VERTICAL LOAD = -0.9422 KIPS SHEAR = -0.9603 KIPS MOMENT = 3.9427 KIP-FT	VERTICAL LOAD = -0.8632 KIPS SHEAR = -1.0991 KIPS MOMENT = 3.8272 KIP-FT
LOAD CASE 7	0.6D+0.6W (GCpi=-0.18)	VERTICAL LOAD = -0.1085 KIPS SHEAR = -1.1758 KIPS MOMENT = 4.2918 KIP-FT	VERTICAL LOAD = -0.0241 KIPS SHEAR = -0.7936 KIPS MOMENT = 3.5918 KIP-FT



**NOTE:**  
 LOADING HAS BEEN CALCULATED WITH WINDWARD LOADING FROM THE LEFT. THE FOUNDATION SHALL BE DESIGNED FOR REVERSIBLE WIND LOADING.



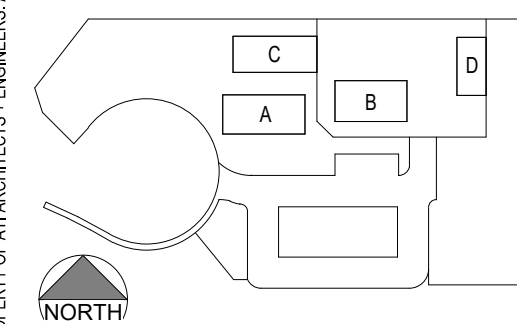
4750 Willow Road #250 Pleasanton, CA 94588 • T 925.648.8800  
 3009 Douglas Blvd #200 Roseville, CA 95661 • T 916.772.1800  
 444 S Flower St #1200 Los Angeles, CA 90071 • T 714.338.1600

PROFESSIONAL STAMP:

CONSULTANT:

ITEM	REVISION / ISSUE	DATE

KEY PLAN:



CLPCCD - LAS POSITAS COLLEGE

AGRICULTURE SCIENCE HORTICULTURE FACILITY

3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**BLDG B. - GREENHOUSE (NON-CERTIFIED) STRUCTURE DETAILS**

DRAWN BY: TX CHECKED BY: ECR  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO: NB002

**NB002**

07/06/2020 - 01:24:03 PM G:\ACTIVE\CLPCCD\ATI Architects & Engineers\ATI Custom Title Block\DWG\NB002.dwg - emehrbt



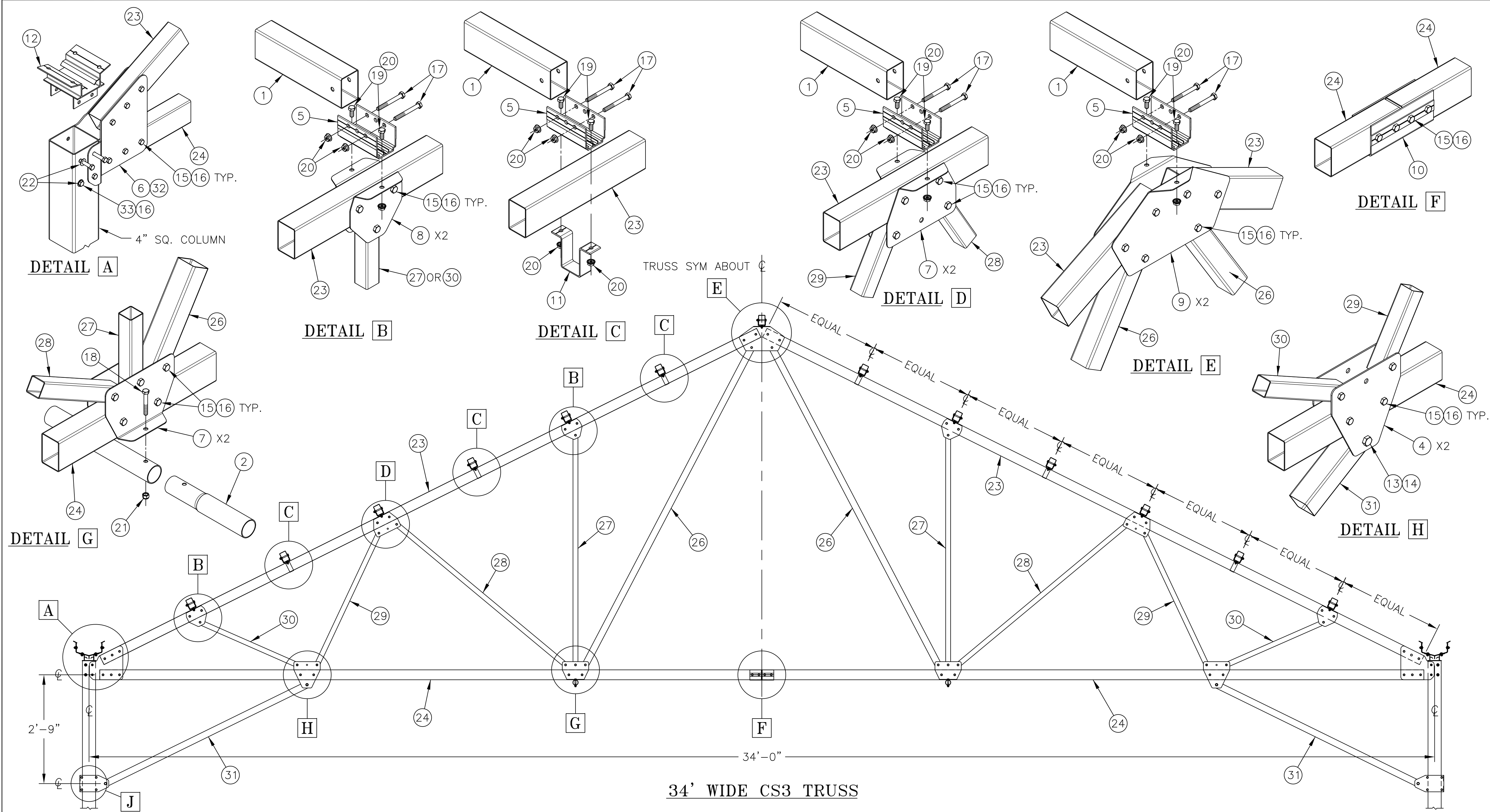
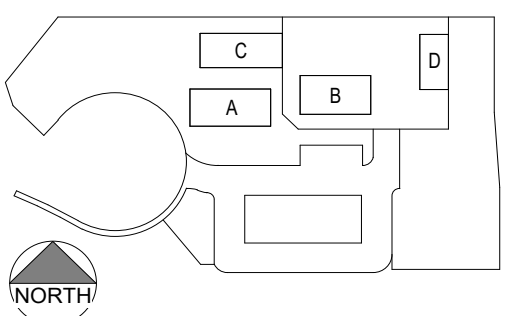
4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200 Los Angeles, CA 90071 - T 714.339.1600

PROFESSIONAL STAMP:

CONSULTANT:

ITEM	REVISION / ISSUE	DATE

KEY PLAN:

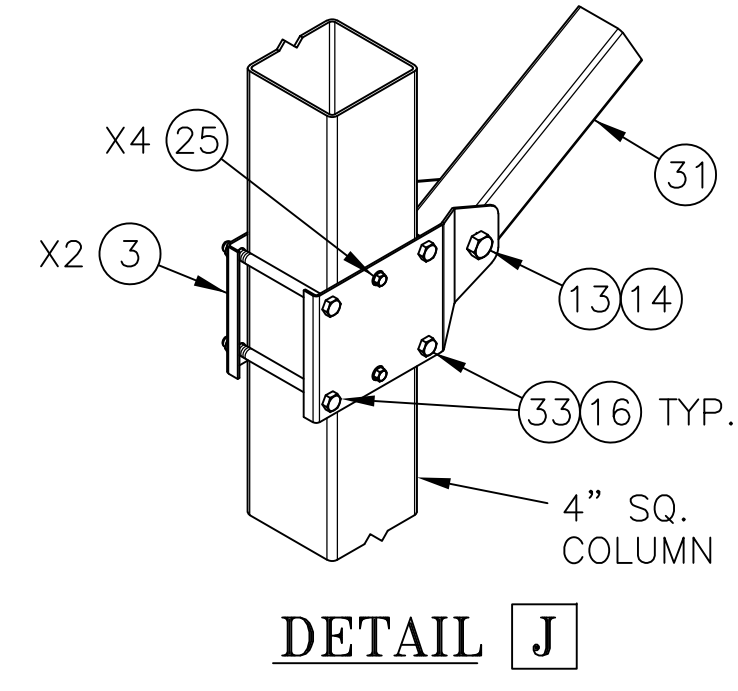


34' WIDE CS3 TRUSS

#	ITEM #	MATERIAL LIST - PART DESCRIPTION	#	ITEM #	MATERIAL LIST - PART DESCRIPTION
1	----	3x2 ROOF PURLIN (SEE LAYOUT DRAWINGS)	18	13430	5/16-18 2-1/4" HEX BOLT G5CD
2	----	1.66 O.D. PURLIN (SEE LAYOUT DRAWINGS)	19	1339	5/16-18 x 3/4" HEX BOLT GR5 CAD
3	993487	CS3 4x4 KICK BRACE BRACKET SINGLE	20	1346	5/16-18 HEX LOCKNUT SRTD FLANGE
4	995246	CS3 KICK BRACE TO HBM BRACKET 3 HOLE	21	13921	5/16-18 LOCKNUT NYLON INSERT ZP
5	P2390	3x2 PURLIN BRACKET 4.5"	22	1306	3/8" x 13/16" OD WASHER ZP
6	998018	CS3 TRUSS PLATE 4x4 RH - CODE APPLICATION	23	999876	34' CS3 3x2 TOP CHORD
7	992858	CS3 TRUSS BRACE BRKT THREE HOLE	24	999877	34' CS3 3x2 BOTTOM CHORD
8	992865	CS3 TRUSS BRACE BRKT ONE HOLE	25	10342	#12-14 1" TEK 3 MILL CC
9	996002	CS3 TRUSS RIDGE CONNECTION	26	995236-10811	2X2-15 108-11/16" HH TRUSS BRACE (3/8" BOLT)
10	P2989	3x2 TUBE SPLICE 7-1/4"	27	993610-06911	1.5SQ-16 69-11/16" HH BRACE
11	P2990	3x2 TUBE STRAP ALUM	28	993610-06611	1.5SQ-16 66-11/16" HH BRACE
12	----	CS3 COLUMN TOP/GUTTER SUPPORT	29	993610-04403	1.5SQ-16 44-3/16" HH BRACE
13	13902	1/2-13 x 3" HEX BOLT GR5 CAD	30	993610-03203	1.5SQ-16 32-3/16" HH BRACE
14	1319	1/2-13 LOCKNUT HEX SERR FLANGE CAD	31	994731-06801	2X2-15 68-1/16" HH KICK BRACE (1/2" BOLT)
15	13468	3/8-16 x 2-3/4" HEX BOLT GR5 CAD	32	998019	CS3 TRUSS PLATE 4x4 LH - CODE APPLICATION
16	1349	3/8-16 LOCKNUT HEX FLANGE SERR CAD	33	12761	3/8-16 x 5" HEX BOLT GR5 ZP
17	13431	5/16-18 x 2-3/4" HEX BOLT GR5 CAD	34	----	----

NOTES:

- ALL STEEL FOR GREENHOUSE MEMBERS MEET REQUIREMENTS OF ASTM A1011M-02.
- MIN. YIELD STRENGTH OF STEEL MEMBERS SHALL BE 50 KSI UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE SAE GRADE 5 OR ASTM A325 UNLESS OTHERWISE NOTED.



DETAIL J

CLPCCD - LAS POSITAS COLLEGE  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

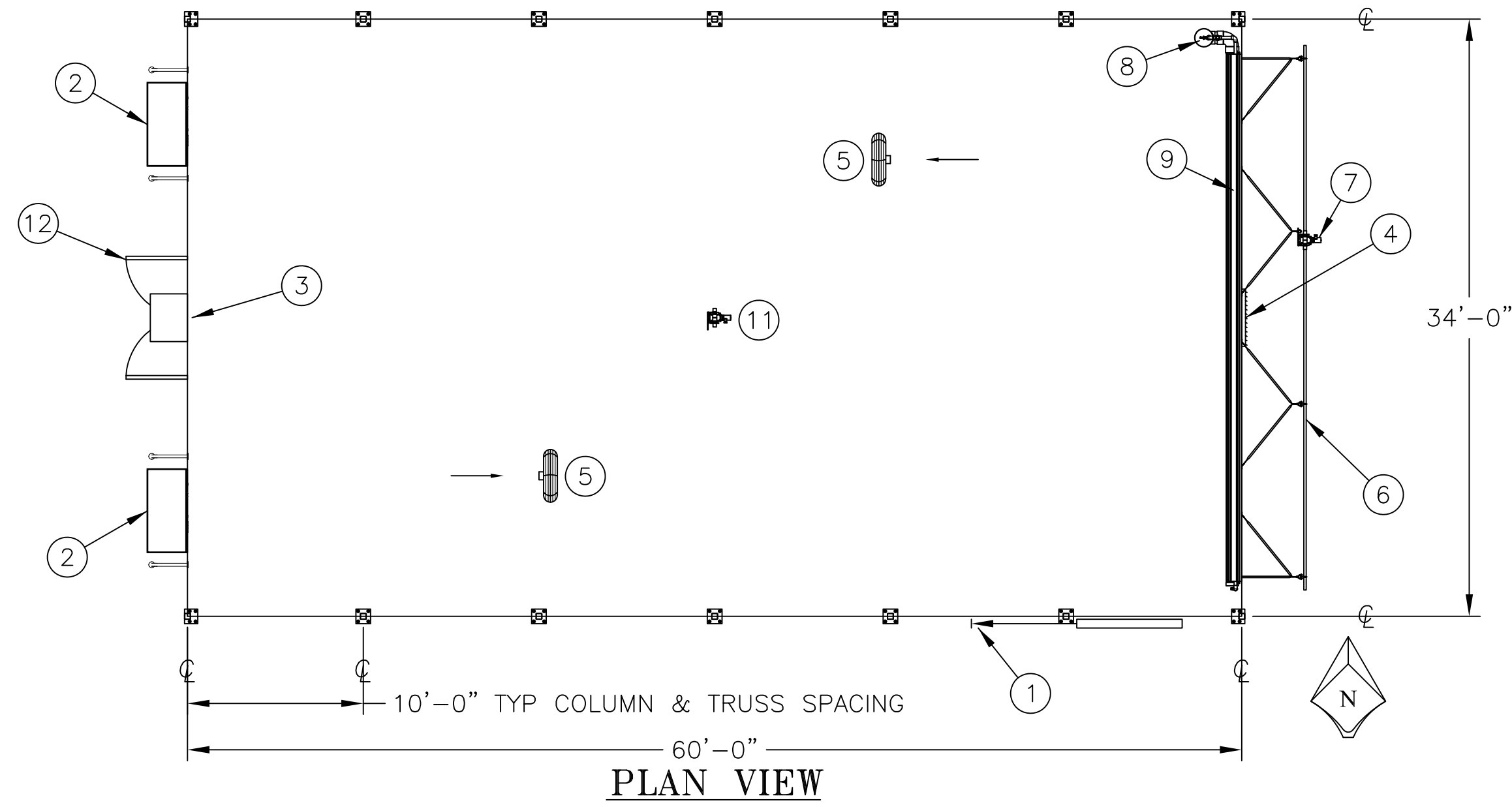
**BLDG B. - GREENHOUSE (NON-CERTIFIED) STRUCTURE TRUSS DETAILS**

DRAWN BY: TX CHECKED BY: ECR  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO: NB003

**NB003**



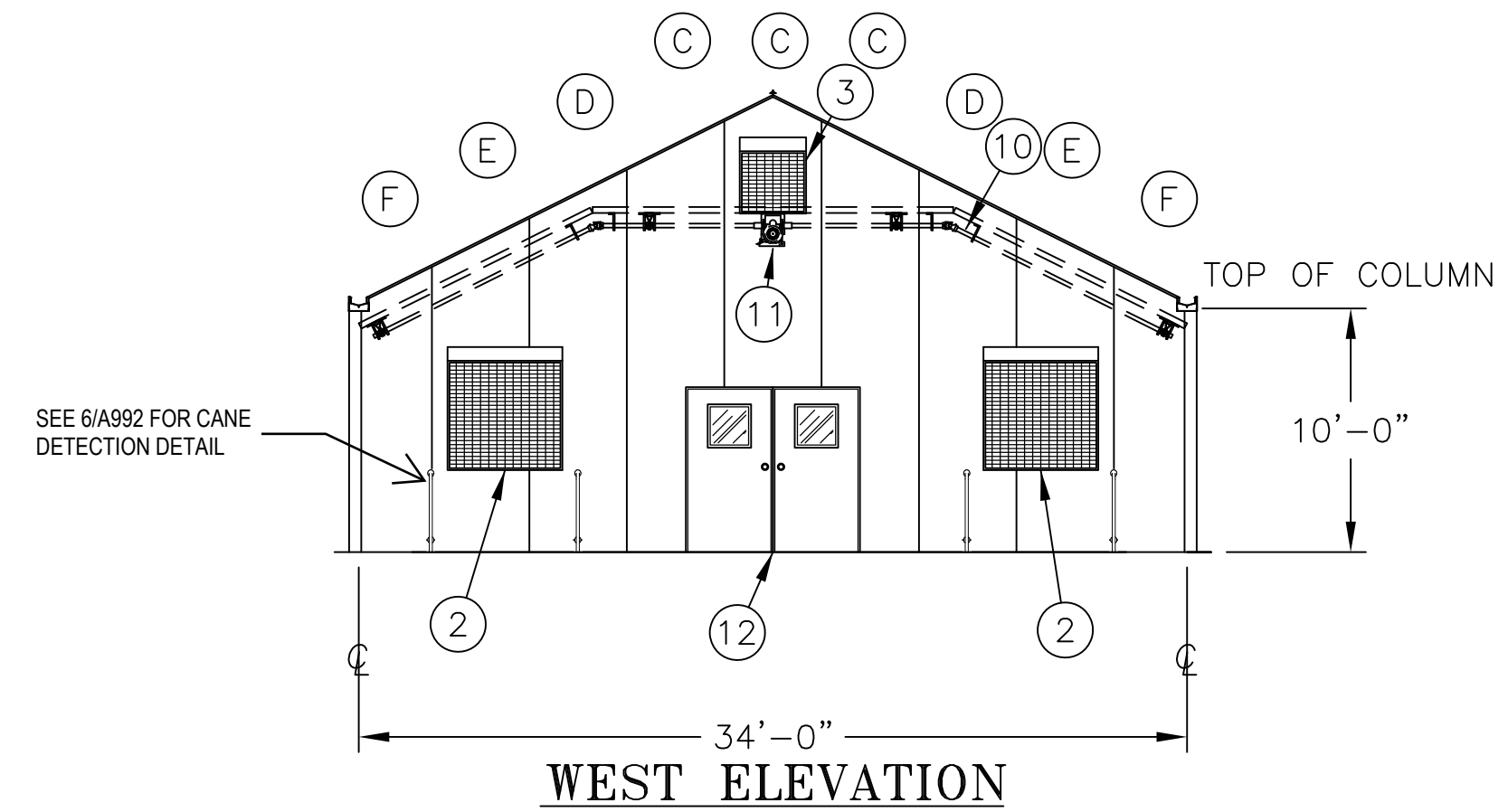
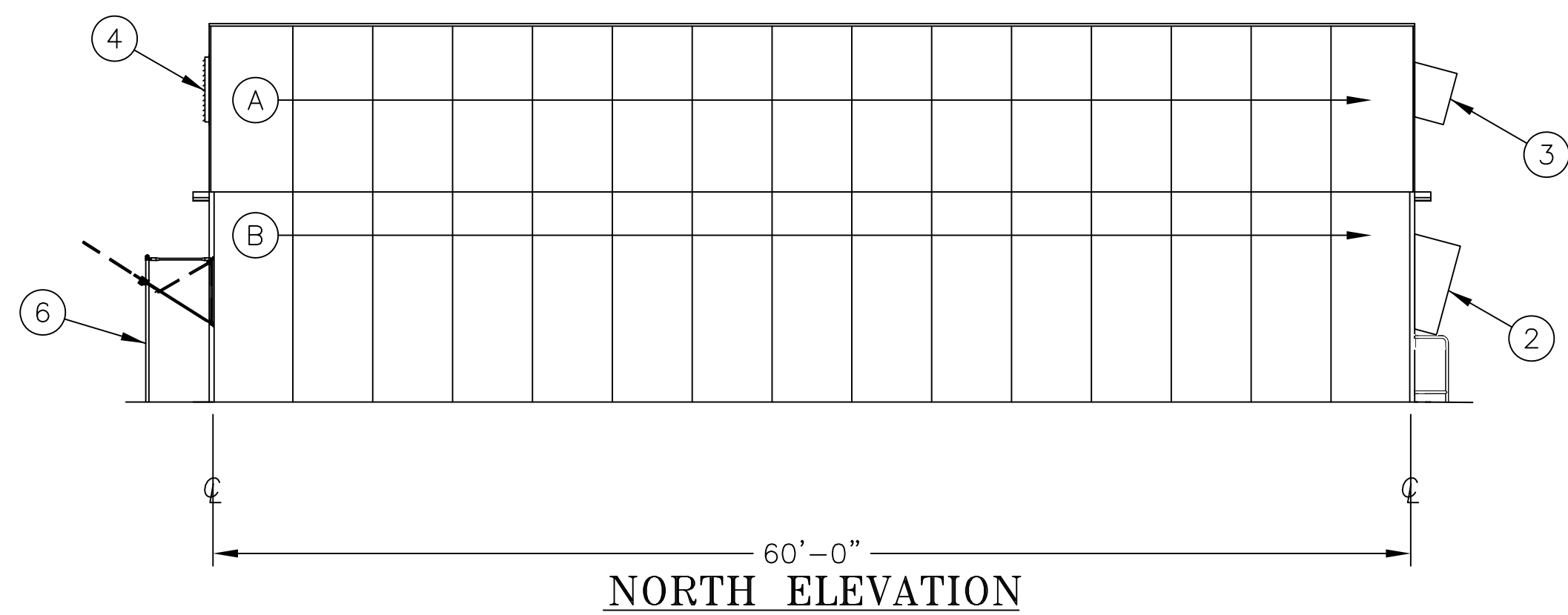
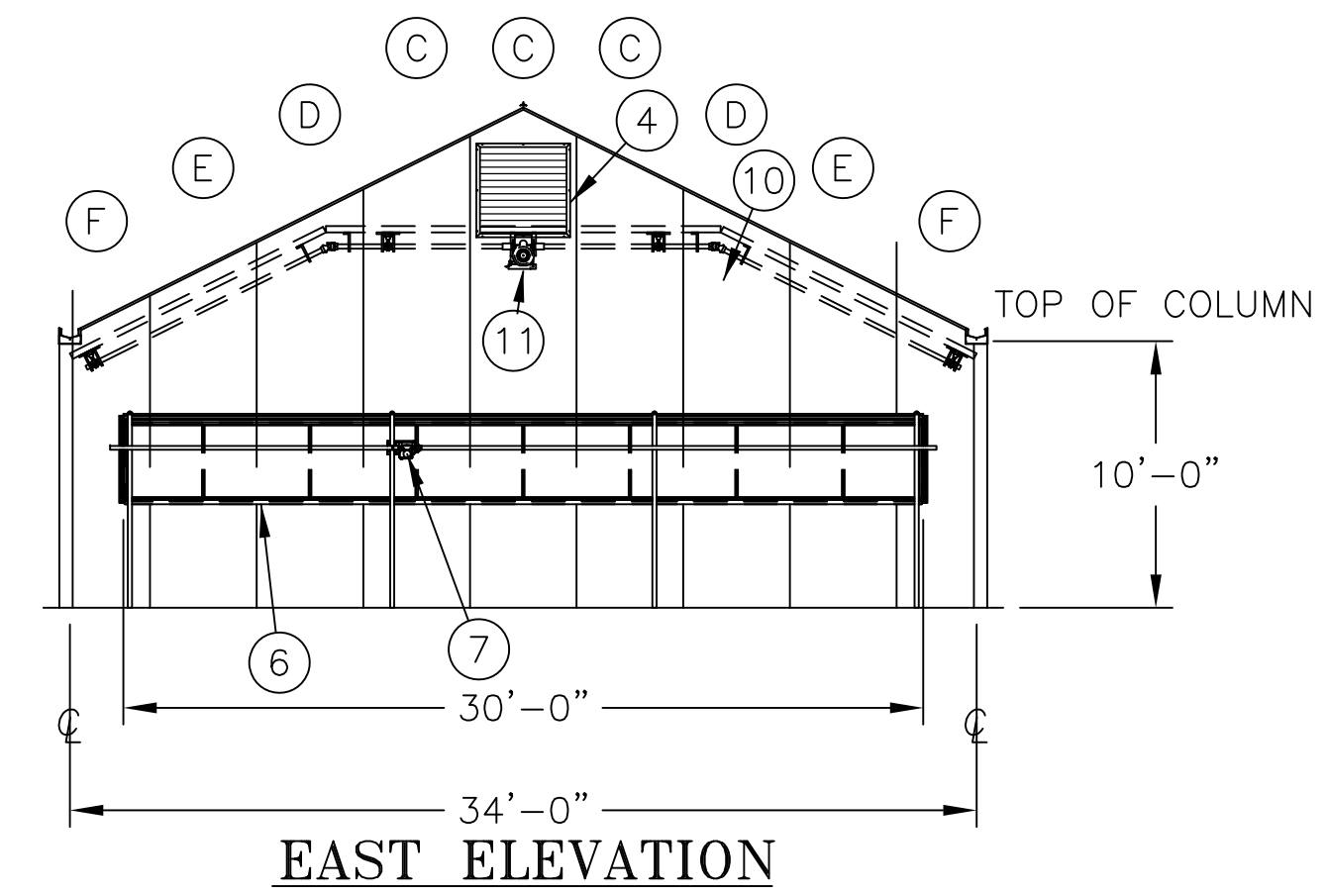
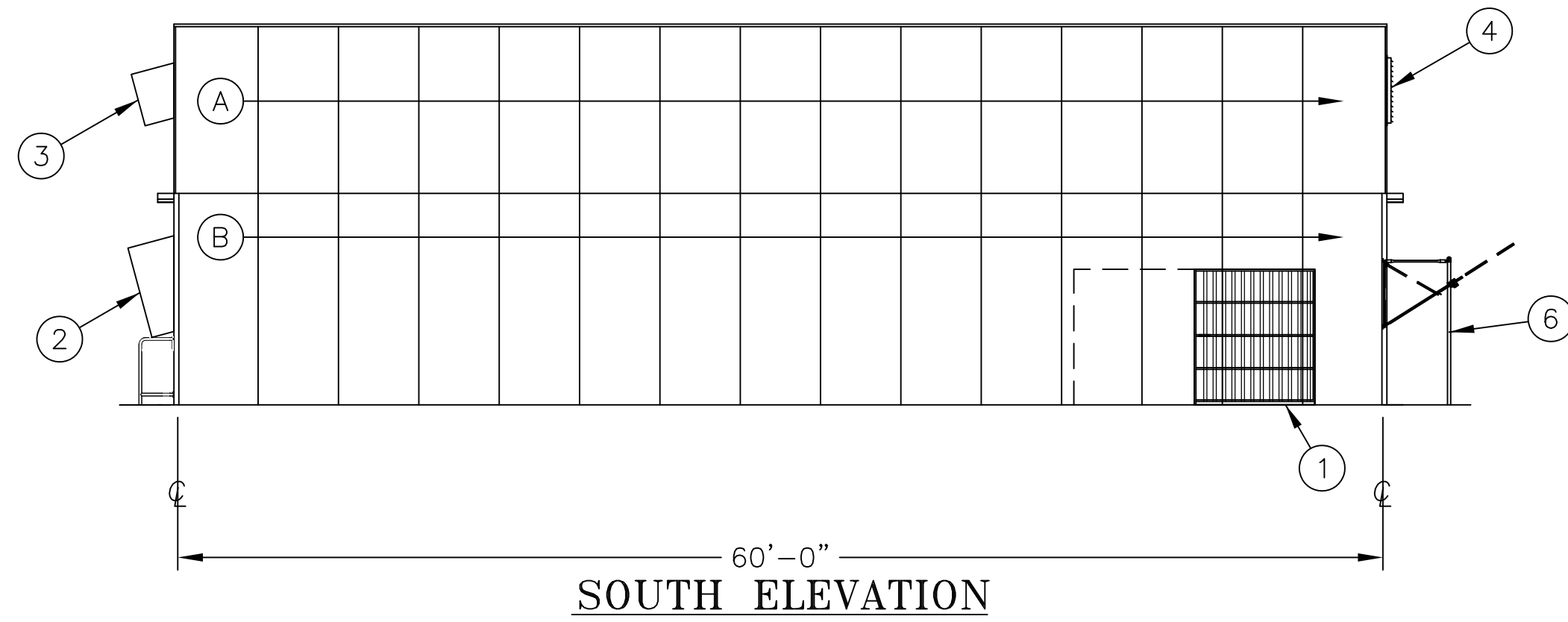
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021



#	ITEM #	MATERIAL LIST -- PART DESCRIPTION	QTY
1	2345-7-6C	6'W X 6'-9"H DOOR CORRUGATED	1
2	33015	MAL48K 115/230/1 PKG 3/4HP, W REAR GUARD	2
3	33001	MAL24H 115/230/1 PKG 1/3 HP, W REAR GUARD	1
4	330614	SHUTTER 39" X 39"ID DOUBLE	1
5	32915	ACME HAF 20F4 1/3HP 115V	2
6	1915	36" RIGID VENT SYS 1-1/4"DR	30FT
7	34516	WW VC100A ILS 1-5/8"OD SHAFT NO CONTROL	1
8	330975	PVC CT 6" X 30' D&R, CMN PARTS, SUMP & PLMB KIT, ELBOWS	1
9	330801	6" X 36" KUUL PAD	30
10	----	STUPPY SFS SHADE SYSTEM	1
11	34520	WW VC2000 3RPM NO LIMIT MTR-GEAR-HDWR 1-5/8" NO CONTROL	1
12	----	DOUBLE DOOR	1

LTR	ITEM #	MATERIAL LIST -- PANEL DESCRIPTION	QTY
A	22993	DG+ CORR UV1 49.6" SS85 X 19'-0"	30
B	23042	DG+ CORR UV1 49.6" CLEAR X 11'-0"	30
C	23042	DG+ CORR UV1 49.6" CLEAR X 19'-0"	6
D	23042	DG+ CORR UV1 49.6" CLEAR X 16'-6"	4
E	23042	DG+ CORR UV1 49.6" CLEAR X 14'-6"	4
F	23042	DG+ CORR UV1 49.6" CLEAR X 12'-6"	4

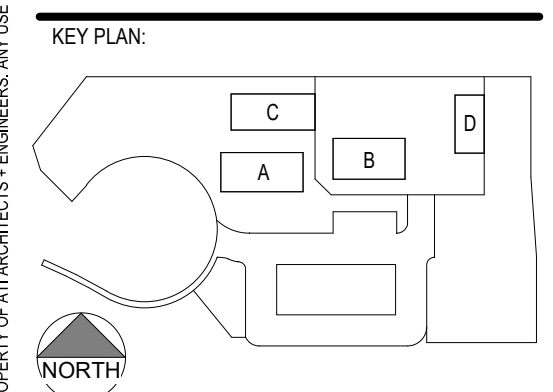
- NOTES:
- CHECK WITH CUSTOMER FOR EXACT LOCATION OF DOORS AND ALL EQUIPMENT.
  - REFER TO ENDWALL FRAMING DRAWINGS FOR ASSEMBLY OF ENDWALLS.
  - IN THE EVENT OF UNINTENDED CONFLICT OF EQUIPMENT PLACEMENT & CODE STRUCTURE, WHEN APPLICABLE, PRIORITY WILL BE GIVEN TO CODE STRUCTURE.



PROFESSIONAL STAMP:

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS  
COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**BLDG B - GREENHOUSE  
(NON-CERTIFIED)  
LAYOUT & ELEVATIONS**

DRAWN BY: TX      CHECKED BY: ECR  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO: NB004

**NB004**

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 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021

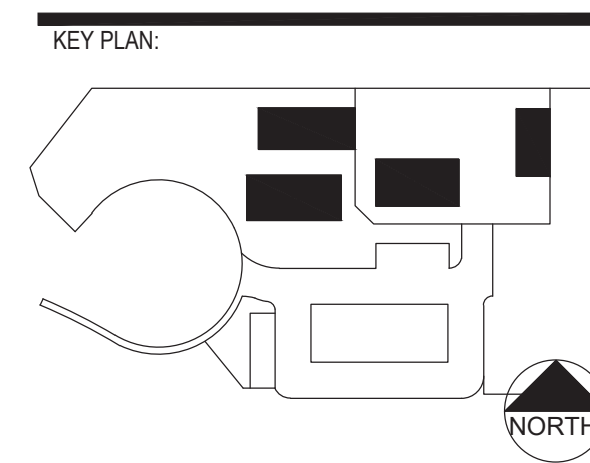
**ATI**  
 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1800

PROFESSIONAL STAMP:  
**CLARK T. KELLY**  
 No. 33181  
 CIVIL  
 Exp. 6/30/2022  
**ROBERT J. BILCHAK**  
 No. 26772  
 REGISTERED PROFESSIONAL ENGINEER  
 CIVIL  
 Exp. 12/31/2022

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
A	100% DD SUBMITTAL	03/27/2020

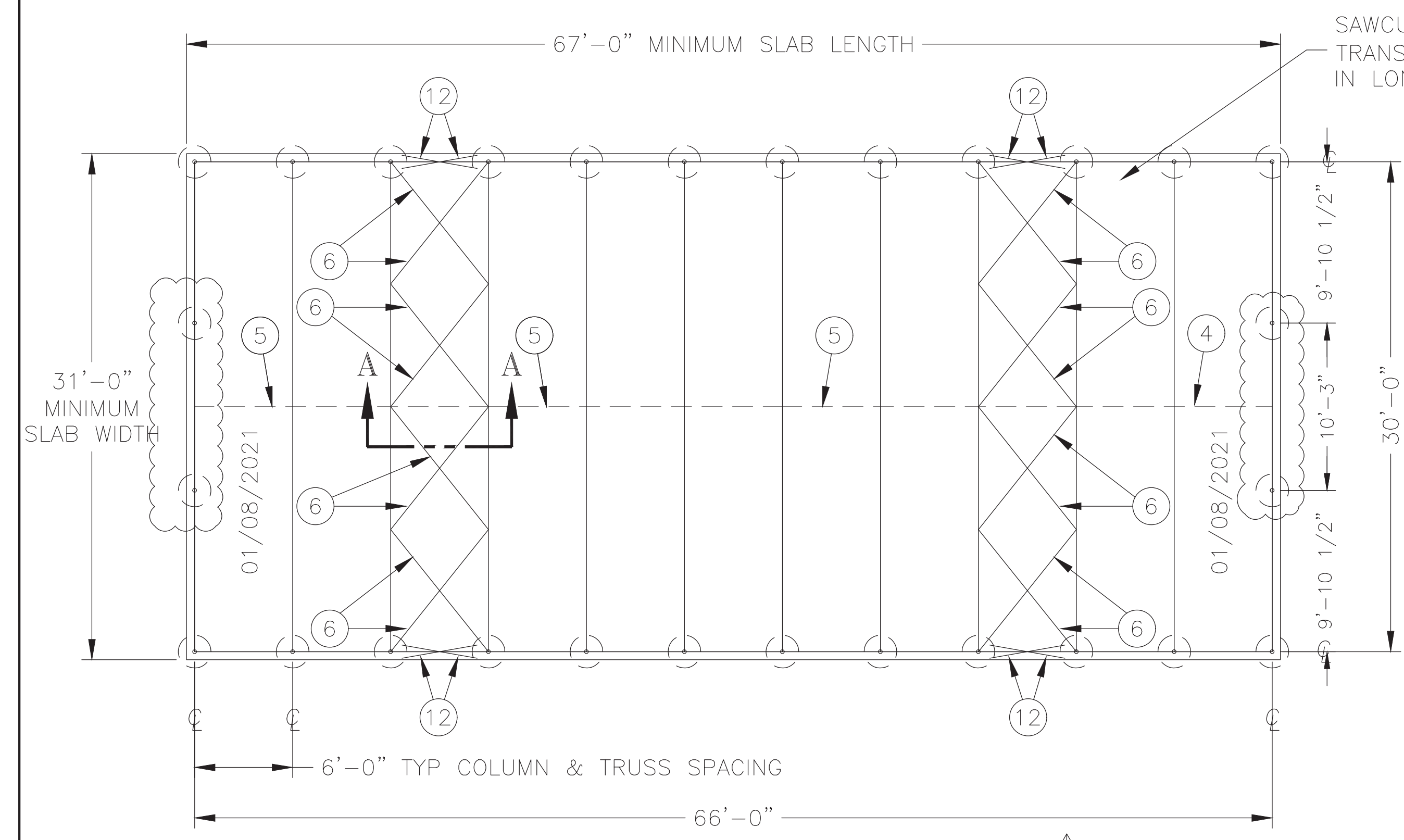


**CLPCCD - LAS POSITAS COLLEGE**  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

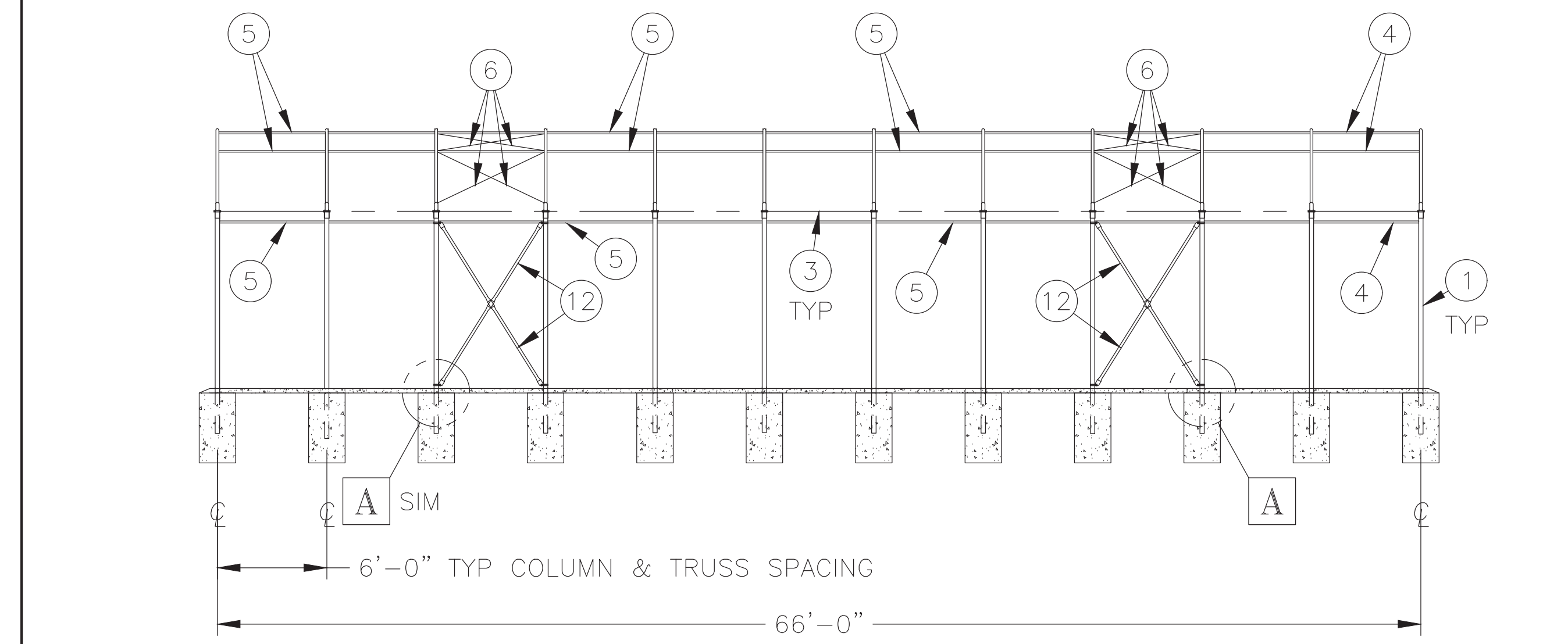
BLDG C. - SHADE HOUSE  
 STRUCTURE PLAN

DRAWN BY: TX      CHECKED BY: ECR  
 DATE: 01/14/2021      PROJECT NO: 09508  
 SHEET NO: NC001

**NC001**



**PLAN VIEW**  
 (ROOF PURLINS NOT SHOWN FOR CLARITY)



**TYPICAL SIDEWALL ELEVATION**  
 (SIDEWALL GIRTS NOT SHOWN FOR CLARITY)

SAWCUT SLAB @ 12' O.C. IN TRANSVERSE DIRECTION & 10' O.C. IN LONGITUDINAL DIRECTION

**GENERAL STRUCTURAL NOTES**

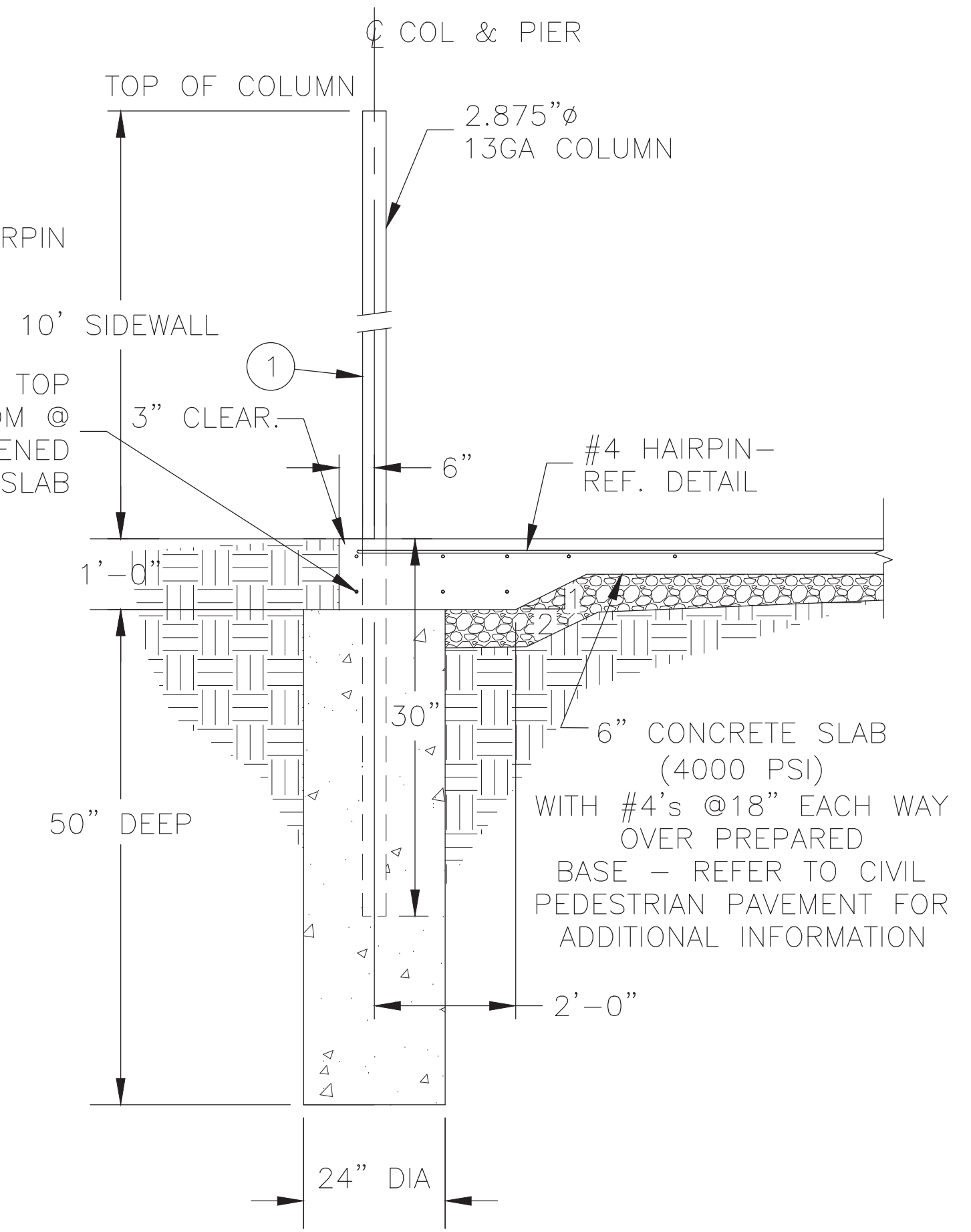
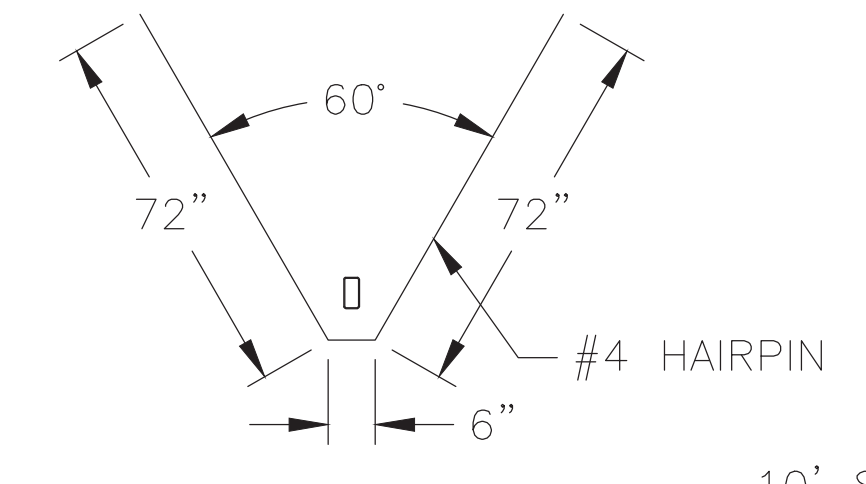
GOVERNING BUILDING CODE: 2019 CALIFORNIA BUILDING CODE (CBC) AND ITS APPROPRIATE SUPPLEMENTS.

DESIGN LOADS:

GRAVITY:  
 ROOF LIVE LOAD \_\_\_\_\_ 12 PSF  
 GROUND SNOW LOAD; P<sub>g</sub> \_\_\_\_\_ 0 PSF

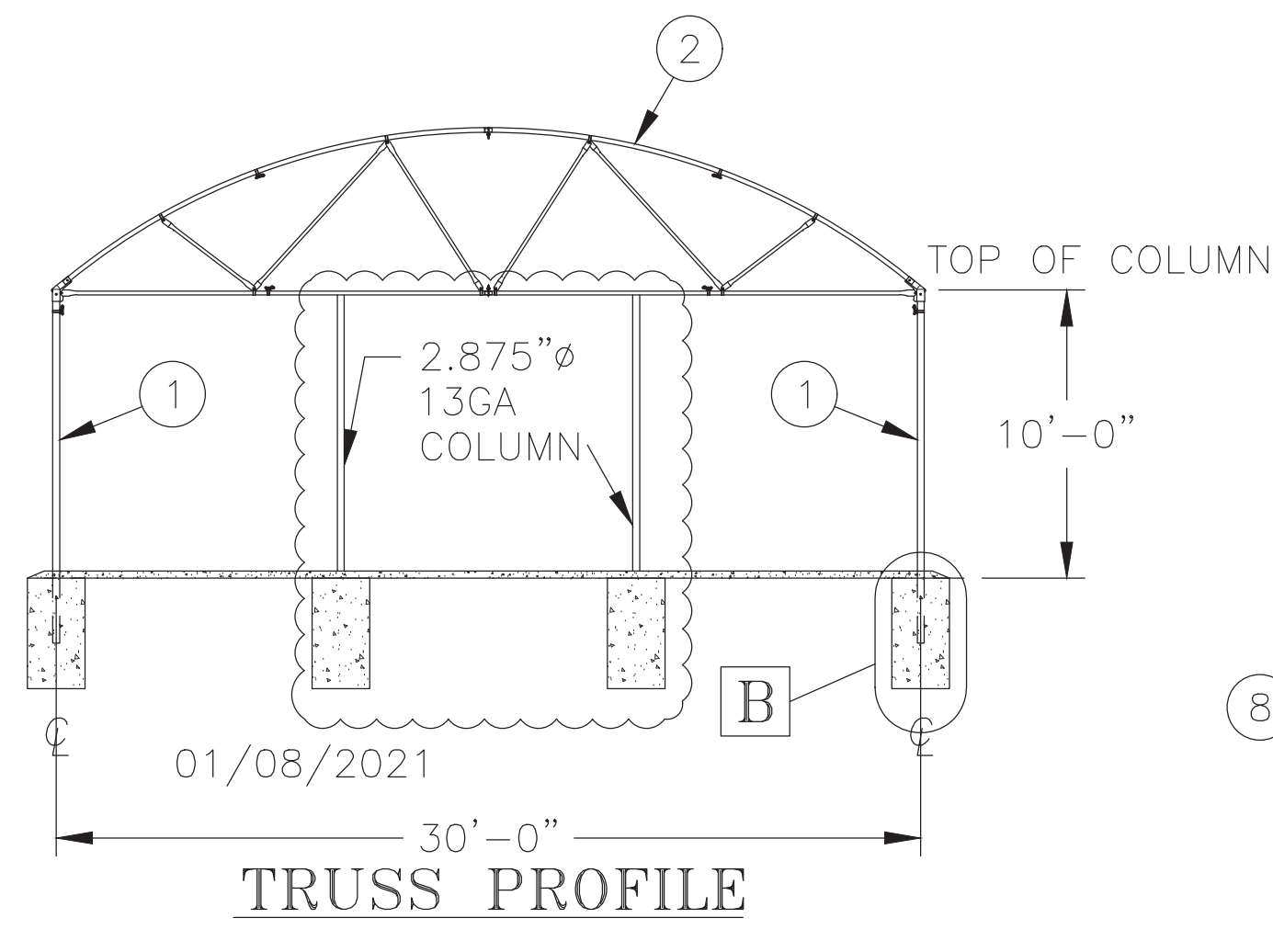
WIND:  
 BASIC WIND SPEED \_\_\_\_\_ 110 MPH  
 WIND IMPORTANCE FACTOR; I<sub>w</sub> \_\_\_\_\_ 1.0  
 RISK CATEGORY \_\_\_\_\_ II  
 EXPOSURE CATEGORY \_\_\_\_\_ C  
 INTERNAL PRESSURE COEFFICIENT \_\_\_\_\_ ±0.18

SEISMIC:  
 SEISMIC IMPORTANCE FACTOR; I<sub>e</sub> \_\_\_\_\_ 1.0  
 SITE CLASS \_\_\_\_\_ D  
 SPECTRAL RESPONSE COEFFICIENT; S<sub>ds</sub> \_\_\_\_\_ 1.151g  
 SPECTRAL RESPONSE COEFFICIENT; S<sub>d1</sub> \_\_\_\_\_ 0.68g  
 SEISMIC DESIGN CATEGORY \_\_\_\_\_ D  
 SFRS: \_\_\_\_\_ ELASTIC ORDINARY CANTILEVER COLUMN  
 DESIGN BASE SHEAR \_\_\_\_\_ 1.151W = 3.5 KIPS  
 RESPONSE MODIFICATION COEFFICIENT; R \_\_\_\_\_ 1.0  
 ANALYSIS PROCEDURE \_\_\_\_\_ EQUIVALENT LATERAL FORCE

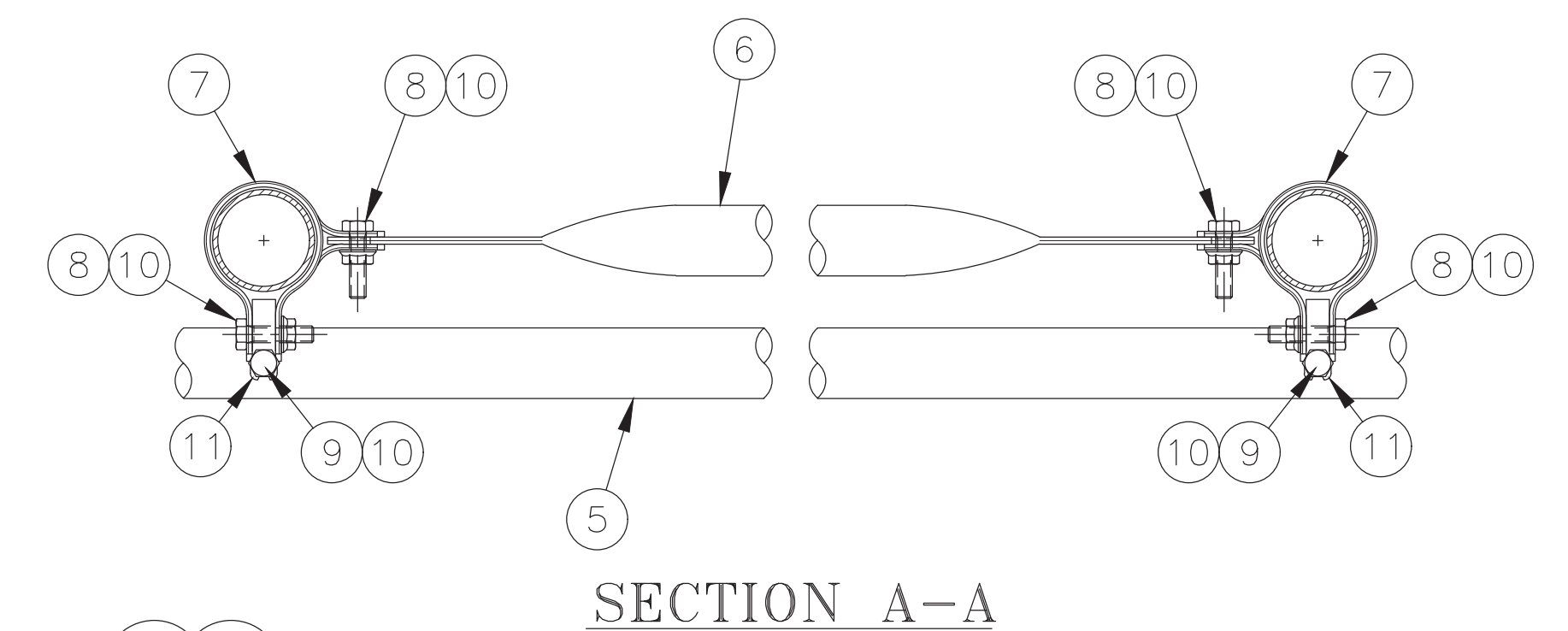


**B CONCRETE PIER DETAIL**  
 24"ø x 50" DEEP

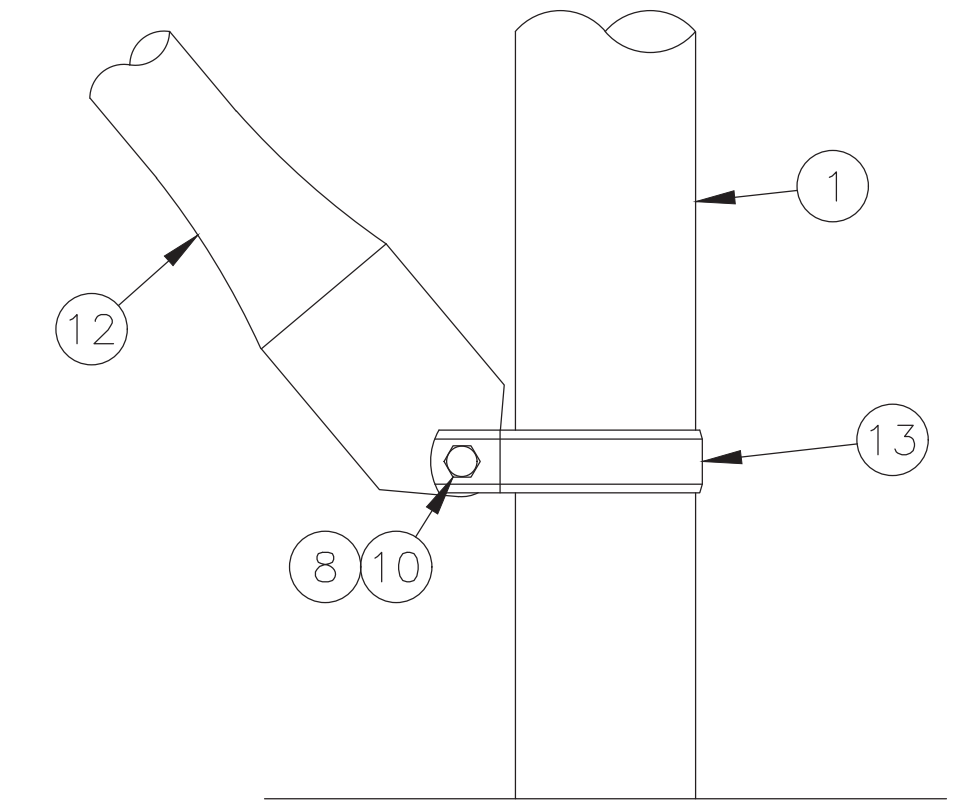
MIN. f'<sub>c</sub> @ 28 DAYS OF CONCRETE ≥ 2500 PSI  
 CLASS V SOIL (ASSUMED)  
 LATERAL BEARING PRESSURE = 100 PSF  
 ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF



**TRUSS PROFILE**



**SECTION A-A**



**A SIDEWALL WIND BRACING DETAIL**

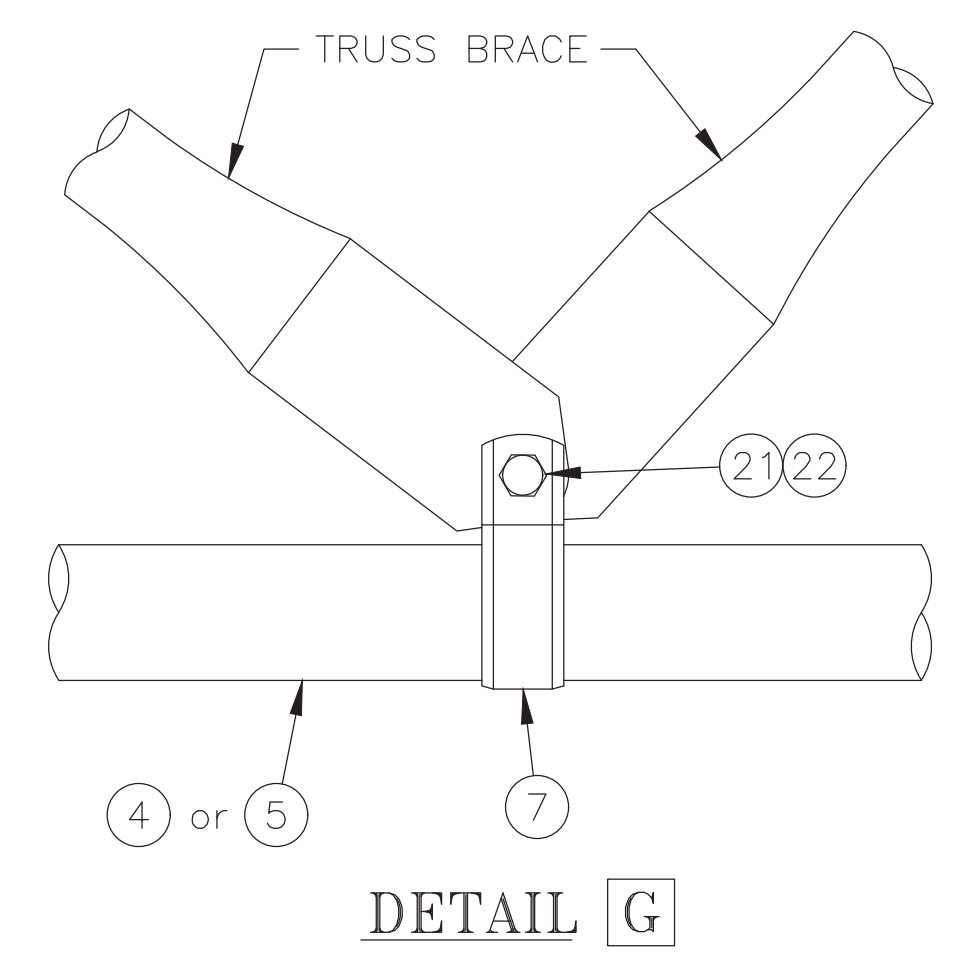
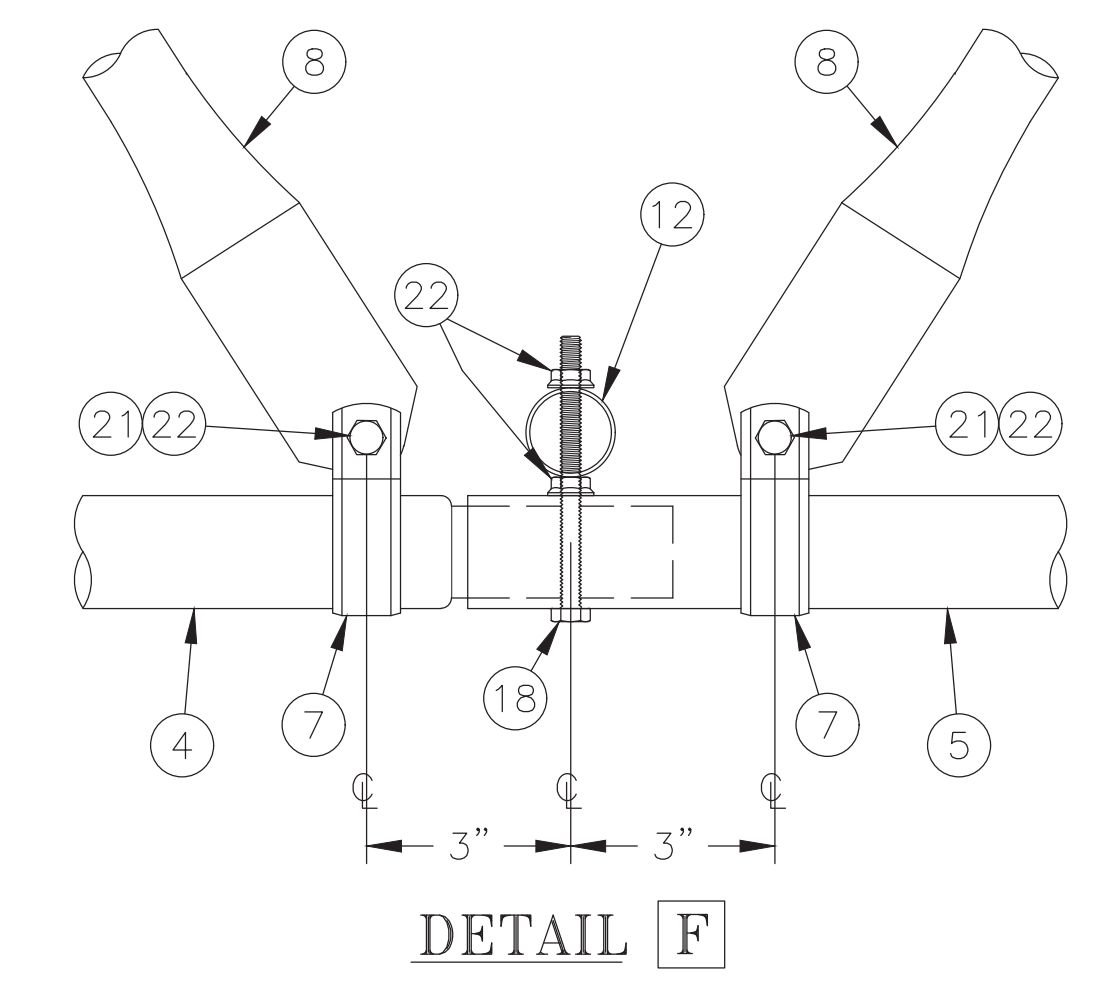
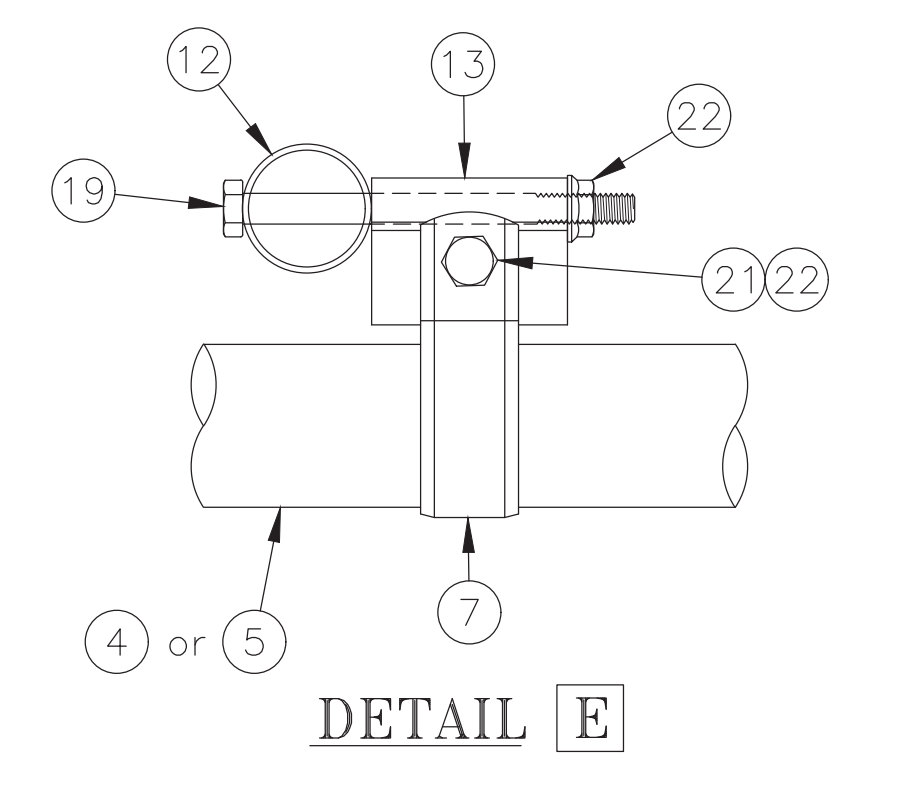
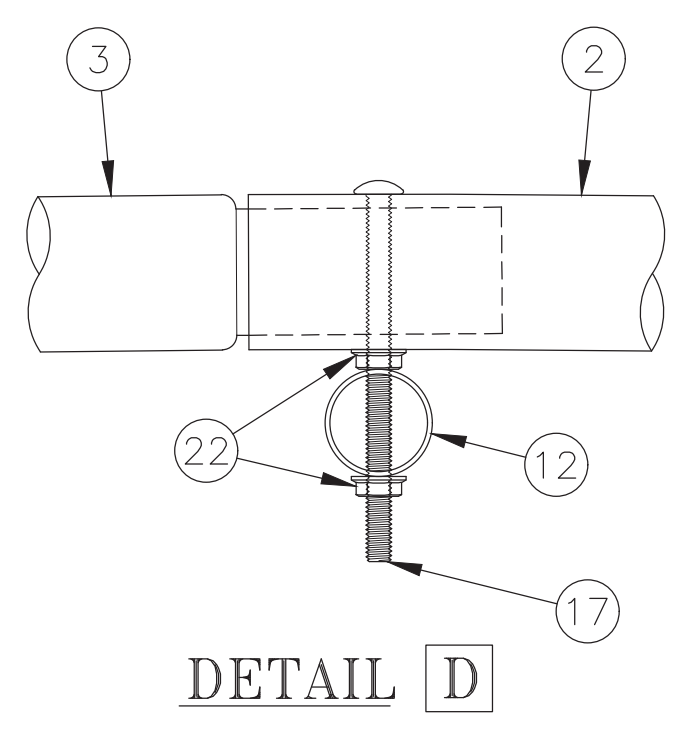
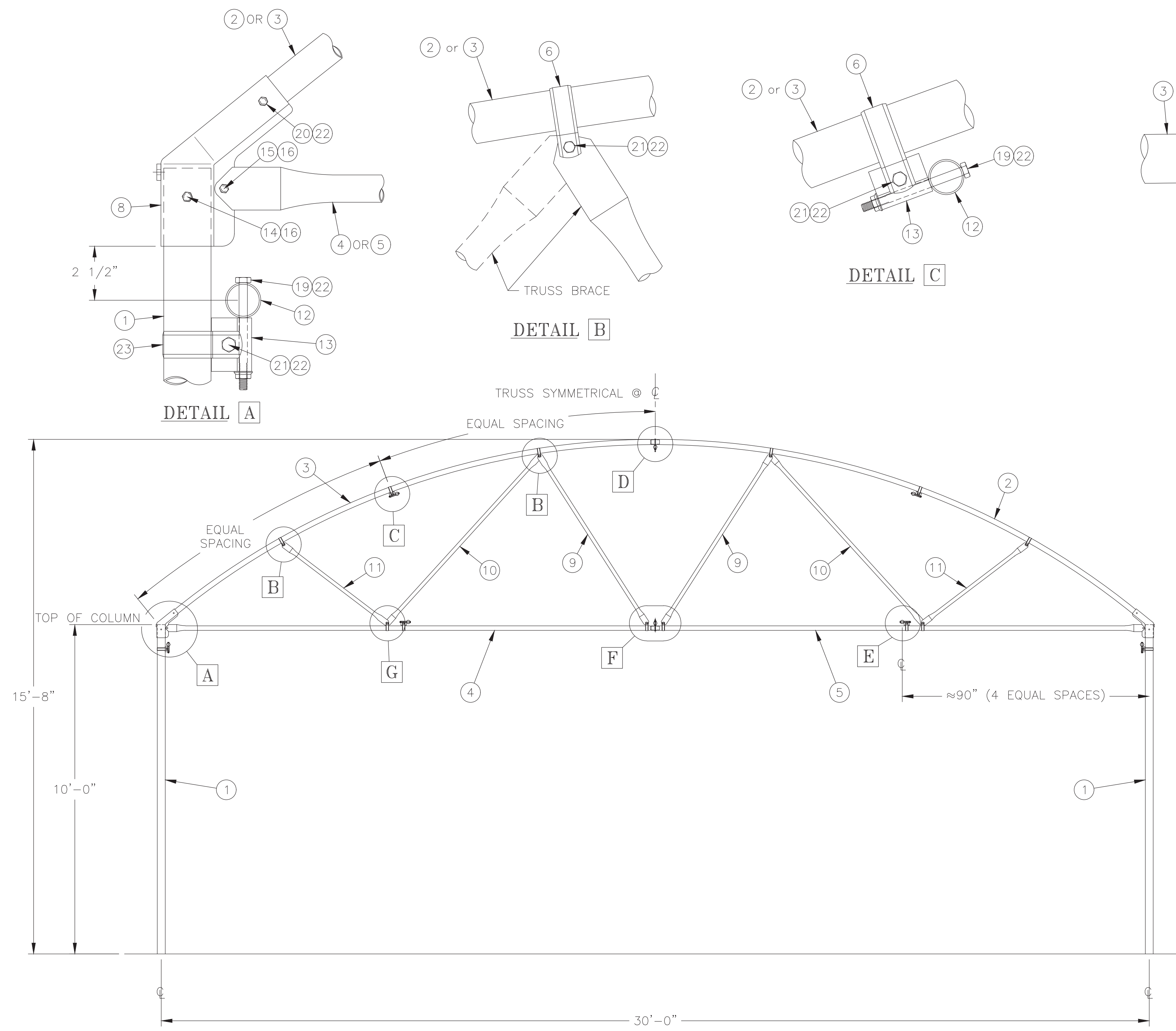
2019 CALIFORNIA BUILDING CODE  
 (BASED ON 2018 INTERNATIONAL BUILDING CODE)  
 12 PSF ROOF LIVE LOAD  
 0 PSF GROUND SNOW LOAD  
 110 MPH (ULTIMATE) WIND EXPOSURE C  
 SEISMIC: S/s=172.6%, S/1=60.0%

NOTES:

- ALL STEEL FOR GREENHOUSE MEMBERS MEET REQUIREMENTS OF ASTM A1011M-02.
- MIN. YIELD STRENGTH OF STEEL MEMBERS SHALL BE 50 KSI UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE SAE GRADE 5 OR ASTM A325 UNLESS OTHERWISE NOTED.

#	ITEM #	MATERIAL LIST - PART DESCRIPTION	#	ITEM #	MATERIAL LIST - PART DESCRIPTION
1	15858	2.875-13 150" COLUMN RB+	8	1341	5/16-18 1-1/4" HEX BOLT G5CD
2	----	30' WIDE RAINBOW PLUS "TRIPLE V" TRUSS (SEE DWG NC002)	9	13451	5/16-18 3-3/4" HEX BOLT G5CD
3	----	RAINBOW PLUS ALUMINUM EAVE	10	1346	5/16-18 LKNT HEX SERR FLNG G2CD
4	15372	1.315-16 PURLIN 12'-6"OC	11	10235	PURLIN BLOCK 2" ALUM
5	1535	1.315-16 PURLIN 18'-6"OC	12	P4791	1.66-15 129-1/2" HH CC FP
6	2144	1.315-16 113" HH CC FP	13	15252	2.875 HVY DUTY BRACE BAND (2-7/8)
7	15262	1.90 BRACE BAND			

01/08/2021 05:07:11 PM  
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#	ITEM #	MATERIAL LIST - PART DESCRIPTION	#	ITEM #	MATERIAL LIST - PART DESCRIPTION
1	15858	2.875-13 150" COLUMN RB+	13	10235	PURLIN BLOCK 2" ALUM
2	P5374	RB+ 30' 1/2 BOW PLAIN 1.90-14GA	14	1348	3/8-16 4" HEX BOLT G5CD
3	P5375	RB+ 30' 1/2 BOW SWEDGED 1.90-14GA	15	1276	3/8-16 1" HEX BOLT G5CD
4	P4954	30' 1/2HBM 1.66 SWG	16	1349	3/8-16 LOCKNUT HEX SERR FLANGE G2CD
5	P4953	30' 1/2HBM 1.66	17	13453	5/16-18 4-1/2" RND HD SLOT MS CD
6	15262	1.90 BRACE BAND (BEV 1-7/8)	18	Z0004	5/16-18 4" ALL THREAD G2CD
7	15263	1.66 BRACE BAND (BEV 1-5/8)	19	13451	5/16-18 3-3/4" HEX BOLT G5CD
8	15202	L CONNECTOR O/S WALL	20	1343	5/16-18 2-1/2" HEX BOLT G5CD
9	P0910	1.315-16 72-1/2" HH FP	21	1341	5/16-18 1-1/4" HEX BOLT G5CD
10	P0911	1.315-16 82-1/2" HH FP	22	1346	5/16-18 LOCKNUT HEX SERR FLANGE G2CD
11	P0909	1.315-16 47-1/2" HH FP	23	15252	2.875 HVY DUTY BRACE BAND (2-7/8)
12	----	Ø1.315-16GA PURLIN	24	----	-----

**NOTES:**

1. ALL STEEL FOR GREENHOUSE MEMBERS MEET REQUIREMENTS OF ASTM A1011M-02.
2. MIN. YIELD STRENGTH OF STEEL MEMBERS SHALL BE 50 KSI UNLESS OTHERWISE NOTED.
3. ALL BOLTS SHALL BE SAE GRADE 5 OR ASTM A325 UNLESS OTHERWISE NOTED.

2019 CALIFORNIA BUILDING CODE  
 (BASED ON 2018 INTERNATIONAL BUILDING CODE)  
 12 PSF ROOF LIVE LOAD  
 0 PSF GROUND SNOW LOAD  
 110 MPH (ULTIMATE) WIND EXPOSURE C  
 SEISMIC: S/s=172.6%, S/1=60.0%

**Norton & Schmidt**  
 Consulting Engineers, L.L.C.  
 311 East 11th Avenue  
 North Kansas City, MO 64116  
 Phone: (816) 421-4232  
 Fax: (816) 421-1956  
 www.nortonschmidt.com  
 N&S COA NUMBER: XXXX  
 N&S JOB NUMBER: 2020-1004  
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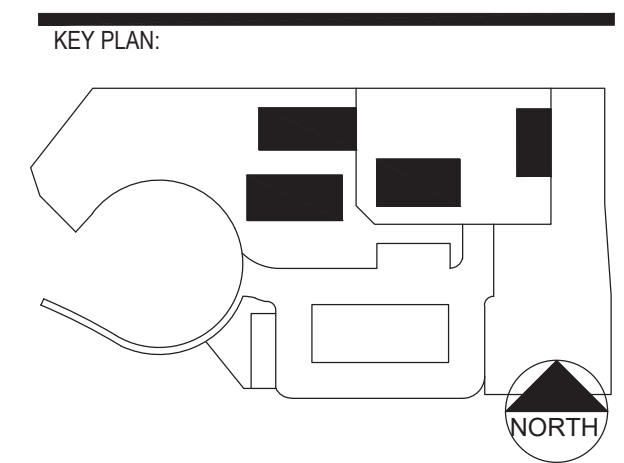


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 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
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CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:
A	100% DD SUBMITTAL	03/27/2020



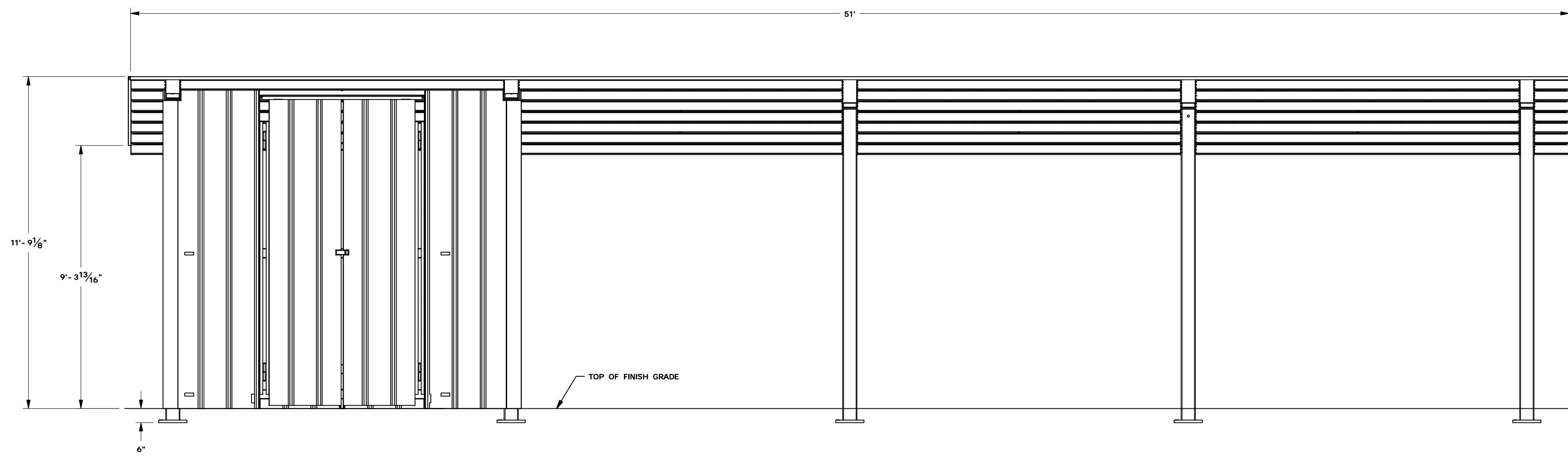
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 COLLEGE  
 AGRICULTURE  
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 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

BLDG C. - SHADE HOUSE  
 STRUCTURE TRUSS  
 DETAILS

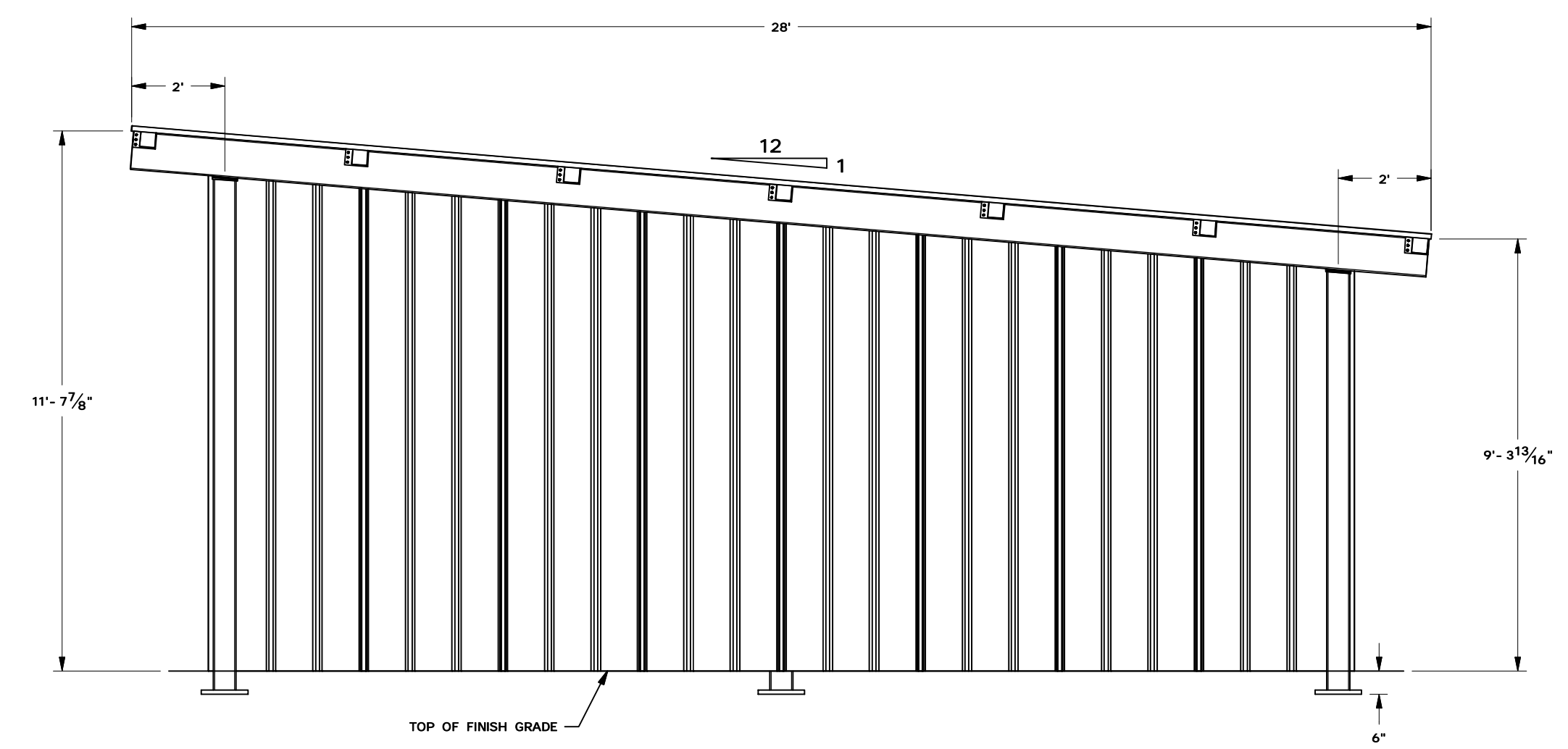
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**NC002**

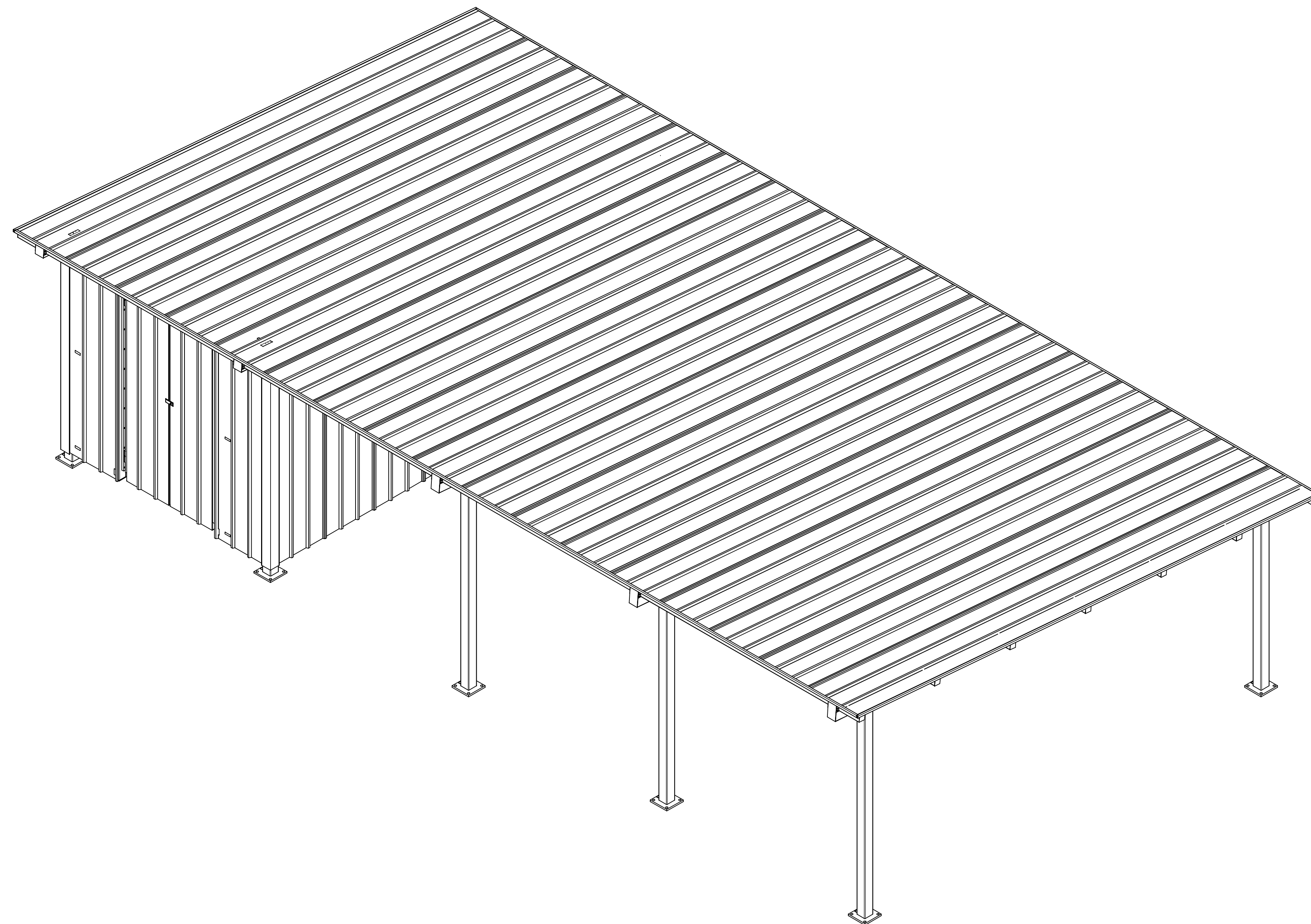




**FRONT VIEW**



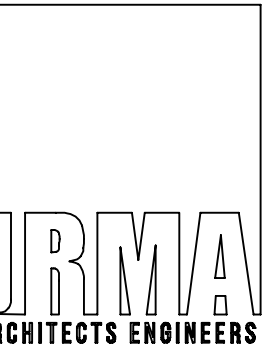
**SIDE VIEW**



**ISOMETRIC VIEW**

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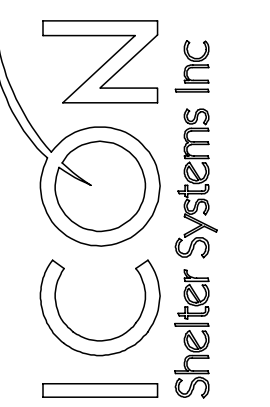
ICON JOB:	6636
DRAWN BY:	JMD
DATE:	11/6/2020
REV:	C
REV DATE:	11/6/2020



*J.R. Miller & Associates*  
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 tel. 714.524.1870  
 fax. 714.524.1875  
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FRAME LAYOUT



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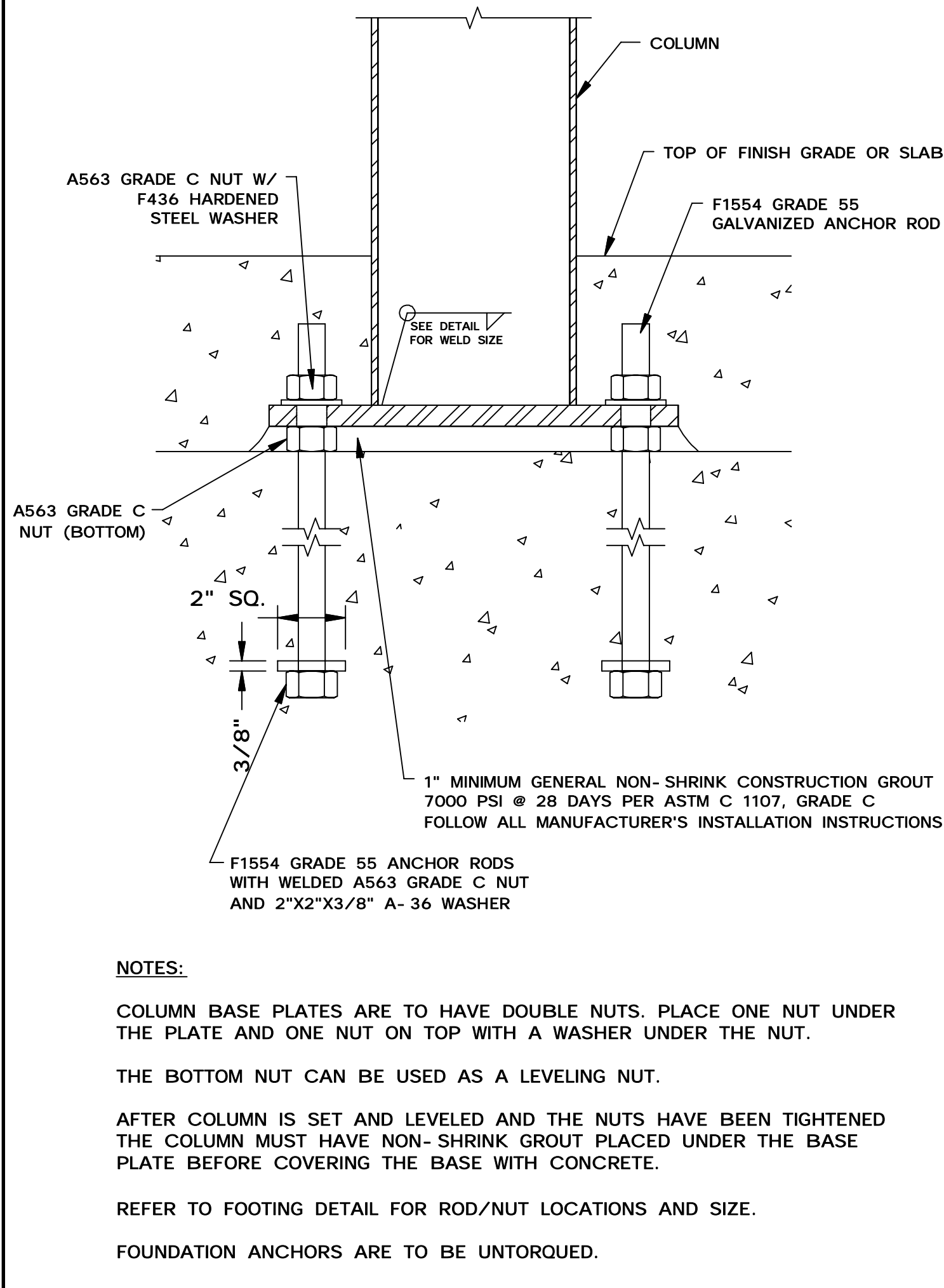
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DATE \_\_\_\_\_

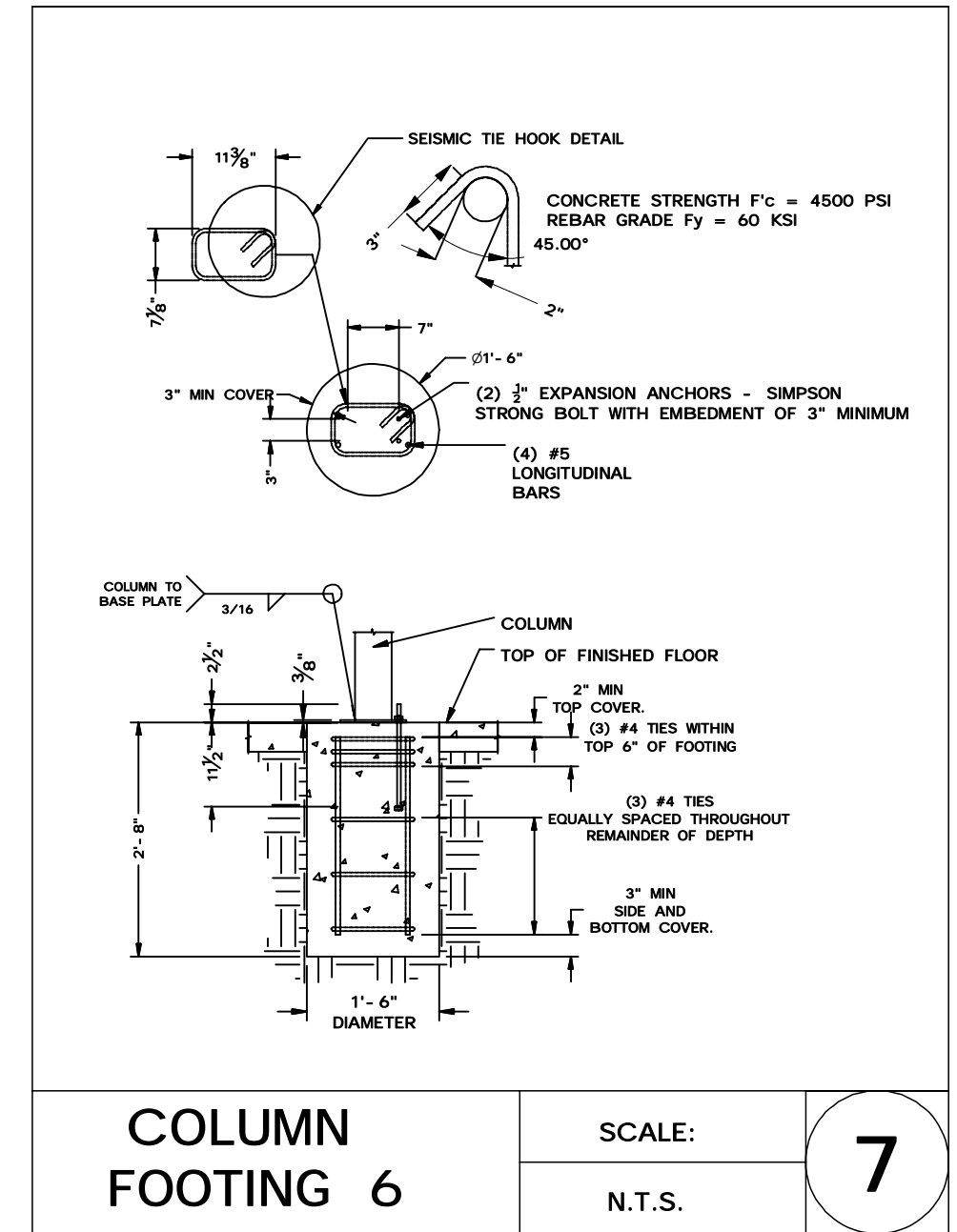
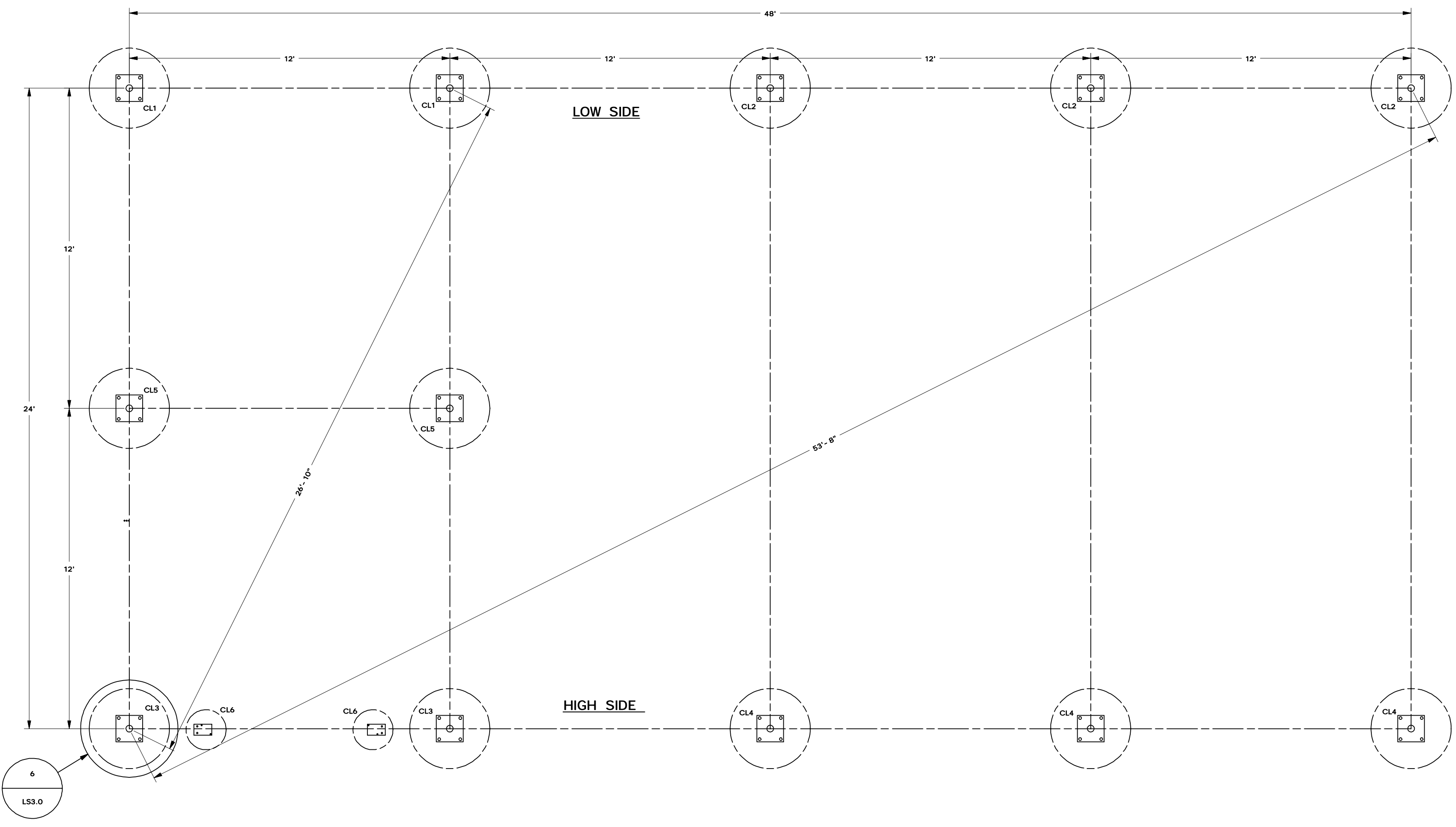
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SHEET  
 LS2.0

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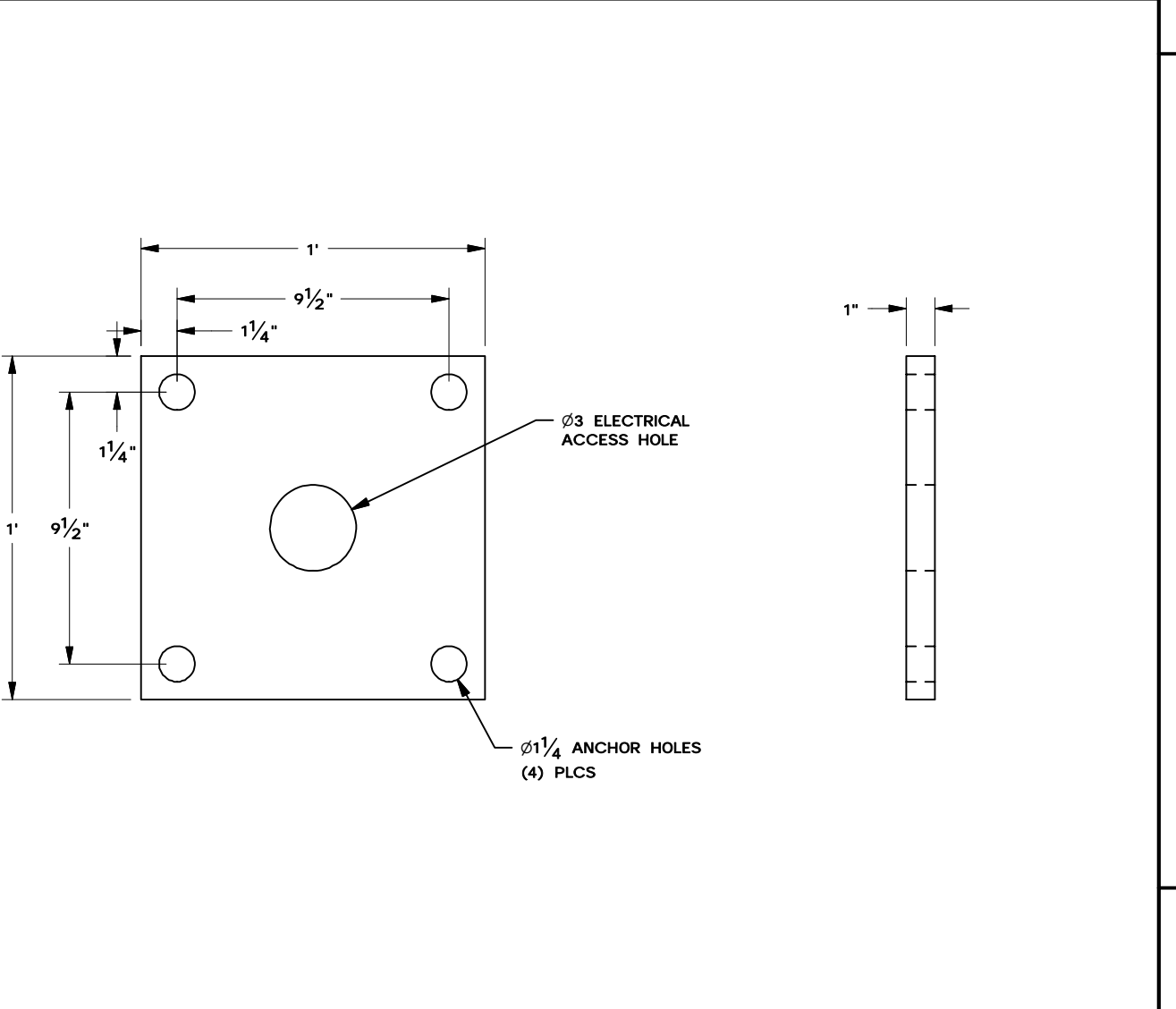
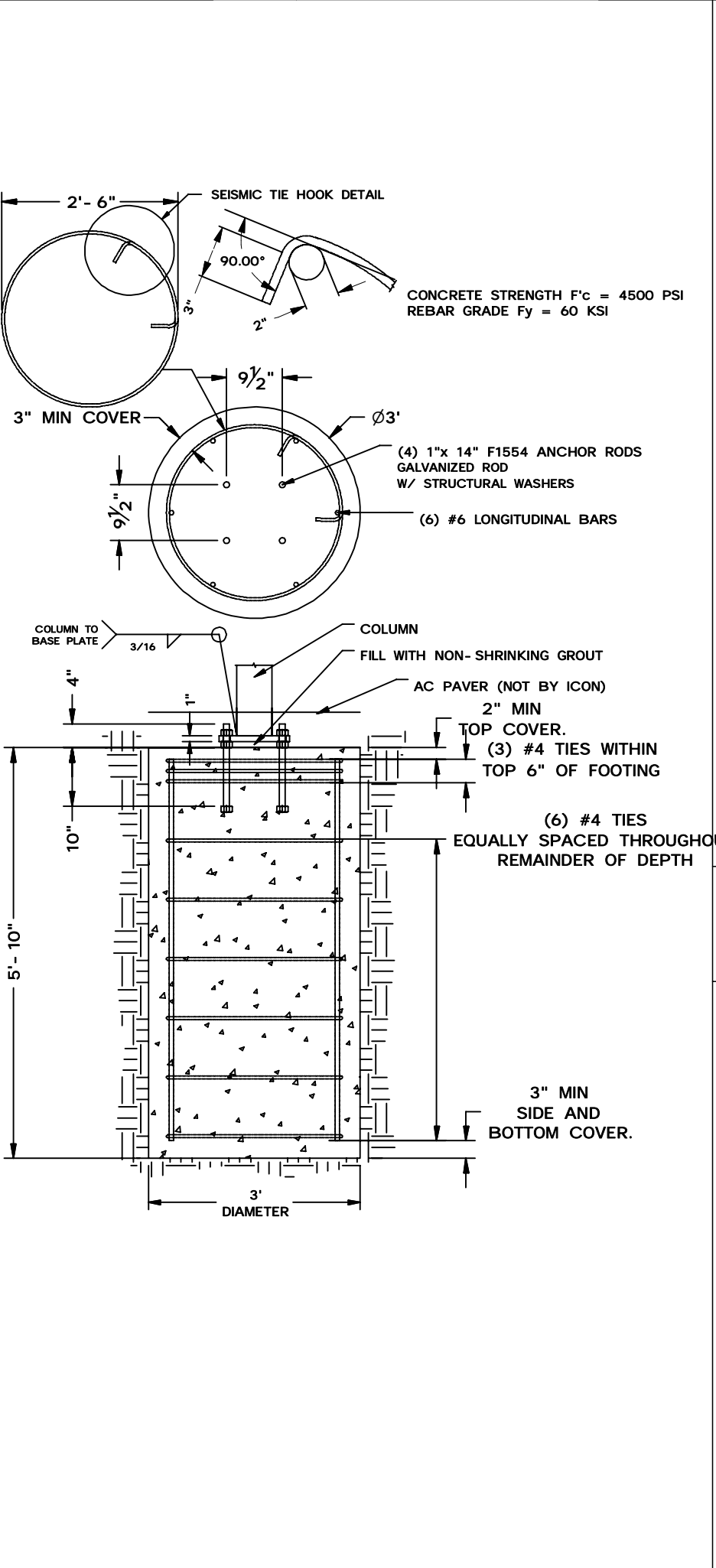
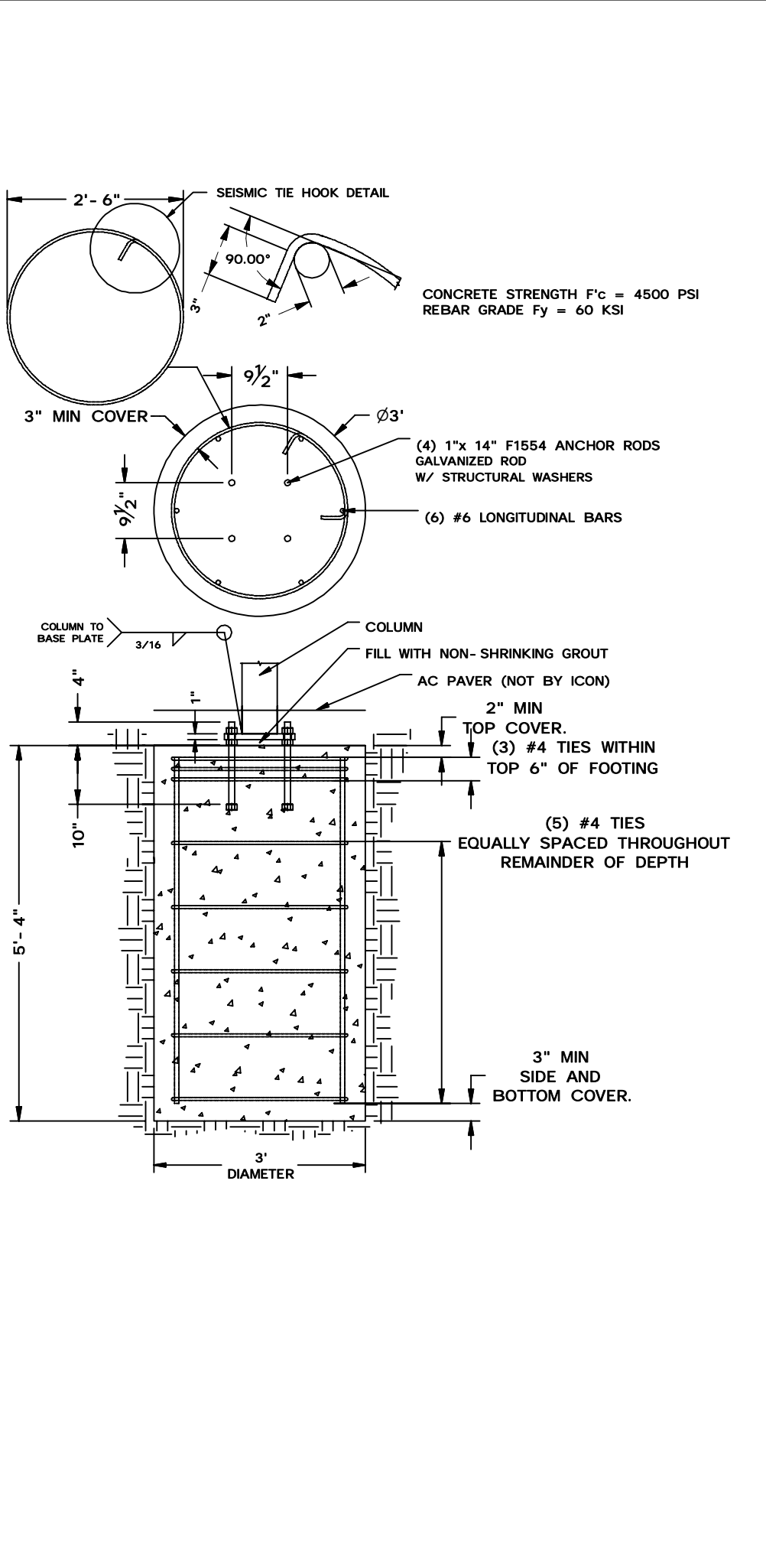
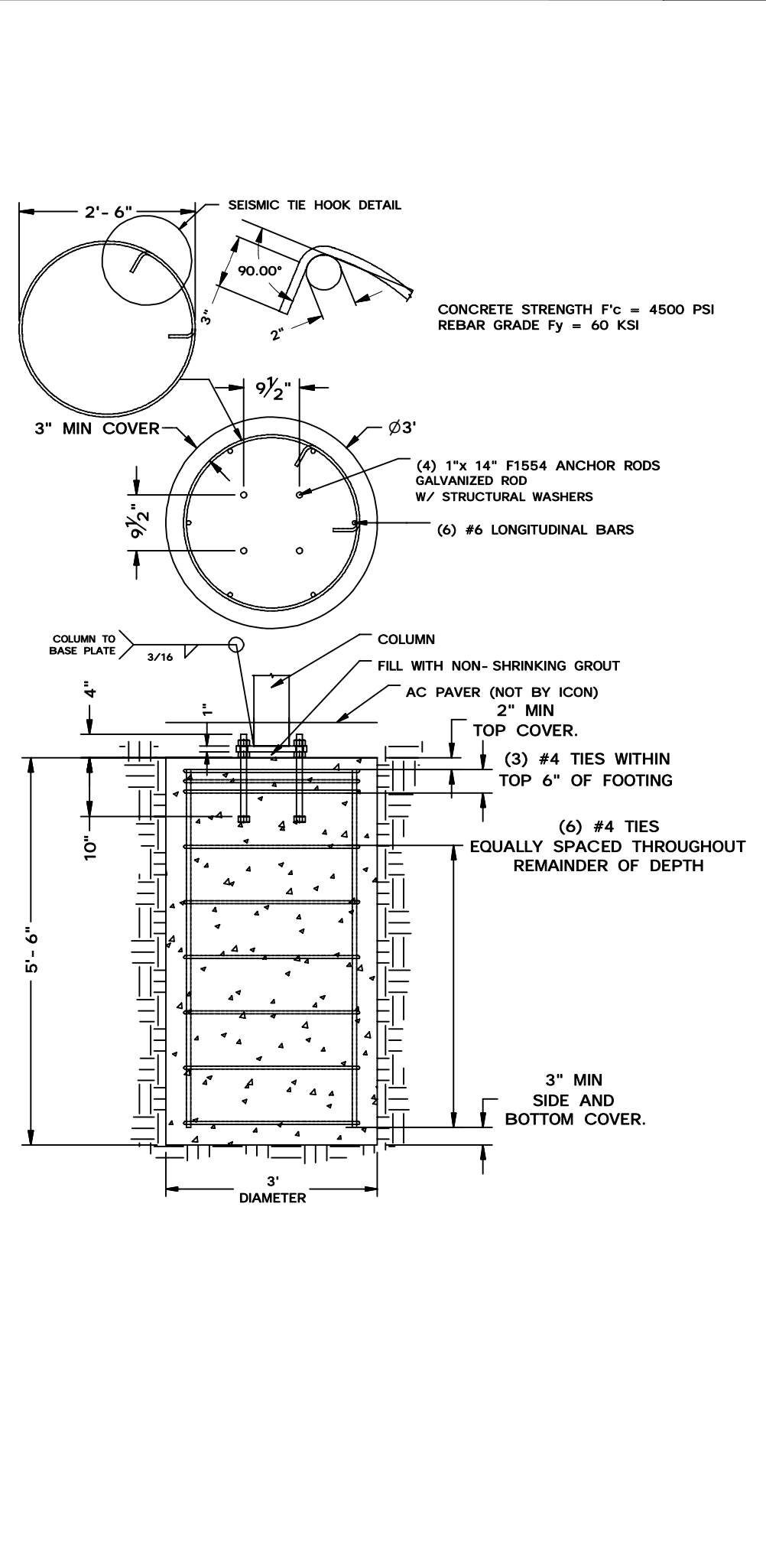
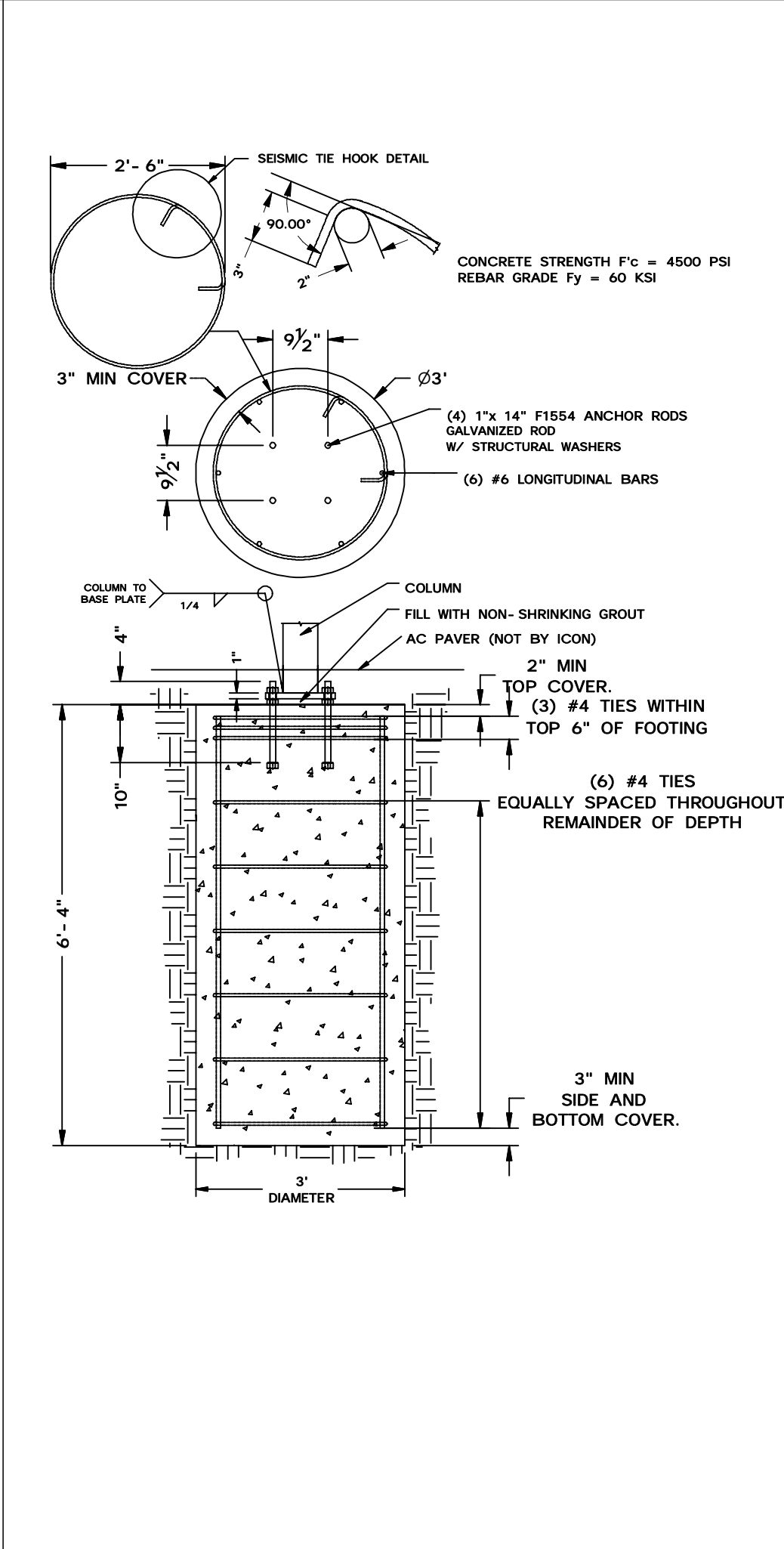
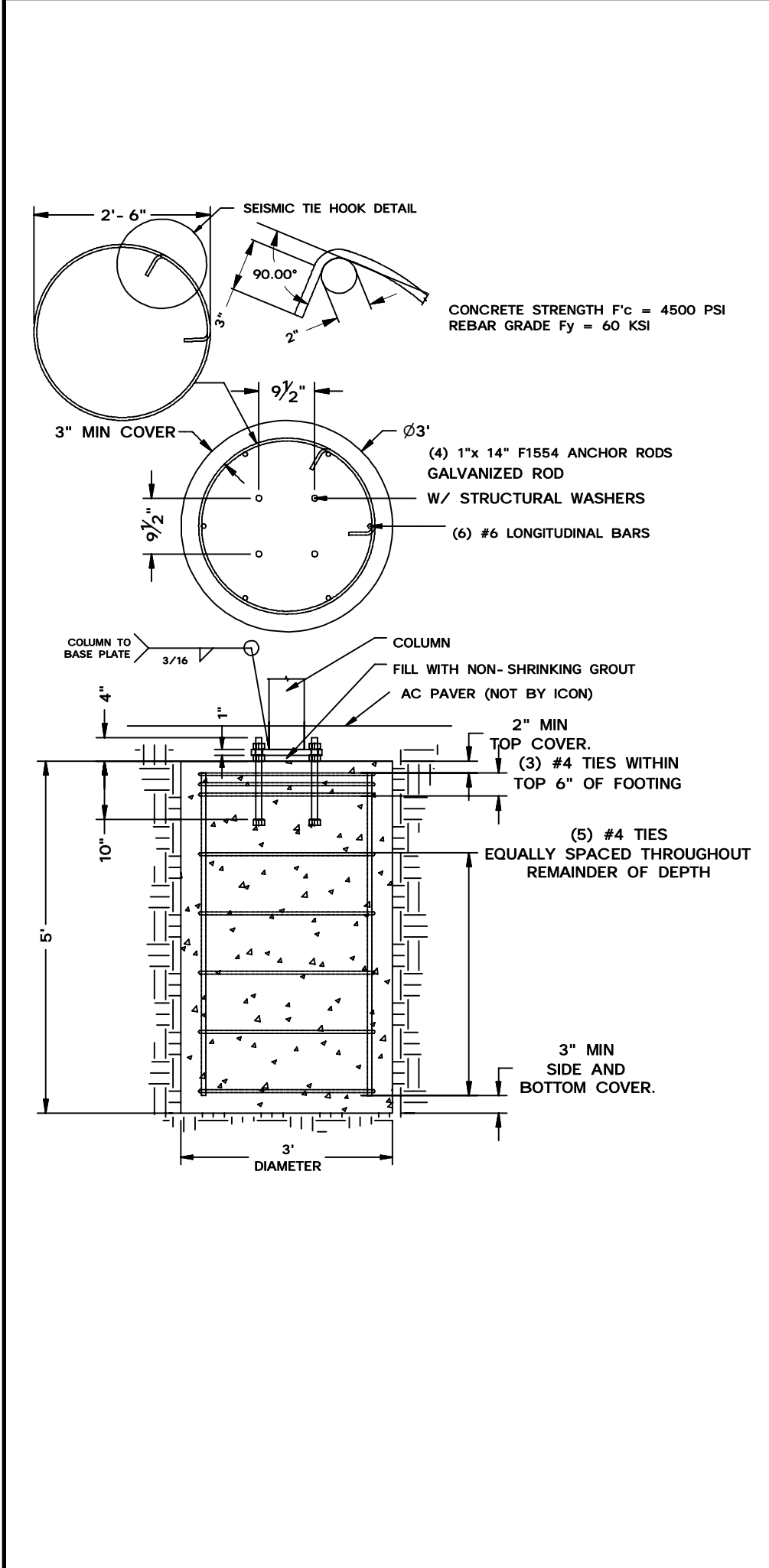
**NOTES:**  
 COLUMN BASE PLATES ARE TO HAVE DOUBLE NUTS. PLACE ONE NUT UNDER THE PLATE AND ONE NUT ON TOP WITH A WASHER UNDER THE NUT.  
 THE BOTTOM NUT CAN BE USED AS A LEVELING NUT.  
 AFTER COLUMN IS SET AND LEVELED AND THE NUTS HAVE BEEN TIGHTENED THE COLUMN MUST HAVE NON-SHRINK GROUT PLACED UNDER THE BASE PLATE BEFORE COVERING THE BASE WITH CONCRETE.  
 REFER TO FOOTING DETAIL FOR ROD/NUT LOCATIONS AND SIZE.  
 FOUNDATION ANCHORS ARE TO BE UNTORQUED.



**NOTES:**  
 1. WHERE CONCRETE SLAB SPECIFIED PORTLAND CEMENT CONCRETE PAVING SHALL HAVE A MEDIUM SALTED (MEDIUM BROOM) FINISH ON ALL SURFACES SLOPED LESS THAN 6% AND SLIP RESISTANT (HEAVY BROOM FINISH) ON ALL SURFACES SLOPED GREATER THAN 6%. CBC SECTION 1133B.7.1

**COLUMN BASE CONNECTION DETAIL**  
 SCALE: C1  
 N.T.S.

**ANCHOR BOLT LAYOUT**



**BASE PLATE DETAIL**  
 SCALE: 6  
 N.T.S.

**COLUMN FOOTING 1**  
 SCALE: 1  
 N.T.S.

**COLUMN FOOTING 2**  
 SCALE: 2  
 N.T.S.

**COLUMN FOOTING 3**  
 SCALE: 3  
 N.T.S.

**COLUMN FOOTING 4**  
 SCALE: 4  
 N.T.S.

**COLUMN FOOTING 5**  
 SCALE: 5  
 N.T.S.

**D.S.A. APPROVAL**

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ICON JOB: 6636  
 DRAWN BY: JMD  
 DATE: 11/6/2020  
 REV: C  
 REV DATE: 11/6/2020

**JRMA**  
 ARCHITECTS ENGINEERS  
 J.R. Miller & Associates  
 2700 Saturn St.  
 Brea, CA 92821  
 tel. 714.524.1870  
 fax. 714.524.1875  
 www.jrma.com

PROFESSIONAL SEAL  
 J.R. MILLER  
 ARCHITECT  
 11/18/2020

**FOUNDATION PLAN**

**ICON**  
 Shelter Systems Inc

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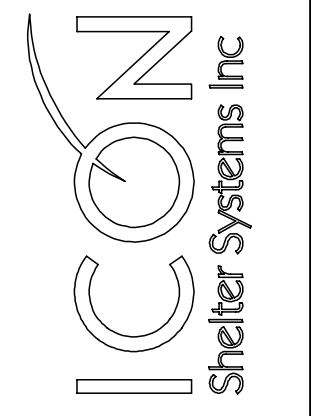
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11/18/2020

FRAMING PLAN  
& DETAILS

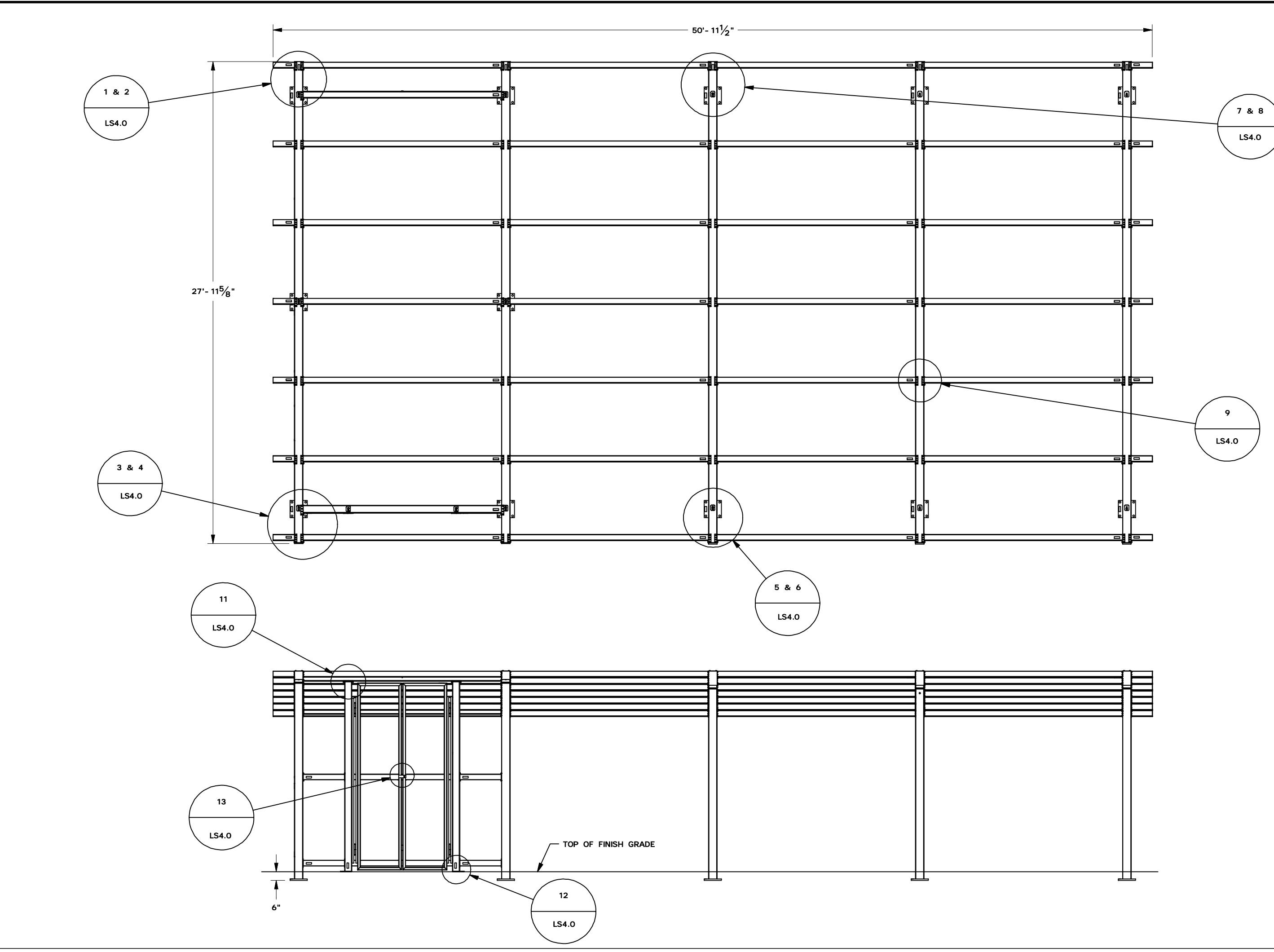
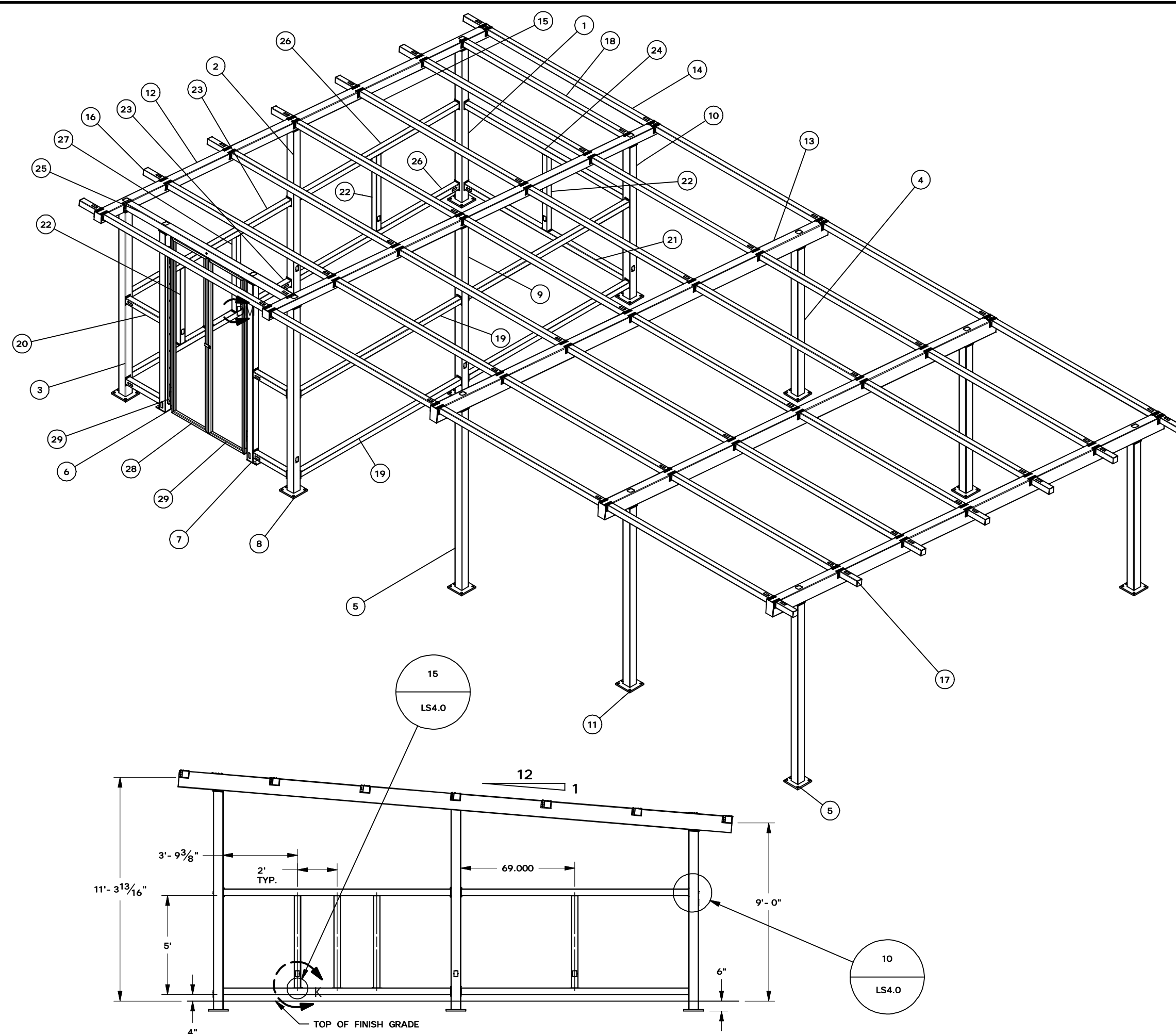


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ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH	UNIT WEIGHT
1	1		COLUMN 1	HSS6x4x3/16	139	lbmass
2	1		COLUMN 2	HSS6x4x3/16	191	lbmass
3	1		COLUMN 3	HSS6x4x3/16	207	lbmass
4	3		COLUMN 4	HSS6x4x3/16	173	lbmass
5	2		COLUMN 5	HSS6x4x3/16	202	lbmass
6	1		COLUMN 6	HSS6x4x3/16	140	lbmass
7	1		COLUMN 7	HSS6x4x3/16	140	lbmass
8	1		COLUMN 8	HSS6x4x3/16	206	lbmass
9	1		COLUMN 9	HSS6x4x3/16	192	lbmass
10	1		COLUMN 10	HSS6x4x3/16	177	lbmass
11	1		COLUMN 11	HSS6x4x3/16	202	lbmass
12	2		RAFTER 1	HSS10x6x3/16	418	lbmass
13	3		RAFTER 2	HSS10x6x3/16	558	lbmass
14	20		PURLIN 1	HSS4x4x1/8	76	lbmass
15	8		PURLIN 2	HSS4x4x1/8	76	lbmass
16	7		PURLIN TAIL 1	HSS4x4x1/8	9	lbmass
17	7		PURLIN TAIL 2	HSS4x4x1/8	9	lbmass
18	1		WALL SUPPORT 1	HSS4x4x1/8	76	lbmass
19	4		WALL SUPPORT 2	HSS4x4x1/8	75	lbmass
20	4		WALL SUPPORT 3	HSS4x4x1/8	17	lbmass
21	1		WALL SUPPORT 4	HSS4x4x1/8	25	lbmass
22	2		WALL SUPPORT 5	HSS4x4x1/8	31	lbmass
23	2		WALL SUPPORT 6	HSS4x4x1/8	75	lbmass
24	1		WALL SUPPORT 7	HSS4x4x1/8	75	lbmass
25	1		WALL SUPPORT 9	HSS4x4x1/8	103	lbmass
26	2		WALL SUPPORT 10	HSS4x4x1/8	75	lbmass
27	2		WALL SUPPORT 8	HSS4x4x1/8	31	lbmass
28	1		GATE 1	HSS2x2x3/16	145	lbmass
29	1		GATE 2	HSS2x2x3/16	160	lbmass
29	2		COLUMN HINGE BAR	1 1/4" BAR	53	lbmass



FRAMING PLAN

**1**  
SCALE: N.T.S.

PLAN - RAFTER & PURLIN CONNECTIONS @ LOW SIDE COLUMN

**2**  
SCALE: N.T.S.

SECTION - RAFTER & PURLIN CONNECTIONS @ LOW SIDE COLUMN

**3**  
SCALE: N.T.S.

PLAN - RAFTER & PURLIN CONNECTIONS @ HIGH SIDE COLUMN

**4**  
SCALE: N.T.S.

SECTION - RAFTER & PURLIN CONNECTIONS @ HIGH SIDE COLUMN

**5**  
SCALE: N.T.S.

PLAN - RAFTER & PURLIN CONNECTIONS @ HIGH SIDE COLUMN

**6**  
SCALE: N.T.S.

SECTION - RAFTER & PURLIN CONNECTIONS @ HIGH SIDE COLUMN

**7**  
SCALE: N.T.S.

PLAN - RAFTER & PURLIN CONNECTIONS @ LOW SIDE COLUMN

**8**  
SCALE: N.T.S.

SECTION - RAFTER & PURLIN CONNECTIONS @ LOW SIDE COLUMN

**9**  
SCALE: N.T.S.

PLAN - PURLIN CONNECTION @ RAFTER

**10**  
SCALE: N.T.S.

PLAN - WALL SUPPORT CONNECTION @ COLUMN

**11**  
SCALE: N.T.S.

PLAN - PURLIN CONNECTION @ GATE COLUMN

**12**  
SCALE: N.T.S.

EXPANSION ANCHOR CONNECTION @ GATE COLUMN

**13**  
SCALE: N.T.S.

GATE CONNECTION @ GATE COLUMN

**14**  
SCALE: N.T.S.

PLAN - HINGE CONNECTION @ COLUMN

**15**  
SCALE: N.T.S.

PLAN - VERTICAL WALL SUPPORT @ WALL SUPPORT

NOTE:

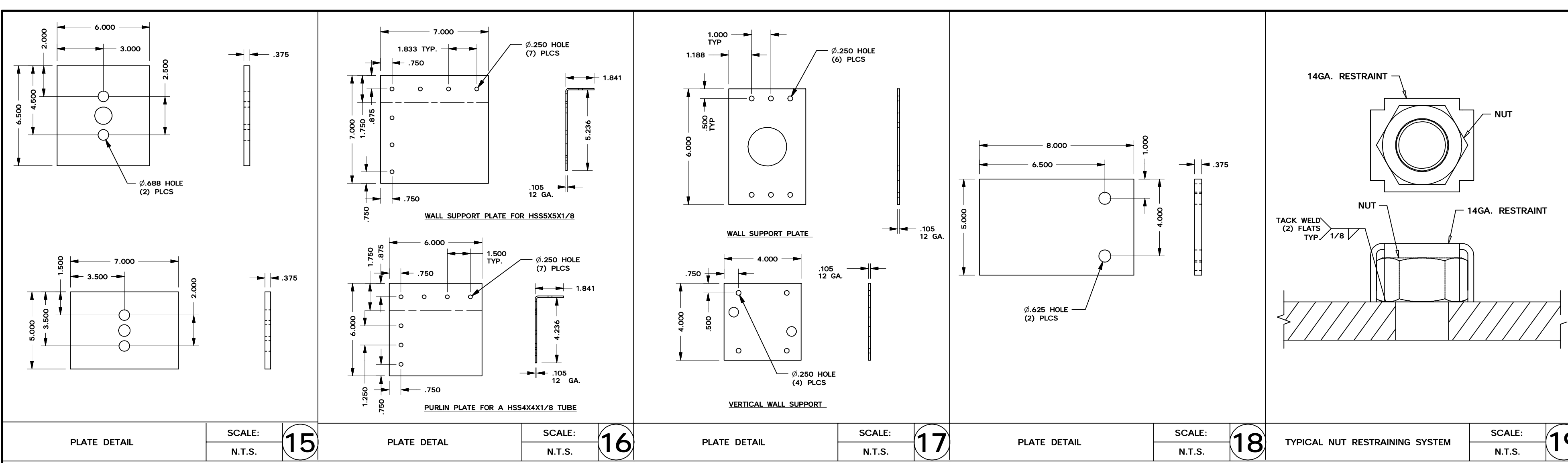
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**ROOF NOTES:**

<p><b>INSTALLED CORRECTLY</b></p> <p>THE SEALING MATERIAL SLIGHTLY VISIBLE AROUND THE METAL WASHER</p>	<p><b>INSTALLED TOO TIGHT</b></p> <p>THE SEALING MATERIAL IS DEFORMED BEYOND THE EDGE OF THE METAL WASHER</p>	<p><b>INSTALLED TOO LOOSE</b></p> <p>THE SEALING MATERIAL IS NOT VISIBLE AROUND THE EDGE OF THE METAL WASHER</p>
--------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------

THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE METAL ROOFING SYSTEM. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. CHANGES TO THE DETAILS MAY BE REQUIRED DUE TO FIELD CONDITIONS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL INSTALLATION INSTRUCTION MATERIAL BEFORE STARTING WORK.

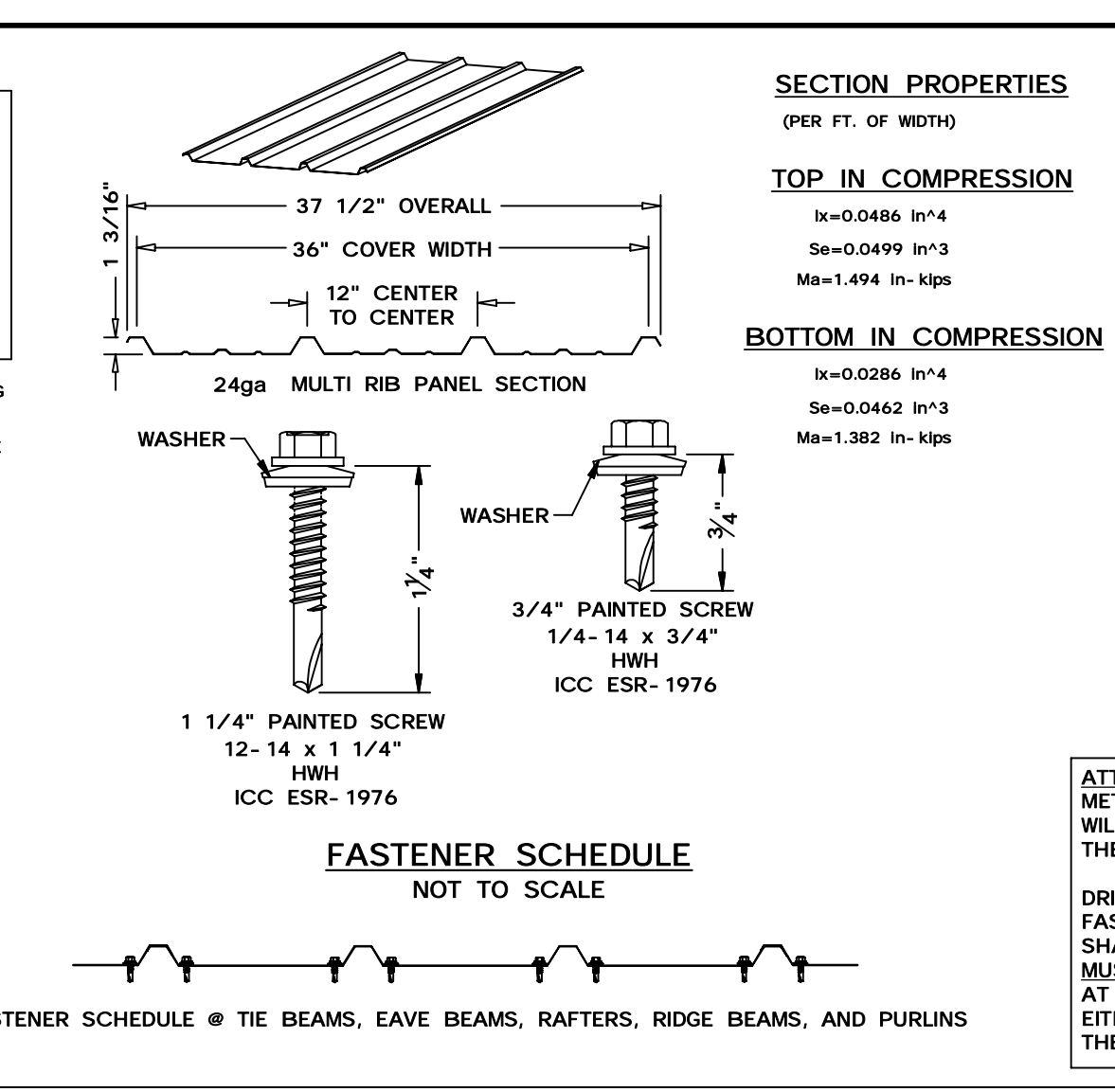
THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

ERECTORS SHALL BE RESPONSIBLE TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

FOR THE BEST APPEARANCE ALL TRIM AND FLASHING SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ALL EXPOSED FASTENERS EQUALLY SPACED.

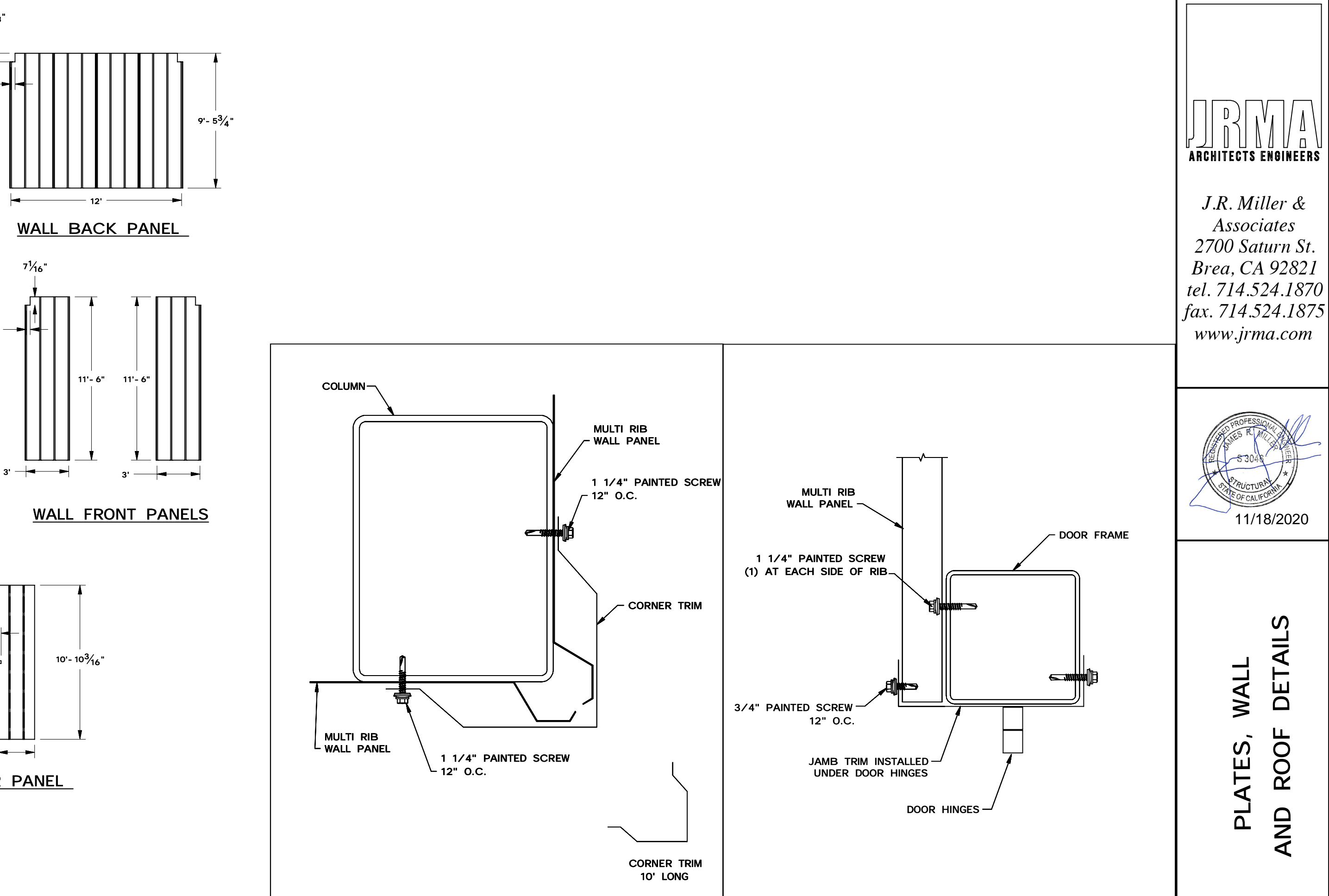
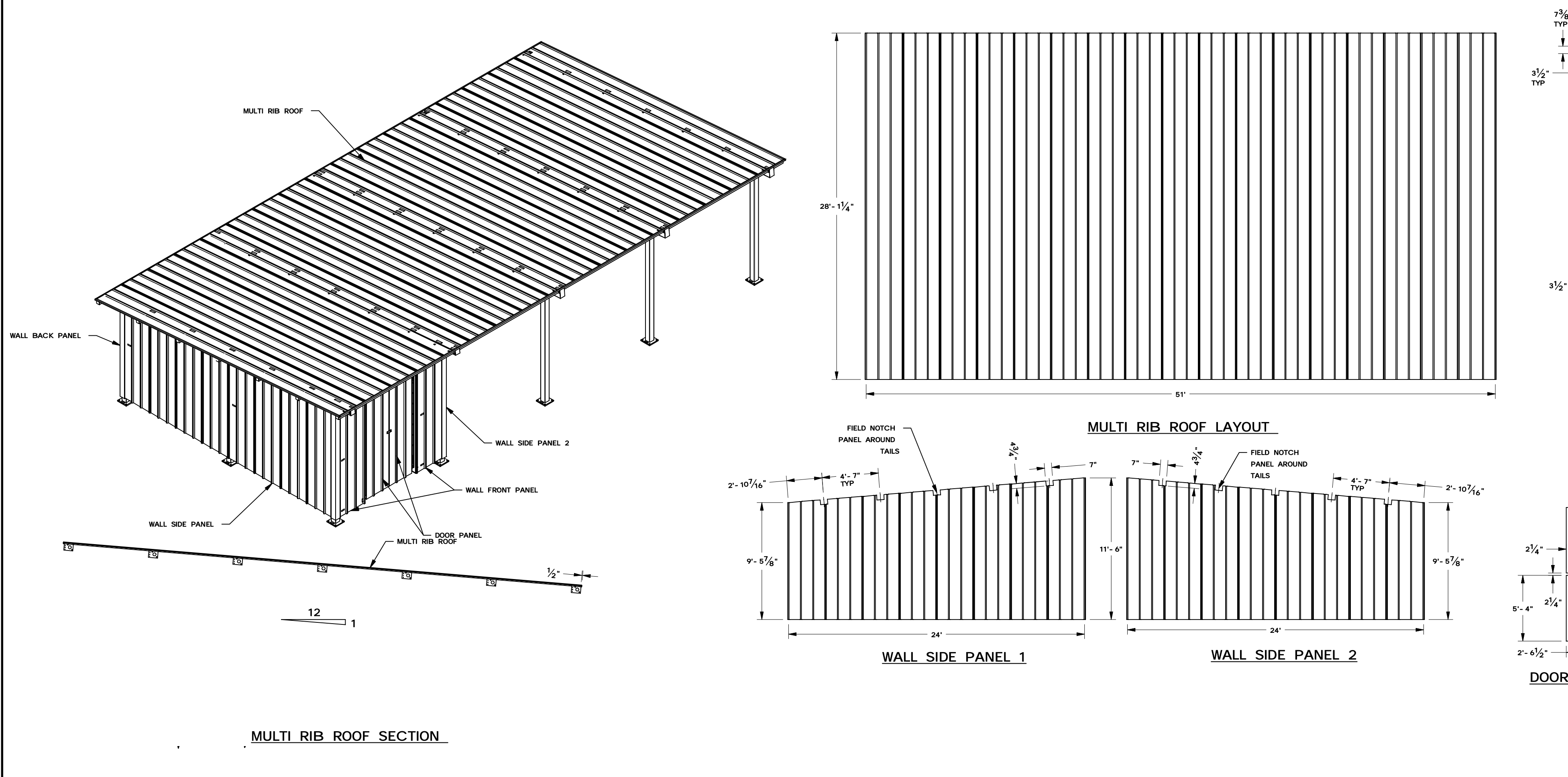
SOME FIELD CUTTING AND/OR FITTING OF PANELS, TRIM AND FLASHING IS TO BE EXPECTED BY THE ERECTOR. MINOR FIELD CORRECTIONS ARE PART OF NORMAL ERECTION WORK.

THE INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN AND WORKMANSHIP SHALL MEET THE BEST INDUSTRY STANDARDS.

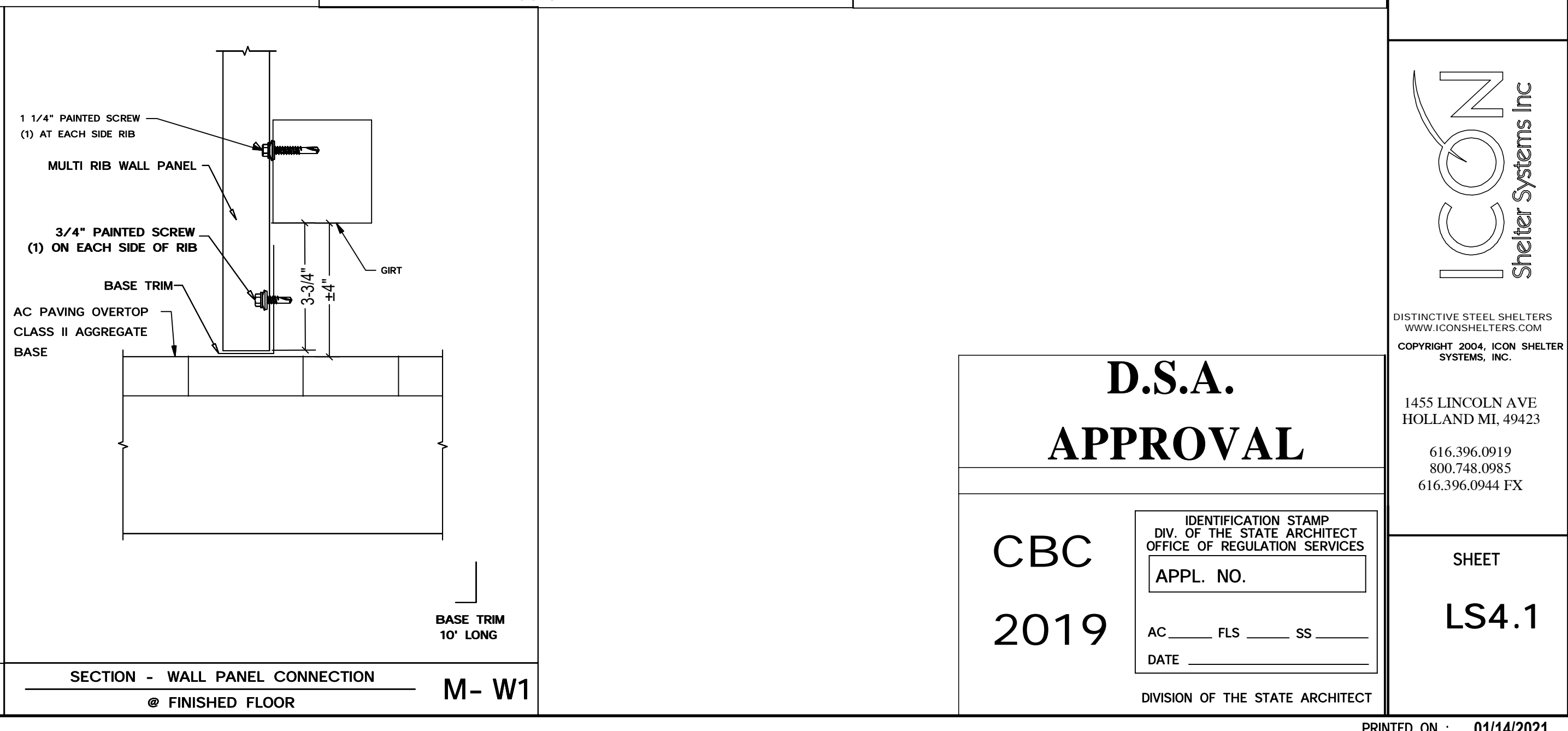
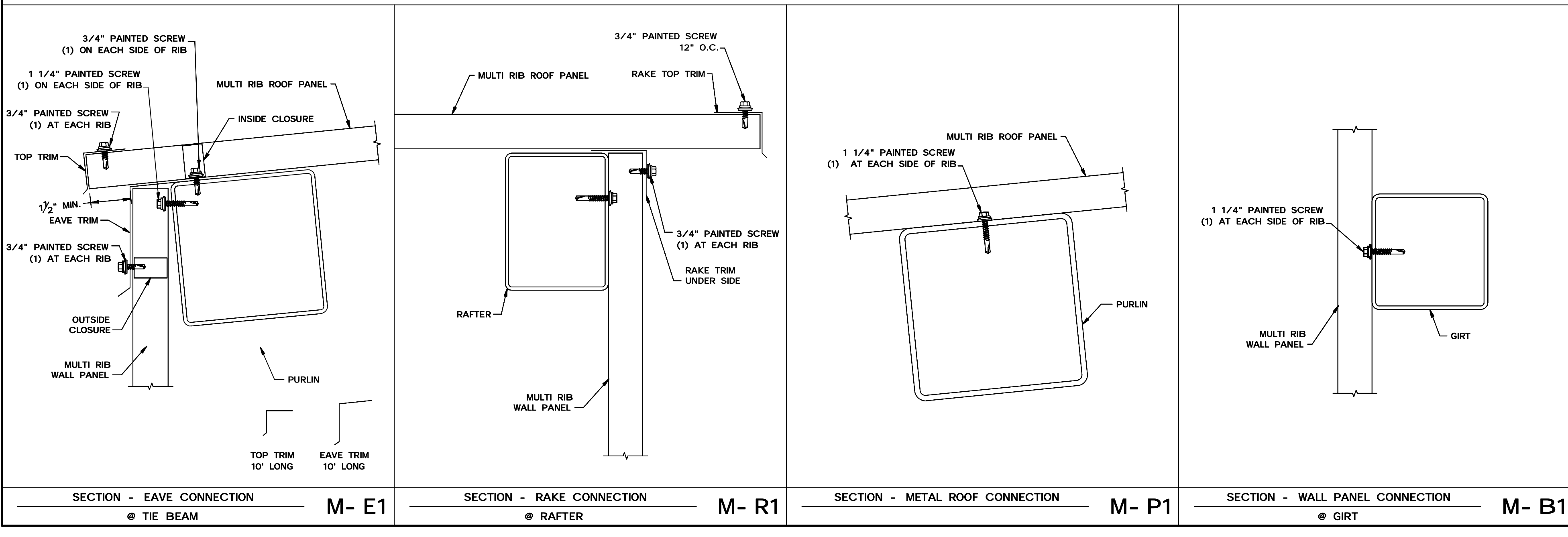


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REV DATE: 11/6/2020



**ROOF AND WALL DETAIL**



**JRMA**  
ARCHITECTS ENGINEERS

J.R. Miller & Associates  
2700 Saturn St.  
Brea, CA 92821  
tel. 714.524.1870  
fax. 714.524.1875  
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**PLATES, WALL AND ROOF DETAILS**

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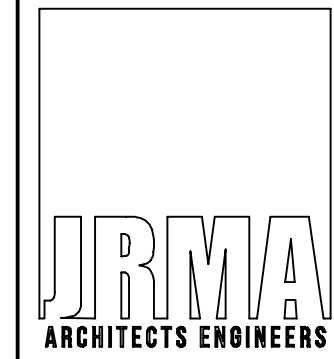
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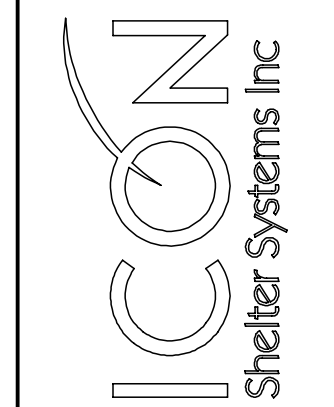
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 DRAWN BY: JMD  
 DATE: 11/6/2020  
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 REV DATE: 11/6/2020



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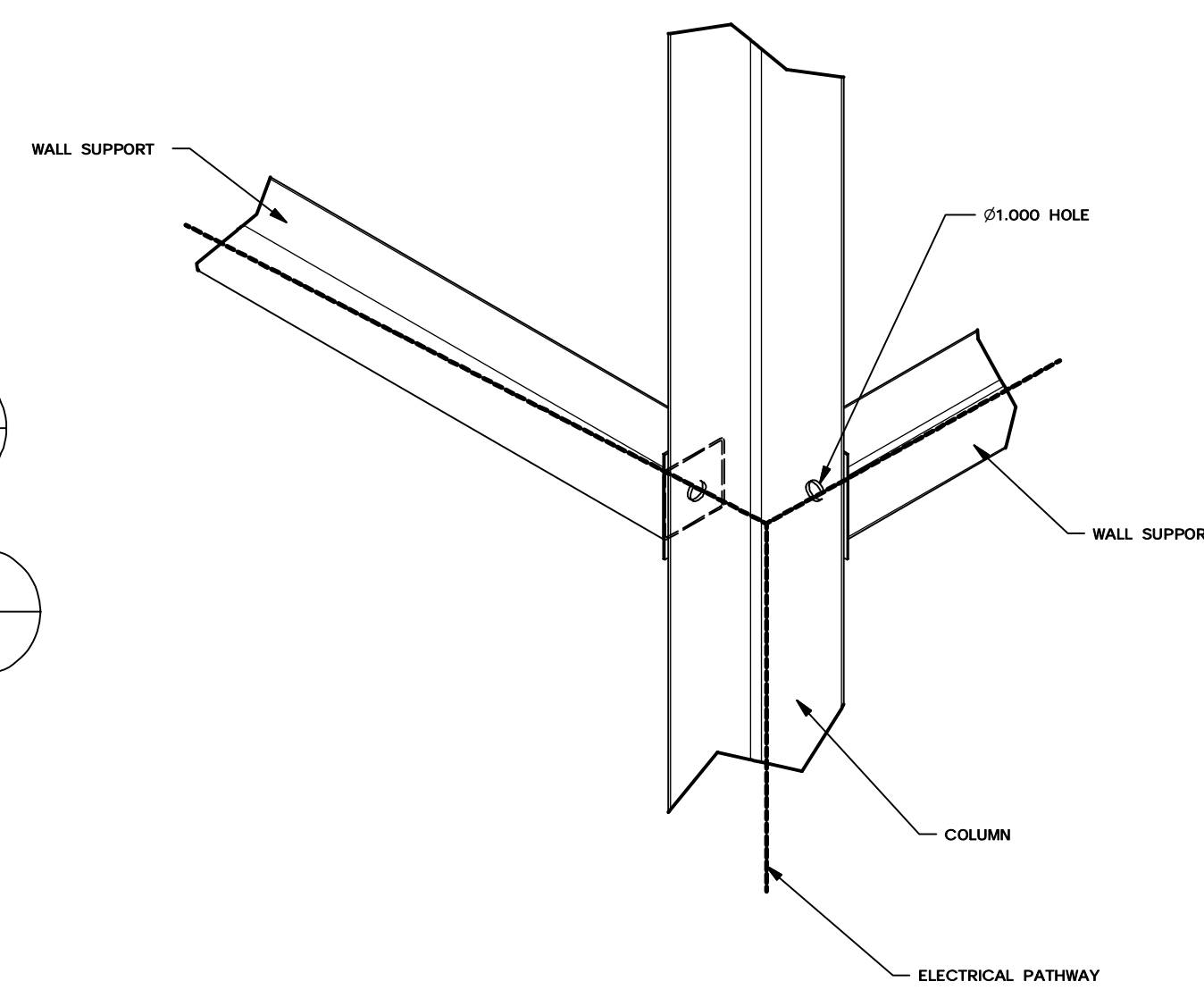
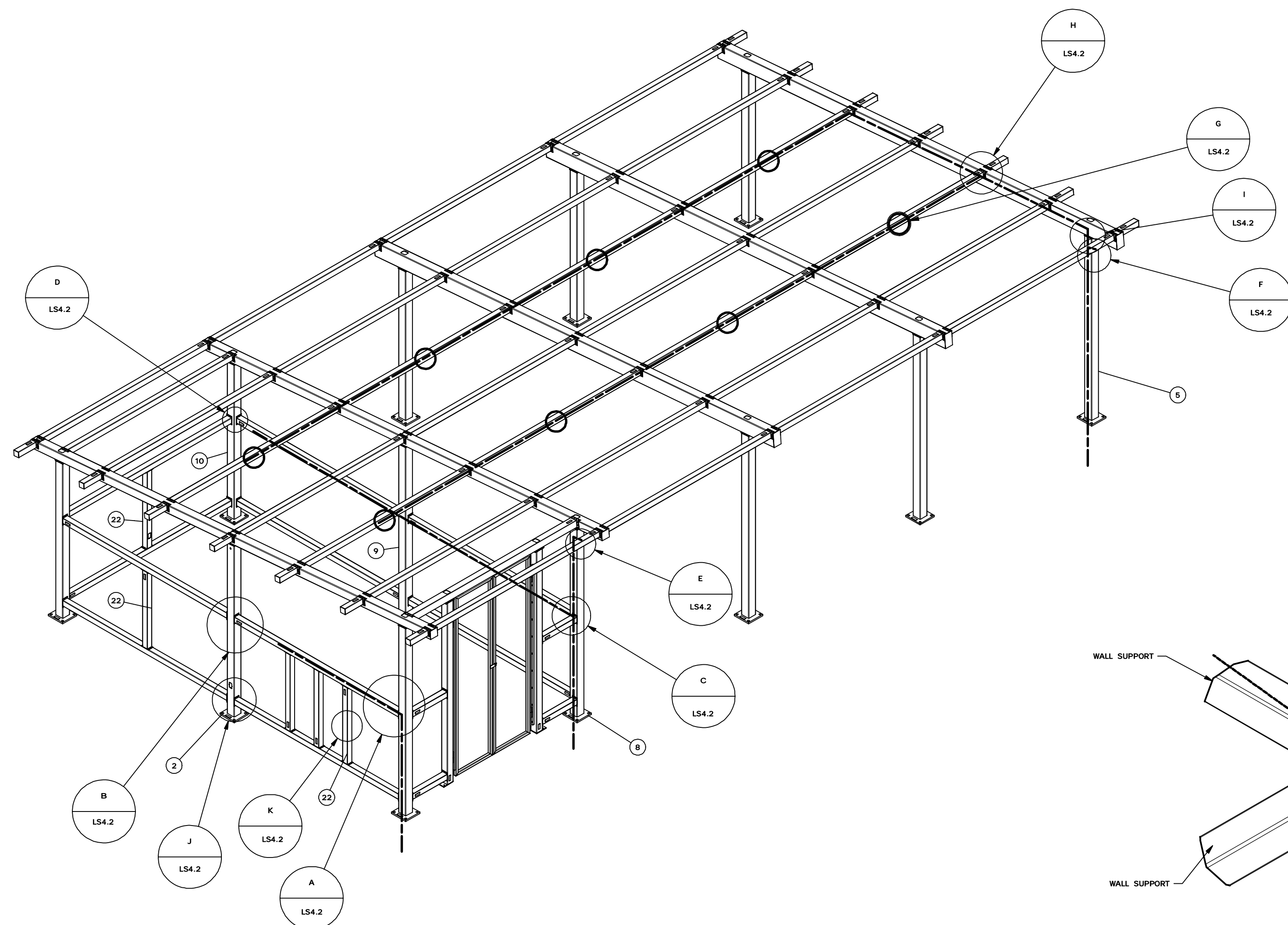
ELECTRICAL LAYOUT



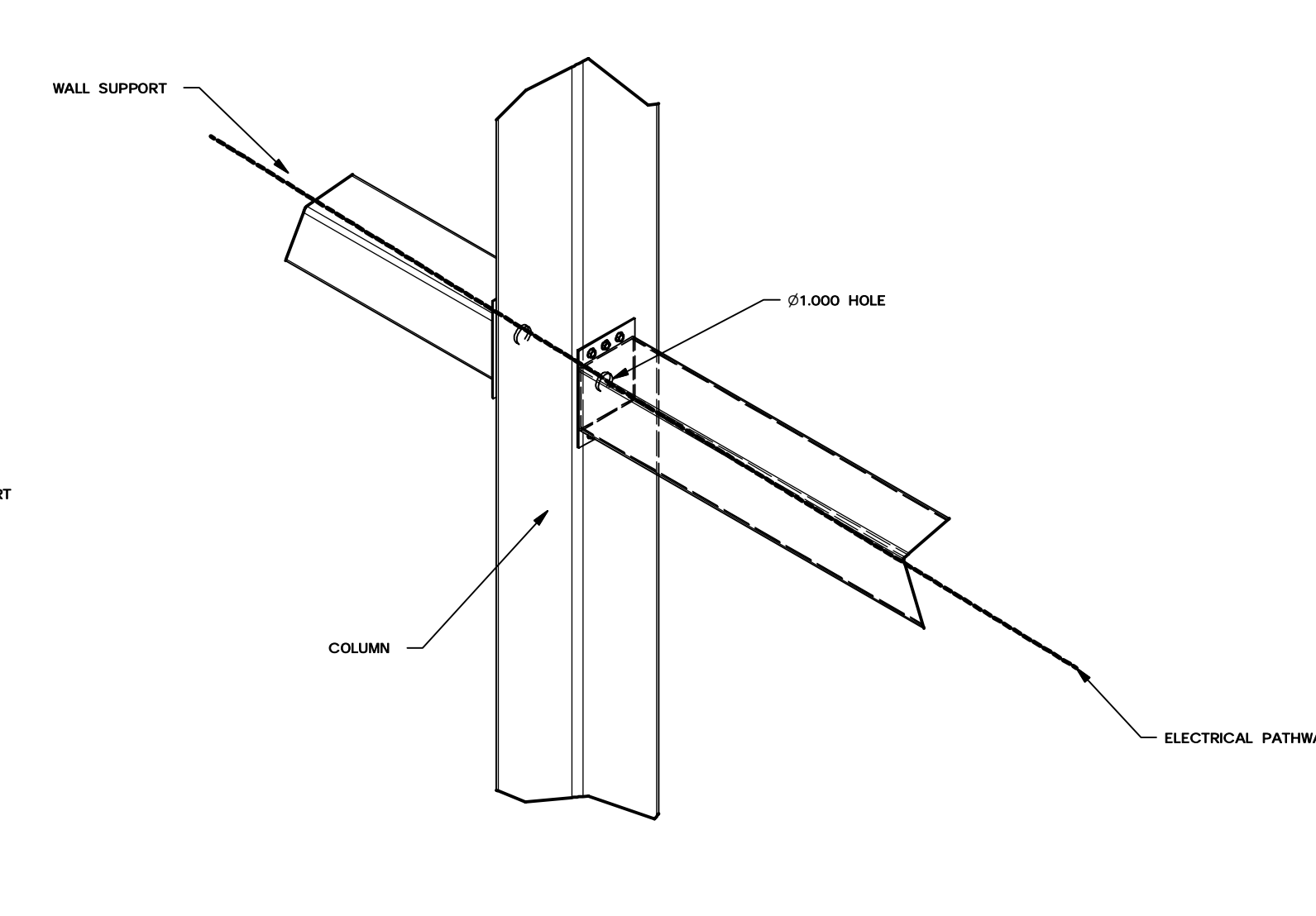
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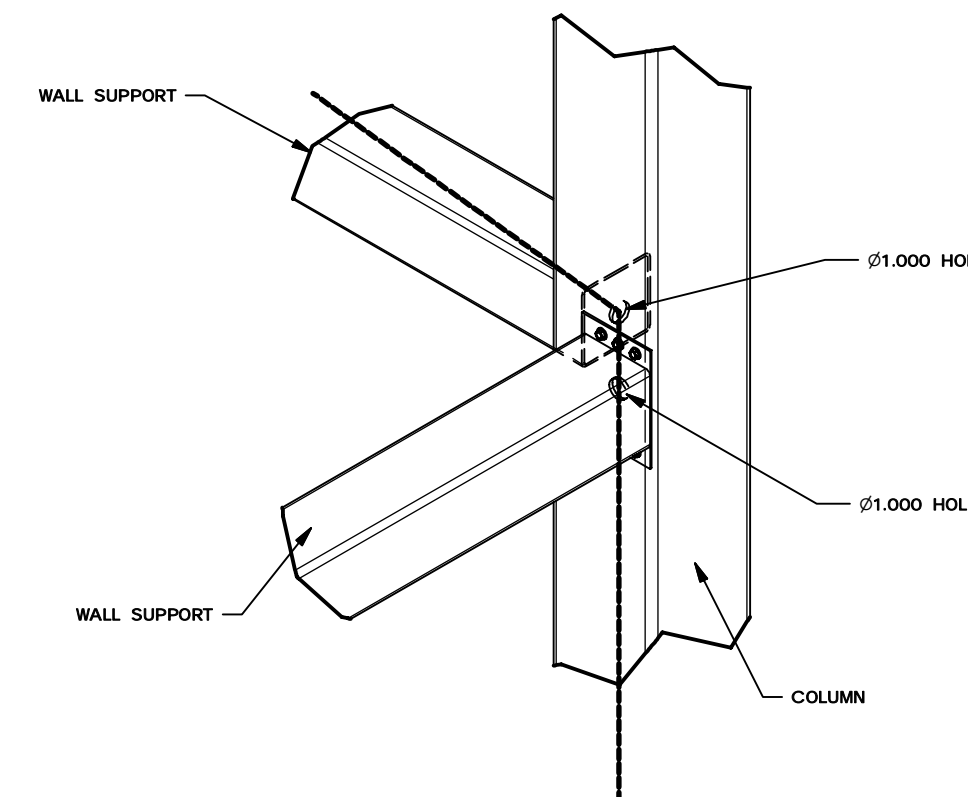
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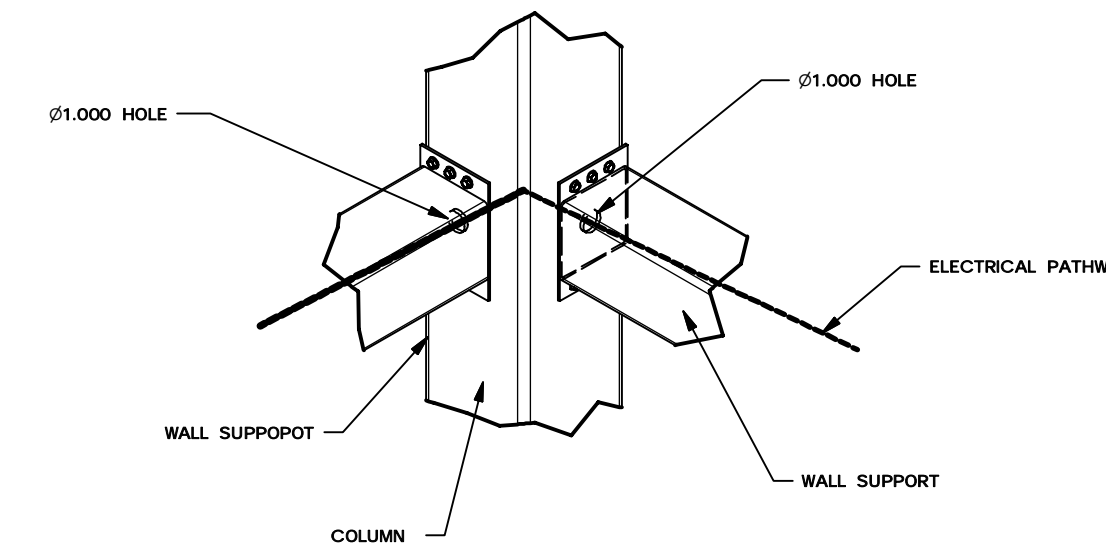
DETAIL A  
 ELECTRICAL AT COLUMN  
 AND WALL SUPPORT



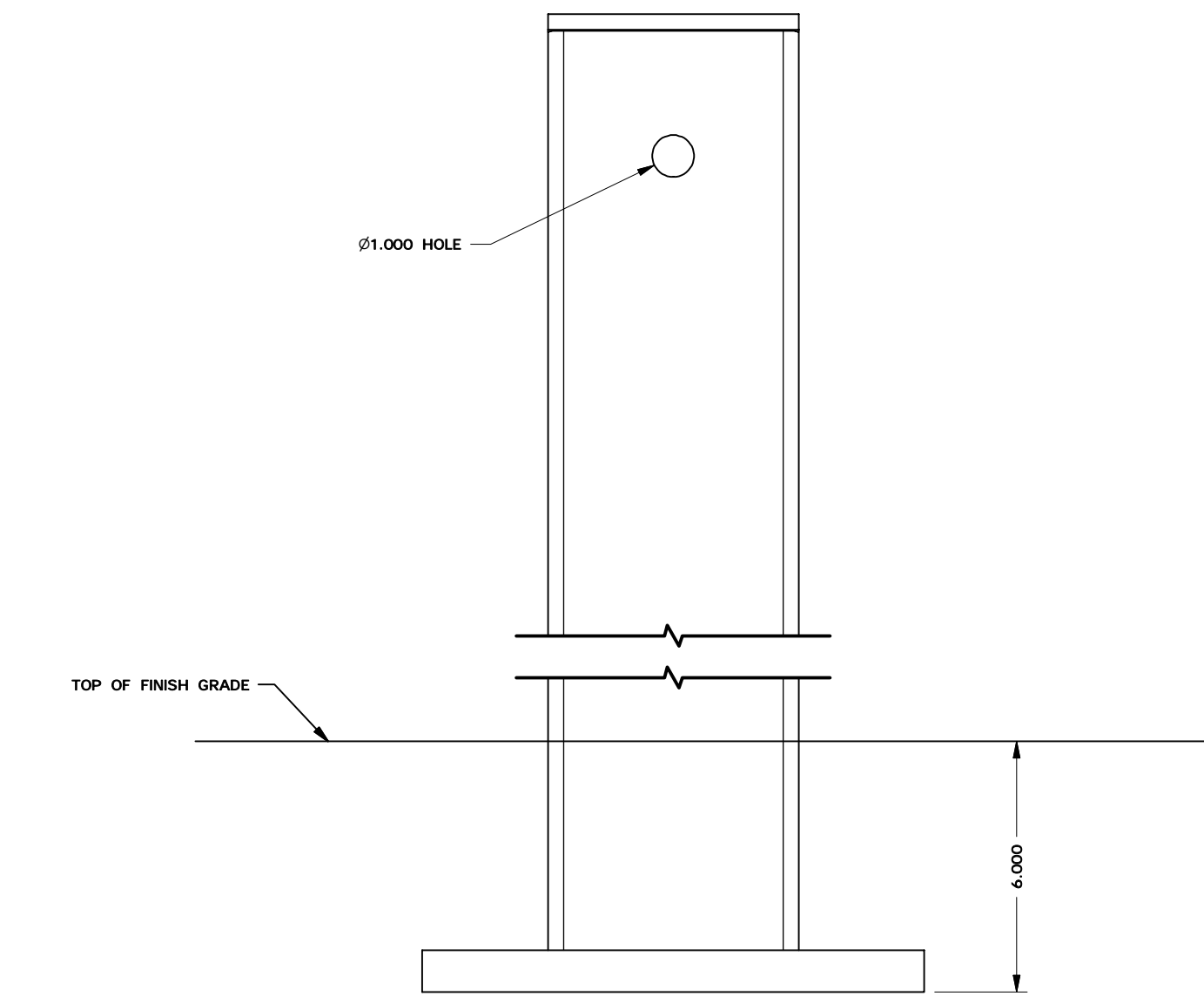
DETAIL B  
 ELECTRICAL AT COLUMN AND  
 WALL SUPPORT



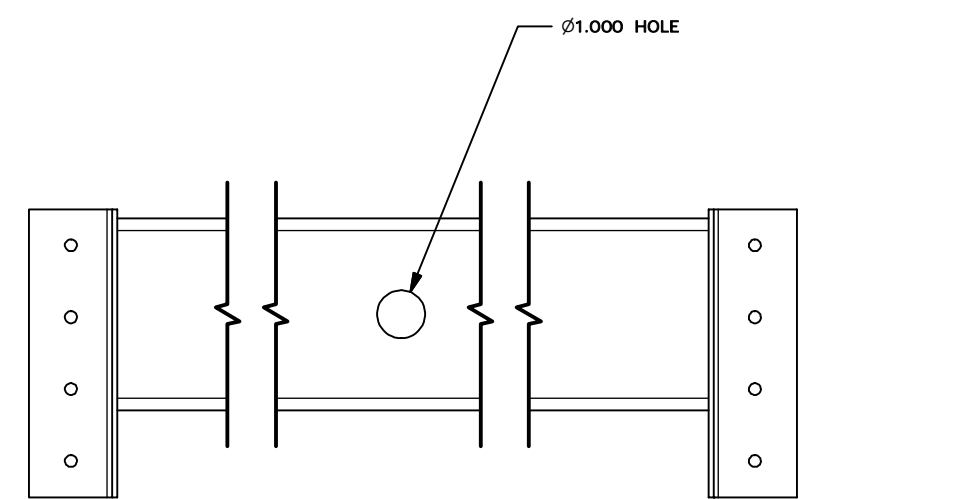
DETAIL C  
 ELECTRICAL AT COLUMN  
 AND WALL SUPPORT



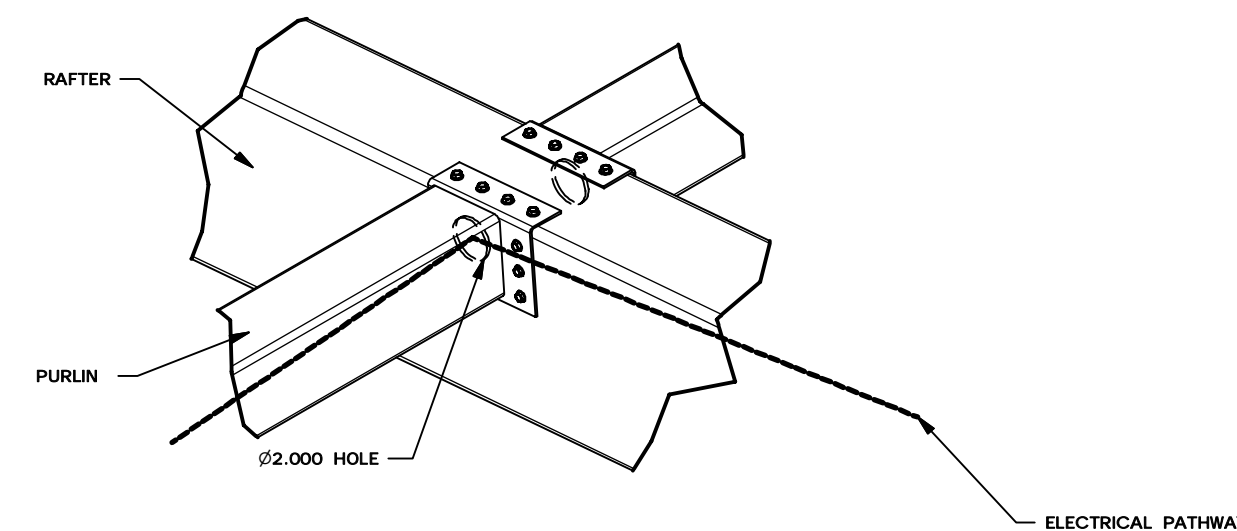
DETAIL D  
 ELECTRICAL AT COLUMN  
 AND WALL SUPPORT



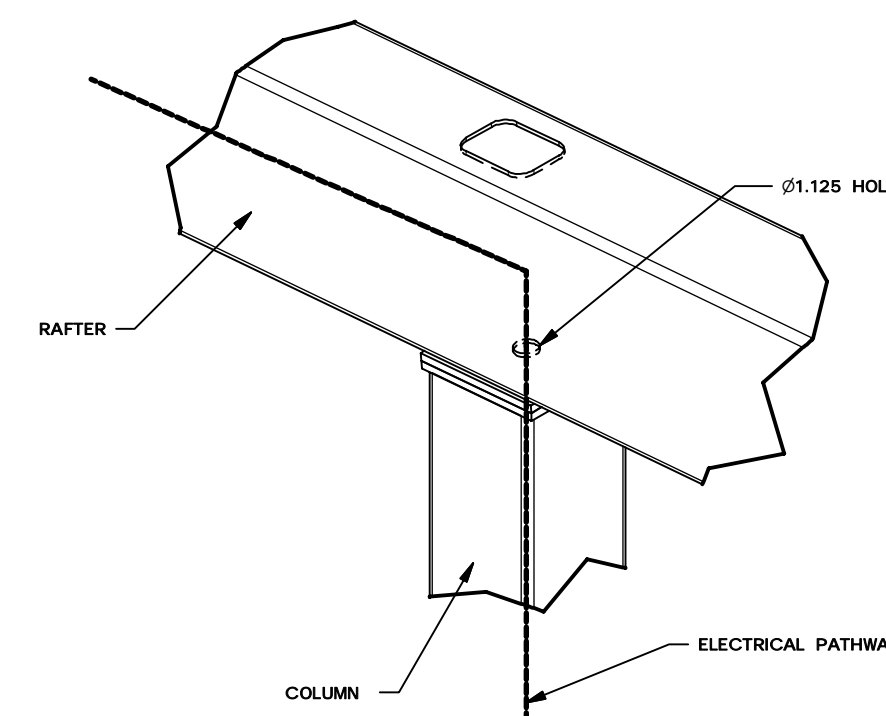
DETAIL E AND F  
 ELECTRICAL CUTOUT AT  
 COLUMN 8 AND 9



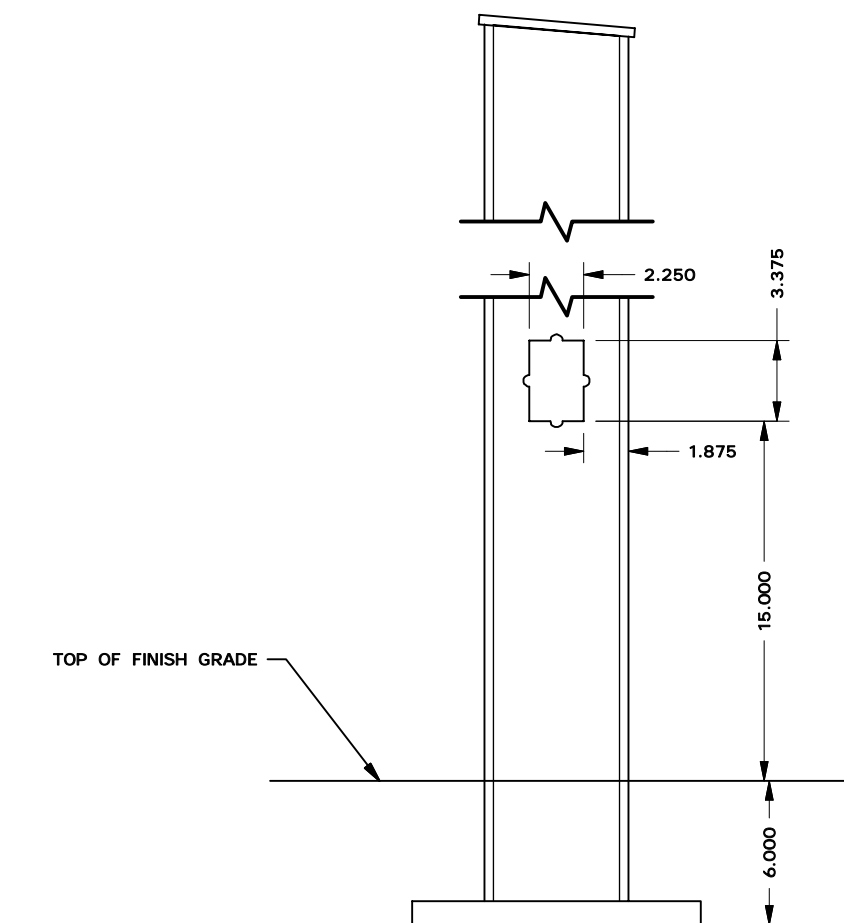
DETAIL G  
 ELECTRICAL CUTOUT AT  
 CENTER ON BOTTOM OF PURLIN TUBE



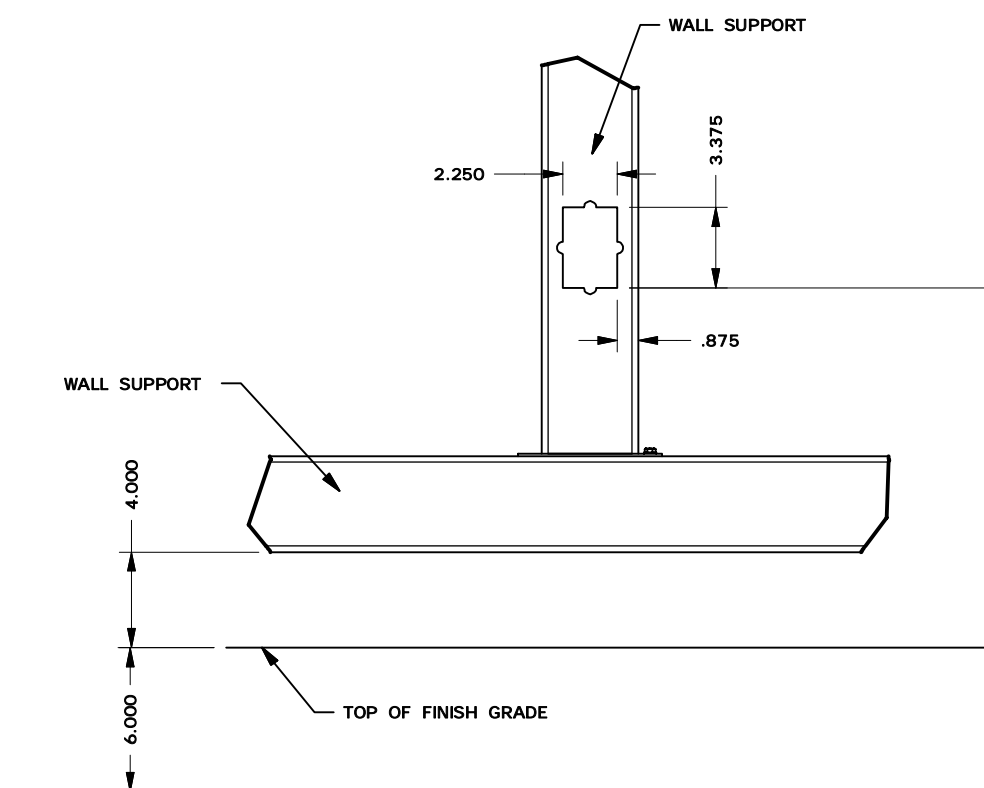
DETAIL H  
 ELECTRICAL AT RAFTER AND PURLIN



DETAIL I  
 ELECTRICAL AT COLUMN AND RAFTER



DETAIL J  
 ELECTRICAL CUTOUT  
 AT COLUMN 2, 8, 9, AND 10



DETAIL K  
 ELECTRICAL CUTOUT  
 AT WALL SUPPORT 11

**D.S.A. APPROVAL**

CBC  
 2019

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 DIV. OF THE STATE ARCHITECT  
 OFFICE OF REGULATION SERVICES  
 APPL. NO. \_\_\_\_\_  
 AC \_\_\_\_\_ FLS \_\_\_\_\_ SS \_\_\_\_\_  
 DATE \_\_\_\_\_  
 DIVISION OF THE STATE ARCHITECT





### STRUCTURAL TESTING AND INSPECTION PROGRAM:

- ALL STRUCTURAL TESTS AND INSPECTIONS SHALL COMPLY WITH ALL REQUIREMENTS AS STATED IN THE 2019 CBC CHAPTER 17A.
- ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER OR ARCHITECT OF RECORD ACTING AS THE OWNER'S AGENT, BUT NOT THE CONTRACTOR OR ANY OTHER PERSON RESPONSIBLE FOR THE WORK, PER CBC SECTION 1704A.
- TESTING LABORATORY SHALL PROVIDE SPECIAL INSPECTION DURING CONSTRUCTION, COMPLYING WITH 2016 CBC SECTIONS 1701A.3 AND 1701A.5. TESTING LABORATORY SHALL FURNISH COPIES OF TEST RESULTS AND FINAL INSPECTION REPORTS TO THE STRUCTURAL ENGINEER OF RECORD IN ADDITION TO OTHER NORMAL DISTRIBUTION WITHIN ONE WEEK OF TEST AND INSPECTION.
- FOUNDATION INSPECTIONS SHALL BE COORDINATED WITH PROJECT GEOTECHNICAL ENGINEER AND SHALL COMPLY WITH ALL REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, INCLUDING BUT NOT LIMITED TO, CBC CHAPTER 18A.
- THE TYPE OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR. SEE ALSO CBC TABLES 1705A.2.1, 1705A.2.3, 1705A.3, 1705A.6, A705A.7, AND 1705A.8.
- REFER TO THE APPROVED DSA TEST & INSPECTION FORM (DSA-103) FOR REQUIRED INSPECTIONS. ALSO SEE CURRENT CBC SECTION 1704A.

### SPECIAL INSPECTION:

- REFER TO THE APPROVED DSA FORM 103 FOR REQUIRED SPECIAL INSPECTIONS. ALSO SEE 2019 CBC SECTION 1704A.

### ABBREVIATIONS

∠	ANGLE
@	INSULATION OR INSULATED
℄	CENTERLINE
°	DEGREE
Ø	DIAMETER
∞	INCH; DITTO (SAME AS ABOVE)
≥	GREATER THAN OR EQUAL TO
≤	LESS THAN OR EQUAL TO
≠	NOT EQUAL TO
±	PLUS/MINUS
#	POUND OR NUMBER
A.B.	ANCHOR BOLT
ABV.	ABOVE
A.C.	ASPHALTIC CONCRETE
ADD'L	ADDITIONAL
ADJ.	ADJACENT
A.F.F.	ABOVE FINISHED FLOOR
AGG.	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARCH.	ARCHITECT OR ARCHITECTURAL
A.T.R.	ALL THREADED ROD

BEV.	BEVELED
B.F.F.	BELOW FINISHED FLOOR
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.N.	BOUNDARY NAIL
BNDY.	BOUNDARY
B.O.	BOTTOM OF
BOT.	BOTTOM
BRG.	BEARING
BRKT.	BRACKET
BTWN.	BETWEEN

CALCS.	CALCULATIONS
CALIF.	CALIFORNIA
CBC	CALIFORNIA BUILDING CODE
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT
CLNG.	CEILING
CLR.	CLEAR OR CLEARANCE
CMU	CONCRETE MASONRY UNIT(S)
CNTR.	CENTER
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
COND.	CONDITION
CONT.	CONTINUATION OR CONTINUOUS
CONTR.	CONTRACTOR
CTSK.	COUNTERSINK OR COUNTERSUNK

D.F.	DOUGLAS FIR
D.F.-L	DOUGLAS FIR LARCH
DL	DEAD LOAD
DBL	DOUBLE
DEMO.	DEMOLITION
DET.	DETAIL
DIA. OR Ø	DIAMETER
DIAG.	DIAGONAL
DIAPH.	DIAPHRAGM
DIM.	DIMENSION
DIST.	DISTANCE
DN.	DOWN
∅	DITTO
DTL	DETAIL
DWG.	DRAWING
DWL.	DOWEL

(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EMBED.	EMBEMENT
E.N.	EDGE NAIL
E.O.S.	EDGE OF SLAB
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.S.	EACH SIDE
ETC.	ET CETERA
E.W.	EACH WAY
EXP.	EXPANSION
EXT.	EXTERIOR

F.D.	FLOOR DRAIN
F.F.	FINISHED FLOOR
F.J.	FLOOR JOIST
FLR.	FLOOR
F.O.	FACE OF
F.S.	FAR SIDE
FOUND. OR FND.	FOUNDATION
FT.	FOOT OR FEET
FTG.	FOOTING

GA.	GAUGE OR GAGE
GALV.	GALVANIZED
GEOTECH.	GEOTECHNICAL
GLU-LAM OR GLB	GLUE LAMINATED BEAM
GRTG.	GRATING
G.S.M.	GALVANIZED SHEET METAL
GYP. BD.	GYPSTUM BOARD

H.A.S.	HEADED ANCHOR STUD
HD	HOLDOWN
H.D.G.	HOT DIP GALVANIZED
HDR.	HEADER
HGR.	HANGER
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
H.S.B.	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SECTION
HT.	HEIGHT
I.D.	INSIDE DIAMETER
INCL.	INCLUDING

### ABBREVIATIONS

INFO.	INFORMATION
INSUL.	INSULATION OR INSULATED
INT.	INTERIOR
INV.	INVERT
INTER.	INTERSECTION
JNT.	JOINT
JST.	JOIST
LB.	POUND
LDGR.	LEDGER
LGMS	LIGHT GAUGE METAL STEEL
LL	LIVE LOAD
L.L.V.	LONG LEG VERTICAL
L.L.H.	LONG LEG HORIZONTAL
LNG.	LONG OR LENGTH
LONGIT.	LONGITUDINAL
L.P.	LOW POINT
LS	LAG SCREW
LSL	LAMINATED STRAND LUMBER
LTWT. OR LW.	LIGHTWEIGHT
LVL	LAMINATED VENEER LUMBER

MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.E.P.	MECHANICAL, ELECTRICAL & PLUMBING
MECH.	MECHANICAL
MNFR. OR MANUF.	MANUFACTURER
MIN.	MINIMUM
MSTR.	MASTER
MTL.	METAL
(N)	NEW
N.A. OR N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
N.S.	NEAR SIDE
N.S.G.	NON-SHRINK GROUT
N.T.S.	NOT TO SCALE

OI	OVER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OPPOSITE HAND
OPP.	OPPOSITE
OPT.	OPTIONAL
O.W.S.J.	OPEN WEB STEEL JOIST

PAR.	PARALLEL
PC.	PIECE
PENTR.	PENETRATION
PERF.	PERFORATED
PERP.	PERPENDICULAR
PF	PERIMETER FOOTING
PL	PLATE
PLYWD. OR PW	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
P.T.	PRESSURE TREATED
P.T.D.F.	PRESSURE TREATED DOUGLAS FIR
R	RISER
RECOM. OR REC.	RECOMMENDATIONS
REINF.	REINFORCING
REQD.	REQUIRED
REBAR.	REINFORCING BARS
R.J.	ROOF JOIST
RM.	ROOM
R.R.	ROOF RAFTER
RSC	RIGID STEEL CONDUIT
R.T.	ROOF TRUSS
RWD.	REDWOOD

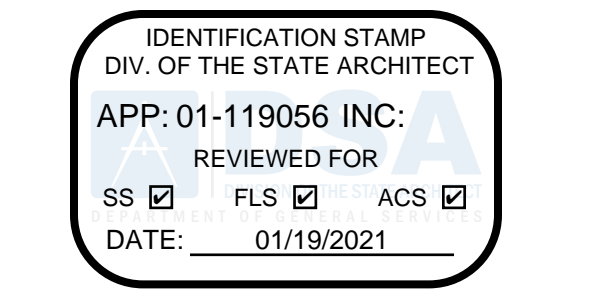
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.C.B.F.	SPECIAL CONCENTRICALLY BRACED FRAME
SCHED.	SCHEDULE
S.C.J.	SLIP CONTROL JOINT
SECT.	SECTION
S.E.O.R.	STRUCTURAL ENGINEER OF RECORD
S.F.R.S.	SEISMIC FORCE RESISTING SYSTEM
SHT.	SHEET
SIML.	SIMILAR
S.L.V.	SHORT LEG VERTICAL
SNGL.	SINGLE
S.M.S.	SHEET METAL SCREW
S.O.G.	SLAB ON GRADE
SPA	SPACING
SQ.	SQUARE
S.S.	STAINLESS STEEL
STAGG.	STAGGERED
STD.	STANDARD
STIFF.	STIFFENER
S.W.	SHEARWALL
SYM.	SYMMETRICAL

T&B	TOP AND BOTTOM TONGUE & GROOVE
T&G	TREAD
T.	TOP PLATE
TIP	THICK
THK.	TOP OF
T.O.	TYPICAL
TYP.	

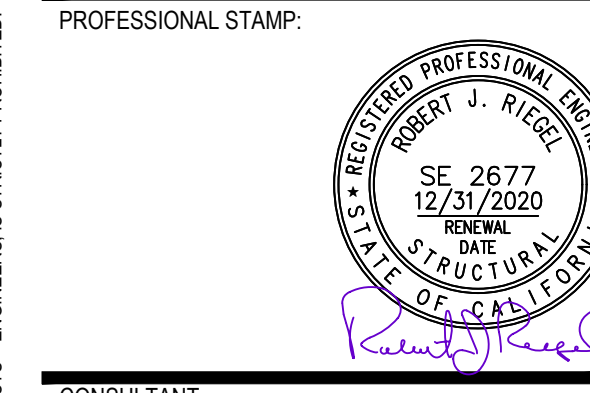
U.O.N.	UNLESS OTHERWISE NOTED
V.I.F.	VERIFY IN FIELD
VERT.	VERTICAL
W	WITH
WIN	WITHIN
W/O	WITH OUT
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
WD.	WOOD
W.P.	WORK POINT
W.P.J.	WEAKENED PLANE JOINT

11/16/2020 01:32:34 PM P:\C3630 CharcoLas Positas\_C035608\_LPC\_Merchante3\_Dwg\S-003\_NOTES-003.dwg - marquines

DSA:

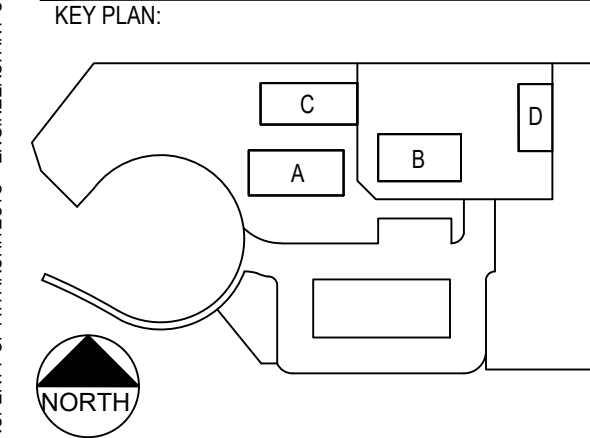


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CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

## STRUCTURAL GENERAL NOTES

DRAWN BY: marquines CHECKED BY: g.ng  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

# S-003

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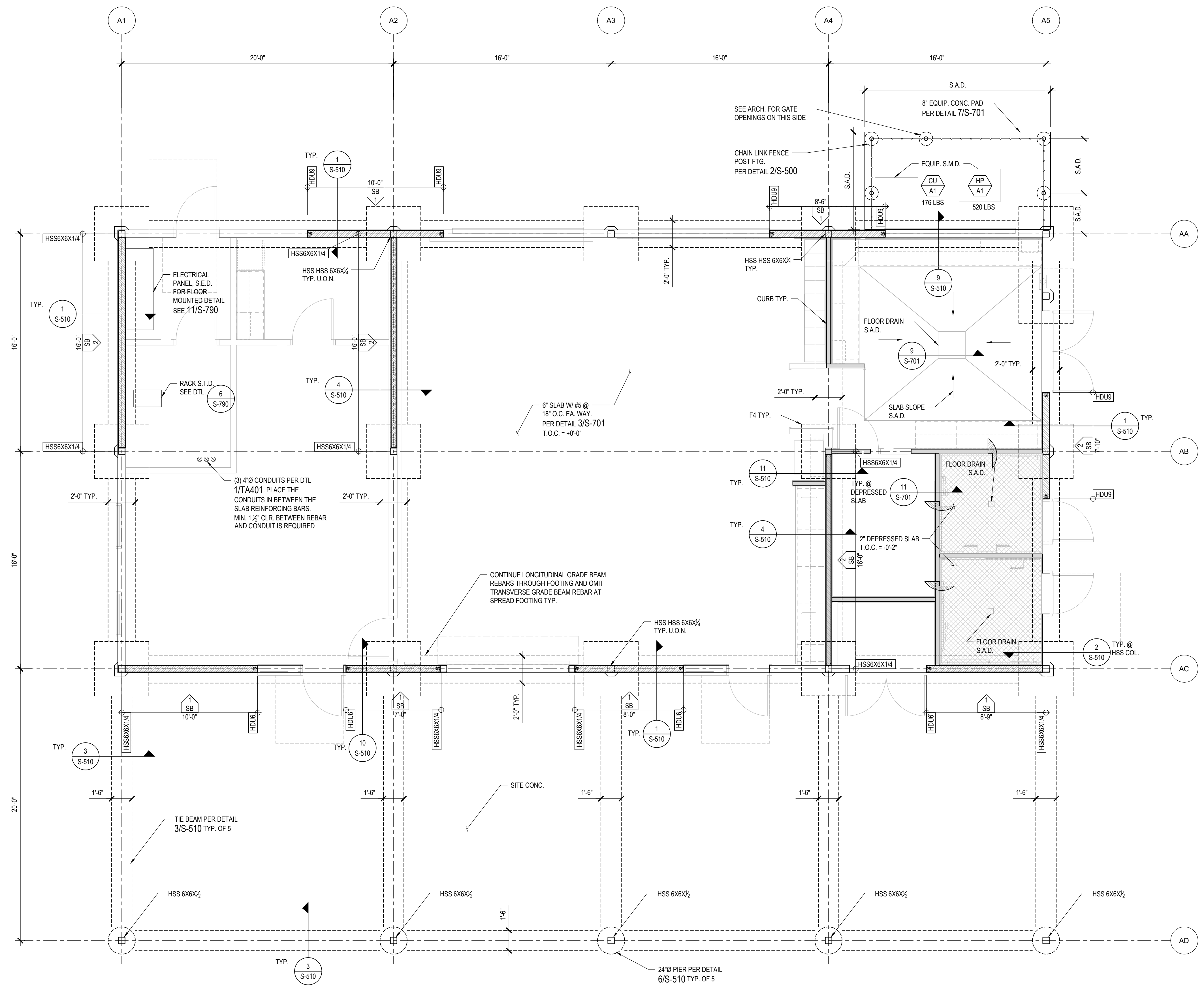
**FOUNDATION PLAN NOTES:**

1. FOR GENERAL NOTES, SEE SHEET S-001 THROUGH S-003
2. FOR TYPICAL CONCRETE DETAILS, SEE SHEET S-700 THROUGH S-702
3. FOR TYPICAL LGMS DETAILS, SEE SHEET S-740 THROUGH S-742
4. FOR TYPICAL STEEL DETAILS, SEE SHEET S-760 THROUGH S-761
5. FOR EQUIPMENT SUPPORT/ANCHORAGE DETAILS, SEE SHEET S-790
6. SEE GEOTECHNICAL REPORT FOR SITE PREPARATION & SUBGRADE. SEE ALSO FOUNDATION NOTES ON S-002.
7. FOR SLAB, CURB AND PAD LOCATIONS, ELEVATIONS, WIDTH, SLOPES, DIMENSIONS, ETC. SEE ARCHITECTURAL DRAWINGS.
8. T.O. SLAB ELEVATION IS = 0'-0". ALL ELEVATIONS ARE REFERENCED TO 0'-0".
9. BOTTOMS OF FTGS. SHALL BE 24" (MIN.) BELOW LOWEST ADJACENT GRADE.
10. EXTEND CONTINUOUS FTG./TIE BEAM REBAR INTO SPREAD FTGS., TYP., U.O.N
11. SEE 3/S-702 FOR FOUNDATION AT HOLDDOWN.
12. INCREASE DEPTH OF FOOTING AT HOLDDOWNS AS REQUIRED FOR ANCHOR BOLT EMBEDMENT. SEE DET. 6/S-702
13. FOR ANCHOR EMBED. OF HSS COL. AND FOOTING SCHEDULE SEE 2/S-700
14. FOR TYPICAL LIGHT GAGE METAL STEEL (L.G.M.S.) WALL FRAMING ELEVATION SEE DETAIL 5/S-740.
15. UNLESS OTHERWISE NOTED METAL STUD SIZES SHALL BE:
  - EXTERIOR WALLS UP TO 20 FT. 600S162 x 54MIL @ 16" O.C.
  - INTERIOR SHEAR WALLS UP TO 20 FT. 600S162 x 54MIL @ 16" O.C.
16. INTERIOR PARTITION WALLS SHALL BE NON-BEARING & CONSTRUCTED AS FOLLOWS:
  - SEE ARCH. DRAWINGS FOR WALL THICKNESS.
  - SEE BELOW FOR STUD SIZE. ALL STUDS SHALL BE 16" O.C., U.O.N.
    - WALL UP TO 20 FT. 382S162-33
    - WALL UP TO 16 FT. 382S162-33
  - SEE 8/S-740 FOR BASE OF WALL DETAIL.
  - SEE 2/S-741 FOR COMPENSATION JOINTS @ T.O. WALL.
  - SEE 12/S-740 FOR HEADERS ABOVE DOORS & WINDOWS.
  - SEE 6/S-740 FOR TYPICAL SILL SECTION.
17. FOR SHEAR WALL SCHEDULE SEE 3/S-742
18. DO NOT CUT HOLES IN SILL TRACK OR TOP TRACK.
19. STEEL COLUMNS ARE ONE PIECE, FULL LENGTH, U.O.N.
20. FOR NON-BEARING WALL ROOF CONNECTION SEE DTL. 7 & 8/S-741
21. FOR NON-BEARING WALL CEILING CONNECTION SEE DTL. 1 & 2/S-743
22. CENTER STRUCTURAL STEEL COLUMNS IN WALLS, U.O.N.
23. EDGE FASTEN SUREBOARD AT ALL STRUCTURAL STEEL NAILERS.

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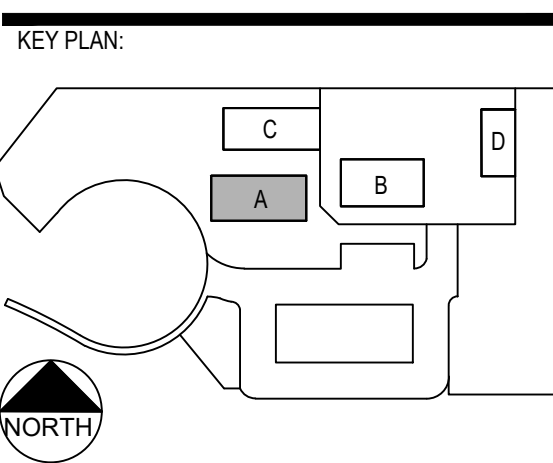
**FOUNDATION SCHEDULE**

F4 - 4'-0" X 4'-0" X 24" THK. PAD FOOTING  
 W/ (6) #6 E.W. AT T&B

**FOUNDATION LEGEND:**

- - ○ : DETAIL NUMBER  
● - ○ : DWG. SHEET NO.
- [ ] : HOLDOWN STUD, DOUBLE SHEAR WALL  
STUD BACK TO BACK, 43MIL MIN.
- [ ] : HSS COL.
- [ ] : FOUNDATION
- : NON-BEARING WALL
- : INTERIOR CONC. CURB
- [ ] : SHEAR WALL  
X = SHEAR WALL TYPE SEE SW SCHED.  
L = MIN SW LENGTH SEE PLANS  
HDUX = HOLDOWN TYPE, HSS INDICATES STRUCTURAL STEEL  
COLUMN IS S.W. HOLDOWN
- [ ] : INDICATES FINISH FLOOR OR TOP OF  
SLAB ON GRADE. DATUM ELEVATION,  
REFER TO CIVIL DWG FOR EQUIVALENT LEVEL
- [ ] : DEPRESSED SLAB-ON-GRADE,  
SEE DTL. 11/S-701

ITEM	REVISION / ISSUE	DATE



**CLPCCD - LAS POSITAS COLLEGE**  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE,  
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**CLASSROOM BUILDING FOUNDATION PLAN**

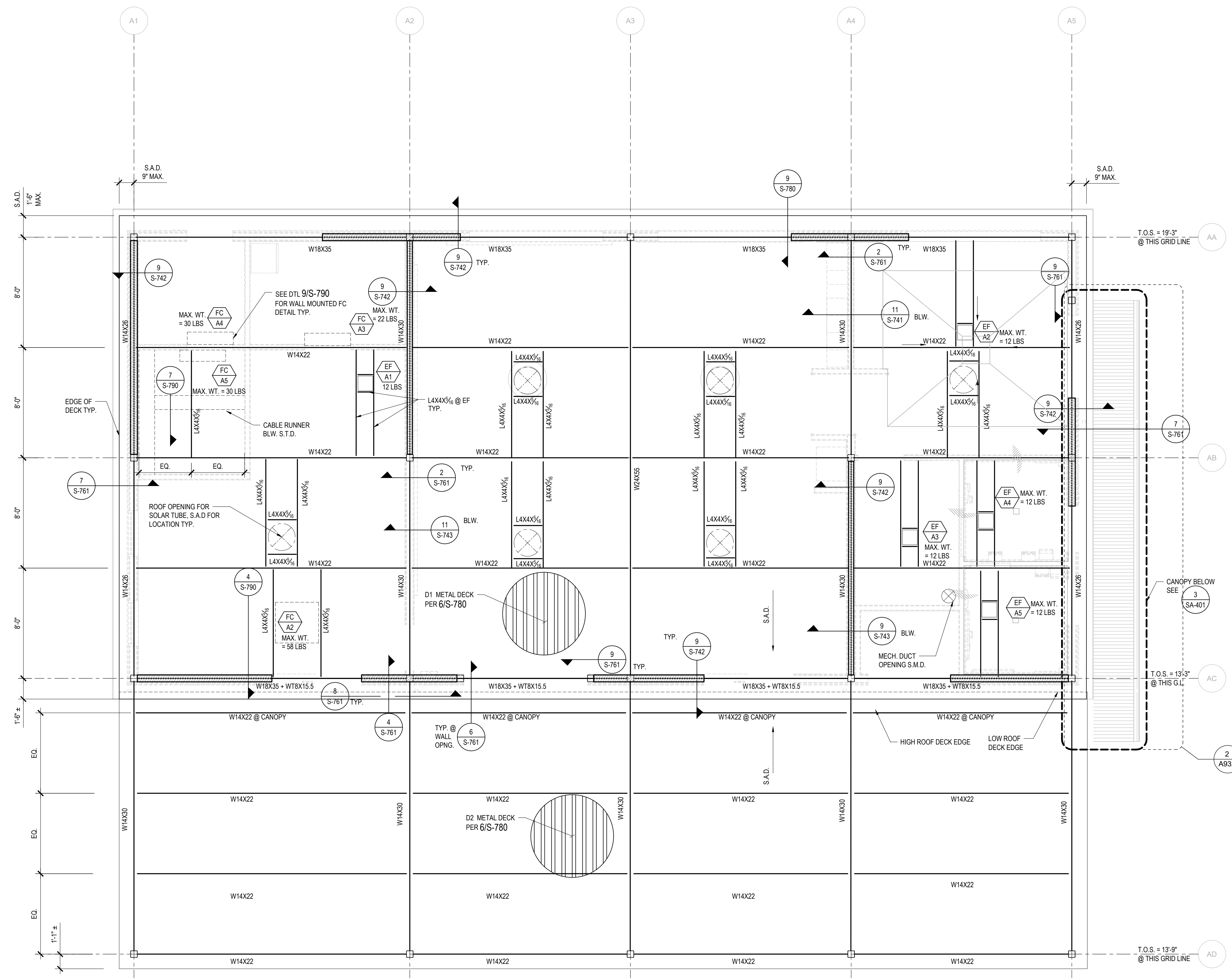
DRAWN BY: m.marques CHECKED BY: g.ng  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**1 CLASSROOM BUILDING FOUNDATION PLAN**  
 SCALE: 1/4" = 1'-0"

1/16/2020 02:01:16 PM P:\C9508 CheckLasPositas\_CCC\C9508\_LPC\_Horticulture3\_Dwg\SA121\_FND\SA121.dwg - marques

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P:\C3630\_ChaosLasPositas\_CCS068 LPC\_Horticulture3\_Dwg\SA161\_Roof\SA161.dwg - marquis



FRAMING PLAN NOTES:

- FOR GENERAL NOTES, SEE SHEET S-001 THROUGH S-003
- FOR TYPICAL LGMS DETAILS, SEE SHEET S-740 THROUGH S-742
- FOR TYPICAL STEEL DETAILS, SEE SHEET S-760 THROUGH S-762
- FOR SHEAR WALL SCHEDULE SEE 3/S-742
- STEEL COLUMNS ARE ONE PIECE, FULL LENGTH, U.O.N.

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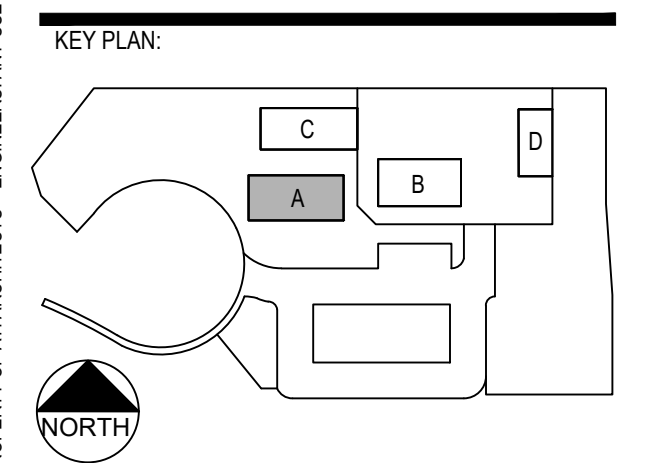
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PROFESSIONAL STAMP:  
REGISTERED PROFESSIONAL ENGINEER  
RESPECT J. RIEGLER  
SE 2677  
12/31/2020  
RENEW  
ONE  
STRUCTURAL  
STATE OF CALIFORNIA

CONSULTANT:

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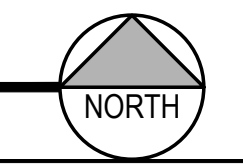
ROOF NOTES:

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**CLASSROOM BUILDING ROOF PLAN**

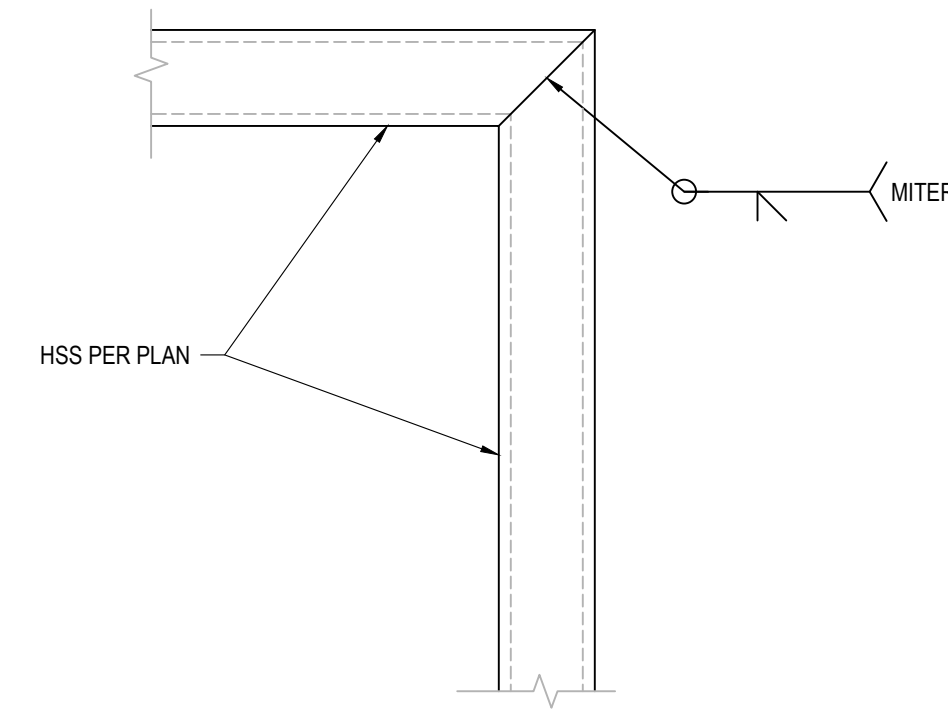
DRAWN BY: marquis CHECKED BY: g.ng  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

1 CLASSROOM BUILDING ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"



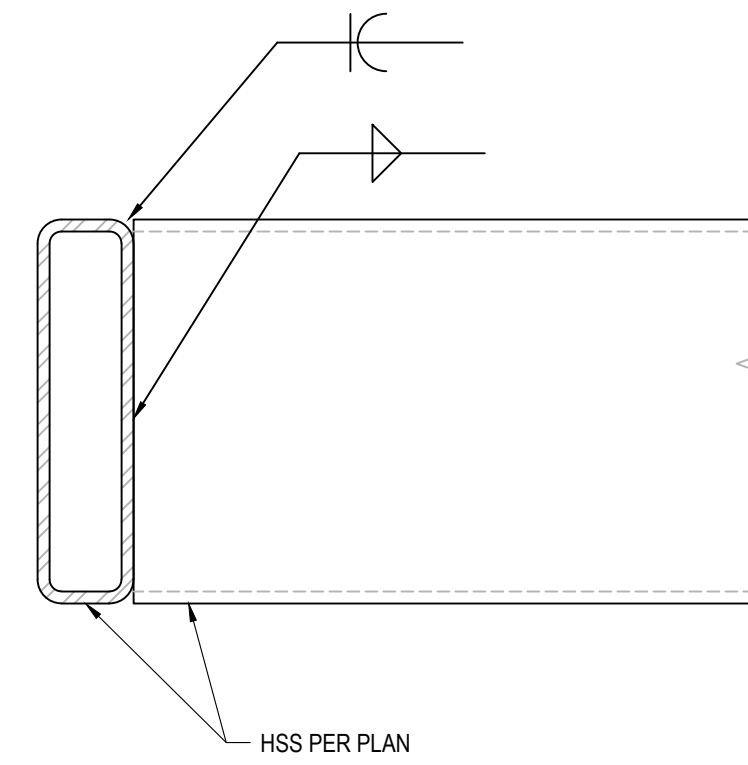
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1/16/2020, 01:32:59 PM  
P:\C3830 ChabotLas Positas\_CCCS608 LPC\_Horticulture3\_Dwg\SSA401\_Canopy-SA401.dwg - marquines



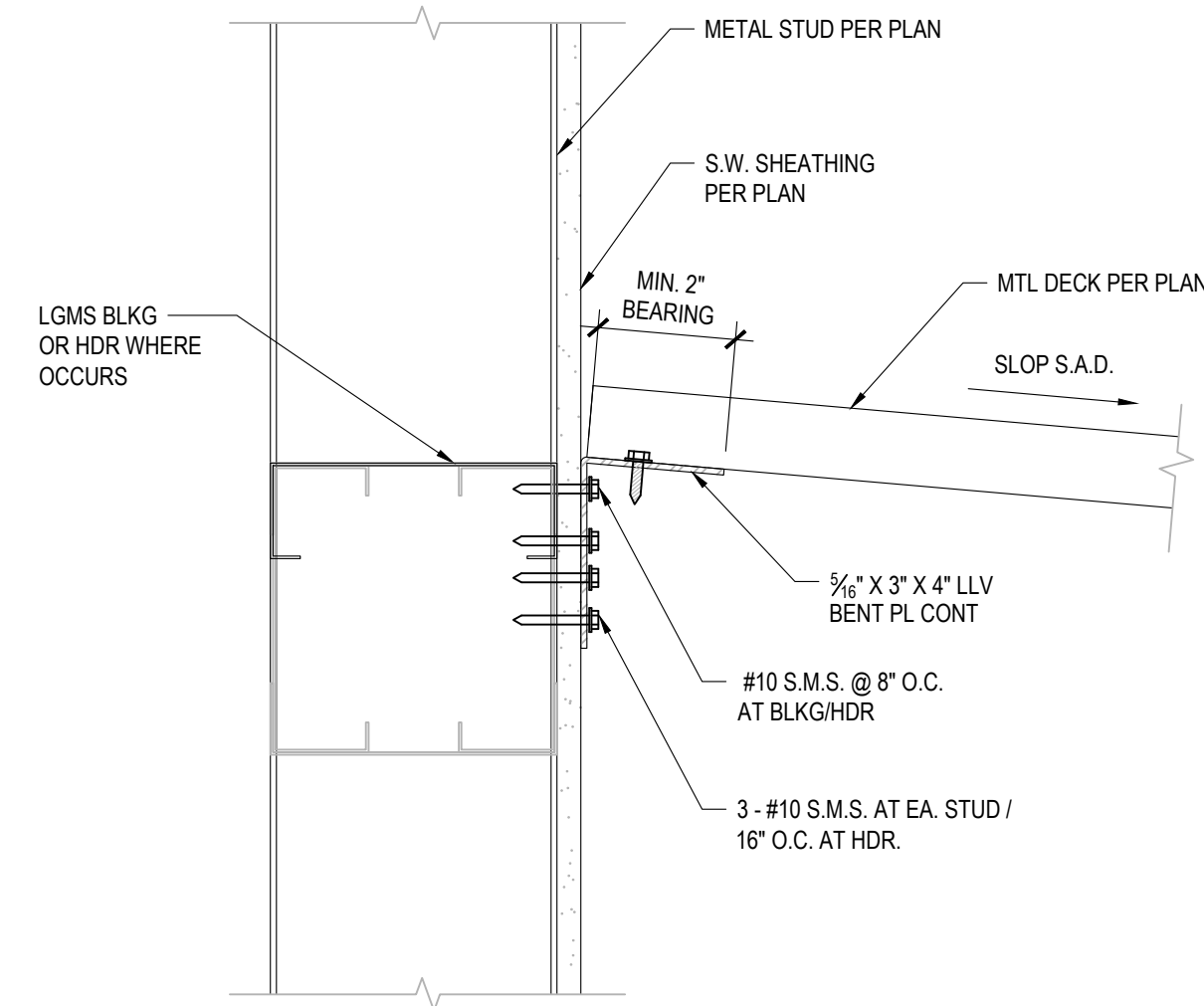
**7 HSS MITER DETAIL**  
SCALE: 3"=1'-0"

JOB# - DMSCALE: 4  
S-05-CNPY-BEAM-BEAM-P01A.DWG



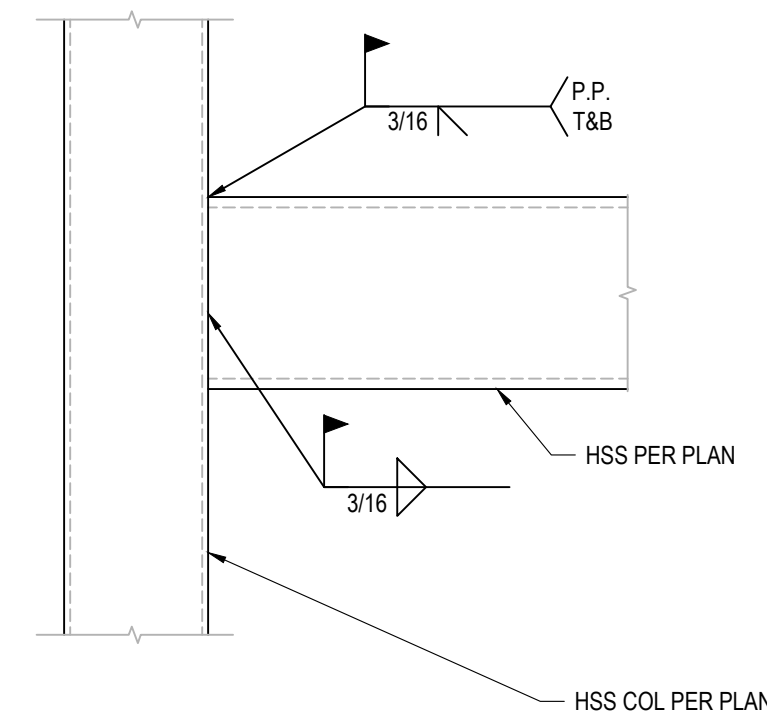
**4 HSS BEAM TO BEAM DETAIL**  
SCALE: 3"=1'-0"

JOB# - DMSCALE: 4  
S-05-CNPY-BEAM-BEAM-P01A.DWG



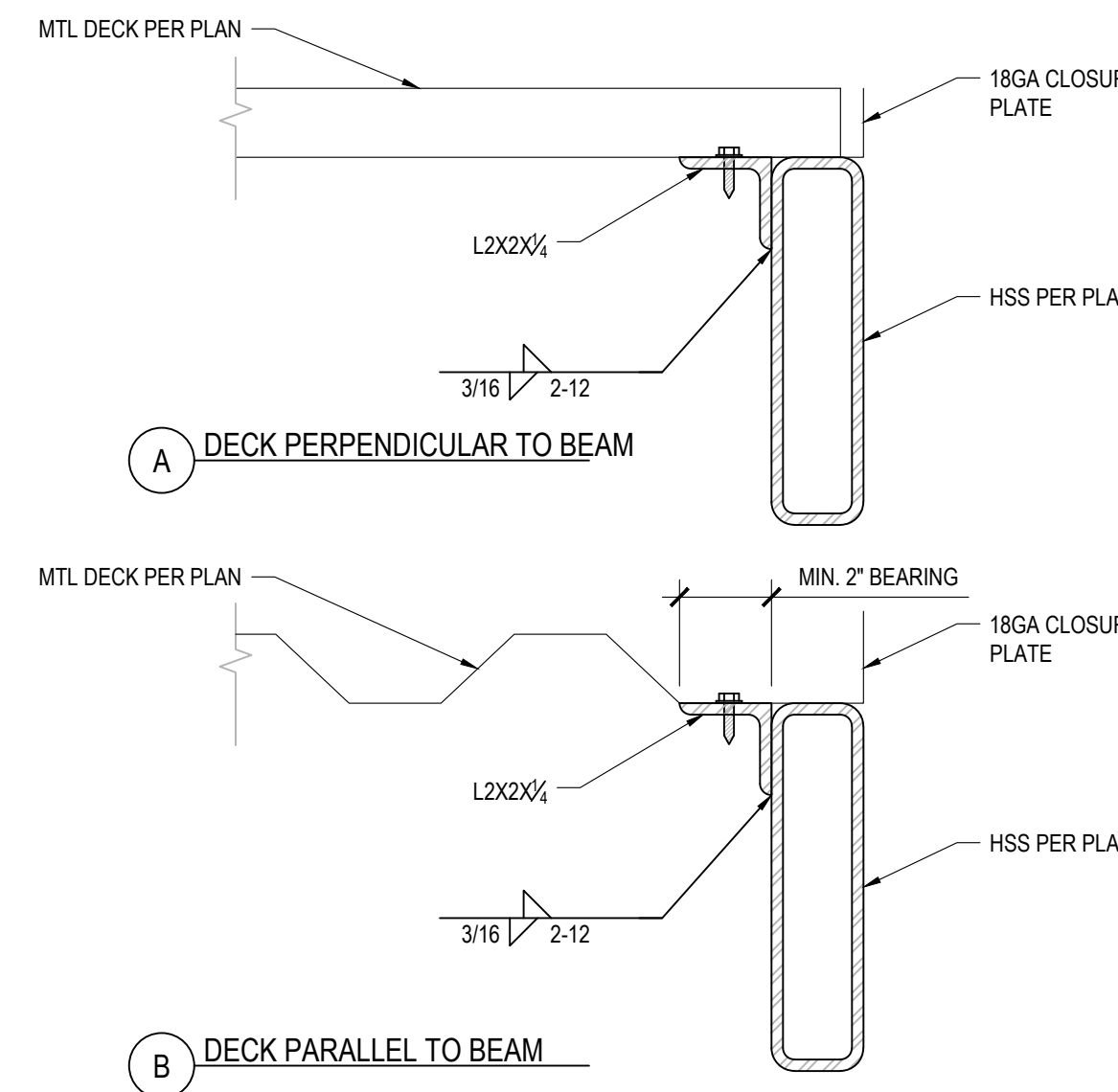
**8 DECK TO BLDG CONNECTION**  
SCALE: 3"=1'-0"

JOB# - DMSCALE: 4  
S-05-CNPY-BEAM-BEAM-P01A.DWG



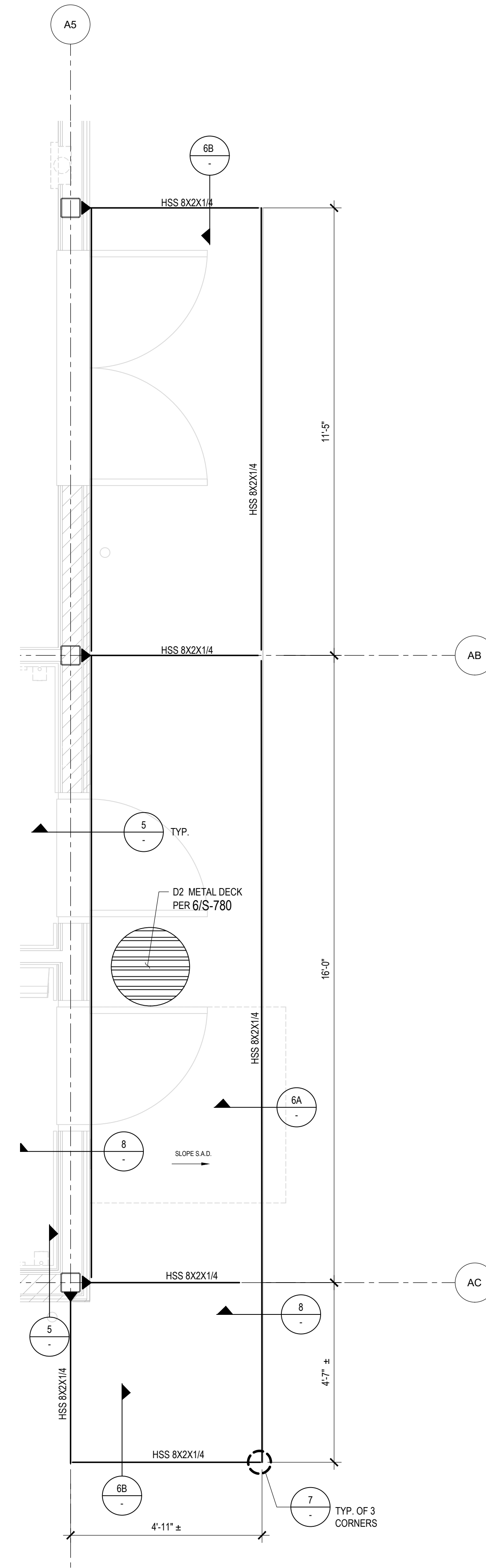
**5 HSS TO COLUMN FIXED CONNECTION**  
SCALE: 1 1/2"=1'-0"

JOB# - DMSCALE: 8  
S-05-CNPY-BEAM-COLN-P01A.DWG



**6 DECK TO BEAM CONNECTION**  
SCALE: 3"=1'-0"

JOB# - DMSCALE: 4  
S-05-CNPY-BEAM-BEAM-P01A.DWG



**3 ENLARGE CANOPY PLAN**  
SCALE: 1/2" = 1'-0"

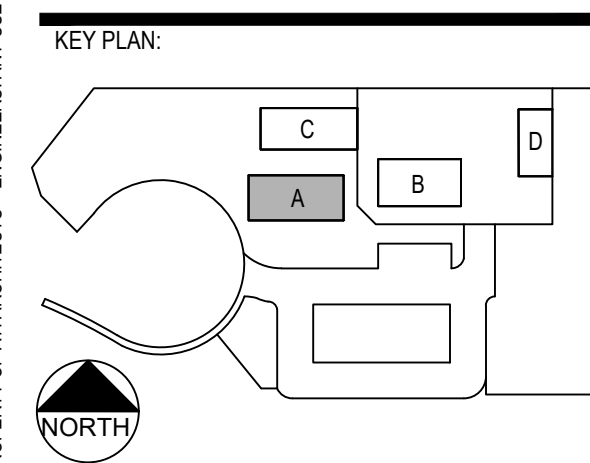
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 LIVERMORE, CA 94551

**CANOPY DETAIL**

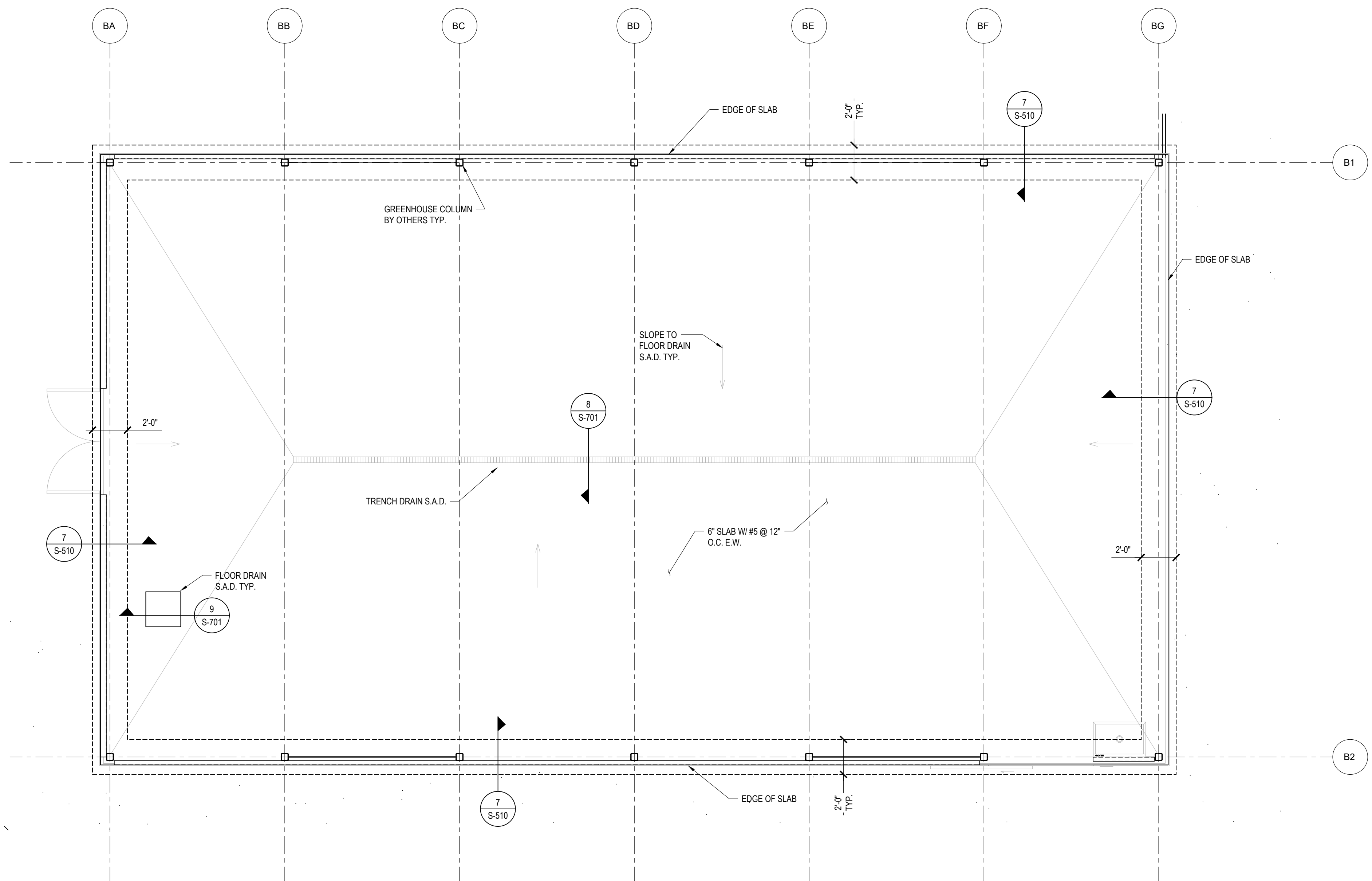
DRAWN BY: marquines      CHECKED BY: g.ng  
 DATE: 01/14/2021      PROJECT NO: C9508  
 SHEET NO:

**SA401**

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1/16/2020, 01:33:06 PM  
 P:\C3600 Check\Las Positas\_C36008 LPC\_Horticulture3\_Dwg\SB121\_GREENHOUSE-SSB121.dwg - marquines

**1 GREENHOUSE FOUNDATION PLAN**  
 SCALE: 1/4" = 1'-0"



THIS SHEET IS NOT PART OF THE DSA APPROVAL

**FOUNDATION PLAN NOTES:**

- FOR GENERAL NOTES, SEE SHEET S-001 THROUGH S-003
- FOR TYPICAL CONCRETE DETAILS, SEE SHEET S-700 THROUGH S-701

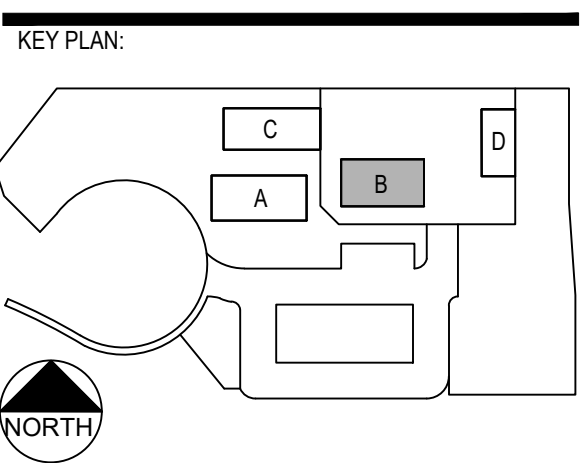
IDENTIFICATION STAMP  
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 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021

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 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

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**FOUNDATION LEGEND:**

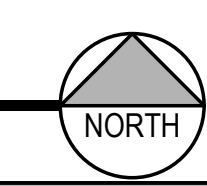
- DETAIL NUMBER 1
- DWG. SHEET NO. S3.1
- STEEL COLUMN BY OTHERS
- FOUNDATION
- FIN. FLR.  INDICATES FINISH FLOOR OR TOP OF SLAB ON GRADE. DATUM ELEVATION. REFER TO CIVIL DWG FOR EQUIVALENT LEVEL.

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 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**GREENHOUSE FOUNDATION PLAN**

DRAWN BY: marquines CHECKED BY: g.ng  
 DATE: 01/14/2021 PROJECT NO: C9508  
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**SB121**




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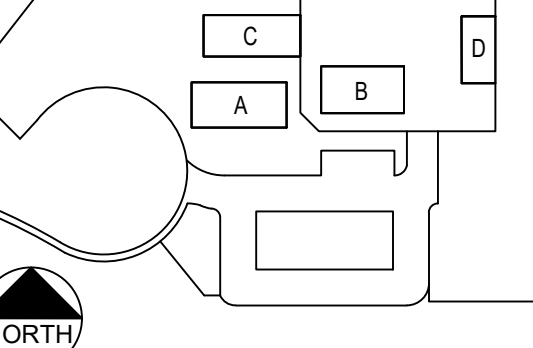
4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90011 - T 714.338.1600

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CONSULTANT:

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KEY PLAN:

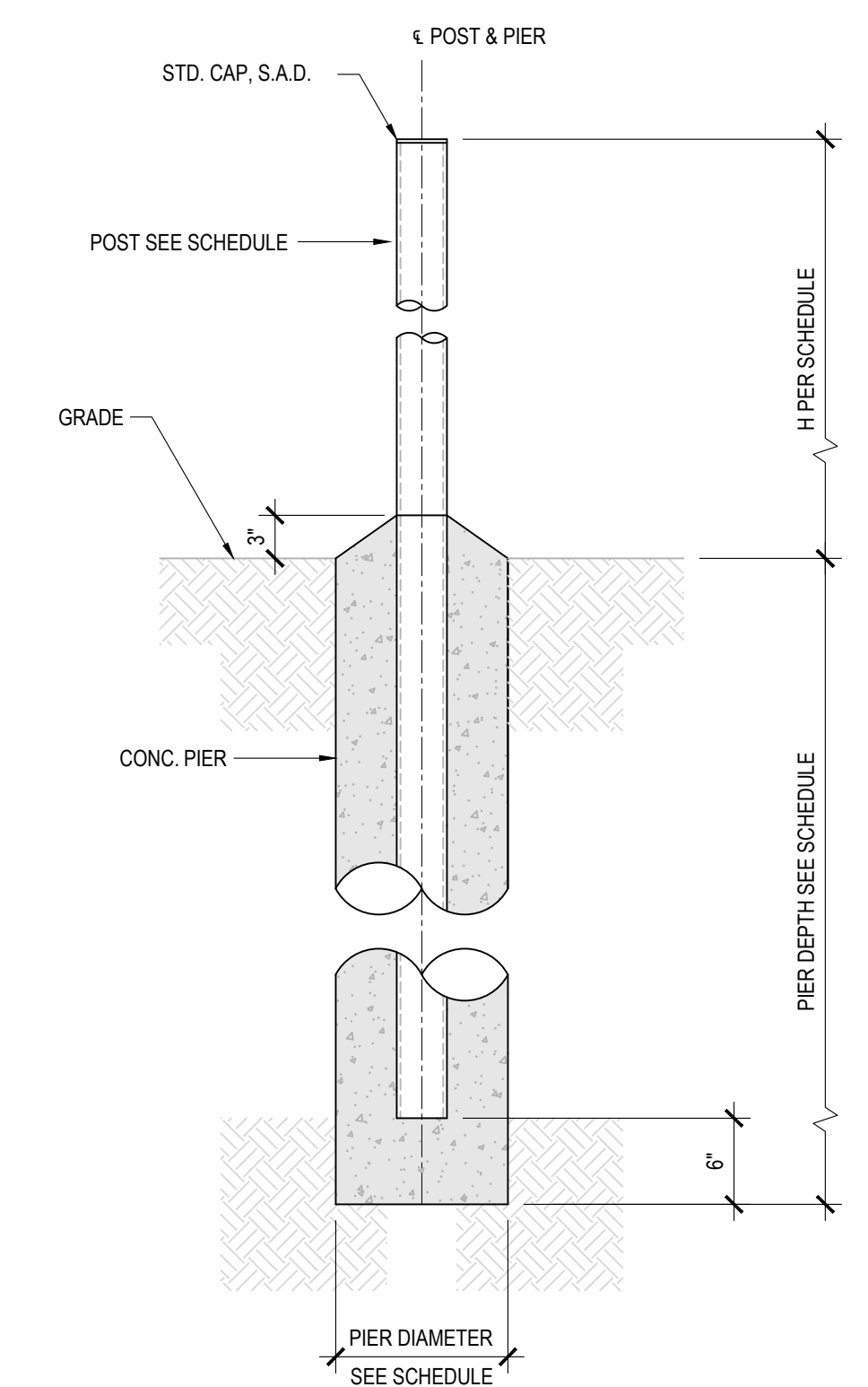


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**SITE  
 EQUIPMENT  
 SUPPORT**

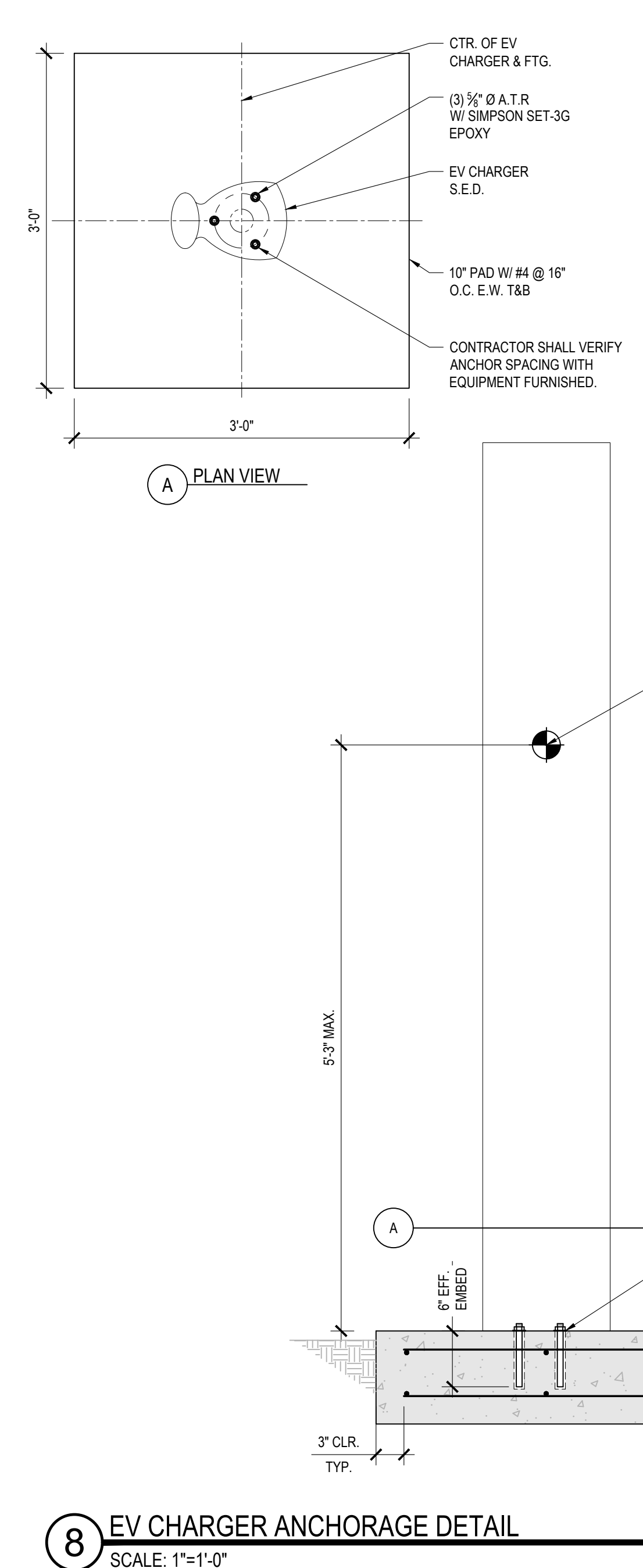
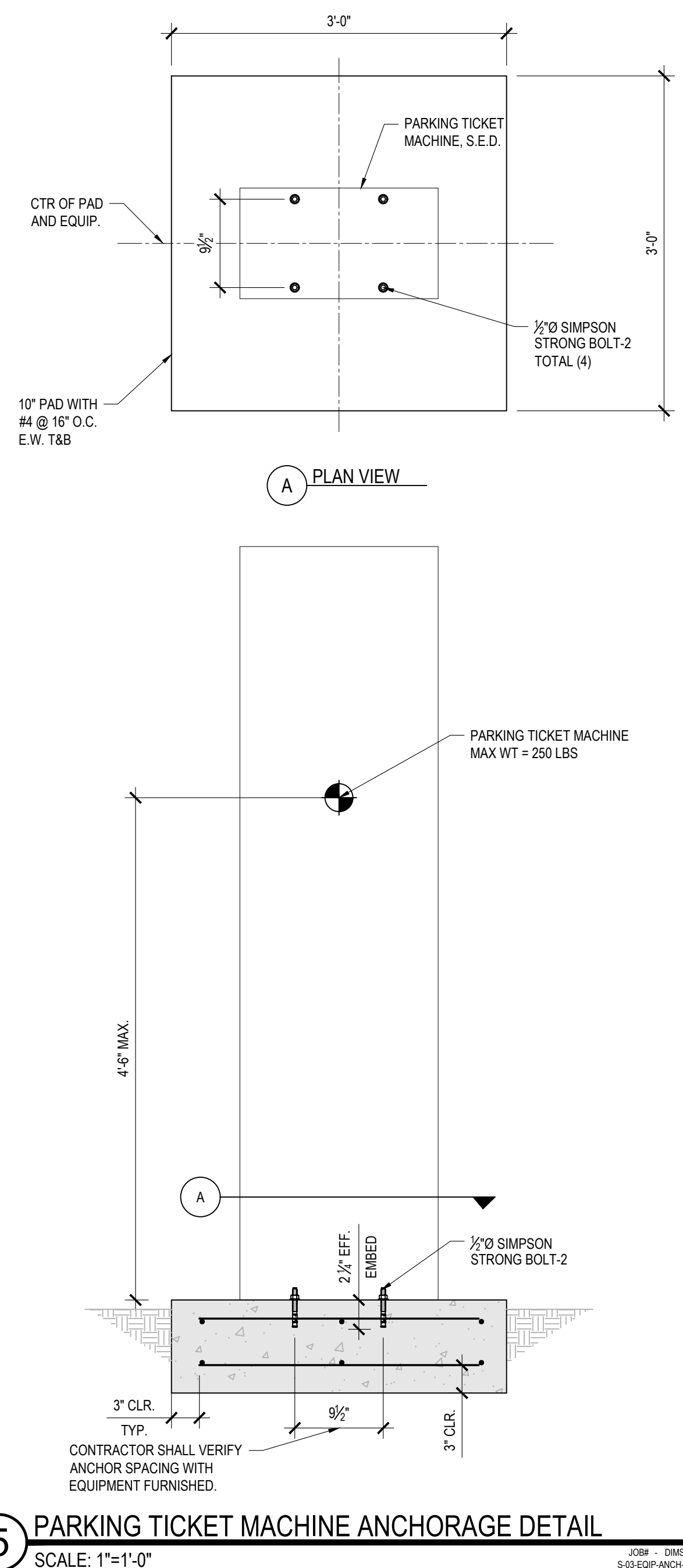
DRAWN BY: m.arquines      CHECKED BY: r.r.  
 DATE: 01/14/2021      PROJECT NO: C9508  
 SHEET NO:

**S-500**

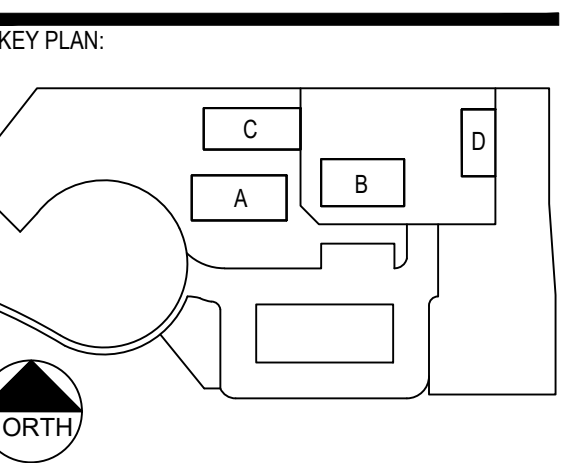


**FENCE FOOTING SCHEDULE**

FENCE TYPE	FENCE HEIGHT	POST SIZE	POST SPACING	PIER DIAMETER	PIER DEPTH BELOW GRADE
CHAIN LINK (NO SLATS)	4'-0"	STD PIPE 3	8'-0" MAX.	12"	3'-6"
CHAIN LINK (NO SLATS)	6'-0"	STD PIPE 3		12"	4'-6"
GREEN SCREEN FENCE	6'-0"	HSS3x3 1/4	8'-0" MAX.	14"	5'-0"
GATE POST	6'-0"	HSS3x3 1/4 / STD PIPE 3 S.L.D.		14"	5'-0"



ITEM:	REVISION / ISSUE:	DATE:

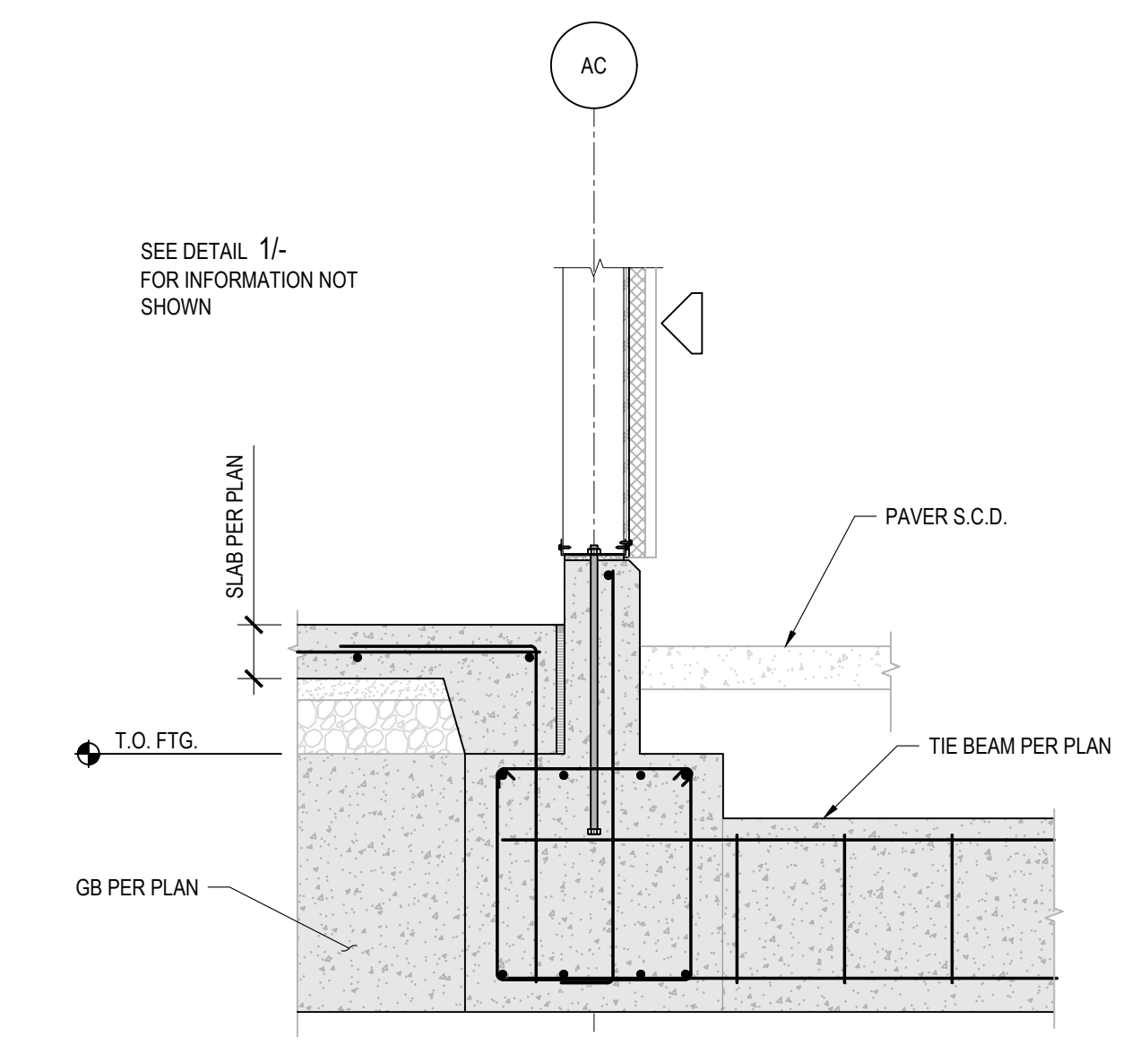


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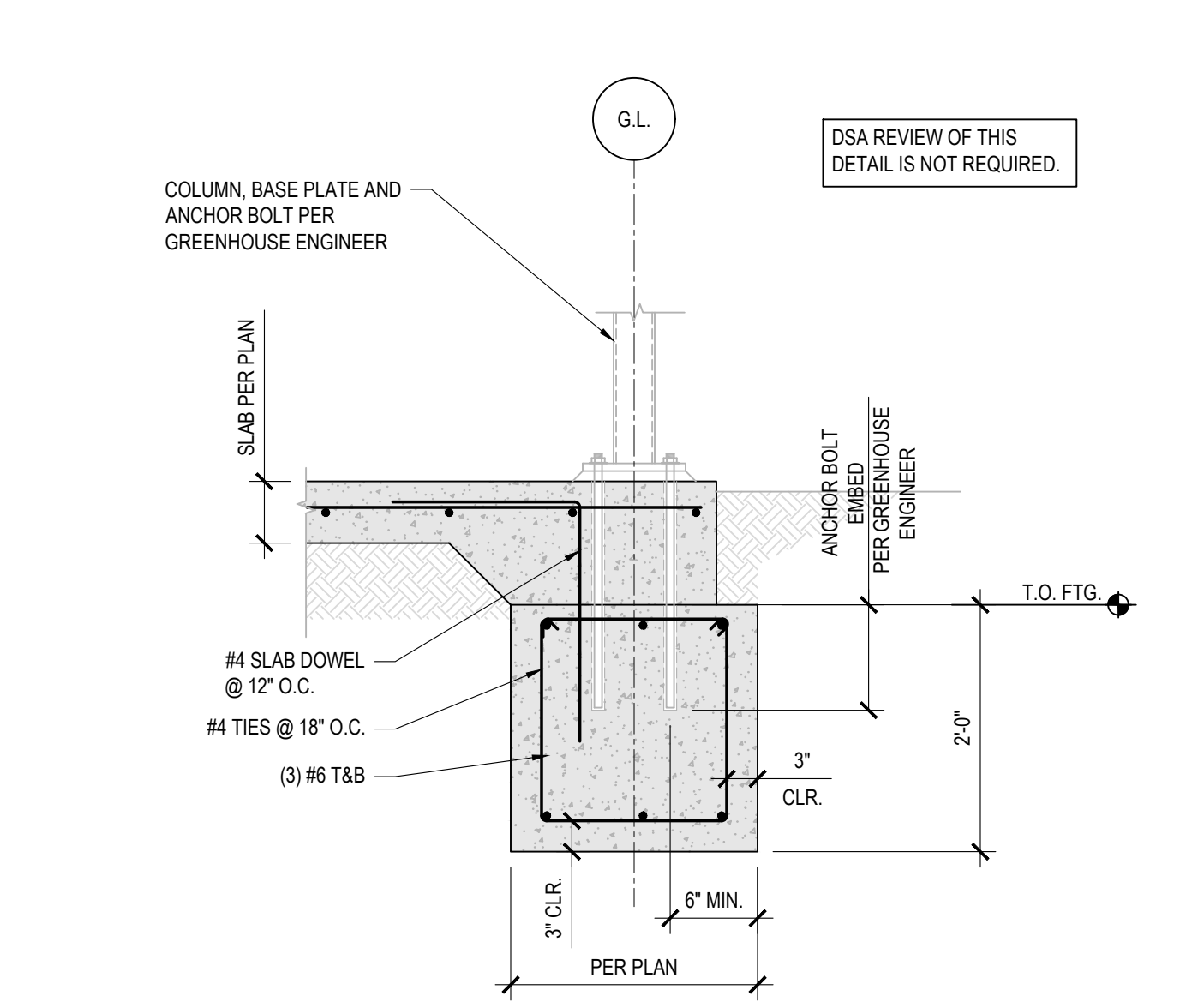
**FOUNDATION  
 DETAILS**

DRAWN BY: m.arquines CHECKED BY:  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

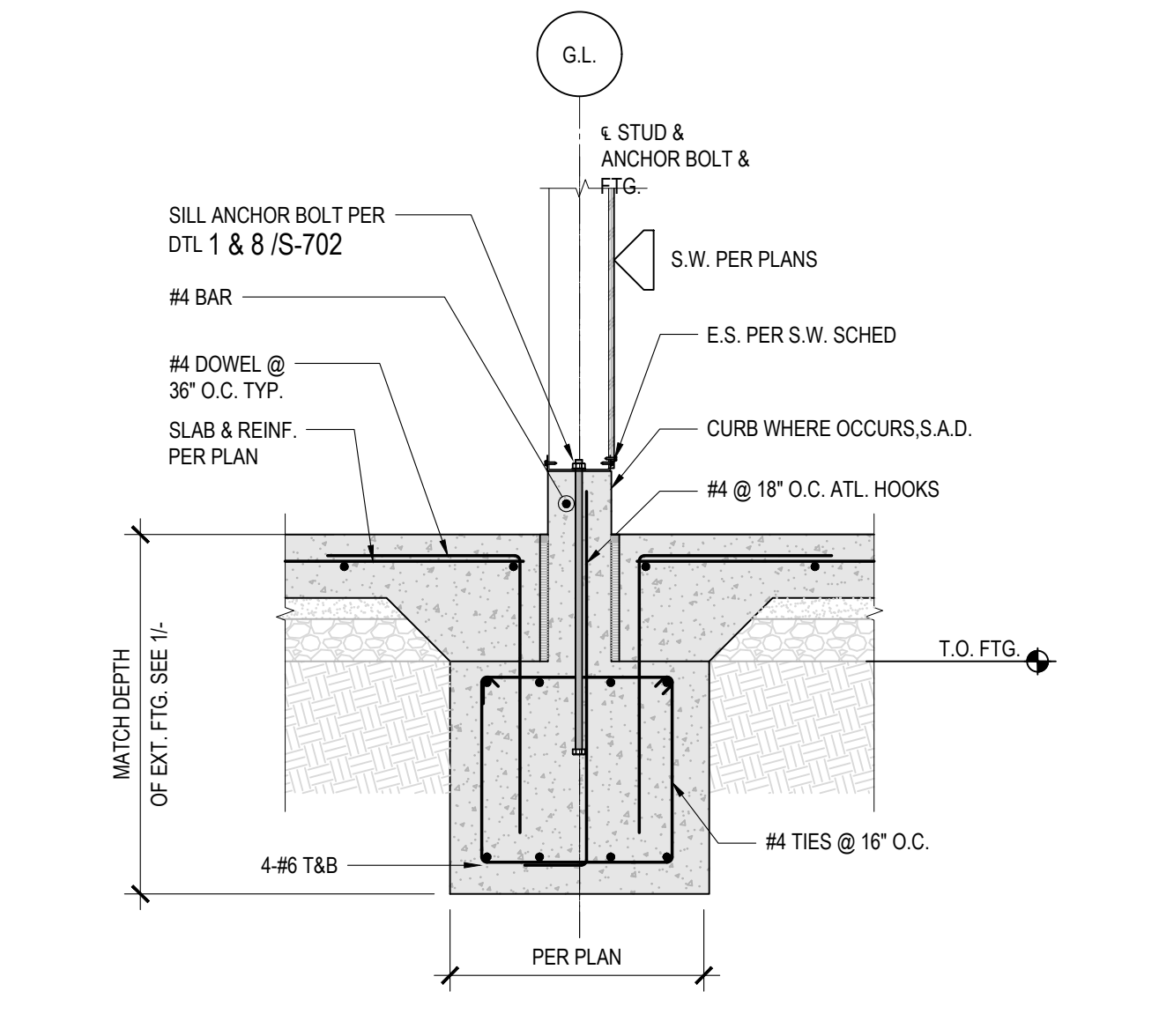
**S-510**



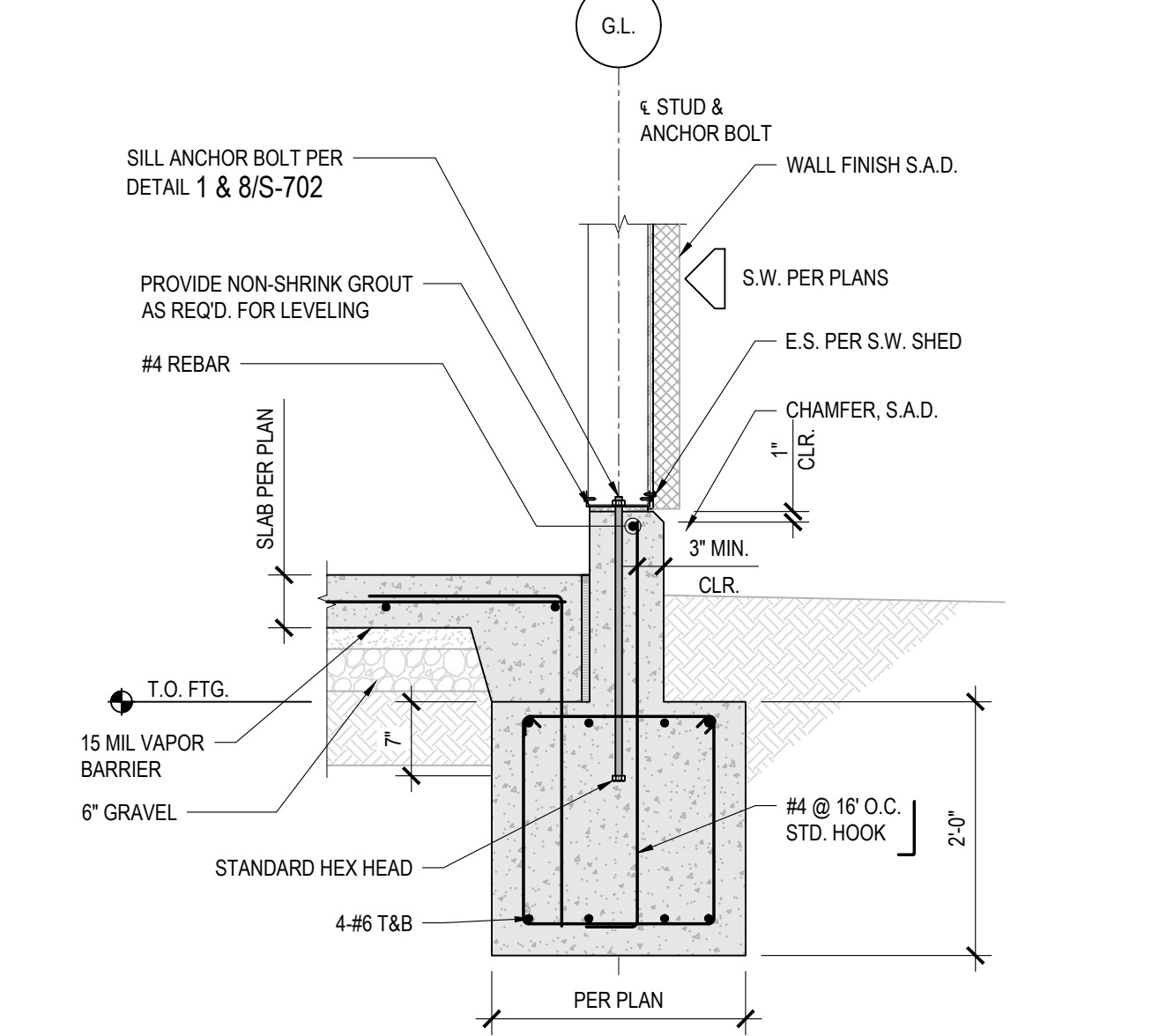
**10 PERIMETER FOOTING DETAIL**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG



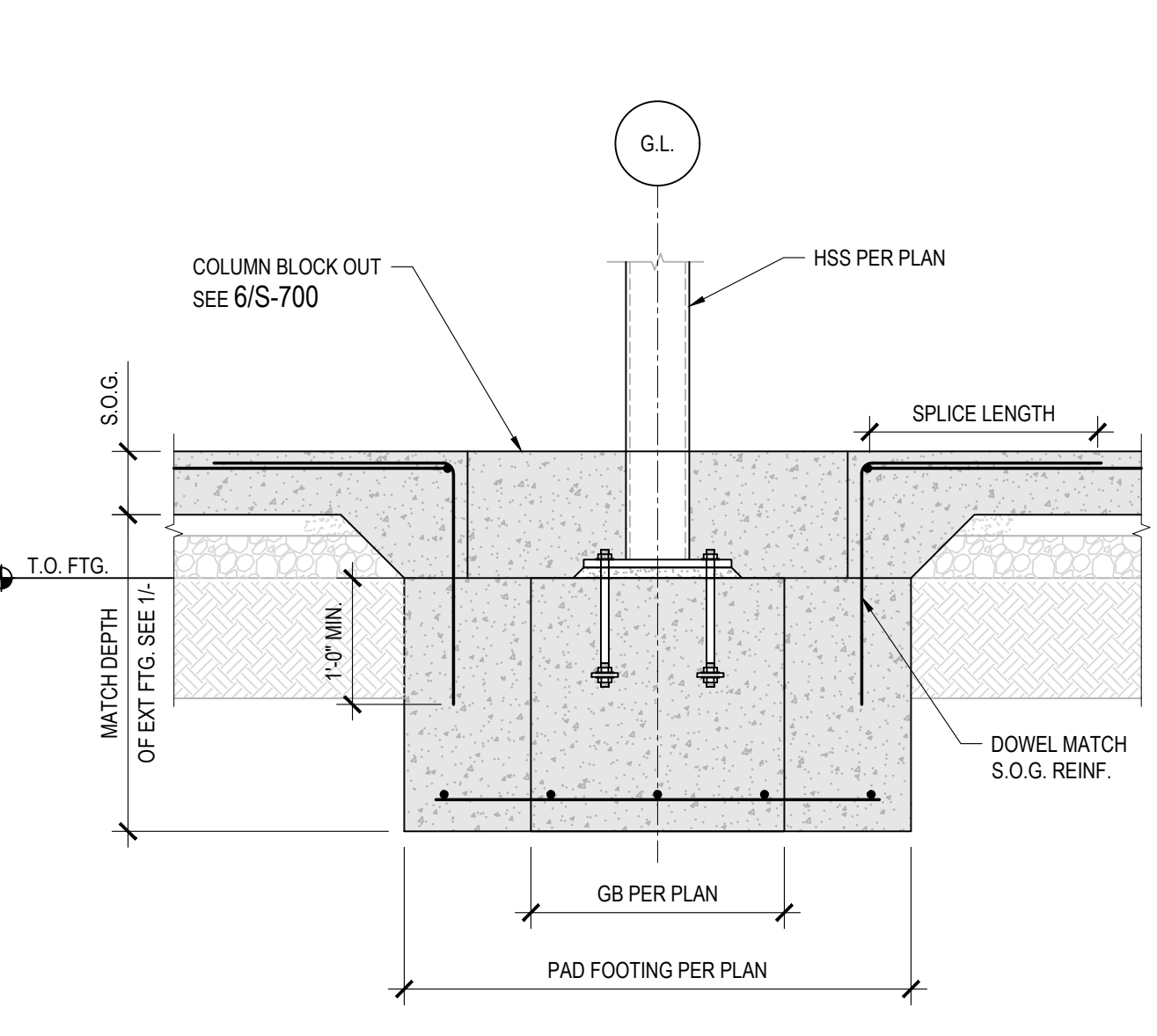
**7 GREENHOUSE FOOTING DETAIL**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-COLN-PIER.DWG



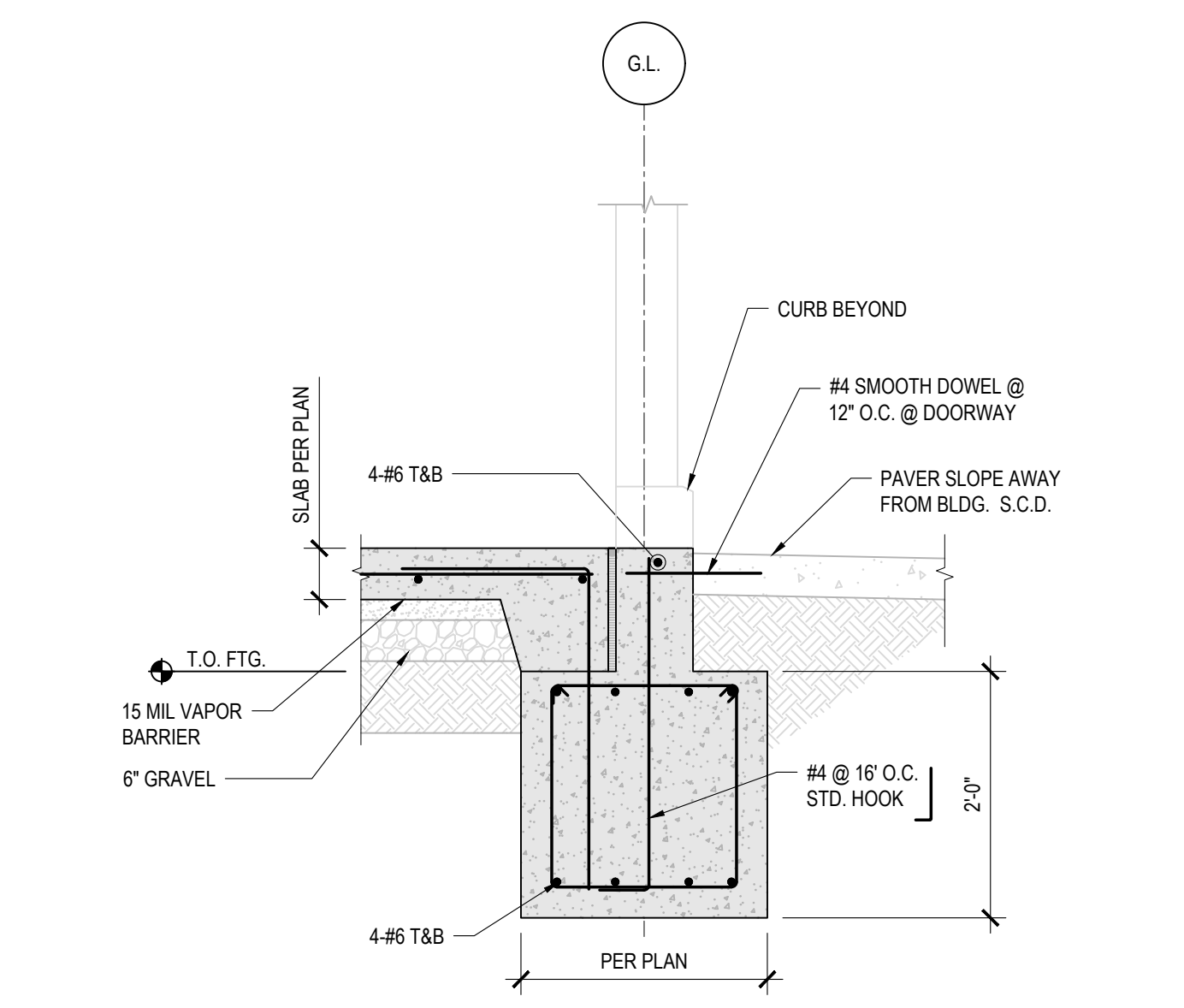
**4 INTERIOR FOOTING DETAIL WITH CURB**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-INT-M3A3.DWG



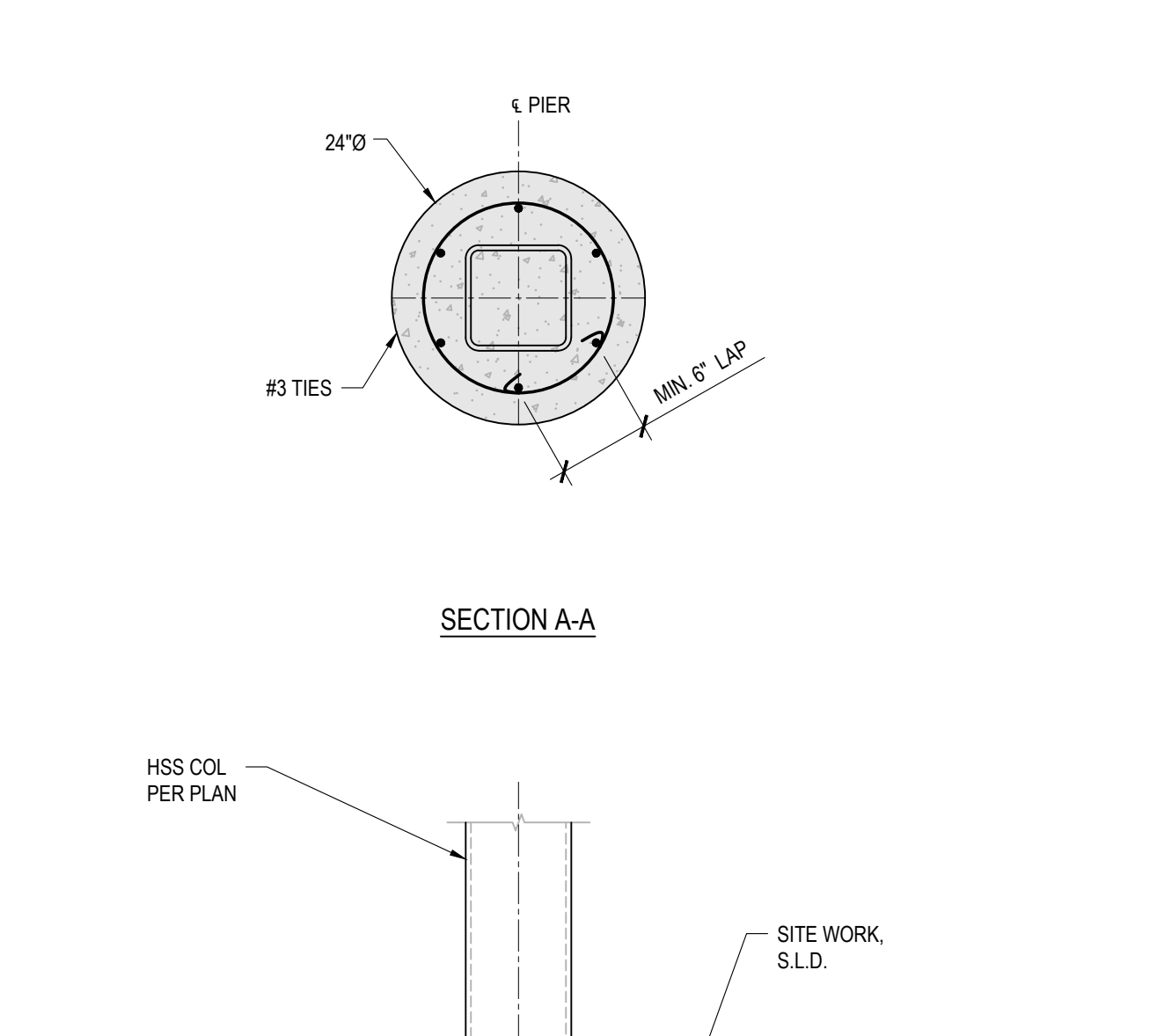
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 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG



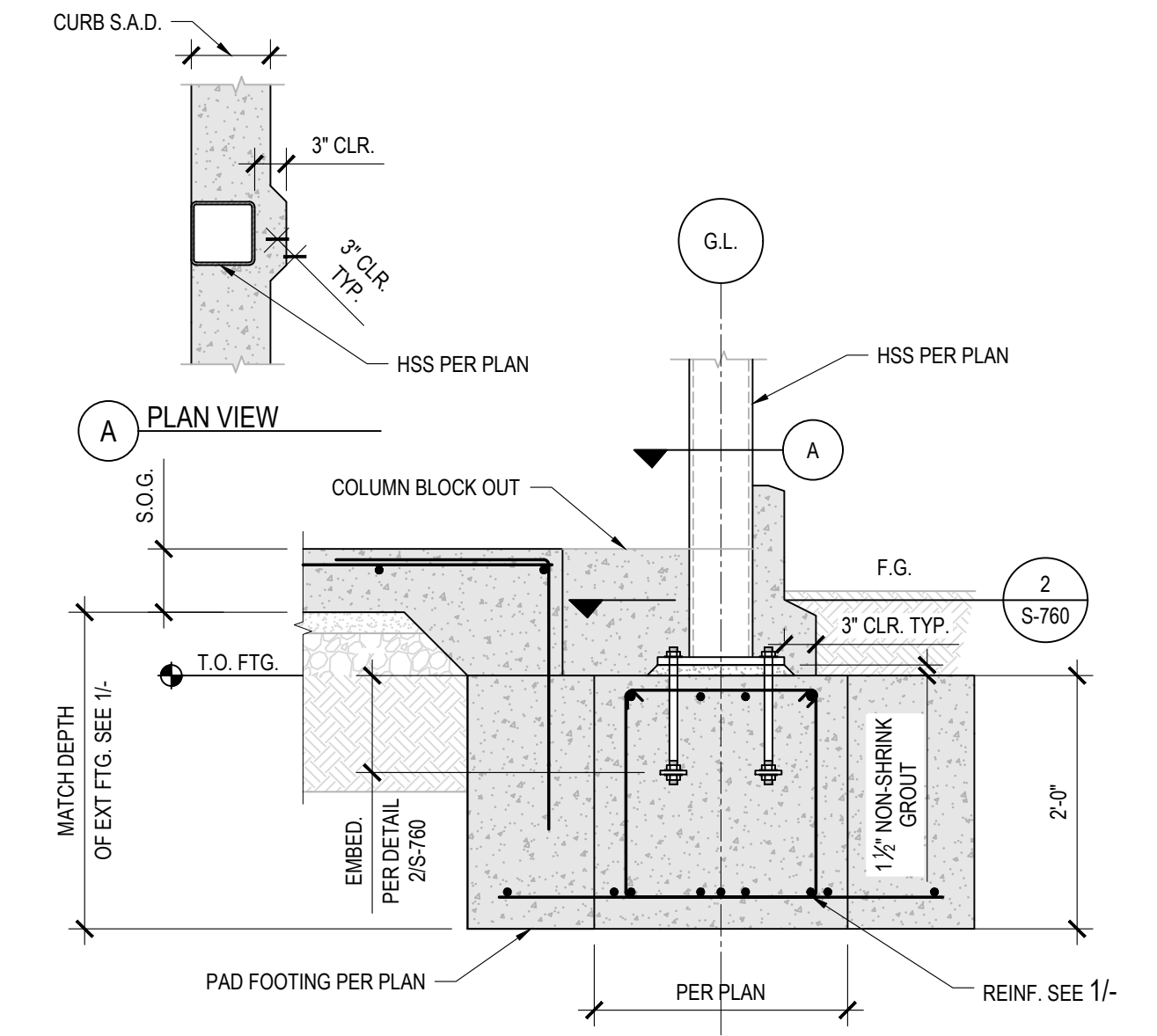
**11 INTERIOR FOOTING DETAIL**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG



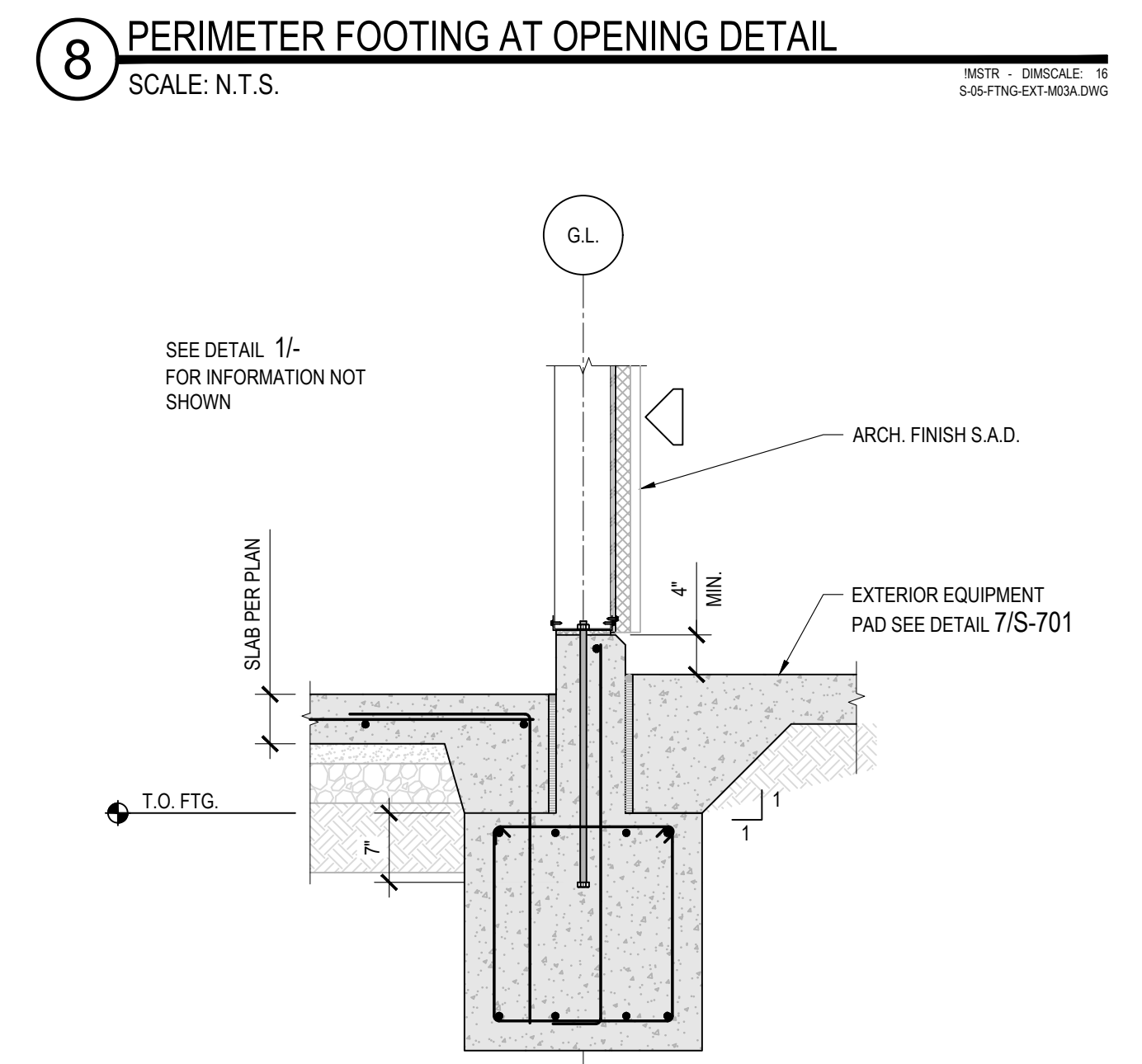
**8 PERIMETER FOOTING AT OPENING DETAIL**  
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 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG



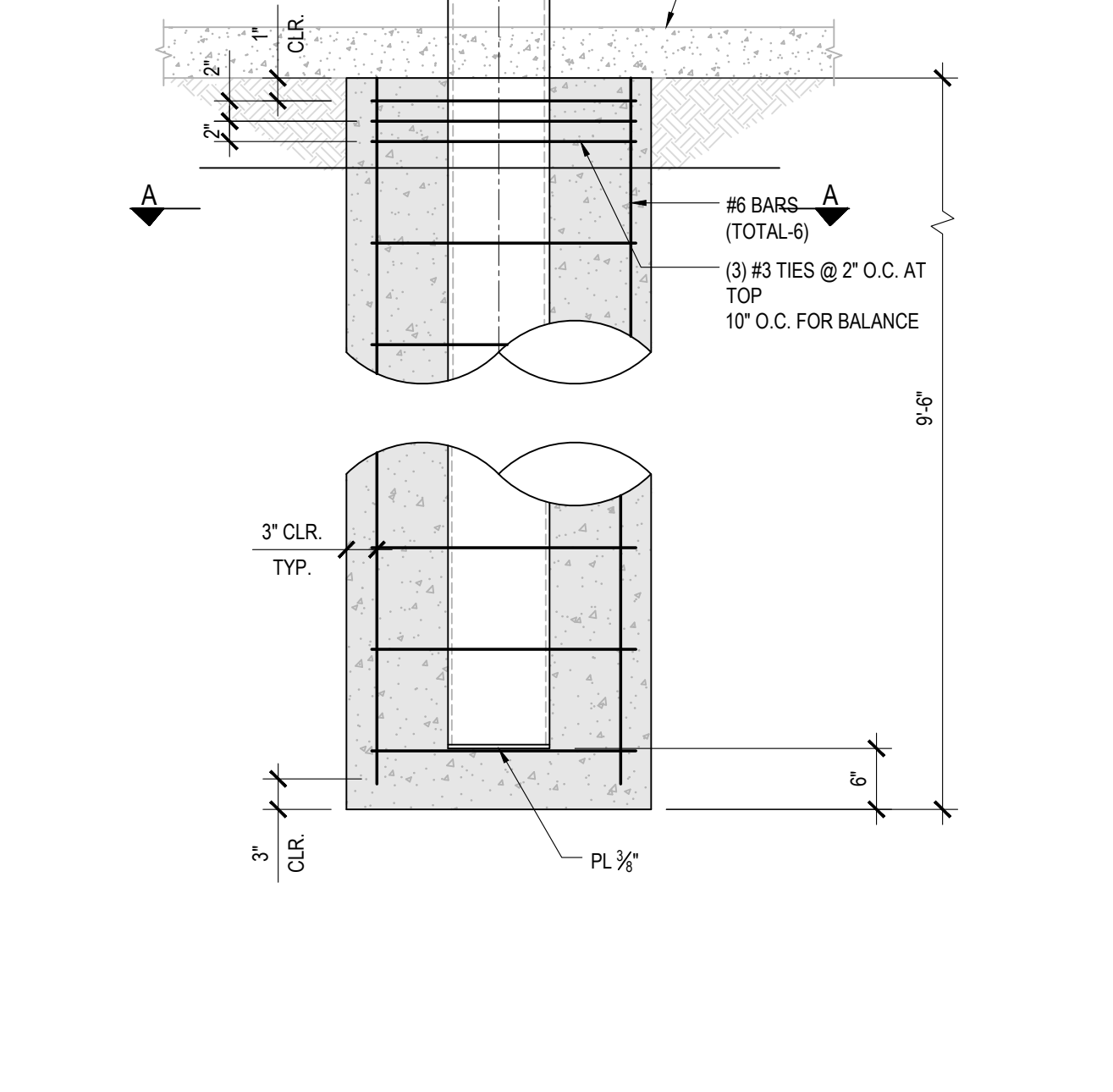
**6 CONCRETE PIER DETAIL**  
 SCALE: 3/4\"=1'-0\"  
 JOB# - DMSCALE: 16  
 S-05-PIER-CLMN-DWG-F018.DWG



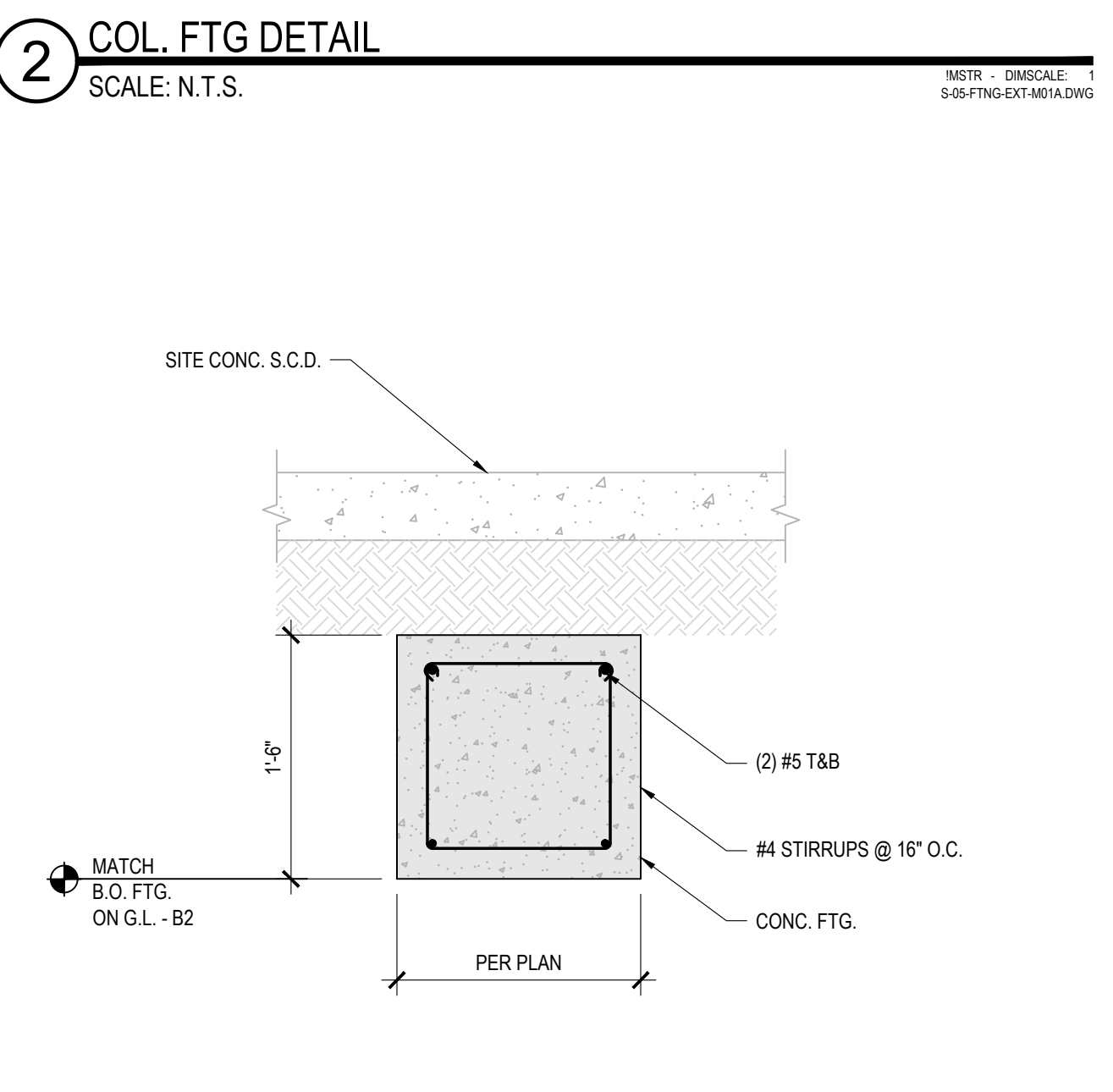
**2 COL. FTG DETAIL**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG



**9 PERIMETER FOOTING DETAIL**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG



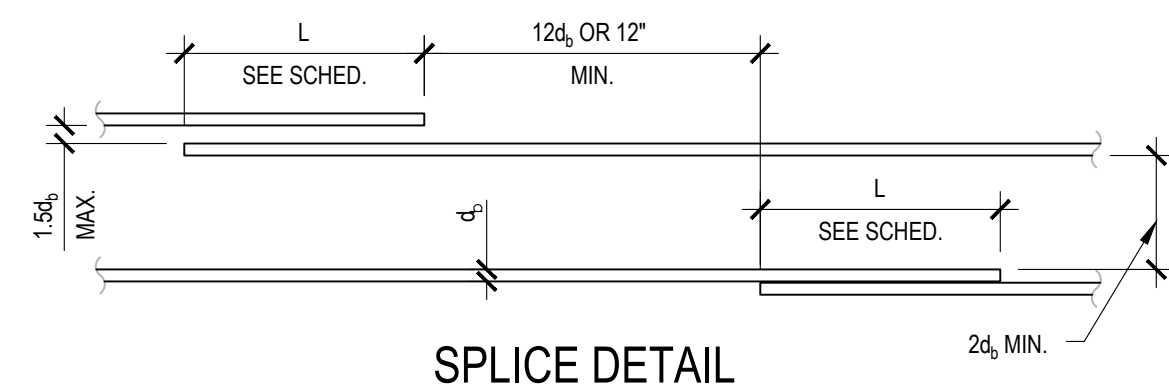
**3 TIE BEAM SECTION**  
 SCALE: 1\"=1'-0\"  
 JOB# - DMSCALE: 12  
 DRAWING.DWG



**1 PERIMETER FOOTING DETAIL**  
 SCALE: N.T.S.  
 MSTR - DMSCALE: 16  
 S-05-FTNG-EXT-M3A4.DWG

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CONCRETE STRENGTH	$F_c = 3000 \text{ PSI}$				$F_c = 4500 \text{ PSI}$				MASONRY, $F_m = 2,000 \text{ PSI}$	
	CLASS 'A'		CLASS 'B'		CLASS 'A'		CLASS 'B'		8' CMU	
	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	CENTER	EDGE
#3	22"	17"	28"	22"	18"	14"	23"	18"	12"	17"
#4	29"	22"	37"	29"	24"	18"	31"	24"	14"	30"
#5	36"	28"	47"	36"	30"	23"	38"	30"	20"	45"
#6	43"	33"	56"	43"	35"	27"	46"	35"	38"	54"
#7	63"	48"	81"	63"	41"	40"	67"	41"	52"	63"
#8	72"	55"	93"	72"	59"	45"	76"	59"	72"	72"
#9	81"	62"	105"	81"	66"	51"	86"	66"	-	-

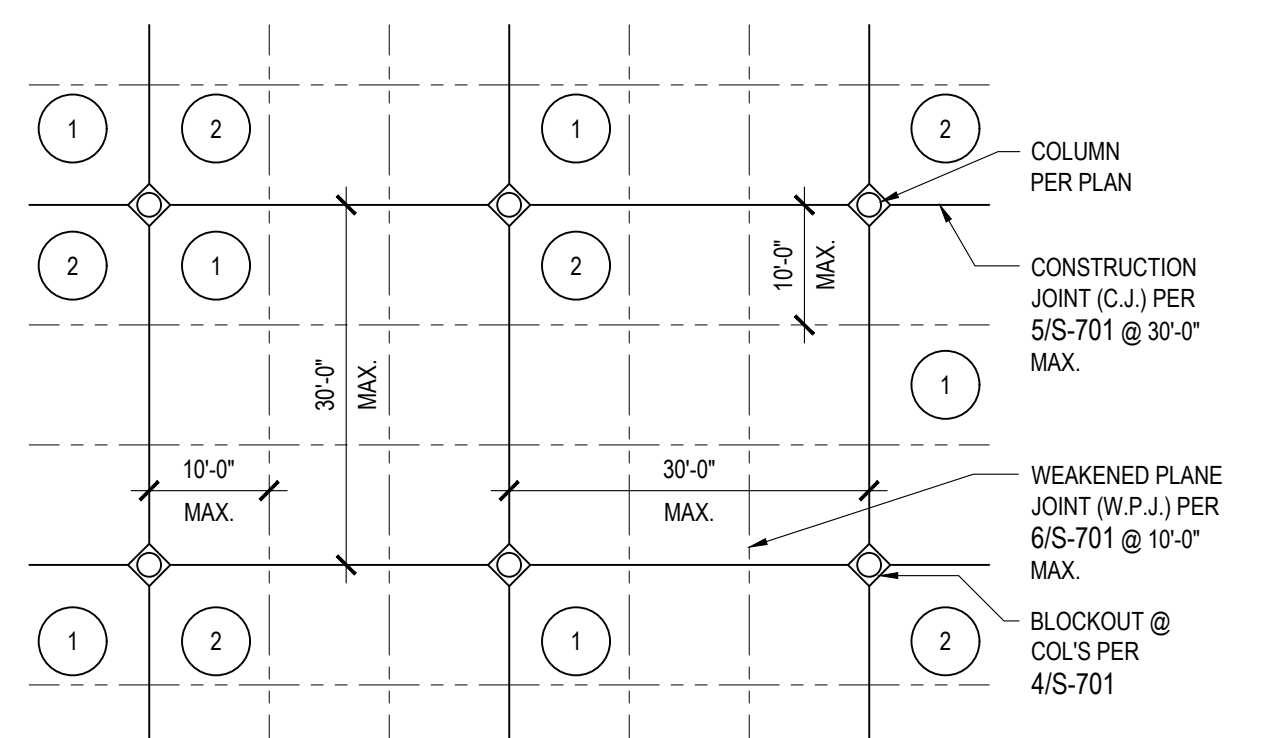
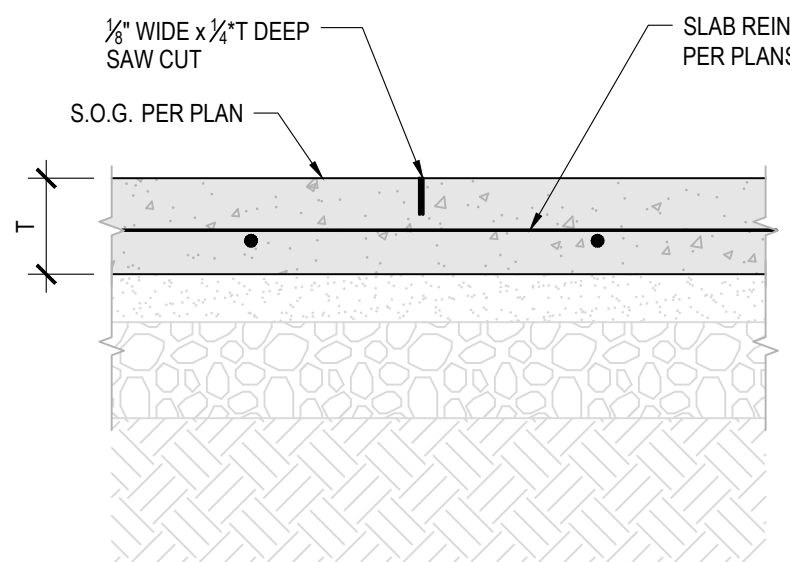


- NOTES:  
1. USE CLASS 'B' SPLICES TYP. U.O.N. ON PLANS.  
2. TOP BARS ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST BELOW THEM.  
3. VALUES SHOWN ARE FOR GR. 60 BARS IN NORMAL WEIGHT CONCRETE. FOR LIGHTWEIGHT CONCRETE MULTIPLY TABLE VALUES BY 1.3.

**10 MINIMUM REINFORCING BAR LAP SPLICES**

SCALE: 3/4"=1'-0"

MSTR - DMSCALE: 16  
5-03-REBAR SPLICE DETAIL.DWG



- NOTES:  
1. PANELS SHALL BE POURED IN CHECKERBOARD PATTERN ①FIRST POUR, ②SECOND POUR.  
2. PANELS SHALL BE DIVIDED BY CONSTRUCTION JOINTS AT CENTER LINE OF COLUMNS.  
3. WHEN CHECKERBOARD PATTERN IS NOT USED (SLAB POURED IN STRIPS), PROVIDE WEAKENED PLANE JOINT PERPENDICULAR TO LONGITUDINAL POUR JOINTS, SEE 11/S-701.  
4. WHEN COLUMN SPACING EXCEEDS 30'-0" PROVIDE ADDITIONAL CONSTRUCTION JOINTS TO MAINTAIN 30'-0" LIMIT.

**11 WEAKENED PLANE JOINT (W.P.J.)**

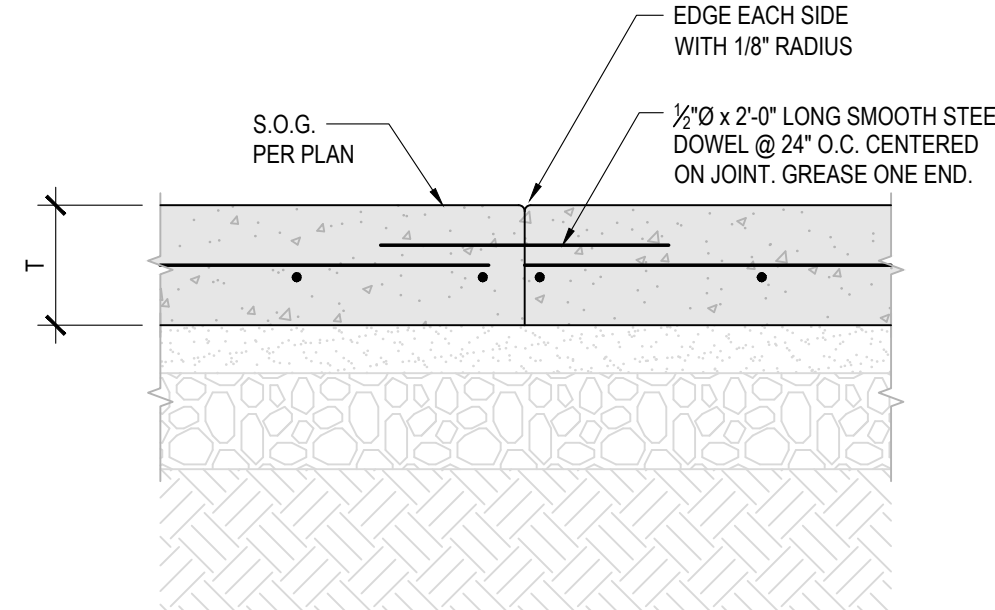
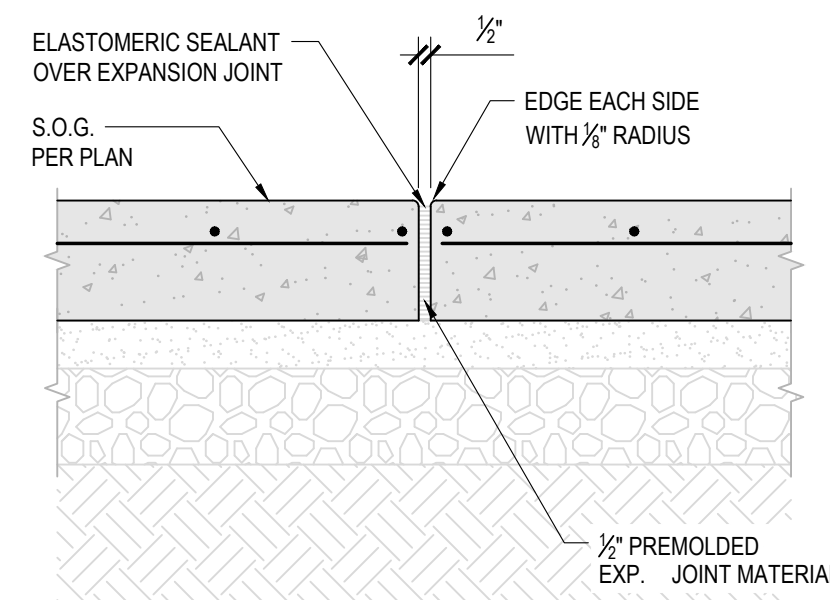
SCALE: 1 1/2"=1'-0"

MSTR - DMSCALE: 8  
5-03-WNTS-WPFL-M01A.DWG

**8 SLAB ON GRADE POUR PATTERN**

SCALE: 1/16"=1'-0"

MSTR - DMSCALE: 16  
5-04-SOCD-POUR-M01A.DWG



**12 CONCRETE EXPANSION JOINT**

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

MSTR - DMSCALE: 8  
5-03-WNTS-EXP-M02A.DWG

**9 CONSTRUCTION JOINT (C.J.)**

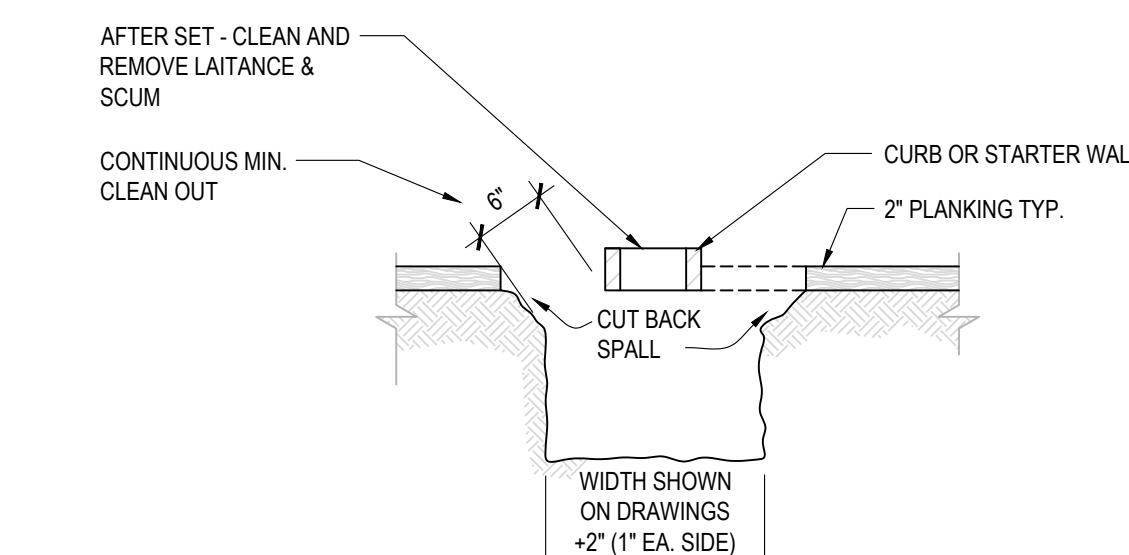
SCALE: 1 1/2"=1'-0"

MSTR - DMSCALE: 8  
5-03-WNTS-CONST-M01A.DWG

**5 MANDATORY MINIMUM FORMWORK**

SCALE: N.T.S.

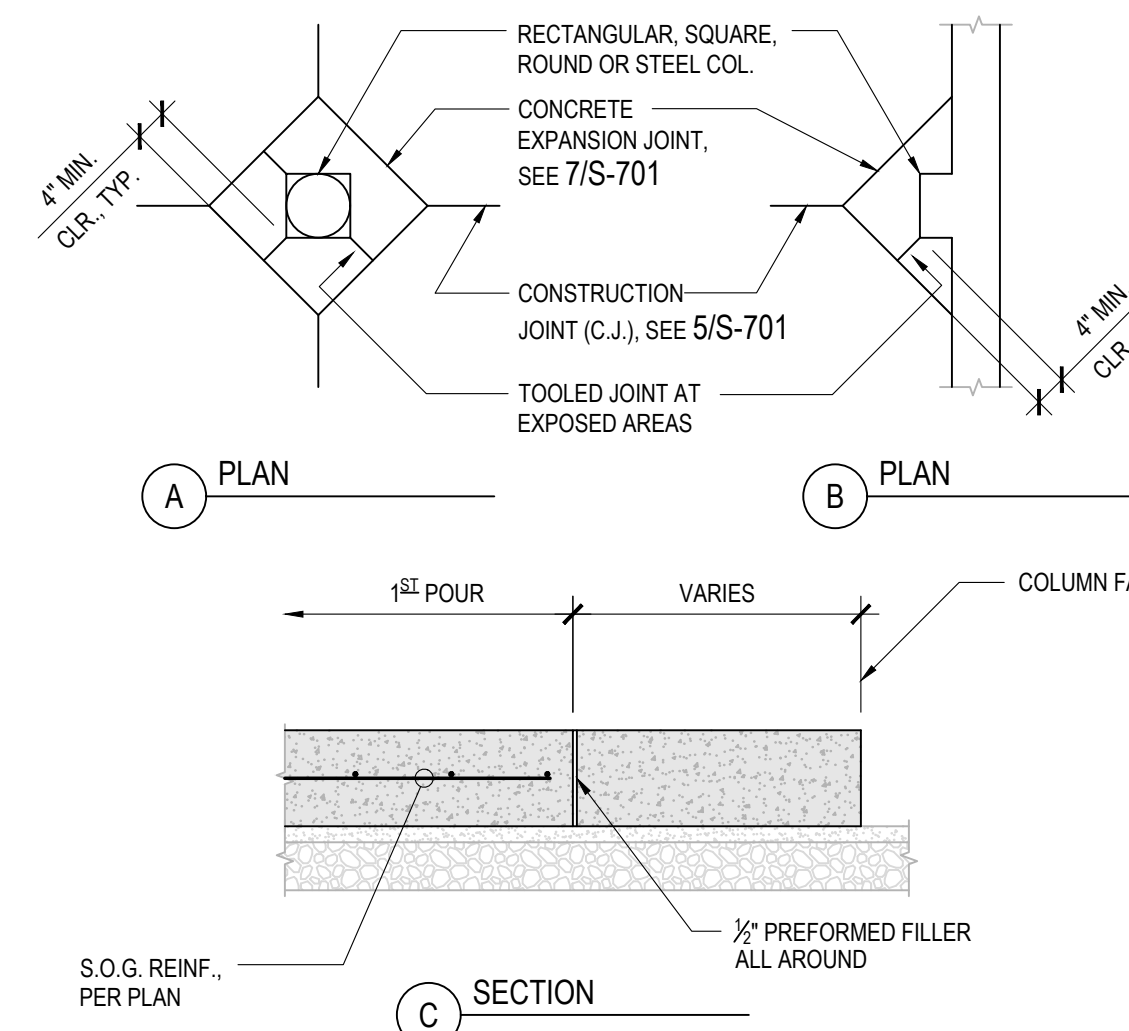
JOB# - DMSCALE: 16  
5-04-WALL-FORM-WORK-M01A.DWG



**6 CONSTRUCTION JOINT AT COLUMN DETAIL**

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

MSTR - DMSCALE: 24  
5-03-WNTS-CONST-M01A.DWG



**LEGEND FOR REINF. BENDS (NOT SHOWN TO SCALE)**

- INDICATES 90° BEND IN PLANE OF DRAWING
- INDICATES 90° BEND PERPENDICULAR TO PLANE OF DRAWING
- INDICATES 135° BEND IN PLANE OF DRAWING
- INDICATES 180° BEND IN PLANE OF DRAWING
- INDICATES 135° OR 180° BEND PERPENDICULAR TO PLANE OF DRAWING
- INDICATES OFFSET IN PLANE OF DRAWING

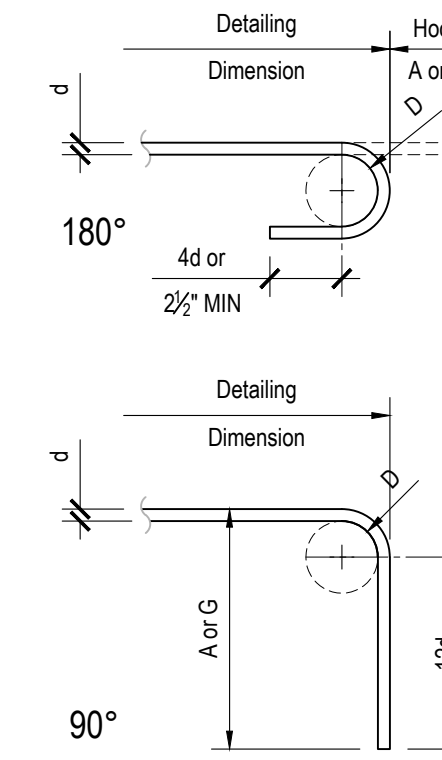
**STANDARD HOOKS**

All specific dimensions recommended by CRSI below meet minimum requirements of ACI 318.

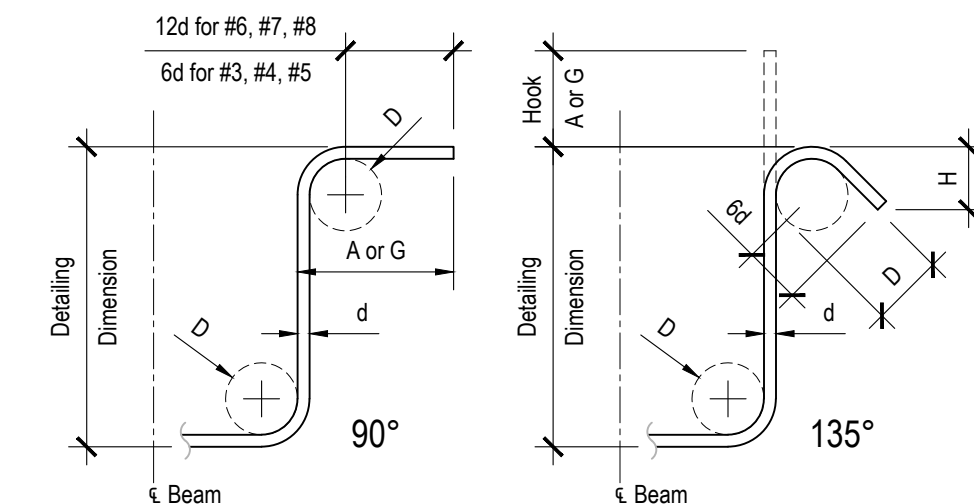
**RECOMMENDED END HOOKS**

All Grades of Steel; D = Finished bend diameter

BAR SIZE	D, (in.)	180° Hooks (ft.-in.)		90° Hooks (ft.-in.)	
		A or G	J	A or G	A or G
#3	2 1/4	0-5	0-3	0-6	
#4	3	0-6	0-4	0-8	
#5	3 1/2	0-7	0-5	0-10	
#6	4 1/2	0-8	0-6	1-0	
#7	5 1/4	0-10	0-7	1-2	
#8	6	0-11	0-8	1-4	
#9	9 1/2	1-3	0-11 1/2	1-7	
#10	10 1/4	1-5	1-1 1/2	1-10	
#11	12	1-7	1-2 1/2	2-0	
#14	18 1/4	2-3	1-9 1/4	2-7	
#18	24	3-0	2-4 1/2	3-5	



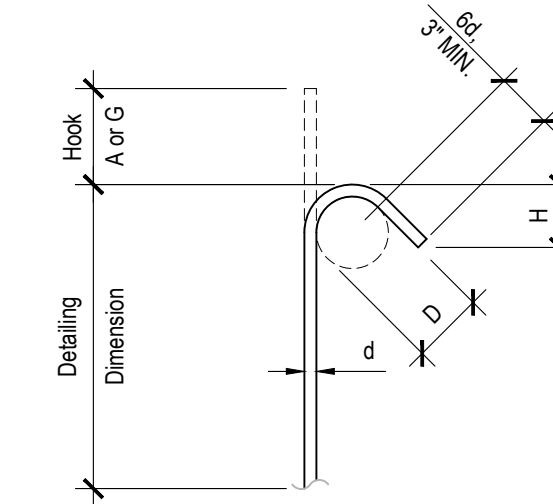
**90° AND 135° STIRRUP AND TIE HOOKS**



**STIRRUP (TIES SIMILAR) STIRRUP AND TIE HOOK DIMENSION**

BAR SIZE	D, (in.)	All Grades of Steel		
		90° Hook (ft.-in.)	135° Hook (ft.-in.)	H (Approx.)
#3	1 1/2	0-4	0-4	0-2 1/2
#4	2	0-4 1/2	0-4 1/2	0-3
#5	2 1/2	0-6	0-5 1/2	0-3 1/2
#6	4 1/2	1-0	0-8	0-4 1/2
#7	5 1/4	1-2	0-9	0-5 1/4
#8	6	1-4	0-10 1/2	0-6

**135° SEISMIC STIRRUP / TIE HOOKS**



**135° SEISMIC STIRRUP / TIE HOOK DIMENSIONS**

BAR SIZE	D, (in.)	135° Hook (ft.-in.)	
		A or G	H (Approx.)
#3	1 1/2	0-4 1/4	0-2 1/2
#4	2	0-4 1/2	0-3
#5	2 1/2	0-5 1/2	0-3 1/4
#6	4 1/2	0-8	0-4 1/2
#7	5 1/4	0-9	0-5 1/4
#8	6	0-10 1/2	0-6

**STANDARD HOOKS & BENDS FOR PRIMARY REINFORCEMENT, TIES & STIRRUPS**

SCALE: N.T.S.

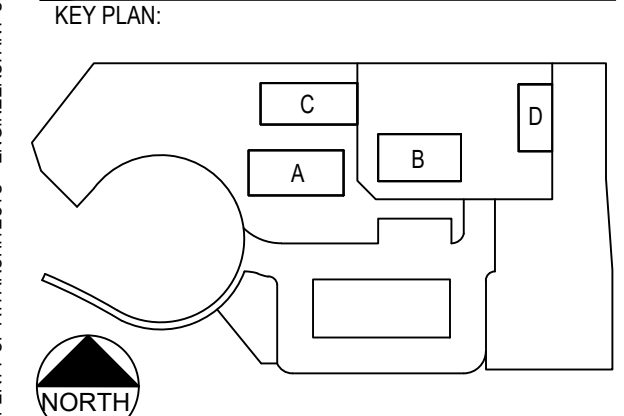
MSTR - DMSCALE: 16  
5-05-BBAR-STD-HOOK-M02A.DWG

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AN AC MARTIN COMPANY  
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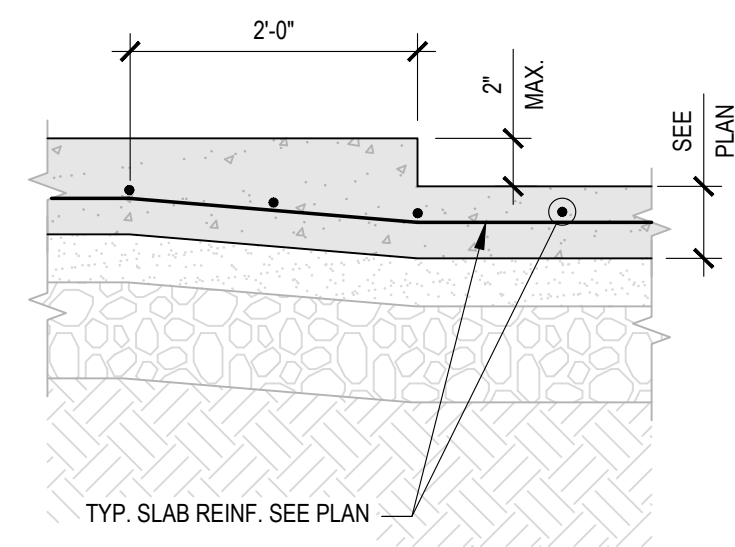
CLPCCD - LAS POSITAS  
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AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**TYPICAL CONCRETE DETAILS**  
DRAWN BY: m.arquines CHECKED BY:  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**S-700**

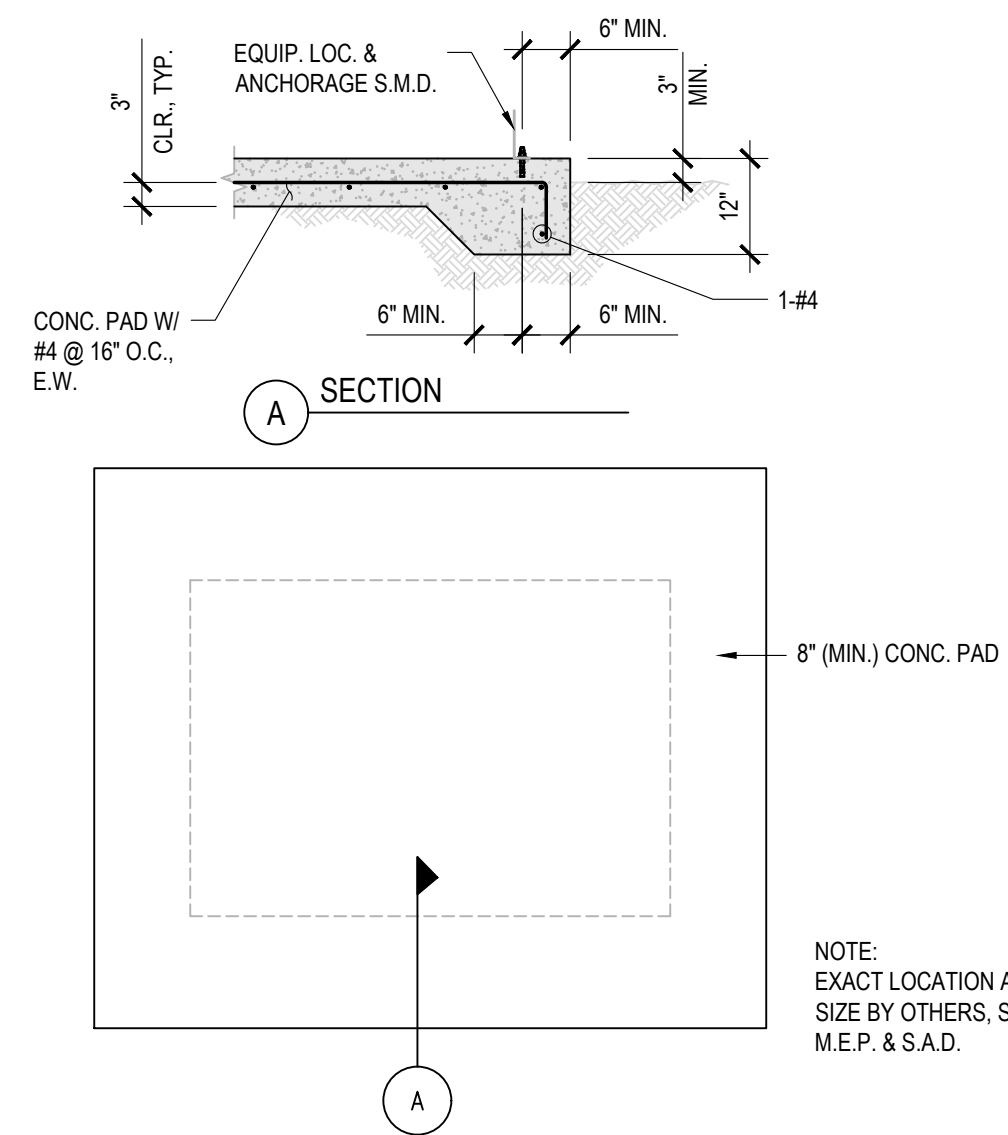
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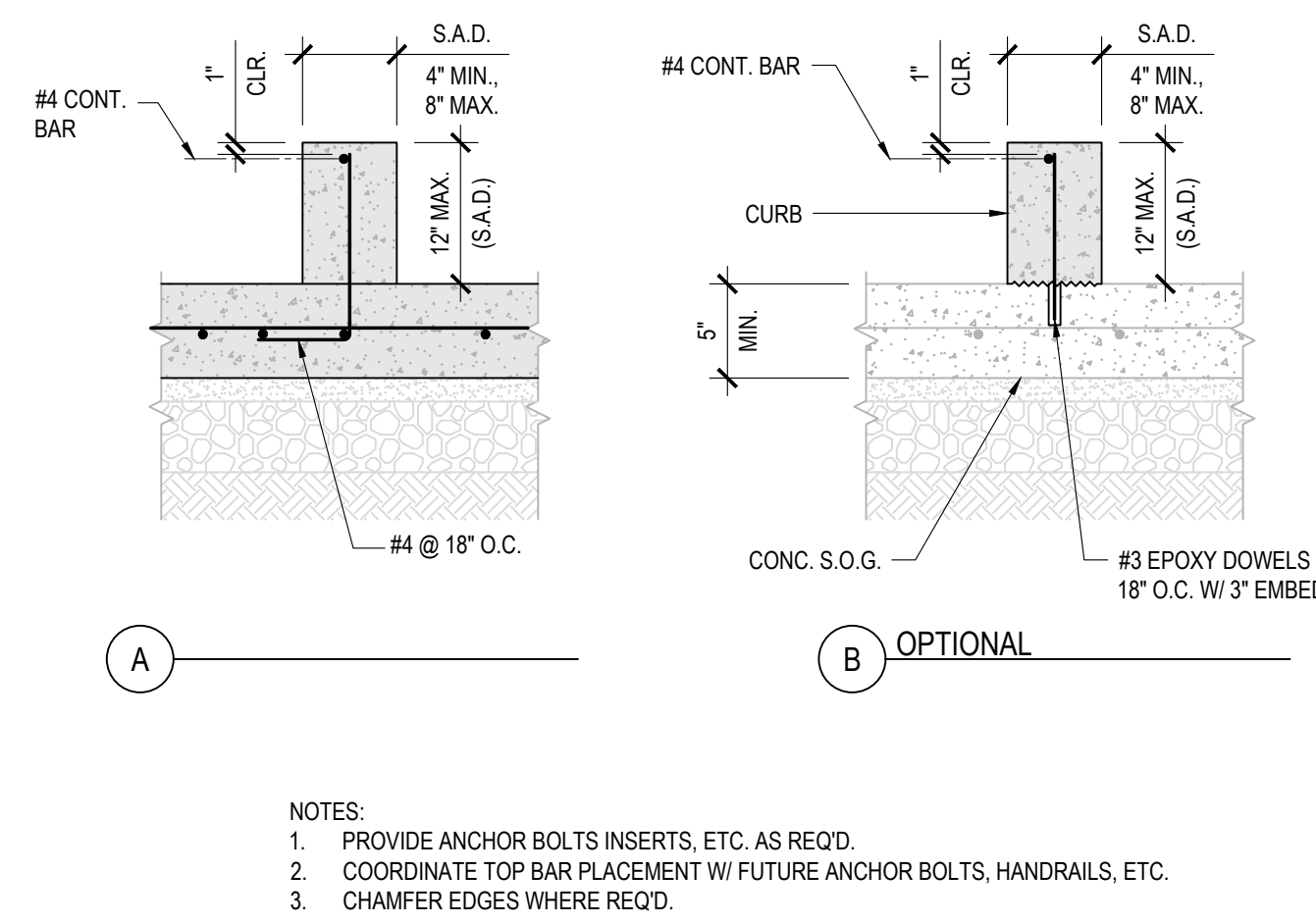
**10** SLAB ON GRADE DEPRESSION  
SCALE: 1 1/2"=1'-0"

MSTR - DMSCALE: 8  
S-03-FNG-STEP-M0A.DWG



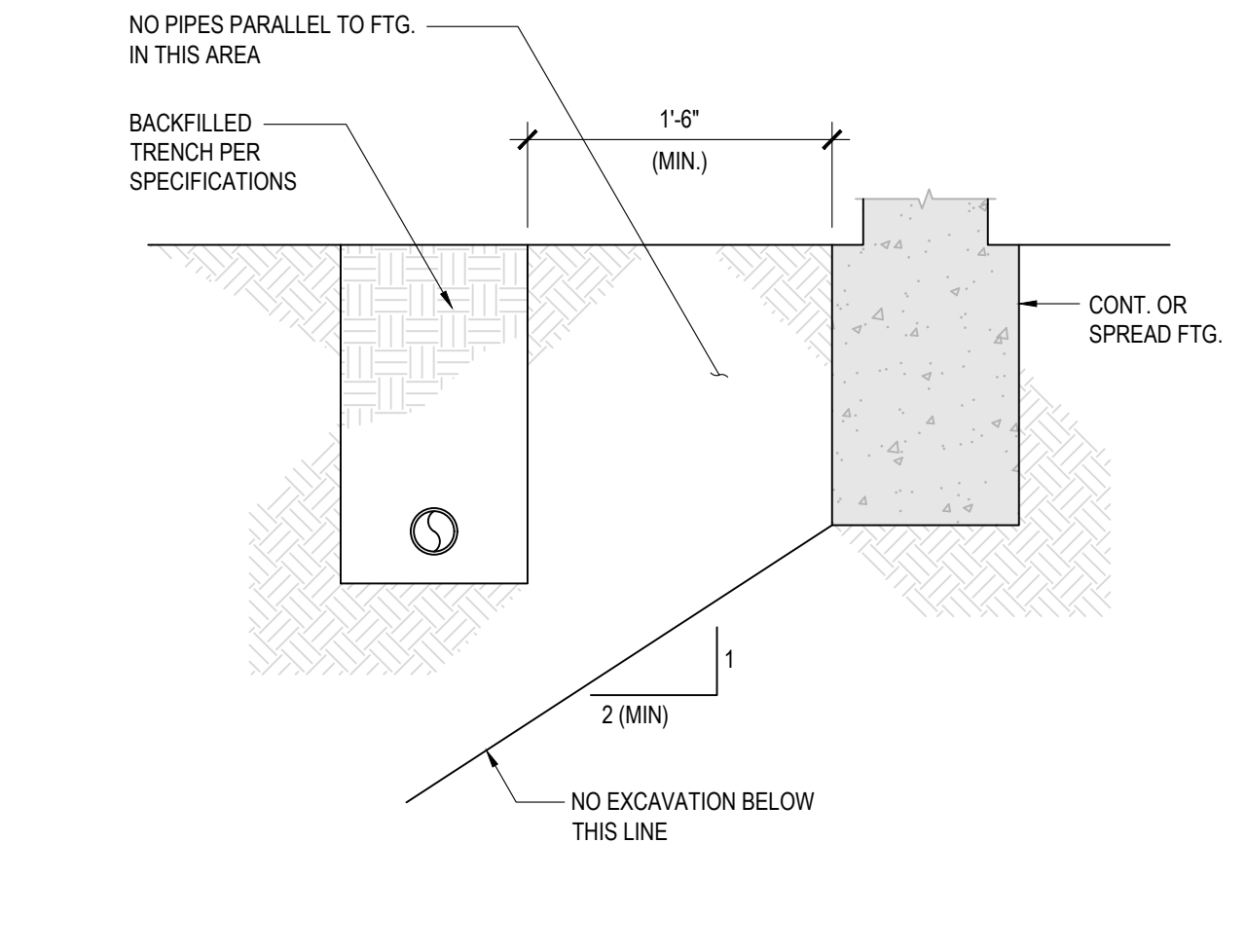
**7** CONCRETE PAD DETAIL FOR EQUIPMENT  
SCALE: N.T.S.

MSTR - DMSCALE: 24  
S-03-PAD-EQP-M0A.DWG



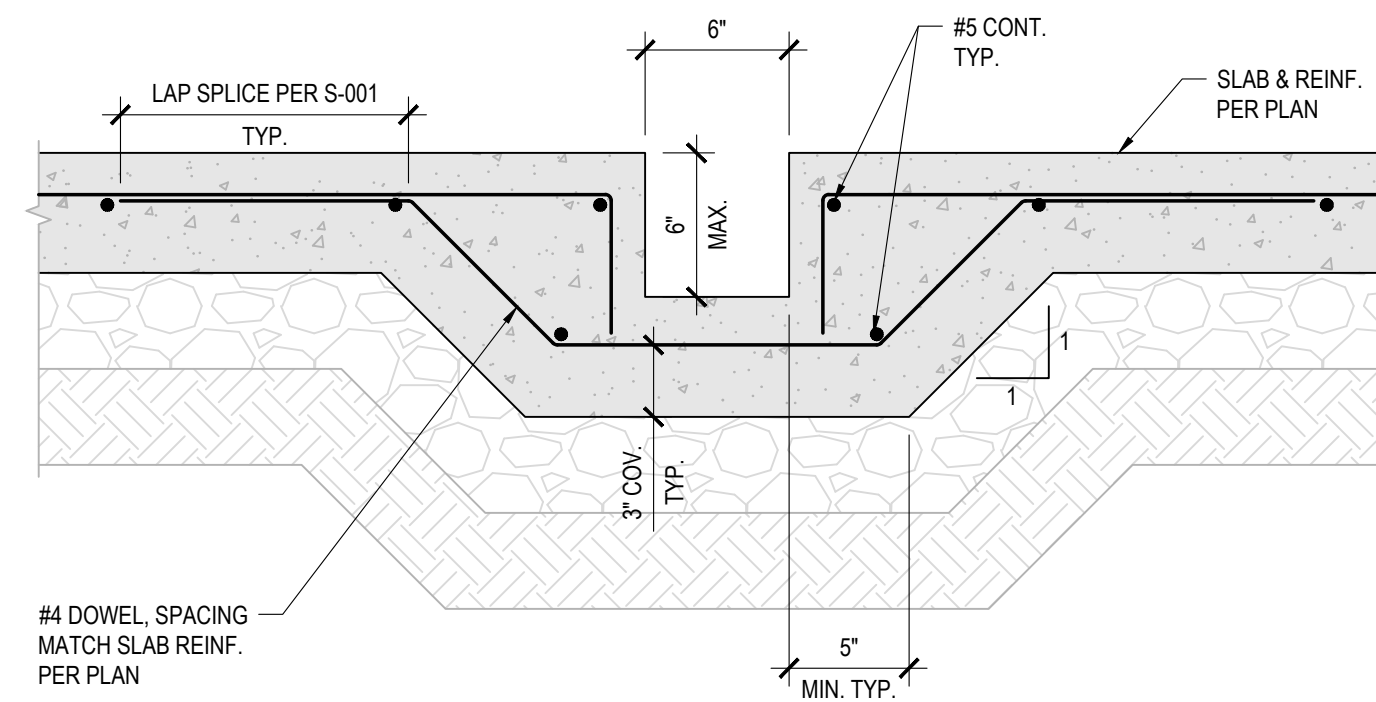
**4** TYPICAL CURB DETAILS  
SCALE: N.T.S.

MSTR - DMSCALE: 16  
S-03-PAD-CURB-M0A.DWG



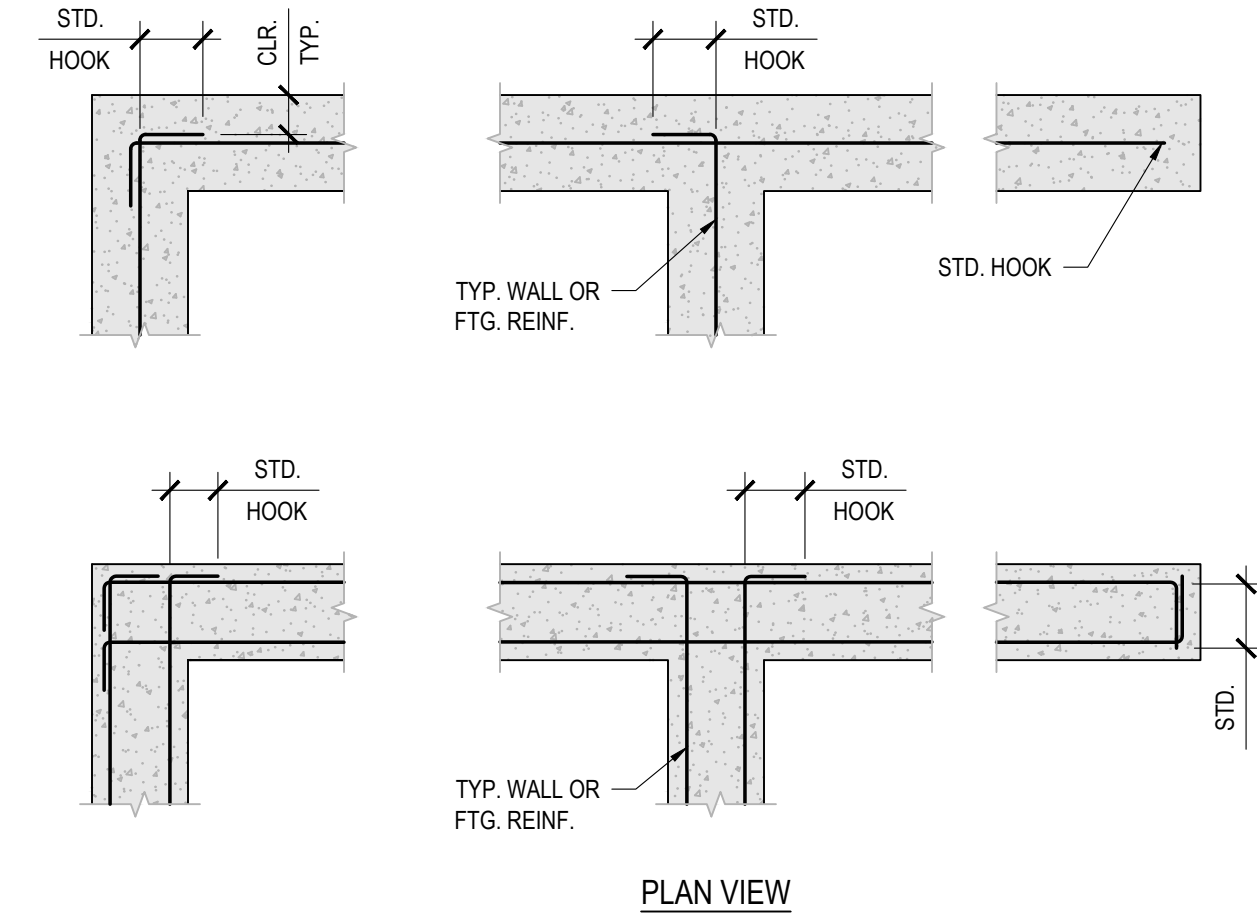
**1** PIPE / TRENCH PARALLEL TO FOOTING  
SCALE: N.T.S.

MSTR - DMSCALE: 12  
S-03-FNG-PIPE-M0A.DWG



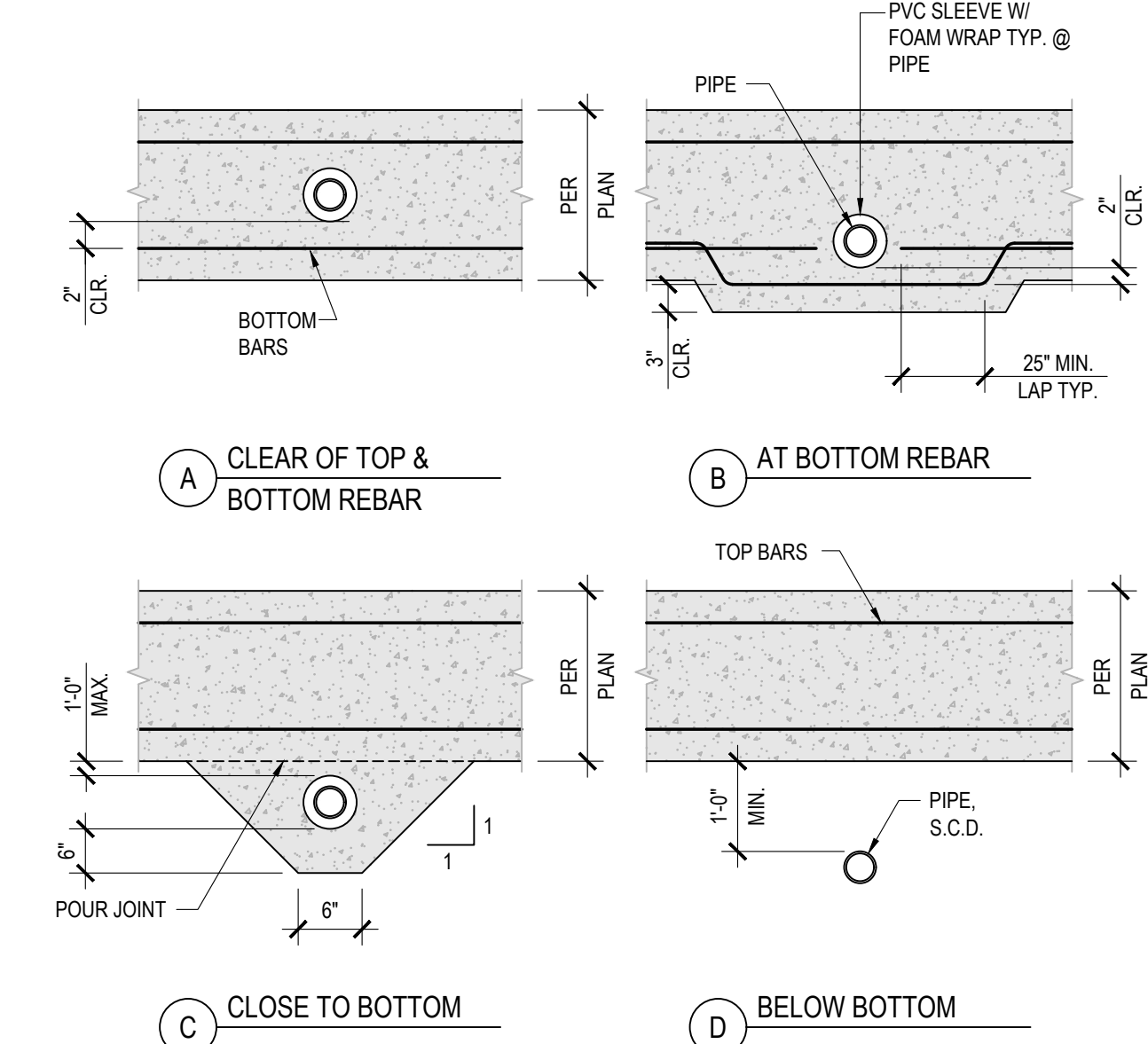
**8** TYPICAL TRENCH DETAIL  
SCALE: 1 1/2"=1'-0"

MSTR - DMSCALE: 8  
S-03-SLAB-TECH-M01A.DWG



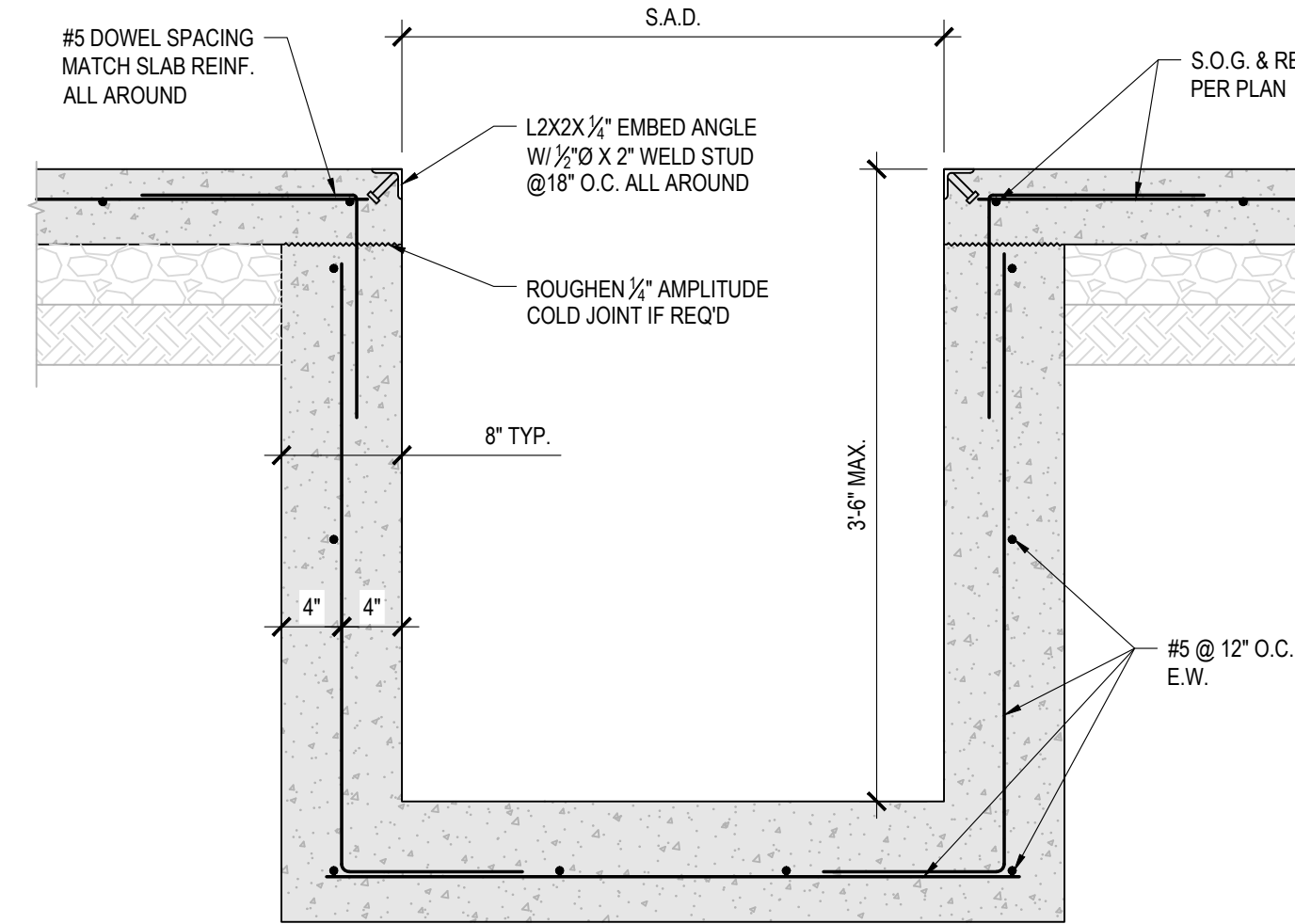
**5** CONC. REINF. AT CORNERS, ENDS, & INTERSECTIONS  
SCALE: 3/4"=1'-0"

MSTR - DMSCALE: 16  
S-03-WALL-REBAR-M01A.DWG



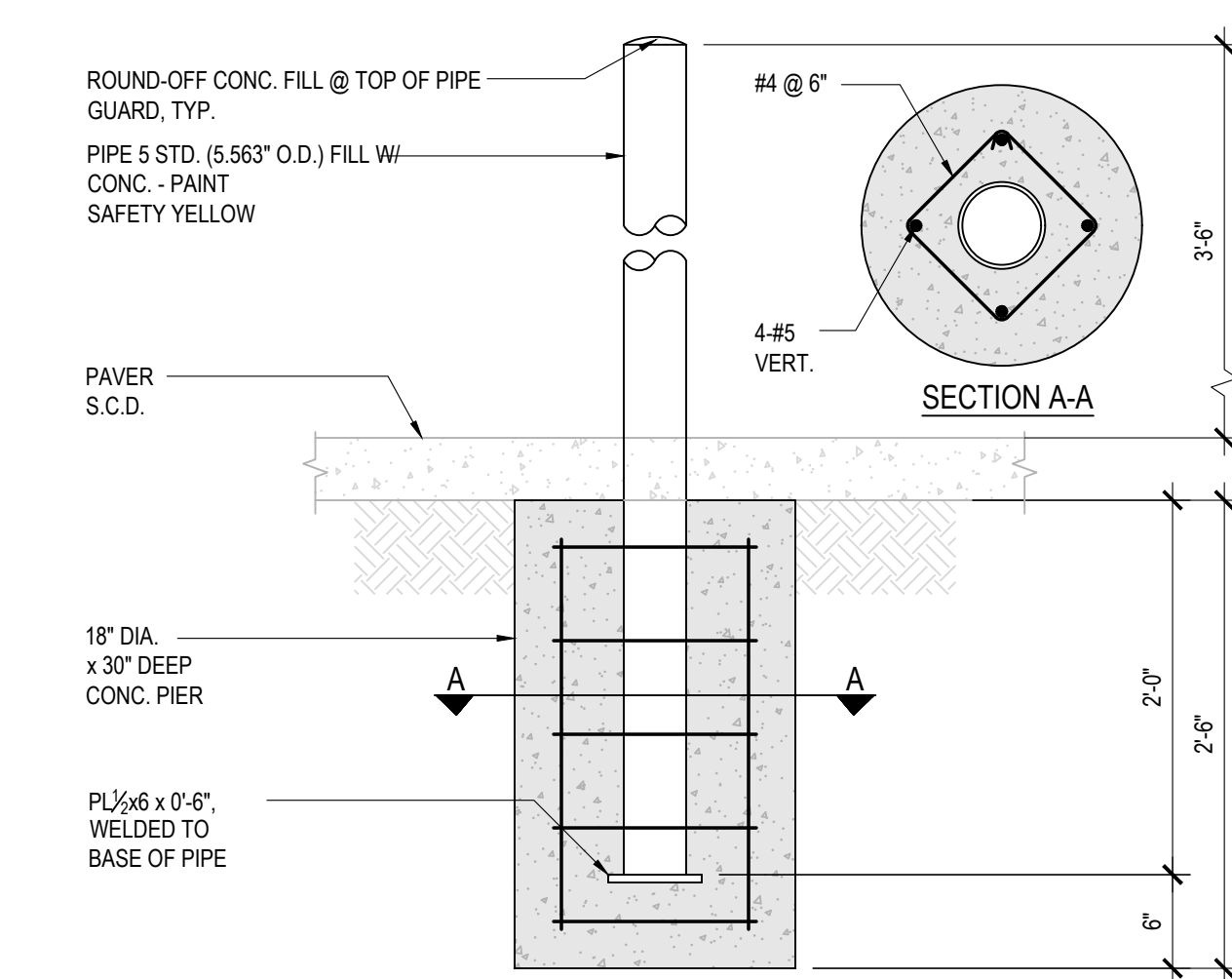
**2** PIPES PERPENDICULAR TO FOOTINGS  
SCALE: N.T.S.

MSTR - DMSCALE: 16  
S-03-FNG-PIPE-M0A.DWG



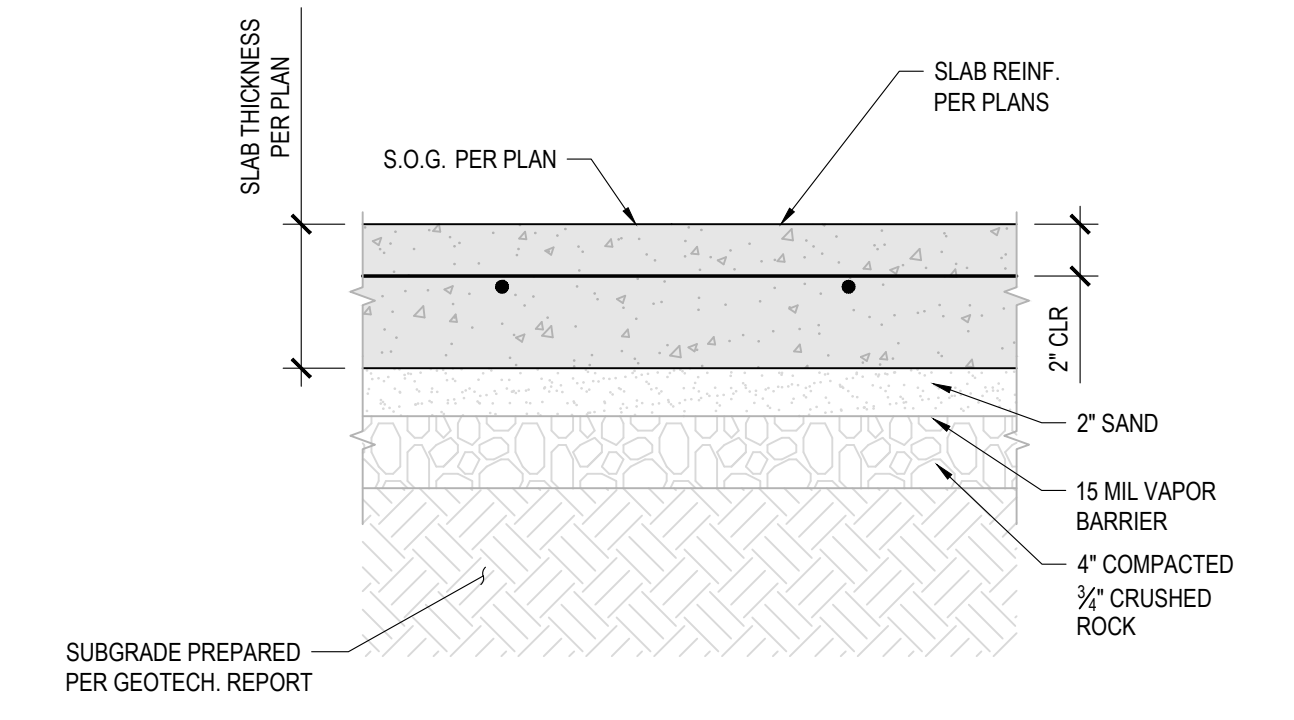
**9** SUMP PIT DETAIL  
SCALE: 1"=1'-0"

MSTR - DMSCALE: 12  
S-03-SUMP-PIIT-M01A.DWG



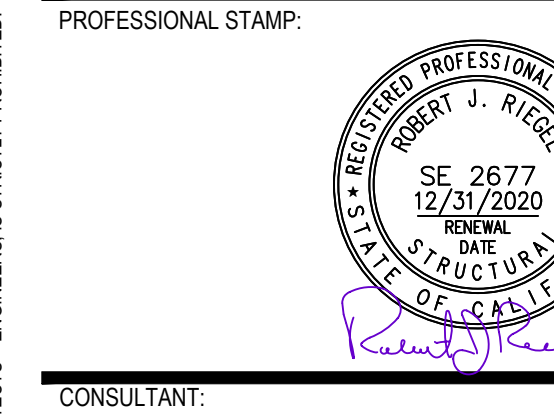
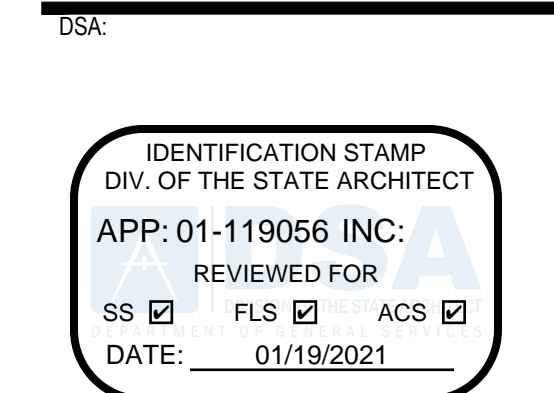
**6** PIPE BOLLARD  
SCALE: 1"=1'-0"

MSTR - DMSCALE: 12  
S-03-FNG-BOLL-M0B.DWG

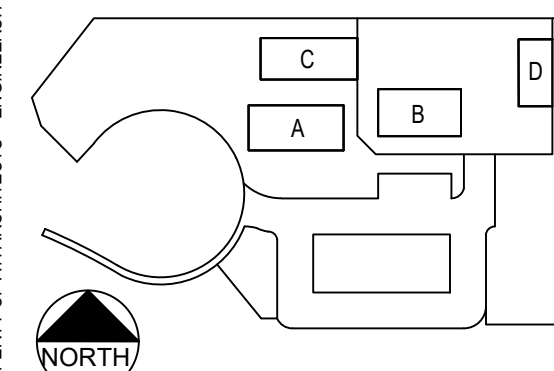


**3** TYPICAL SLAB-ON-GRADE  
SCALE: 1 1/2"=1'-0"

MSTR - DMSCALE: 8  
S-03-JNT5-WPT-M0B.DWG



ITEM:	REVISION / ISSUE:	DATE:



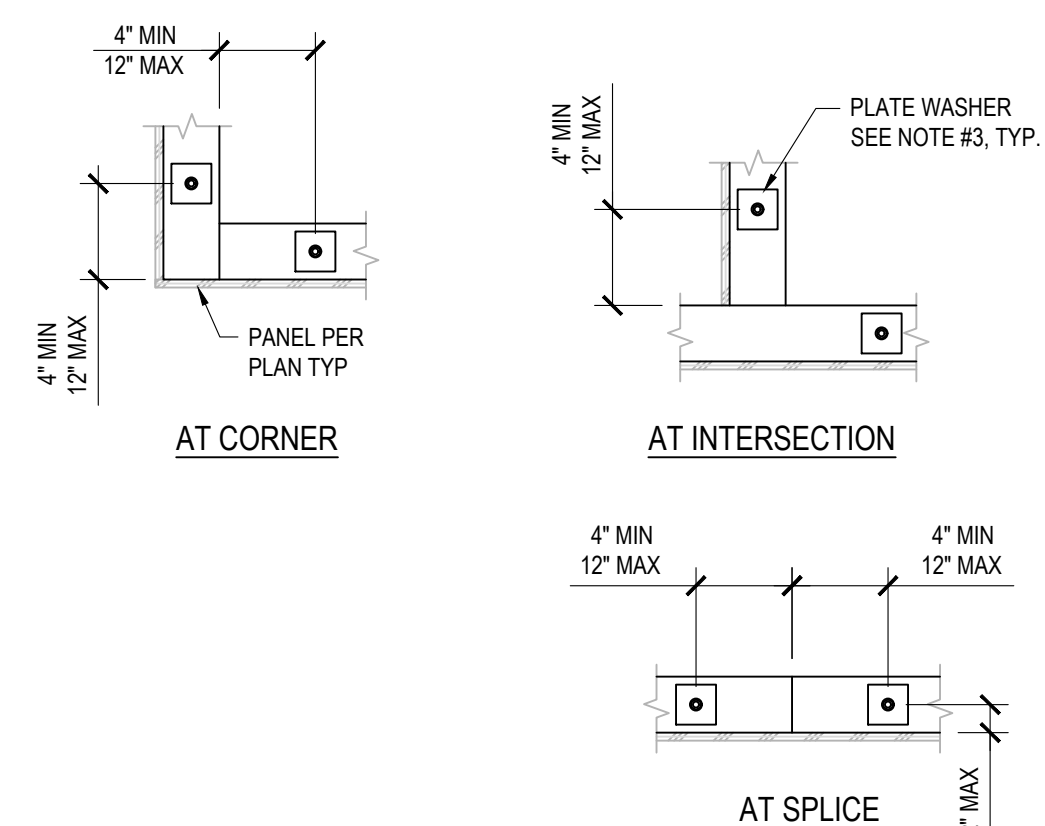
CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**TYPICAL CONCRETE DETAILS**  
DRAWN BY: m.arquines      CHECKED BY:  
DATE: 01/14/2021      PROJECT NO: C9508  
SHEET NO:

**S-701**

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11/16/2020, 01:33:25 PM  
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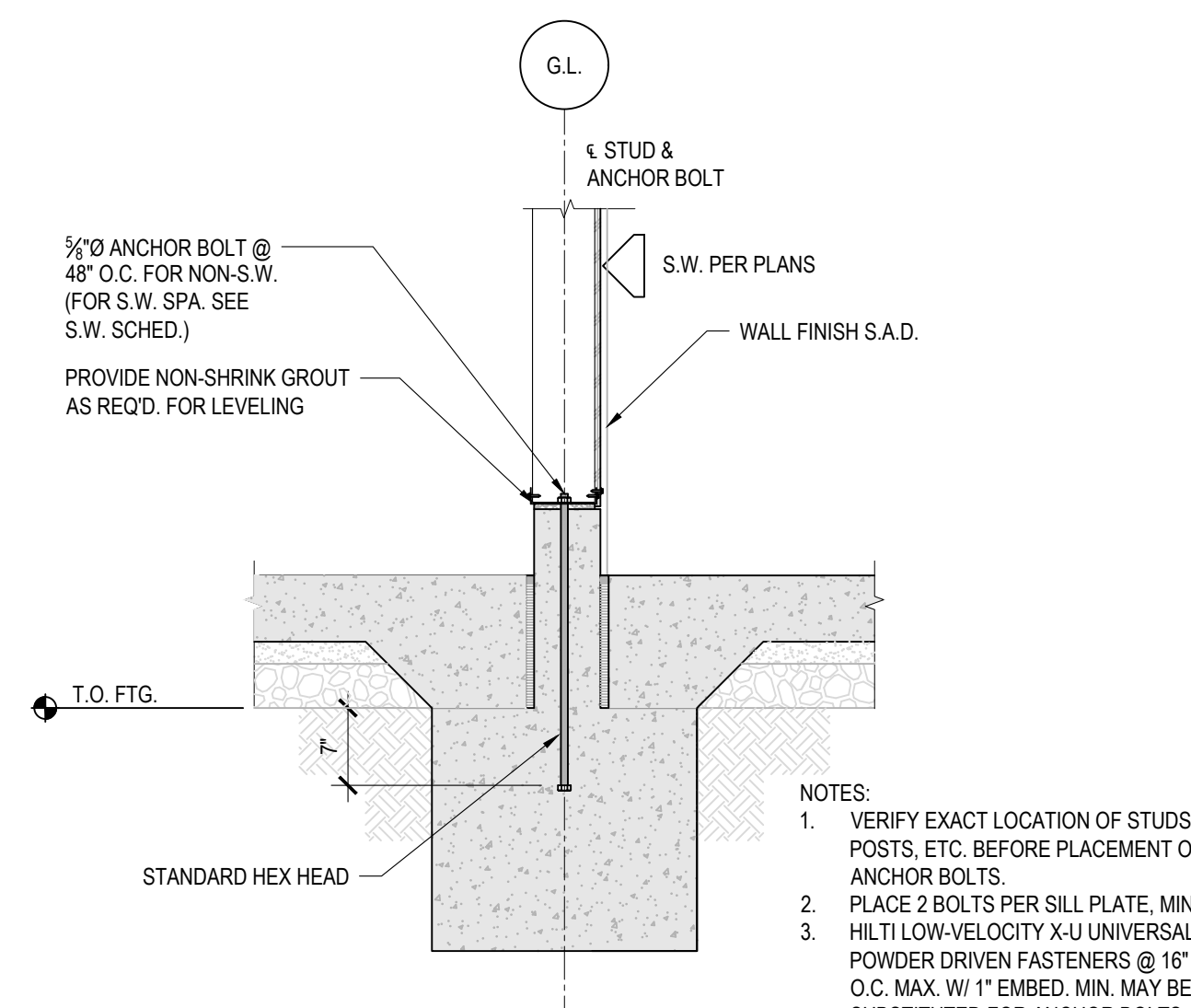


NOTES:

- WHERE SILL PLATE IS NOTCHED OR DRILLED MORE THAN 1/2 OF ITS WIDTH, A BOLT SHALL BE PLACED ON EA. SIDE OF THE NOTCH.
- PROVIDE 2 BOLTS MINIMUM EACH PIECE OF SILL PLATE. FOR WALL LESS THAN 2'-0" LONG, THE MINIMUM END DISTANCE MAY BE REDUCED TO 2 1/2'.
- PROVIDE PLATE WASHERS 0.229" x 3/8" MIN AT ALL SHEAR WALL SILL BOLTS. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/4" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 1/2". PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.
- STANDARD WASHERS MAY BE USED AT NON SHEAR WALLS.

**7** SILL ANCHOR BOLT  
SCALE: N.T.S.

MSTR - DMSCALE: 12  
S-05-ANPL-MRT-MEGA.DWG

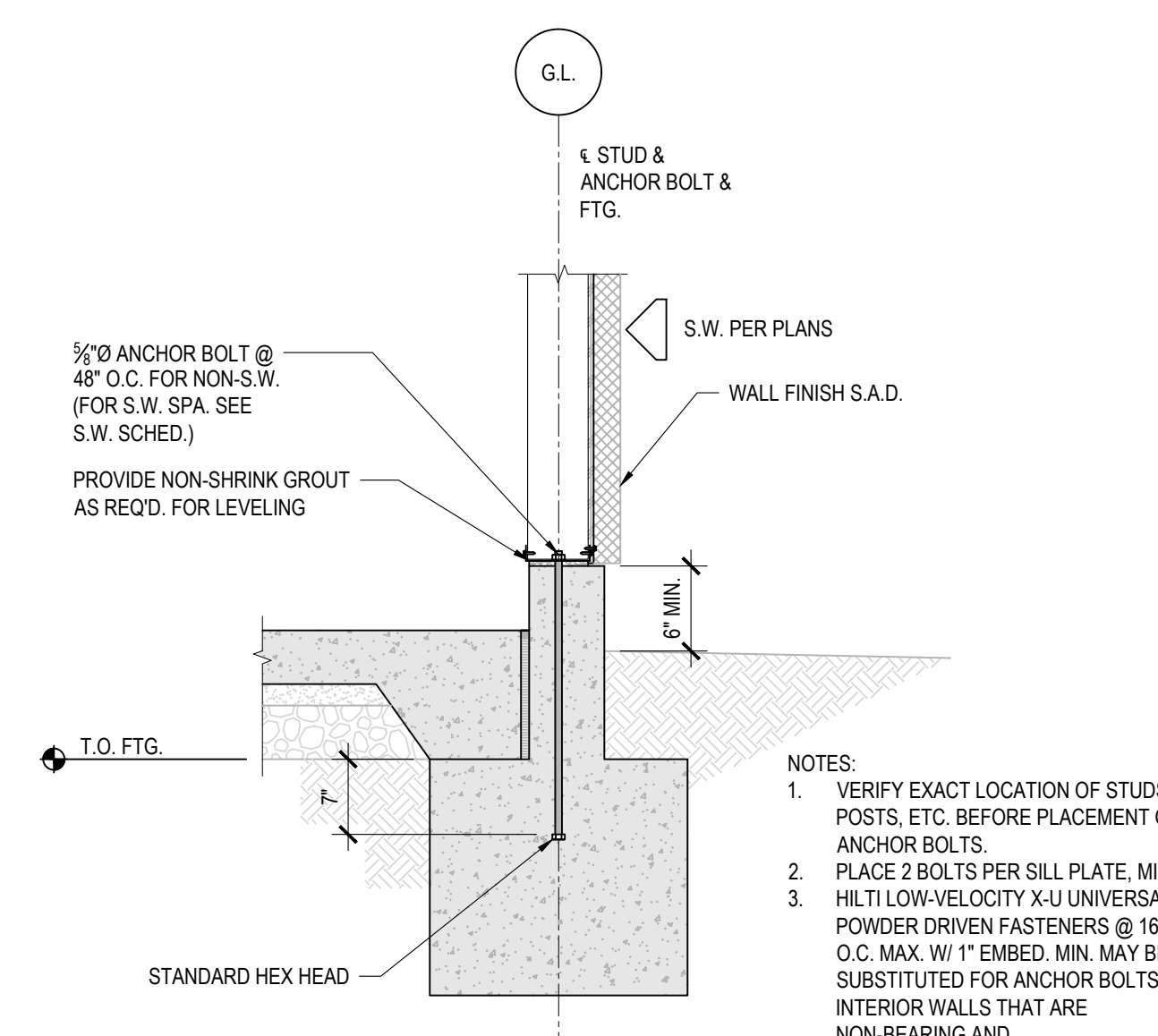


NOTES:

- VERIFY EXACT LOCATION OF STUDS, POSTS, ETC. BEFORE PLACEMENT OF ANCHOR BOLTS.
- PLACE 2 BOLTS PER SILL PLATE. MIN. HILTI LOW-VELOCITY X-U UNIVERSAL POWDER DRIVEN FASTENERS @ 16" O.C. MAX. W/ 1" EMBED. MIN. MAY BE SUBSTITUTED FOR ANCHOR BOLTS @ INTERIOR WALLS THAT ARE NON-BEARING AND NON-SHEARWALLS. INSTALL PER ICC ESR-2269.

**4** ANCHOR BOLT INSTALLATION DETAIL  
SCALE: N.T.S.

MSTR - DMSCALE: 16  
S-05-FLDN-APR-MEGA.DWG

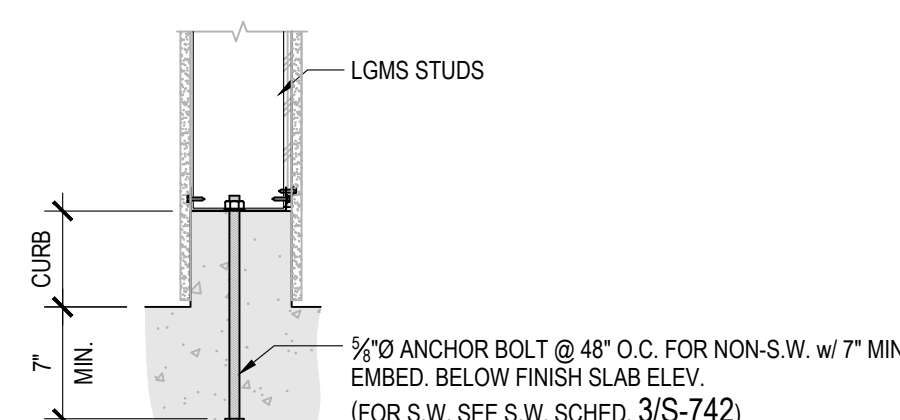


NOTES:

- VERIFY EXACT LOCATION OF STUDS, POSTS, ETC. BEFORE PLACEMENT OF ANCHOR BOLTS.
- PLACE 2 BOLTS PER SILL PLATE. MIN. HILTI LOW-VELOCITY X-U UNIVERSAL POWDER DRIVEN FASTENERS @ 16" O.C. MAX. W/ 1" EMBED. MIN. MAY BE SUBSTITUTED FOR ANCHOR BOLTS @ INTERIOR WALLS THAT ARE NON-BEARING AND NON-SHEARWALLS. INSTALL PER ICC ESR-2269.

**1** ANCHOR BOLT INSTALLATION DETAIL  
SCALE: N.T.S.

MSTR - DMSCALE: 16  
S-05-FLDN-APR-MEGA.DWG

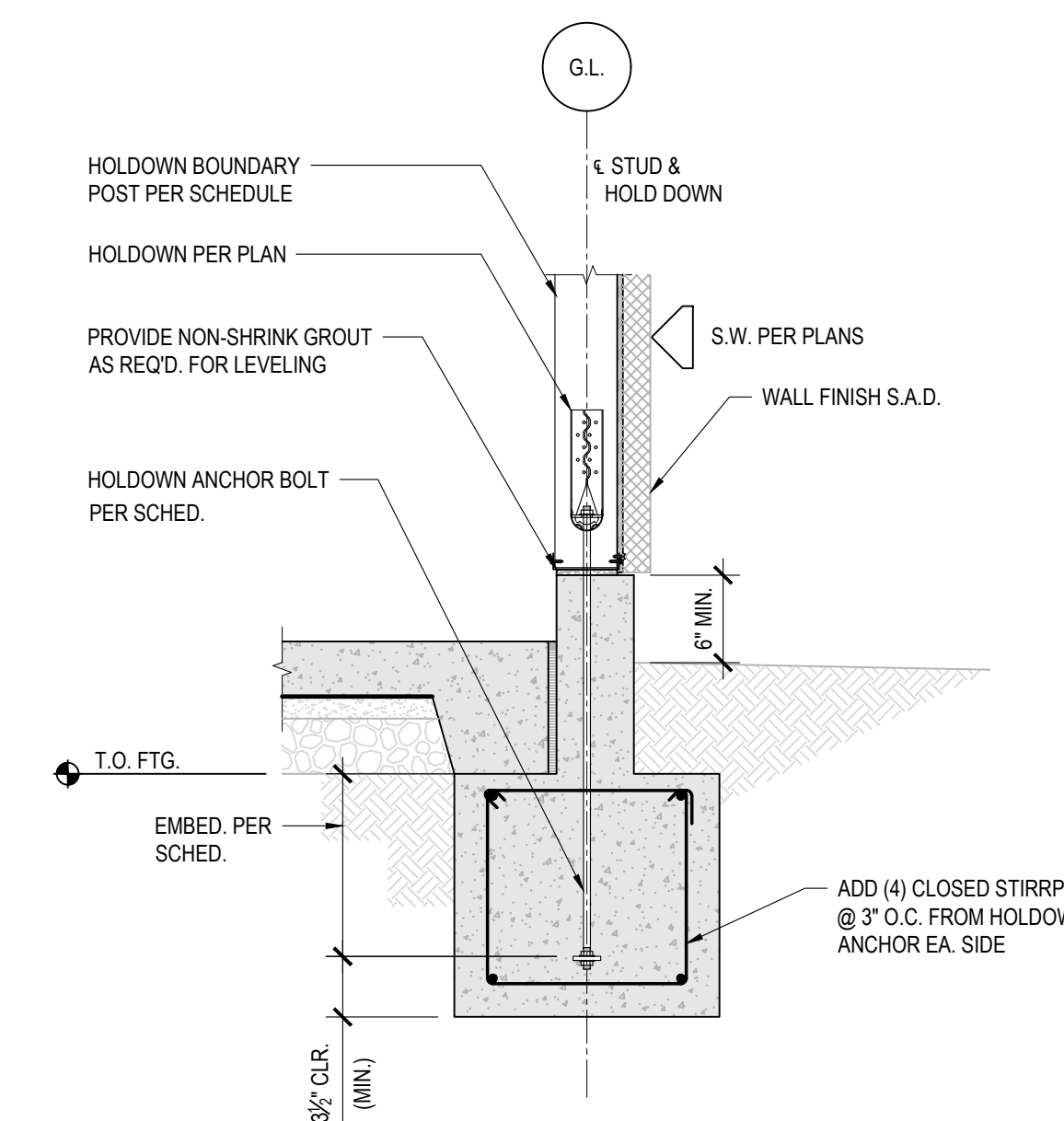


NOTES:

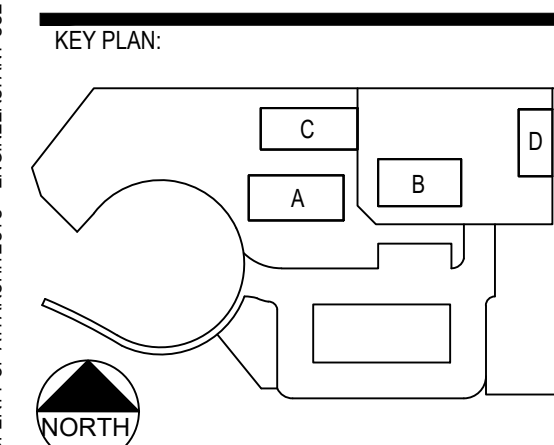
- VERIFY EXACT LOCATION OF STUDS, POSTS, ETC. BEFORE PLACEMENT OF ANCHOR BOLTS.
- PLACE 2 BOLTS PER SILL PLATE MIN.
- HILTI LOW-VELOCITY X-U UNIVERSAL POWDER DRIVEN FASTENERS @ 16" O.C. MAX. W/ 1" EMBED. MIN. MAY BE SUBSTITUTED FOR ANCHOR BOLTS @ INTERIOR WALLS THAT ARE NON-BEARING AND NON-SHEARWALLS. INSTALL PER ICC ESR-2269.

**5** ANCHOR BOLT PLACEMENT  
SCALE: 1"=1'-0"

MSTR - DMSCALE: 12  
S-05-ANPL-PLMT-MEGA.DWG



ITEM	REVISION / ISSUE	DATE



HOLDDOWN SCHEDULE					
HOLDDOWN TYPE	MIN. BOUNDARY FRAMING MEMBER MIL (GA)	FRAMING FASTENERS	THREADED ROD, DIA.	THREADED ROD MATERIAL	EMBEDMENT
SHDU6	2 - 54 (16Ga)	12 - #14 S.M.S.	3/4"	ASTM F1554 Gr. 55	10"
SHDU9	2 - 54 (16Ga)	18 - #14 S.M.S.	7/8"		14"

NOTES:

- HOLDDOWN ANCHOR BOLTS DO NOT REPLACE SILL PLATE ANCHOR BOLTS.
- SEE ALSO THICKENED FOOTING AT HOLDDOWN DTL. 6/- FOR MORE INFO.
- FOR INFO NOT SHOWN SEE PERIMETER FTG. DTL. 1/-
- PROVIDE (2) HEX HEAD NUTS W/ PL 1/2" x 3" SQ. AT EMBEDDED END.

**6** THICKENED FOOTING AT HOLDDOWN  
SCALE: 3/4"=1'-0"

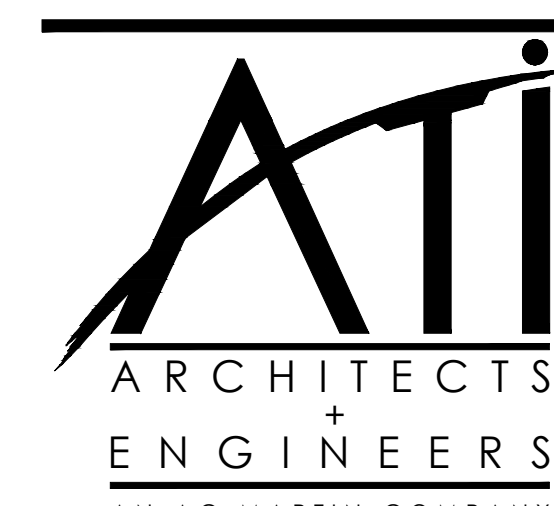
MSTR - DMSCALE: 16  
S-05-FTNO-STEP-MEGA.DWG

**3** HOLDDOWN ANCHOR BOLT INSTALLATION DETAIL  
SCALE: N.T.S.

MSTR - DMSCALE: 16  
S-05-FLDN-APR-MEGA.DWG

DSA:

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DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC.:  
REVIEWED FOR:  
SS  FLS  ACS   
DATE: 01/19/2021



PROFESSIONAL STAMP:

**ROBERT J. ALEGRE**  
SE 2677  
12/31/2020  
LICENSE  
ONE  
STRUCTURAL ENGINEERING  
STATE OF CALIFORNIA

CONSULTANT:

CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**TYPICAL CONCRETE DETAILS**

DRAWN BY: marquis CHECKED BY:  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**S-702**

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1/16/2020, 01:33:28 PM  
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DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC.  
REVIEWED FOR  
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DATE: 01/19/2021

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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90011 - T 714.338.1600

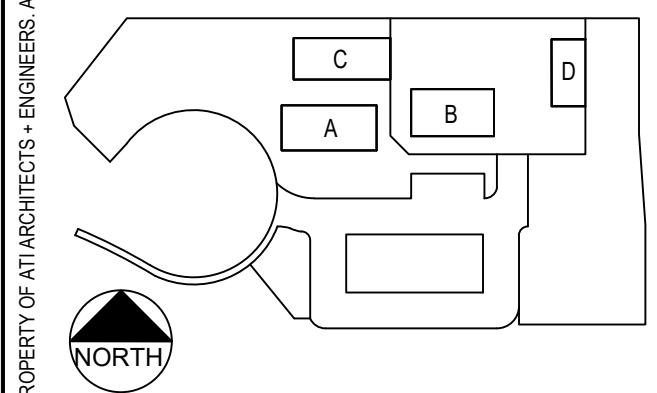
PROFESSIONAL STAMP:

ROBERT J. RIEGLER  
SE 2677  
12/31/2020  
REGISTERED PROFESSIONAL ENGINEER  
CIVIL  
STATE OF CALIFORNIA

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:

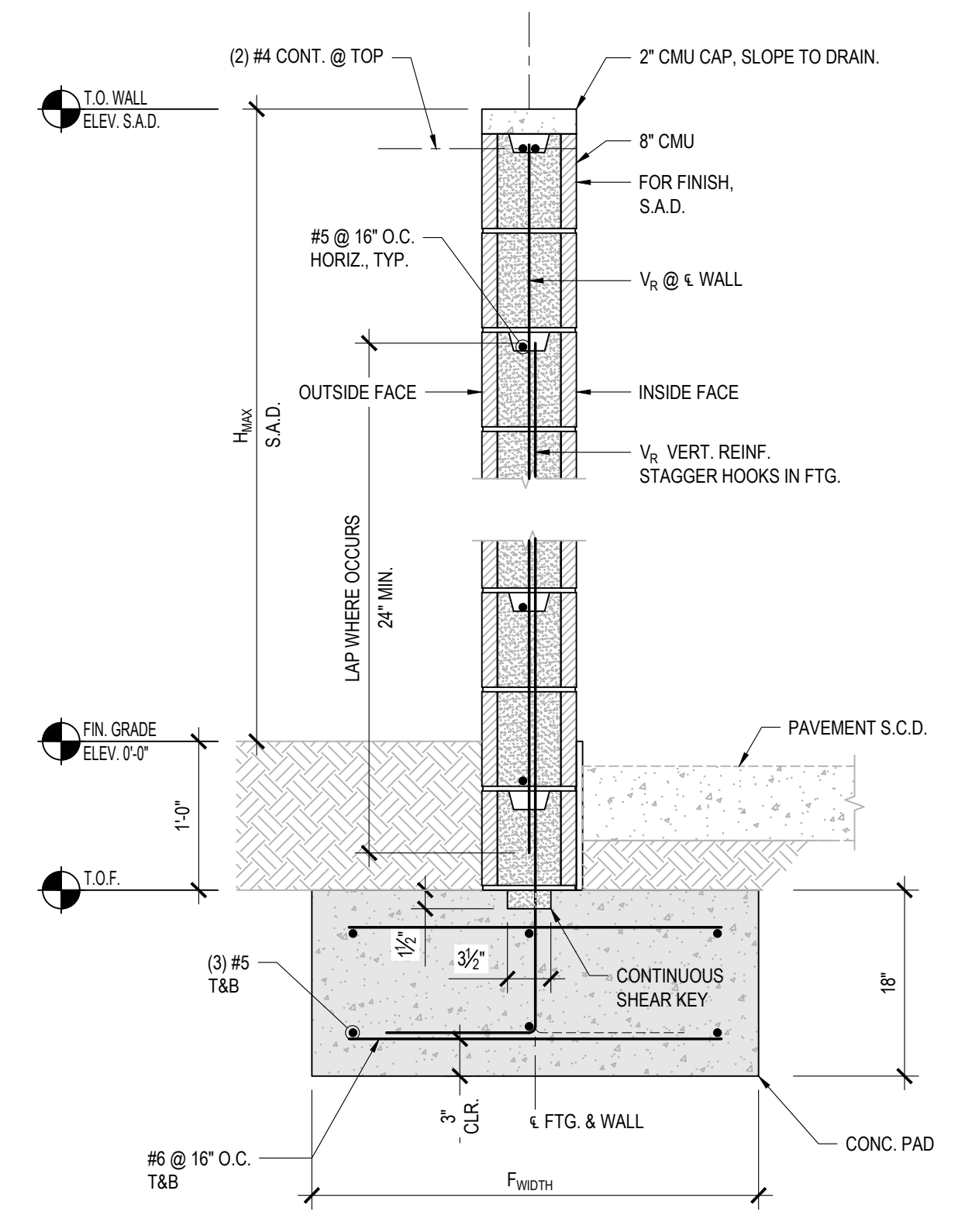


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HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

TYPICAL  
MASONRY  
DETAILS

DRAWN BY: marquines CHECKED BY: g.ng  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

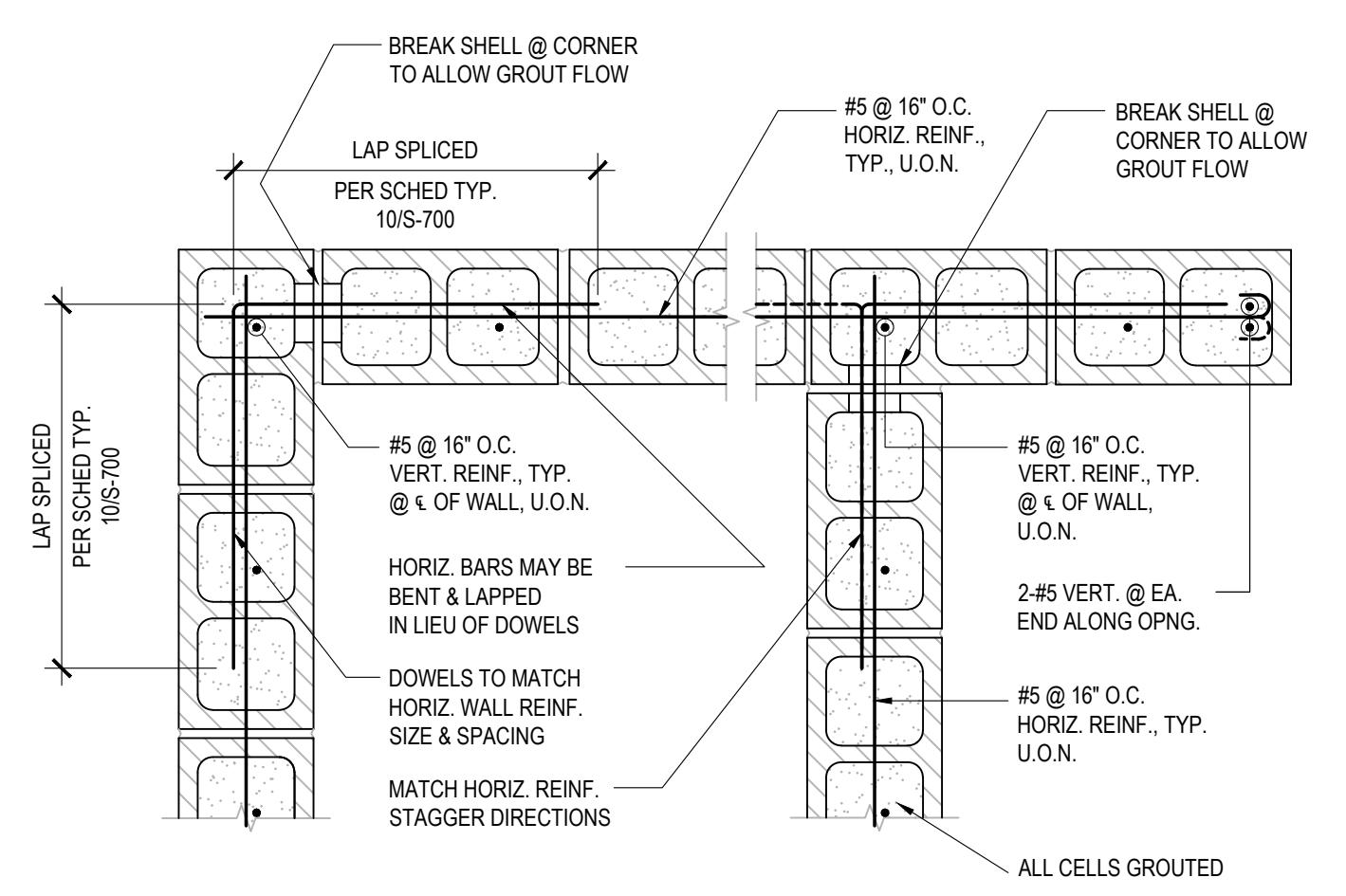
S-710



CMU WALL SCHEDULE

MAX. WALL HEIGHT $H_{MAX}$	VERTICAL REINF. $V_R$	FOOTING WIDTH $F_{WIDTH}$
6'-6"	#5 @ 16" O.C.	3'-6"
4'-6"	#5 @ 16" O.C.	2'-6"

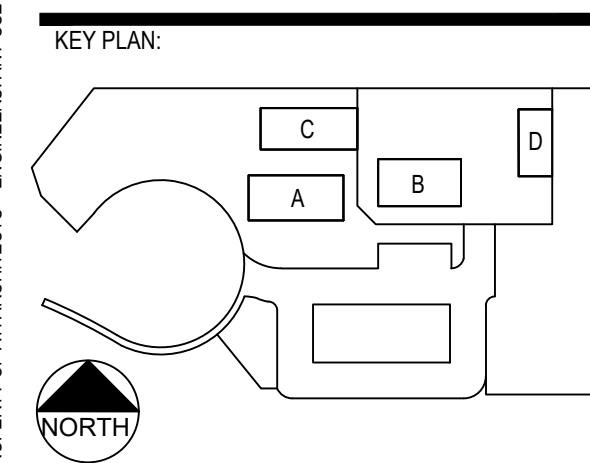
5 CMU SOIL BIN WALL DETAIL  
SCALE: 1"=1'-0"  
JOB# - DMSCALE: 12  
2-04MSWL SECT-P018.DWG



1 CMU WALL REINF. AT END, CORNER & INTERSECTION  
SCALE: 1"=1'-0"  
JOB# - DMSCALE: 12  
2-04MSWL SECT-P018.DWG

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ITEM	REVISION / ISSUE	DATE

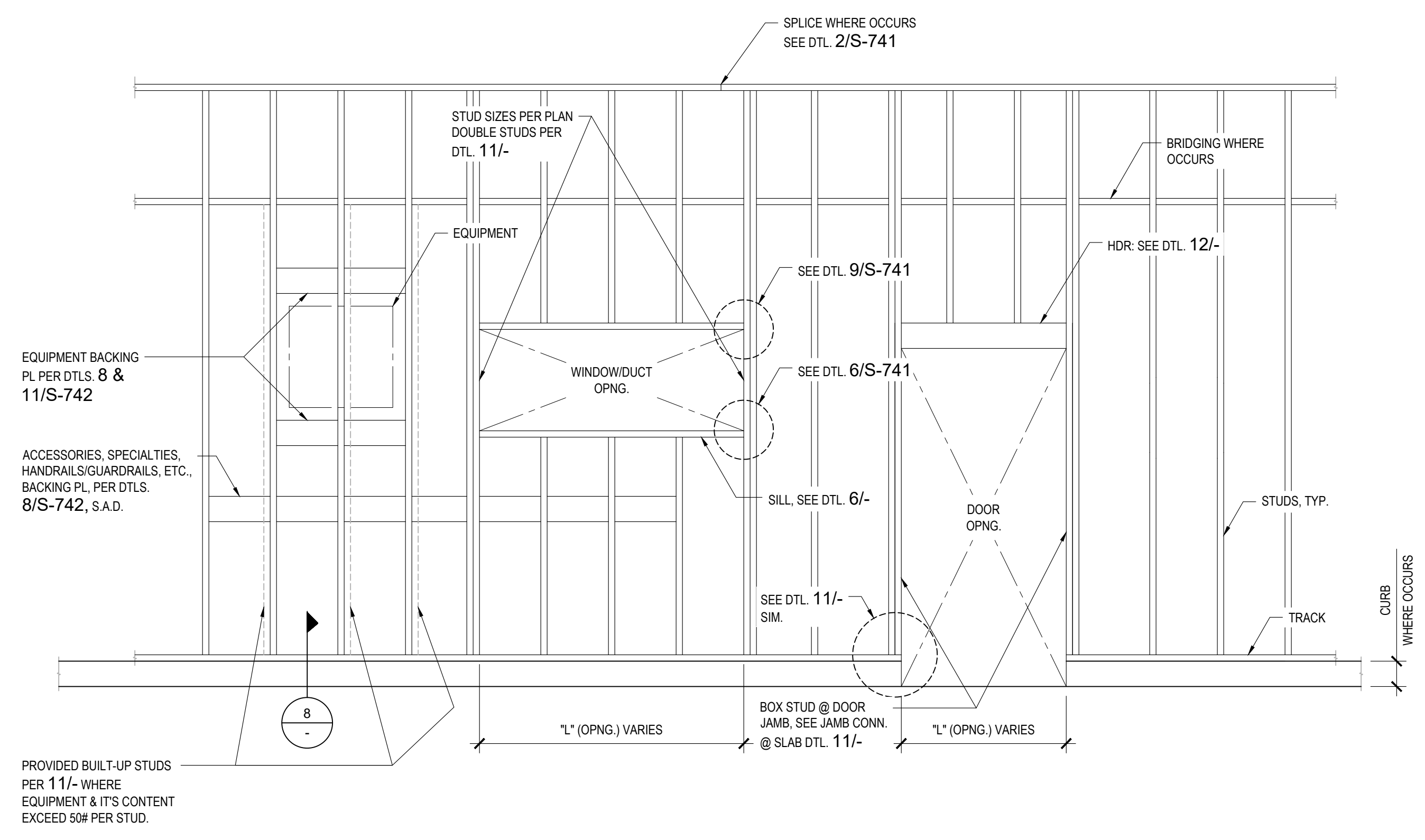
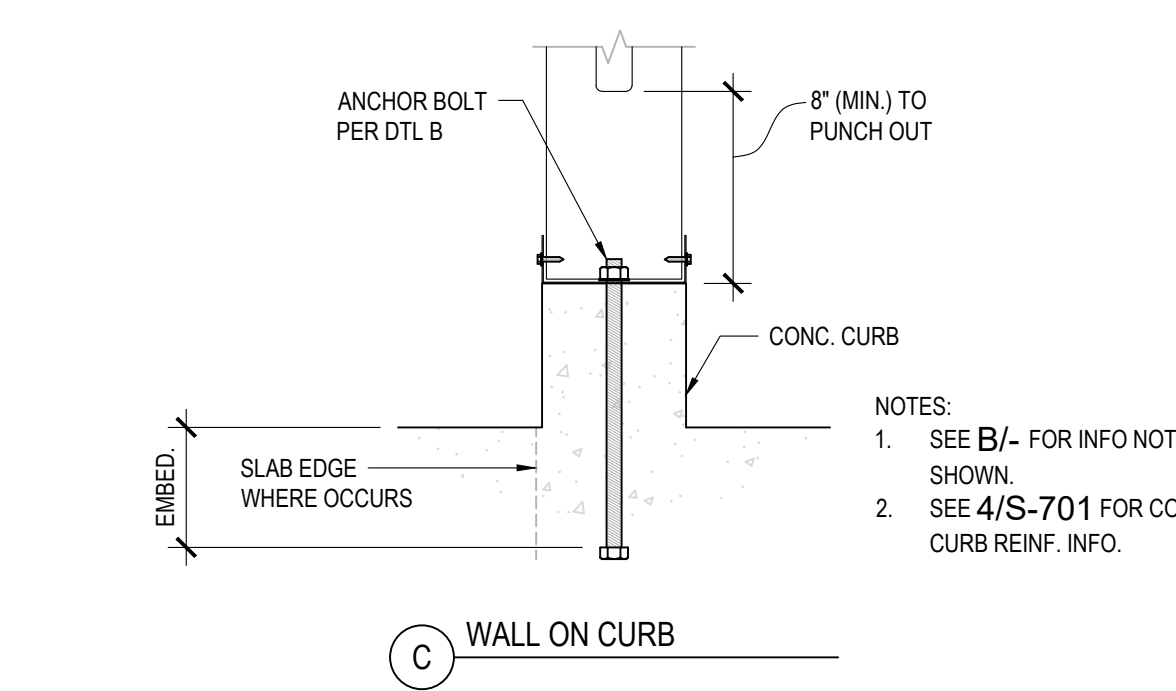
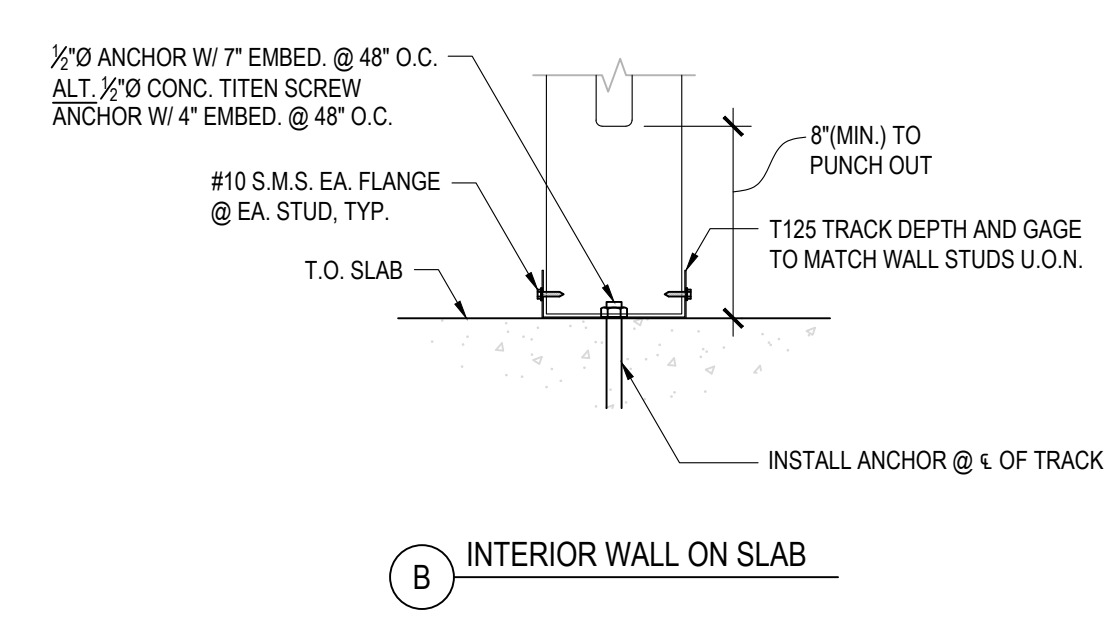
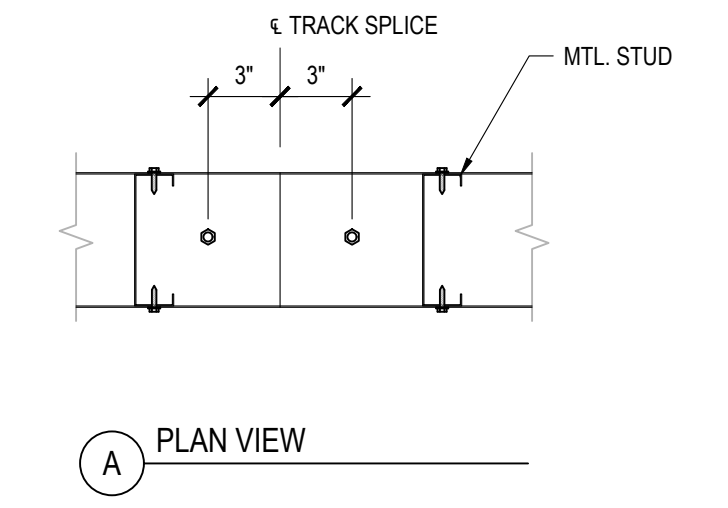
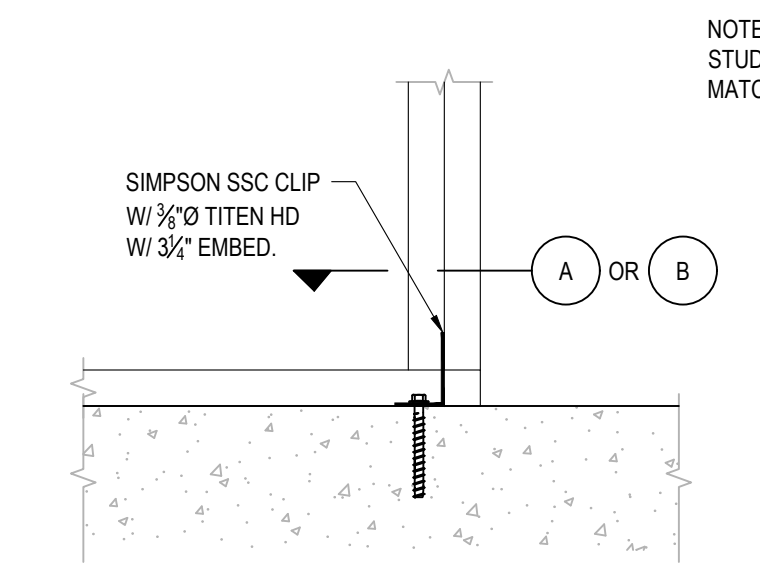
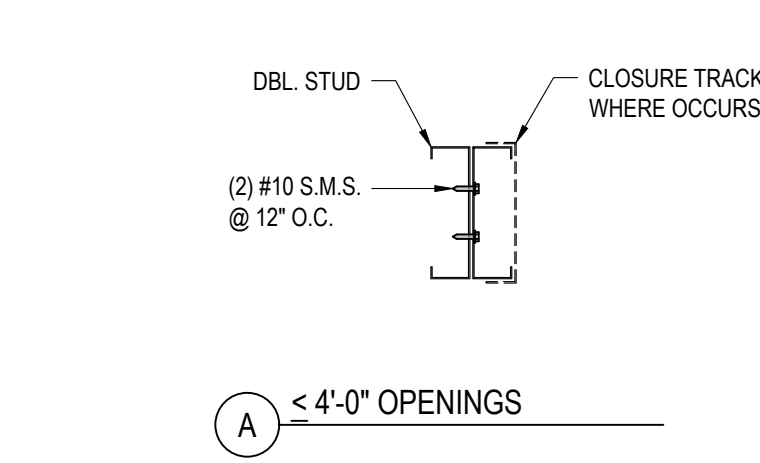
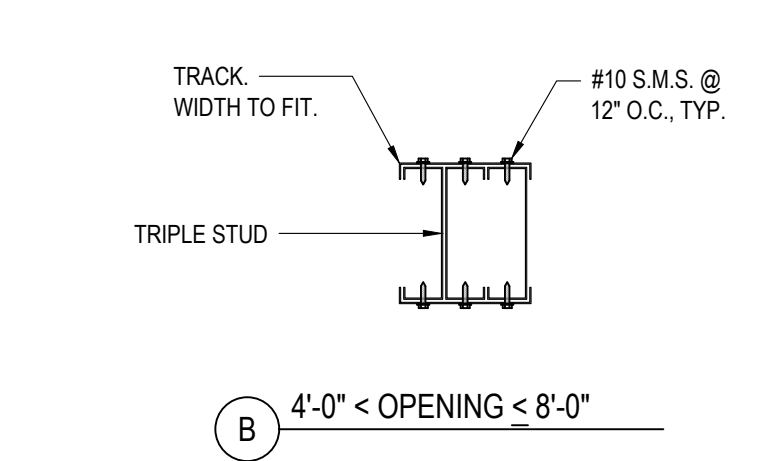
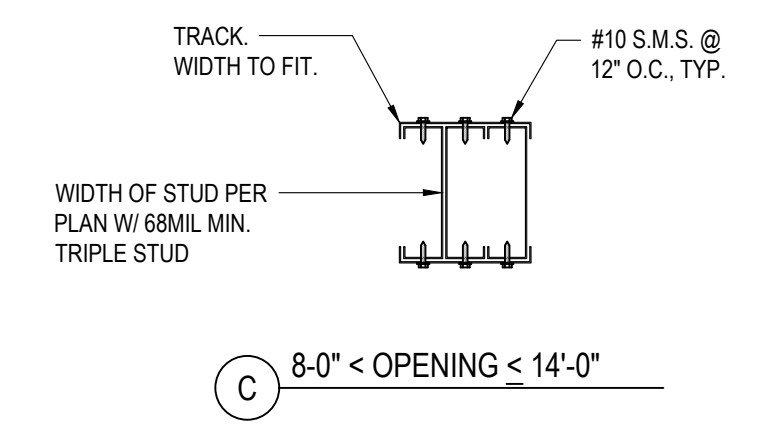


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FACILITY  
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LIVERMORE, CA 94551

**TYPICAL  
LIGHT GAUGE  
METAL STEEL  
DETAILS**

DRAWN BY: m.arquines  
DATE: 01/14/2021  
CHECKED BY:  
PROJECT NO: C9508  
SHEET NO:

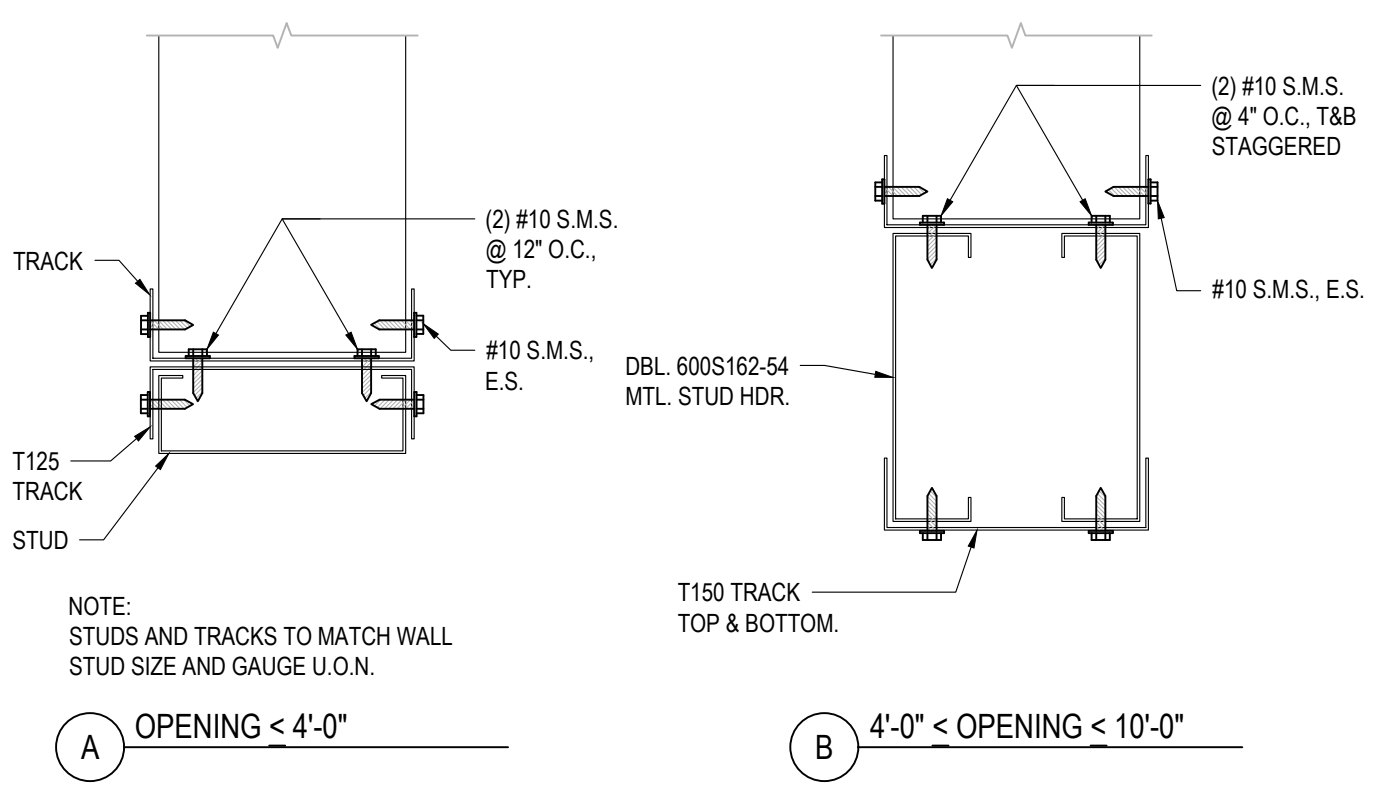
**S-740**



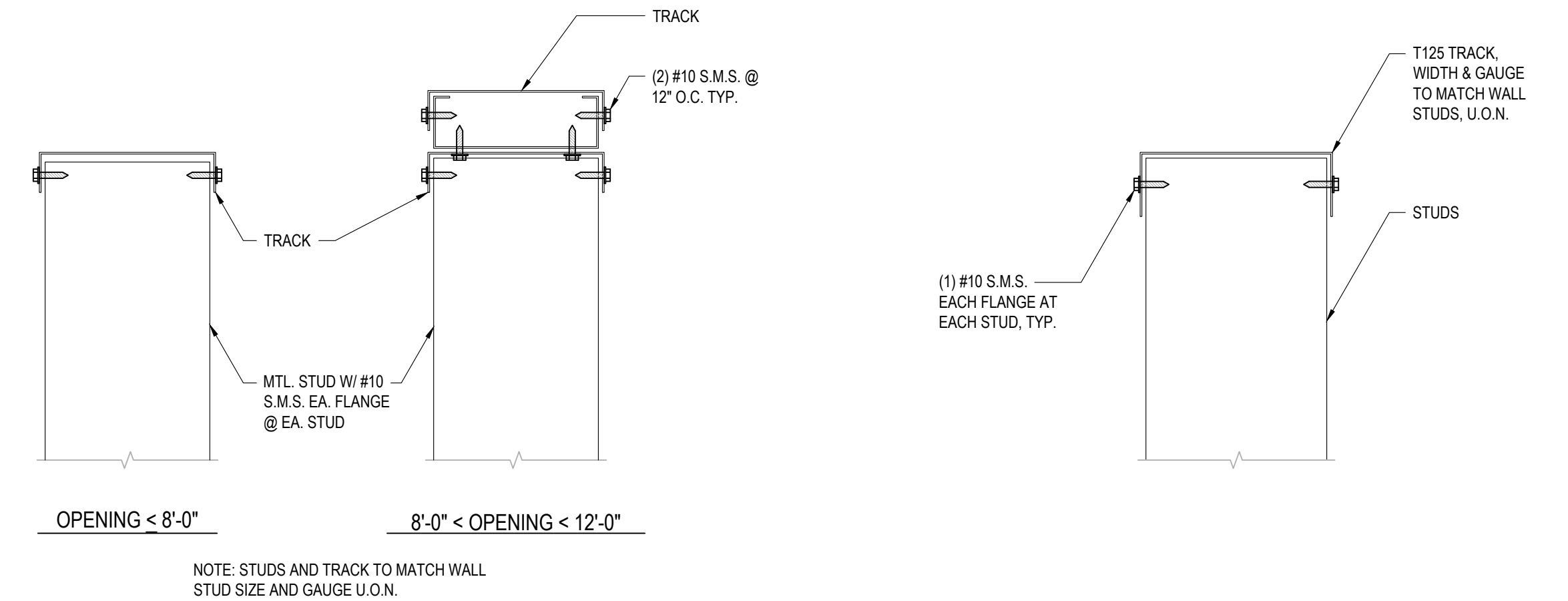
**11** JAMB SCHEDULE  
SCALE: 1 1/2"=1'-0"

**8** BASE OF WALL DETAIL  
SCALE: 1 1/2"=1'-0"

**5** TYPICAL WALL FRAMING  
SCALE: 1/2"=1'-0"



**12** TYPICAL HEADER SCHEDULE  
SCALE: 3"=1'-0"

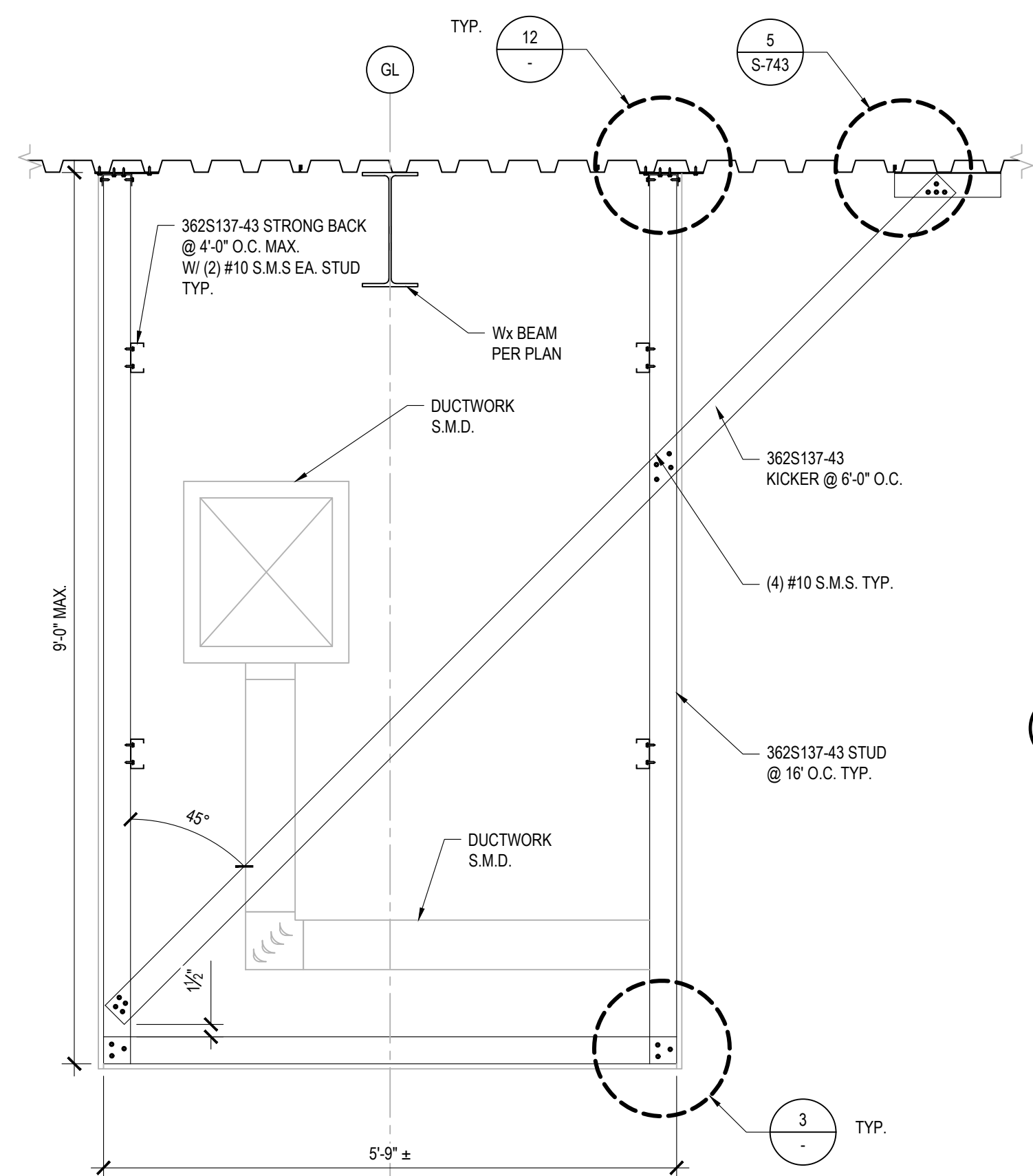


**6** SILL SCHEDULE  
SCALE: 3"=1'-0"

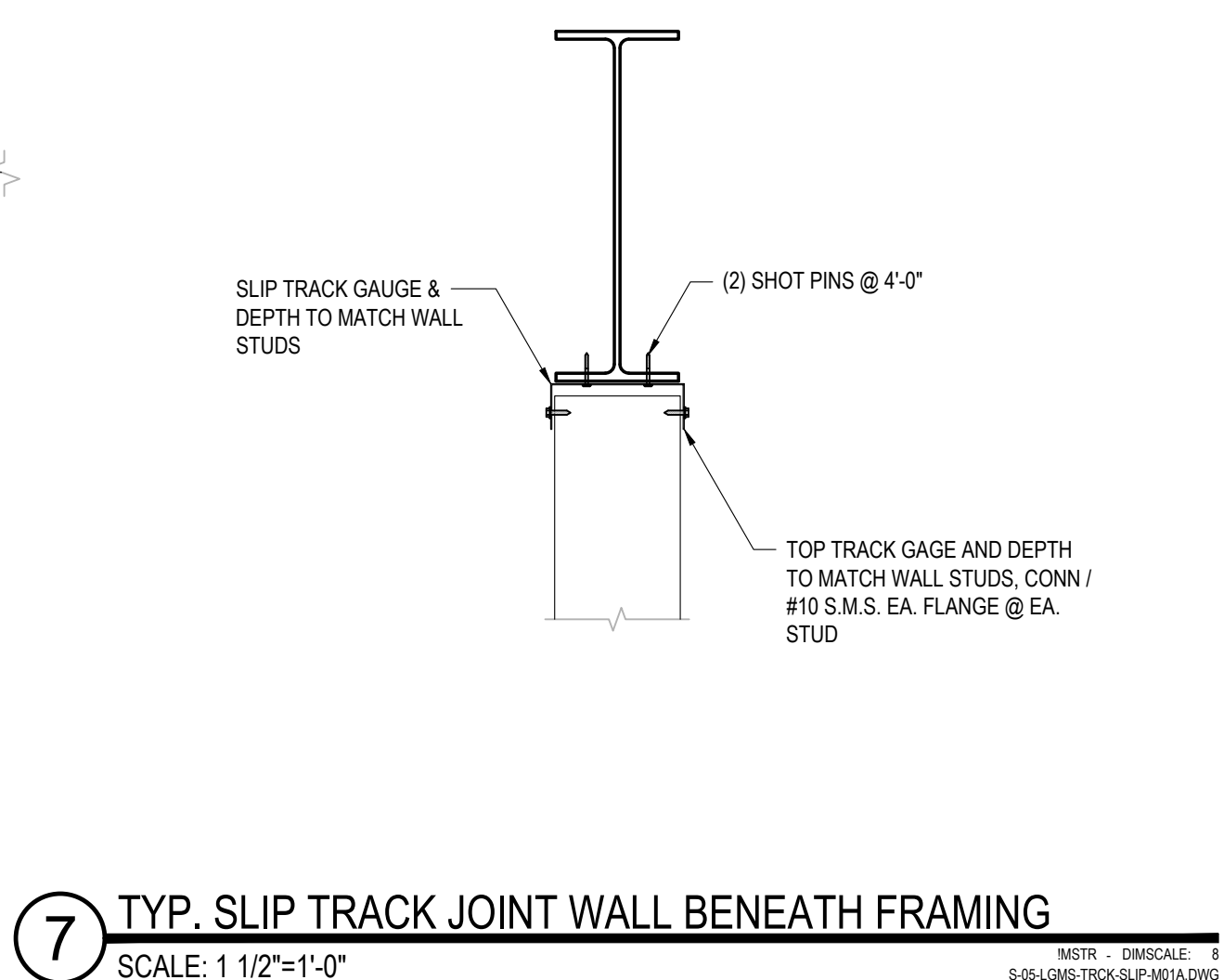
**3** TYPICAL STUD END  
SCALE: 1 1/2"=1'-0"

1/16/2020, 01:33:31 PM  
P:\C38500 ChabotLas Positas\_CCS9508\_LPC\_Horticulture3\_Dwg\S-740\_LGMS-740.dwg - m.arquines

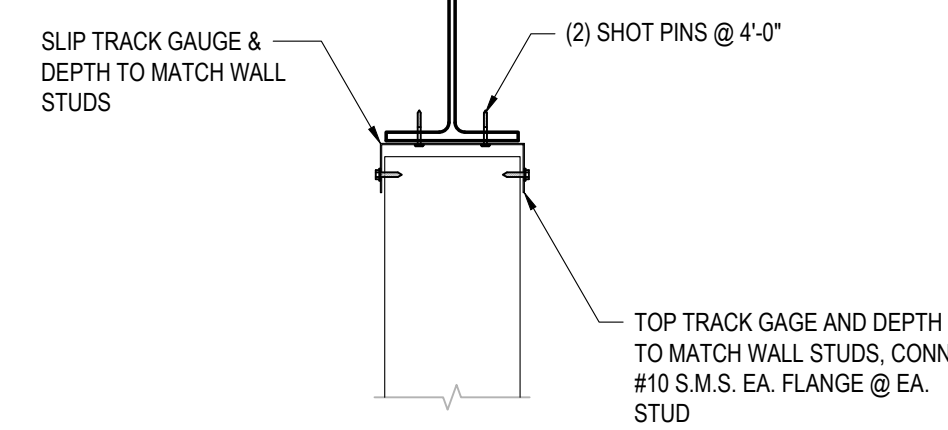
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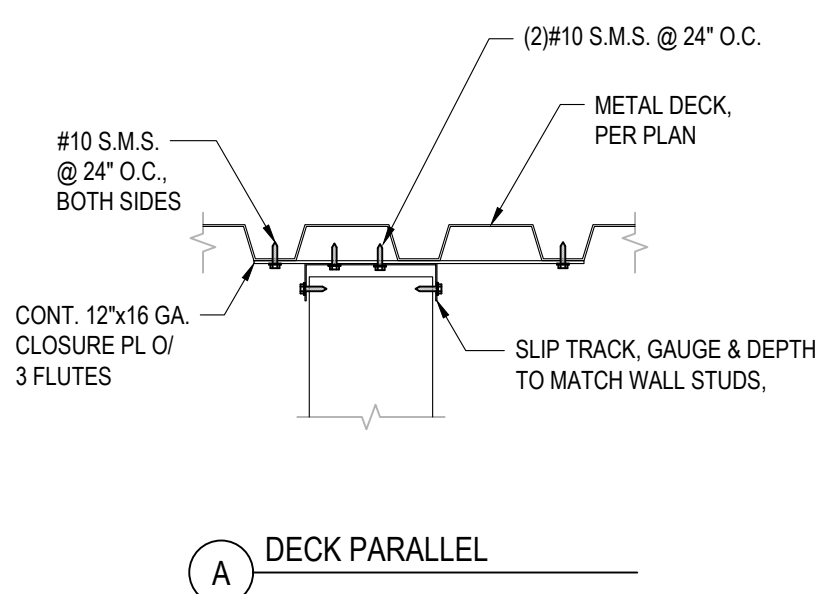
**11** SOFFIT DETAIL  
SCALE: 3/4"=1'-0"



**7** TYP. SLIP TRACK JOINT WALL BENEATH FRAMING  
SCALE: 1 1/2"=1'-0"

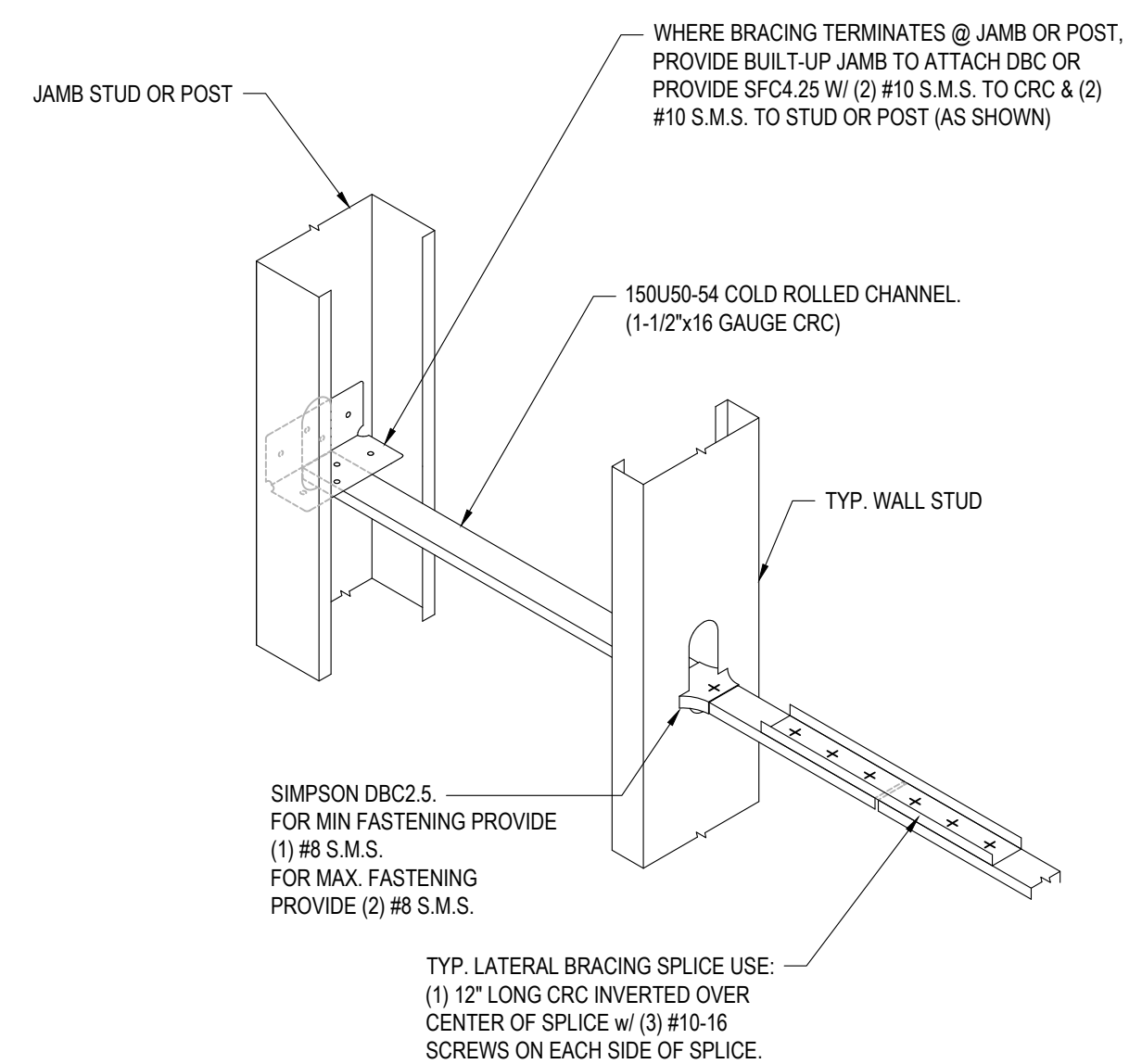


**B** DECK PERPENDICULAR



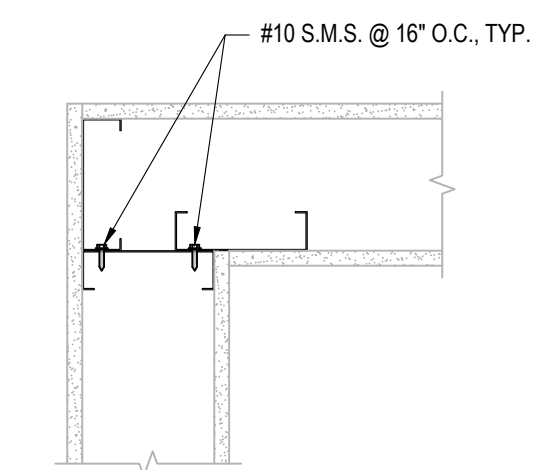
**A** DECK PARALLEL

STUD SIZE	VERT. SPA. OF CRC BRIDGING		ASD DESIGN LOAD
	MIN. FASTENING	MAX. FASTENING	
362S162	8'-0"	-	5 PSF
600S162	5'-0"	7'-0"	25 PSF
800S162	4'-0"	7'-0"	25 PSF

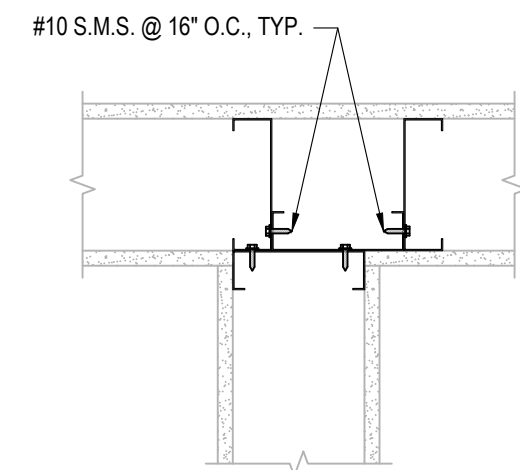


**5** CRC LATERAL BRIDGING W/ SIMPSON DBC  
SCALE: N.T.S.

**A** TYPICAL EXTERIOR CORNER

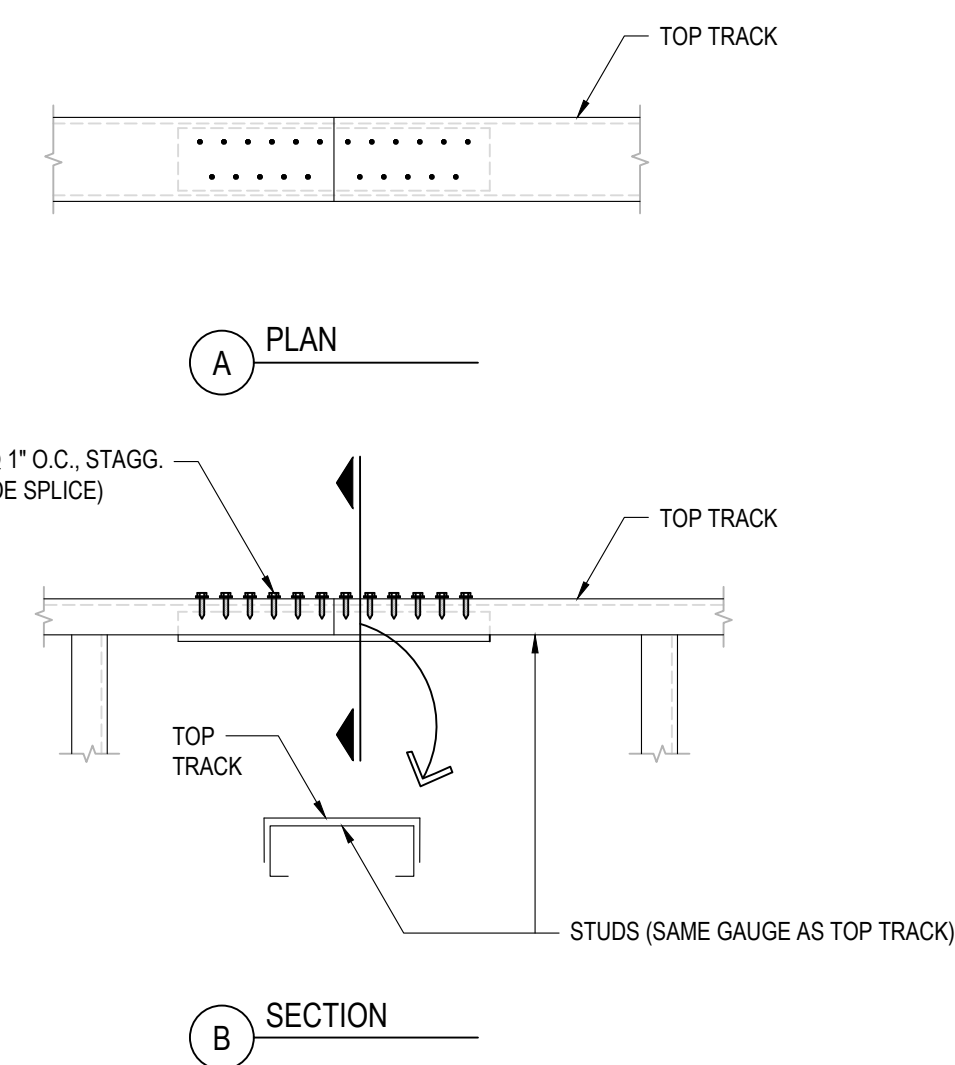


**B** TYPICAL INTERIOR CORNER

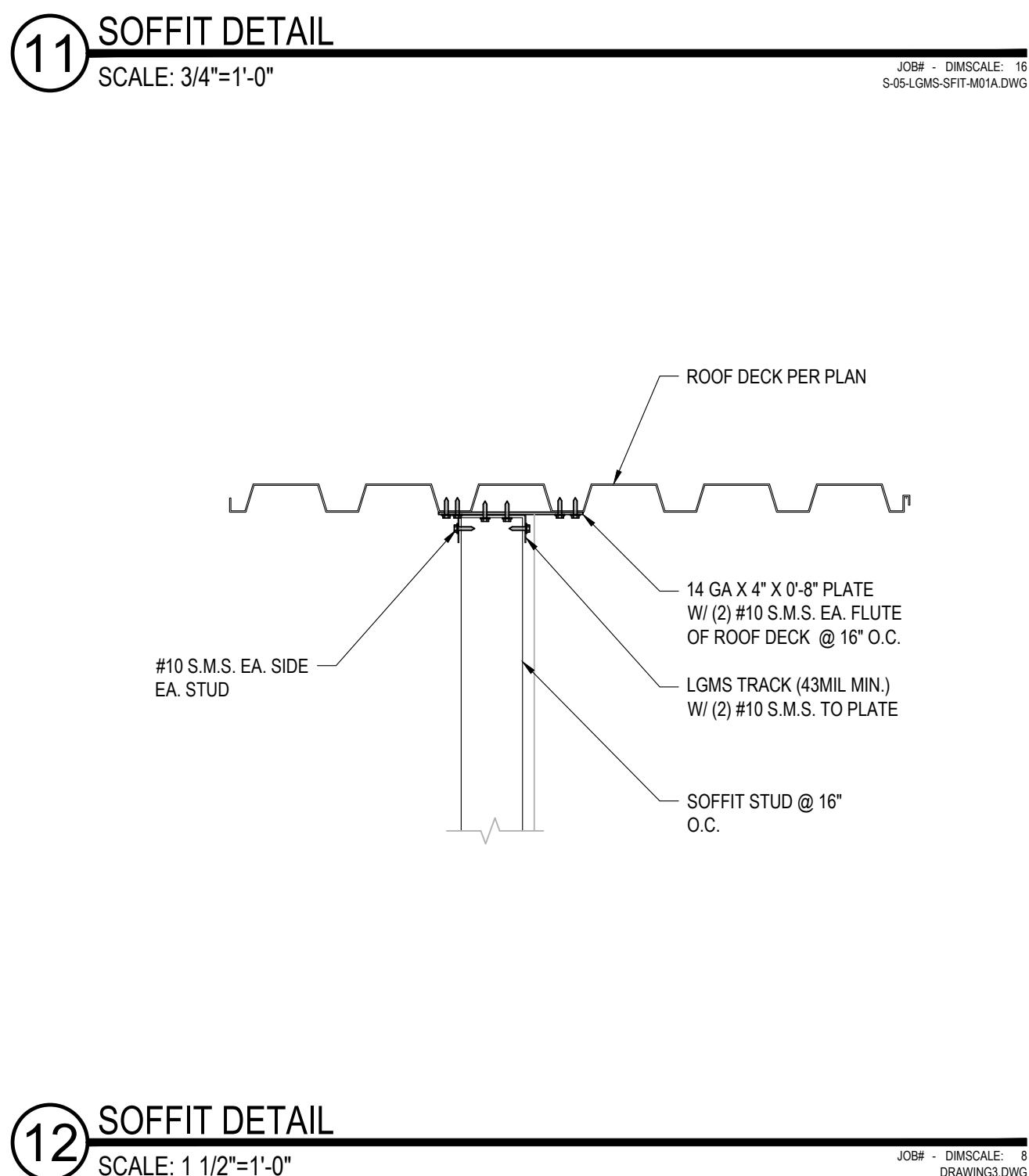


**C** TYPICAL INTERIOR INTERSECTION

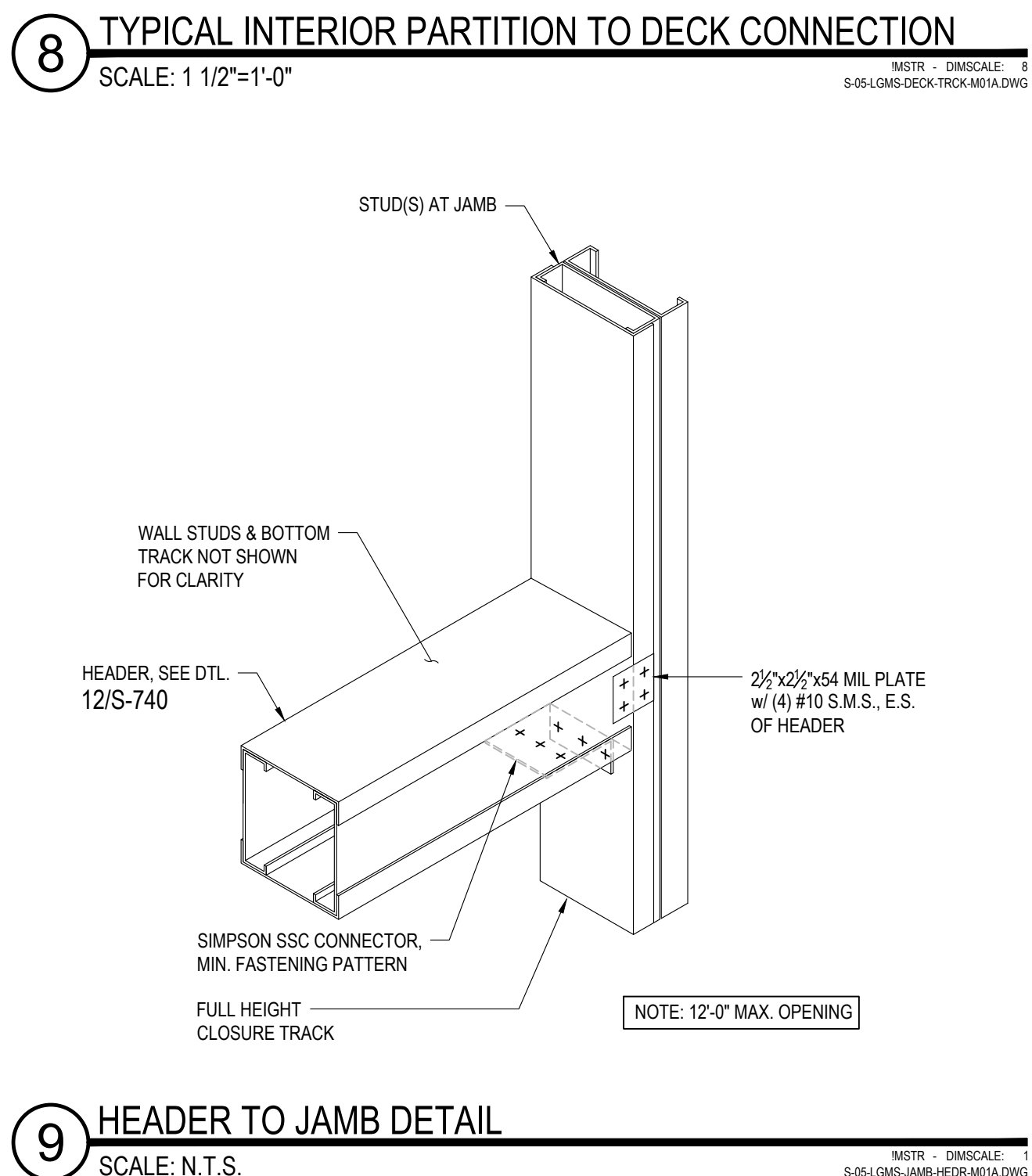
**1** TYPICAL LIGHT GAUGE METAL STEEL CORNER DETAILS  
SCALE: 1 1/2"=1'-0"



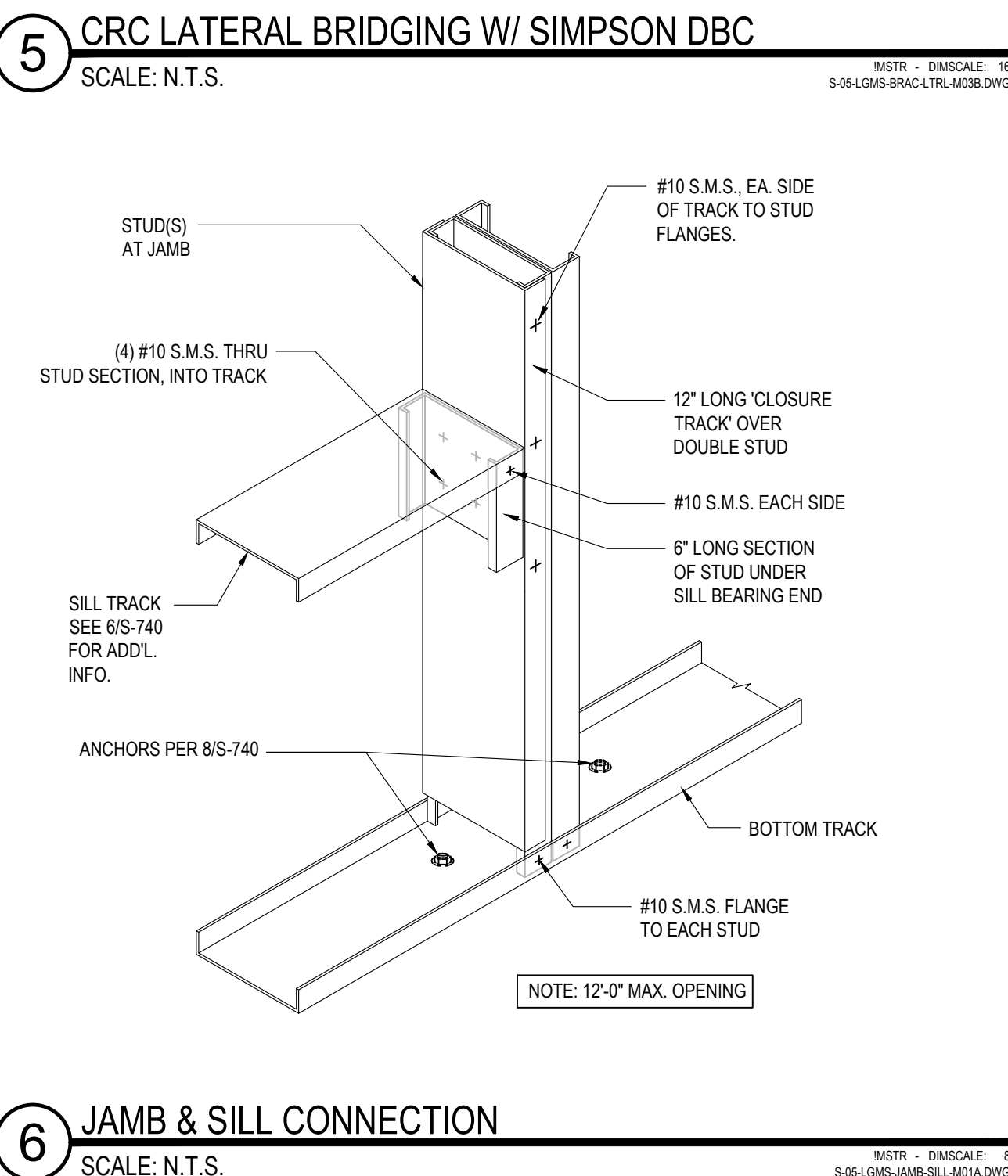
**2** TYPICAL LIGHT GAUGE METAL STEEL TOP TRACK SPLICE  
SCALE: N.T.S.



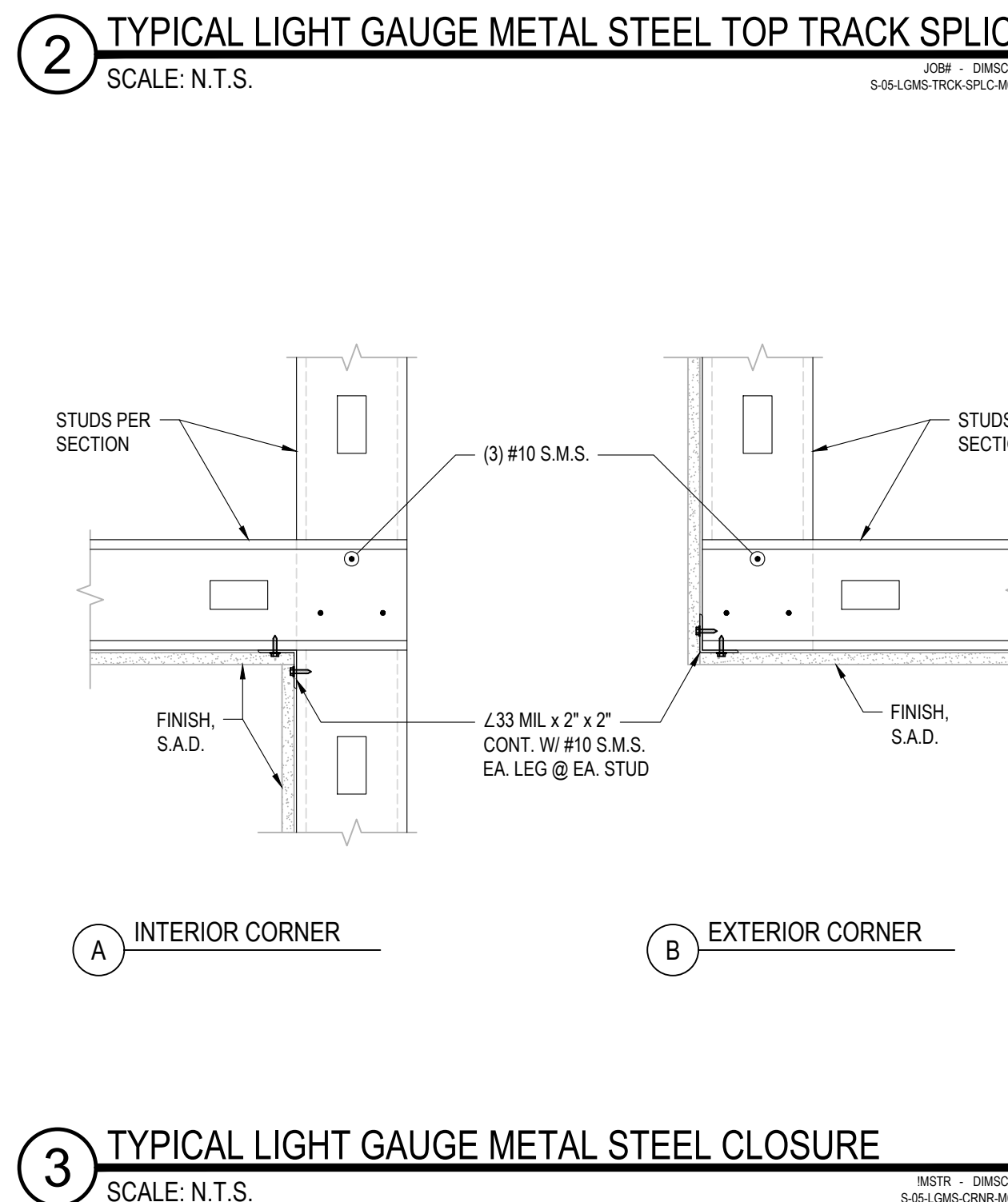
**12** SOFFIT DETAIL  
SCALE: 1 1/2"=1'-0"



**9** HEADER TO JAMB DETAIL  
SCALE: N.T.S.



**6** JAMB & SILL CONNECTION  
SCALE: N.T.S.



**3** TYPICAL LIGHT GAUGE METAL STEEL CLOSURE  
SCALE: N.T.S.

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APP: 01-119056 INC.  
REVIEWED FOR  
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DATE: 01/19/2021

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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

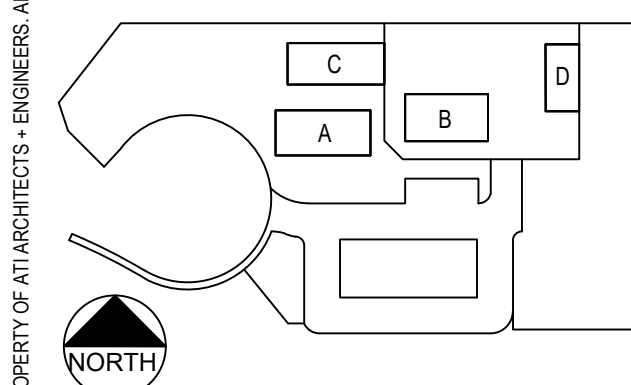
PROFESSIONAL STAMP:

REGISTERED PROFESSIONAL ENGINEER  
ROBERT J. RIEGLER  
SE 2677  
12/31/2020  
RENEW  
ONE  
STRUCTURAL  
ENGINE  
STATE OF CALIFORNIA  
*Robert J. Riegler*

CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



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COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

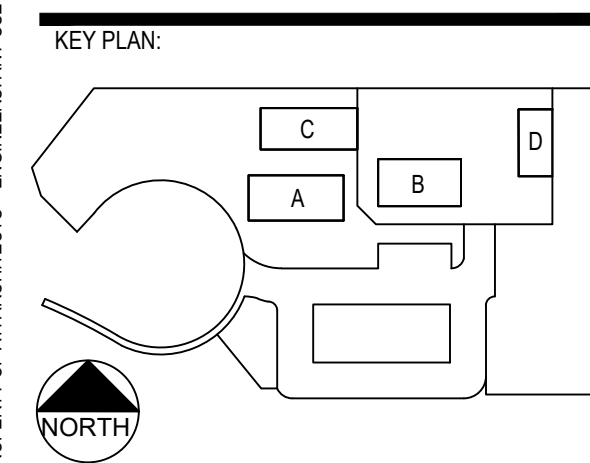
**TYPICAL LIGHT GAUGE METAL STEEL DETAILS**

DRAWN BY: m.marques CHECKED BY:  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**S-741**



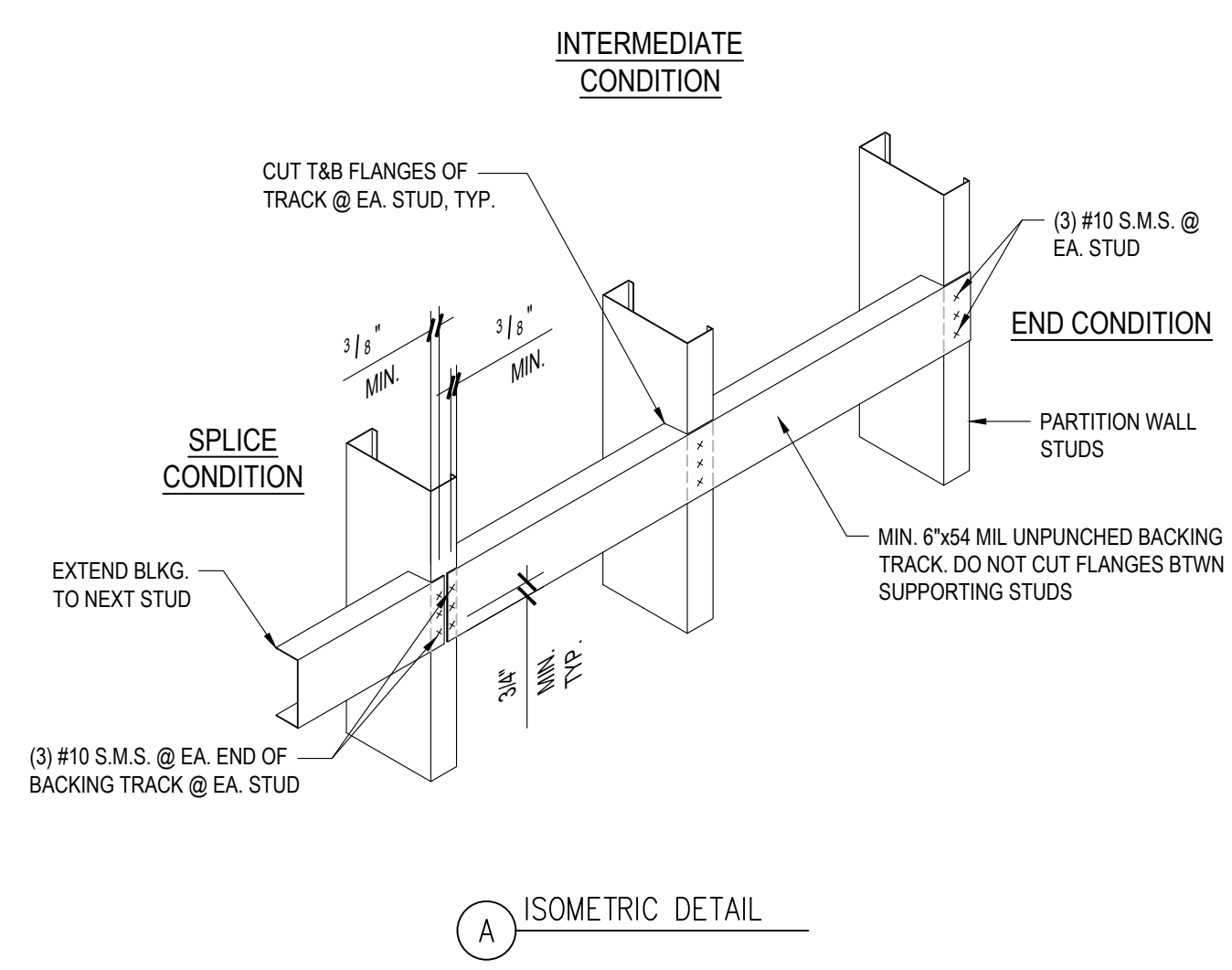
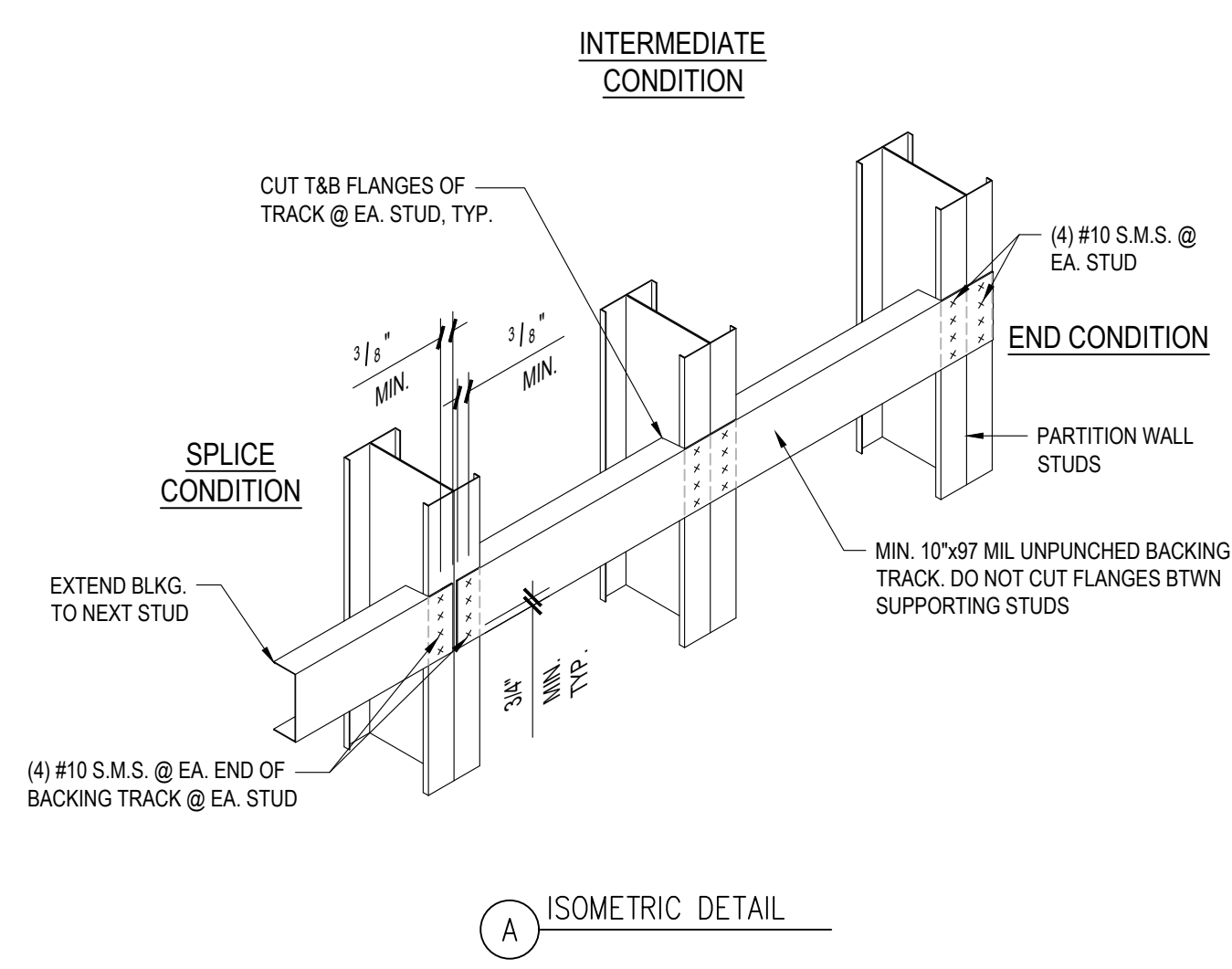
ITEM:	REVISION / ISSUE:	DATE:



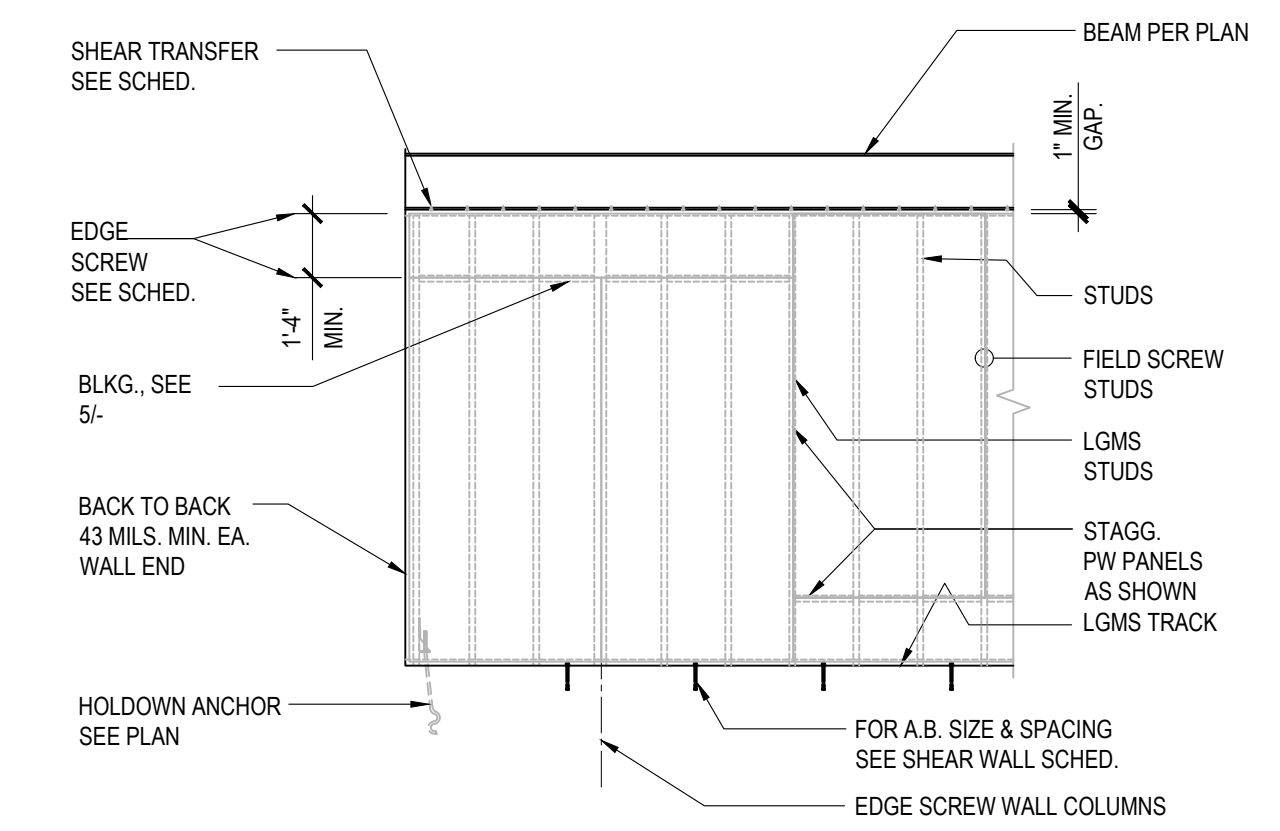
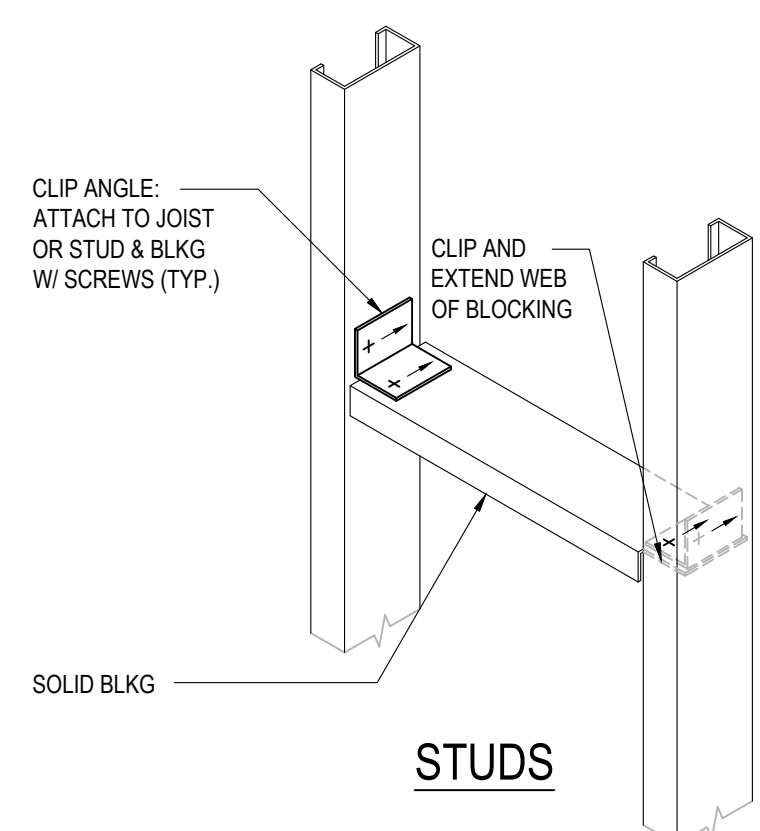
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HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**TYPICAL LIGHT GAGE METAL STEEL DETAILS**  
DRAWN BY: m.arquines CHECKED BY: r.riegell  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

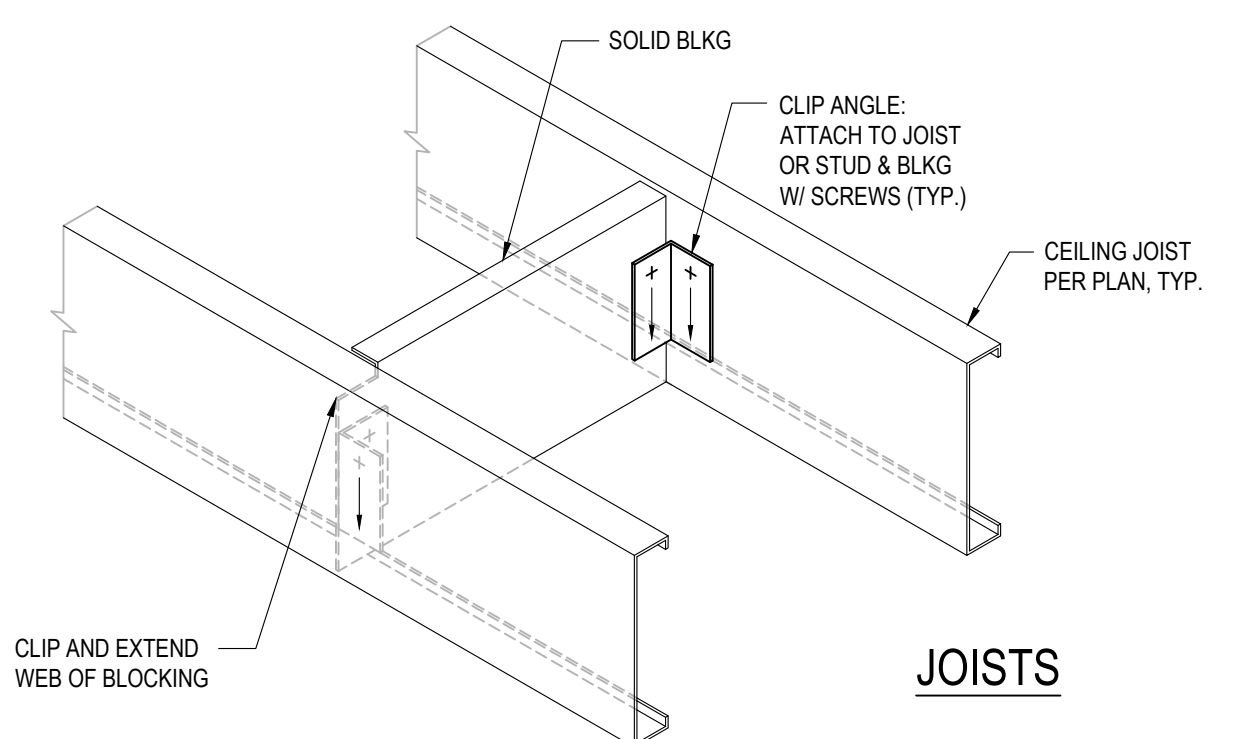
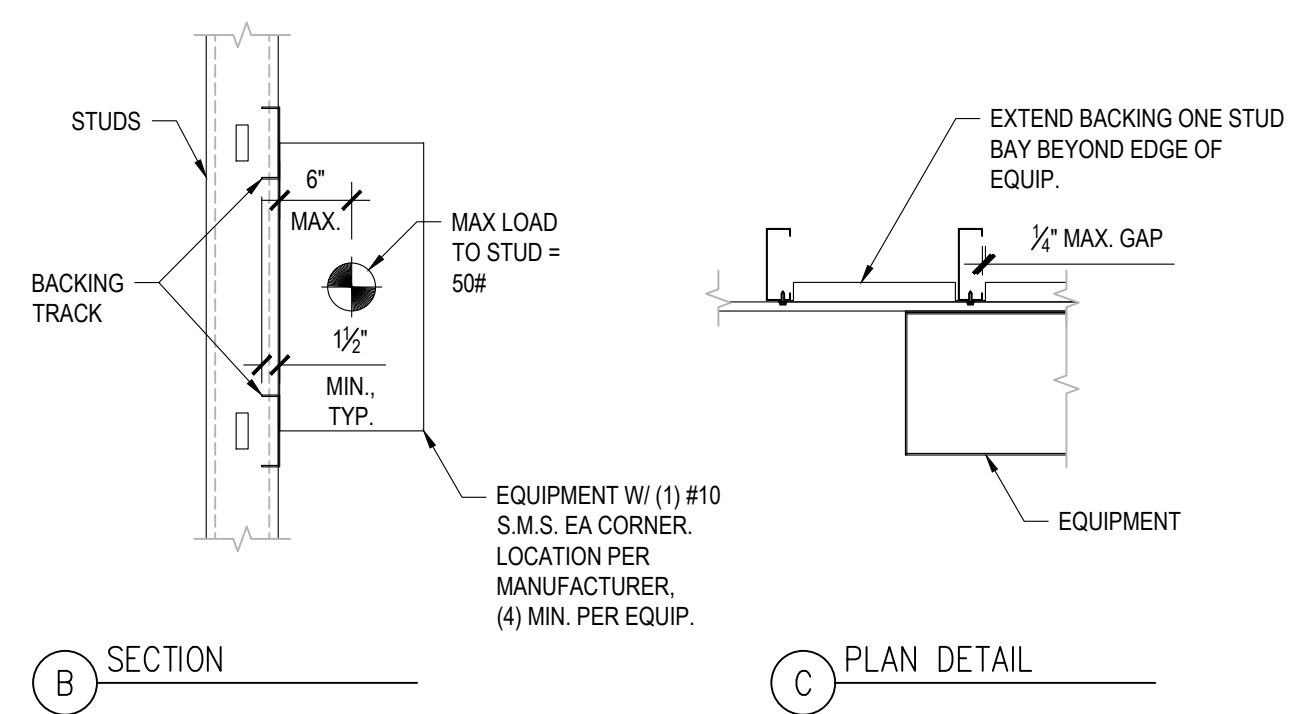
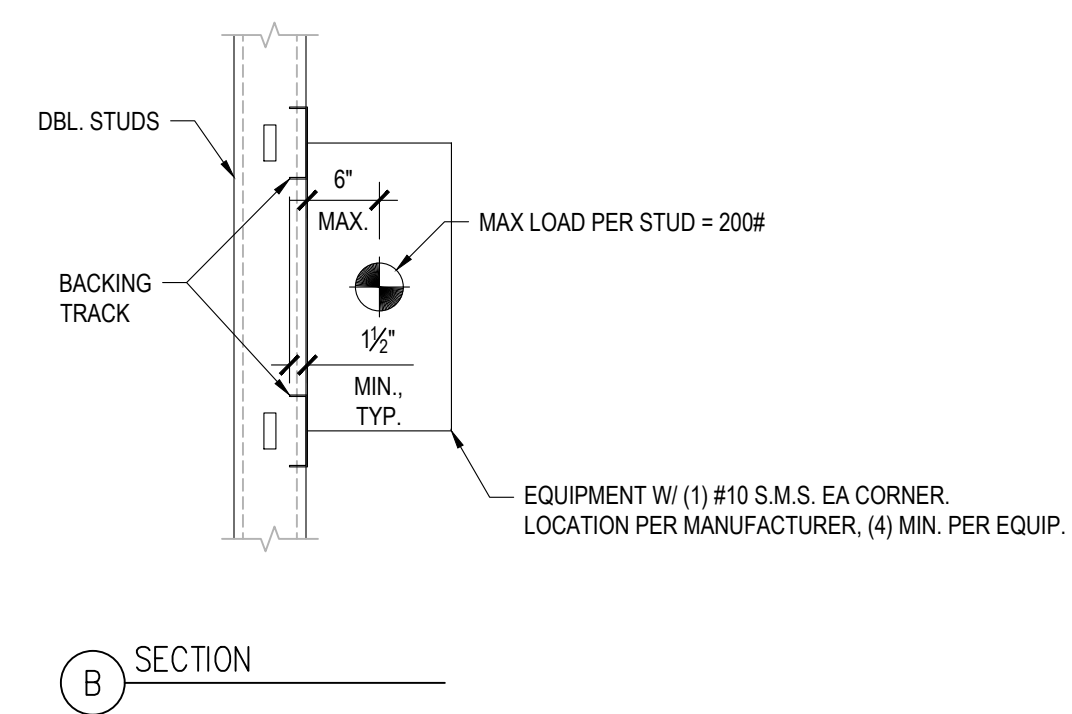
**S-742**



- NOTES:
- WHERE BLKG. MATERIAL THICKNESS ALLOWS, NOTCH & BEND TRACK 90° FOR CONN. SOLID BLKG. TO BE THE FULL DEPTH AND SAME GAGE OF THE MEMBER.
  - CLIP ANGLE: 14 GAx2"x2"x1"D" LONG D = 1/2" LESS THAN STUD WIDTH



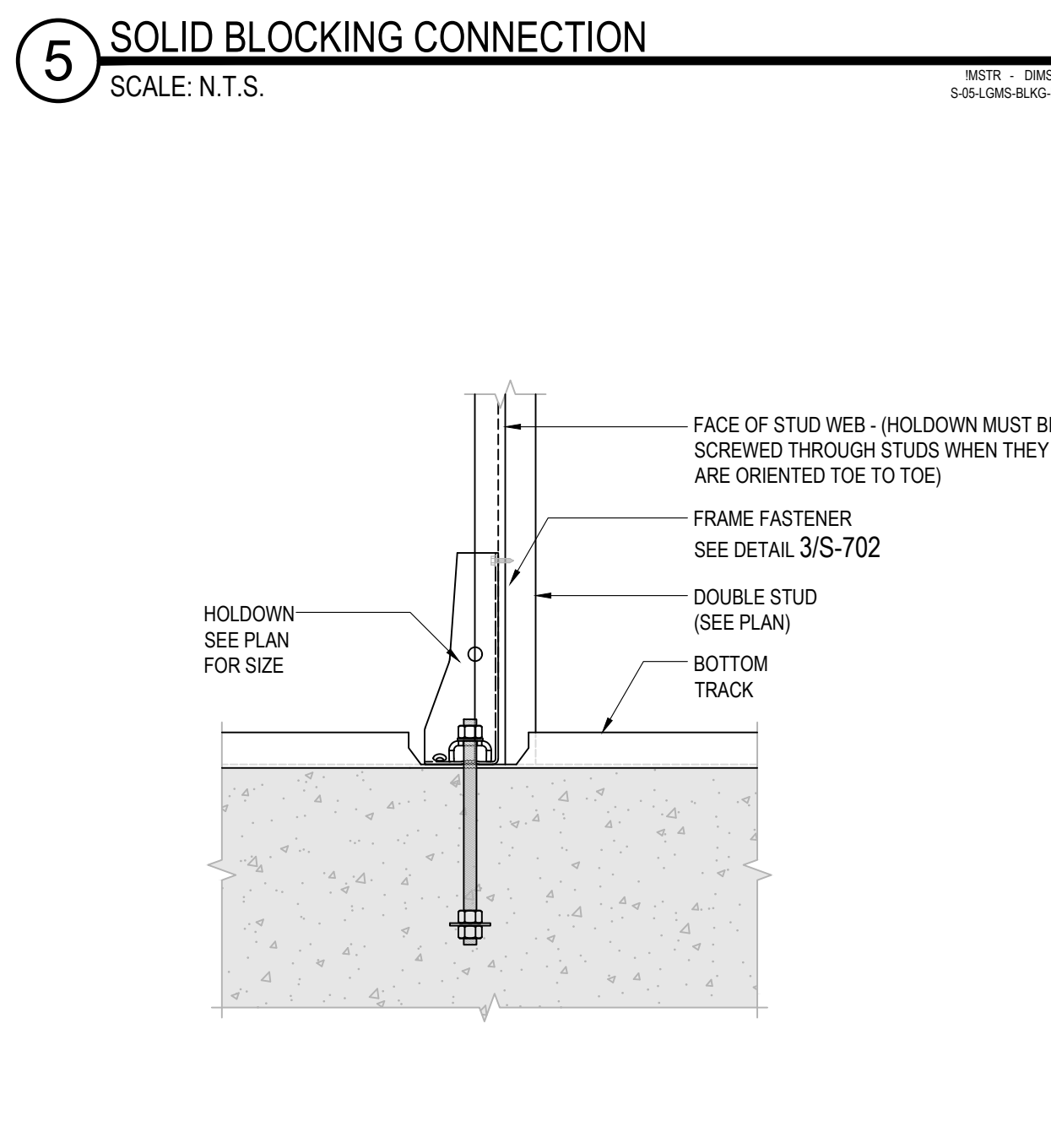
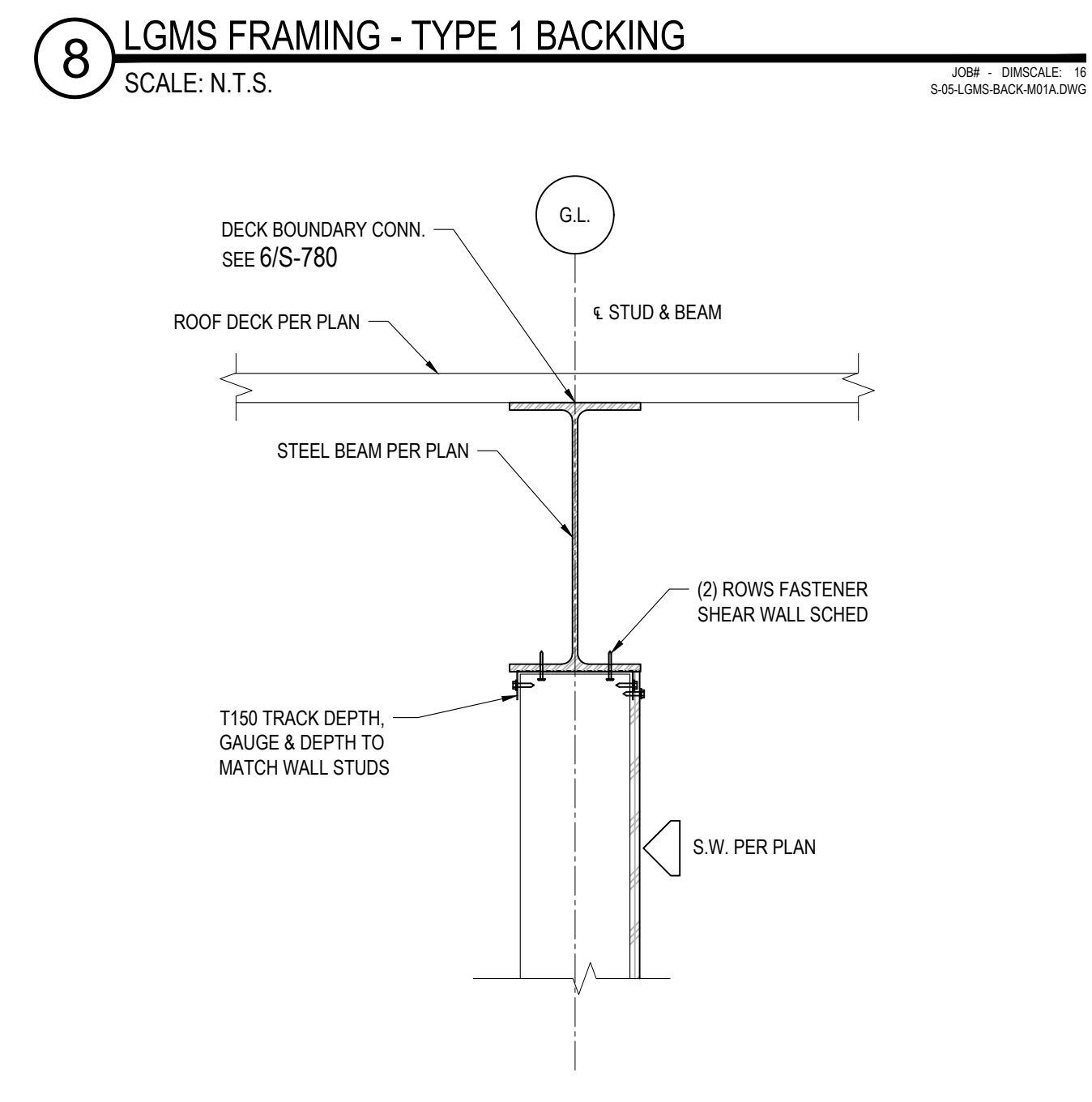
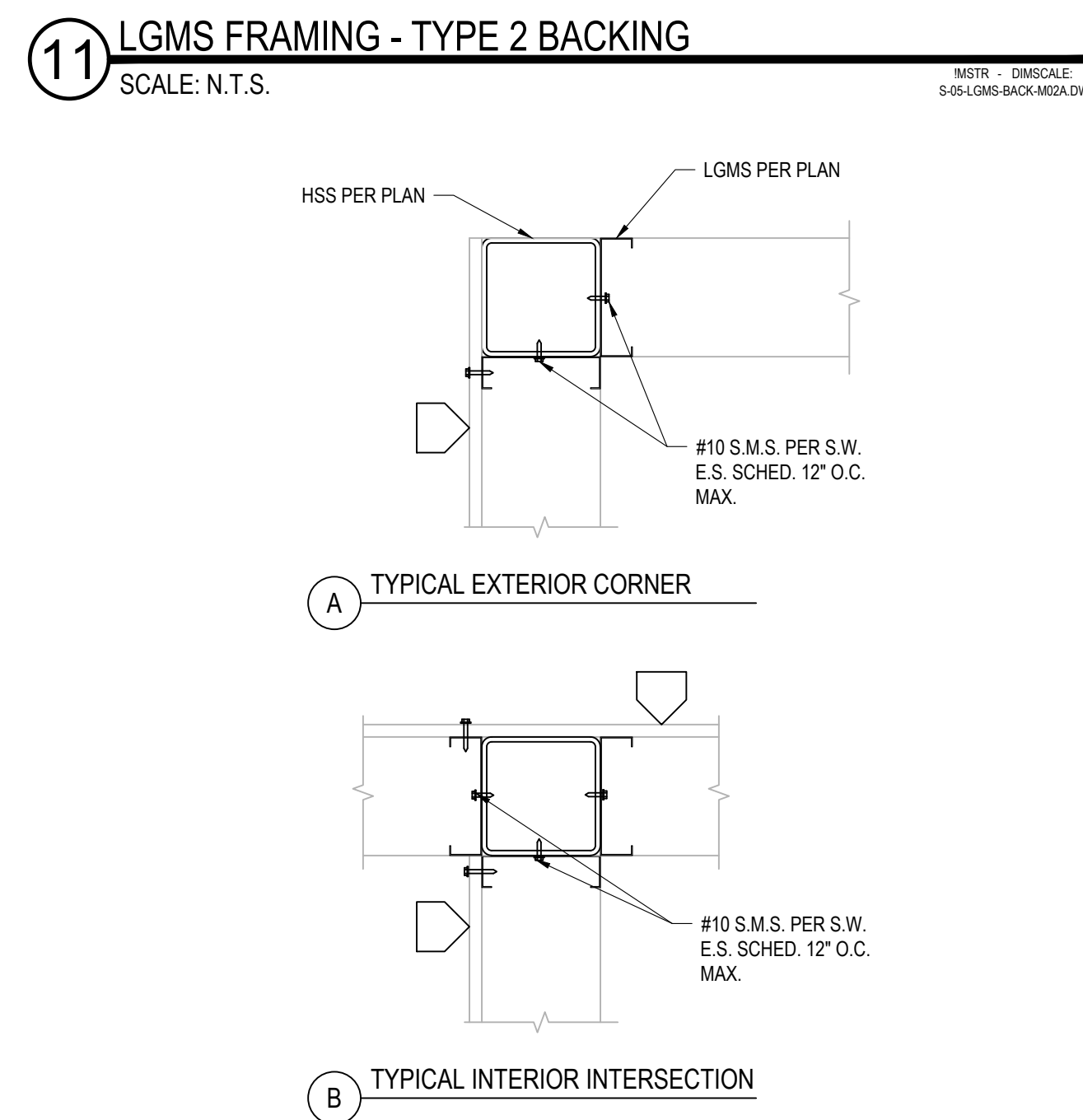
- NOTES:
- ALL PANEL EDGES SHALL BE BLOCKED.
  - PW PANELS MAY BE PLACED VERT. OR HORIZ. ACROSS STUDS.
  - FOR OPNS. IN SW SEE 718-743.
  - MIN. PANEL SIZE IS 16" X 96"
  - ALL PANELS MAY BE FASTENED AT PANEL JOINT STUD WITHOUT STAGGERING THE FASTENERS AT EACH PANEL.
  - NO PANELS SHALL BE LAPPED OVER ANOTHER AT EACH LAP JOINT STUDS.
  - JOINT SPACING BETWEEN PANELS SHALL RANGE FROM 0" TO 1/2".
  - 1" MIN GAP AT TOP AND BOTTOM TRACK TO FLOORS OR BEAM.



**SHEARWALL SCHEDULE - COLD FORMED STEEL FRAMING WITH SURE-BOARD SERIES 200 (IAPMO ER 126)**

SHEARWALL DESIGNATION	SB	SB			
MATERIAL	SURE-BOARD SERIES 200 STRUCTURAL PANELS ON SIDE				
CFS STUD, TRACK, AND BLKG. (MILS)	54	54			
EDGE FASTENER	#10 @ 6"	#10 @ 4"			
SILL TRACK FASTENERS - CONCRETE	1/2" O.C. @ 32" O.C.				
TOP TRACK FASTENERS	SIZE & SPACING TO MATCH S.W. EDGE FASTENING				
NOMINAL SHEAR STRENGTH (R <sub>n</sub> )	1085 PLF	1545 PLF			
ALLOWABLE SHEAR STRENGTH (R <sub>n</sub> /Ω <sub>0</sub> )	434 PLF	618 PLF			

- NOTES**
- NOMINAL STRENGTH SHALL BE MULTIPLIED BY THE RESISTANCE FACTOR (φ=0.6 FOR SEISMIC, φ=0.65 FOR WIND) TO DETERMINE DESIGN STRENGTH.
  - ALL PANEL EDGE SHOULD BE BLOCKED. SCREWS IN THE FIELD OF THE PANEL SHALL BE INSTALLED 12 INCHES (305 mm) O.C. UNLESS OTHERWISE SHOWN.
  - SHEAR WALL HEIGHT TO WIDTH ASPECT RATIOS (h/w) SHOULD NOT EXCEED 2 1/2 : 1
  - UNLESS NOTED AS (MIN.), SUBSTITUTION OF A STUD OR TRACK OF A DIFFERENT DESIGNATION THICKNESS IS NOT PERMITTED.
  - WALL STUDS AND TRACK SHALL BE OF ASTM A1003 STRUCTURAL GRADE 60 (GRADE 340) TYPE H STEEL FOR MEMBERS WITH A DESIGNATION THICKNESS EQUAL TO OR GREATER THAN 54 MILS. FOR STRUCTURAL PANEL SHEATHED SHEAR WALLS, TABULATED R<sub>n</sub> VALUES APPLICABLE FOR SHORT-TERM LOAD DURATION (WIND OR SEISMIC LOADS).
  - STUDS SHALL BE C-SHAPE MEMBERS WITH A MINIMUM THICKNESS OF 33 MILS, MINIMUM FLANGE WIDTH OF 1 1/2 INCHES, MINIMUM WEB DEPTH OF 3/2 INCHES AND MINIMUM EDGE STIFFENER OF 3/8 INCH.
  - TRACK SHALL BE MINIMUM THICKNESS 33 MILS WITH A MINIMUM FLANGE WIDTH OF 1 1/2 INCHES AND A MINIMUM WEB DEPTH OF 3/2 INCHES.
  - MAXIMUM FRAMING SPACING SHALL BE 16 INCHES ON CENTER.
  - FASTENERS ALONG THE EDGE OF SHEAR PANELS SHALL BE PLACED FROM PANEL EDGES NOT LESS THAN 1/4 INCH.





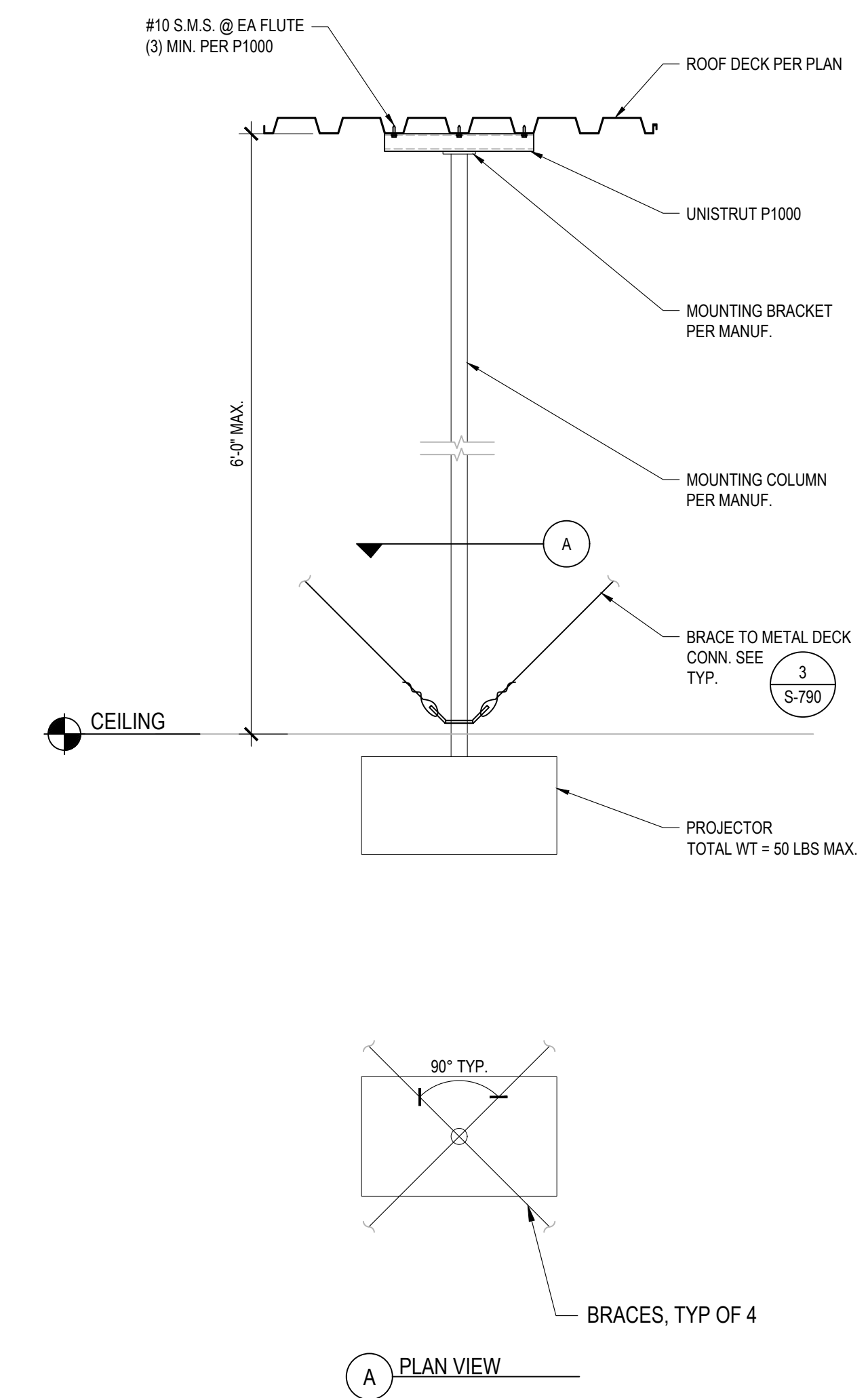








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 P:\C3630 ChabotLas Positas\_CCCS608\_LPC\_Mechanical3\_Dwg\SS791\_EQUIP\_ARCH\AS-791.dwg - marquis



**2** PROJECTOR SUPPORT  
 SCALE: 1 1/2"=1'-0"

JOB - ENSCALE 8  
 S-65-BEAM-ORGG-CONN-META.DWG

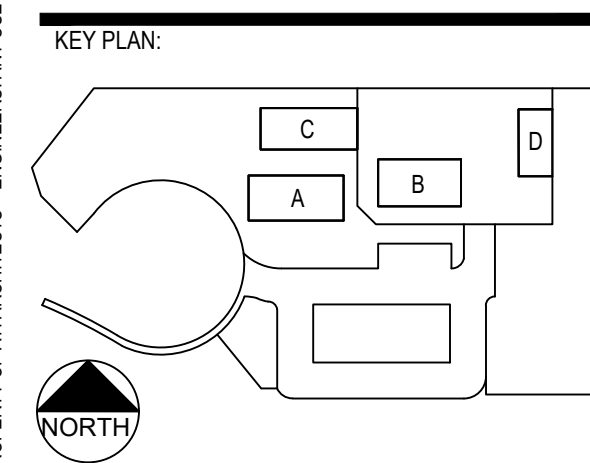
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 APP: 01-119056 INC:  
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ITEM:	REVISION / ISSUE:	DATE:



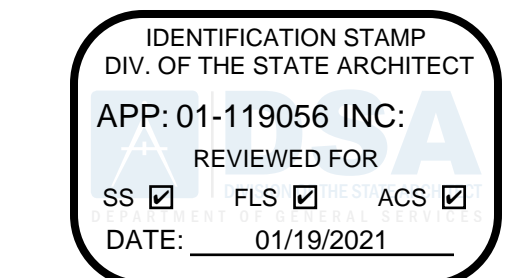
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 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**EQUIPMENT  
 SUPPORT  
 DETAILS**

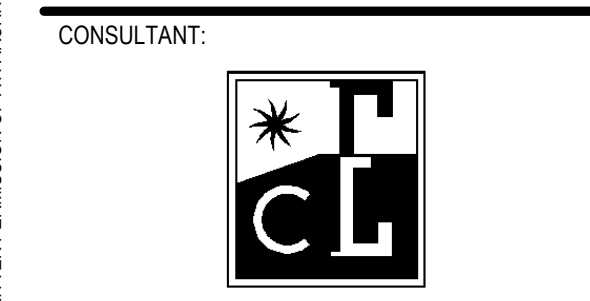
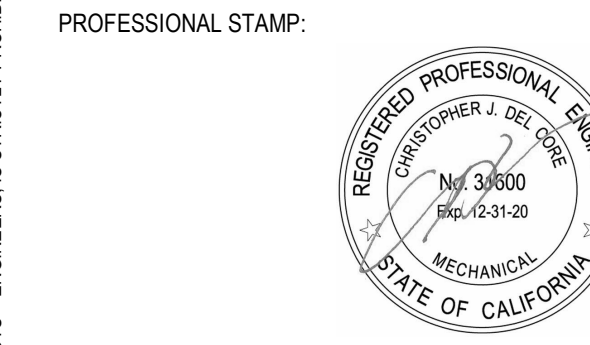
DRAWN BY: marquis CHECKED BY:  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**S-791**

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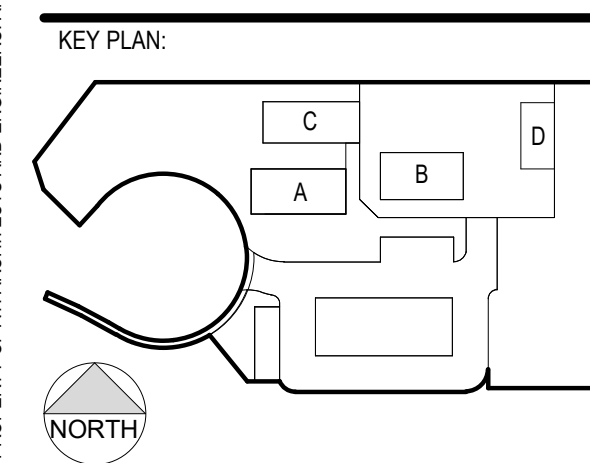


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444 S. Flower St #1200 Los Angeles, CA 90071 - T 714 338 1600



3274 Yuba Lane - Napa, CA 94558 ph: 707-252-9177 fax: 707-252-9473

Table with columns: ITEM, REVISION / ISSUE, DATE. Multiple empty rows for tracking changes.



CLPCCD - LAS POSITAS COMMUNITY COLLEGE  
**AGRICULTURE SCIENCE - HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**MECHANICAL SCHEDULES & LEGENDS**

DRAWN BY: CY CHECKED BY: CD  
DATE: 01/14/2021 PROJECT NO: C9908  
SHEET NO:

**M101**

**HVAC LEGEND**  
Table with columns: SYMBOL, ABBREVIATION, DESCRIPTION. Lists symbols for equipment types, ductwork, and air terminals.

**BLDG 'MECHANICAL' SHEET LIST**  
Table listing sheet numbers and titles: M101 MECHANICAL SCHEDULES & LEGENDS, MA121 FIRST FLOOR MECHANICAL PLAN, MA122 FIRST FLOOR MECHANICAL PIPING PLAN, MA221 ROOFTOP MECHANICAL PLAN, M301 MECHANICAL DETAILS, M302 MECHANICAL DETAILS, M303 MECHANICAL DETAILS, M401 MECHANICAL CONTROLS, M402 MECHANICAL CONTROLS AND PIPING.

**Mechanical Ventilation 120.1A - T24 MINIMUM**  
Table with columns: ROOM #, ROOM NAME, Area, OCCUPANCY, Area Rate (Ra), 120.1A OSA, DESIGN OSA.

**Mechanical Ventilation ASHRAE 62.1**  
Table with columns: ROOM #, ROOM NAME, Area, OCCUPANCY, Area Outdoor Air Rate (Ra), People Outdoor Air Rate (Rp), Default Occupant Density, Default Occupancy, Design Occupancy, Vbz, EZ, Voz, DESIGN OSA.

**LIST OF APPLICABLE CODES AND STANDARDS:**  
TITLE 24, PART 2: 2019 CALIFORNIA BUILDING CODE (VOLUMES 1 & 2)  
TITLE 24, PART 3: 2019 CALIFORNIA ELECTRICAL CODE  
TITLE 24, PART 4: 2019 CALIFORNIA MECHANICAL CODE  
TITLE 24, PART 5: 2019 CALIFORNIA PLUMBING CODE  
TITLE 24, PART 6: 2019 CALIFORNIA ENERGY CODE  
TITLE 24, PART 9: 2019 CALIFORNIA FIRE CODE  
TITLE 24, PART 12: 2019 CALIFORNIA REFERENCED STANDARDS CODE  
TITLE 24, PART 1: 2019 CALIFORNIA ADMIN CODE  
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

**MEP COMPONENT ANCHORAGE NOTE:**  
ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26, AND 30.  
1. ALL PERMANENT EQUIPMENT AND COMPONENTS.  
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. PERMANENTLY ATTACHED SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR DUPLEX RECEPTACLES.  
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4'-0" OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. 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 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTABLE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

**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, 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 SYSTEMS ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PRE APPROVED INSTALLATION GUIDE (e.g. OSHPD OPM FOR 2013 CBC OR LATER), 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 SYSTEM. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL/PLUMBING/DUCTS  
 M  PP  D  -OPTION 1:  DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.  
 M  PP  D  -OPTION 2:  SHALL COMPLY WITH THE OSHPD PRE-APPROVAL (OPM #) # 0043-13

**AIR TERMINAL SCHEDULE** MANUFACTURER:TITUS (EXCEPT AS NOTED)  
Table with columns: SYMBOL, DESCRIPTION, NOTES. Lists various air terminal types like ceiling diffusers, wall supply diffusers, ceiling returns, duct supply grilles, and door louvers.

NOTES: 1. ADAPTER NEEDED FOR TRANSITION FROM SQUARE NECK TO ROUND DUCT.  
2. SIZE (NECK/FACE) TYPE FACE SIZE FOR T-BAR CEILING ONLY  
CFM (NO. OF THROW)

**SPLIT SYSTEM INDOOR UNIT**  
Table with columns: MARK, MFR, MODEL, AIRFLOW, NOMINAL CAPACITY COOLING (BTU/HR), NOMINAL CAPACITY HEATING (BTU/HR), ELECTRICAL DATA (V-Ø-HZ, MCA, MOCOP), FILTER, WEIGHT, SERVICE, MOUNTING DETAIL, REMARKS.

**HEAT PUMP UNIT SCHEDULE**  
Table with columns: MARK, MFR, MODEL NO., UNIT CAPACITIES (MBH) HEATING, COOLING, EER, ELECTRICAL DATA (V-Ø-HZ, MCA, MOCOP), WEIGHT, SERVICE, MOUNTING DETAIL, REMARKS.

**CONDENSING UNIT SCHEDULE**  
Table with columns: MARK, MFR, MODEL NO., UNIT CAPACITIES (MBH) HEATING, COOLING, EER, ELECTRICAL DATA (V-Ø-HZ, MCA, MOCOP), WEIGHT, SERVICE, MOUNTING DETAIL, REMARKS.

**BRANCH CONTROLLER SCHEDULE**  
Table with columns: MARK, MFR, MODEL NUMBER, ELECTRICAL DATA (V-Ø-HZ, MCA, MOCOP), WEIGHT, MOUNTING DETAIL, REMARKS.

**ENERGY RECOVERY VENTILATOR SCHEDULE**  
Table with columns: MARK, MFR, MODEL NO., AIRFLOW, FILTERS, ELECTRICAL DATA (V-Ø-HZ, MCA, MOCOP), WEIGHT, MOUNTING DETAIL, REMARKS.

**SUPPLY FAN SCHEDULE**  
Table with columns: MARK, MFR, MODEL NO., AIRFLOW, V-Ø-HZ, BHP, WEIGHT, MOUNTING DETAIL, REMARKS.

**EXHAUST FAN SCHEDULE**  
Table with columns: MARK, MFR, MODEL NO., AIRFLOW, FAN RPM, INLET SONES, ELECTRICAL DATA (WATTS, V-Ø-Hz), WEIGHT, SERVICE, REMARKS.

**GRAVITY RELIEF SCHEDULE**  
Table with columns: MARK, MFR, MODEL NO., AIRFLOW, WEIGHT, MOUNTING DETAIL.

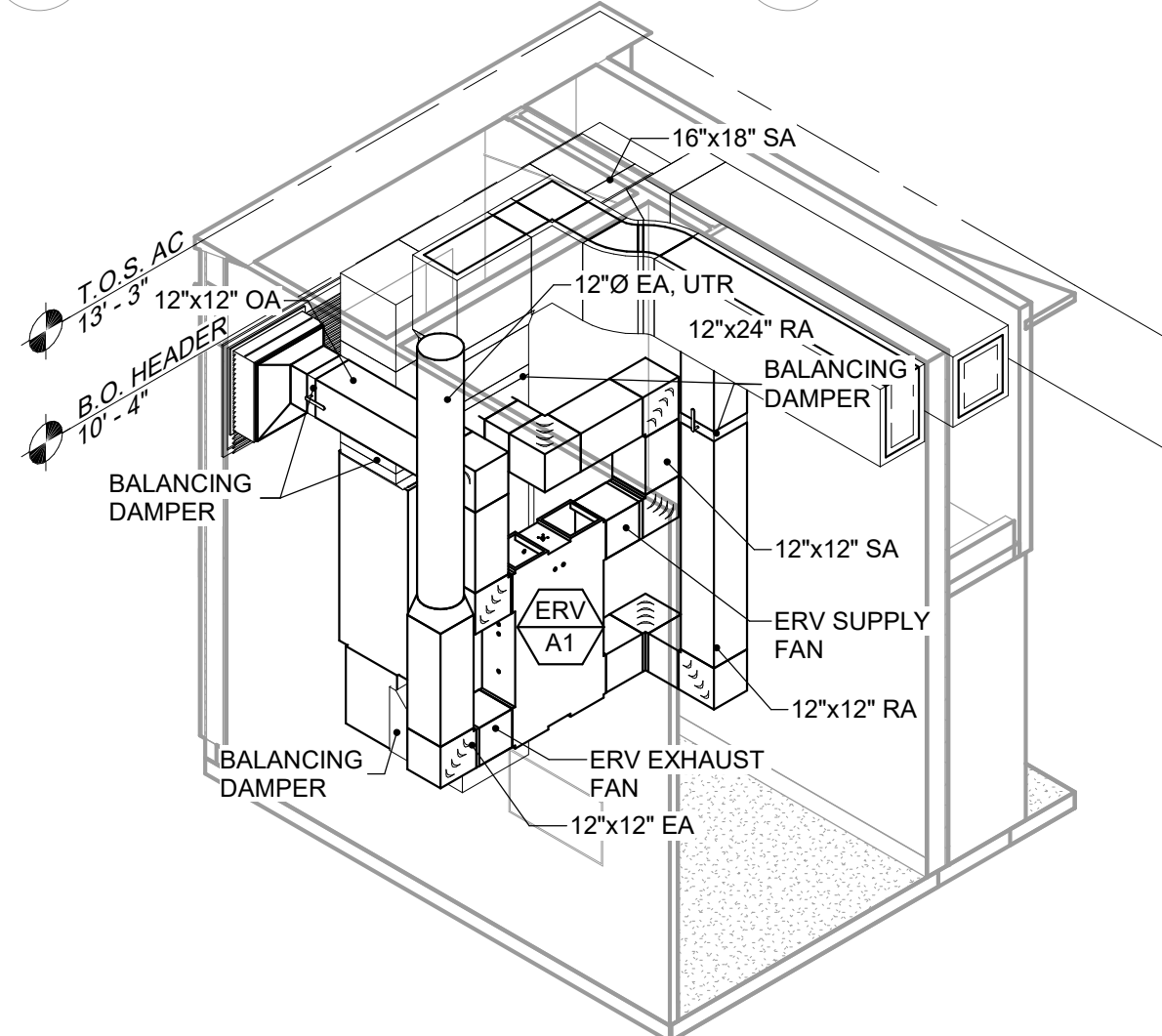
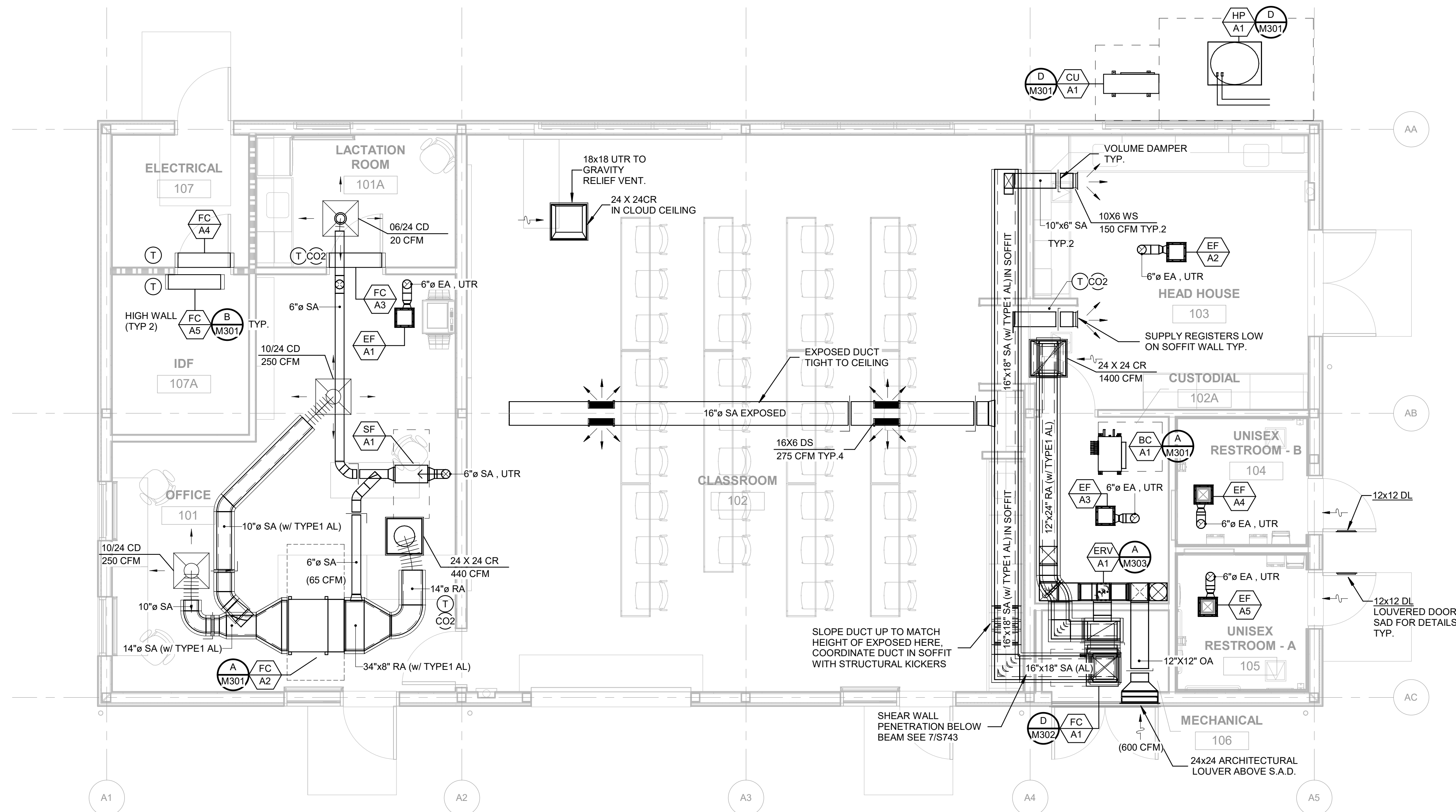
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# 1 FIRST FLOOR MECHANICAL PLAN

1/4" = 1'-0"



2 ERV - ISO VIEW

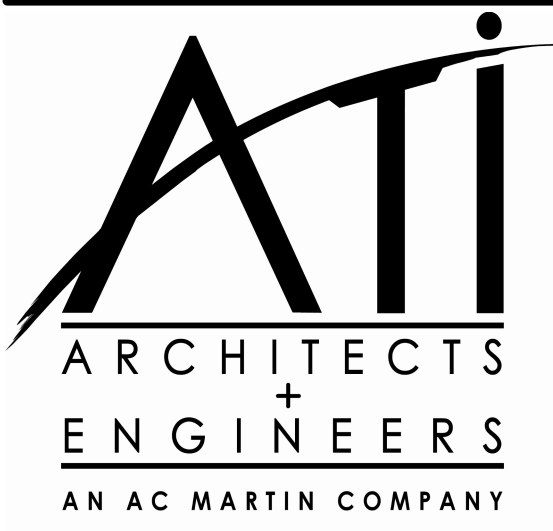
## GENERAL NOTES

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- CONTRACTOR SHALL COORDINATE ALL GRILLE LOCATIONS AND CEILING TYPES PRIOR TO ORDERING GRILLES. SEE ARCHITECTURAL CEILING PLANS AND ELECTRICAL LIGHTING PLANS.
- REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOW.
- IDENTIFY AND LABEL ALL PIPING CROSSING THROUGH WALL(S), WITHIN 3 FEET OF THE ENTRY AND ON BOTH SIDES OF THE WALL. SEE SPECIFICATIONS FOR LABELING DETAILS.

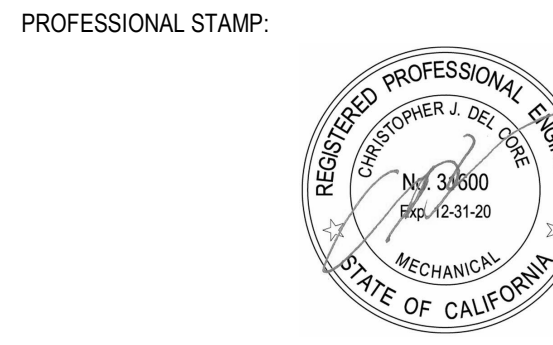
## WALL LEGENDS

- METAL FRAMING - NON RATED, INSULATED
- 1 HR RATED WALL

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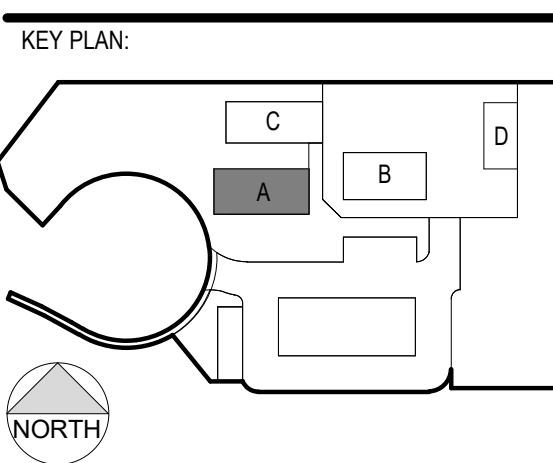


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CONSULTANT:  
  
COSTA ENGINEERS INC.  
3274 Villa Lane - Suite, CA 94518 ph: 707-252-9177 fax: 707-252-9473

ITEM	REVISION / ISSUE	DATE



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LIVERMORE, CA 94551

## FIRST FLOOR MECHANICAL PLAN

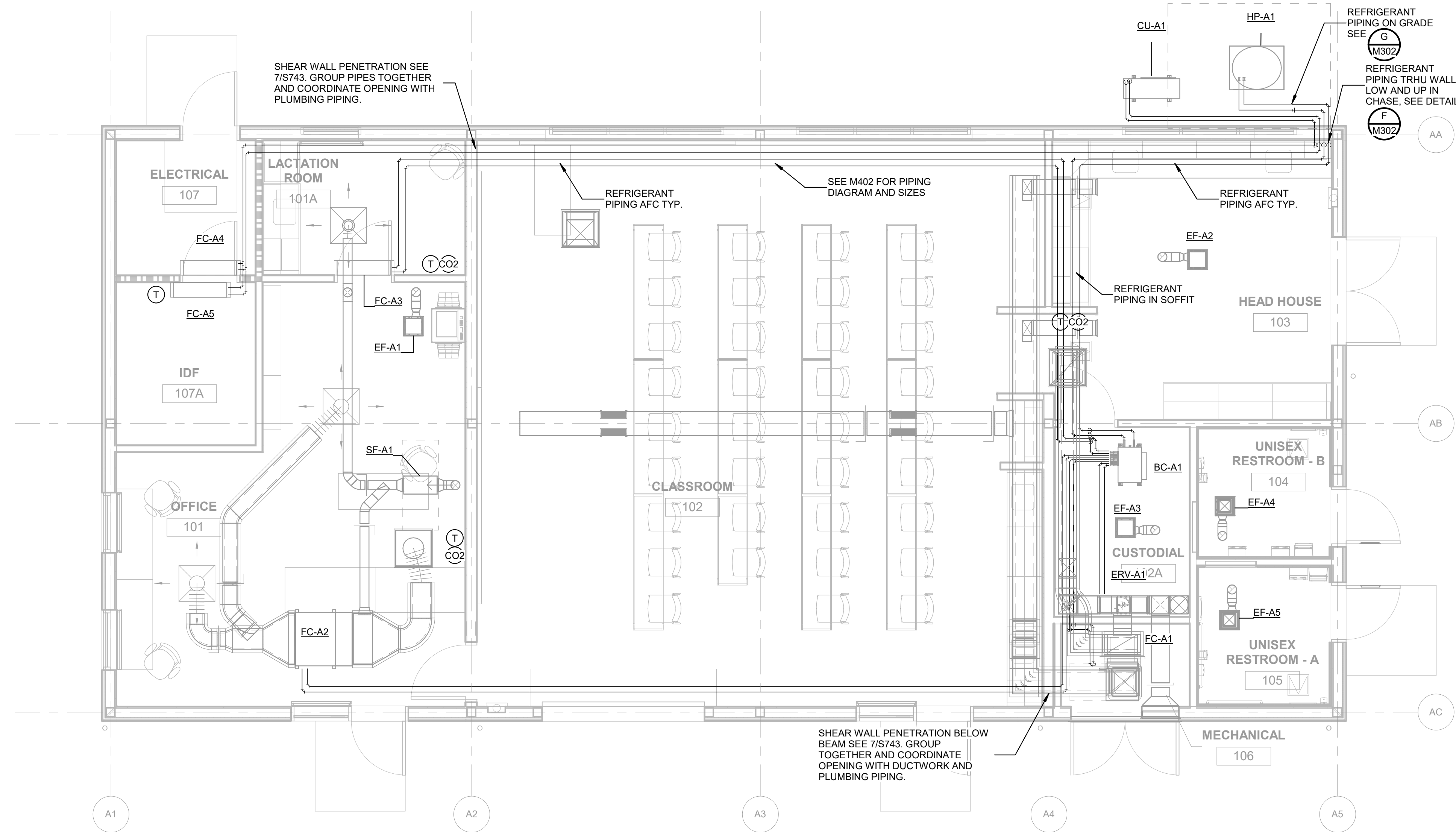
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SHEET NO:

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**WALL LEGENDS**

- [Symbol] METAL FRAMING - NON RATED, INSULATED
- [Symbol] 1 HR RATED WALL

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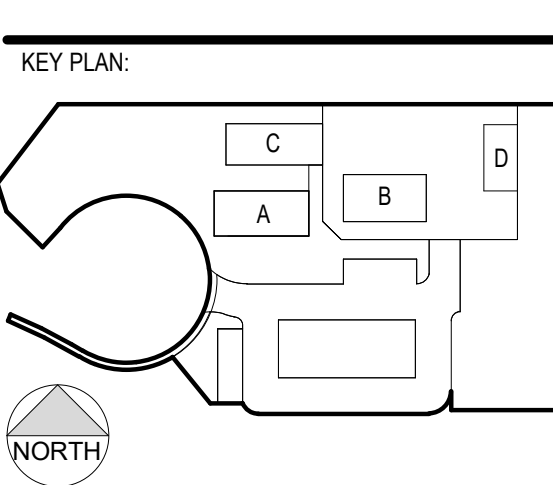
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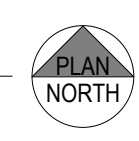


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LIVERMORE, CA 94551

**FIRST FLOOR  
MECHANICAL  
PIPING PLAN**

DRAWN BY: CY CHECKED BY: CDC  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

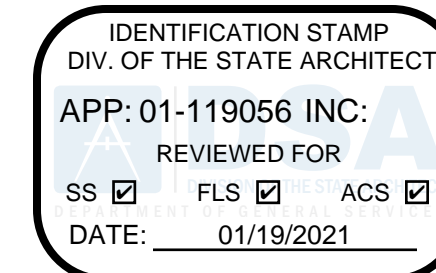
**MA122**



# GENERAL NOTES

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4. REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOW.
5. IDENTIFY AND LABEL ALL PIPING CROSSING THROUGH WALL(S), WITHIN 3 FEET OF THE ENTRY AND ON BOTH SIDES OF THE WALL. SEE SPECIFICATIONS FOR LABELING DETAILS.

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CONSULTANT:

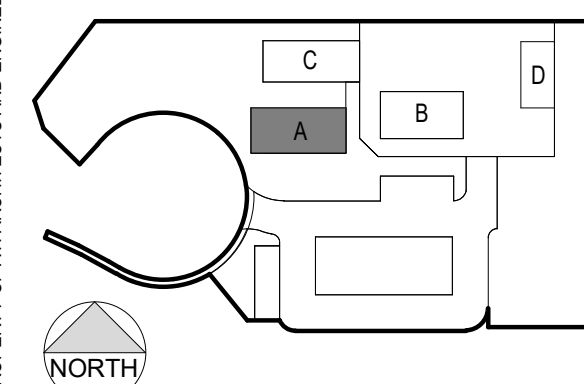


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 3274 Yuba Lane - Suite 200, CA 94518 ph: 707-252-9171 fax: 707-252-0473

ITEM: REVISION / ISSUE: DATE:

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KEY PLAN:

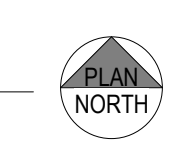
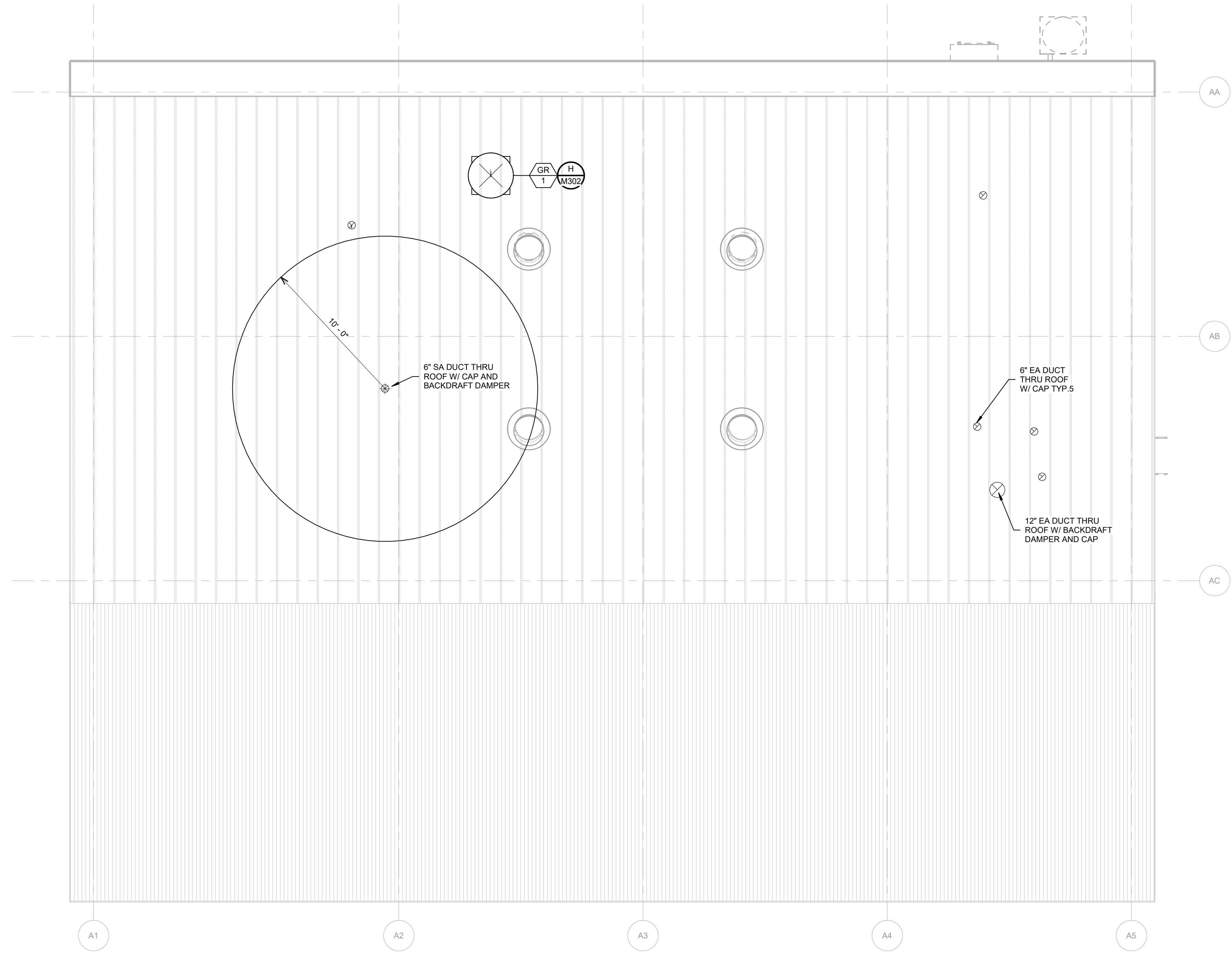


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 LIVERMORE, CA 94551

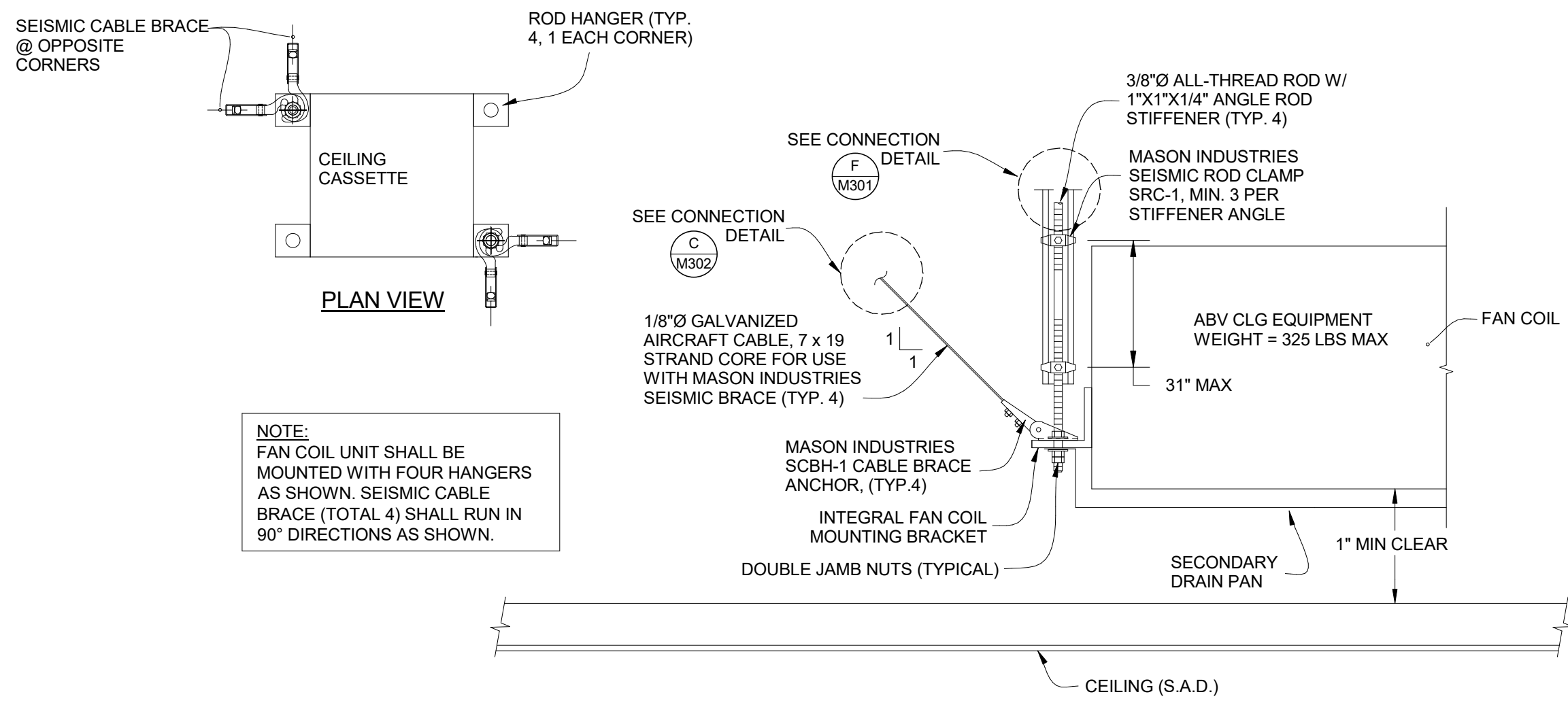
## ROOFTOP MECHANICAL PLAN

DRAWN BY: CY CHECKED BY: CD  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

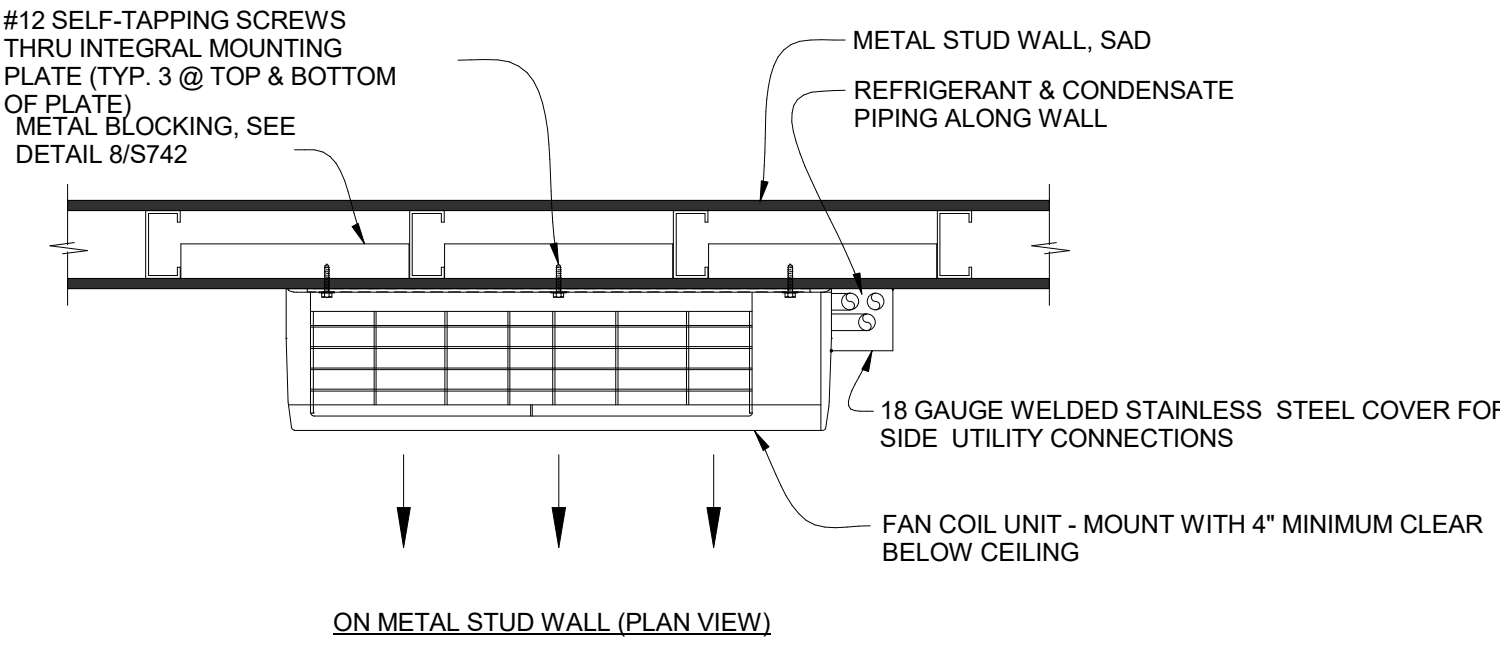
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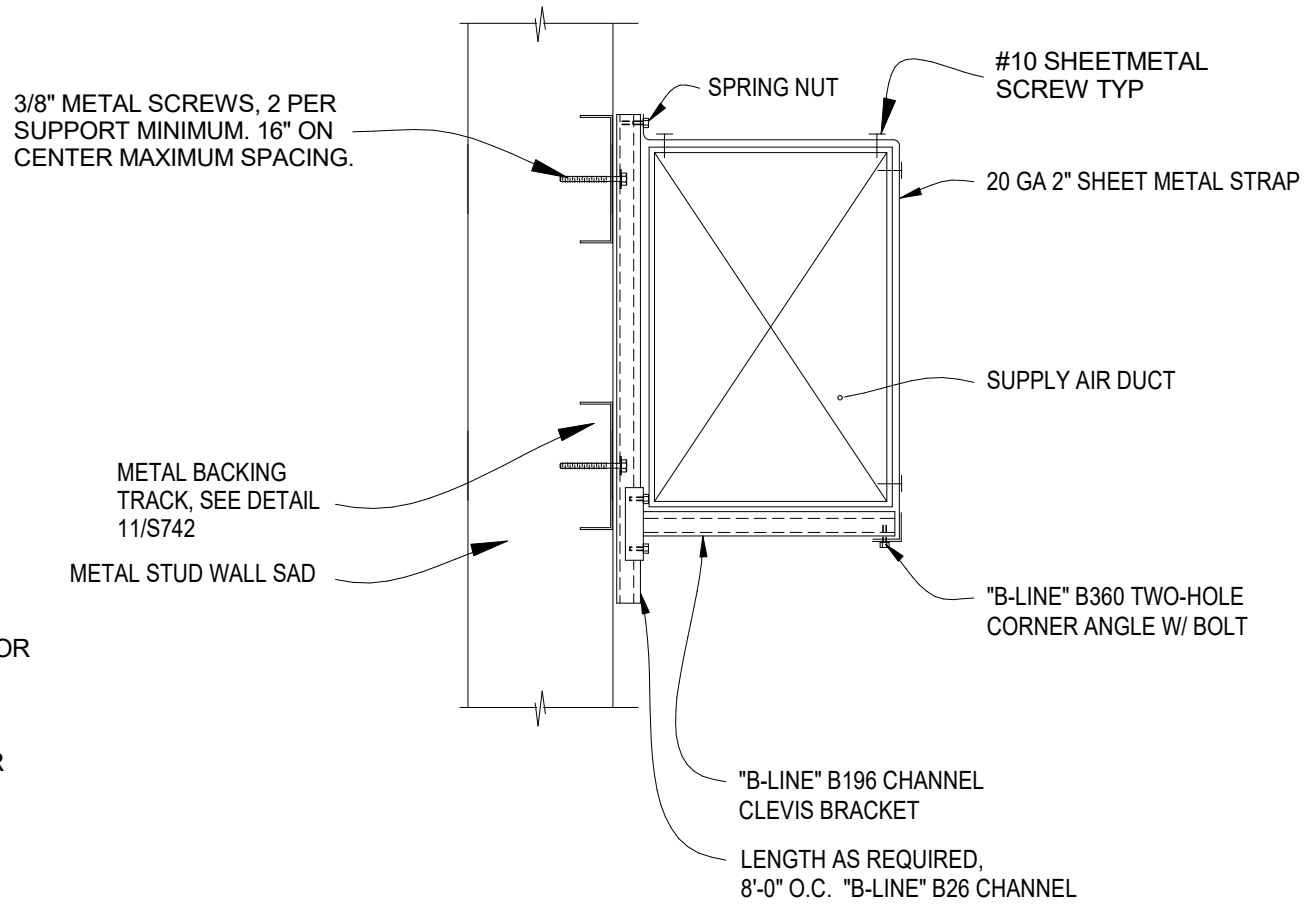
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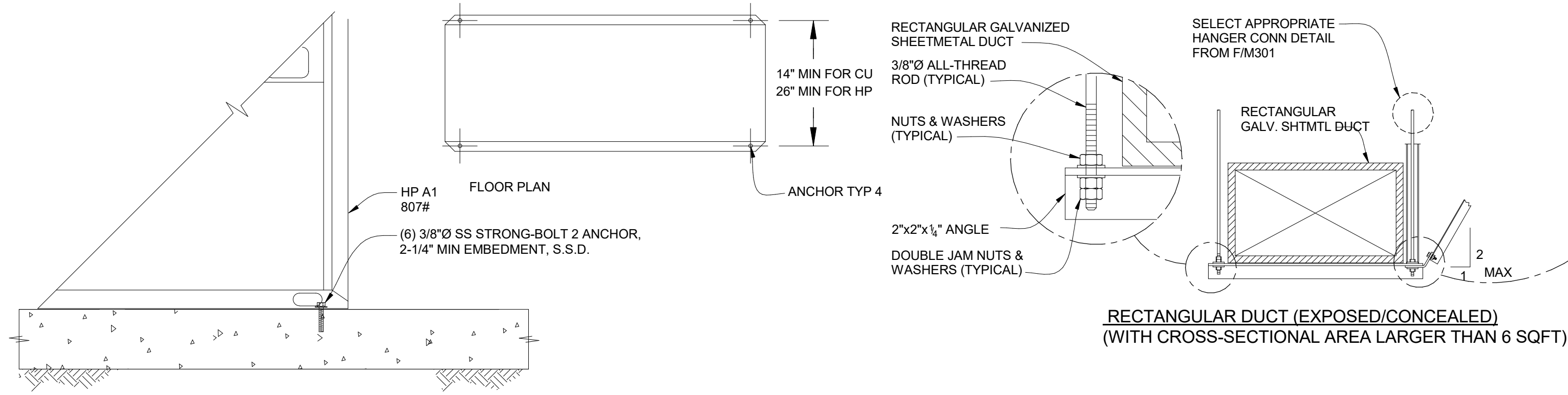
**A** FC/BC MOUNTING DETAIL  
SCALE: NONE



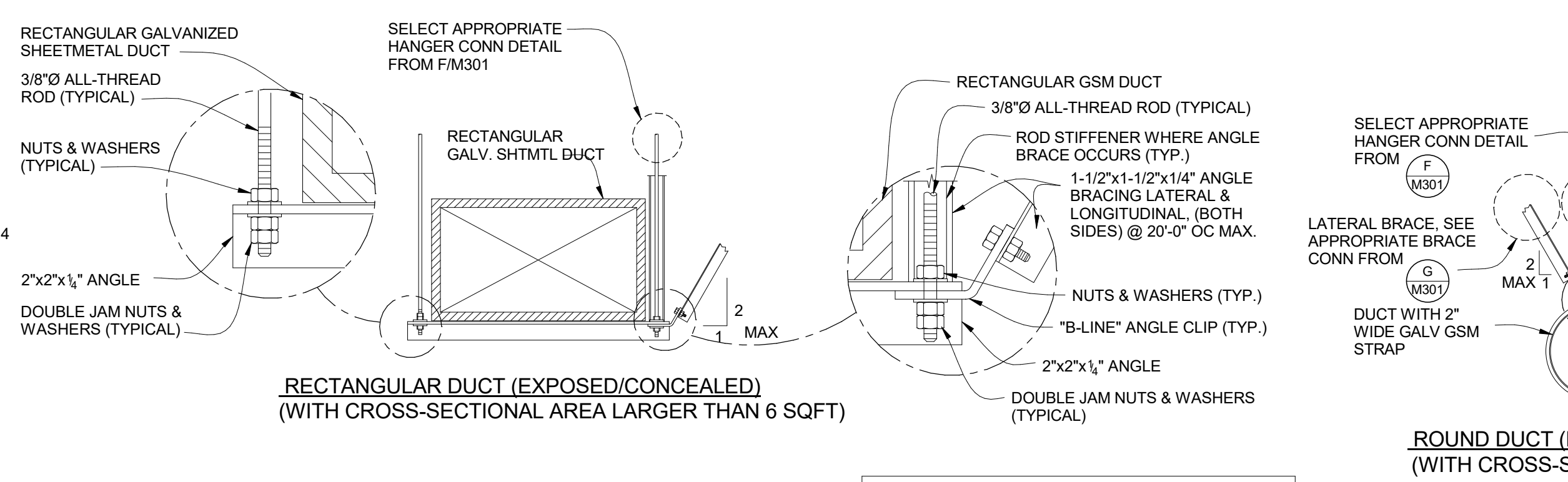
**B** WALL MOUNTED FAN COIL ON WOOD STUD  
SCALE: NONE



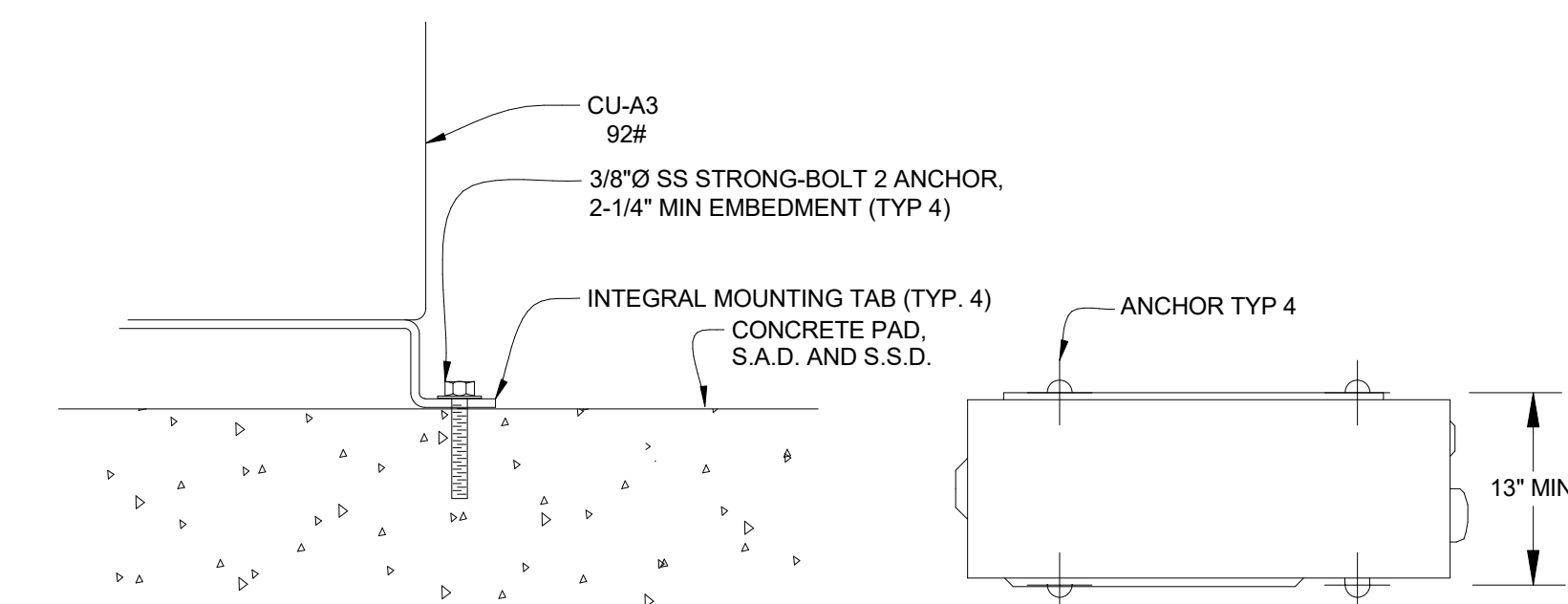
**C** DUCT ALONG WALL DETAIL  
SCALE: NONE



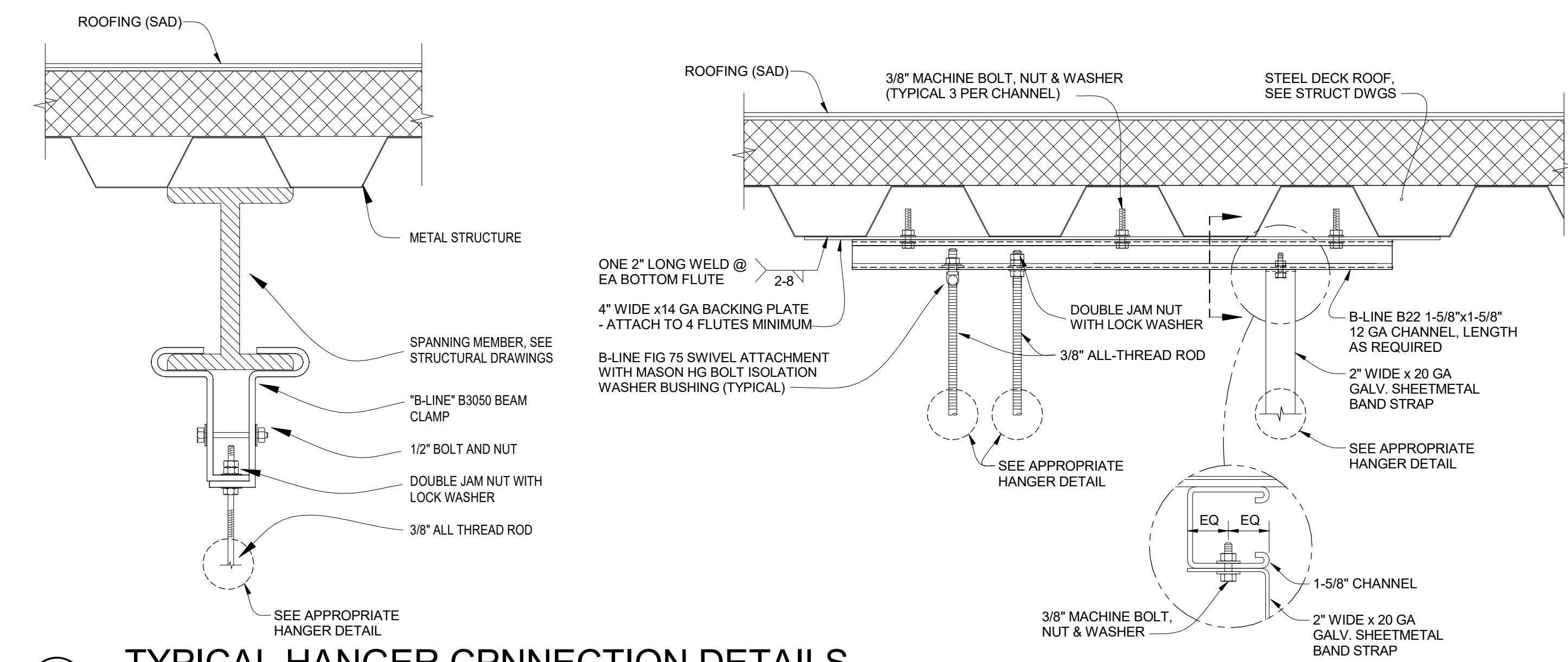
**D** ON GRADE UNIT MOUNTING DETAIL  
SCALE: NTS



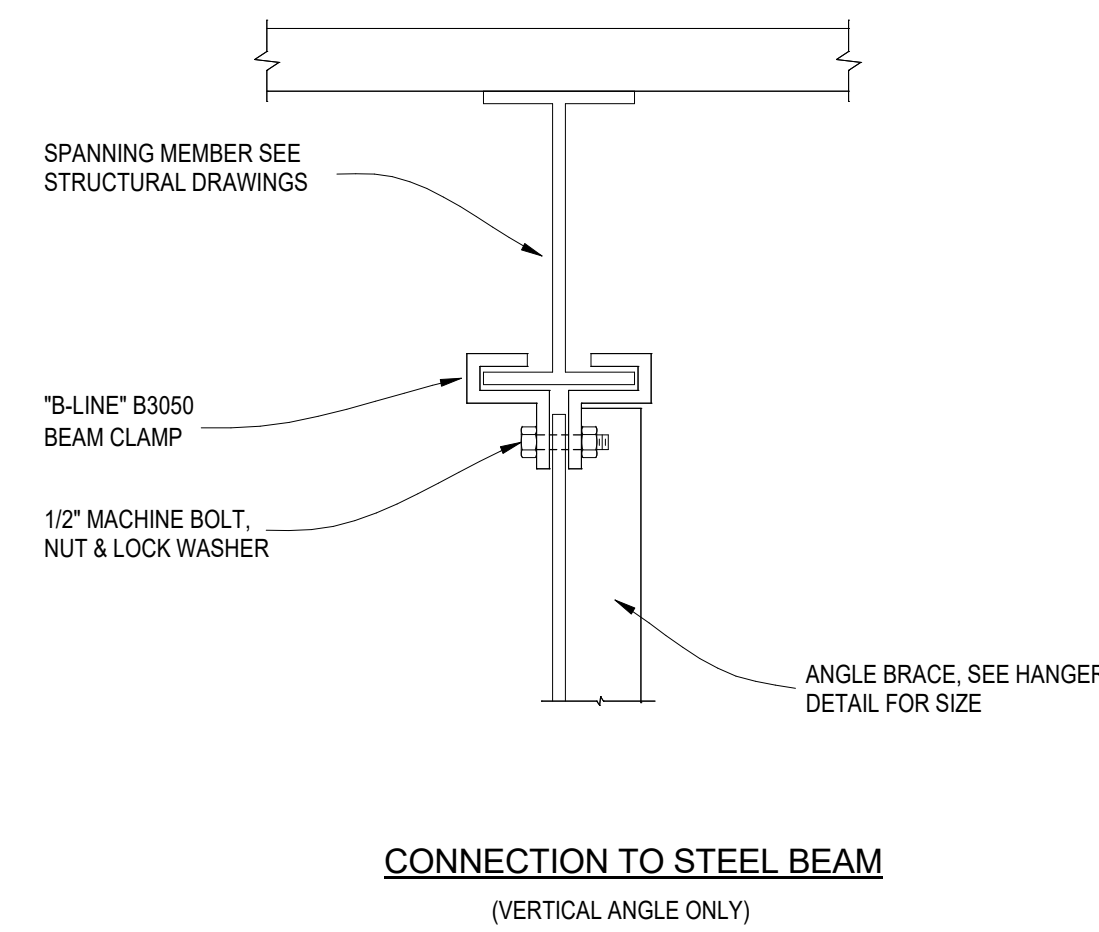
**E** TYPICAL EXPOSED DUCT HANGER DETAIL  
SCALE: NONE



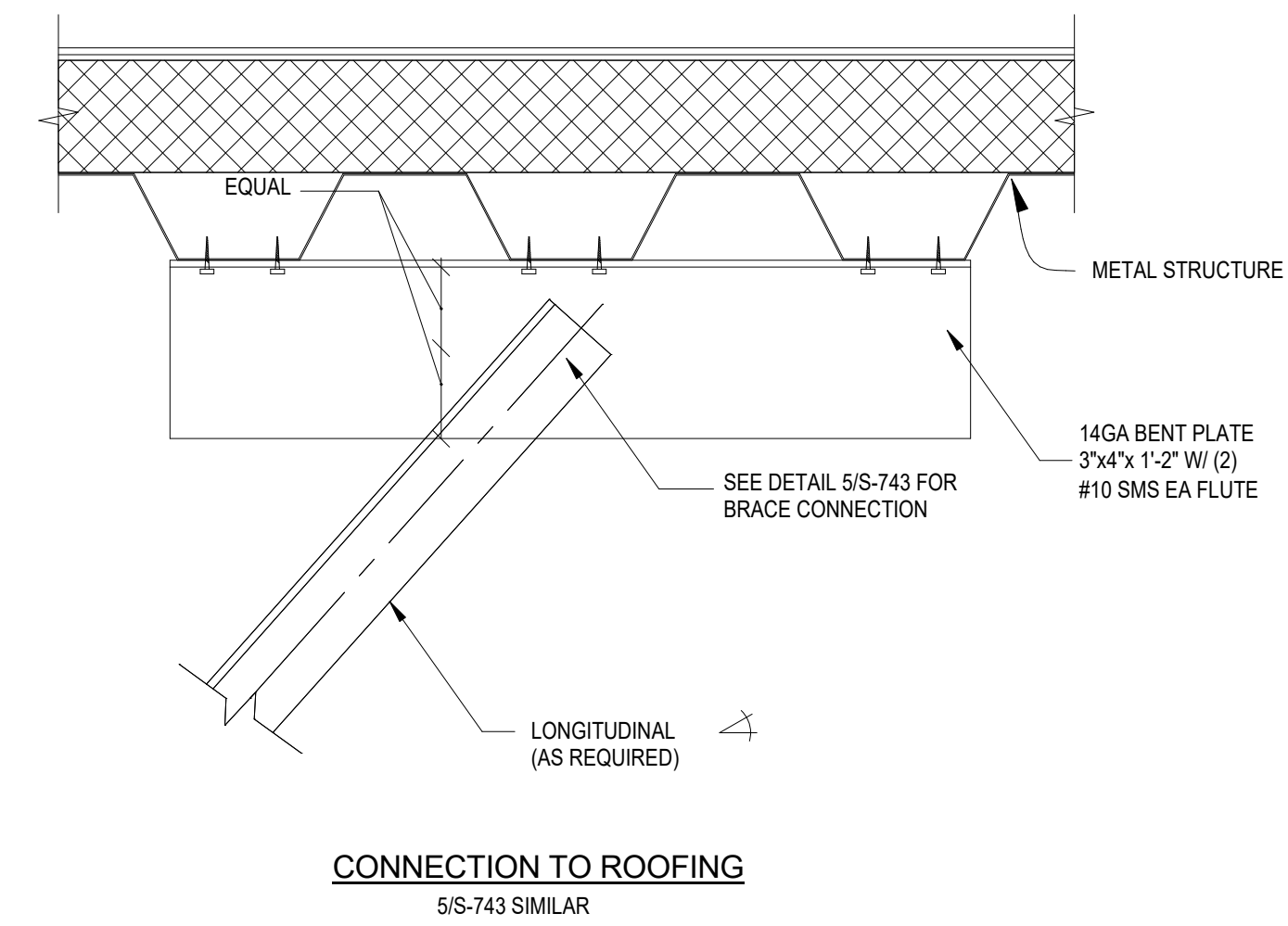
**M-301** ON GRADE UNIT MOUNTING DETAIL  
SCALE: NTS



**F** TYPICAL HANGER CONNECTION DETAILS  
SCALE: NONE



**G** TYPICAL HANGER CONNECTION DETAILS  
SCALE: NONE



**H** CONNECTION TO ROOFING  
5/S-743 SIMILAR

- DUCT SUPPORT NOTES:**
- A. ALL STRAPS, RODS, TRAPEZE ANGLES AND TRAPEZE CHANNELS SHALL BE SIZED AND INSTALLED AS DETAILED ON THE DRAWINGS OR IN ACCORDANCE WITH OPM-0043-13
  - B. ALL BOLTS, NUTS, SCREWS AND OTHER FASTENING DEVICES SHALL BE SIZED AND INSTALLED AS DETAILED ON THE DRAWINGS OR IN ACCORDANCE WITH OPM-0043-13.
  - C. WIRE, USED IN LIEU OF STRAPS AND RODS, IS NOT ALLOWED.
  - D. WHERE APPLICABLE, INSTALL INSULATION AFTER INSTALLING DUCT HANGERS.
  - E. LATERAL BRACING REQUIRED ON DUCTS WITH CROSS-SECTIONAL AREA LARGER THAN 6 SQFT
  - F. SUPPORTS SHALL BE PLACED AT 8'-0" ON CENTER (MAX) AND AT ALL CHANGES IN DIRECTION.
  - G. DUCTWORK SUPPORTED WITHIN 12" OF ATTACHMENT POINT ON STRUCTURE NEED NOT BE LATERALLY BRACED

BRACING NOT REQUIRED FOR DUCTS < 12" FROM STRUCTURE TO SUPPORT PER CBC SECTION 1616A. 1.25

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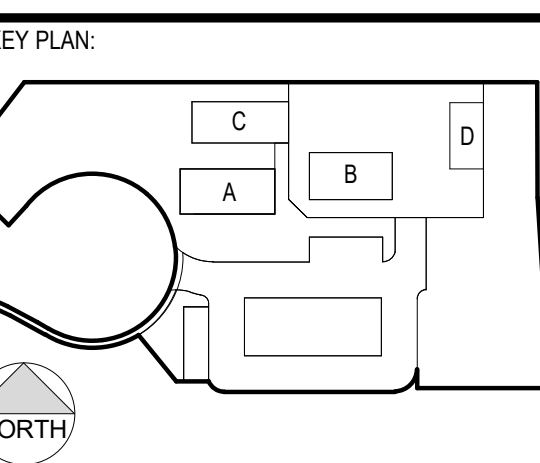
4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
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CONSULTANT:

**COSTA ENGINEERS INC.**  
3274 Villa Lane - Suite, CA 94538 ph: 707-253-9177 fax: 707-253-0473

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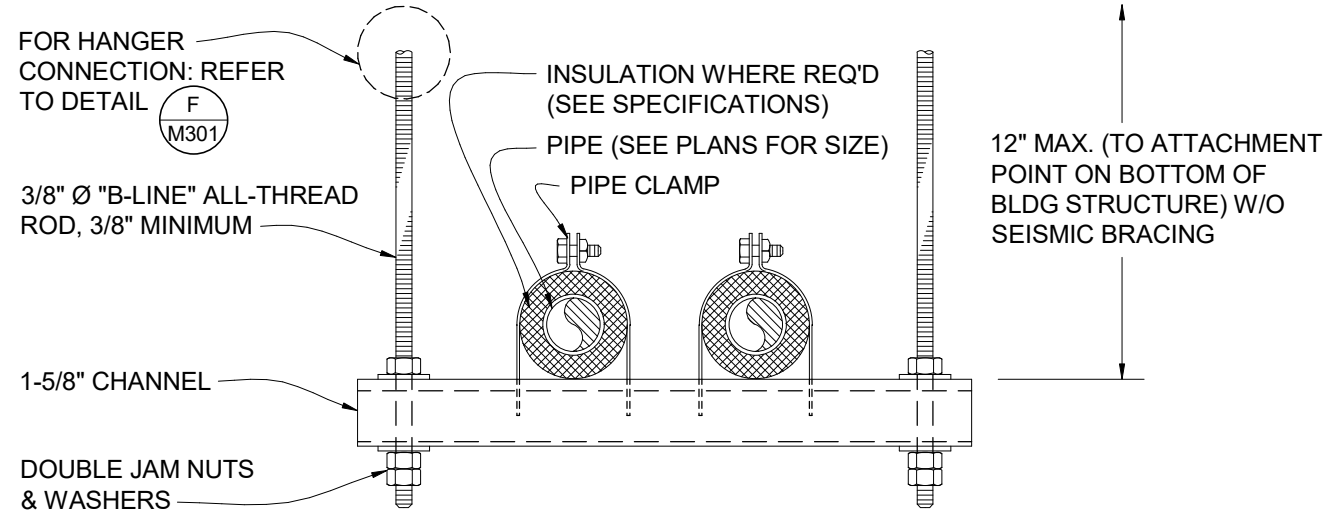
**MECHANICAL DETAILS**

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DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**M301**

GENERAL NOTES:

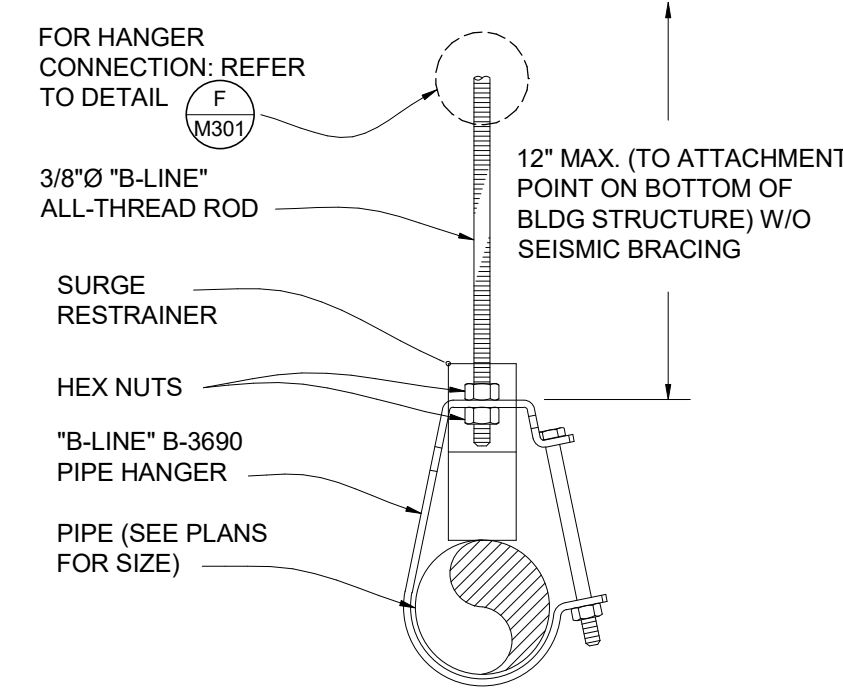
1. RUN PIPING TRAPEZE AS CLOSE AS POSSIBLE TO STRUCTURE.
2. SUPPORT PIPING AT A MAXIMUM OF 8'-0" INTERVALS.
3. SEE PLANS FOR PIPE SIZES.
4. NO BRACING IS REQUIRED ON PIPES WITH LESS THAN 1" I.D.
5. NO BRACING IS REQUIRED ON PIPES LESS THAN 2-1/2" IN DIAMETER, AND WHEN SUPPORTED LESS THAN 12" FROM ATTACHMENT POINT ON BOTTOM OF ROOF STRUCTURE.
6. WHERE PIPES MUST BE SUPPORTED FURTHER THAN 12" MAXIMUM, USE C/P702 FOR PIPE SUPPORT AND BRACING.



**A** TYPICAL PIPE HANGER DETAILS

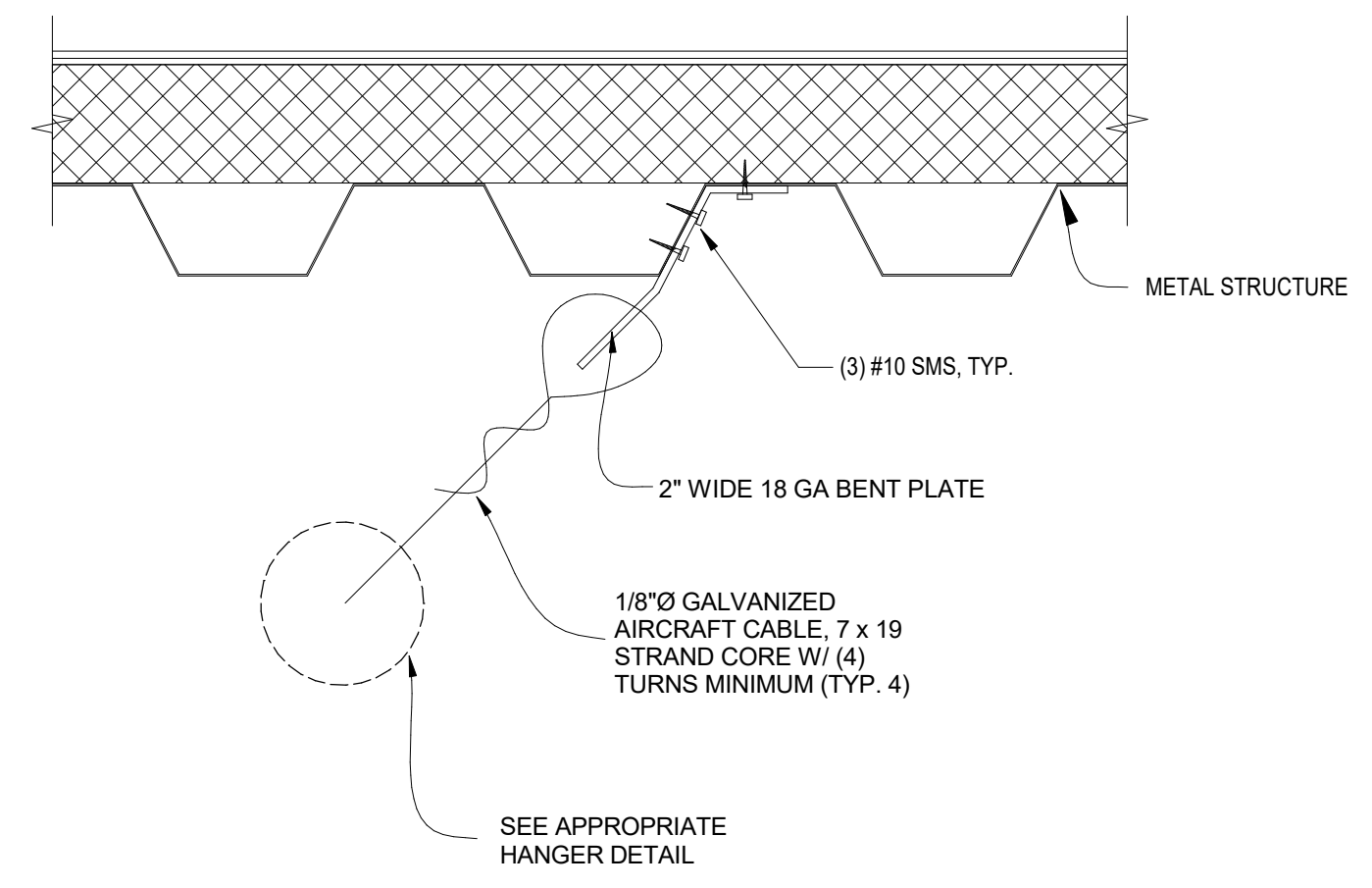
SCALE: NONE

MINIMUM ROD SIZES (INCHES)	PIPE DIAMETER (INCHES)
3/8"	2" & SMALLER PIPE



**B** HORIZONTAL PIPE SUPPORT DETAIL

SCALE: NONE

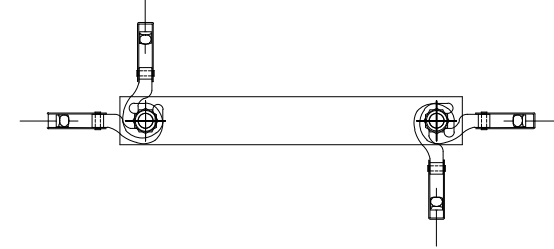


**C** CABLE BRACE CONNECTION DETAIL

SCALE: NONE

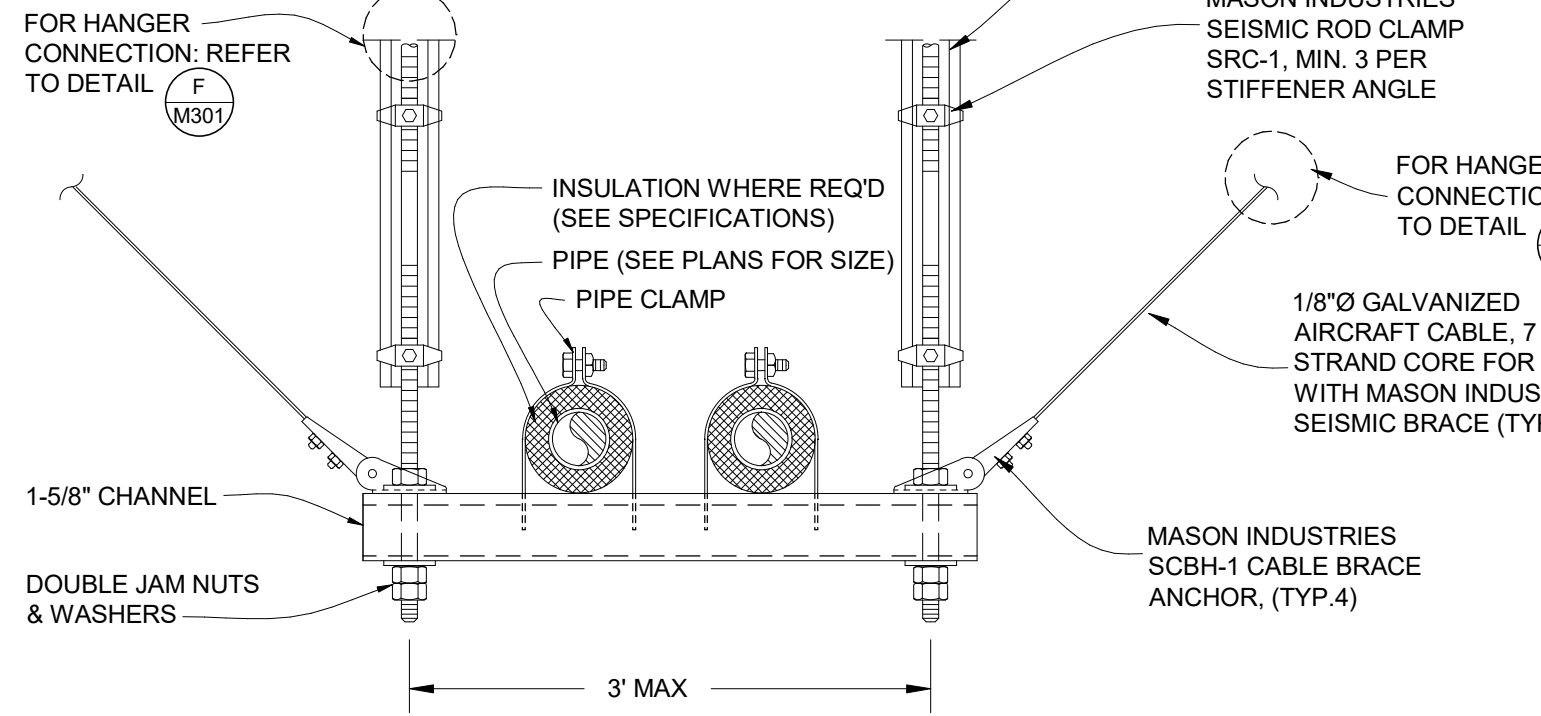
GENERAL NOTES:

1. RUN PIPING TRAPEZE AS CLOSE AS POSSIBLE TO STRUCTURE.
2. THIS DETAIL TO BE USED WHERE PIPING SUPPORT EXCEEDS 12" FROM ATTACHMENT POINT ON STRUCTURE.
3. NO BRACING IS REQUIRED ON PIPES WITH LESS THAN 1" I.D.
4. NO BRACING IS REQUIRED ON PIPES LESS THAN 2-1/2" IN DIAMETER, AND WHEN SUPPORTED LESS THAN 12" FROM ATTACHMENT POINT ON BOTTOM OF ROOF STRUCTURE.



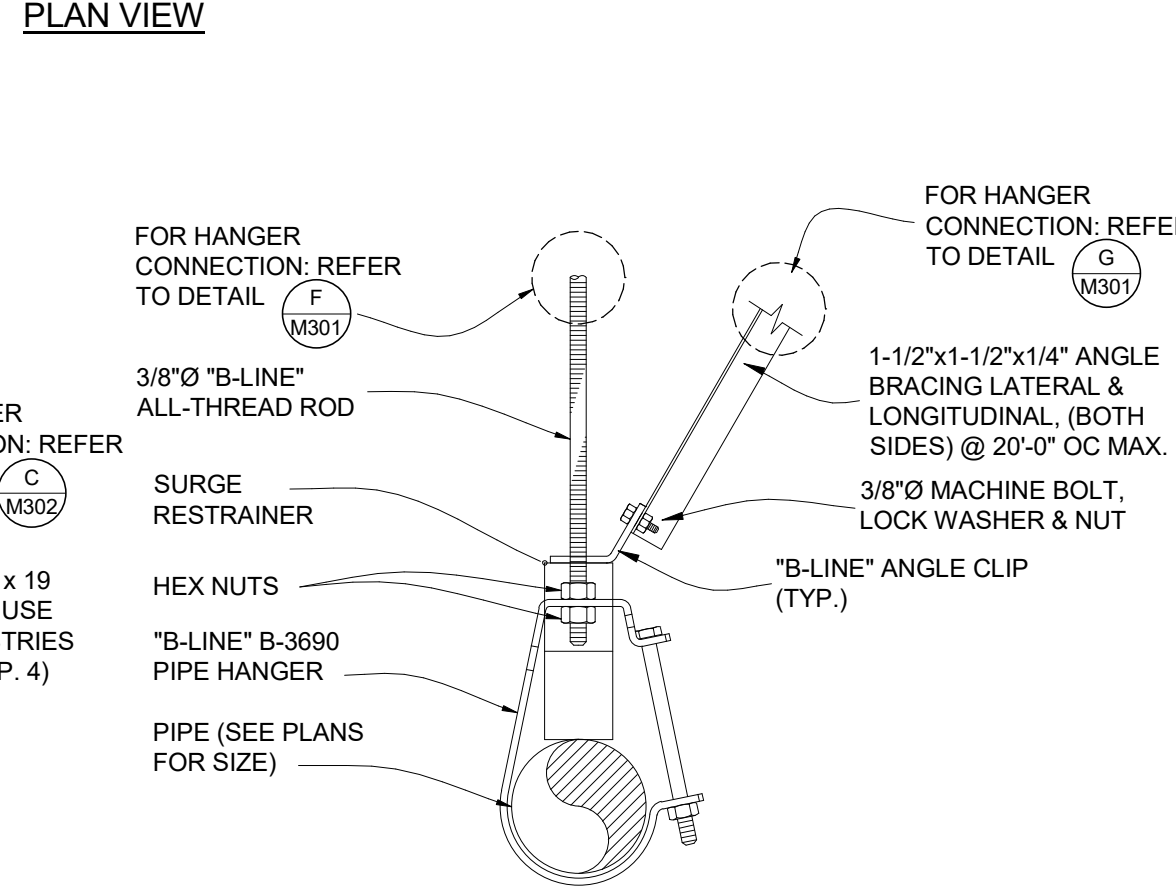
**D** TYPICAL CLOSET HEAT PUMP MOUNTING DETAIL

SCALE: NONE



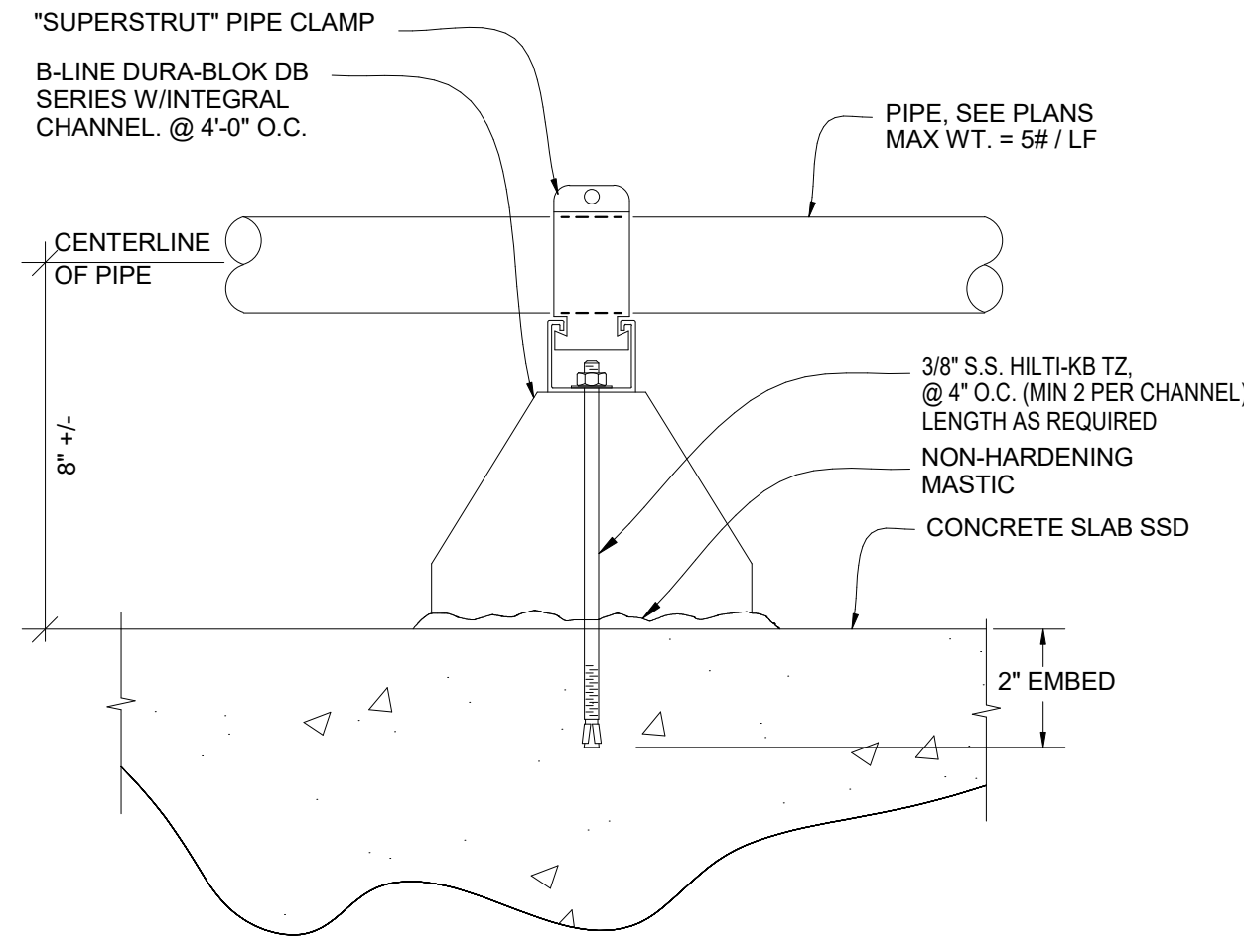
**E** TYPICAL BRACED PIPE HANGER DETAILS

SCALE: NONE



**F** REFRIGERATION PIPE THRU WALL

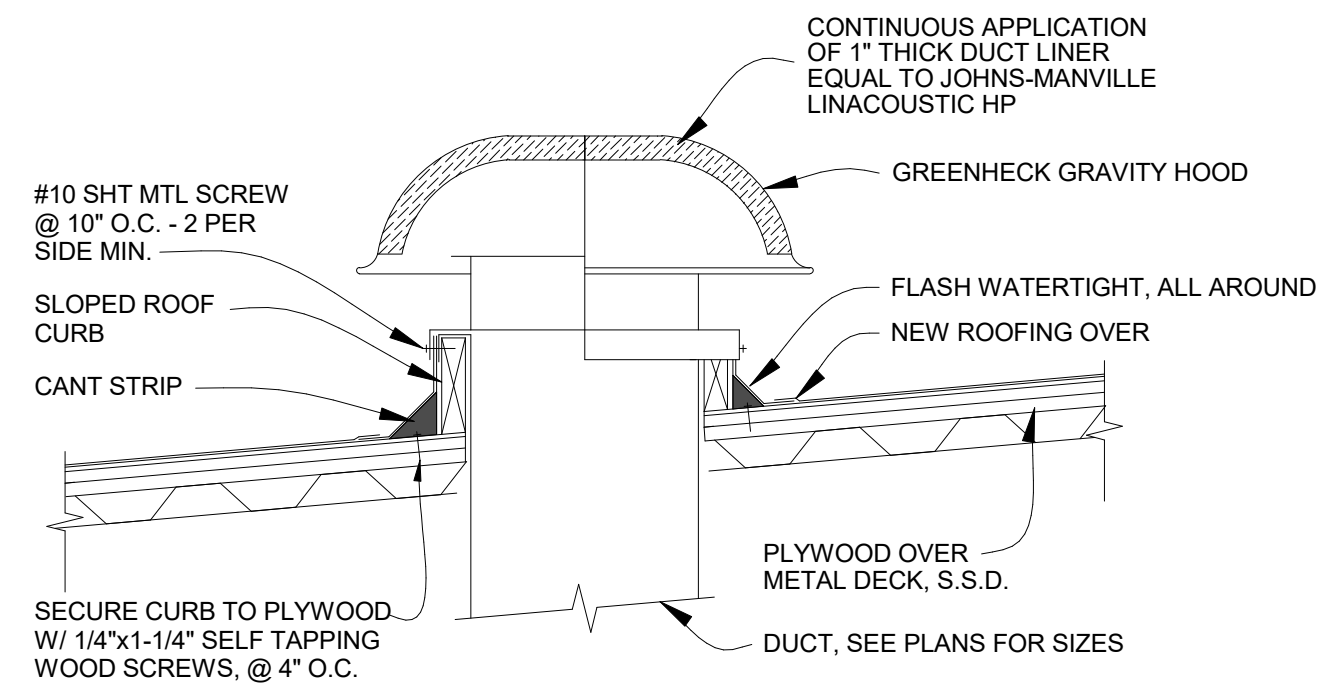
SCALE: NONE



NOTE: SUPPORTS SHALL BE AT 4'-0" ON CENTER & AT ALL CHANGE OF DIRECTION

**G** PIPE SUPPORT ON CONCRETE DETAIL

SCALE: NONE



**H** GRAVITY HOOD MOUNTING DETAIL

SCALE: NONE

C:\Users\charlie\Documents\19955 Las Positas Horticulture RVT19\_021021 3:56:59 PM

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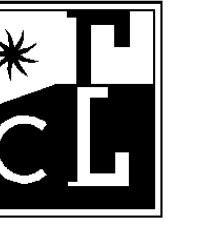
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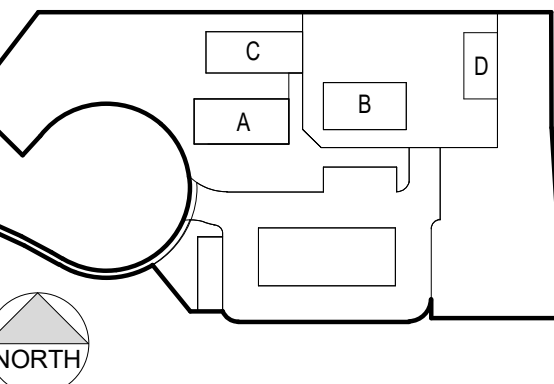
CONSULTANT:



**COSTA ENGINEERS INC.**  
3274 Villa Lane Suite, CA 94516 ph: 707-252-9177 fax: 707-252-9473

ITEM	REVISION / ISSUE	DATE

KEY PLAN:



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3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**MECHANICAL  
DETAILS**

DRAWN BY: CY CHECKED BY: CDC  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**M302**

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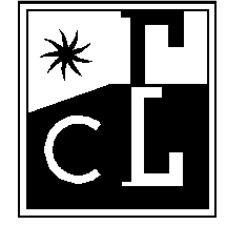


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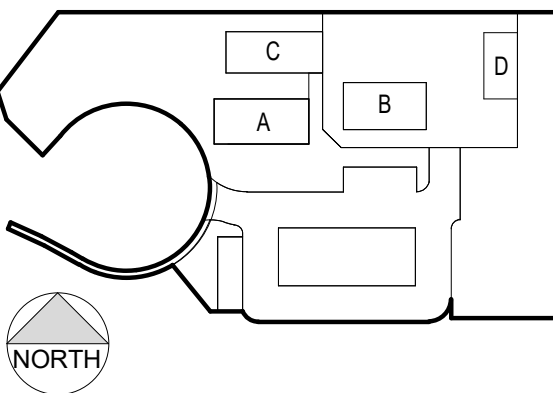
CONSULTANT:



**COSTA ENGINEERS INC.**  
 3274 Vista Lane - Suite 200, CA 94518 ph: 707-252-9177 fax: 707-252-9473

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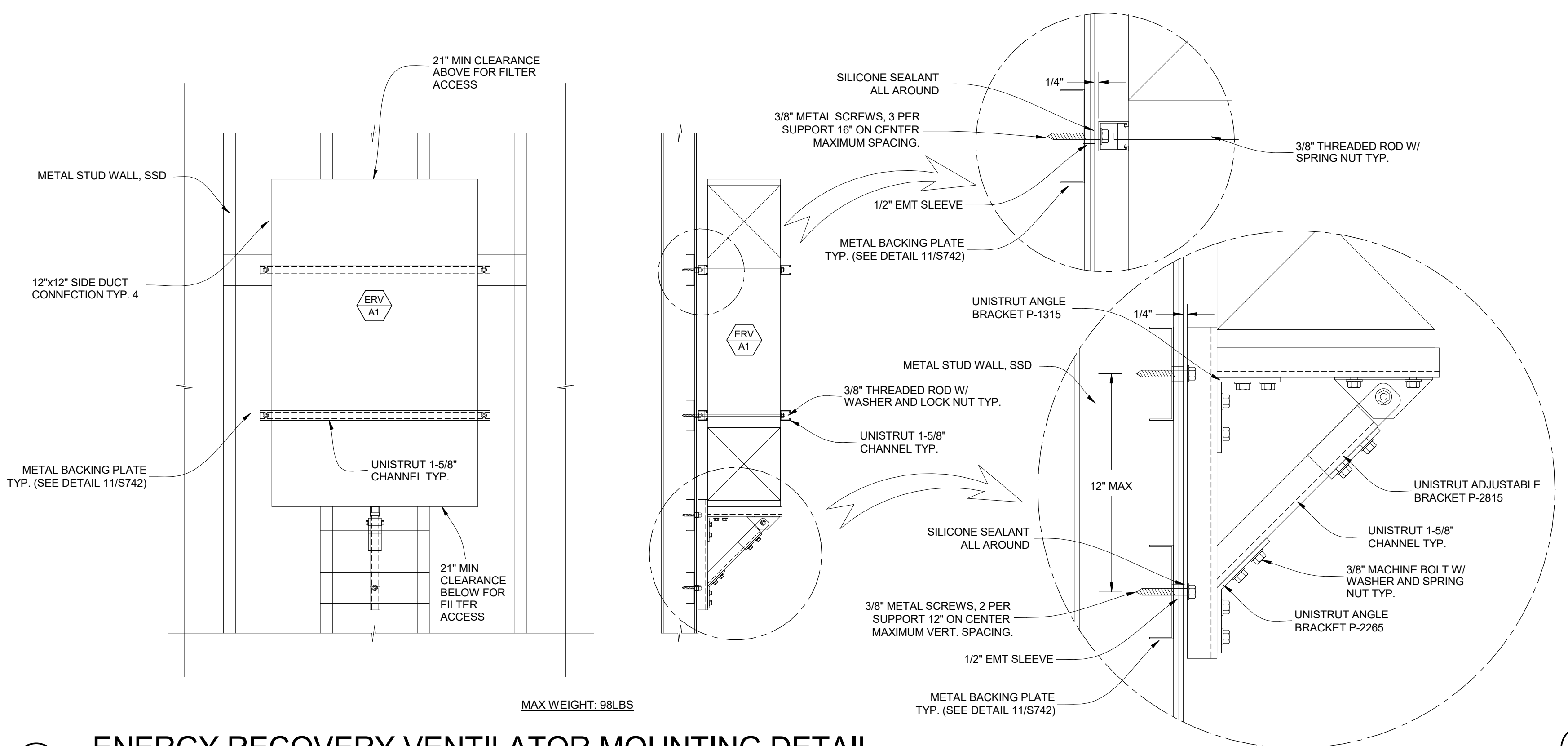


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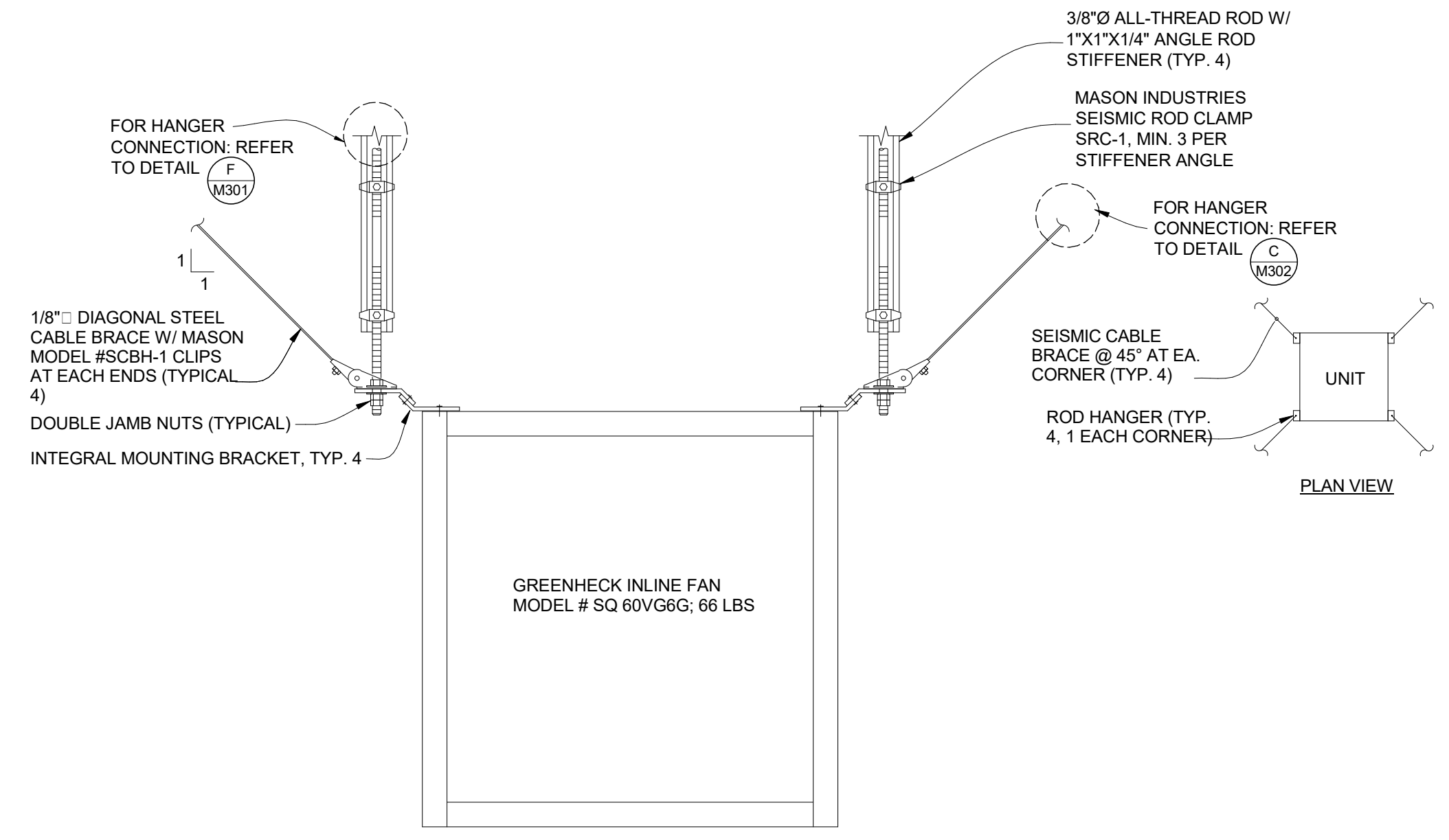
**MECHANICAL  
 DETAILS**

DRAWN BY: CY CHECKED BY: CDC  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

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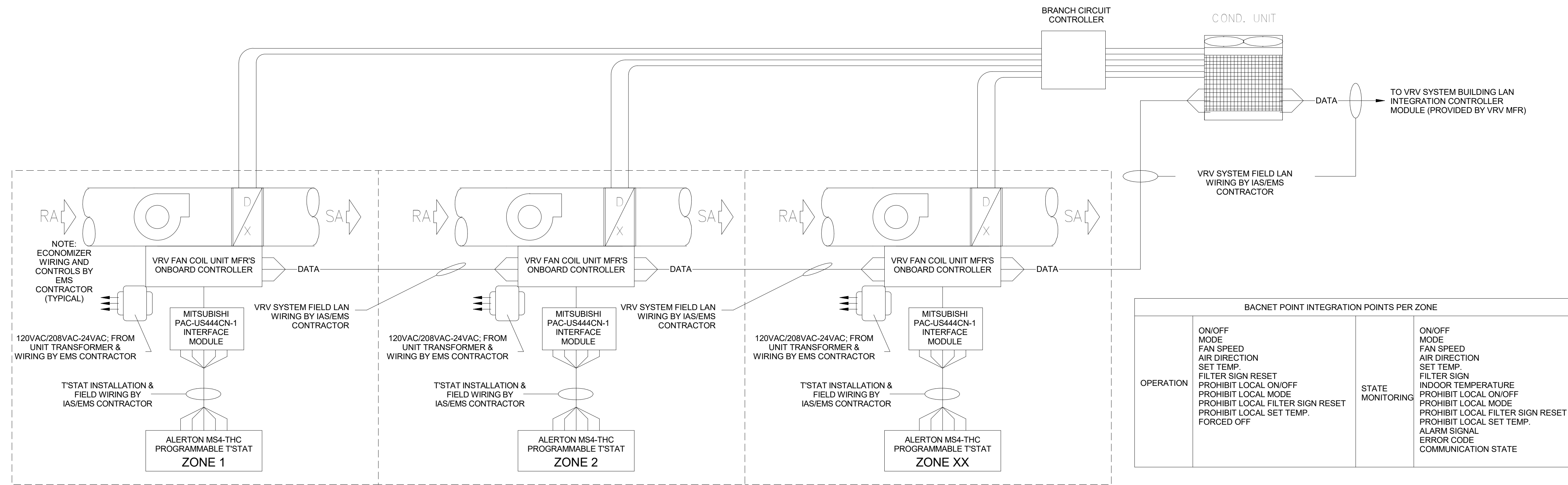


**A ENERGY RECOVERY VENTILATOR MOUNTING DETAIL**  
 SCALE: NONE

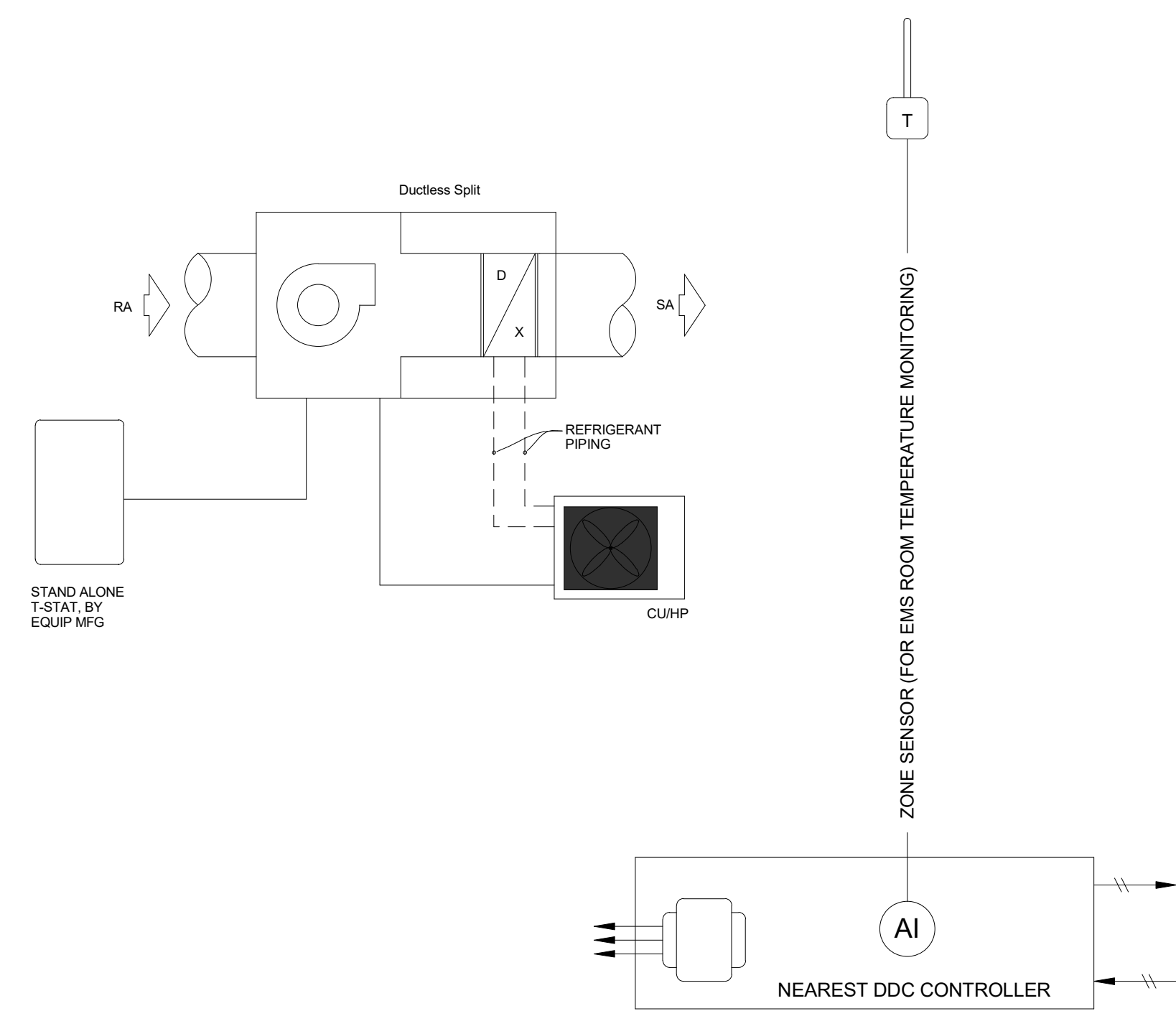


**B CENTRIFUGAL INLINE FAN MOUNTING DETAIL**  
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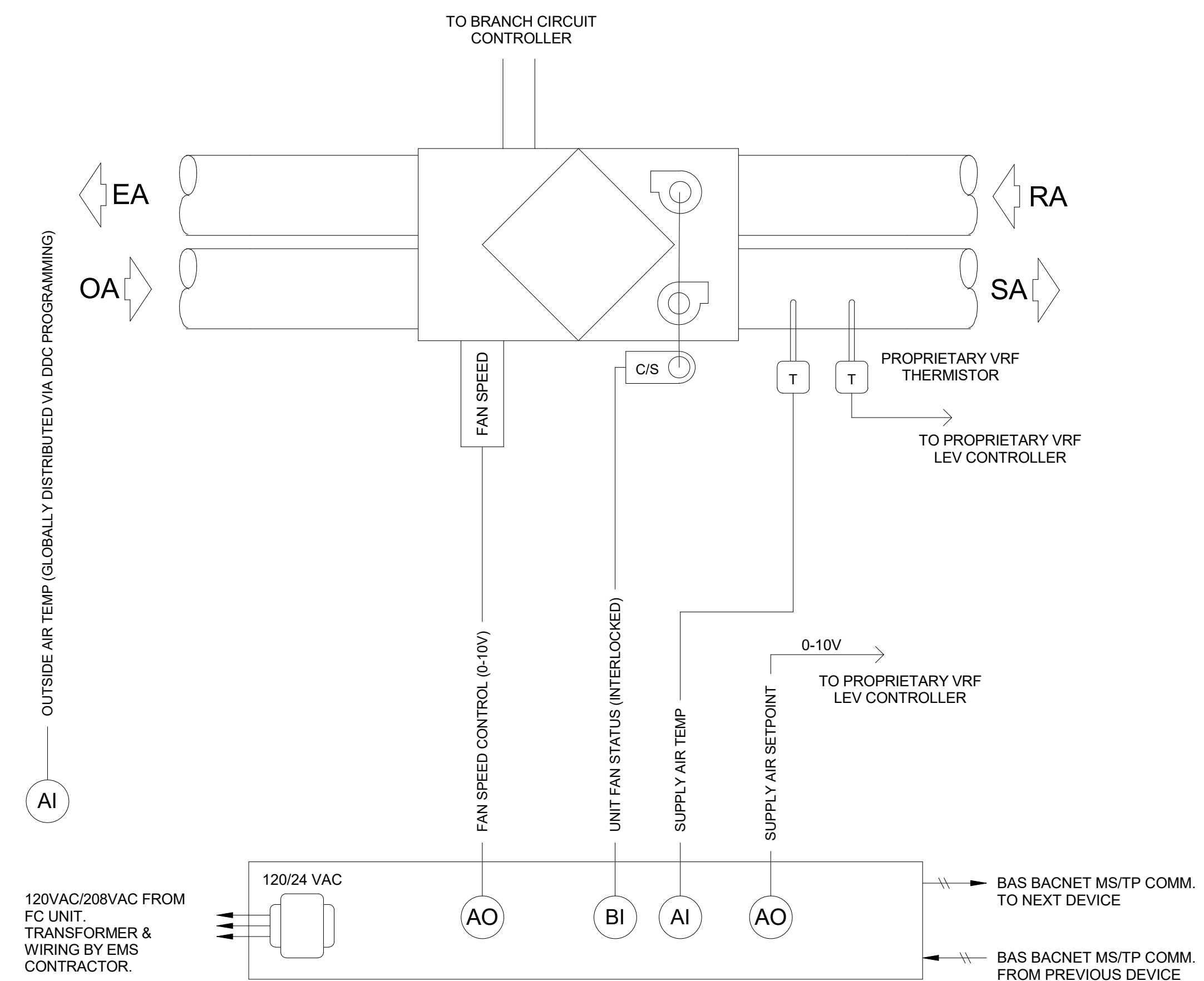


**A** VRF CONTROLS DIAGRAM  
SCALE: NONE



**B** SINGLE ZONE DUCTLESS SPLIT SYSTEM CONTROL DIAGRAM  
SCALE: NONE

- Energy Recovery Ventilator & 100% Outside Air
- System Overview
    - Each ERV unit will be directly controlled by its own dedicated EMS (Energy Management System) unitary controller.
    - EMS unitary controller will be connected to a wall mounted electronic zone temperature sensor. Electronic zone temperature sensor shall have a touch screen LCD interface which includes: 1) digital pushbuttons for warmer/cooler setpoint control; 2) visual display of room temperature and ambient OSA temperature; and 3) digital pushbutton after-hours override timer control, with user adjustable duration. The after-hours override duration shall have the ability to be limited from the front-end.
  - Unit Fan Operation
    - When the zone is in Occupied Mode or in Afterhours Mode, the fans shall run continuously.
    - During the Unoccupied Mode as determined by EMS time schedule, the unit fan cycles with demand and the temperature is controlled by the unoccupied space temperature heating and cooling setpoints.
  - Temperature operation
    - The controller compares the temperature setpoint with the space temperature and determines a need-heating or need cooling control signal to the LEV at the VRF coil.
  - Zone Pre-Occupancy Purge
    - The EMS shall schedule the zone to be in Occupied Mode one hour prior to the actual time of anticipated occupancy.
  - Monitoring - The following conditions shall be monitored and displayed at EMS Operator Workstation/Graphical User Interface:
    - Supply air temperature.
    - Room temperature.
    - Current command status of fan
    - Fan Status thru Current Switch.



**C** ERV CONTROLS DIAGRAM  
SCALE: NONE

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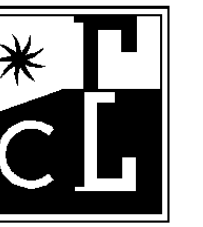
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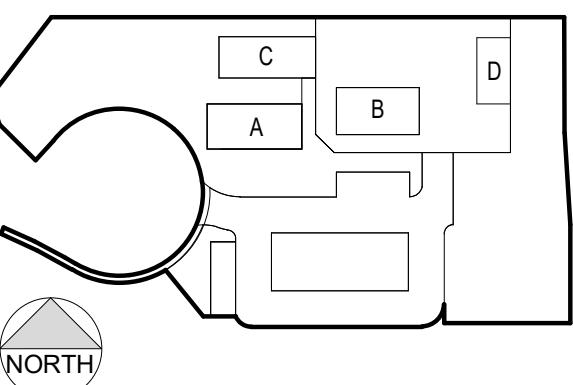
CONSULTANT:



**COSTA ENGINEERS INC.**  
3274 Villa Lane - Napa, CA 94558 ph: 707-252-9177 fax: 707-252-9473

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**MECHANICAL  
CONTROLS**

DRAWN BY: CY CHECKED BY: CDC  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

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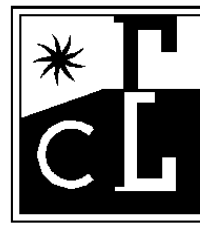


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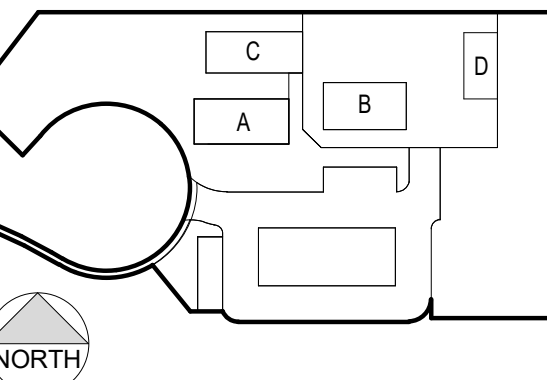
CONSULTANT:



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3274 Yuba Lake St., San Jose, CA 95134 ph: 707-252-9177 fax: 707-252-9473

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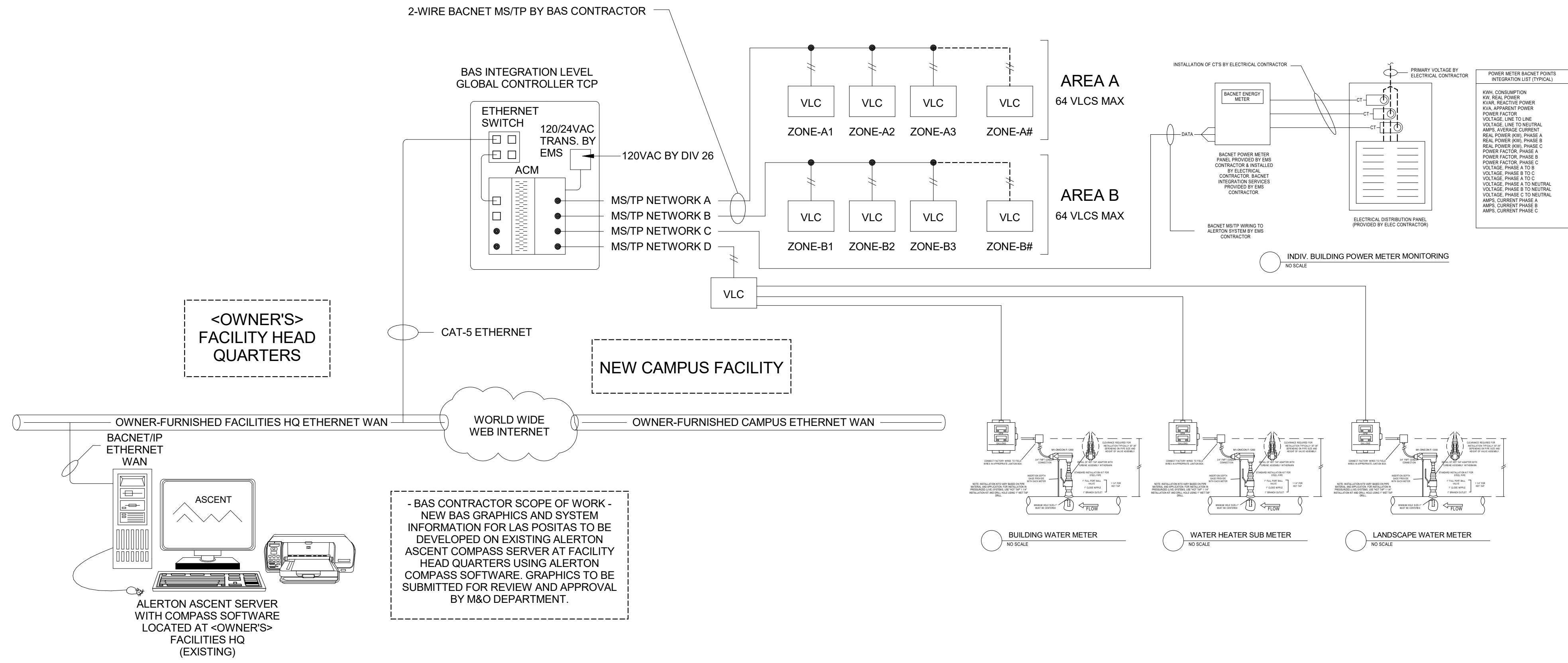


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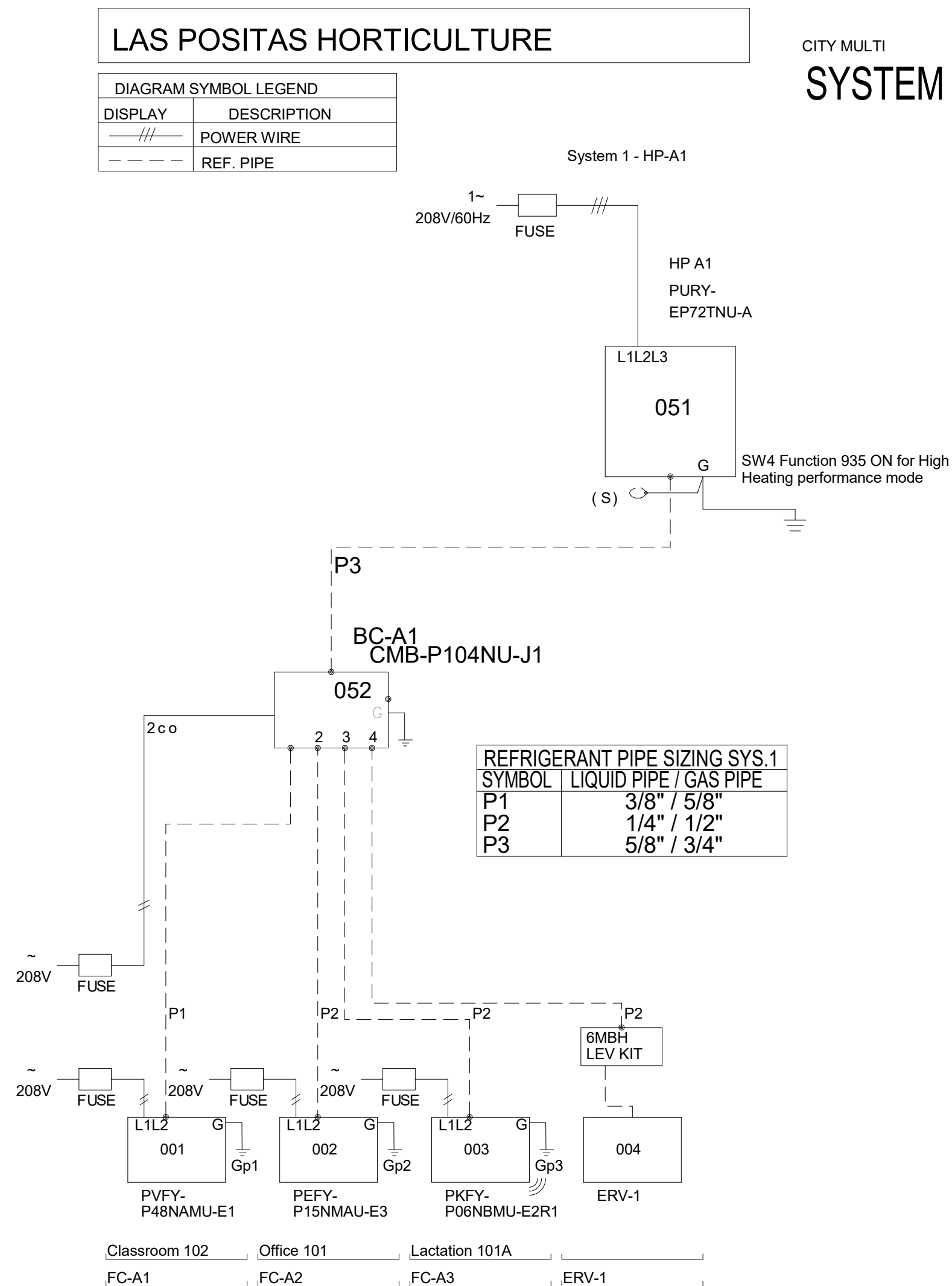
### MECHANICAL CONTROLS AND PIPING

DRAWN BY: CY CHECKED BY: CDC  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

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**A CONTROL SYSTEM ARCHITECTURE**  
SCALE: NONE



**B VRF SYSTEM DIAGRAMS**  
SCALE: NONE

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ELECTRIC WATER HEATER SCHEDULE table with columns: MARK, MANUF., MODEL, TYPE, STORAGE CAPACITY, RECOVERY @ 60F° RISE, SUPPLY TEMPERATURE SETPOINT, ELECTRICAL (V-Ø-HZ, No. Elements, WATTS), OPER. WEIGHT, LOCATION, REMARKS.

PLUMBING FIXTURE SCHEDULE table with columns: MARK, W, V, CW, HW, REMARKS, MANUF./MODEL, Cal Green Maximum, Design Flow.

LIST OF APPLICABLE CODES AND STANDARDS:

TITLE 24, PART 2: 2019 CALIFORNIA BUILDING CODE (VOLUMES 1 & 2)
TITLE 24, PART 3: 2019 CALIFORNIA ELECTRICAL CODE
TITLE 24, PART 4: 2019 CALIFORNIA MECHANICAL CODE
TITLE 24, PART 5: 2019 CALIFORNIA PLUMBING CODE
TITLE 24, PART 6: 2019 CALIFORNIA ENERGY CODE
TITLE 24, PART 9: 2019 CALIFORNIA FIRE CODE
TITLE 24, PART 12: 2019 CALIFORNIA REFERENCED STANDARDS CODE
TITLE 24, PART 1: 2019 CALIFORNIA ADMIN CODE
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL...

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, 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 SYSTEMS ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON PRE APPROVED INSTALLATION GUIDE (e.g. OSHPD OPM FOR 2013 CBC OR LATER), 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 SYSTEM.

- MECHANICAL/PLUMBING/DUCTS
M PP D -OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
M PP X D -OPTION 2: SHALL COMPLY WITH THE OSHPD PRE-APPROVAL (OPM #) # 0043-13

PLUMBING LEGEND

PLUMBING LEGEND table with columns: SYMBOL, ABBREVIATION, DESCRIPTION. Includes symbols for equipment types, pipe types (vent, cold water, hot water, etc.), valves, and fittings.

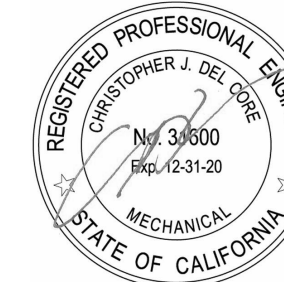
BLDG 'PLUMBING' SHEET LIST table with columns: ID, Description.

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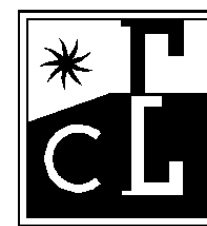


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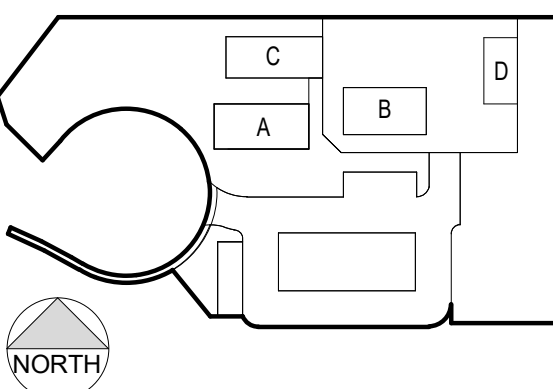
CONSULTANT:



COSTA ENGINEERS INC. 3274 Yuba Lane - Napa, CA 94558 ph: 707-252-9177 fax: 707-252-9473

Revision table with columns: ITEM, REVISION / ISSUE, DATE.

KEY PLAN:



CLPCCD - LAS POSITAS COMMUNITY COLLEGE AGRICULTURE SCIENCE - HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

PLUMBING SCHEDULES & LEGENDS

DRAWN BY: CY CHECKED BY: CDC DATE: 01/14/2021 PROJECT NO: C9908 SHEET NO:

P101

DSA:

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021



4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
 444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

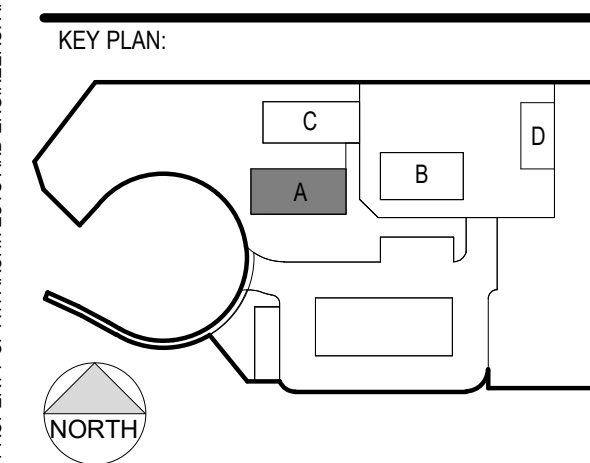
PROFESSIONAL STAMP:  

 REGISTERED PROFESSIONAL ENGINEER  
 CHRYSTOPHER J. DEL CORRAL  
 No. 33000  
 Exp. 6-31-28  
 MECHANICAL  
 STATE OF CALIFORNIA

CONSULTANT:  

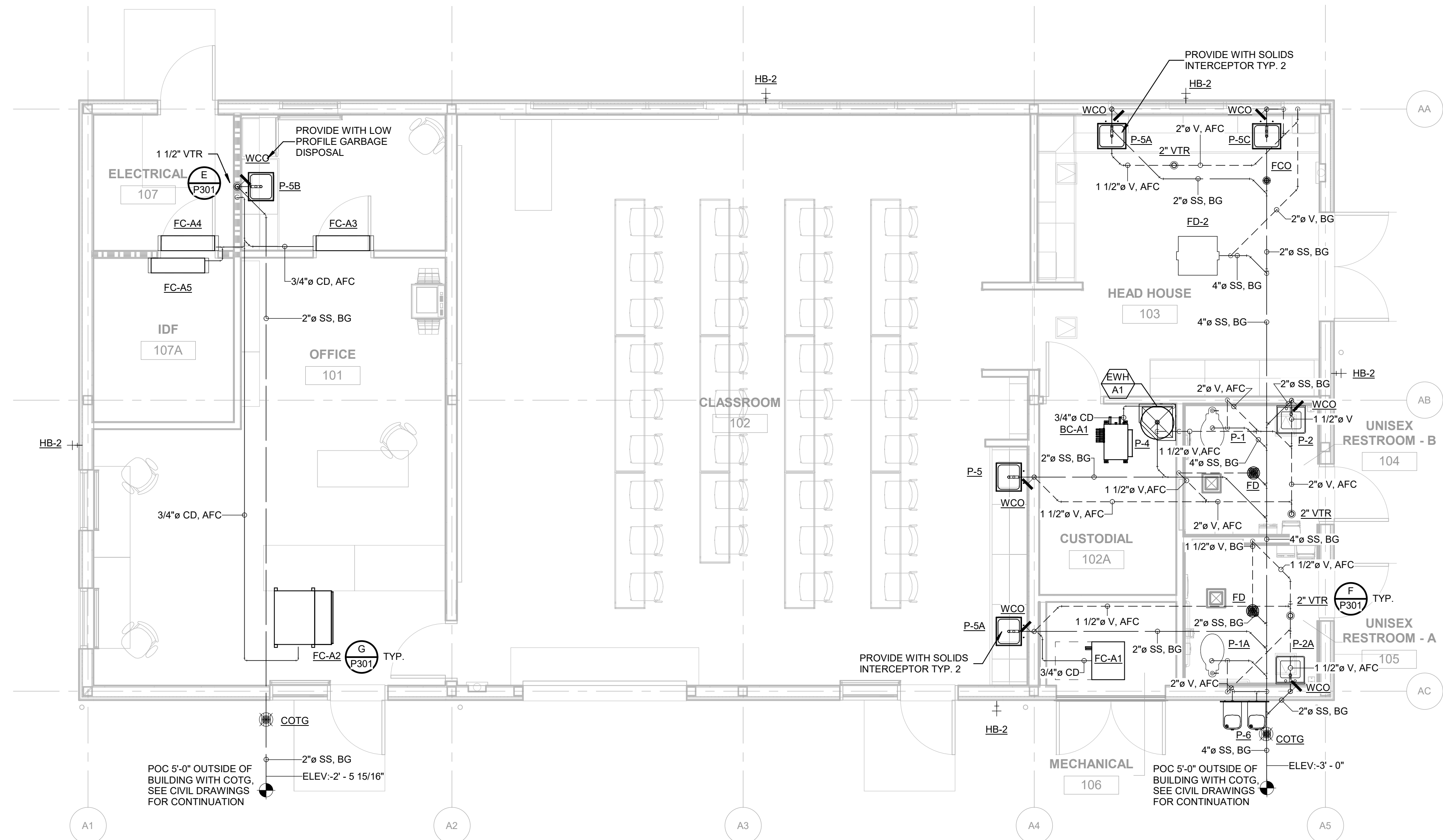
 COSTA ENGINEERS INC.  
 3274 Villa Lane - Stepa, CA 94516 ph: 707-252-9177 fax: 707-252-0473

ITEM	REVISION / ISSUE	DATE



### GENERAL NOTES

- FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET P101
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PLUMBING WORK WITH OTHER TRADES.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.
- PROVIDE WALL CLEANOUTS FOR SINKS AND URINALS AS REQUIRED.
- FOR ACCESSIBLE WATER CLOSETS, LOCATE VALVE HANDLE ON THE ACCESSIBLE SIDE PER ACCESSIBLE REQUIREMENTS.
- ALL UNDERGROUND AND BELOW SLAB PIPING SHALL BE INSTALLED NO LESS THAN MINIMUM BURY PER CODE. ALL PIPING THROUGH SLAB, BURIED OR UNDERNEATH FOUNDATION SSD.
- REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOW.
- OPENINGS FOR PLUMBING AND DUCTWORK TO FIT BETWEEN JOISTS.
- IDENTIFY AND LABEL ALL PIPING CROSSING THROUGH WALL(S), WITHIN 3 FEET OF THE ENTRY AND ON BOTH SIDES OF THE WALL. SEE SPECIFICATIONS FOR LABELING DETAILS.



### WALL LEGENDS

- METAL FRAMING - NON RATED, INSULATED
- 1 HR RATED WALL

CLPCCD - LAS POSITAS  
 COMMUNITY COLLEGE  
**AGRICULTURE  
 SCIENCE -  
 HORTICULTURE  
 FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

### FIRST FLOOR WASTE & VENT PLAN

DRAWN BY: CY      CHECKED BY: CDC  
 DATE: 01/14/2021      PROJECT NO: C9508  
 SHEET NO:

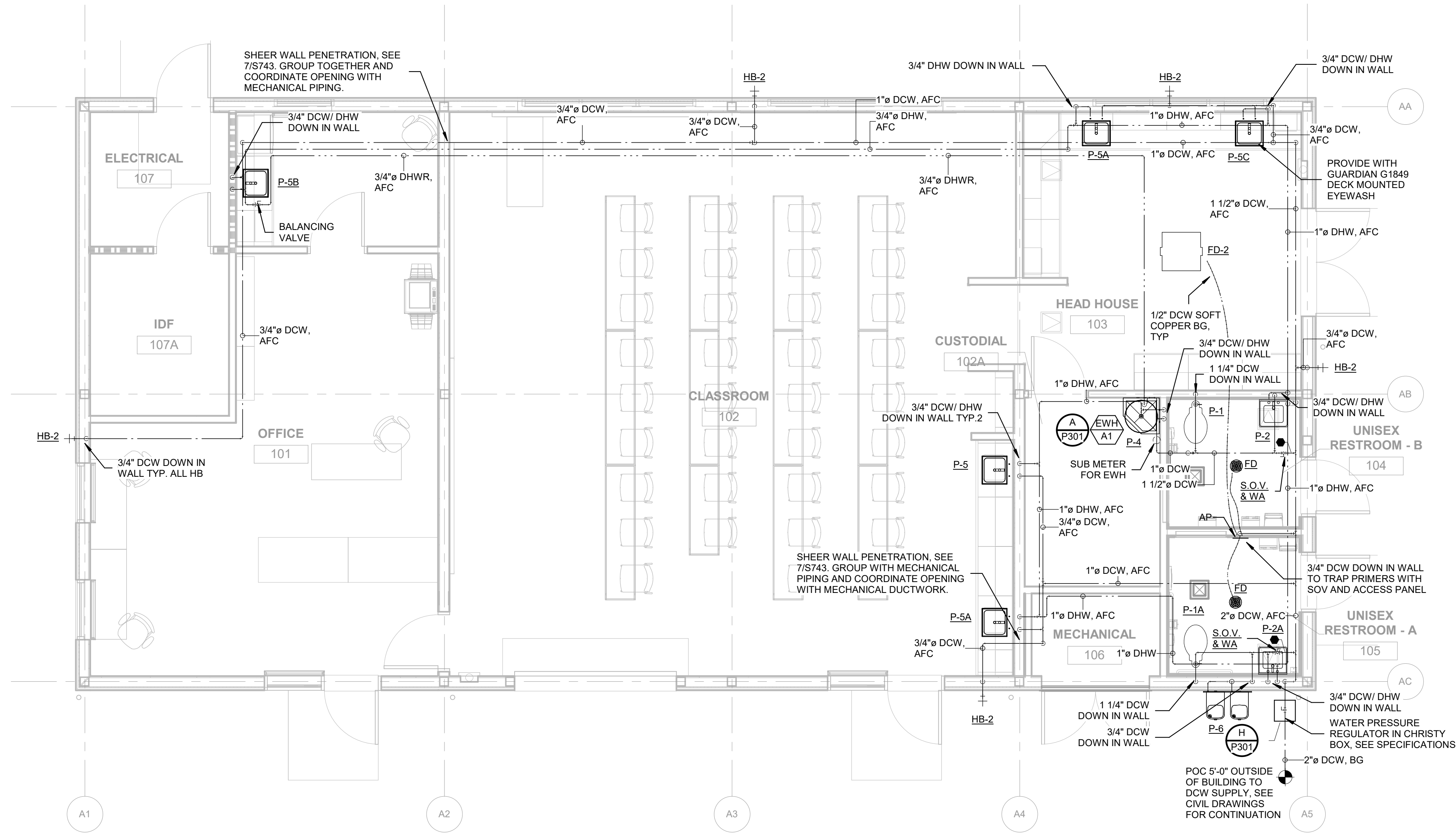
# PA121

**1** FIRST FLOOR WASTE & VENT PLAN  
 1/4" = 1'-0"

1/16/2020 9:19:20 AM C:\Users\charlie\Documents\19055\_Las Positas Horticulture RVT19\_cyates@costaengineers.com.rvt

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**1** FIRST FLOOR WATER PLAN  
1/4" = 1'-0"



**GENERAL NOTES**

- FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET P101
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PLUMBING WORK WITH OTHER TRADES.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.
- PROVIDE WALL CLEANOUTS FOR SINKS AND URINALS AS REQUIRED.
- FOR ACCESSIBLE WATER CLOSETS, LOCATE VALVE HANDLE ON THE ACCESSIBLE SIDE PER ACCESSIBLE REQUIREMENTS.
- ALL UNDERGROUND AND BELOW SLAB PIPINGS SHALL BE INSTALLED NO LESS THAN MINIMUM BURY PER CODE. ALL PIPING THROUGH SLAB, BURIED OR UNDERNEATH FOUNDATION SSD.
- REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOW.
- OPENINGS FOR PLUMBING AND DUCTWORK TO FIT BETWEEN JOISTS.
- IDENTIFY AND LABEL ALL PIPING CROSSING THROUGH WALL(S), WITHIN 3 FEET OF THE ENTRY AND ON BOTH SIDES OF THE WALL. SEE SPECIFICATIONS FOR LABELING DETAILS.
- IDENTIFY AND LABEL ALL WATER SHUT OFF VALVES WITH IDENTIFICATION NUMBERS. COORDINATE ID NUMBERS WITH M&O DURING SUBMITAL PHASE. SEE SPECIFICATIONS FOR LABELING DETAILS.

**WALL LEGENDS**

- METAL FRAMING - NON RATED, INSULATED
- 1 HR RATED WALL

DSA:

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DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021



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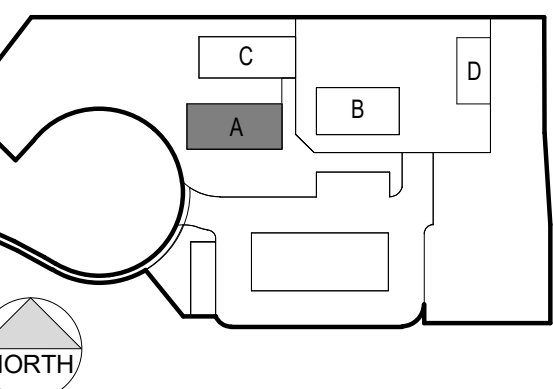
CONSULTANT:



**COSTA ENGINEERS INC.**  
3274 Villa Lane - Napa, CA 94558 ph: 707-252-9177 fax: 707-252-9473

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



**CLPCCD - LAS POSITAS  
COMMUNITY COLLEGE  
AGRICULTURE  
SCIENCE -  
HORTICULTURE  
FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**FIRST FLOOR  
WATER PLAN**

DRAWN BY: CY CHECKED BY: CDC  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**PA122**



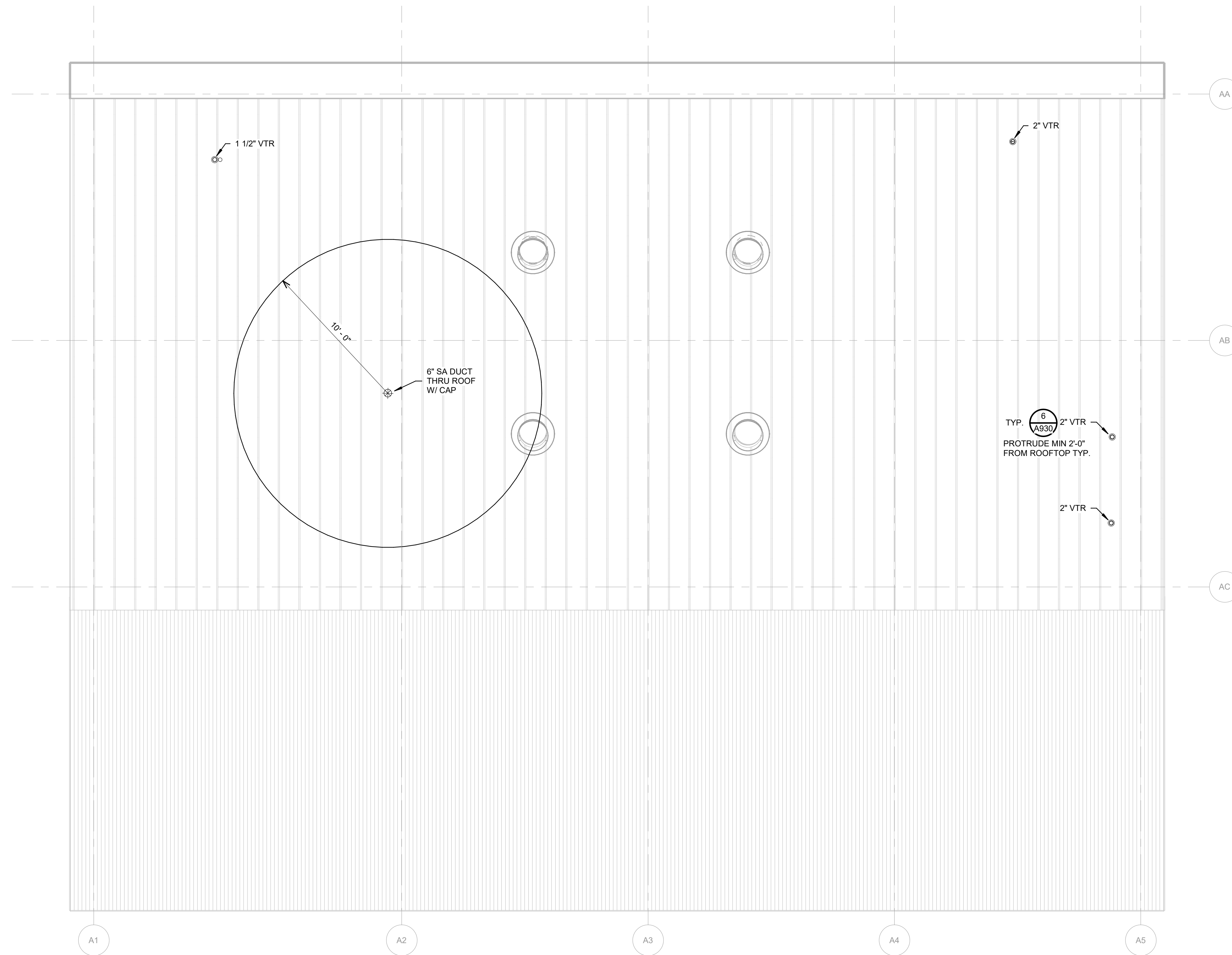
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C:\Users\charlie\Documents\19055 Las Positas Horticulture RVT19\_cyates@costaengineers.com.rvt

11/16/2020 9:19:25 AM

# 1 PLUMBING ROOF PLAN

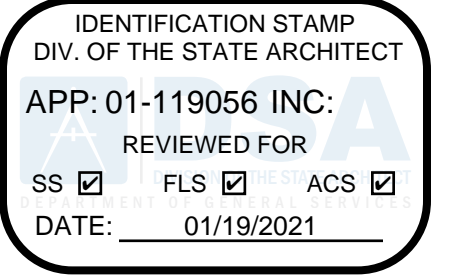
1/4" = 1'-0"



## GENERAL NOTES

- FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET P101
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PLUMBING WORK WITH OTHER TRADES.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.
- PROVIDE WALL CLEANOUTS FOR SINKS AND URINALS AS REQUIRED.
- FOR ACCESSIBLE WATER CLOSETS, LOCATE VALVE HANDLE ON THE ACCESSIBLE SIDE PER ACCESSIBLE REQUIREMENTS.
- ALL UNDERGROUND AND BELOW SLAB PIPING SHALL BE INSTALLED NO LESS THAN MINIMUM BURY PER CODE. ALL PIPING THROUGH SLAB, BURIED OR UNDERNEATH FOUNDATION SSD.
- REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOW.
- OPENINGS FOR PLUMBING AND DUCTWORK TO FIT BETWEEN JOISTS.
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DSA:

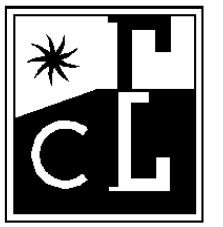


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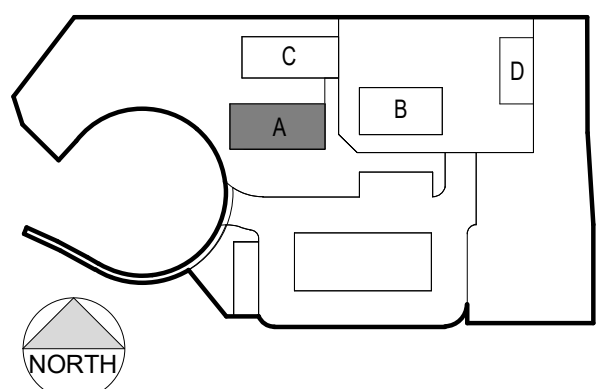
CONSULTANT:



**COSTA ENGINEERS INC.**  
 3274 Vista Lake Napa, CA 94558 ph: 707-252-9177 fax: 707-252-0473

ITEM:	REVISION / ISSUE:	DATE:

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 HORTICULTURE  
 FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

## ROOFTOP PLUMBING PLAN

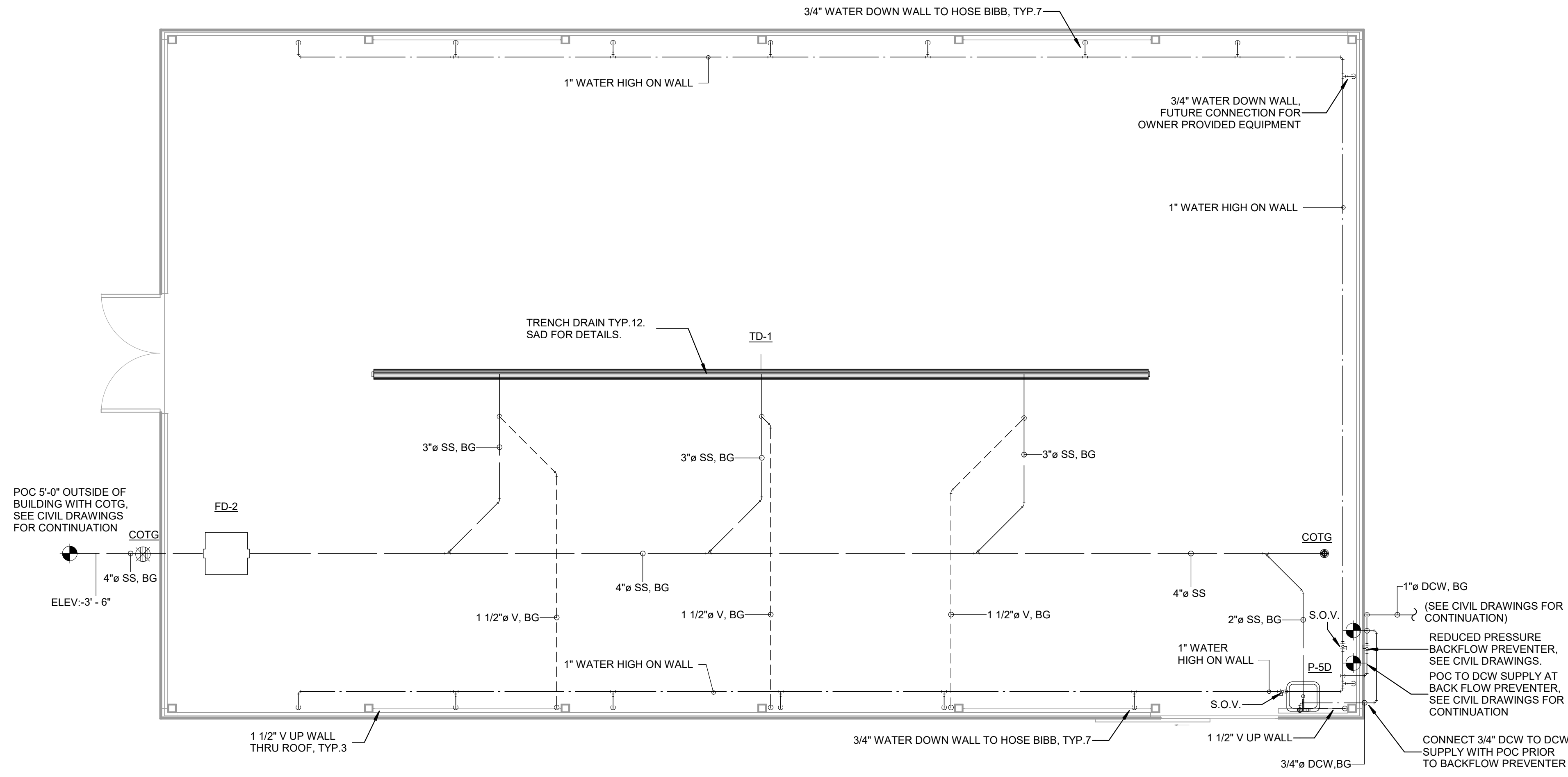
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**1 GREENHOUSE PLUMBING PLAN**  
1/4" = 1'-0"



**GENERAL NOTES**

1. FOR PLUMBING GENERAL NOTES, LEGENDS, AND SYMBOLS, REFER TO SHEET P101
2. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PLUMBING WORK WITH OTHER TRADES.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.
4. PROVIDE WALL CLEANOUTS FOR SINKS AND URINALS AS REQUIRED.
5. FOR ACCESSIBLE WATER CLOSETS, LOCATE VALVE HANDLE ON THE ACCESSIBLE SIDE PER ACCESSIBLE REQUIREMENTS.
6. ALL UNDERGROUND AND BELOW SLAB PIPING SHALL BE INSTALLED NO LESS THAN MINIMUM BURY PER CODE. ALL PIPING THROUGH SLAB, BURIED OR UNDERNEATH FOUNDATION SSD.
7. REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOW.
8. OPENINGS FOR PLUMBING AND DUCTWORK TO FIT BETWEEN JOISTS.

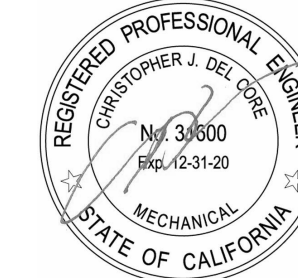
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**ARCHITECTS**  
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**ENGINEERS**  
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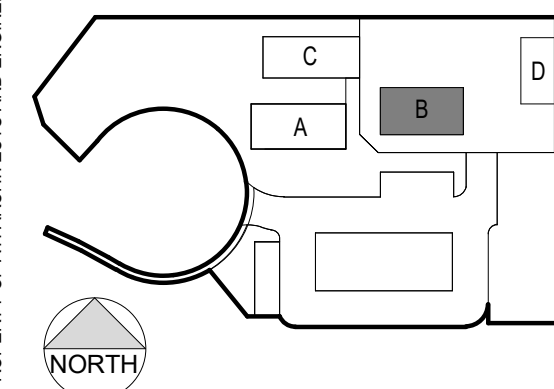


CONSULTANT:

**CE**  
**COSTA ENGINEERS INC.**  
 3274 VISTA Lane - Napa, CA 94558 ph: 707-252-9177 fax: 707-252-9473

ITEM	REVISION / ISSUE	DATE

KEY PLAN:



**CLPCCD - LAS POSITAS  
 COMMUNITY COLLEGE  
 AGRICULTURE  
 SCIENCE -  
 HORTICULTURE  
 FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**GREENHOUSE  
PLUMBING PLAN**

DRAWN BY: CY      CHECKED BY: CDC  
 DATE: 01/14/2021      PROJECT NO: C9508  
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**PB120**

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DATE: 01/19/2021

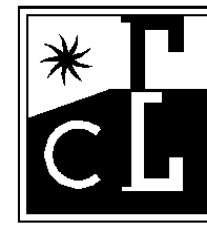


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444 S. Flower St #1200 Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:



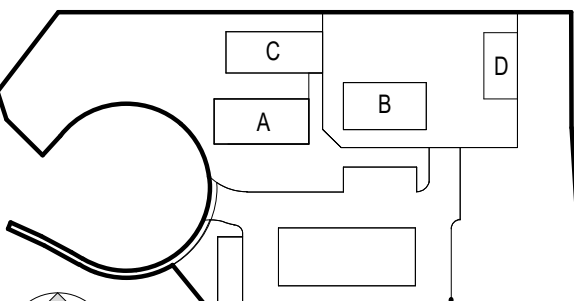
CONSULTANT:



COSTA ENGINEERS INC.  
3274 Villa Lane - Suite, CA 94518 ph: 707-252-9177 fax: 707-252-9473

ITEM:	REVISION / ISSUE:	DATE:

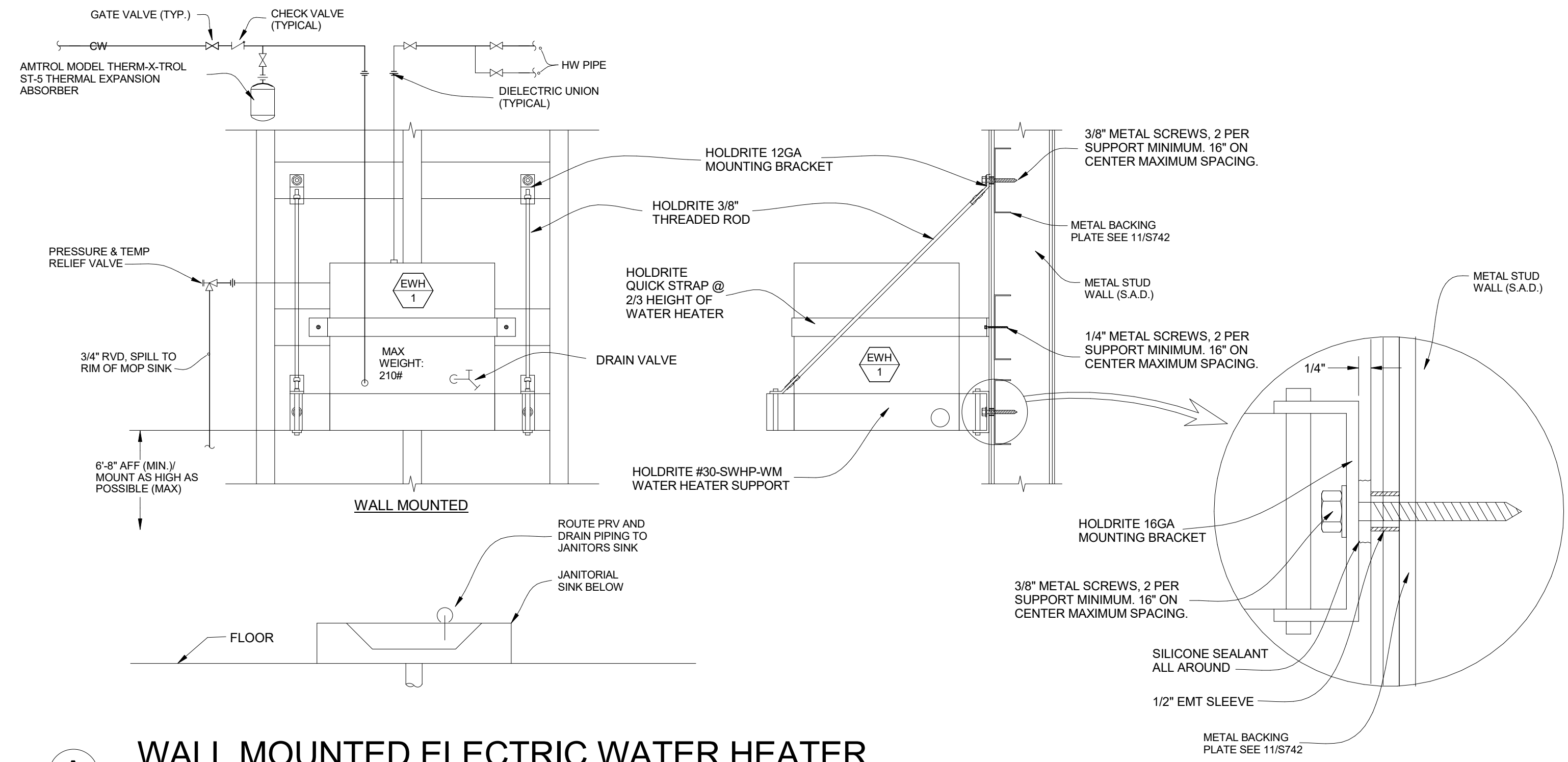
KEY PLAN:



CLPCCD - LAS POSITAS  
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**AGRICULTURE  
SCIENCE -  
HORTICULTURE  
FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**PLUMBING  
DETAILS**

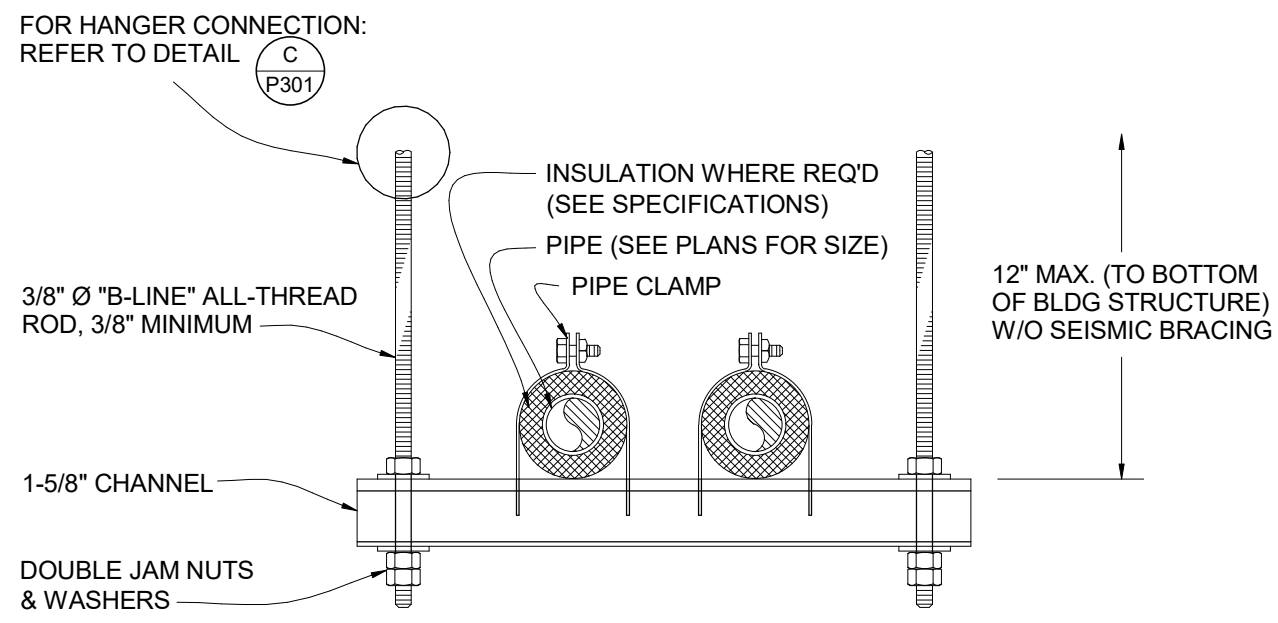
DRAWN BY: CY CHECKED BY: CDC  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:



**A** WALL MOUNTED ELECTRIC WATER HEATER  
SCALE: NONE

GENERAL NOTES:

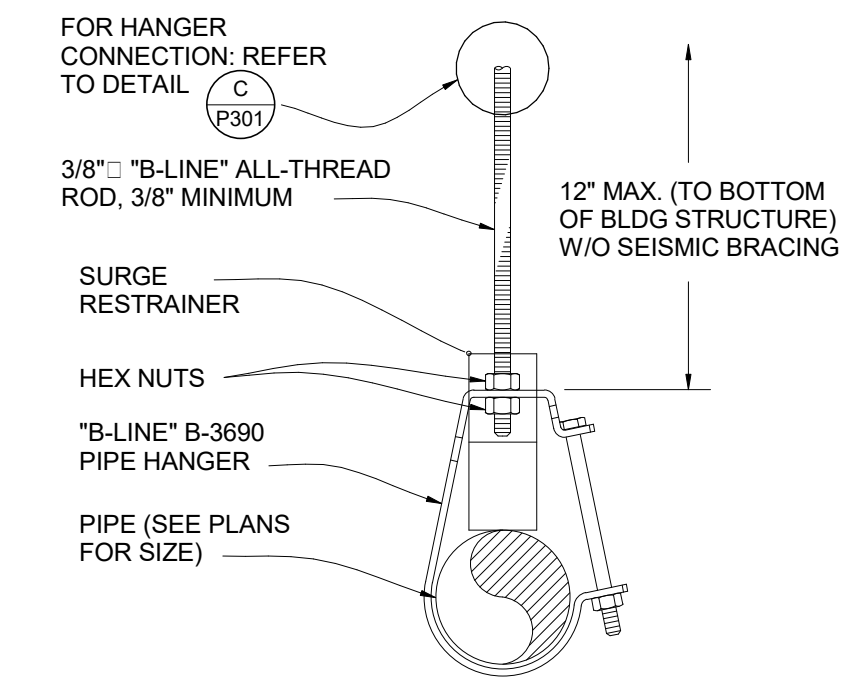
1. RUN PIPING TRAPEZE AS CLOSE AS POSSIBLE TO STRUCTURE.
2. SUPPORT PIPING AT A MAXIMUM OF 8'-0" INTERVALS.
3. SEE PLANS FOR PIPE SIZES.
4. B-LINE CHANNEL ROD STIFFENER @ ALL-THREAD WHERE DIAGONAL BRACE OCCURS. INCLUDE SC228 ASSEMBLY AS RECOMMENDED BY MANUFACTURER.
5. NO BRACING IS REQUIRED ON PIPES WITH LESS THAN 1" I.D.
6. NO BRACING IS REQUIRED ON PIPES LESS THAN 2-1/2" IN DIAMETER, AND WHEN SUPPORTED LESS THAN



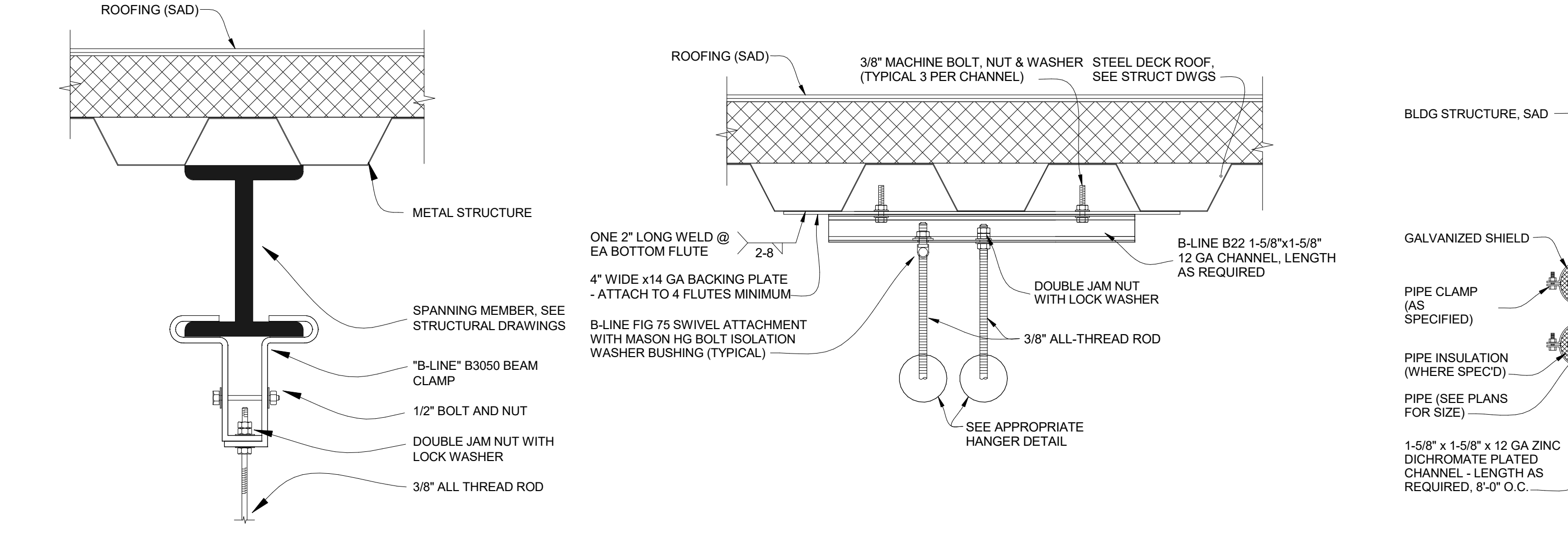
**B** TYPICAL PIPE HANGER DETAILS  
SCALE: NONE

MINIMUM ROD SIZES (INCHES)	PIPE DIAMETER (INCHES)
3/8"	2" & SMALLER PIPE

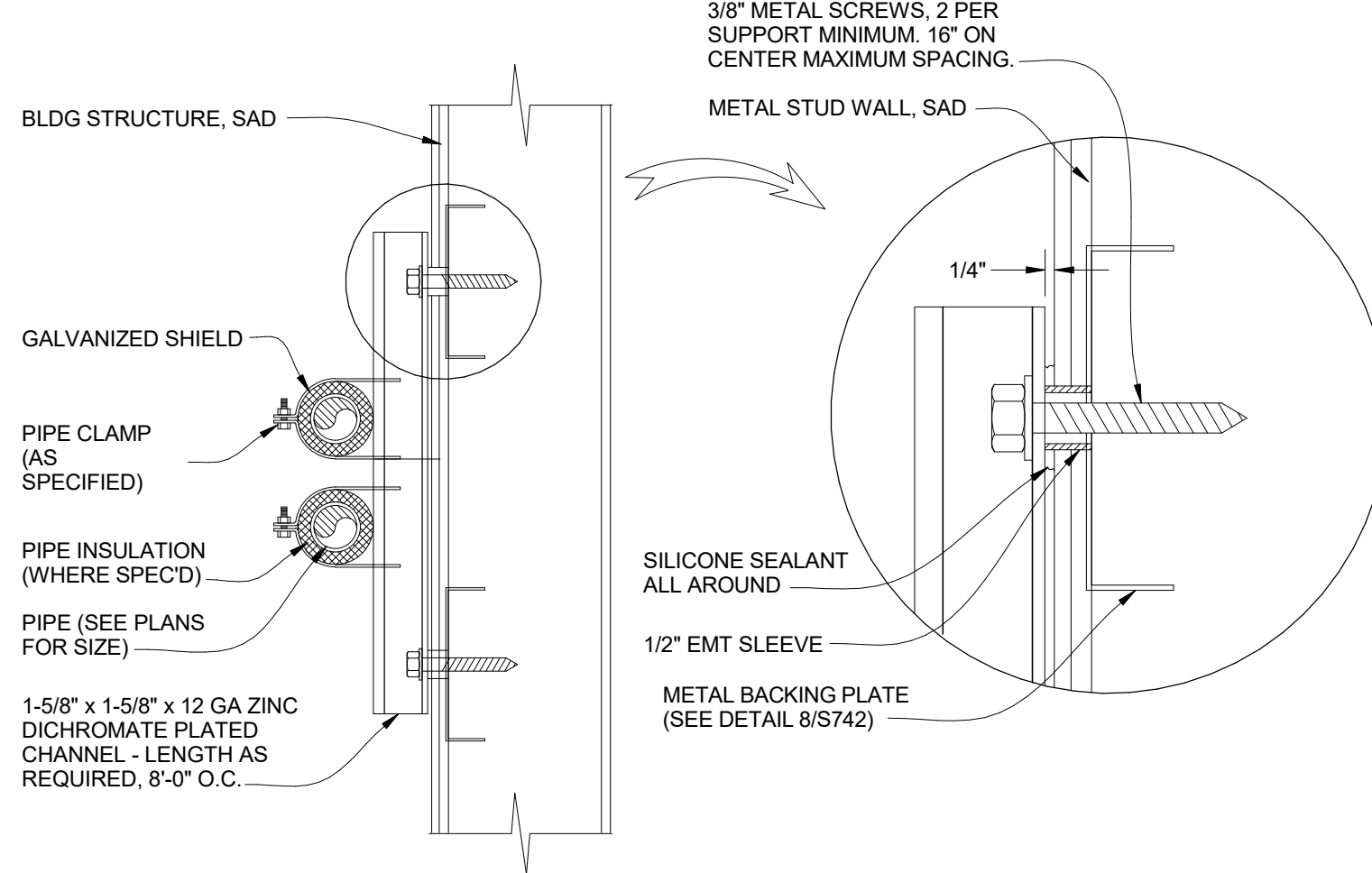
12" FROM ATTACHMENT POINT ON BOTTOM OF ROOF STRUCTURE.



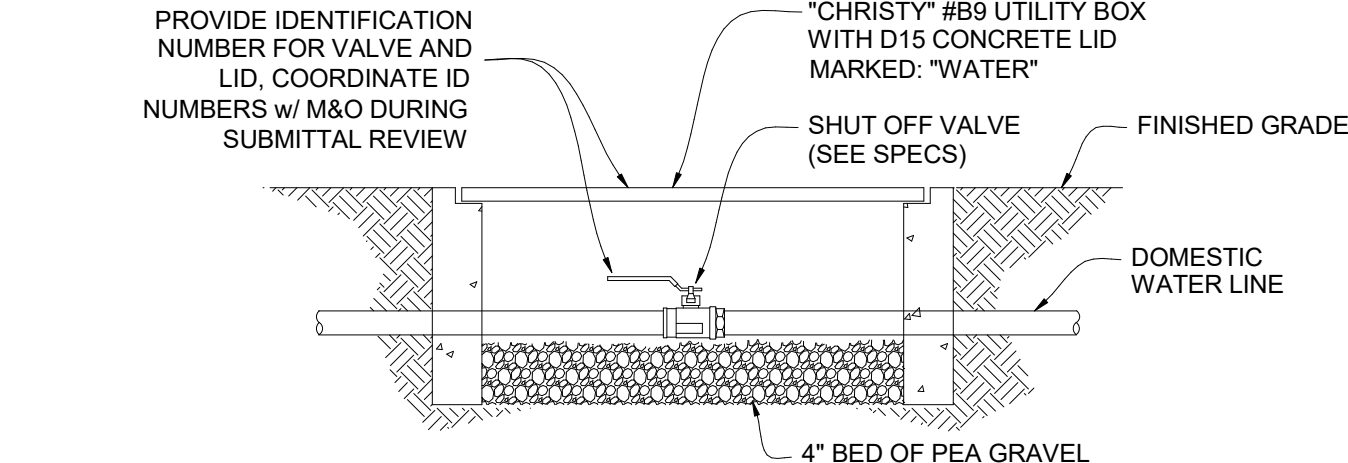
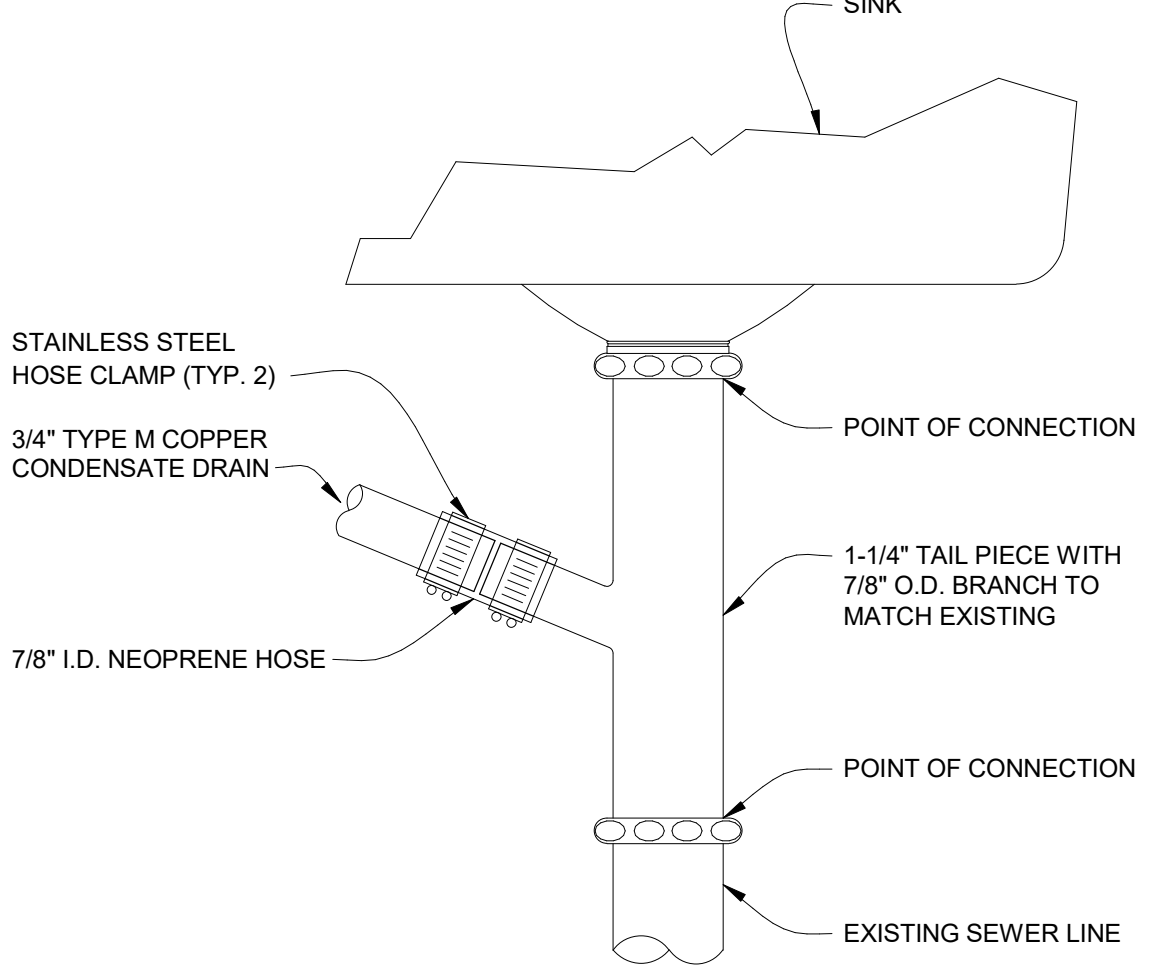
**E** CONDENSATE TO SINK TAIL PIECE  
SCALE: NONE



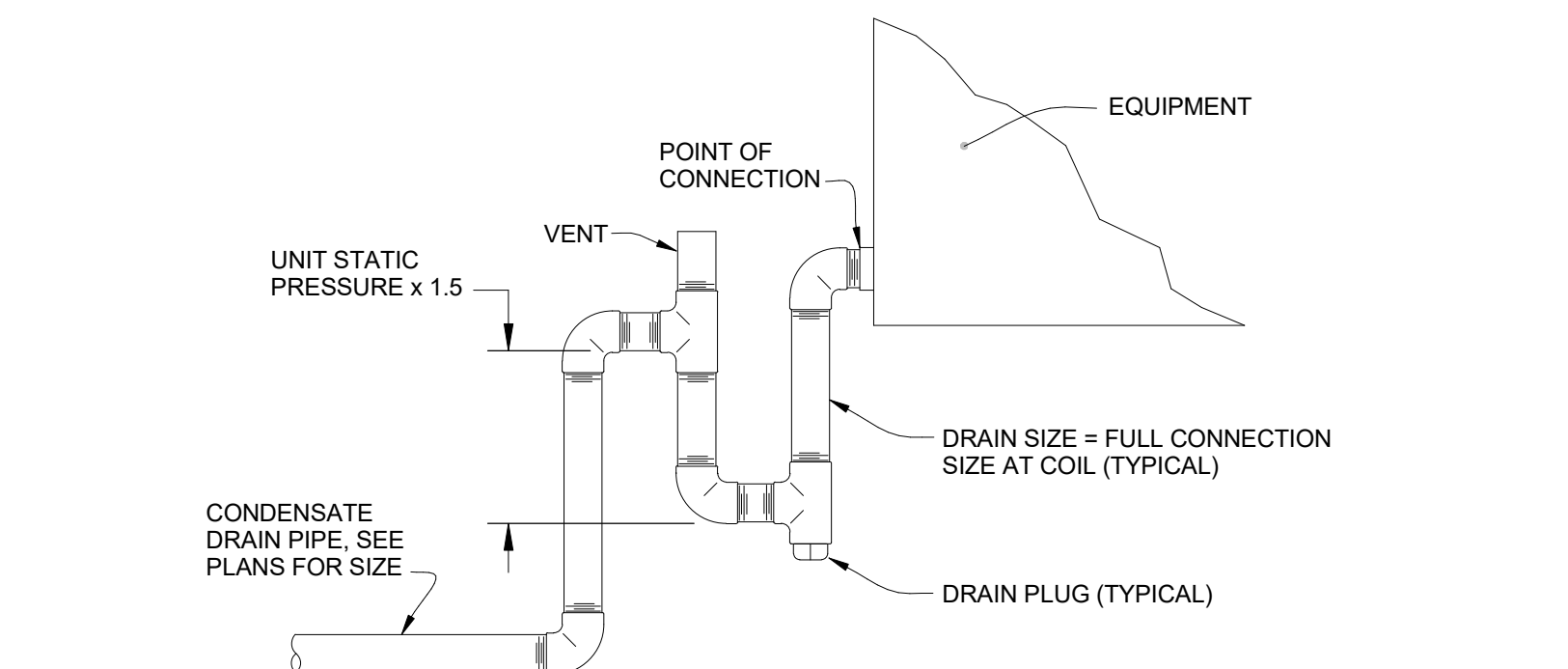
**C** TYPICAL HANGER CONNECTION DETAILS  
SCALE: NONE



**D** PLUMBING CHANNEL SUPPORT DETAIL  
SCALE: NONE



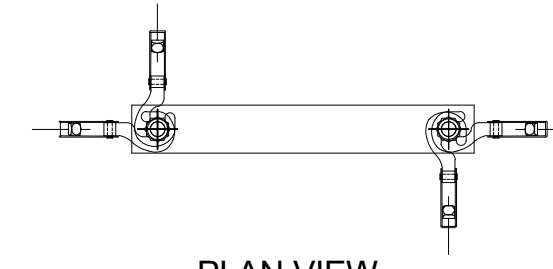
**H** DOMESTIC WATER SHUT-OFF DETAIL  
SCALE: NONE



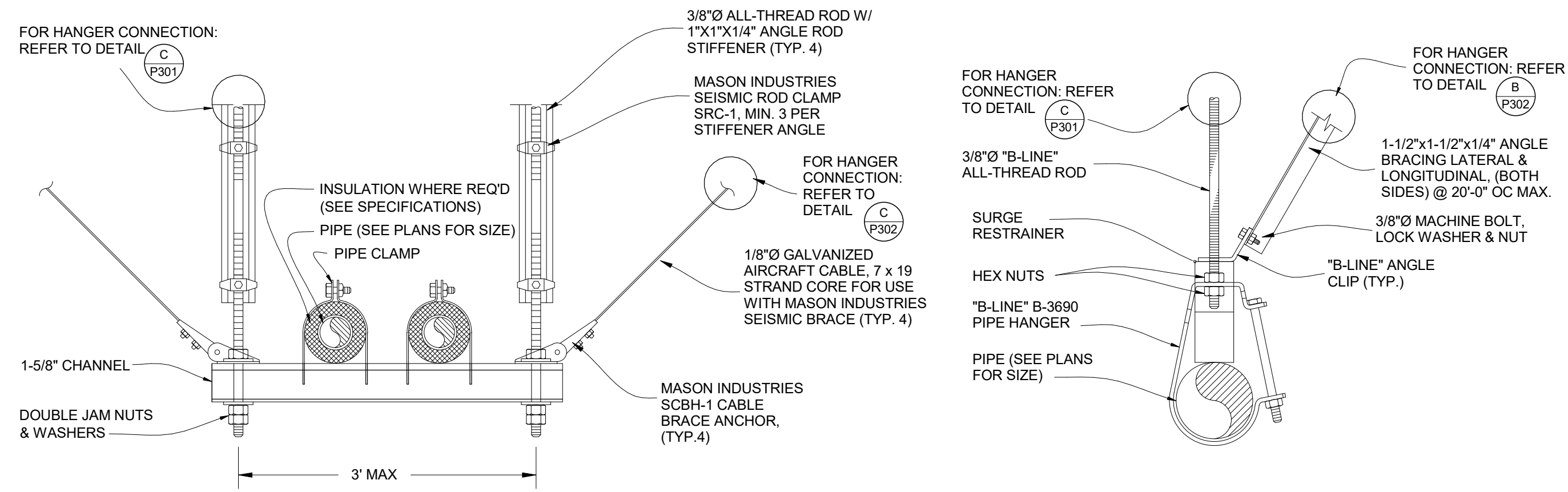
**G** CONDENSATE PIPING CONNECTION DETAIL  
SCALE: NONE

GENERAL NOTES:

1. RUN PIPING TRAPEZE AS CLOSE AS POSSIBLE TO STRUCTURE.
2. THIS DETAIL TO BE USED WHERE PIPING SUPPORT EXCEEDS 12" FROM ATTACHMENT POINT ON STRUCTURE
3. NO BRACING IS REQUIRED ON PIPES WITH LESS THAN 1" I.D.
4. NO BRACING IS REQUIRED ON PIPES LESS THAN 2-1/2" IN DIAMETER, AND WHEN SUPPORTED LESS THAN 12" FROM ATTACHMENT POINT ON BOTTOM OF ROOF STRUCTURE.

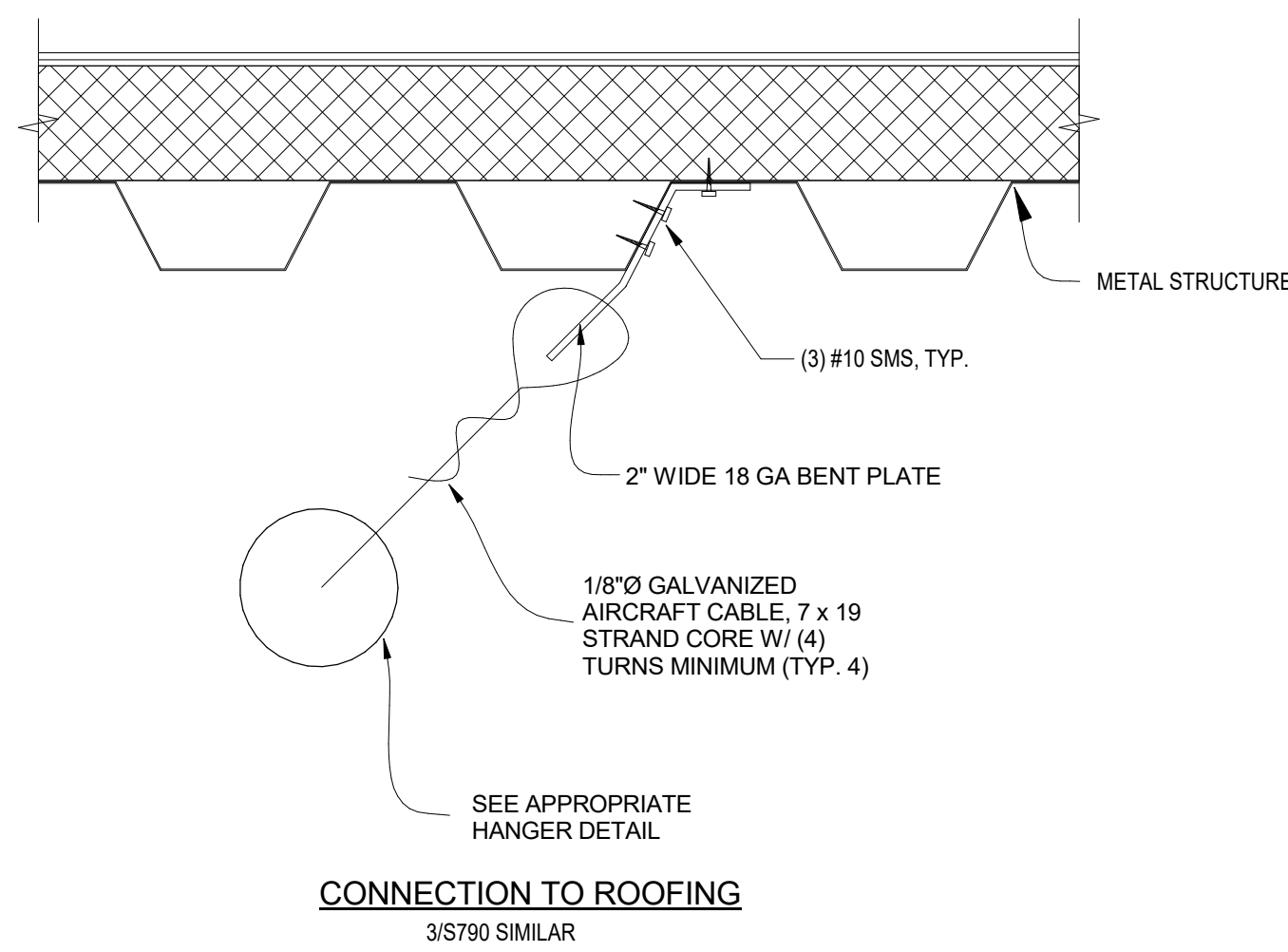


PLAN VIEW



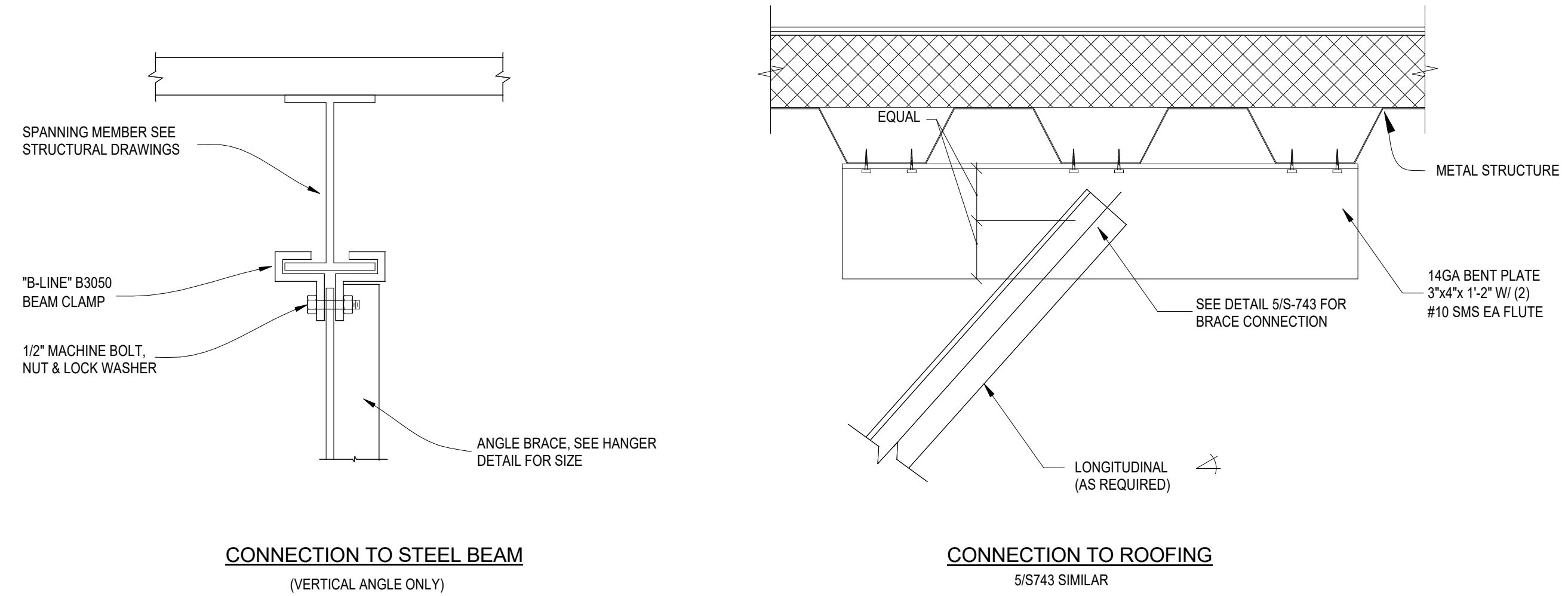
**A** TYPICAL BRACED PIPE HANGER DETAILS

SCALE: NONE



**C** CABLE BRACE CONNECTION DETAIL

SCALE: NONE



**B** TYPICAL HANGER CONNECTION DETAILS

SCALE: NONE

DSA:

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SS  FLS  ACS   
DATE: 01/19/2021

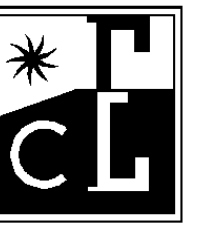
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**ARCHITECTS**  
**+ ENGINEERS**  
AN AC MARTIN COMPANY

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3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S. Flower St #1200 Los Angeles, CA 90071 - T 714.338.1600

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CONSULTANT:

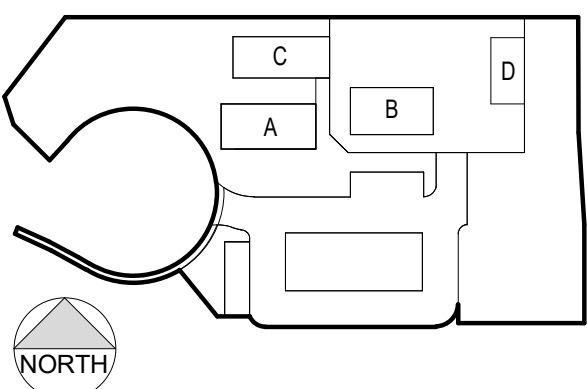


**COSTA ENGINEERS INC.**

3274 Yuba Lane - Suite 200, Los Angeles, CA 90008 ph: 707-252-9177 fax: 707-252-0473

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



**CLPCCD - LAS POSITAS  
COMMUNITY COLLEGE**  
**AGRICULTURE  
SCIENCE -  
HORTICULTURE  
FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**PLUMBING  
DETAILS**

DRAWN BY: CY CHECKED BY: CDC

DATE: 01/14/2021 PROJECT NO: C9508

SHEET NO:

**P302**

GENERAL NOTES:

- THE LATEST ADDENDUM OF THE DISTRICT'S AND/OR ARCHITECT'S GENERAL, SPECIAL AND SUPPLEMENTARY CONDITIONS AS WELL AS SEPARATE SPECIFICATIONS OR PROJECT MANUALS ARE PART OF THESE CONSTRUCTION DOCUMENTS.
- THE SCOPE OF WORK SHALL INCLUDE LABOR, MATERIALS, EQUIPMENT, TOOLS AND SERVICES REQUIRED FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS AS INDICATED AND SPECIFIED.
- PROVIDE ELECTRICAL EQUIPMENT, WIRES, CONDUITS, CONNECTIONS, OUTLETS, ETC. NECESSARY TO ACHIEVE A COMPLETE ELECTRICAL INSTALLATION. WHEN AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR AS THOUGH FULLY SHOWN AND SPECIFIED.
- BE FULLY RESPONSIBLE FOR DAMAGES INCURRED TO WALLS, FLOORS, AND CEILINGS DURING ELECTRICAL CONSTRUCTION. IF DAMAGE OCCURS DURING ELECTRICAL CONSTRUCTION, ELECTRICAL CONTRACTOR SHALL PATCH, REPAIR, AND PAINT DAMAGED SURFACES TO ORIGINAL CONDITION.
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW JUNCTION BOXES, PULL BOXES, OFFSETS, BENDS, ELBOWS OR OTHER SPECIFIC ELEMENTS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF WORK. SIZE AND LOCATION OF EQUIPMENT AND WIRING ARE SHOWN TO SCALE WHERE POSSIBLE BUT MAY BE DISTORTED FOR CLARITY OF THE DRAWINGS. IT IS NOT WITHIN THE SCOPE OF DRAWINGS TO SHOW NECESSARY BENDS, OFFSETS, PULL BOXES AND RESTRICTIONS TO INSTALLATION TO MAINTAIN HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
- ELECTRICAL MATERIAL & EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED. EQUIPMENT SHALL BE LISTED, LABELLED, AND INSTALLED PER A RECOGNIZED ELECTRICAL TESTING LABORATORY, AND MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS OF ANS, NEMA & NFPA. REPLACE DEFECTIVE OR DAMAGED MATERIALS, OR REPAIR IN A MANNER APPROVED BY THE OWNER.
- DEFINITIONS:
  - FURNISH: SUPPLY AND DELIVER TO PROJECT SITE. UNLOAD, UNPACK AND ASSEMBLE, AND PUT IN PLACE
  - INSTALL: OPERATIONS AT PROJECT SITE INCLUDING TEMPORARY STORING, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO FINISH, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS
  - PROVIDE: FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.
  - SHALL: CODE TO QUALIFY AN ACTION WHICH IS MANDATORY
- PROVIDE SEISMIC SUPPORT DEVICES, RESTRAINTS AND APPURTENANCES INCLUDING HANGERS, ANCHORS, SLEEVES, INSERTS, SEALS, AND ASSOCIATED ELECTRICAL ITEMS IN ACCORDANCE WITH STATE, COUNTY, CITY, AND LOCAL CODES. SEISMIC RESTRAINTS AND ATTACHMENTS FOR ELECTRICAL EQUIPMENT AND SYSTEM COMPONENTS SHALL BE PROVIDED IN ACCORDANCE WITH CBC AND SMOGNA REQUIREMENTS.
- REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATIONS, DIMENSIONS, AND/OR RATINGS OF FIRE RATED SEPARATIONS, EXPANSION JOINTS, AND SEISMIC JOINTS.
- KEEP CONDUITS AND OTHER OPENINGS CLOSED TO PREVENT ENTRY OF FOREIGN MATTER, COVER FIXTURES, EQUIPMENT AND APPARATUS AND PROTECT AGAINST DIRT, WATER, CHEMICAL OR MECHANICAL DAMAGE BEFORE AND DURING THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE. RESTORE TO ORIGINAL CONDITION ANY FIXTURES, APPARATUS OR EQUIPMENT DAMAGED PRIOR TO FINAL ACCEPTANCE, INCLUDING REPAIR OR REPLACE DAMAGED SHOP COATS OF PAINT. DELIVER EQUIPMENT AND STORE AT THE SITE, PROPERLY PACKED AND CRATED, UNTIL FINALLY INSTALLED.
- INCONSISTENCIES OR DISCREPANCIES IN THE DRAWINGS OR SPECIFICATIONS SHALL BE CLARIFIED WITH THE DISTRICT PROJECT MANAGER PRIOR TO ROUGH IN OR INSTALLATION. IF FURTHER UNDERSTOOD THAT THE CONTRACTOR HAS READ AND FULLY UNDERSTANDS THE DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS FOR THIS PROJECT PRIOR TO THE COMMENCEMENT OF WORK, INCLUDING DOCUMENTS OF OTHER DIVISIONS WHICH MAY INTERFERE OR OTHERWISE AFFECT THE WORK OF THIS DIVISION, NO CONSIDERATION WILL BE GRANTED BY REASON OF LACK OF FAMILIARITY ON THE PART OF THIS DIVISION WITH THOSE DOCUMENTS.
- UNDERTAKE THE WORK IN ITS ENTIRETY IN ACCORDANCE WITH ITS DESIGN AND PURPOSE. WORK SHALL BE CARRIED OUT IN A PROFESSIONAL MANNER WITH MAXIMUM EFFICIENCY, EXCELLENT WORKMANSHIP AND SHALL MEET THE REQUIREMENTS OF BUT NOT LIMITED TO THE 2019 EDITION FOR THE FOLLOWING, U.S.A.:
  - CALIFORNIA CODE OF REGULATIONS:
    - TITLE 8 - INDUSTRIAL RELATIONS (ELEVATOR SAFETY ORDERS)
    - TITLE 19 - PUBLIC SAFETY
    - TITLE 22 - SOCIAL SECURITY
    - TITLE 24 - CALIFORNIA BUILDING STANDARDS CODE, (PARTS 1, 2 (CALIFORNIA BUILDING CODE), 3 (CALIFORNIA ELECTRICAL CODE), 4, 5, 6 (CALIFORNIA ENERGY CODE), 7 THRU 12)
    - CALIFORNIA STATE AND LOCAL FIRE MARSHAL
    - AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
    - INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
    - INSTITUTE OF CABLE ENGINEERS ASSOCIATION (ICEA)
    - NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS FOR CONSTRUCTION (NECA)
    - UNDERWRITERS LABORATORIES, INC. (UL)
    - INSTRUMENT SOCIETY OF AMERICA (ISA)
    - 2019 NFPA 72 STATE INDUSTRIAL ACCIDENT COMMISSION
    - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
    - NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
    - AUTHORITIES HAVING JURISDICTION
- SECURE AND PAY FOR PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING BUT NOT LIMITED TO CHARGES BY STATE, COUNTY, CITY, AND LOCAL GOVERNMENT AND AGENCIES. OBTAIN REQUIRED CERTIFICATES OF INSPECTION FOR THE ELECTRICAL WORK AND DELIVER SAME TO THE DISTRICT BEFORE REQUESTING ACCEPTANCE AND FINAL PAYMENT FOR WORK.
- CAREFULLY LAY OUT WORK IN ADVANCE TO AVOID UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILINGS OR OTHER SURFACES. STRUCTURAL MEMBERS SHALL NOT BE CUT OR DRILLED WITHOUT THE APPROVAL OF THE DISTRICT. HOWEVER, WHERE SUCH WORK IS NECESSARY PROVIDE CUTTING, CORING AND PATCHING OF THE CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF THE ELECTRICAL WORK. PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH, AND SHALL ACCURATELY MATCH SURROUNDING WORK. AFTER COMPLETION OF WORK, CLEAN UP RESULTANT DEBRIS AND REMOVE FROM SITE.
- ENCLOSURES, J-BOXES, CUTTERS ETC. INSTALLED OUTDOORS OR SUBJECT TO WEATHER SHALL BE WEATHER PROOF. RECEPTACLES INSTALLED OUTDOORS SHALL BE OF THE TYPE WITH "IN USE" TYPE WEATHERPROOF ENCLOSURES. GFI TYPE RECEPTACLES LOCATED ON ROOF SHALL HAVE "IN USE" TYPE WEATHER PROOF

- ENCLOSURES, AND MUST BE LOCATED WITHIN 25' OF ROOF MOUNTED EQUIPMENT.
- INSTALL EXPOSED CONDUITS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW SURFACE CONTOURS AS MUCH AS POSSIBLE.
- PROVIDE ACCESS PANELS AS REQUIRED FOR CODE REQUIRED ACCESS IN HARD CEILING AREAS. PANEL LOCATIONS SHALL BE SUBMITTED TO AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
- PROVIDE ELECTRICAL FINAL CONNECTIONS TO ELECTRICAL EQUIPMENT AND OUTLETS FOR A COMPLETE AND OPERABLE SYSTEM UNLESS OTHERWISE NOTED.
- PENETRATIONS OF FLOORS, ROOF, WALLS, AND WALL MEMBRANES REQUIRED TO HAVE A FIRE-RESISTANCE RATINGS SHALL BE PROTECTED WITH THROUGH-PENETRATION FIRE STOPS SUITABLE FOR THE METHOD OF PENETRATION. THROUGH-PENETRATION FIRE STOPS SHALL BE TESTED IN ACCORDANCE WITH UL AND CBC REQUIREMENTS.
- PROVIDE HOUSEKEEPING PADS MINIMUM 4" ABOVE FINISHED FLOOR FOR INTERIOR MOUNTED EQUIPMENT AND 4" ABOVE FINISHED GRADE FOR EXTERIOR MOUNTED EQUIPMENT. PROVIDE A MINIMUM OF 6" FROM EDGE OF PAD ON ALL SIDES, UNLESS OTHERWISE NOTED. FOR PAD DETAIL SEE STRUCTURAL DRAWINGS.
- VISIT THE JOBSITE PRIOR TO SUBMITTING PROPOSAL TO BECOME FAMILIAR WITH EXISTING CONDITIONS.
- PROVIDE ENGRAVED LAMINATED PLASTIC NAMEPLATES FOR THE FOLLOWING EQUIPMENT INCLUDING BUT NOT LIMITED TO: METERS, PANELBOARDS, SWITCHBOARDS INCLUDING EACH INDIVIDUAL DEVICE OR PIECE OF EQUIPMENT WITHIN THE SWITCHBOARD, MOTOR CONTROL CENTERS (MCC) INCLUDING EACH DEVICE WITHIN THE MCC, ENCLOSED SWITCHES, STARTERS, CONTACTORS, CIRCUIT BREAKERS AND TRANSFORMERS.
- SEE DRAWINGS AND SPECIFICATIONS OF OTHER DIVISIONS FOR ADDITIONAL CONNECTION REQUIREMENTS FOR CONTROL DEVICES AND EQUIPMENT, INCLUDING BUT NOT LIMITED TO CONTROL PANELS & TRANSFORMERS, 120V FOR CONTROL SYSTEM SWITCHES, THE CLOCK, VALVES, STATTS, RELAYS, DUCT SMOKE DETECTORS, ETC. VERIFY FINAL CONTROL WIRING REQUIREMENTS WITH CONTRACTORS OF OTHER DIVISIONS PRIOR TO COMMENCEMENT OF WORK, AND PROVIDE NECESSARY DEVICES AND CONNECTIONS.
- EQUIPMENT SHALL BE BONDED AND GROUNDED IN ACCORDANCE WITH STATE, COUNTY, CITY, AND LOCAL CODES. APPLICABLE CODES AND JURISDICTIONS. REFER TO SPECIFICATIONS FOR DETAILS. ALL FEEDERS AND BRANCH CIRCUIT CONDUITS SHALL BE PROVIDED WITH AN INSULATED EQUIPMENT BONDING CONDUCTOR.
- EQUIPMENT SHALL BE FULLY RATED FOR THE MAXIMUM SHORT CIRCUIT CURRENT. REFER TO FEEDER LOAD SUMMARY AND CALCULATIONS TABLES FOR VOLTAGE DROP AND AVAILABLE FAULT CURRENT VALUES. FEEDER LENGTHS SHOWN ARE ESTIMATES FOR CALCULATION PURPOSES ONLY. CONTRACTOR SHALL DETERMINE ACTUAL LENGTHS BASED ON ROUTING AND FIELD CONDITIONS.
- CONTRACTORS SHALL BE LICENSED IN THE STATE OF CALIFORNIA AND WORKERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF APPRENTICESHIP STANDARDS AND CALIFORNIA LABOR CODE SECTION 35099.
- PRIOR TO PLANNING EXCAVATION WORK, RETAIN THE SERVICES OF AN INDEPENDENT REGISTERED ELECTRICAL LOCATOR TO PROVIDE THE EXACT LOCATION OF UNDERGROUND UTILITY SERVICES AND VERIFY POSSIBLE CONFLICTS WITH THAT WHICH IS INDICATED ON THE SITE OR OTHER UTILITY DRAWINGS. REPORT CONFLICTS TO THE OWNER AND ARCHITECT WITHIN 5 DAYS OF THE COMPLETION OF THE SURVEY.
- PROVIDE WIRING FOR EQUIPMENT FURNISHED BY OTHER DIVISIONS. THE TERM "WIRING" AS USED HEREIN, INCLUDES FURNISHING AND INSTALLING CONDUIT, WIRE, JUNCTION BOXES, DISCONNECTS ETC., AND MAKING CONNECTIONS TO THE EQUIPMENT. BE RESPONSIBLE FOR PROPER WIRING AND NECESSARY ELECTRICAL ADJUSTMENTS TO EQUIPMENT CONFORMING TO SPECIFIED REQUIREMENTS OF THE EQUIPMENT. REVIEW DRAWINGS OF OTHER DIVISIONS TO ASCERTAIN THE REQUIREMENTS OF EQUIPMENT BEING FURNISHED AND/OR INSTALLED BY THAT DIVISION PRIOR TO BID. COORDINATE EXACT DETAILS AND LOCATIONS OF BID. EQUIPMENT AND DEVICES PRIOR TO ROUGH IN WITH OTHER DIVISIONS. PROVIDE FLUSH MOUNTED BRACKETS AND 3/4" CONDUIT ONLY STUBBED INTO CEILING SPACE (ABOVE OR LEVEL BELOW) FOR TEMPERATURE AND CO2 SENSORS, AND/OR CONDUIT RACEWAYS AS SHOWN ON THESE DRAWINGS; OTHER DIVISIONS WILL PROVIDE CONDUIT CONTINUATIONS, CONTROL WIRING, AND TERMINATIONS TO EQUIPMENT AND DEVICES UNLESS NOTED OTHERWISE.
- PROVIDE REQUIRED HARDWARE FOR CONNECTION TO DEVICES WHICH LUGS DO NOT ACCEPT OVERSIZED CONDUCTORS. SUBMIT TO DISTRICT PROJECT MANAGER FOR APPROVAL APPLICABLE VOLTAGE DROP CALCULATIONS PRIOR TO REDUCING CONDUCTOR SIZE.
- CONDUITS EMBEDDED WITHIN CONCRETE FLOORS SHALL BE ROUTED PARALLEL TO OR AT RIGHT ANGLES TO STRUCTURAL MEMBERS AND SHALL HAVE A MINIMUM OF 1 1/2" COVER ABOVE AND BELOW THE CONDUIT.
- ADJACENT LIGHT SWITCHES AND OTHER WIRING DEVICES SHALL BE PROVIDED WITH A SINGLE COVER PLATE, BARRIERS SHALL BE PROVIDED IN BOXES FOR DIFFERENT VOLTAGES AS REQUIRED. VERIFY COLOR WITH DISTRICT PROJECT MANAGER.
- WALL OUTLETS SHALL NOT BE INSTALLED IN A BACK TO BACK CONFIGURATION BUT SHALL BE INSTALLED SEPARATED HORIZONTALLY BY A MINIMUM OF 18 INCHES IN NON-FIRE-RATED WALLS, AND A MINIMUM OF 24 INCHES IN FIRE RATED WALLS. WHERE THESE SEPARATIONS ARE NOT POSSIBLE TO MAINTAIN, PROVIDE SOUND DEADENING FIRE RATED PADS AROUND THE BOXES.
- 125 VOLT, 20 AMPERE RATED, SINGLE PHASE DUPLEX RECEPTACLES WITH GROUND FAULT INTERRUPTER PROTECTIONS SHALL BE INSTALLED OUTDOORS, WITHIN 6 FEET OF A SINK OR WET EQUIPMENT OR OTHER SOURCE OF WATER, KITCHENS, AND IN SURFACE METAL RACEWAYS OR ENCLOSURES. FEED THROUGH WIRING OF GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLES SHALL NOT BE PERMITTED UNLESS NOTED OTHERWISE.
- PROVIDE BRANCH CIRCUIT CONDUCTORS SIZED SO THAT VOLTAGE DROP DOES NOT EXCEED 3% TO THE LAST DEVICE.
- BRANCH CIRCUITS WITH MORE THAN THREE CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT SHALL HAVE THEIR AMPACITY DERATED PER ELECTRICAL CODE SECTION 310(B)(2).
- COMPLETE, POST, SUBMIT, OR MAKE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPROPRIATE INSPECTIONS OR BUILDING OWNER, DOCUMENTATION IN ACCORDANCE WITH TITLE

- DELIVER COMPLETE AND ACCURATE RECORD DRAWINGS (AS-BUILT) TO BUILDING OWNER WITHIN 90 DAYS OF RECEIVING FINAL OCCUPANCY PERMIT FOR THE ENFORCING AGENCY (AUTHORITY HAVING JURISDICTION). IF ANY CHARACTERISTIC IS MATERIALLY CHANGED BEFORE FINAL CONSTRUCTION AND INSTALLATION, SUCH THAT THE BUILDING MAY NO LONGER COMPLY WITH TITLE 24, PART 6, THE BUILDING MUST BE BROUGHT BACK INTO COMPLIANCE, AND SO INDICATED ON AMENDED PLANS, SPECIFICATIONS, AND CERTIFICATE(S) OF COMPLIANCE AND SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. SUCH CHARACTERISTICS SHALL INCLUDE THE EFFICIENCY (OR OTHER CHARACTERISTIC REGULATED BY PART 6) OF EACH DEVICE.
- FOR ELECTRICAL WORK RELATED TO SPECIALTY SYSTEMS NOT SHOWN ON THESE DRAWINGS, REFER TO DRAWINGS AND SPECIFICATIONS FOR THE FOLLOWING SYSTEMS:
  - FIRE ALARM - "F" SERIES SHEETS
- POWER ACTIVATED FASTENERS ARE NOT PERMITTED FOR USE ON THIS PROJECT.
- PROVIDE CONDUIT PENETRATIONS THROUGH ROOF FOR FIRE ALARM BELL TRANSFORMER ON ROOF.
- PERFORM AN ARC FLASH ANALYSIS STUDY IN CONJUNCTION WITH THE SHORT CIRCUIT STUDY AND PROTECTIVE DEVICE COORDINATION STUDY. THIS ARC FLASH ANALYSIS STUDY TO BE PERFORMED IN ACCORDANCE WITH IEEE STANDARD 1584. DETERMINE THE FOLLOWING FOR EACH BUS ANALYZED:
  - FLASH HAZARD PROTECTION BOUNDARY
  - INCIDENT ENERGY LEVEL
  - REQUIRED PERSONAL PROTECTIVE EQUIPMENT CATEGORY
  - TYPE OF FIRE RATED CLOTHING
  - LIMITED APPROACH BOUNDARY
  - RESTRICTED APPROACH BOUNDARY
- PRODUCE AN ARC FLASH WARNING LABEL FOR EACH PIECE OF ELECTRICAL EQUIPMENT WITH IDENTIFICATION AND RESULTANT VALUES OF THE ARC FLASH STUDY ITEMS LISTED ABOVE FOR THAT EQUIPMENT. INCLUDE THE SYSTEM OPERATING VOLTAGE AND DATE OF ISSUE. LABELS SHALL BE PRINTED IN COLOR ON ADHESIVE BACKED NYLON LABELS AND APPLIED TO EQUIPMENT FRONT.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" STEEL, UNLESS OTHERWISE NOTED.
- MINIMUM WIRE SIZE SHALL BE AWG #12 MINIMUM, UNLESS OTHERWISE NOTED.
- WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS AND/OR DELAYS.
- ALL WIRE SHALL BE COPPER.
- WHEN NECESSARY ADJUST FIXTURE PLACEMENT TO FIELD CONDITIONS.
- RECEPTACLES SHALL BE 20 AMPERE, HEAVY DUTY, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY THE DISTRICT PROJECT MANAGER 24 HOURS PRIOR TO PLANNED INSPECTIONS.
- IMMEDIATELY NOTIFY THE DISTRICT PROJECT MANAGER UPON DISCOVERY OF CONFLICTS.
- DAMAGE TO EXISTING FACILITIES INCLUDING BUT NOT LIMITED TO FENCES, WALLS, SIDEWALK AND OTHER PAVEMENT SURFACES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
- BE RESPONSIBLE FOR WORKING CONDITIONS ON THE JOB SITE. INCLUDING BUT NOT LIMITED TO THE SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK, INCLUDING OUTSIDE OF NORMAL WORKING HOURS.
- THE ELECTRICAL SWITCHES AND CONTROLS TO BE USED BY THE OCCUPANTS OF THE ROOM OR AREA TO CONTROL LIGHTING AND VENTILATING EQUIPMENT SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF OUTLET BOX NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM.
- ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPS OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISH FLOOR OR WORKING PLATFORM.
- MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

COMPONENT ANCHORAGE NOTE:

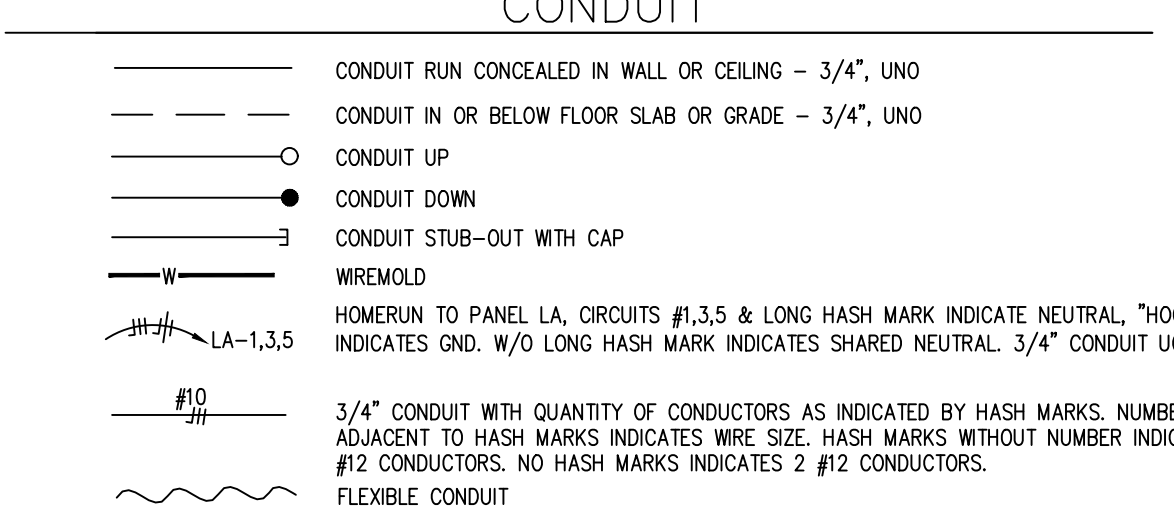
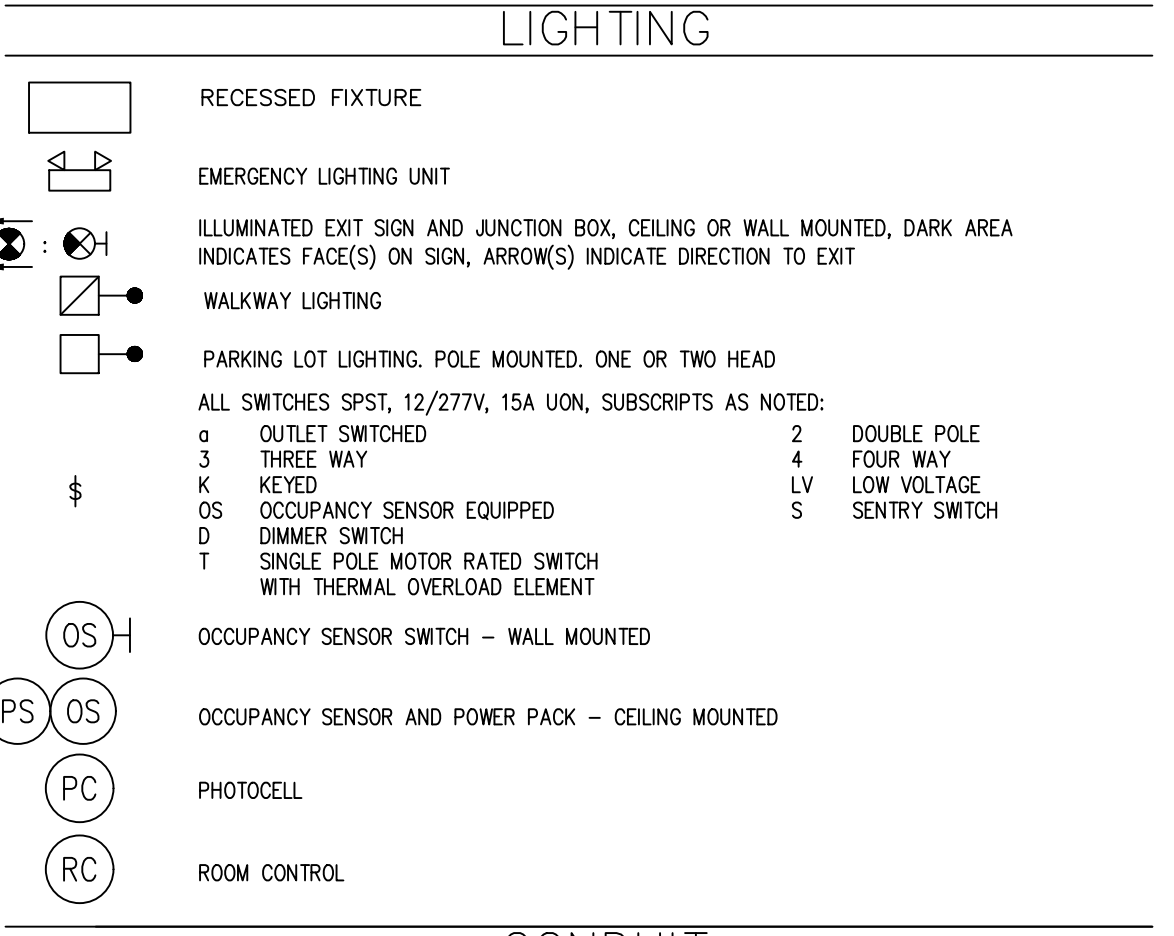
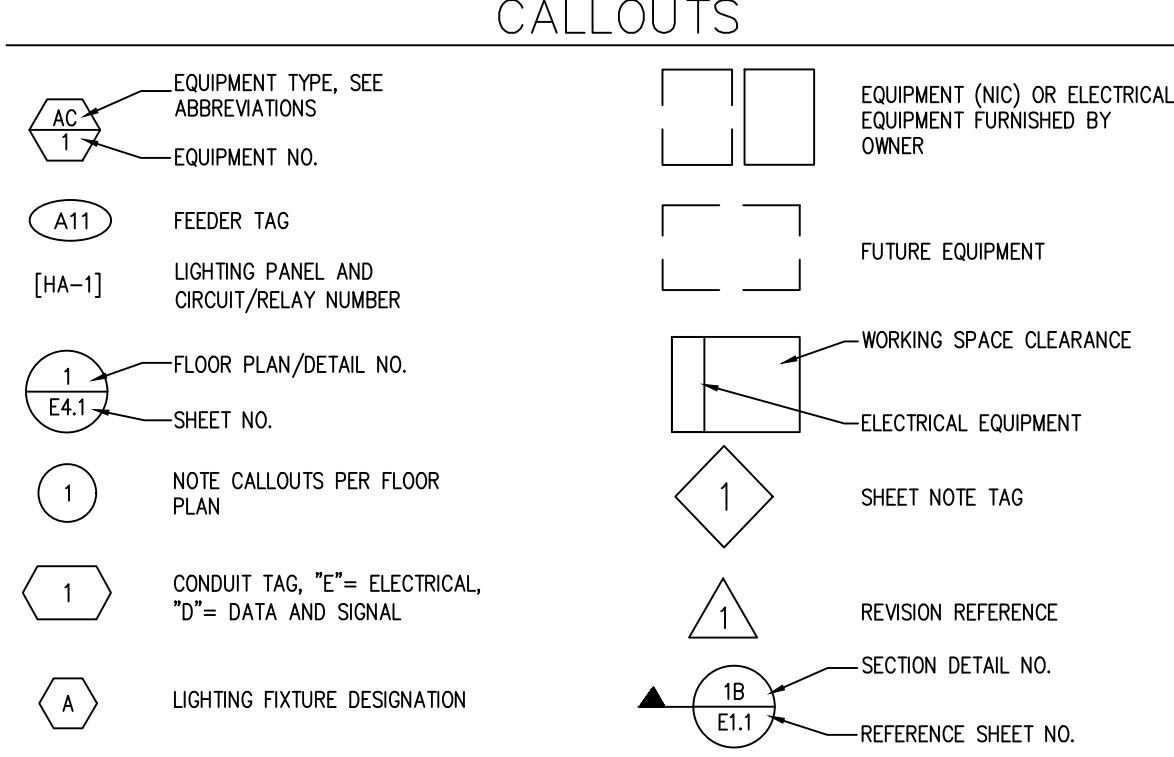
ALL PERMANENT EQUIPMENT AND COMPONENTS TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. PERMANENTLY ATTACHED SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.

TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

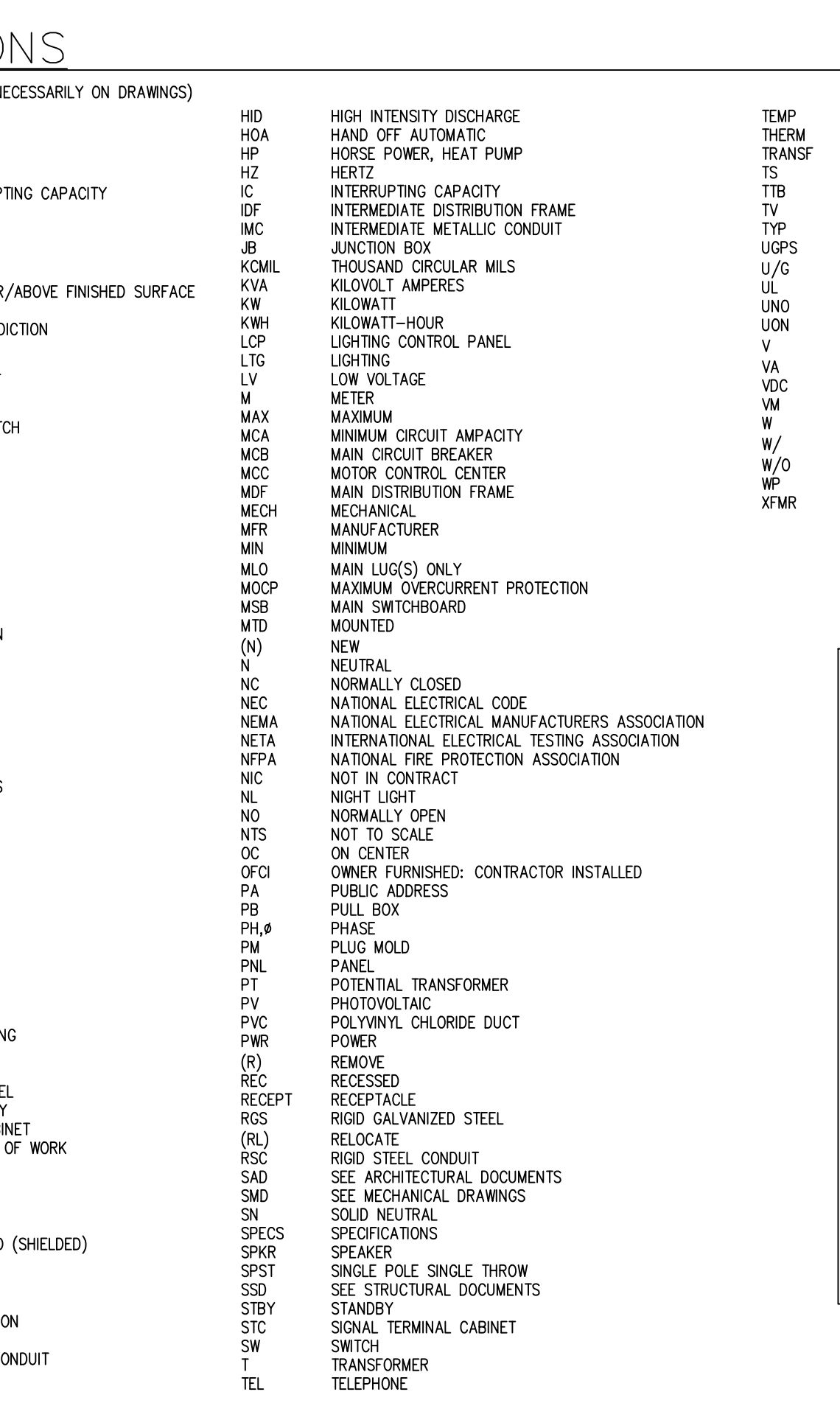
OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHDP PER-APPROVAL (OPM#) # \_\_\_\_\_

MM MM MD PP EE



LEGEND (ALL SYMBOLS SHOWN ARE NOT NECESSARILY ON DRAWINGS)



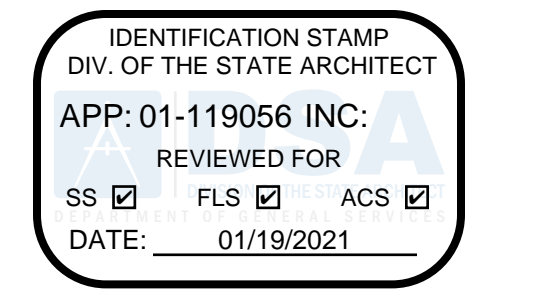
ABBREVIATIONS (ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY ON DRAWINGS)

A	AMPERE	HID	HIGH INTENSITY DISCHARGE	TEMP	TEMPERATURE
AC	ALTERNATING CURRENT	HO	HAND OFF AUTOMATIC	THERM	THERMIST
ADJ	ADJACENT	HP	HORN, POWER, HEAT PUMP	TRANSF	TRANSFORMER
AF	AMP FRAME/AMP TRIP	HZ	HERTZ	TS	TAMPER SWITCH
AF/AT	ABOVE FINISHED FLOOR	IC	INTERRUPTING CAPACITY	TV	TELEVISION
AFS	AUTOMATIC FIRE SPRINKLER/ABOVE FINISHED SURFACE	IB	INTERMEDIATE METALLIC CONDUIT	TVS	TYPICAL
AFG	ABOVE FINISHED GRADE	JC	JUNCTION BOX	UGP	UNDERGROUND PULL SECTION
AGL	ABOVE GROUND LEVEL	KCMIL	KILOVOLT CIRCULAR MILS	UG	UNDERGROUND
AHJ	AUTHORIZES HAVING JURISDICTION	KV	KILOVOLT AMPERES	UN	UNLESS NOTED OTHERWISE
APPROX	APPROXIMATE	KWH	KILOWATT-HOUR	UN	UNLESS OTHERWISE NOTED
ARCH	ARCHITECT/ARCHITECTURAL	LCF	LIGHTING CONTROL PANEL	V	VOLT/VOLTAGE
AS	AMPERES SWITCH	LTG	LIGHTING	VA	VOLT AMPERE(S)
AS/AF	AMP SWITCH/AMP FUSE	LV	LOW VOLTAGE	VDC	VOLTAGE DIRECT CURRENT
ATS	AUTOMATIC TRANSFER SWITCH	M	METER	VM	VOLT METER
AUX	AUXILIARY	MAX	MAXIMUM	W	WATT
AWG	AMERICAN WIRE GAUGE	MCA	MINIMUM CIRCUIT AMPACITY	W/O	WITHOUT
BCW	BARE COPPER WIRE	MCB	MINI CIRCUIT BREAKER	W/O	WITHOUT
BLDG	BUILDING	MCC	MOTOR CONTROL CENTER	WF	WEATHERPROOF
BLDG	BUILDING CONDUIT	MDF	MAIN DISTRIBUTION FRAME	WF	WEATHERPROOF
CAB	CABINET	MECH	MECHANICAL	XFMR	TRANSFORMER
CATV	CABLE TELEVISION	MFR	MECHANICAL FURNISHER		
CB	CIRCUIT BREAKER	MIN	MINIMUM		
CB	CIRCUIT BREAKER	MLO	MAIN LUG(S) ONLY		
CB	CIRCUIT BREAKER	MOPP	MAXIMUM OVERCURRENT PROTECTION		
CB	CIRCUIT BREAKER	MSB	MAIN SWITCHBOARD		
CB	CIRCUIT BREAKER	MNTD	MOUNTED		
CB	CIRCUIT BREAKER	(N)	NEW		
CB	CIRCUIT BREAKER	NC	NEUTRAL		
CB	CIRCUIT BREAKER	NC	NORMALLY CLOSED		
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE		
CB	CIRCUIT BREAKER	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		
CB	CIRCUIT BREAKER	NETA	INTERNATIONAL ELECTRICAL TESTING ASSOCIATION		
CB	CIRCUIT BREAKER	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION		
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT		
CB	CIRCUIT BREAKER	NL	NIGHT LIGHT		
CB	CIRCUIT BREAKER	NO	NORMALLY OPEN		
CB	CIRCUIT BREAKER	NTS	NOT TO SCALE		
CB	CIRCUIT BREAKER	OC	ON CENTER		
CB	CIRCUIT BREAKER	OPW	OWNER FURNISHED: CONTRACTOR INSTALLED		
CB	CIRCUIT BREAKER	PA	PUBLIC ADDRESS		
CB	CIRCUIT BREAKER	PB	PULL BOX		
CB	CIRCUIT BREAKER	PH	PHASE		
CB	CIRCUIT BREAKER	PM	PLUG MOLD		
CB	CIRCUIT BREAKER	PNL	PANEL		
CB	CIRCUIT BREAKER	PT	POTENTIAL TRANSFORMER		
CB	CIRCUIT BREAKER	PT	PHOTOMETRIC		
CB	CIRCUIT BREAKER	REC	RECESSED		
CB	CIRCUIT BREAKER	RECEPT	RECEPTACLE		
CB	CIRCUIT BREAKER	RGS	RIGID GALVANIZED STEEL		
CB	CIRCUIT BREAKER	(RL)	RELLOCATE		
CB	CIRCUIT BREAKER	RSC	RIGID STEEL CONDUIT		
CB	CIRCUIT BREAKER	SAD	SEE ARCHITECTURAL DOCUMENTS		
CB	CIRCUIT BREAKER	SD	SEE MECHANICAL DRAWINGS		
CB	CIRCUIT BREAKER	SN	SOLID NEUTRAL		
CB	CIRCUIT BREAKER	SPEC	SPECIFICATIONS		
CB	CIRCUIT BREAKER	SPKR	SPEAKER		
CB	CIRCUIT BREAKER	SPST	SINGLE POLE SINGLE THROW		
CB	CIRCUIT BREAKER	SSD	SEE STRUCTURAL DOCUMENTS		
CB	CIRCUIT BREAKER	STBY	STANDBY		
CB	CIRCUIT BREAKER	STC	SIGNAL TERMINAL CABINET		
CB	CIRCUIT BREAKER	SW	SWITCH		
CB	CIRCUIT BREAKER	T	TRANSFORMER		
CB	CIRCUIT BREAKER	TEL	TELEPHONE		

SHEET INDEX: 30 SHEETS

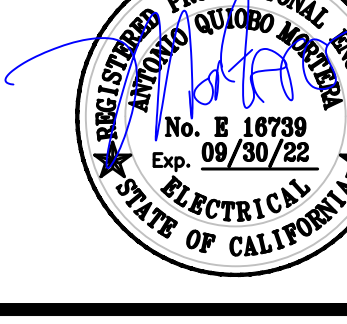
E000	LEGEND, NOTES & SYMBOLS
E001	SCHEDULES & DETAILS
E010	OVERALL SITE PLAN
E102	SITE PHOTOMGRAM
E103	BUILDING EGRESS PHOTOMETRICS
E121	CLASSROOM BUILDING - POWER AND SIGNAL PLAN
E130	CLASSROOM BUILDING - SECURITY PLAN
E141	CLASSROOM BUILDING - LIGHTING PLAN
E142	CLASSROOM BUILDING - PHOTOMETRICS
E143	GREENHOUSE BUILDING - POWER AND SIGNAL PLAN
E144	GREENHOUSE BUILDING - LIGHTING PLAN
E145	SHADE HOUSE - POWER & SIGNAL PLAN
E146	SHADE HOUSE LIGHTING PLAN
E147	SITE PHOTOMGRAM
E148	EQUIPMENT STORAGE BUILDING - LIGHTING PLAN
E149	SHADE HOUSE LIGHTING PLAN
E150	ELECTRICAL DETAILS - SECURITY
E151	ELECTRICAL DETAILS - SECURITY
E152	ELECTRICAL DETAILS - SECURITY
F000	FIRE ALARM LEGEND, NOTES AND SYMBOLS
F002	FIRE ALARM BATTERY CALC
F003	FIRE ALARM BATTERY CALC
F004	FIRE ALARM BATTERY CALC
F005	FIRE ALARM BATTERY CALC
F006	FIRE ALARM BATTERY CALC
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F038	FIRE ALARM BATTERY CALC
F039	FIRE ALARM BATTERY CALC
F040	FIRE ALARM BATTERY CALC

DSA:



4750 Willow Road #250 Pleasanton, CA 94568 - T 925.648.8800  
3099 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:



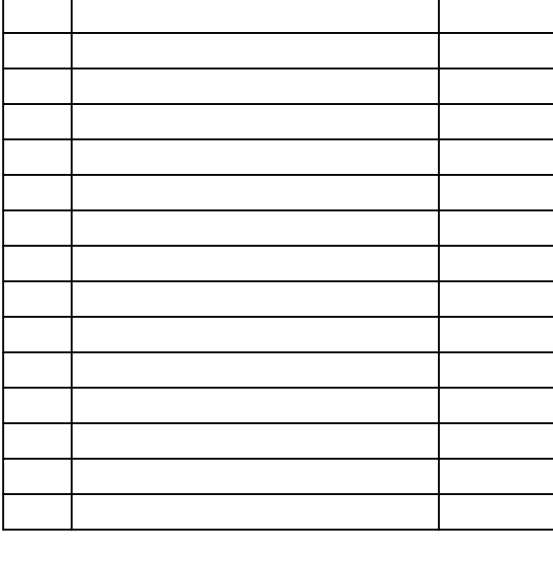
CONSULTANT:



METRO POWER ENGINEERS, INC.

3150 HILL TOP MALL ROAD, SUITE 222  
RICHMOND, CA 94806  
TEL: 510.275.3000 FAX: 510.275.3002

ITEM	REVISION / ISSUE	DATE



KEY PLAN:

CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

LEGEND, NOTES & SYMBOLS

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_

DATE: 01/14/2021 PROJECT NO: C9508

SHEET NO:

E000



MISCELLANEOUS EQUIPMENT SCHEDULE										
TAG	DESCRIPTION	LOAD	VOLT Φ HZ	CONTROLS	STARTER	DISC. DISC.	MOTOR TD	① FUSE	REMARKS	
FC A1	FAN COIL UNIT - A1	5.63 MCA	208 1Φ 60	BY MECH	-	-	30	15		
FC A2	FAN COIL UNIT - A2	1.45 MCA	208 1Φ 60	BY MECH	-	-	30	15		
FC A3	FAN COIL UNIT - A3	0.19 MCA	208 1Φ 60	BY MECH	-	-	30	15		
FC A4	FAN COIL UNIT - A4	1.0 MCA	208 1Φ 60	BY MECH	-	-	30	15		
FC A5	FAN COIL UNIT - A5	1.0 MCA	208 1Φ 60	BY MECH	-	-	30	15		
CU A1	CONDENSING UNIT - A1	19.0 MCA	208 1Φ 60	BY MECH	-	-	30	26		
HP A1	HEAT PUMP - A1	23 MCA	208 1Φ 60	BY MECH	-	-	60	35		
BC A1	BRANCH CONTROLLER - A1	0.38 MCA	208 1Φ 60	BY MECH	-	-	30	15		
SF A1	SUPPLY FAN - A1	12W	115 1Φ 60	BY MECH	☑	-	-	-		
EF A1	EXHAUST FAN - A1	11W	120 1Φ 60	BY MECH	☑	-	-	-		
EF A2	EXHAUST FAN - A2	11W	120 1Φ 60	BY MECH	☑	-	-	-		
EF A3	EXHAUST FAN - A3	11W	120 1Φ 60	BY MECH	☑	-	-	-		
EF A4	EXHAUST FAN - A4	8W	120 1Φ 60	BY MECH	☑	-	-	-		
EF A5	EXHAUST FAN - A5	8W	120 1Φ 60	BY MECH	☑	-	-	-		
ERV A1	ENERGY RECOVERY VENTILATOR	11 MCA	208 1Φ 60	BY MECH	-	-	30	20		
EWH A1	WATER HEATER 1	3000W	208 1Φ 60	BY MECH	-	-	30	20		

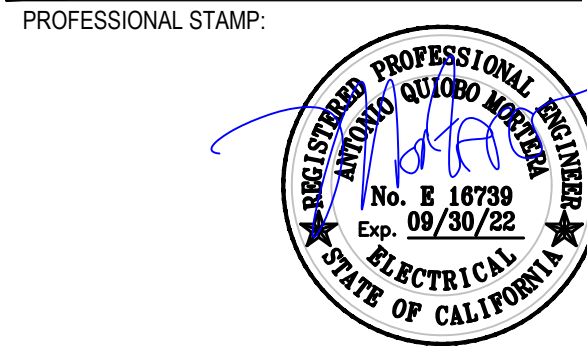
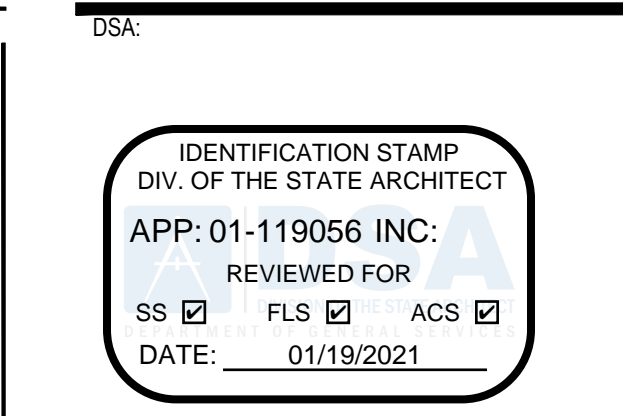
① VERIFY FUSE SIZE WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.

## LIGHTING FIXTURE SCHEDULE ①

NOTE: SEE ARCHITECT FOR FIXTURE COLOR SELECTION

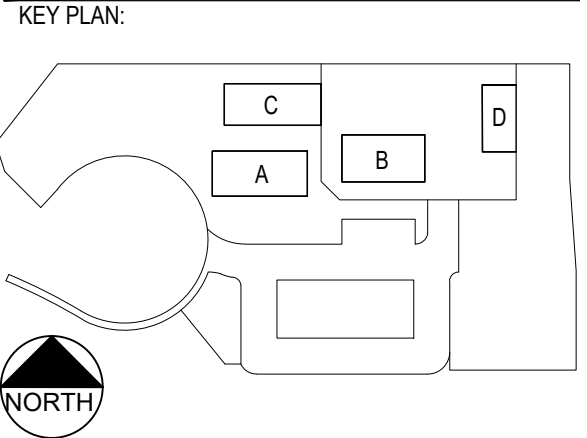
SYM	TAG	DESCRIPTION	MANUFACTURER CATALOG NUMBER	LAMPS	W	VOLTS				MOUNTING	WEIGHT (LBS)	REMARKS
						120	208	277	480			
Ⓐ		DIRECT/INDIRECT LINEAR LED, 0-10V DIM, SWIVEL CANOPY AND AC CABLE, WHITE FINISH, INTEGRAL DIMMING AND OCCUPANCY SENSORS	CORELITE DIVIDE SERIES DSI-WS-50L-840-1-D-UNV- STD-FC-W-AC120-T9-8	LED 4000K	9.5W /LF		●			PENDANT	6LB/FT	EL14W FOR UNITS W/EM OPTION
Ⓐ		DIRECT/INDIRECT LINEAR LED, 0-10V DIM, WHITE FINISH, INTEGRAL DIMMING AND OCCUPANCY SENSORS	FINELITE SERIES 16 S16LED-1D-DCO-8-4E-H- 840-TDO-120-SC-FA- FE-C2-0BD-0B0	LED 4000K	10.8 W/LF		●			SURFACE	3LB/FT	EL14W FOR UNITS W/EM OPTION
Ⓑ		NARROW SURFACE WRAPAROUND, LED, 0-10V DIM, INTEG BATTERY PACK, DIFFUSED LENS	EATON LIGHTING FVS4M.4LD4.1.STD.40.P125. EDD1, MVOLT	LED 4000K	39	●		●		SURFACE	3LB/FT	EL14W FOR UNITS W/EM OPTION
Ⓒ		4' VANITY LIGHT WITH DIFFUSED LENS, 0-10V DIM	EATON LIGHTING FVS4M.4LD4.1.STD.40.P125.EDD1 OR WAC EQUAL	LED 4000K	33.6	●				WALL	3LB/FT	EMERGENCY FIXTURE (EL14W) SEE AA201/202FOR MTG HT
Ⓓ		SLIM UNDERCABINET LED TASK LIGHTING, 0-10 DIM, ACRYLIC LENS	EATON LIGHTING HU1018D940P	LED 4000K	8W /LF		●			SURFACE	3LB/FT	
Ⓔ		EDGEKIT EXIT SIGN, INTEGRAL BATTERY PACK, SELF DIAGNOSTIC, GREEN TEXT, UNIVERSAL MOUNT, MVOLT	ENVOY LIGHTING EXEL G.C.W.EM.SDT OR EQUAL	LED	5	●		●		UNIVERSAL MOUNTING	2.4LB	EXIT SIGNS
Ⓕ		EXTERIOR SCENCE WITH INTEGRAL BATTERY PACK, MOTION SENSOR/AUTO DIM, POLY CARBONATE LENS, FULL CUT-OFF	VISIONAIRE LIGHTING PGAS-2-T2-32LC-3-4K -UNV-BP	LED 4000K	42	●		●		WALL	20LB	EMERGENCY EXTERIOR FIXTURES (EBPL) SEE AA201/202FOR MTG HT
Ⓖ		VAPOR TIGHT LUMINAIRE, LED, 0-10V DIM, POLYCARBONATE LENS, STAINLESS STEEL MOUNTING BRACKET, COMPLETE WITH INTEGRAL OCCUPANCY SENSOR	LITHONIA LIGHTING VAP-4000LM-FST-WD-MVOLT- G210-40K-80CRI-	LED 4000K	35	●		●		SURFACE	18LB	EMERGENCY EXTERIOR FIXTURES (E15WCP)
Ⓗ		PARKING LOT LIGHTING ON 18' POLE, INTEGRAL AUTO DIM/OCCUPANCY SENSORS, SINGLE HEAD, TYPE III DISTRIBUTION, INTEGRAL GFCI RECEPTACLE AT POLE BASE, COMPLETE	GARDCO LIGHTING GL18.APD-MRO.1.5.160LA- 481A.NW.480.BRP.PC	LED 4000K	160				●	POLE/GROUND SEE DETAIL 12/E500	40LB	INTEGRAL XFMR FOR GFCI RECEPT PER MANUFACTURER

① NOTES: 1. SHADED FIXTURE INDICATES UNIT WITH EMERGENCY BALLAST, BODINE 50 OR APPROVED EQUAL.



CONSULTANT:  
**METRO POWER ENGINEERS, INC.**  
 3150 HILL TOP MALL ROAD, SUITE 22  
 RICHMOND, CA 94806  
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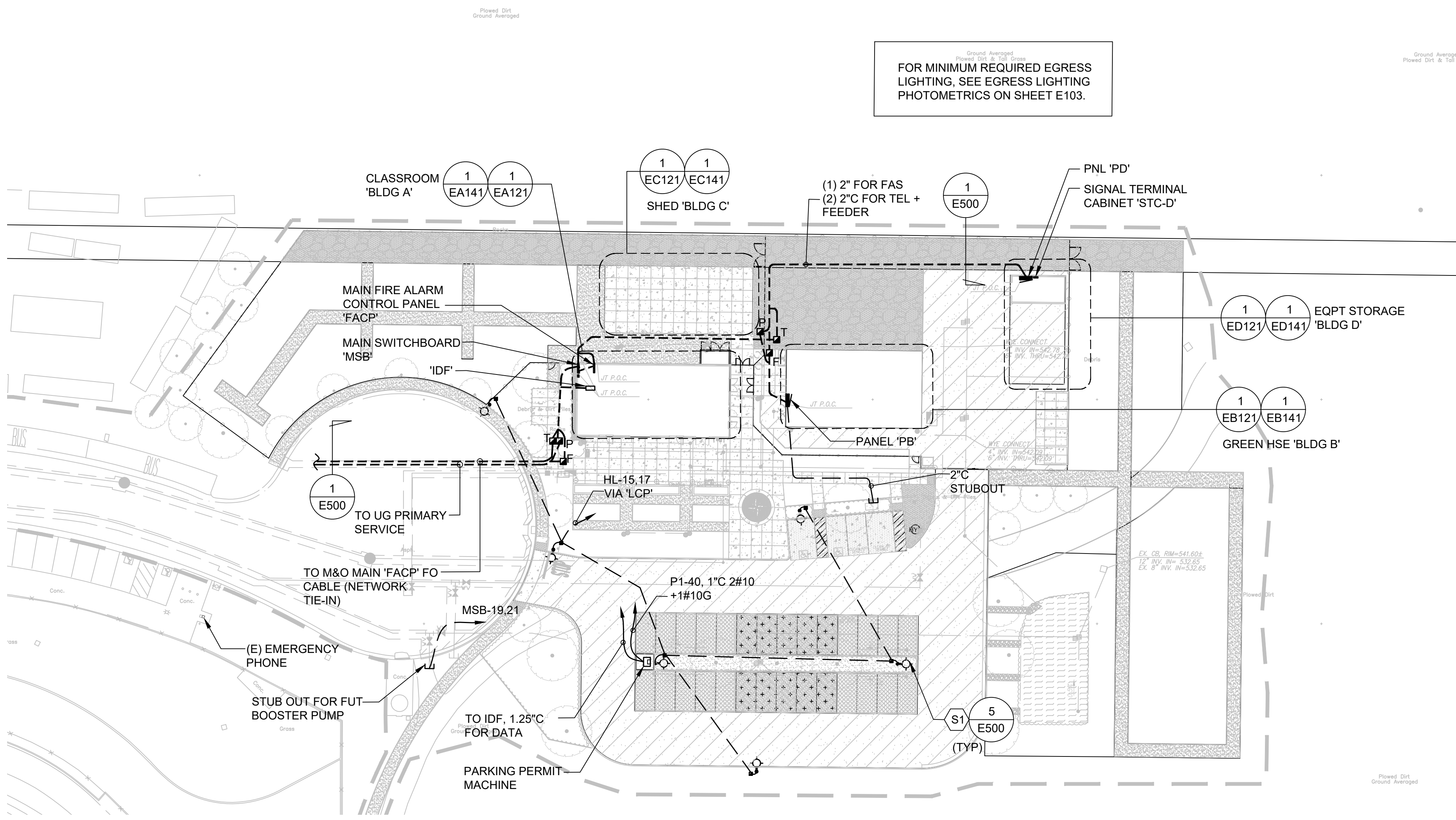


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 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**SCHEDULES**  
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# E001

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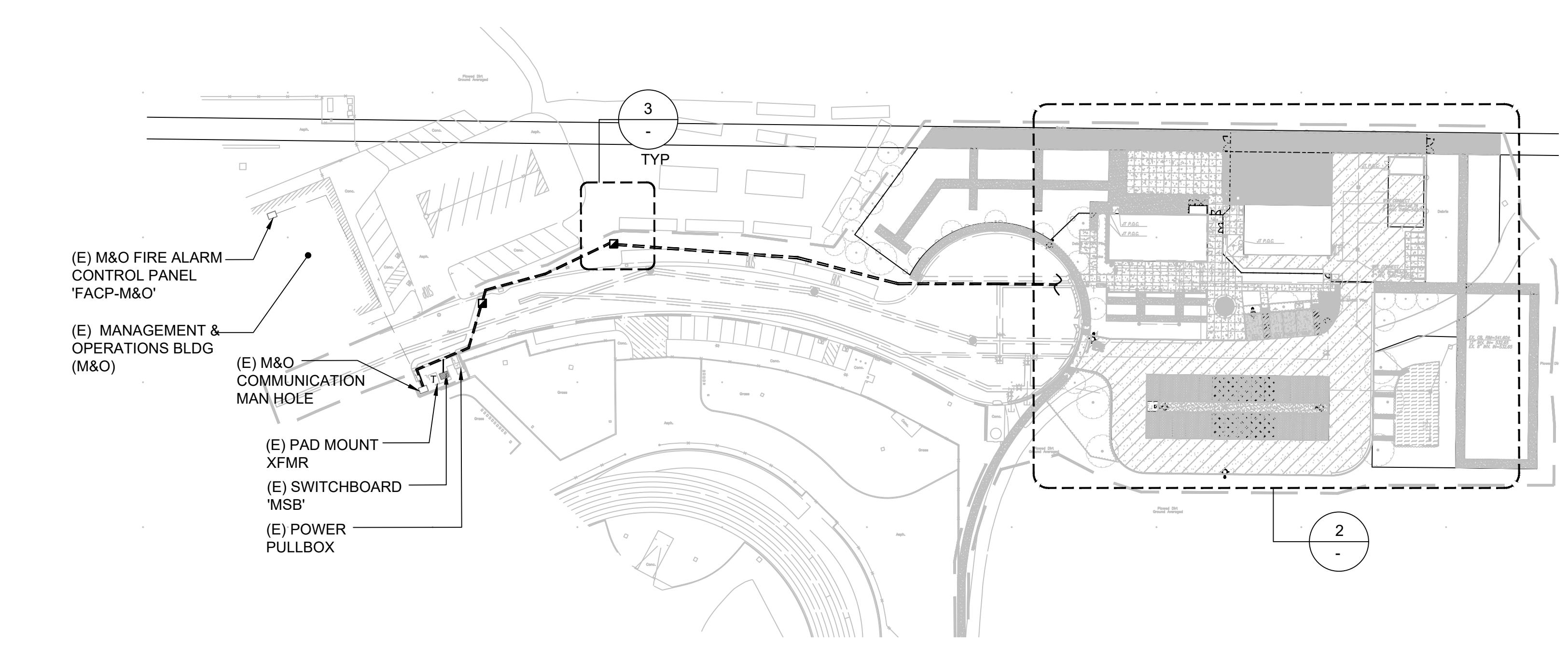
**GENERAL NOTES:**

1. FOR SITE LIGHTING BRANCH CIRCUIT, USE 2"C WITH (2)#10AWG CU + (1)#10 CU G, TYP, UON.

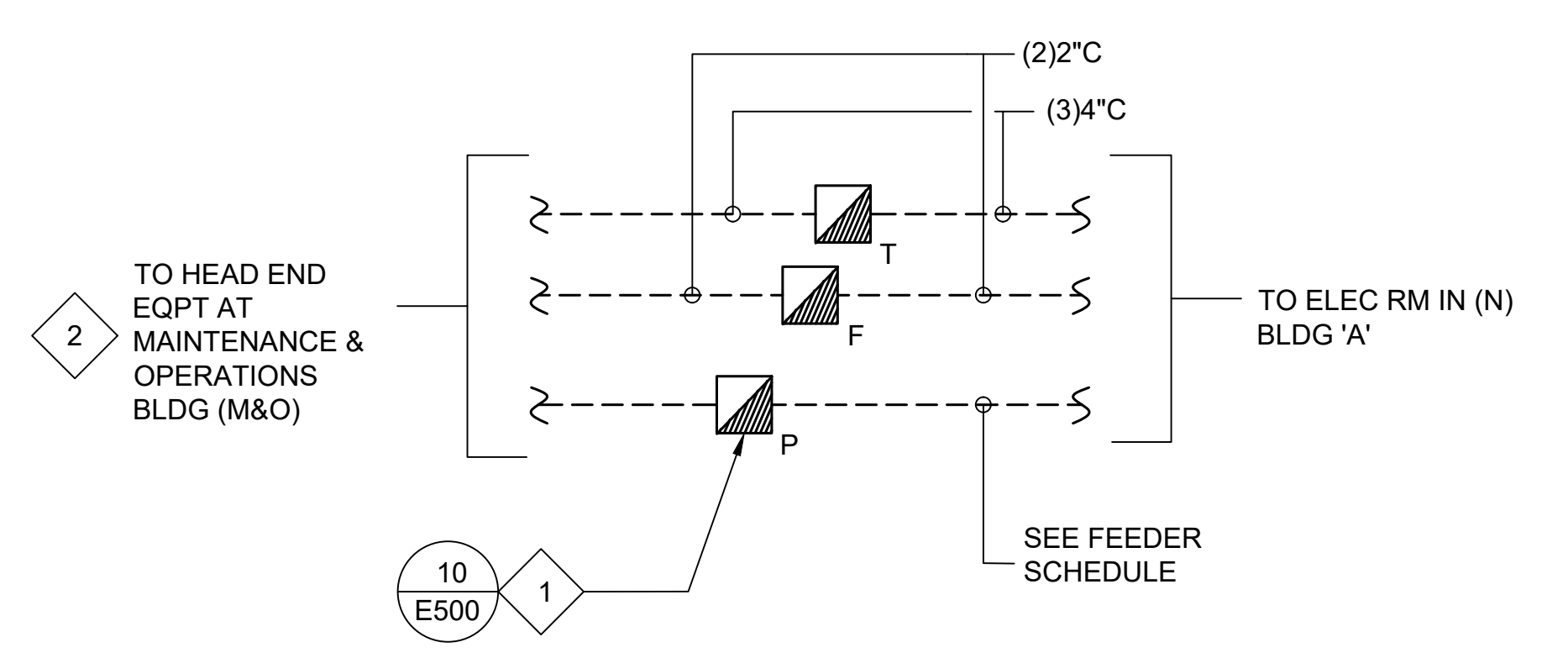
**KEY NOTES:**

1. PROVIDE THE FOLLOWING TRAFFIC RATED CONCRETE PULLBOX.
  - P 48" X 36" FOR POWER, COMPLETE WITH EXTENSION AND COVER WITH MARKED LID 'ELECTRICAL'.
  - F 30" X 24" FOR FIRE ALARM SYSTEM COMPLETE WITH EXTENSION AND COVER, MARKED LID 'FIRE ALARM'.
  - T 48" X 36" FOR TELECOM VAULT WILL BE TRAFFIC RATED AND MARKED WITH LABEL 'COMMUNICATIONS'.
2. PROVIDE HOMERUN TO (E) HEAD END EQUIPMENT. FIELD VERIFY ROUTING OF CONDUIT.

2 ENLARGED SITE PLAN SCALE: 1/32" = 1'-0"



1 OVERALL SITE PLAN SCALE: 1/64" = 1'-0"

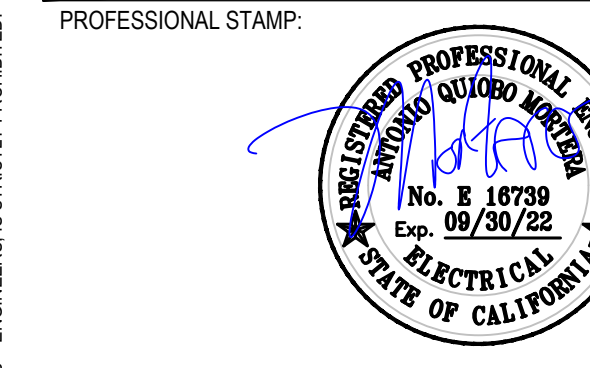


3 PULLBOX LAYOUT PLAN SCALE: NTS

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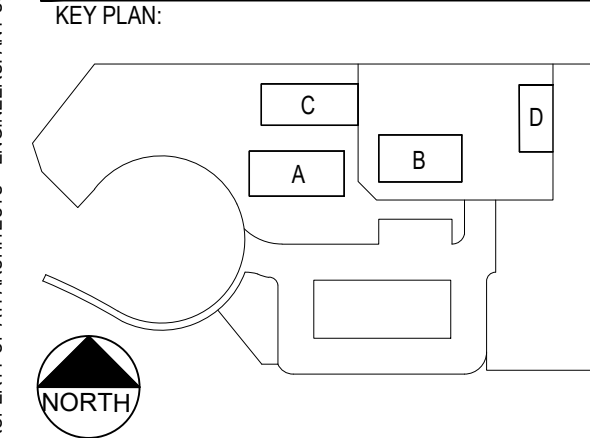


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CONSULTANT:  
**METRO POWER ENGINEERS, INC.**  
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 RICHMOND, CA 94806  
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**OVERALL SITE PLAN**

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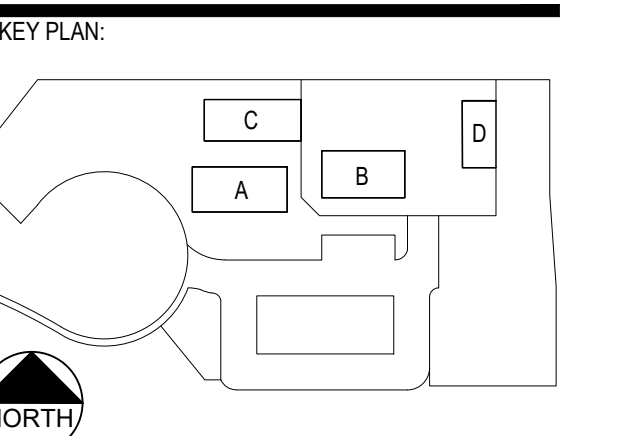


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 CONSULTANT: MPE

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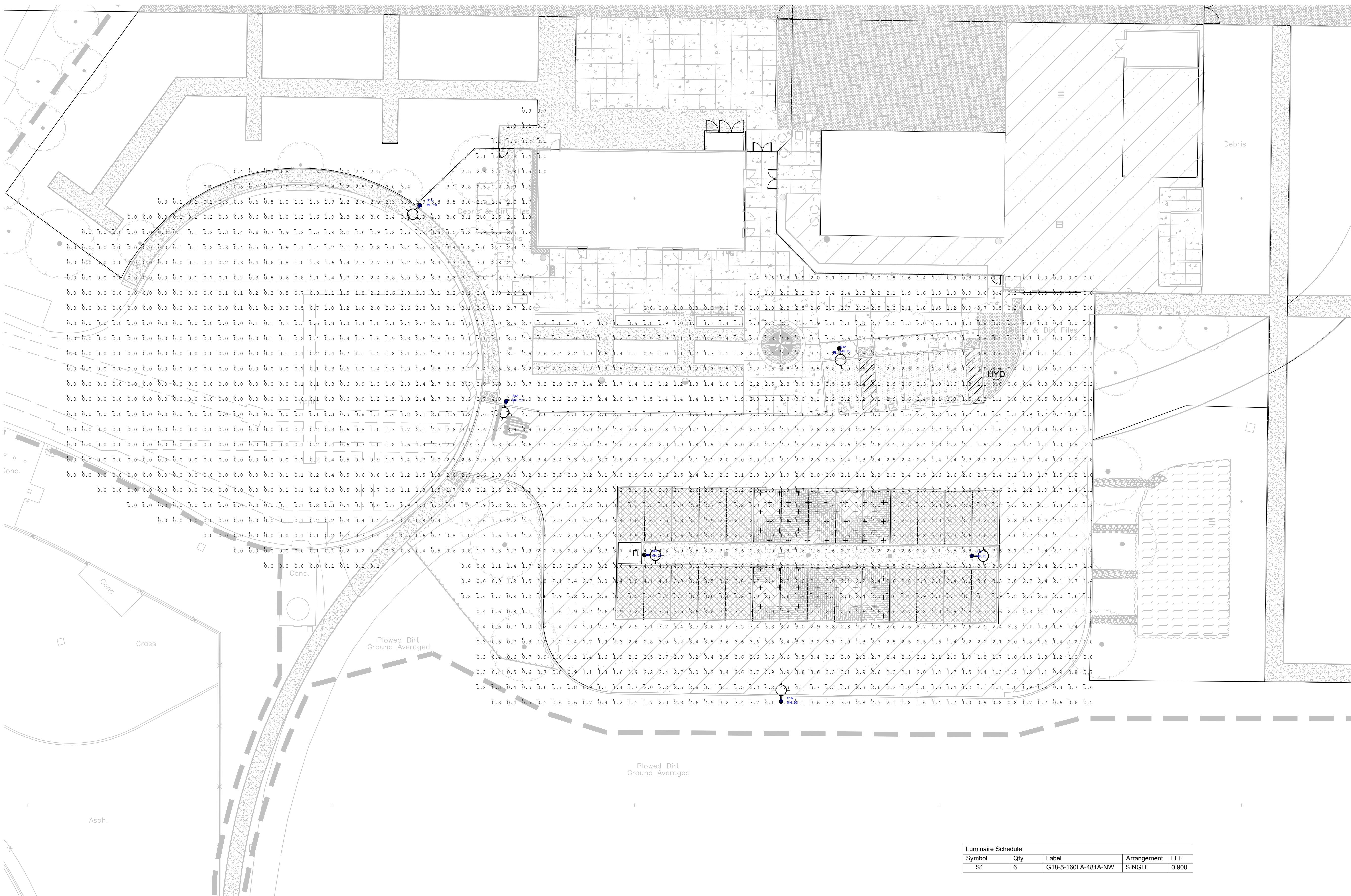
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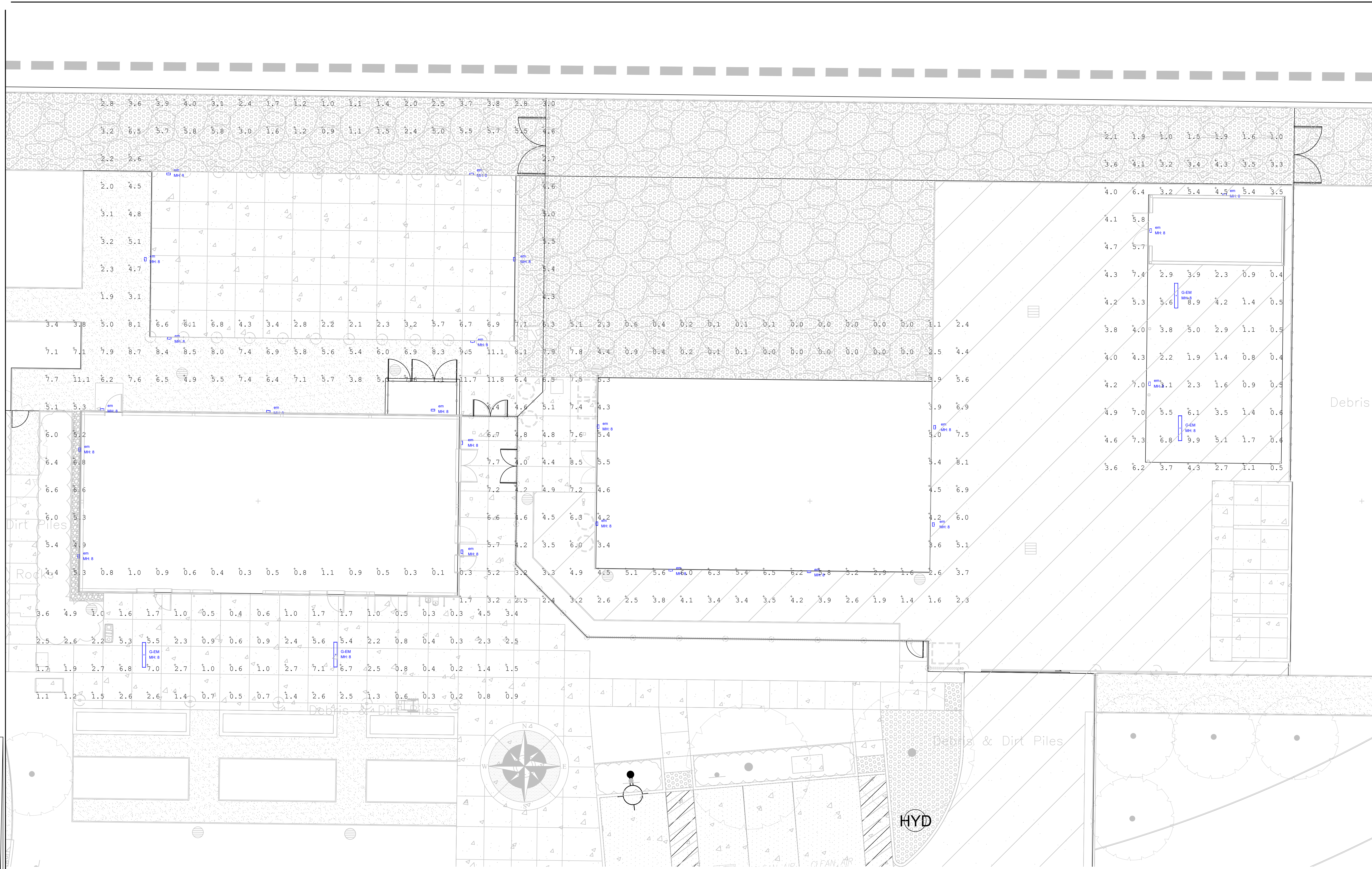
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SITE PHOTOMETRICS

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**1 SITE PHOTOMETRICS**

SCALE : 1/16" = 1'-0"

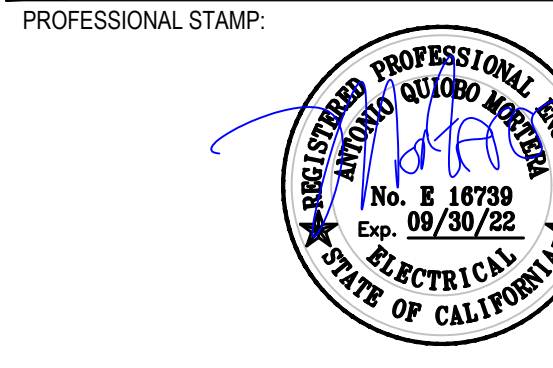
Symbol	Qty	Label	Arrangement
F	22	PGAS-2_T2_16LC_3_4K_UNV_WM	SINGLE
G	4	VAP_4000LM_FST_WD_35K_80CRI	SINGLE

Label	CalcType	Units	Avg	Max	Min
BLDG ABC	ILLUMINANCE	Fc	4.25	11.8	0.0
BLDG ABC_CANOPY	ILLUMINANCE	Fc	2.03	7.1	0.2
BLDG D	ILLUMINANCE	Fc	3.47	9.2	0.0

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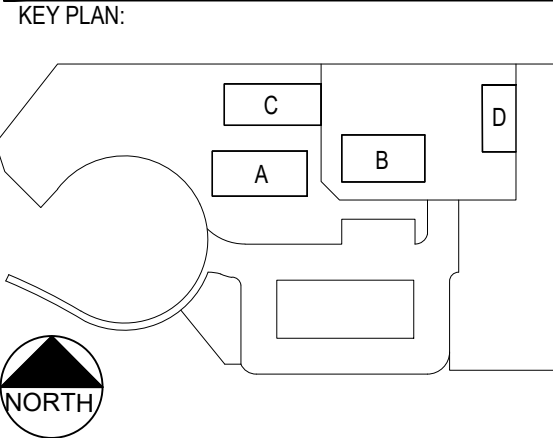
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CONSULTANT:  
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**BUILDING EGRESS PHOTOMETRICS**

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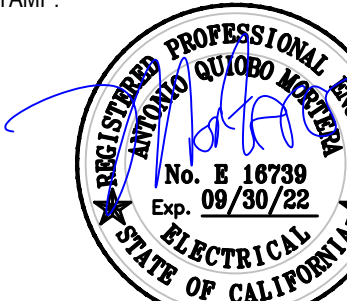
**E103**


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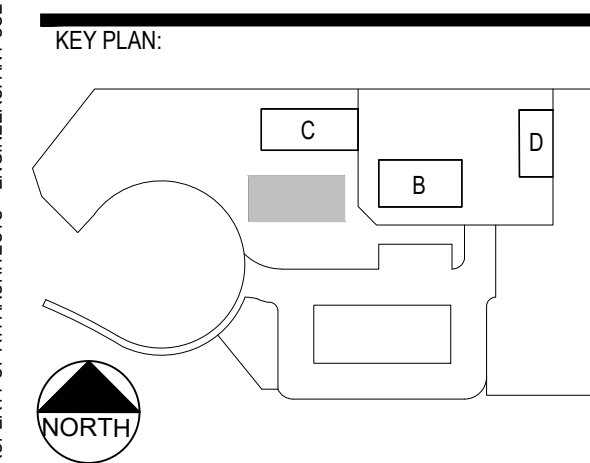
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**CLASSROOM  
 BUILDING FLOOR  
 PLAN  
 POWER & SIGNAL**

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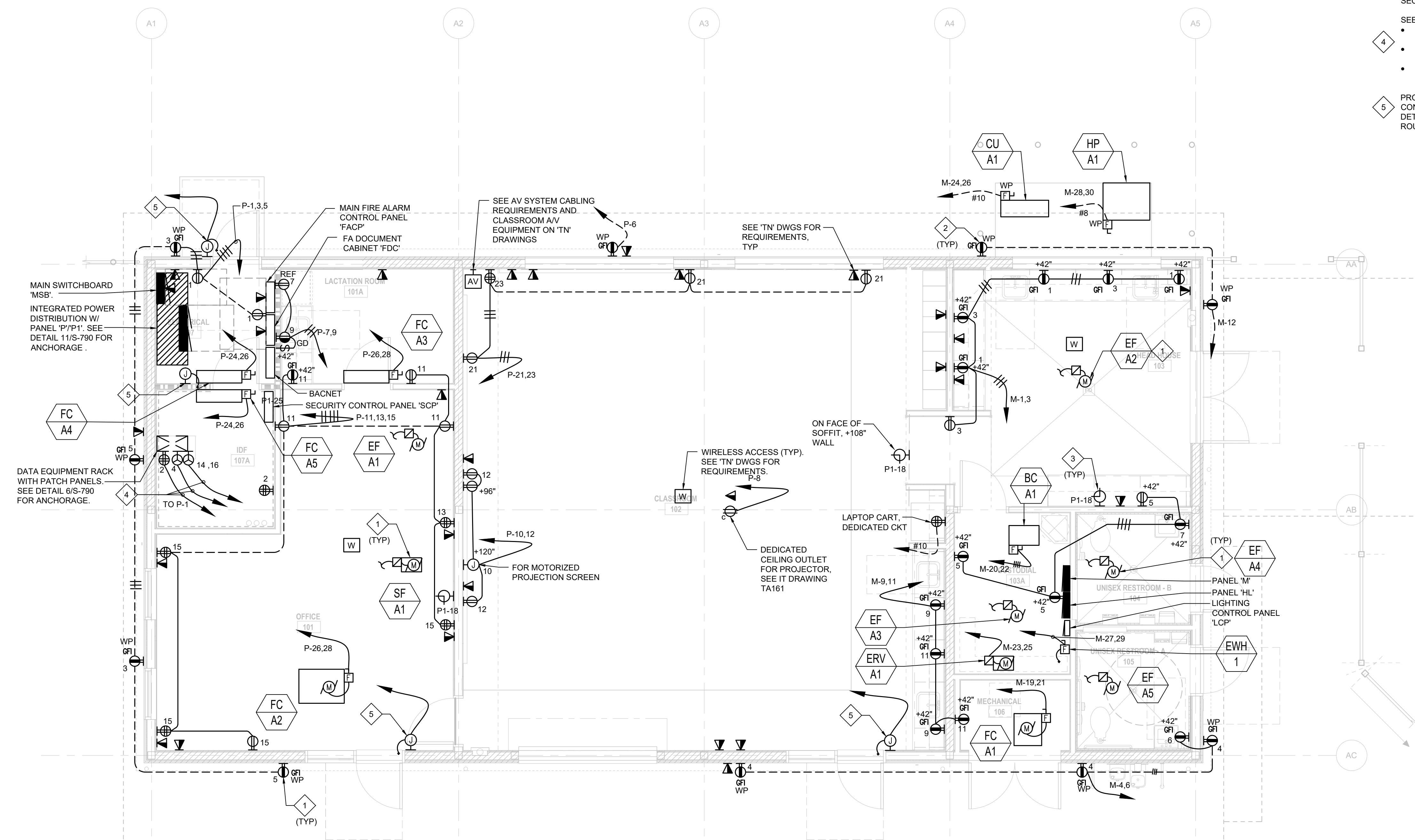
**EA121**

**GENERAL NOTES:**

- FOR DATA/COMMUNICATION DRAWINGS SEE 'TN' SERIES.

**KEY NOTES:**

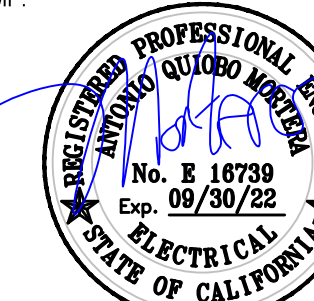
- CONNECT TO ROOM LIGHTING CIRCUIT.
- PROVIDE WP METALLIC, PAD LOCKABLE HEAVY DUTY 'WHILE-IN USE' COVER AS MANUF BY HUBBELLOR EQUAL.
- PROVIDE CLOCK AS INDICATED. CLOCK SHALL HAVE LAS POSITAS COLLEGE LOGO. MODEL SPEAKER SPECS PER OWNER. NUMBER 12" ROUND PLASTIC CASE - SURFACE MOUNTED WITH BATTERY BOOSTER, TEMPER RESISTANT SECURITY BRACKET & DEDICATED CKT AS SHOWN.
- SEE TA401 FOR EXACT LOCATION OF THE FOLLOWING:
  - PROVIDE ONE QUAD 5-20R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
  - PROVIDE ONE L6-20R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
  - PROVIDE ONE L5-30R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
- PROVIDE LV DOOR ACCESS CONTROL WITH DOOR ALARM CONTACTS, CARD READER AND ELECTRONIC LATCH. SEE DETAIL 2/EA131. COORDINATE WITH OWNER PRIOR TO ROUGH-IN.



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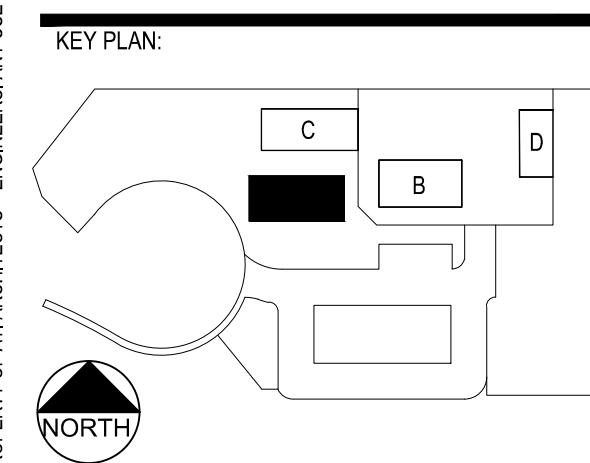
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 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551**

**CLASSROOM  
 BUILDING FLOOR  
 PLAN  
 SECURITY**

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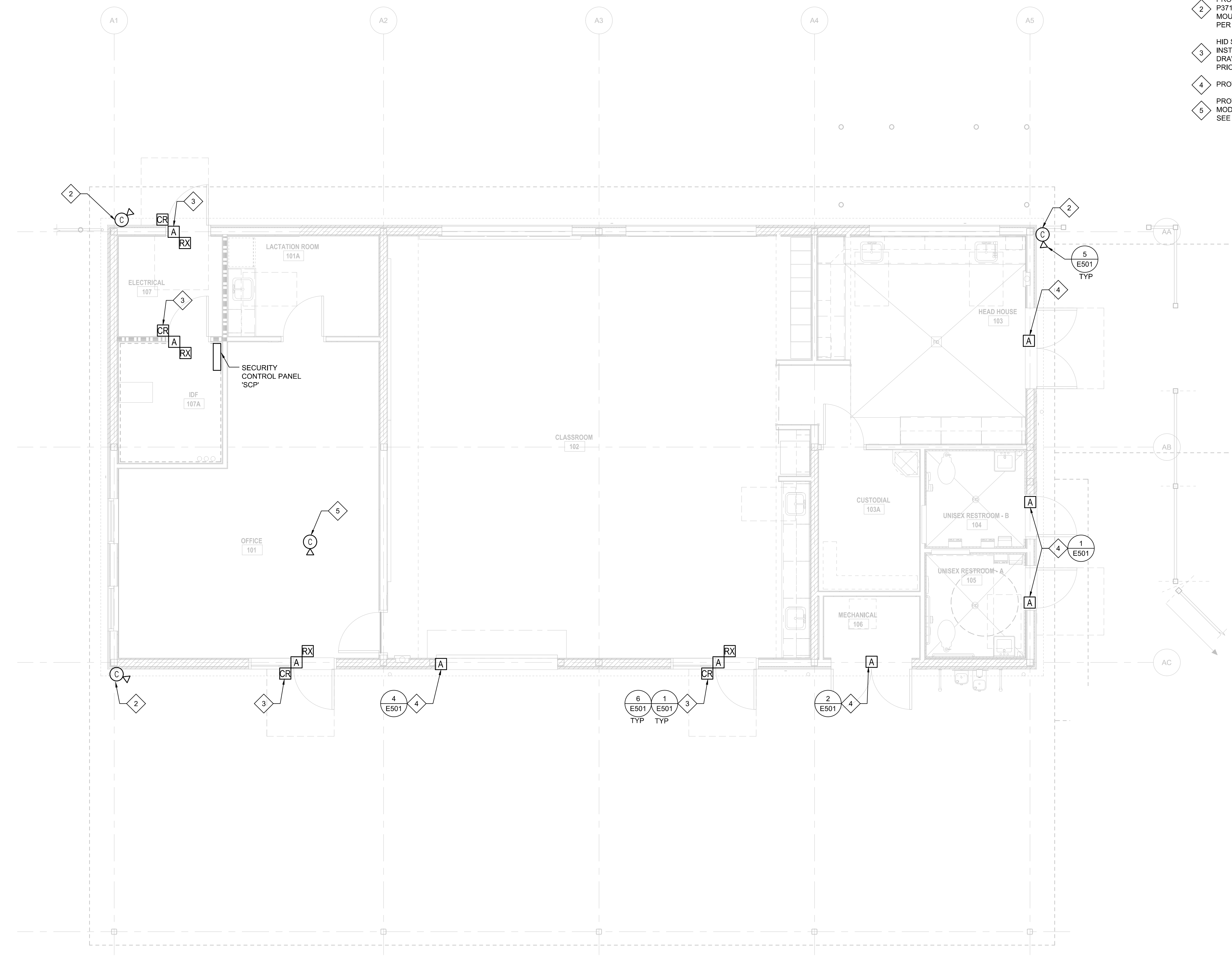
**EA131**

**GENERAL NOTES:**

- LOCATE WEATHERPROOF (WP) JUNCTION BOX FOR SECURITY CAMERA, COORDINATE WITH 'TN' DRAWINGS AS REQUIRED, TYP, UON.
- FOR OTHER BUILDING SECURITY CAMERA, SEE DWG ED121.

**KEY NOTES:**

- USE PLENUM RATED CABLING IN LIEU OF THE 1" C WITH REQUIRED LV CABLES. SEE CABLING UNDER 'TN' DRAWINGS.
- PROVIDE FIXED CAMERA WITH 270° VIEW, MODEL # AXIS P3717-PLC NETWORK CAMERA. PROVIDE CORNER MOUNTING BRACKET, AXIS T91A64 OR EQUAL. CABLING PER DIV 27.
- HID SIGNO 20K MULLION MOUNT READER CAN BE INSTALLED ON THE SIDELIGHT MULLION. PROVIDE SHOP DRAWINGS FOR CAMPUS STANDARD CONTROL SYSTEM PRIOR TO INSTALLATION. SEE SPECS 28 1300.
- PROVIDE DOOR LATCH.
- PROVIDE CEILING MOUNTED FIXED NETWORK CAMERA MOD#AXIS P3228-LV, ORIENT TO VIEW ENTRANCE DOOR. SEE DETAIL #E501. PROVIDE CABLING PER DIV 27.



**1 CLASSROOM BUILDING - SECURITY**

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



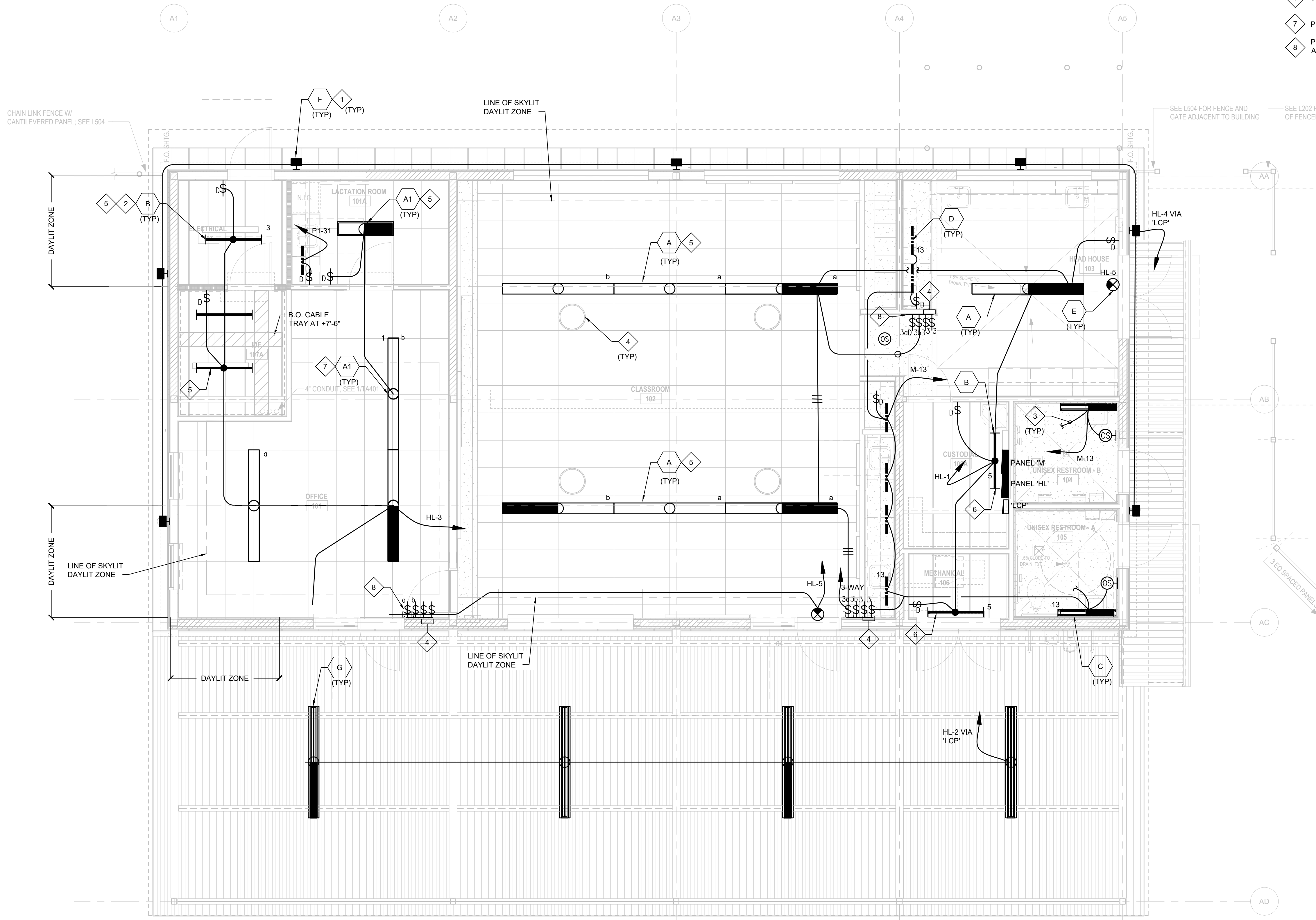
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**GENERAL NOTES:**

1. ALL LIGHTING FIXTURES ARE LED TYPE AND CONFORMING TO TITLE 24 REQUIREMENTS FOR REQUIRED AUTO SHUTOFF AND DIMMING INTEGRAL WITH THE UNIT FIXTURES. SEE FIXTURE SCHEDULE, TYP FOR LIGHTING PLANS, UON.

**KEY NOTES:**

- 1 PROVIDE DEDICATED BRANCH CIRCUIT HOMERUN TO PNL 'LP' VIA 'LCP'.
- 2 UNIT WITH INTEGRAL BATTERY PACK, BODINE 50 OR VENDOR'S EQUAL.
- 3 CONNECT TO ROOM EXH FAN, SEE MECH.
- 4 SOLAR TUBE, TYP. SEE ARCHITECTURAL DRAWINGS.
- 5 PENDANT HUNG, MOUNT AT +10'-0" A.F.F.
- 6 WALL MOUNTED, MOUNT AT +10'-0" A.F.F.
- 7 PENDANT MOUNTED, MOUNT AT +8'-5" A.F.F.
- 8 PROVIDE MULTI-GANG BOX WITH A COMMON FACEPLATE AS MANUFACTURED BY LEVITON OR APPROVED EQUAL.



1 CLASSROOM BUILDING - LIGHTING

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

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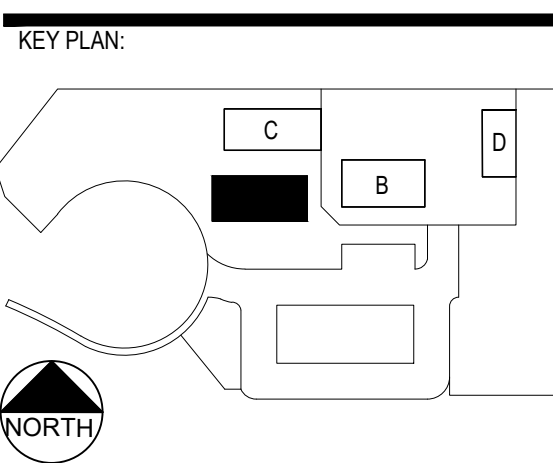
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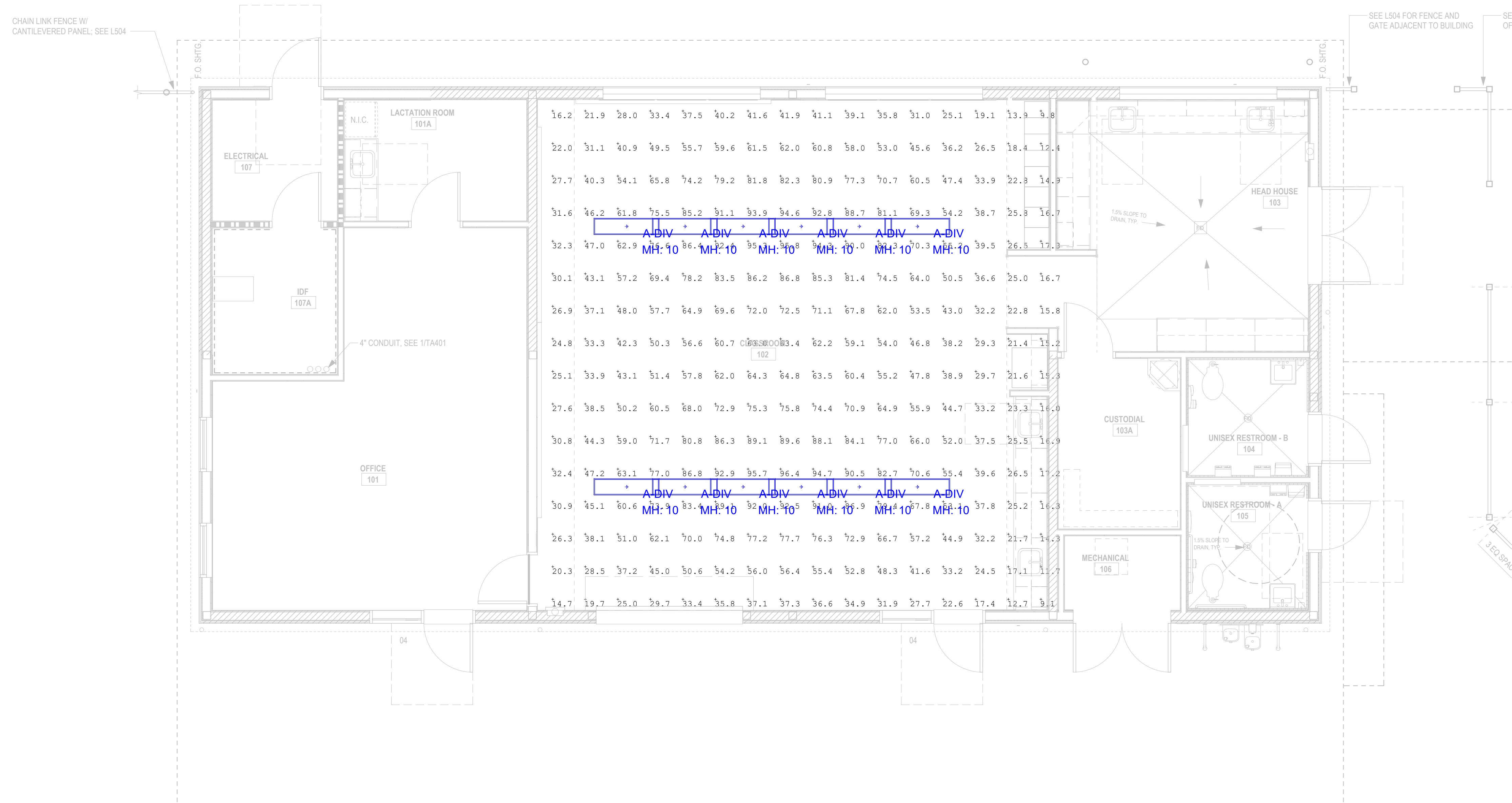
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**CLASSROOM  
 BUILDING FLOOR  
 PLAN  
 LIGHTING**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

EA141

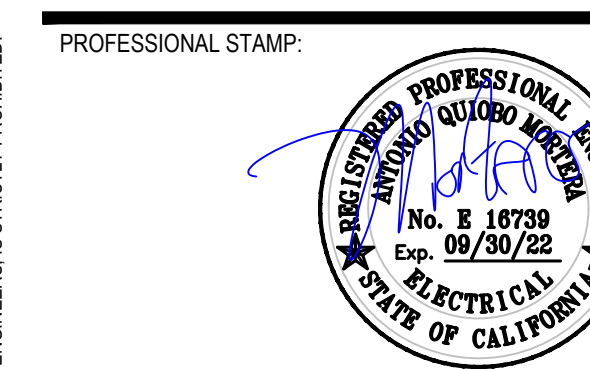
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Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
*	12	DSI-WS-5L35-1C-UNV-4	SINGLE	8750	0.900	DSI-WS-5L35-1C-UNV-4

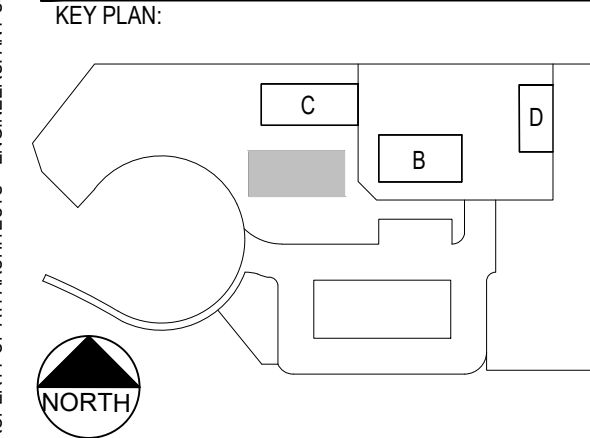
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
classroom_Workplane	Illuminance	Fc	51.96	96.4	9.1	5.71	10.59

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 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021



CONSULTANT:  
  
**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 222  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

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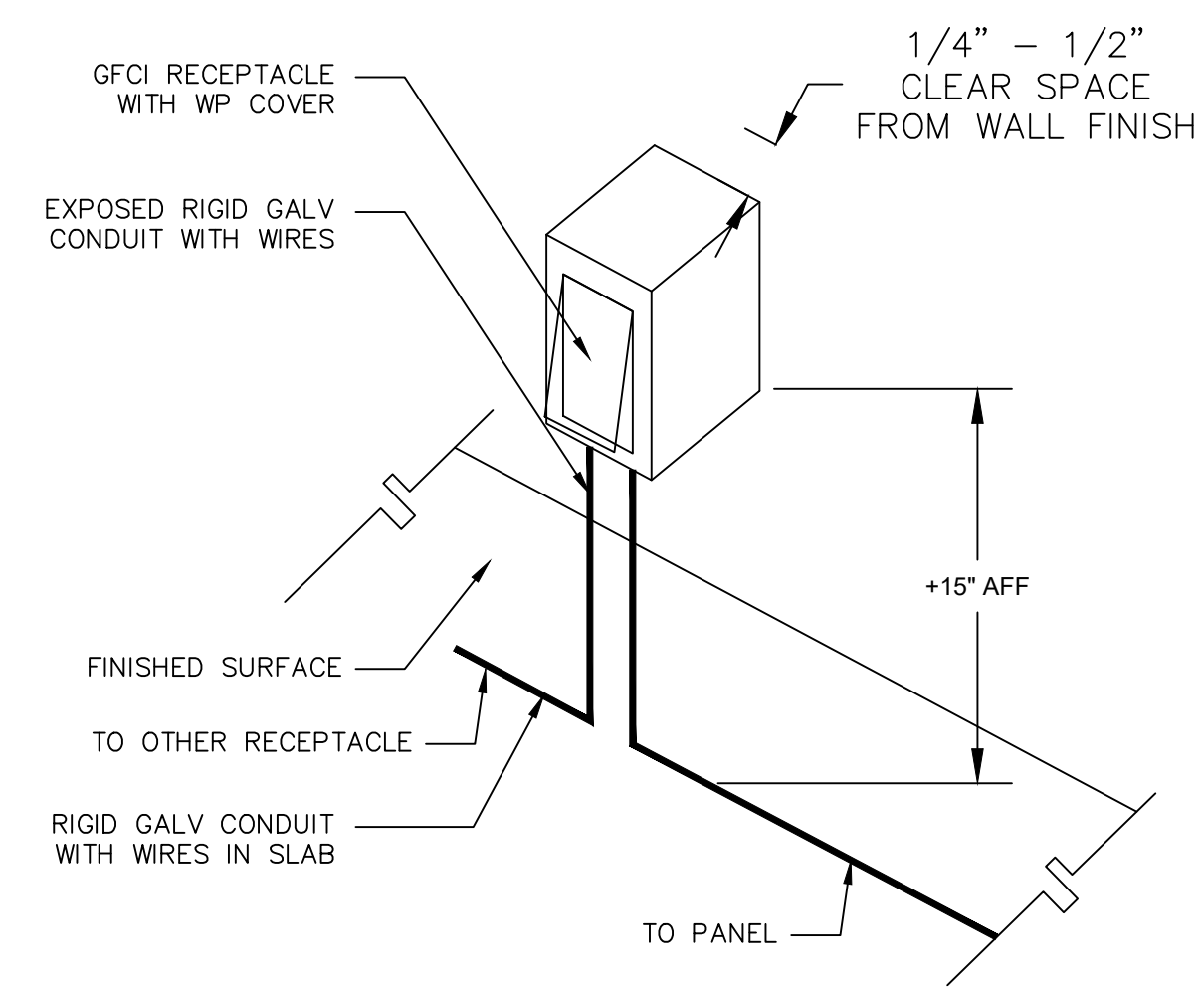
CLPCCD - LAS POSITAS COLLEGE  
 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

CLASSROOM BUILDING FLOOR PLAN PHOTOMETRICS

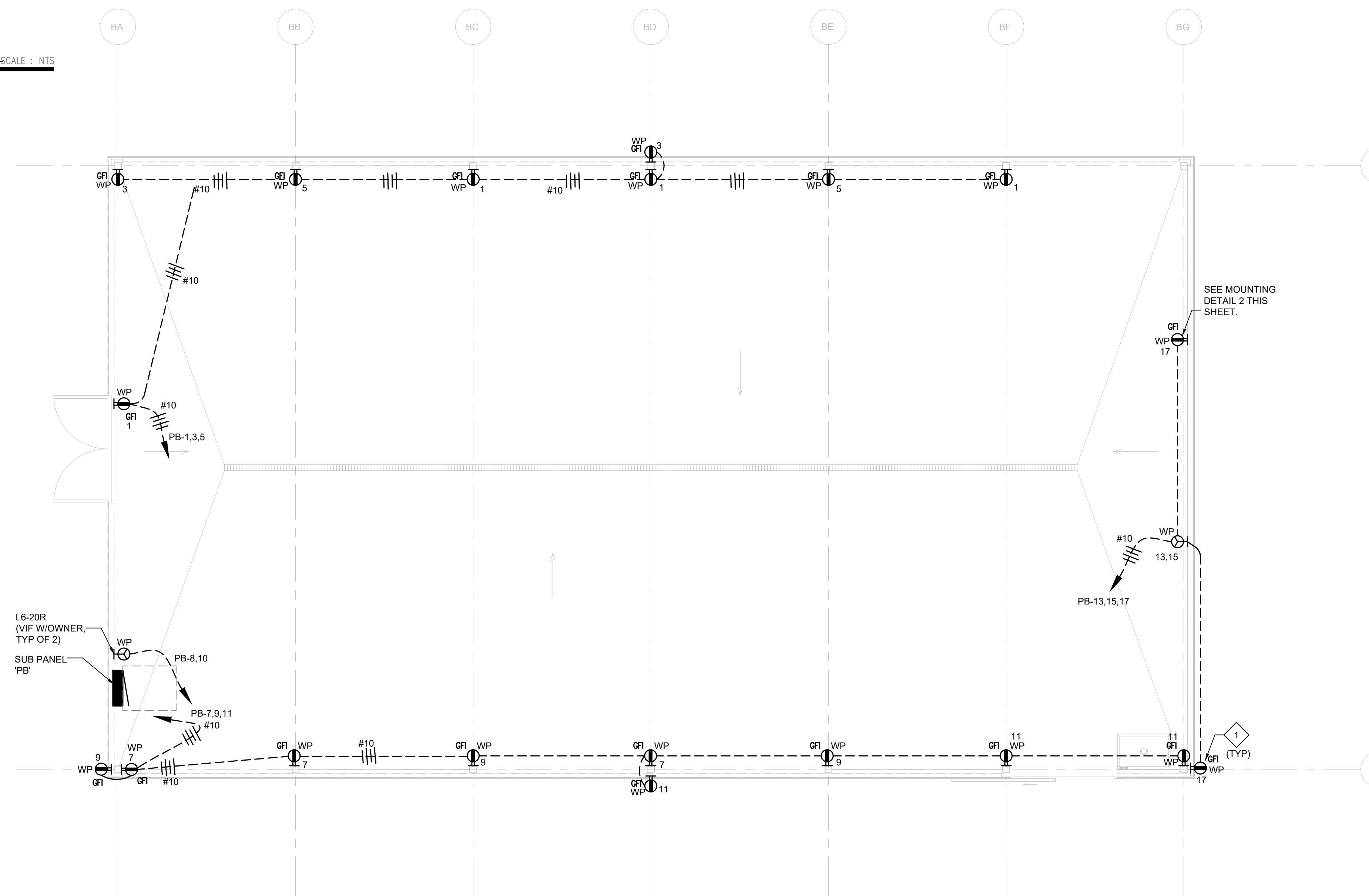
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2 RECEPTACLE MOUNTING DETAIL SCALE: NTS



1 GREEN HOUSE FLOOR PLAN - POWER & SIGNAL

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

KEY NOTES:  
 1 PROVIDE WP METALLIC, PAD LOCKABLE HEAVY DUTY 'WHILE-IN USE' COVER AS MANUF BY HUBBELL OR EQUAL.

DSA:

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 DIV. OF THE STATE ARCHITECT  
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**ATI**  
 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94568 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

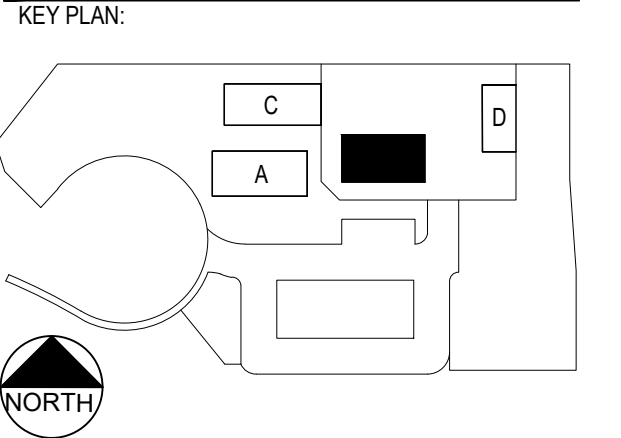
PROFESSIONAL STAMP:

*(Signature)*  
 REGISTERED PROFESSIONAL ENGINEER  
 No. E 16739  
 Exp. 09/30/22  
 ELECTRICAL  
 STATE OF CALIFORNIA

CONSULTANT:

**MPE**  
 METRO POWER ENGINEERS, INC.  
 3150 HILLTOP MALL ROAD, SUITE 222  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

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 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**GREENHOUSE  
 BUILDING FLOOR  
 PLAN**

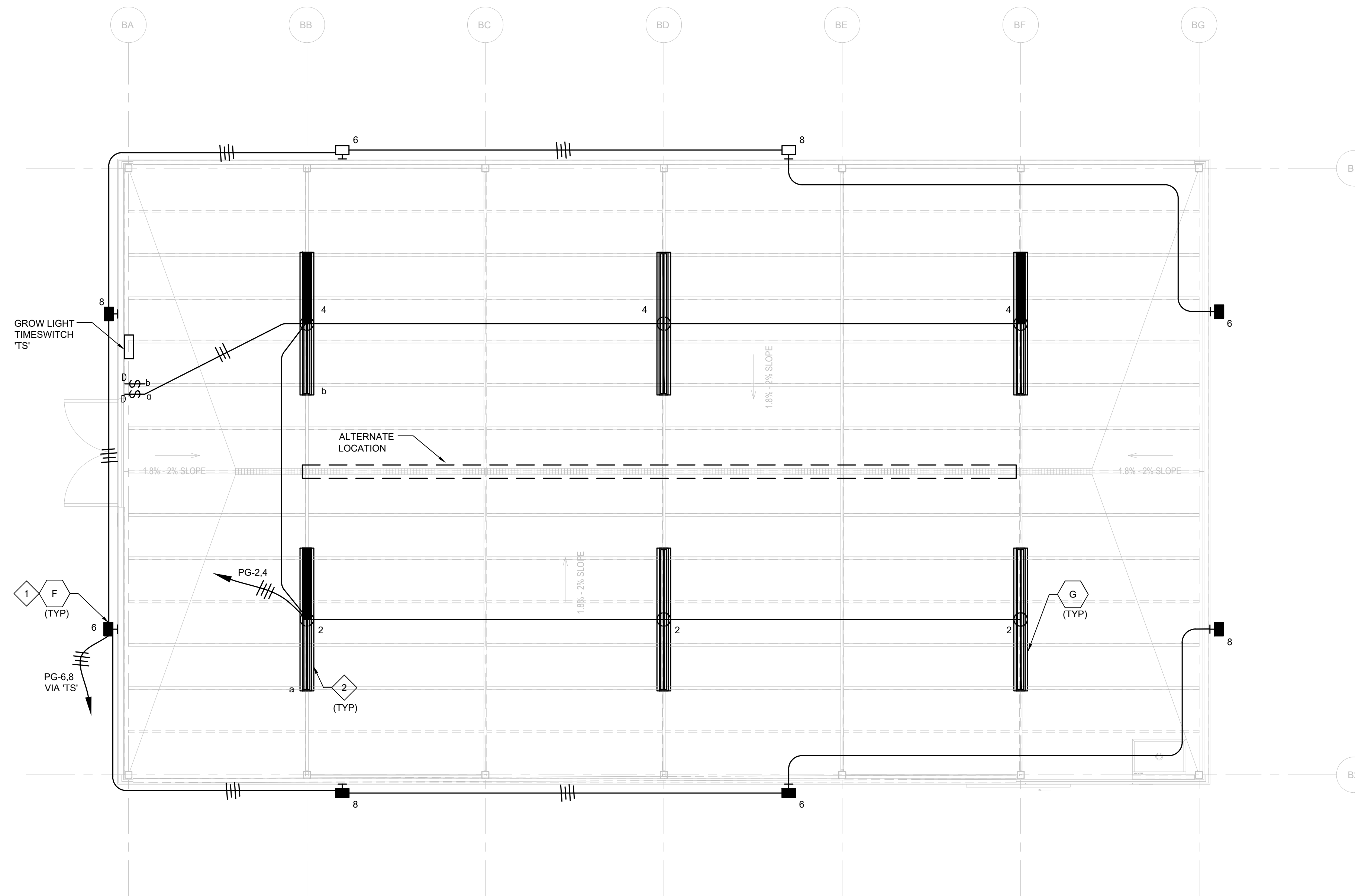
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
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**EB121**

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**KEY NOTES:**

- 1 PROVIDE DEDICATED BRANCH CIRCUIT HOMERUN TO PNL LP VIA TS.
- 2 UNIT WITH INTEGRAL BATTERY PACK, BODINE 50 OR VENDOR'S EQUAL.



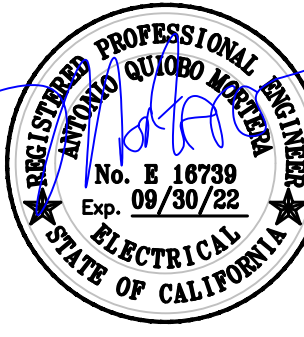
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 DIV. OF THE STATE ARCHITECT  
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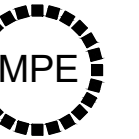


4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:



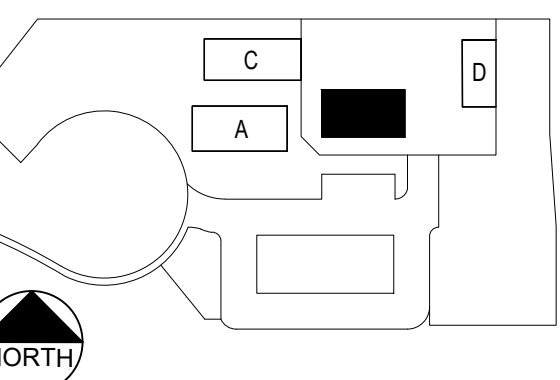
CONSULTANT:



**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 222  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



**CLPCCD - LAS POSITAS COLLEGE**  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**GREENHOUSE BUILDING LIGHTING PLAN**

DRAWN BY: CHECKED BY:  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

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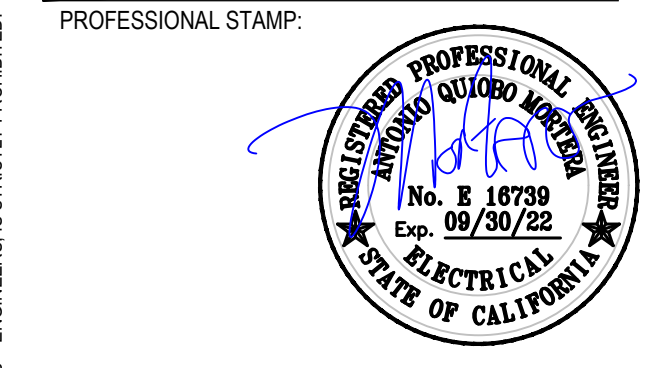
DSA:

**KEY NOTES:**  
1 PROVIDE WP METALLIC, PAD LOCKABLE HEAVY DUTY 'WHILE-IN USE' COVER AS MANUF BY HUBBELL OR EQUAL.

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DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC:  
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DATE: 01/19/2021

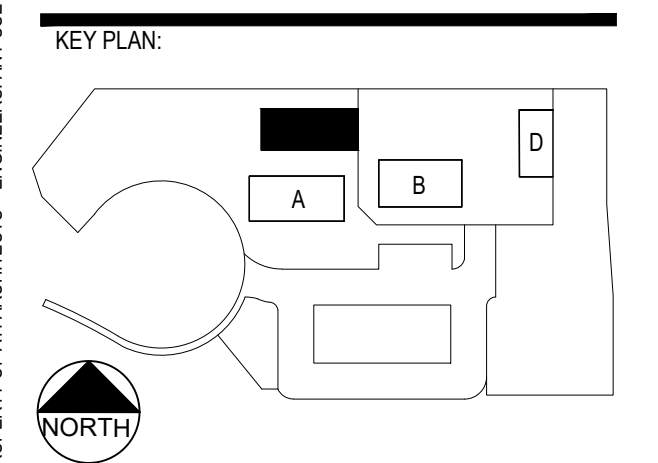


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3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600



CONSULTANT:  
**MPE**  
**METRO POWER ENGINEERS, INC.**  
3150 HILLTOP MALL ROAD, SUITE 22  
RICHMOND, CA 94806  
TEL: 510.275.3000 FAX: 510.275.3002

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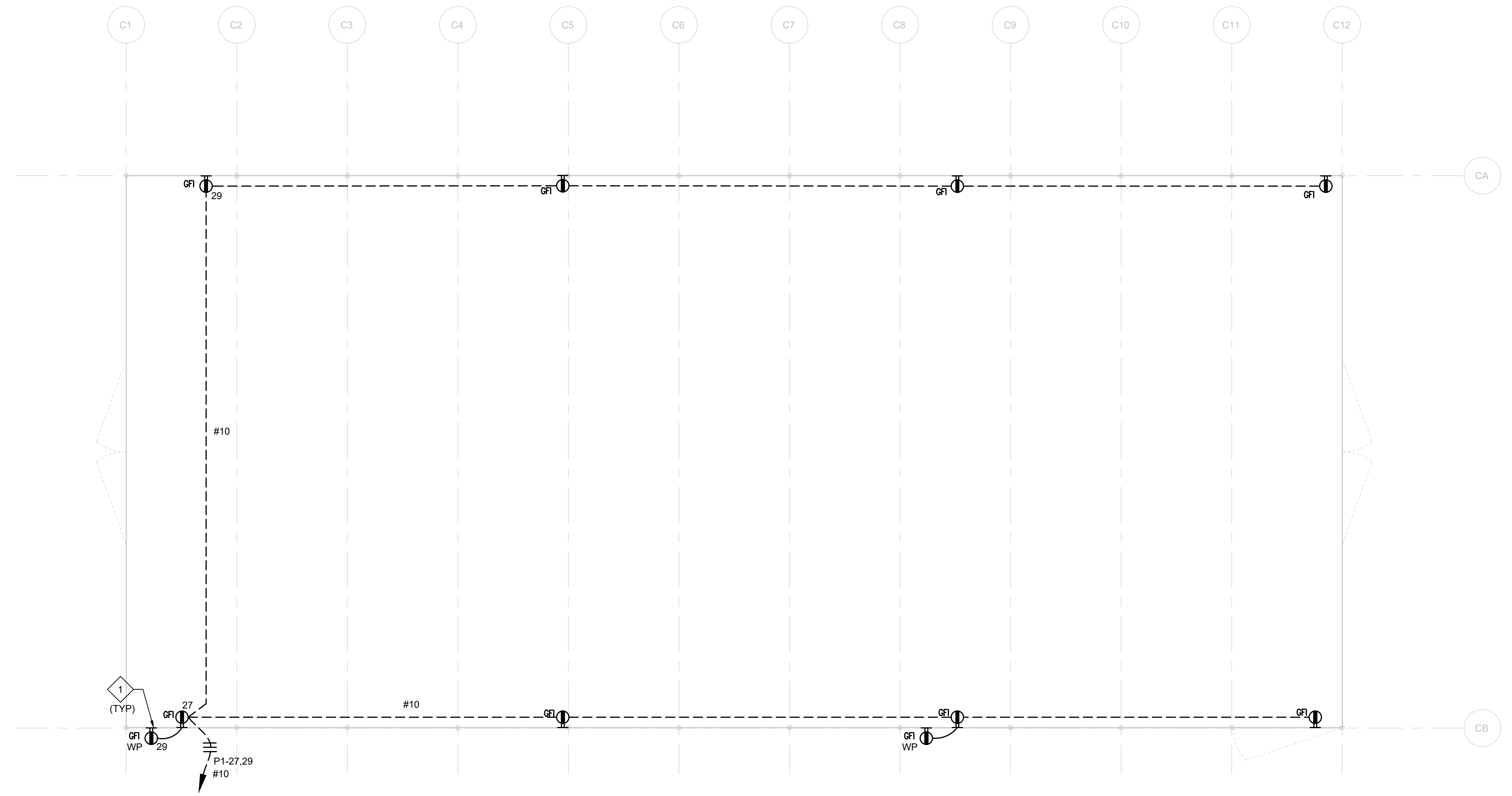


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AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

### SHADE HOUSE POWER & SIGNAL PLAN

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

# EC121



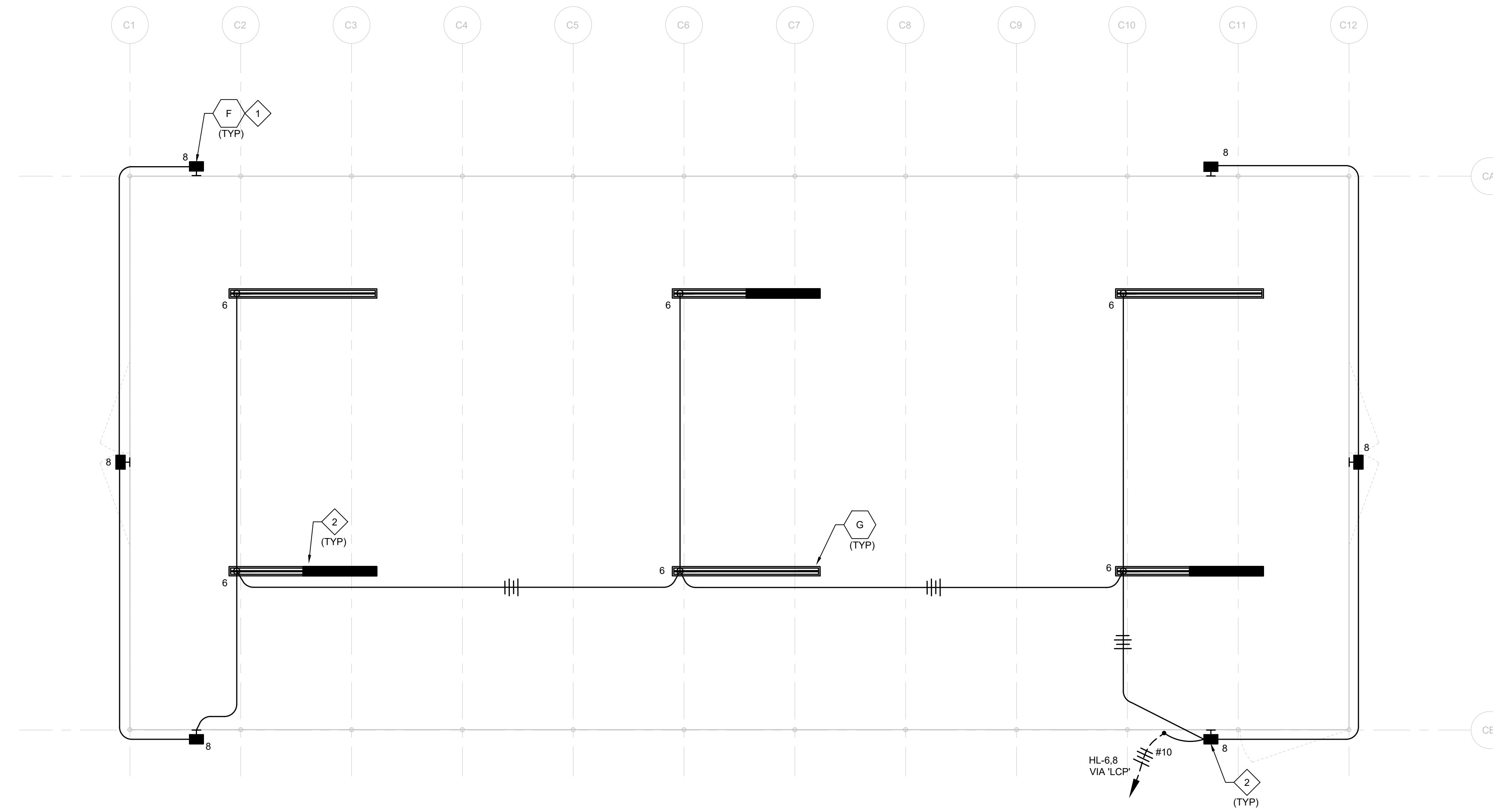
## 1 SHADE HOUSE - POWER & SIGNAL

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

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KEY NOTES:

- 1 PROVIDE DEDICATED BRANCH CIRCUIT HOMERUN TO PNL 'LP' VIA 'LCP'.
- 2 UNIT WITH INTEGRAL BATTERY PACK, BODINE 50 OR VENDOR'S EQUAL.



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 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021

**ATI**  
 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94568 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:

REGISTERED PROFESSIONAL ELECTRICAL ENGINEER  
 No. E 16739  
 Exp. 09/30/22  
 STATE OF CALIFORNIA

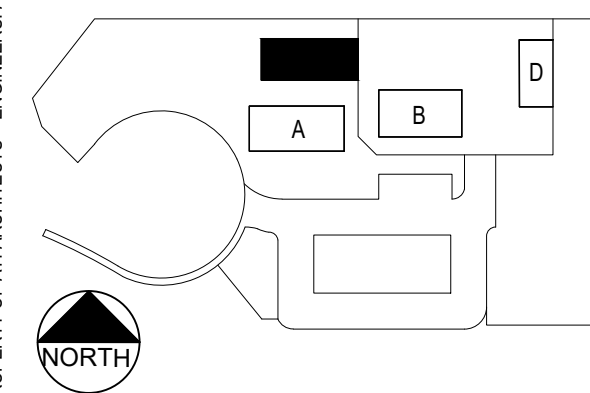
CONSULTANT:

**MPE**

**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 22  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:

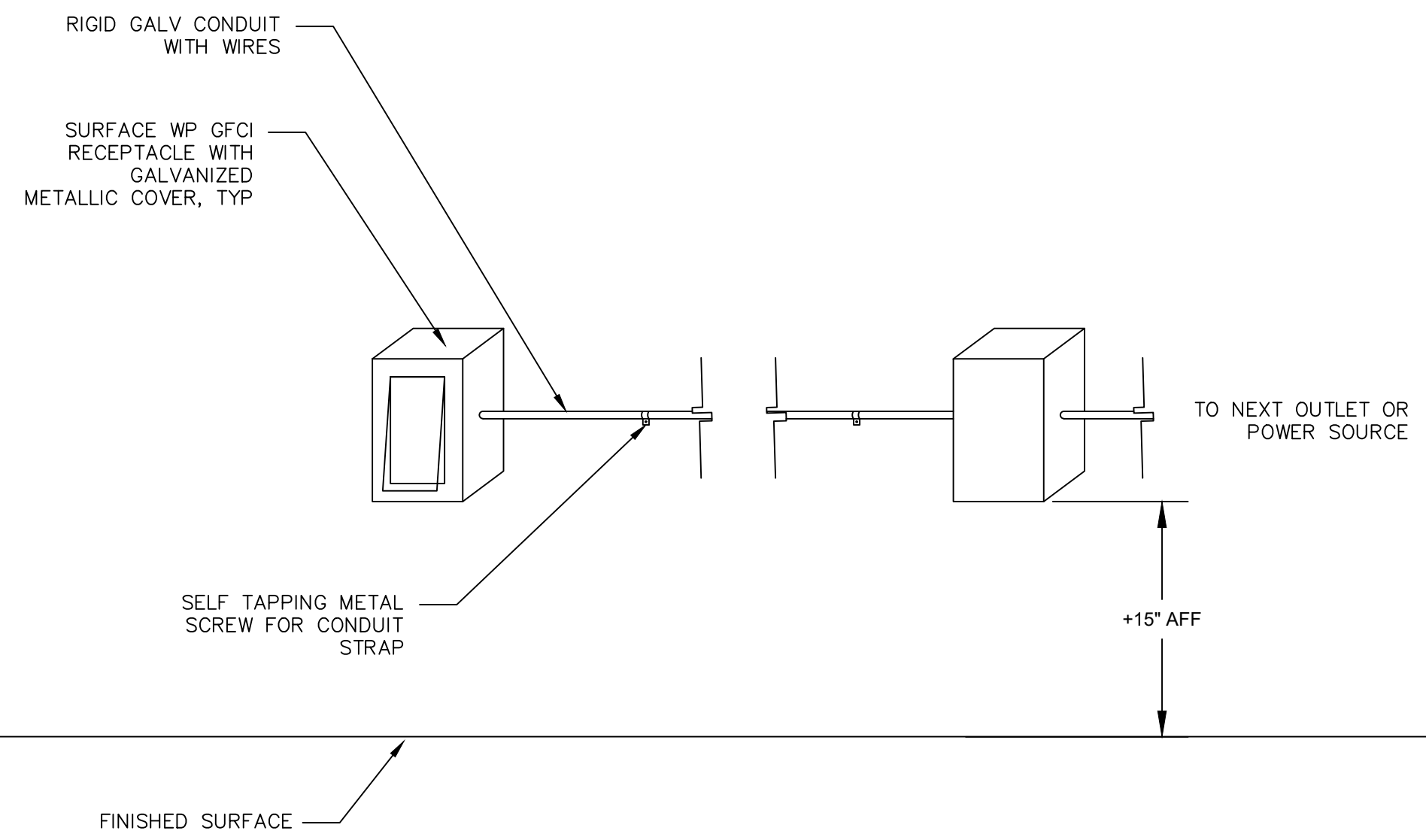


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 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

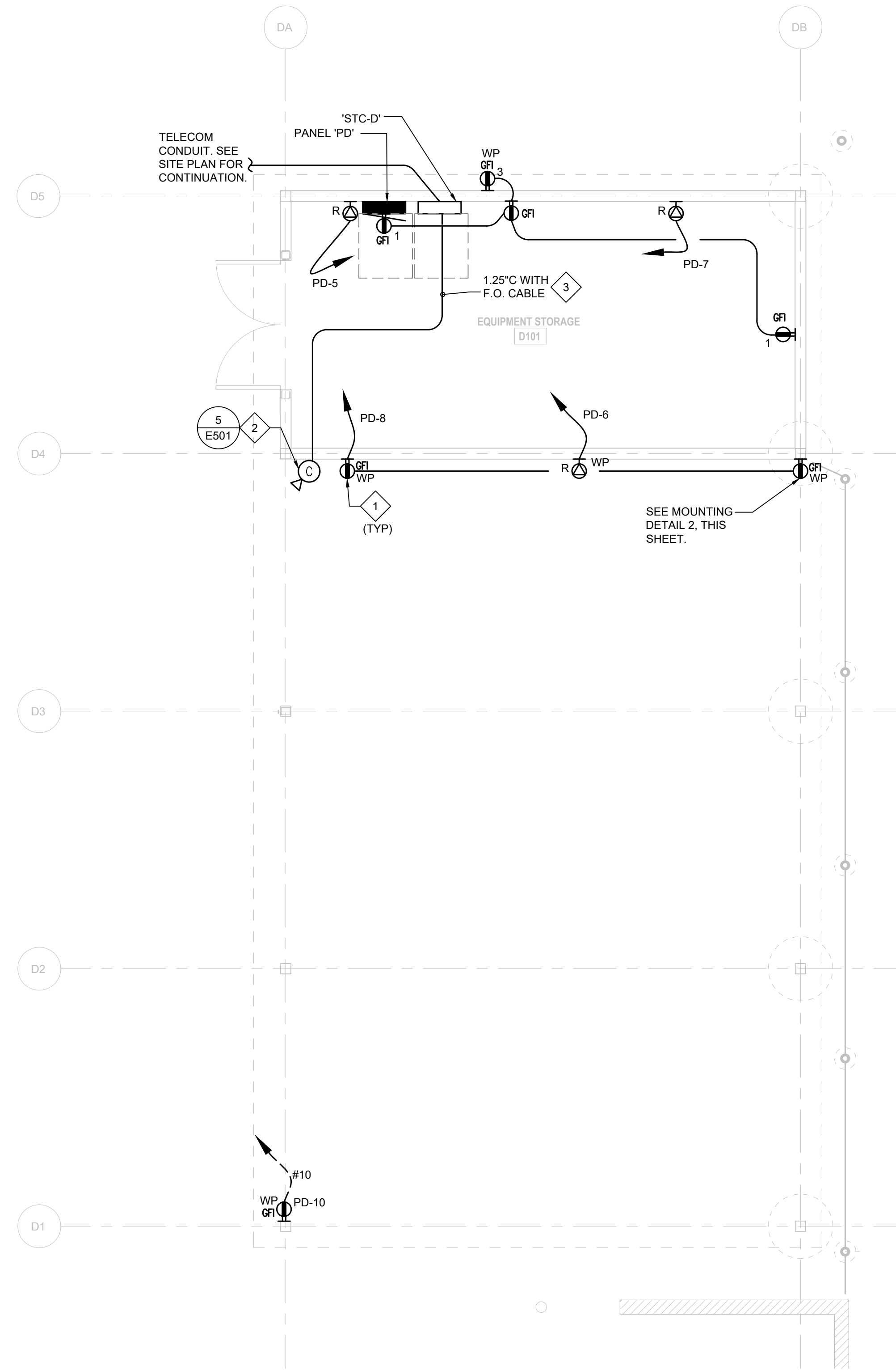
**SHADE HOUSE LIGHTING PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO: \_\_\_\_\_

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2 RECEPTACLE MOUNTING DETAIL SCALE: NTS



1 EQPT. STORAGE FLOOR PLAN - POWER & SIGNAL

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

- KEY NOTES:**
- 1 PROVIDE WP METALLIC, PAD LOCKABLE HEAVY DUTY 'WHILE-IN USE' COVER AS MANUF BY HUBBELL OR EQUAL.
  - 2 PROVIDE FIXED CAMERA WITH 270° VIEW, MODEL # AXIS P3717-PL-1 NETWORK CAMERA. PROVIDE CORNER MOUNTING BRACKET, AXIS T91A64 OR EQUAL. CABLING PER DIV 27.
  - 3 SEE TELECOM DRAWING TA101 FOR RELATED REQUIREMENTS.

DSA:

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021

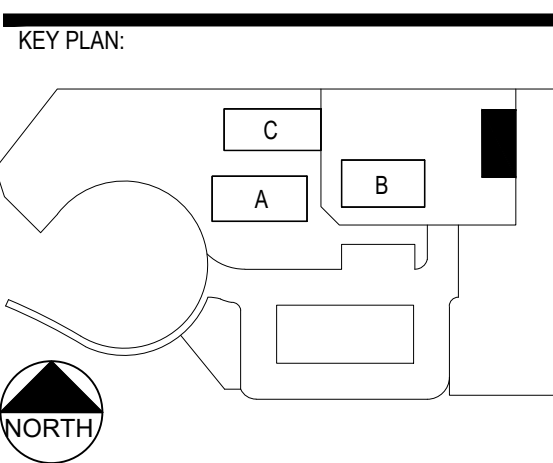
4750 Willow Road #250 Pleasanton, CA 94568 - T 925 648 8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:

CONSULTANT:

**METRO POWER ENGINEERS, INC.**  
3150 HILLTOP MALL ROAD, SUITE 22  
RICHMOND, CA 94806  
TEL: 510.275.3000 FAX: 510.275.3002

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**EQPT. STORAGE BUILDING FLOOR PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**ED121**

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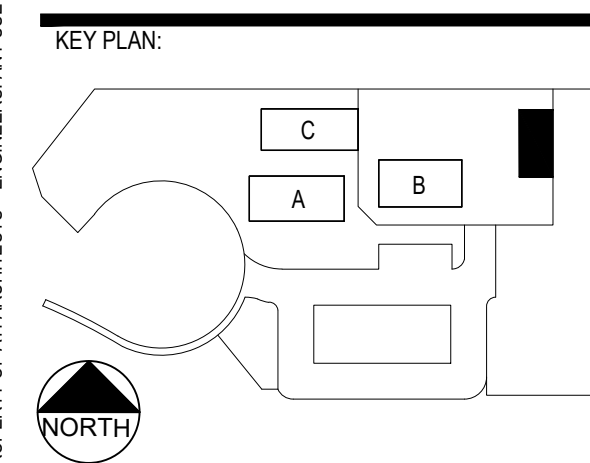


4750 Willow Road #250 Pleasanton, CA 94568 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:

CONSULTANT:  
  
**METRO POWER ENGINEERS, INC.**  
 3150 HILL TOP MALL ROAD, SUITE 222  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

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 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

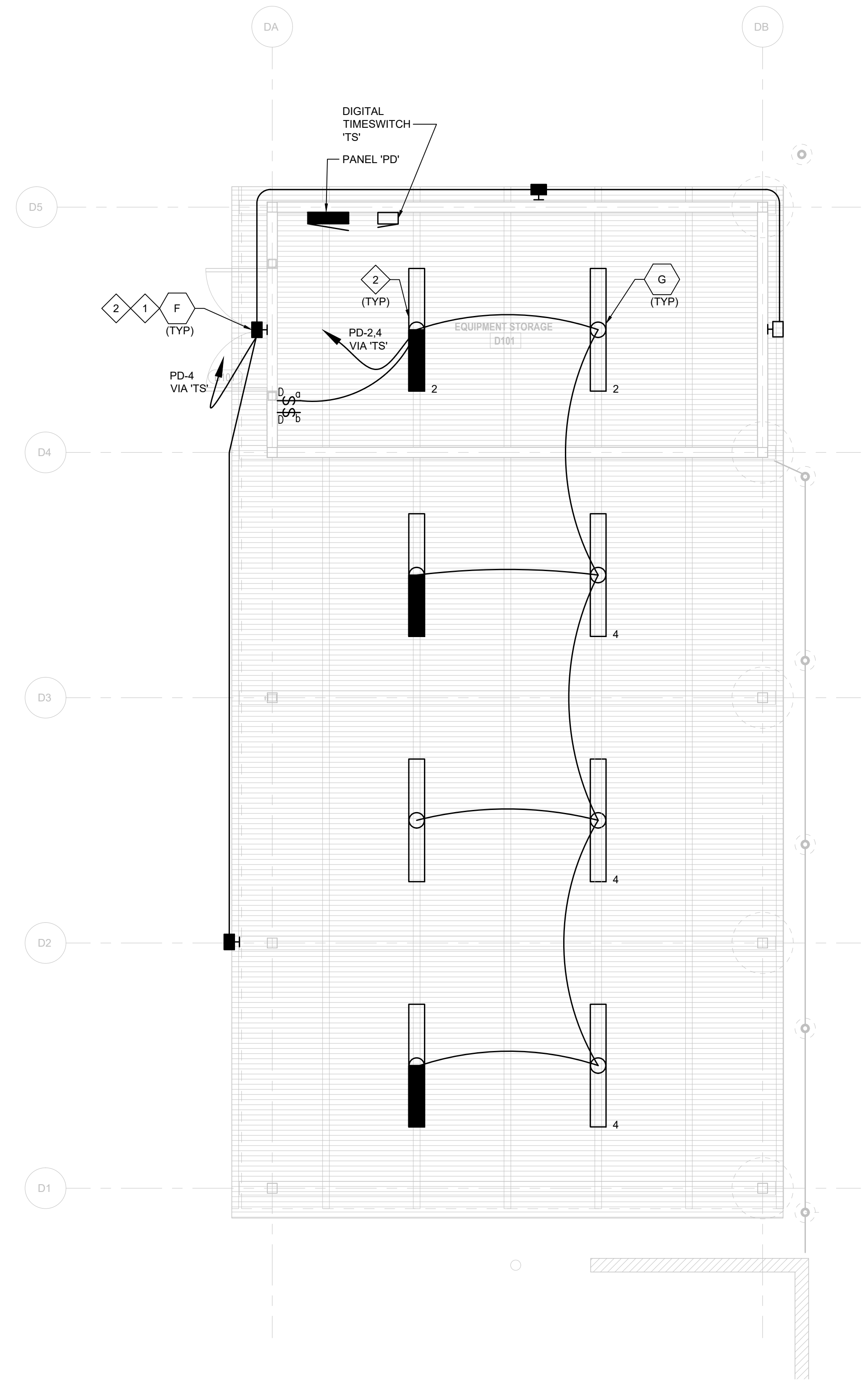
**EQPT. STORAGE  
 LIGHTING PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**ED141**

**KEY NOTES:**

- 1 PROVIDE DEDICATED BRANCH CIRCUIT HOMERUN TO PNL 'PD' VIA 'TS'.
- 2 UNIT WITH INTEGRAL BATTERY PACK, BODINE 50 OR VENDOR'S EQUAL.



1 EQPT. STORAGE FLOOR PLAN — LIGHTING

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

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TYPE: BOLT-ON SERVICE: 208Y/120V 3PH, 4W BUS: 400A		PANEL: "P" LOCATION: ELEC RM				MAIN: 400A MTG: RECESSED AIC: 10 KAIC						
LOAD SERVED	BREAKER				NO	BREAKER				LOAD SERVED		
	LCL	KVA	TRIP	POLE		POLE	TRIP	KVA	LCL			
SPARE			20	1	1	A	2	1	20		SPARE	
SPARE			20	1	3	B	4	1	20		SPARE	
SPARE			20	1	5	C	6	1	20		SPARE	
SPARE			20	1	7	A	8	1	20		SPARE	
SPARE			20	1	9	B	10	1	20		SPARE	
SPARE			20	1	11	C	12	1	20		SPARE	
SPARE			20	1	13	A	14	1	20		SPARE	
SPARE			20	1	15	B	16	1	20		SPARE	
SPARE			20	1	17	C	18	1	20		SPARE	
SPARE			20	1	19	A	20	1	20		SPARE	
SPACE					21	B	22	1			SPACE	
SPACE					23	C	24	1			SPACE	
SPACE					25	A	26	1			SPACE	
SPACE					27	B	28	1			SPACE	
SPACE					29	C	30	1			SPACE	
SPACE					31	A	32	3	100	6.2	SUB PNL 'PB'	
SPACE					33	B	34			6.2		
SPACE					35	C	36			6.2		
SUB PNL 'M'			5.1	100	3	37	A	38	3	100	2.7	SUB PNL 'PD'
			6.4			39	B	40			2.7	
			8.3			41	C	42			2.7	

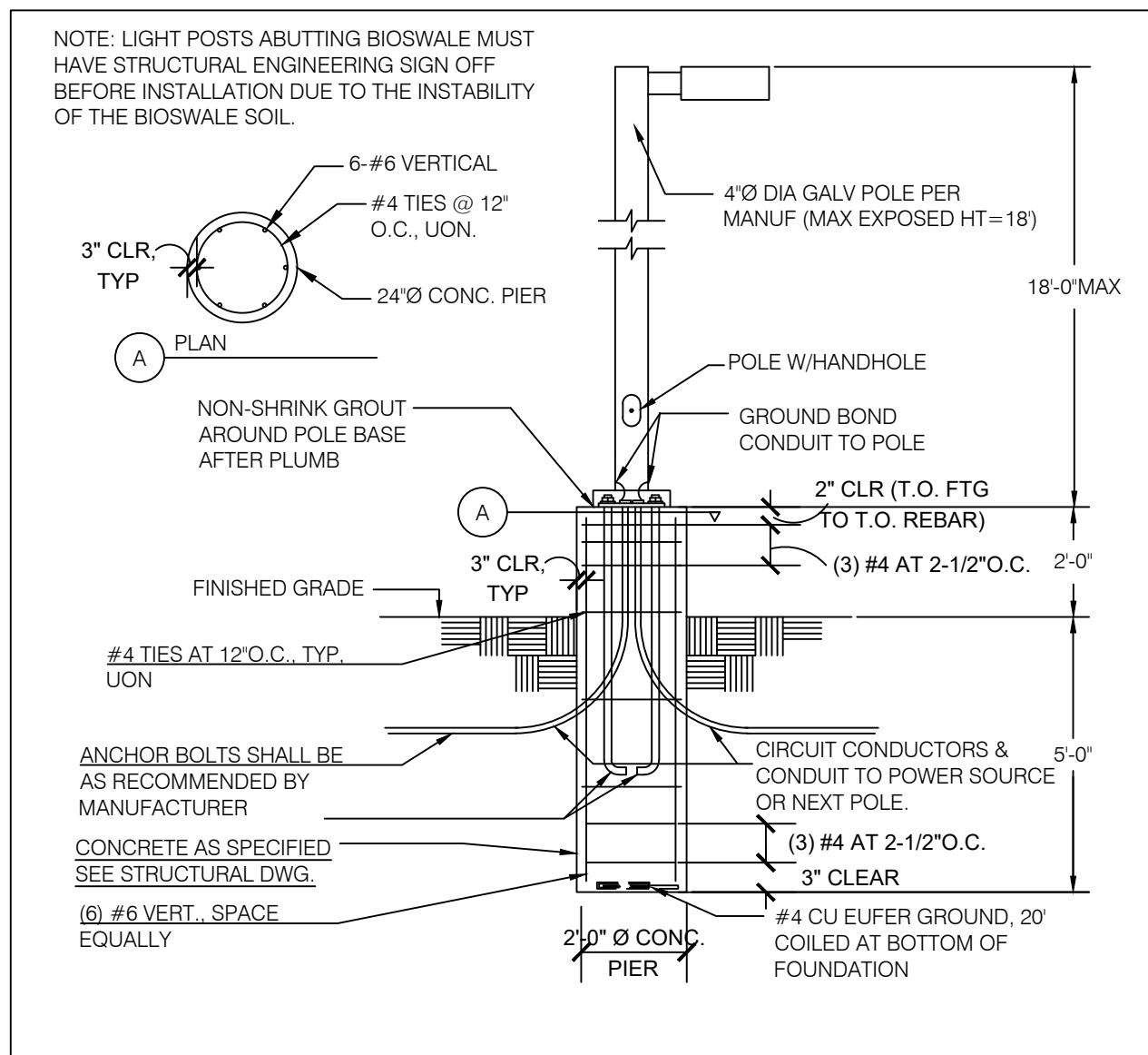
TYPE: BOLT-ON SERVICE: 277/408V, 3PH,4W BUS: 125A		PANEL: "HL" LOCATION: CUST.RM 102A				MAIN: MLO MTG: SURFACE AIC: 14 KAIC						
LOAD SERVED	BREAKER				NO	BREAKER				LOAD SERVED		
	LCL	KVA	TRIP	POLE		POLE	TRIP	KVA	LCL			
LTG @ CLASSRM BLDG	X	1.0	20	1	1	A	2	1	20	0.4	X	LTG-OUTDOOR CANOPY
LTG @ OFC/IDF/ELEC	X	0.5	20	1	3	B	4	1	20	0.3	X	LTG-PERIMETER
LTG EMERGENCY	X	0.1	20	1	5	C	6	1	20	0.6	X	LTG-BLDG C-INTERIOR
SPARE			20	1	7	A	8	1	20	0.3	X	LTG-BLDG C-EXTERIOR
SPARE			20	1	9	B	10	1	20	0.1	X	LTG-EXTERIOR BOLLARDS
SPARE			20	1	11	C	12	1				SPACE
LCP	X	0.5	20	1	13	A	14	1				SPACE
SITE LIGHTING	X	0.3	20	2	15	B	16	1				SPACE
	X	0.3			17	C	18	1				SPACE

TYPE: BOLT-ON SERVICE: 208Y/120V 3PH, 4W BUS: 400A		PANEL: "P1" LOCATION: ELEC RM				MAIN: MLO MTG: RECESSED AIC: 10 KAIC							
LOAD SERVED	BREAKER				NO	BREAKER				LOAD SERVED			
	LCL	KVA	TRIP	POLE		POLE	TRIP	KVA	LCL				
RECEIPT ELEC RM			0.4	20	1	1	A	2	1	20	1.0	X	TELCO BOARD TT'B
GFCEI-WP RECEIPT W/EXTR			0.4	20	1	3	B	4	1	20	0.8		QUAD @ IDF RM
GFCEI-WP RECEIPT W/EXTR			0.4	20	1	5	C	6	1	30	2.8		L5-30R @ IDF RM
REFRIG @ LACTATION			1.0	20	1	7	A	8	1	20	1.0	X	CLNG PROJECTOR
GARBAGE DISPOSER			0.9	20	1	9	B	10	1	20	0.5		MOTORIZED SCREEN
RECEIPT @ OFC			0.6	20	1	11	C	12	1	20	0.6		WALL RECEIPT @ CLASSRM
RECEIPT @ OFC			0.8	20	1	13	A	14	2	20	1.0		L6-20R @ IDF RM
RECEIPT @ OFC			0.6	20	1	15	B	16			1.0		
FACP	X	0.5	20	1	17	C	18	1	20	0.2	X	LPC CLOCK	
BACNET	X	0.5	20	1	19	A	20	1	20			SPACE	
RECEIPT @ CLASSRM NW			0.6	20	1	21	B	22	2	20	0.2		FC-A4 / FC-A5
RECEIPT @ CLASSRM NW			0.4	20	1	23	C	24			0.2		
SECURITY PANEL	X	0.5	20	1	25	A	26	2	20	0.2		FC-A2 / FC-A3	
RECEIPT-BLDG C			1.0	20	1	27	B	28			0.2		
RECEIPT-BLDG C			1.0	20	1	29	C	30	1	20			SPACE
UC LIGHTING	X	0.1	20	1	31	A	32	1	20			SPACE	
SPARE			20	1	33	B	34	1	20			SPACE	
SPARE			20	1	35	C	36	1	20			SPACE	
SPARE			20	1	37	A	38	1	20			SPACE	
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SPARE			20	1	41	C	42	1	20			SPACE	

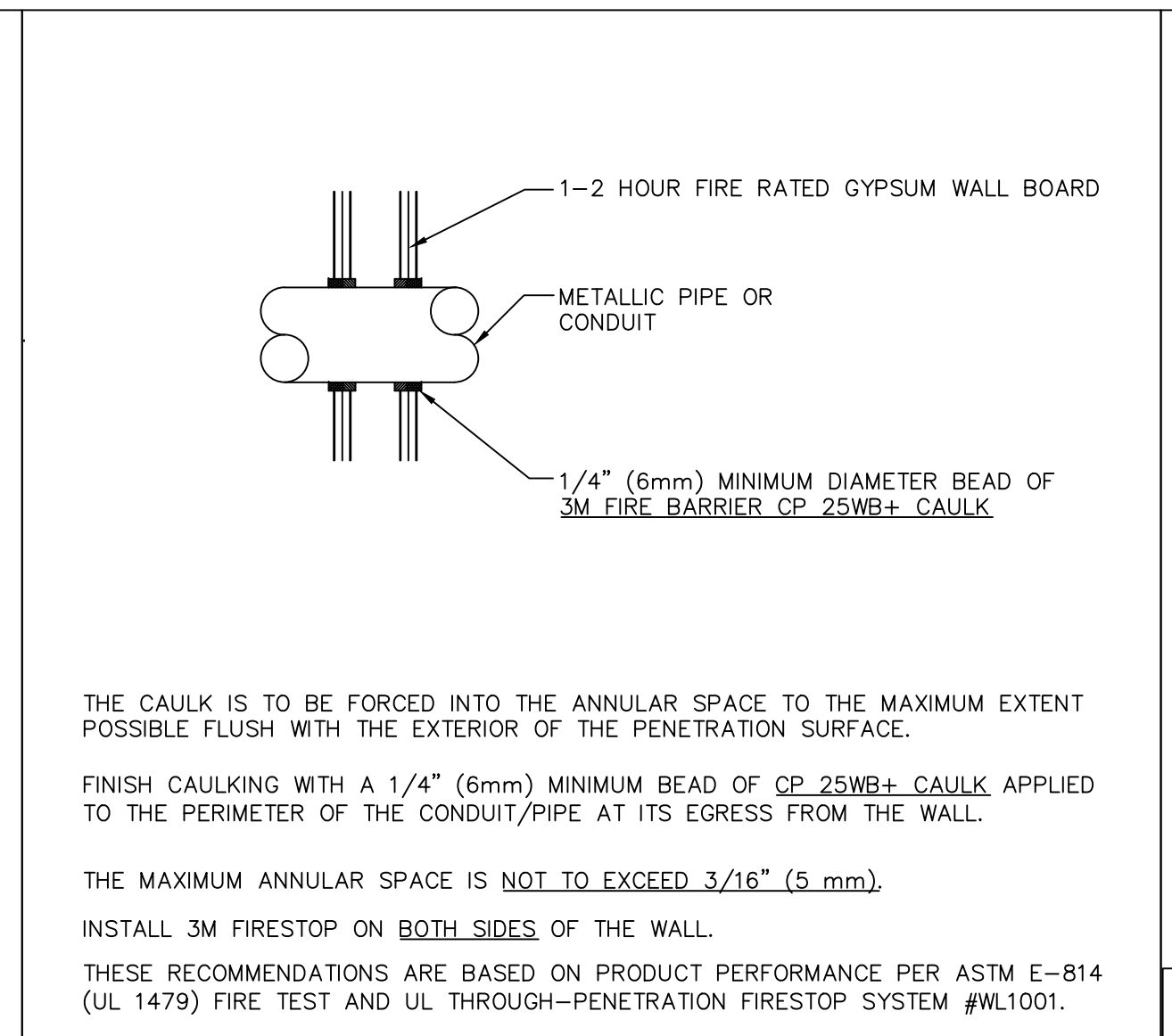
TYPE: BOLT-ON SERVICE: 208Y/120V 3PH, 4W BUS: 225A		PANEL: "M" LOCATION: CUST.RM 102A				MAIN: 400A MTG: SURFACE AIC: 10 KAIC							
LOAD SERVED	BREAKER				NO	BREAKER				LOAD SERVED			
	LCL	KVA	TRIP	POLE		POLE	TRIP	KVA	LCL				
GFCEI RECEIPT-HEAD HOUSE			0.6	20	1	1	A	2	1	20	0.4		GFCEI RECEIPT - N WALL
GFCEI RECEIPT-HEAD HOUSE			0.6	20	1	3	B	4	1	20	0.6		GFCEI RECEIPT - S WALL
GFCEI-HEAD HSE/CUST			0.6	20	1	5	C	6	1	20	0.4		GFCEI RECEIPT - UNISEX TOILET
GFCEI RECEIPT UNISEX TOILET			0.4	20	1	7	A	8	1	20			SPACE
GFCEI RECEIPT CLASS RM			0.6	20	1	9	B	10	1	20			SPACE
GFCEI RECEIPT MECH RM			0.4	20	1	11	C	12	1	20			SPACE
UC LIGHTING/VANITY	X	0.2	20	1	13	A	14	1	20			SPACE	
SPACE			20	1	15	B	16	1	20			SPACE	
SPACE			20	1	17	C	18	1	20			SPACE	
FAN COIL A1 @ MECH RM			0.6	20	2	19	A	20	2	20	0.1	X	BCA1 CONTROLLER
			0.6			21	B	22			0.1	X	
ERV-VENTILATOR @ CUST			1.1	20	2	23	C	24	2	25	1.9		CU-A1 @ N YARD
SPACE			1.1			25	A	26			1.9		
EWHA1 @ CUST			1.5	20	2	27	B	28	2	35	2.4		HP-A1 @ N YARD
			1.5			29	C	30			2.4		

TYPE: BOLT-ON SERVICE: 208Y/120V 3PH, 4W BUS: 225A		PANEL: "PB" LOCATION: GREENHOUSE BLDG				MAIN: 125A/3P MTG: SURFACE AIC: 10 KAIC							
LOAD SERVED	BREAKER				NO	BREAKER				LOAD SERVED			
	LCL	KVA	TRIP	POLE		POLE	TRIP	KVA	LCL				
MAINT GFCEI RECEIPT N WALL			0.6	20	1	1	A	2	1	20	0.3	X	GENERAL LIGHTING
MAINT GFCEI RECEIPT N WALL			0.6	20	1	3	B	4	1	20	0.3	X	GENERAL LIGHTING
MAINT GFCEI RECEIPT N WALL			0.6	20	1	5	C	6	1	20	0.4	X	EXTERIOR SCONCE
MAINT GFCEI RECEIPT S WALL			0.6	20	1	7	A	8	2	20	1.5		SPECIAL OUTLET
MAINT GFCEI RECEIPT S WALL			0.6	20	1	9	B	10			1.5		SPECIAL OUTLET
MAINT GFCEI RECEIPT S WALL			0.6	20	1	11	C	12	1	20	0.2	X	TIMESWITCH
SPECIAL OUTLET			1.5	20	2	13	A	14	1	20			SPACE
SPECIAL OUTLET			1.5			15	B	16	1	20			SPACE
GFCEI RECEIPT E WALL			0.4	20	1	17	C	18	1	20			SPACE
SPACE			20	1	19	A	20						SPACE
SPACE			20	1	21	B	22						SPACE
SPACE			20	1	23	C	24	2	40	3.5			EV CHARGE STATION
SPACE			1	25	A	26					3.5		(FUTURE)
SPACE			1	27	B	28	2	40			3.5		EV CHARGE STATION
SPACE			1	29	C	30					3.5		(FUTURE)
			31	A	32								
			33	B	34								
			35	C	36								
			37	A	38								
			39	B	40								
			41	C	42								

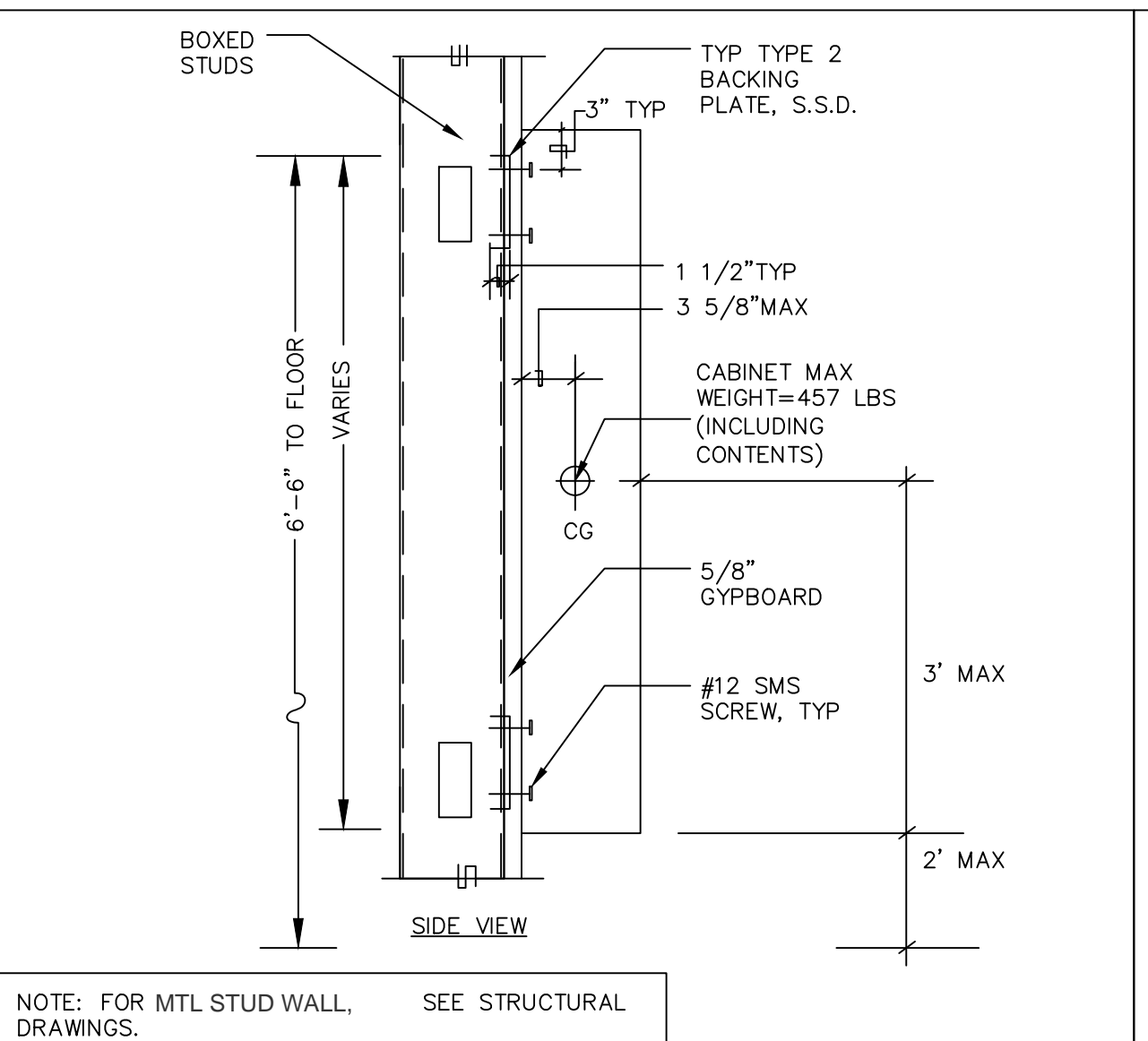
TYPE: BOLT-ON SERVICE: 208Y/120V 3PH, 4W BUS: 225A		PANEL: "PD" LOCATION: EQPT STG				MAIN: 100A/3P MTG: SURFACE AIC: 10 KAIC							
LOAD SERVED	BREAKER				NO	BREAKER				LOAD SERVED			
	LCL	KVA	TRIP	POLE		POLE	TRIP	KVA	LCL				
MAINT RECEIPT STOR			0.4	20	1	1	A	2	1	20	0.2	X	GENERAL LIGHTING
GFCEI EXTR RECEIPT N WALL			0.4	20	1	3	B	4	1	20	0.6	X	EXTR LIGHTING
L5-30R RECEIPT			2.0	30	1	5	C	6	1	30	2.0		L5-30R RECEIPT
L5-30R RECEIPT			2.0	30	1	7	A	8	1	20	0.4		GFCEI EXTR RECEIPT S WALL
SPARE			0.6	20	1	9	B	10	1	20	0.4		GFCEI EXTR RECEIPT MATL BIN
SPARE			0.6	20	1	11	C	12	1	20	0.2	X	TIMESWITCH
SPARE			1.5	20	1	13	A	14	1	20			SPACE
SPACE			1.5	20	1	15	B	16	1	20			SPACE
SPACE			0.4	20	1	17	C	18	1	20			SPACE
SPACE					19	A	20						SPACE
SPACE					21	B	22						SPACE
SPACE					23	C	24						SPACE
					25	A	26						
					27	B	28						
					29	C	30						
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					35	C	36						
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					39	B	40						
					41	C	42						



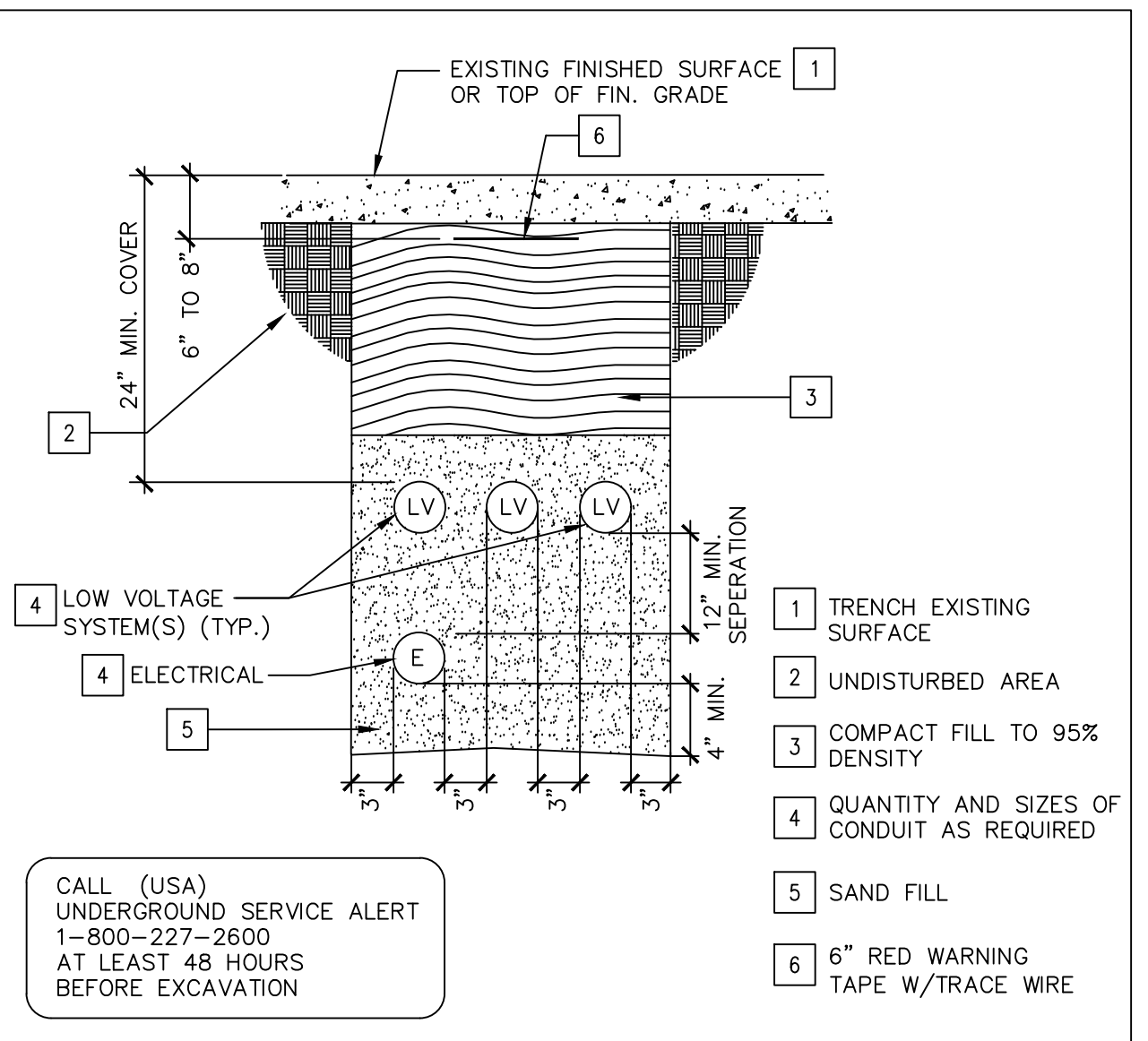
12 POST TOP LTG FOUNDATION DETAIL N.T.S.



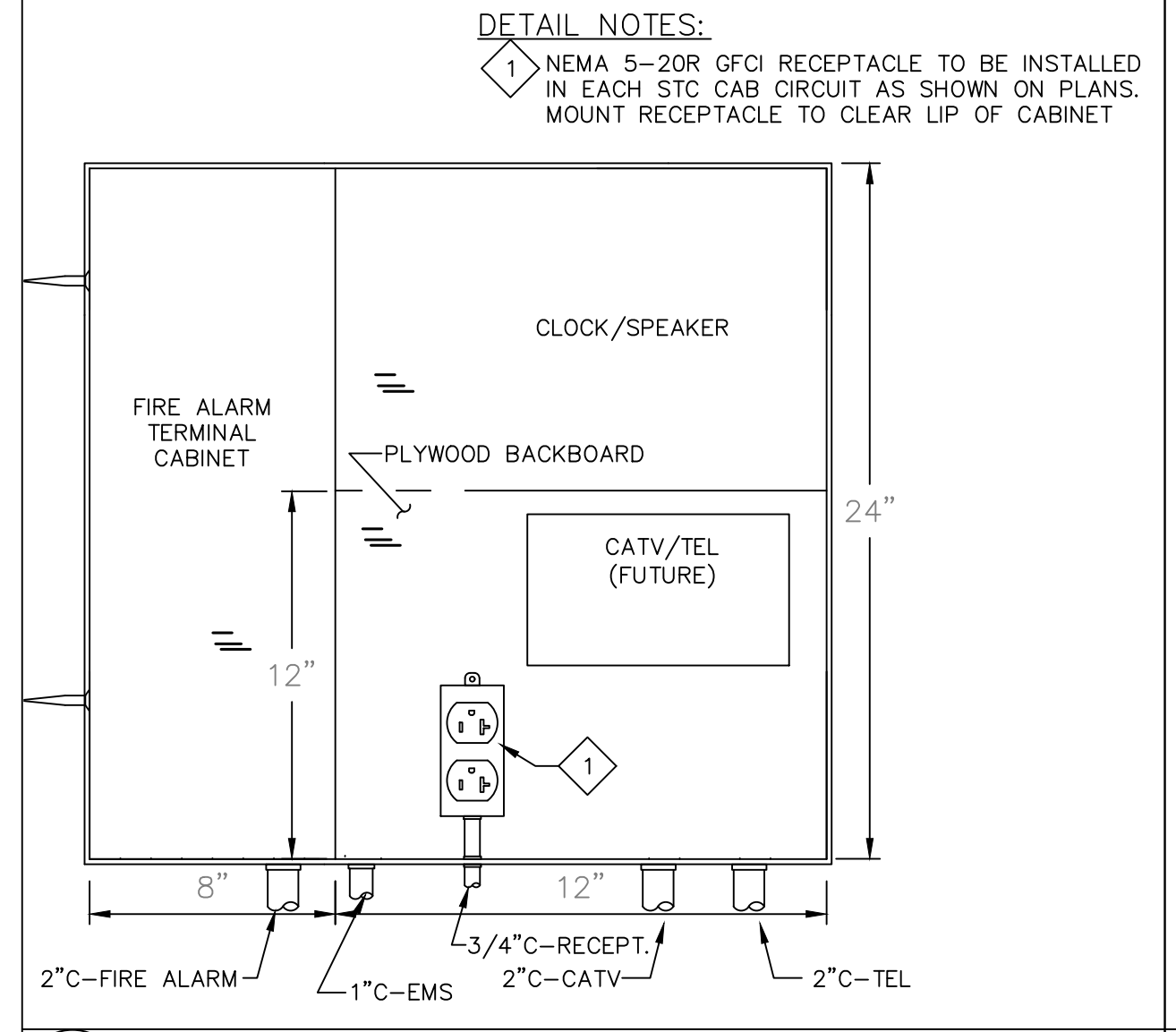
7 FIRESTOP PENETRATION DETAIL N.T.S.



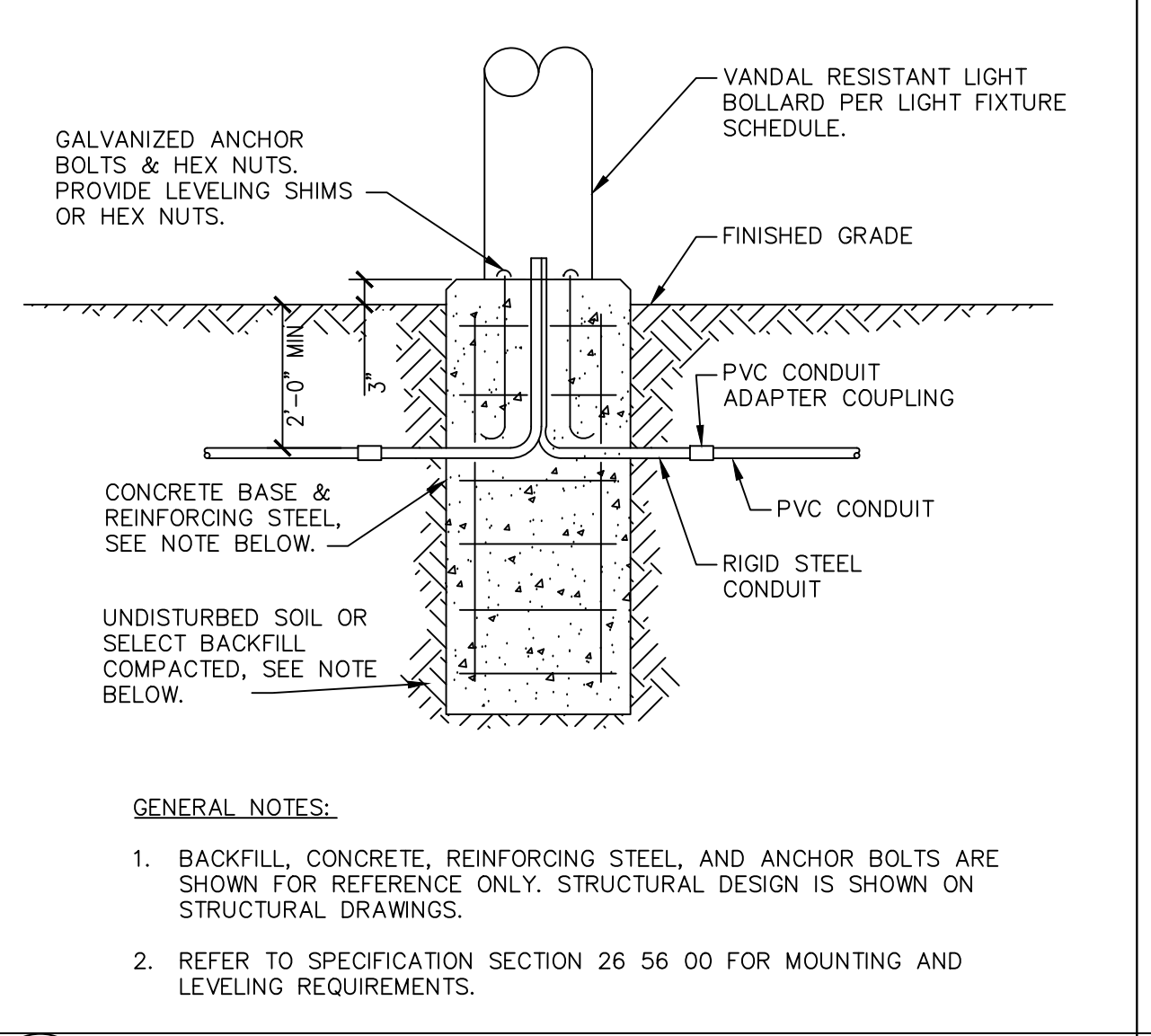
4 SURFACE MOUNTED PANELBOARD DETAIL N.T.S.



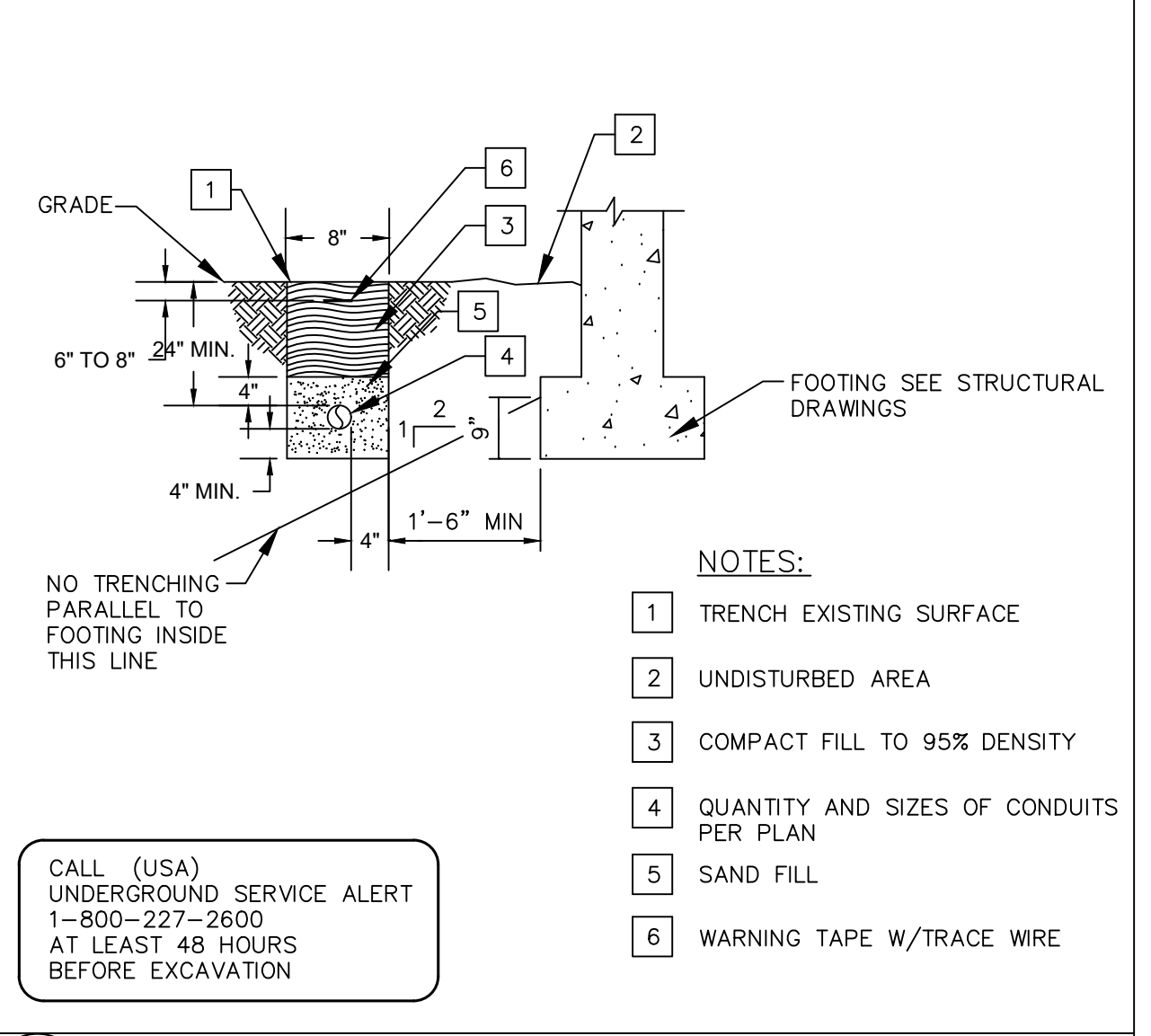
1 POWER & LV CONDUIT TRENCH DETAILS N.T.S.



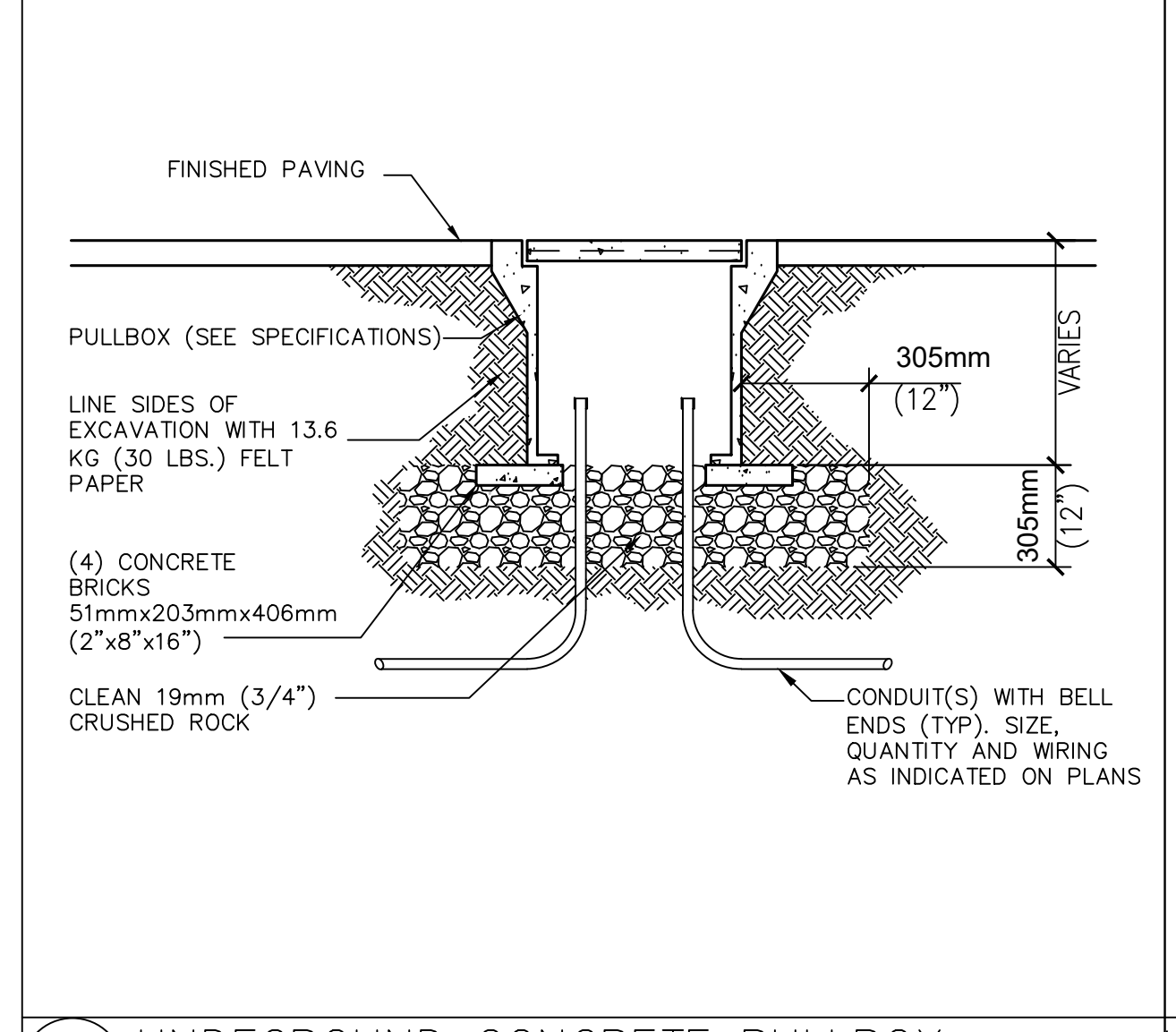
8 STC SPACE ALLOCATION N.T.S.



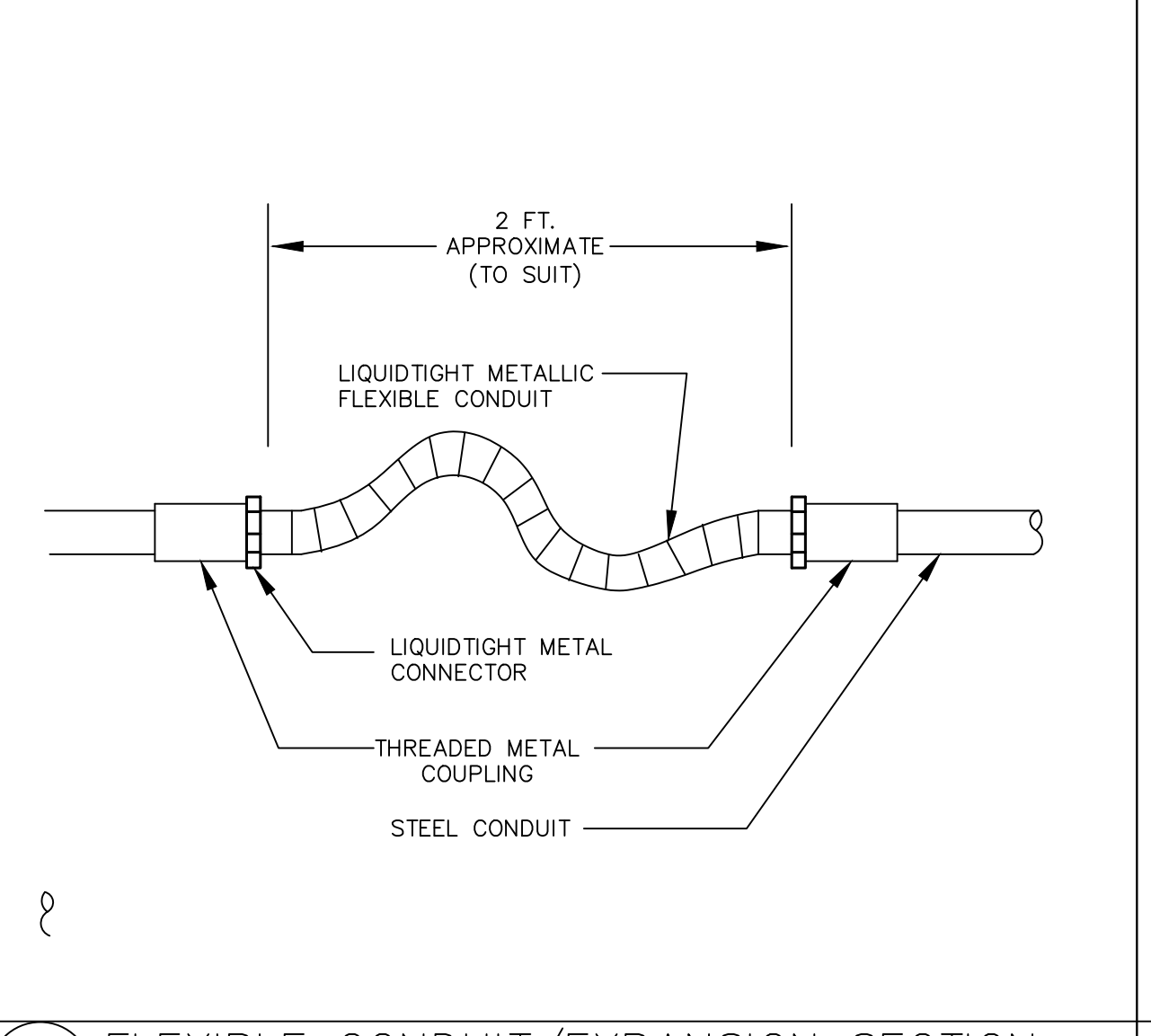
5 BOLLARD BASE DETAIL - TURF AREAS N.T.S.



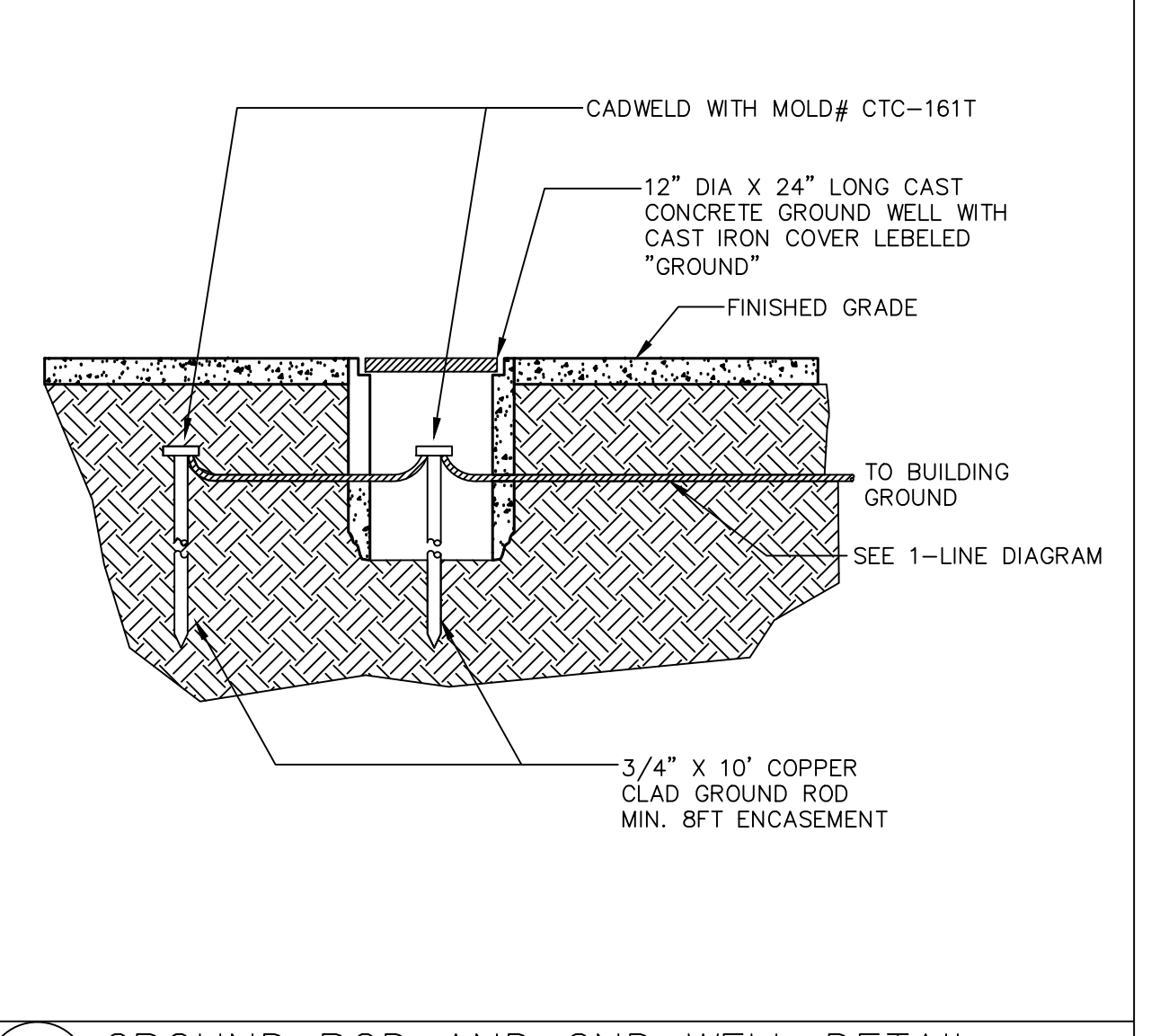
2 ELECTRICAL TRENCH SECTION N.T.S.



10 UNDECLARED CONCRETE PULLBOX - PAVED AREAS N.T.S.



6 FLEXIBLE CONDUIT/EXPANSION SECTION N.T.S.



3 GROUND ROD AND GND WELL DETAIL N.T.S.

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021

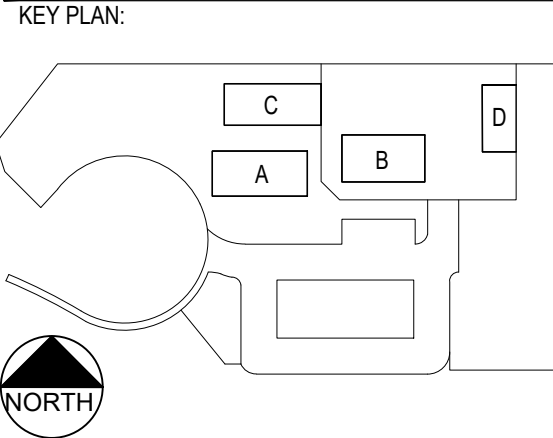
**ATI**  
ARCHITECTS  
+  
ENGINEERS  
AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
REGISTERED PROFESSIONAL ENGINEER  
No. E 16739  
Exp. 09/30/22  
ELECTRICAL  
STATE OF CALIFORNIA

CONSULTANT:  
**MPE**  
METRO POWER ENGINEERS, INC.  
3150 HILLTOP MALL ROAD, SUITE 22  
RICHMOND, CA 94806  
TEL: 510.275.3000 FAX: 510.275.3002

ITEM	REVISION / ISSUE	DATE

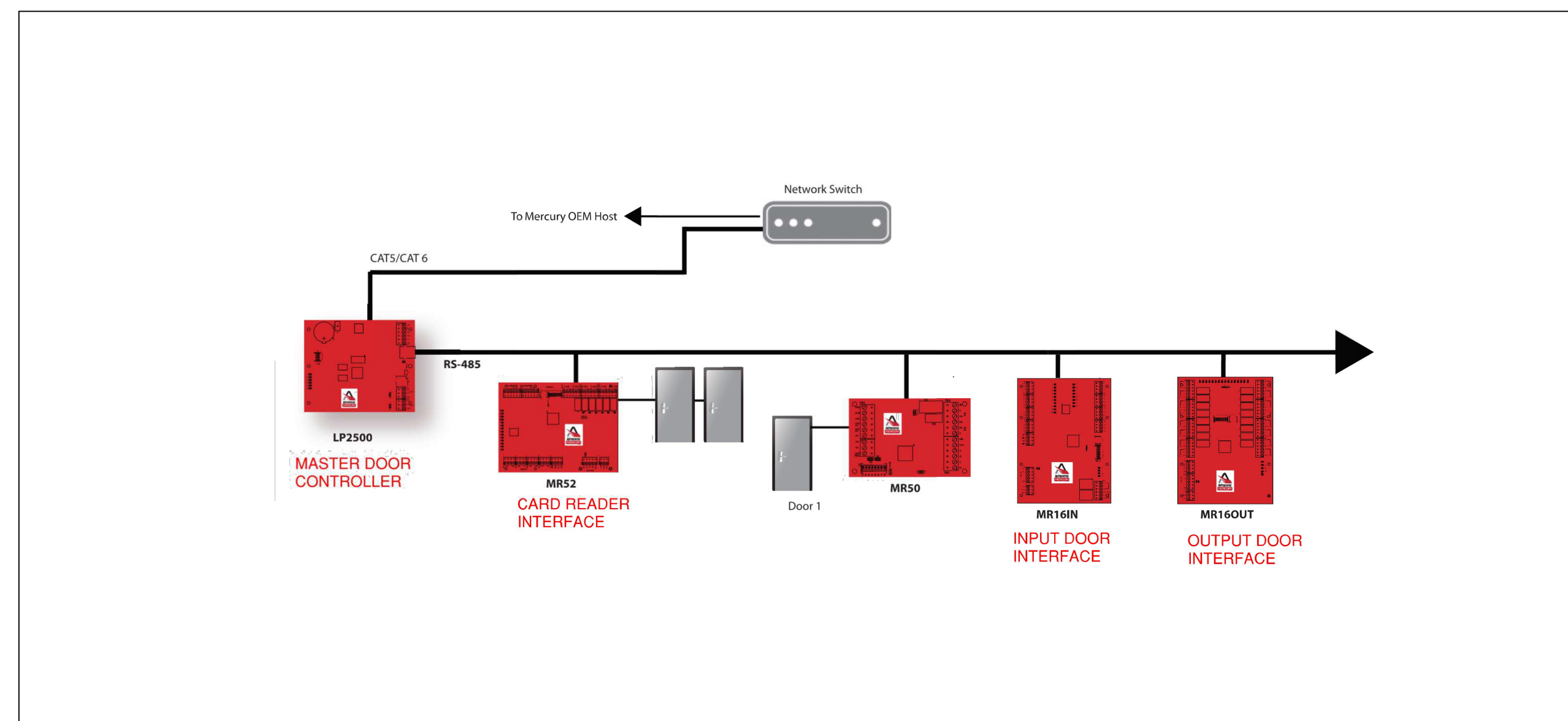


CLPCDD - LAS POSITAS  
COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

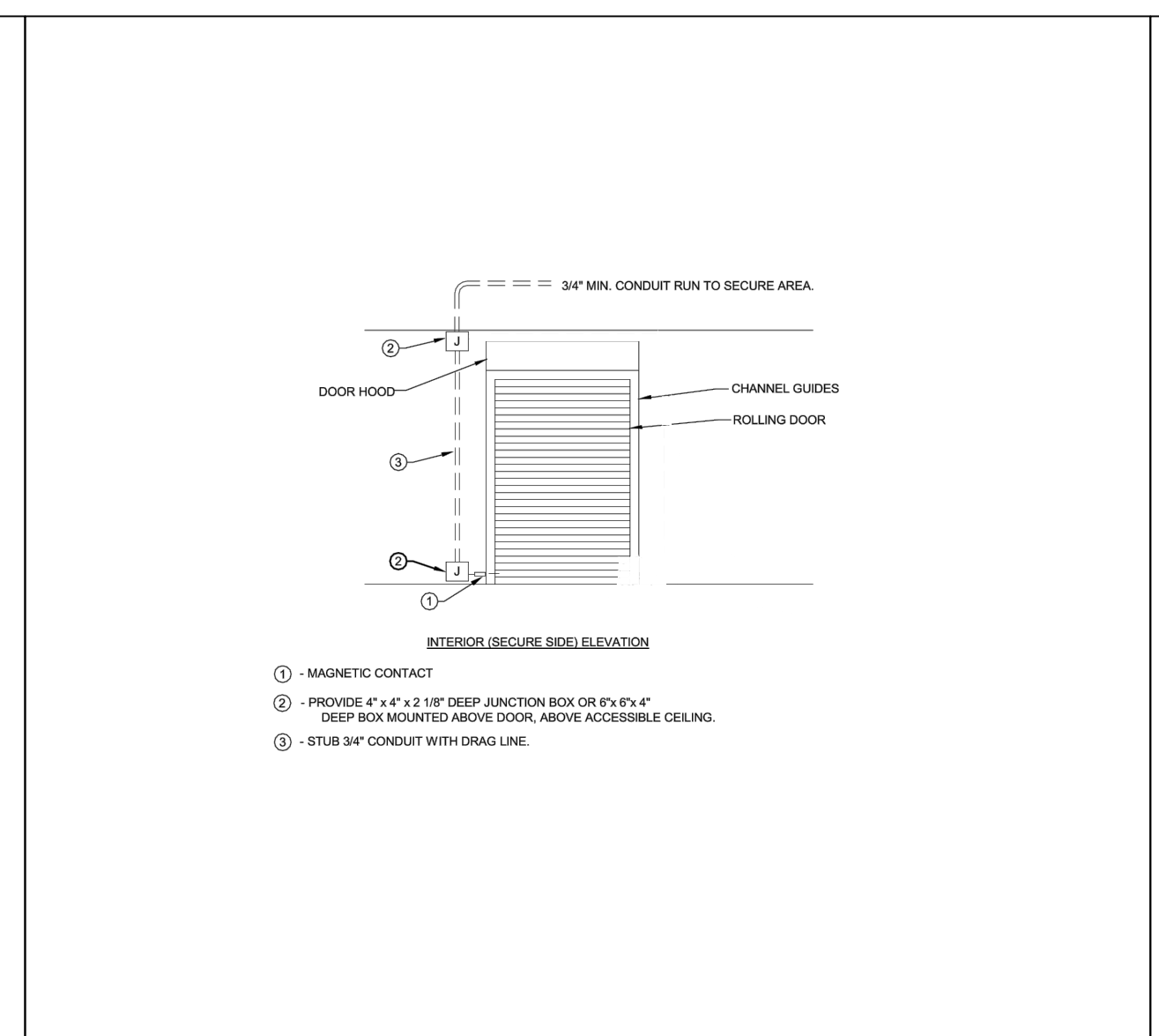
ELECTRICAL  
DETAILS

DRAWN BY: CHECKED BY:  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

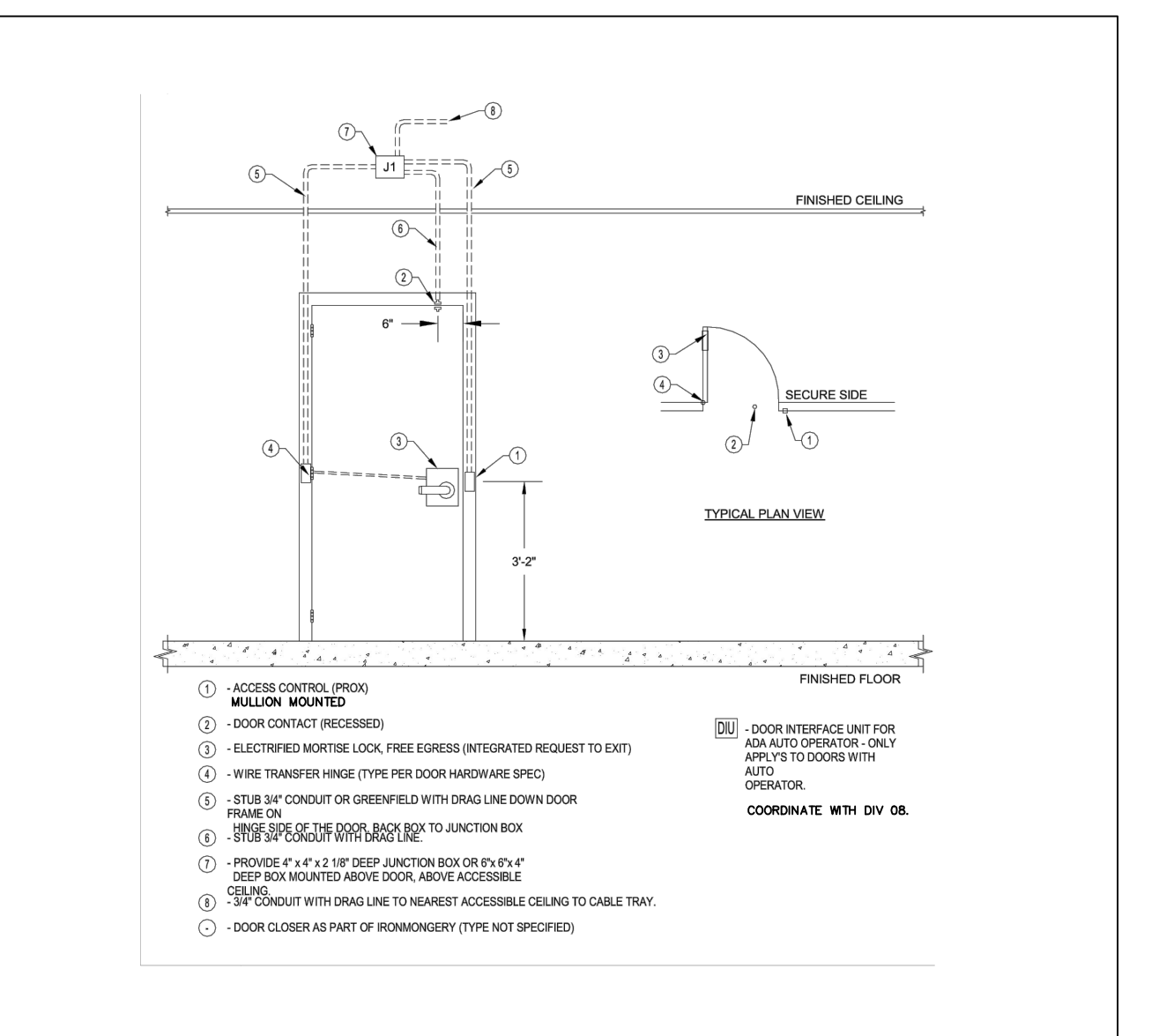




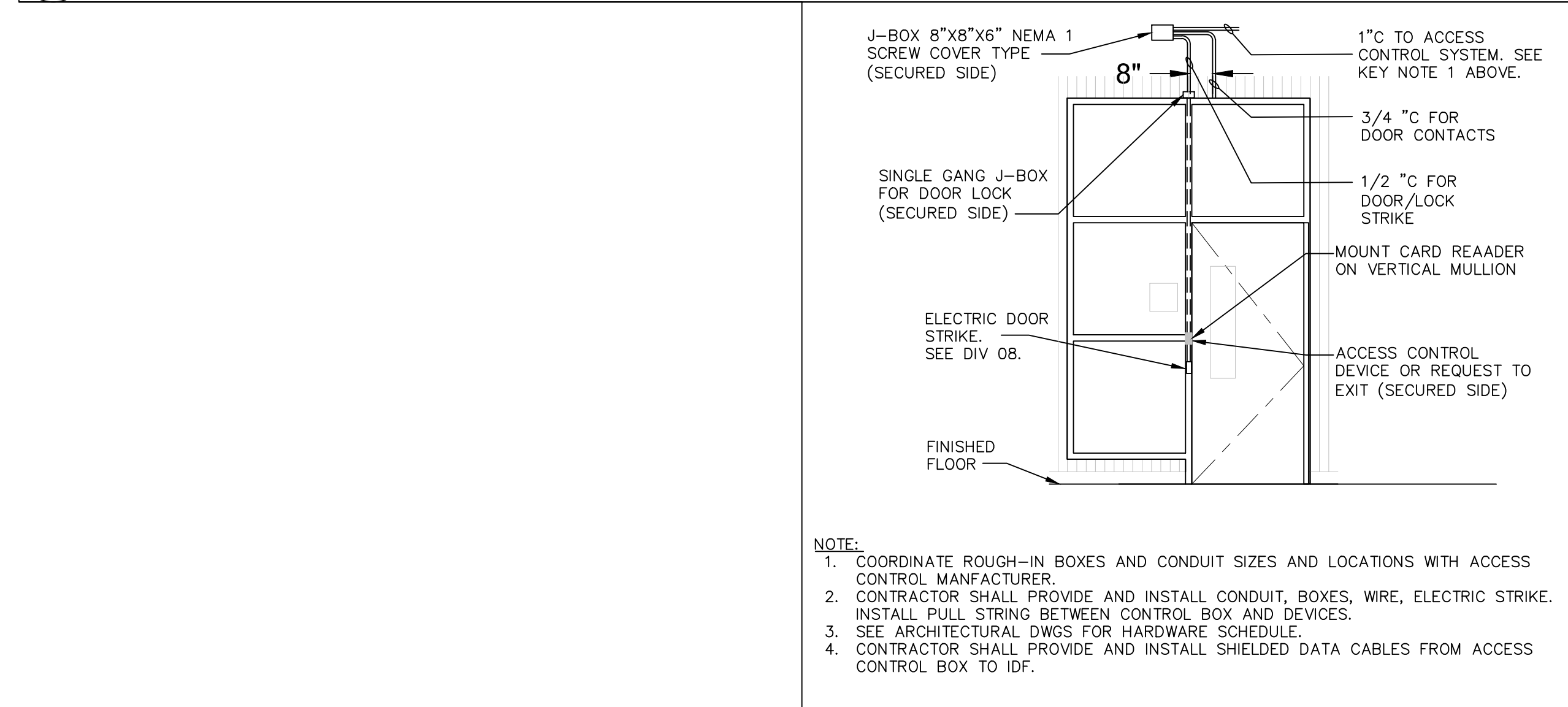
**7** DOOR ACCESS CONTROL SCHEMATIC N.T.S.



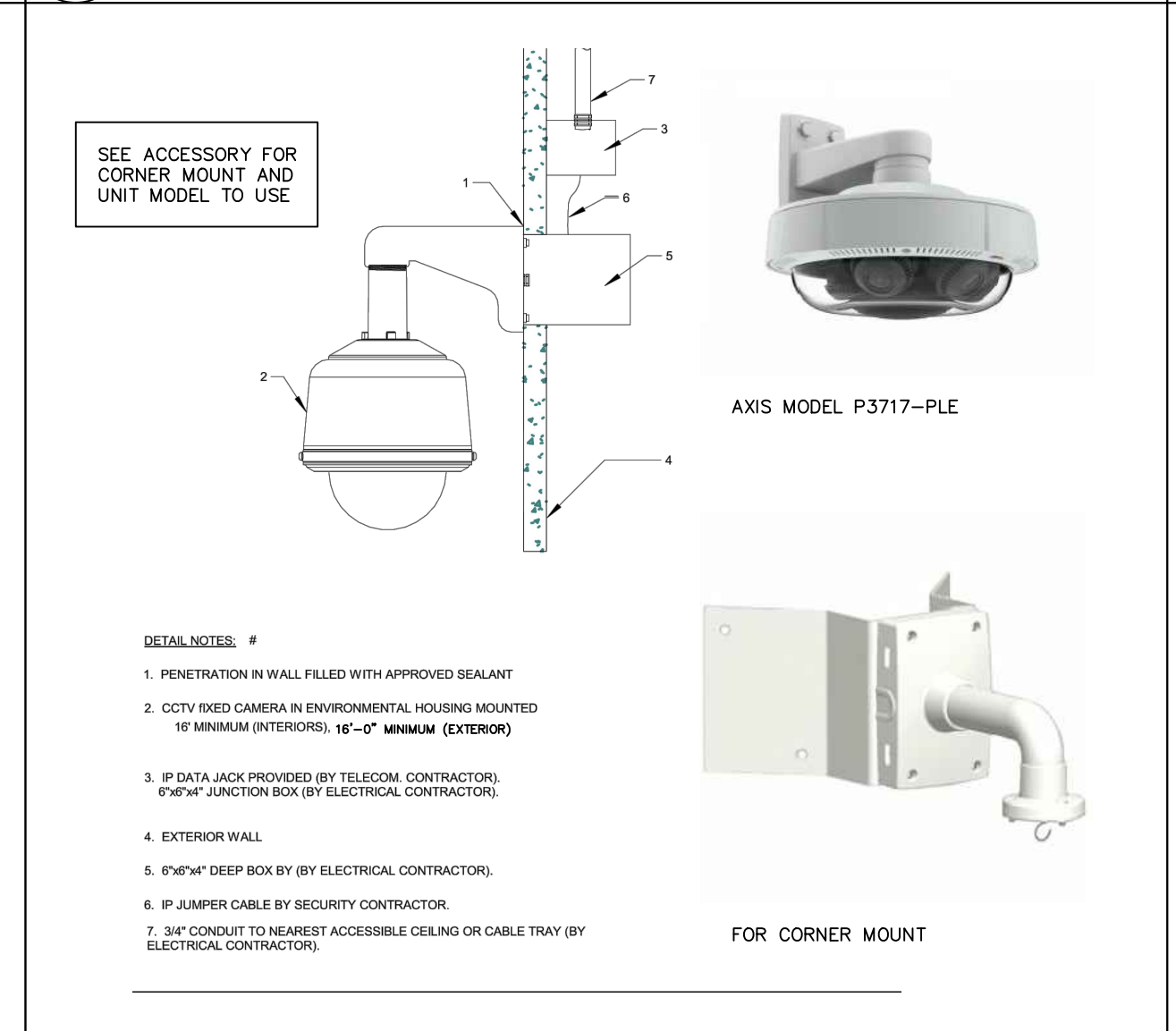
**4** MAGNETIC CONTACT - OVERHEAD DOOR SURFACE MOUNTED N.T.S.



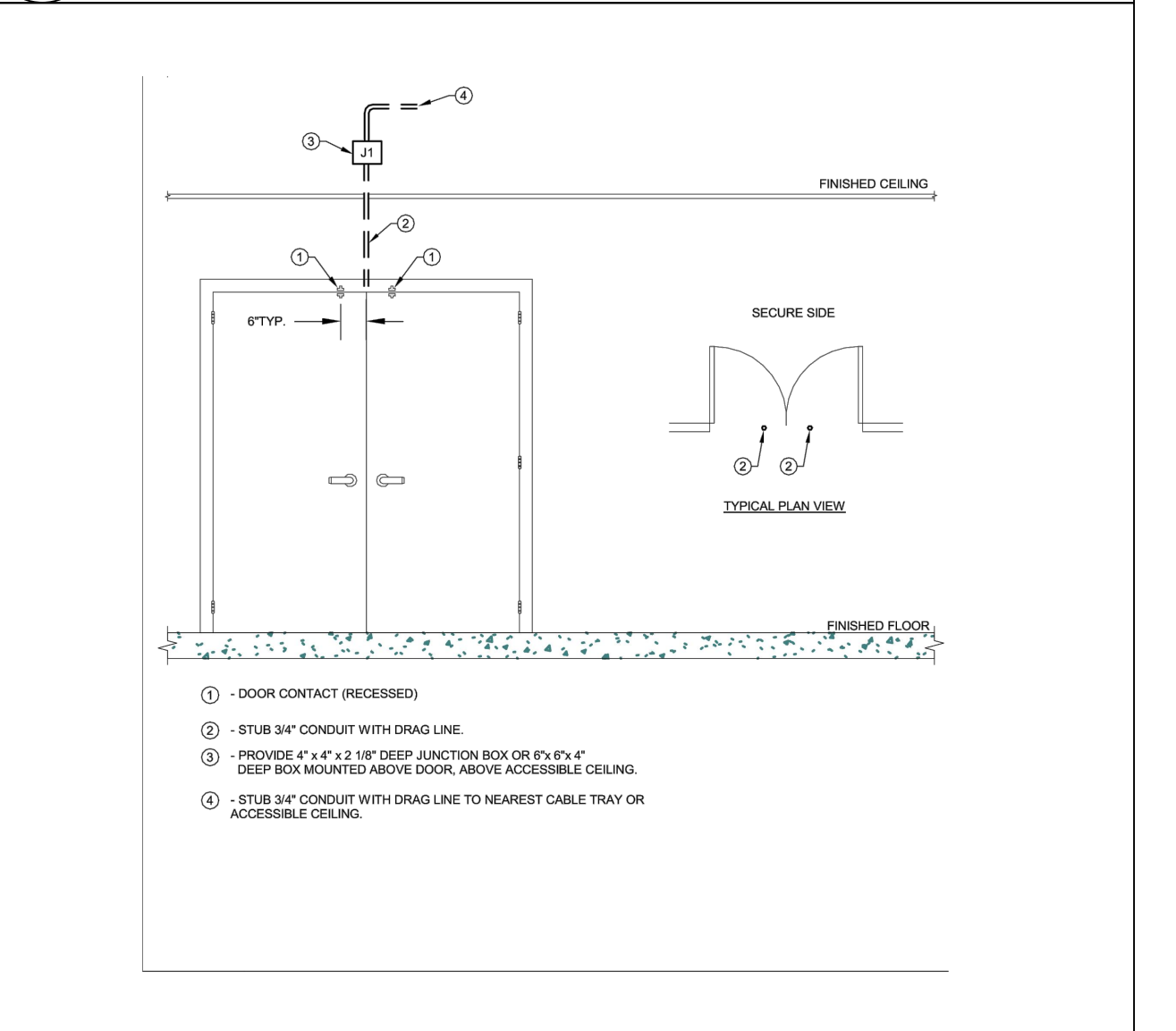
**1** ACCESS CONTROL - SINGLE DOOR - CARD READER MULLION MOUNTED, ELECTRIFIED MORTISE LOCK, DOOR POSITION SWITCH N.T.S.



**8** ACCESS CONTROL CONDUIT DETAIL ELECTRIC DOOR STRIKE N.T.S.



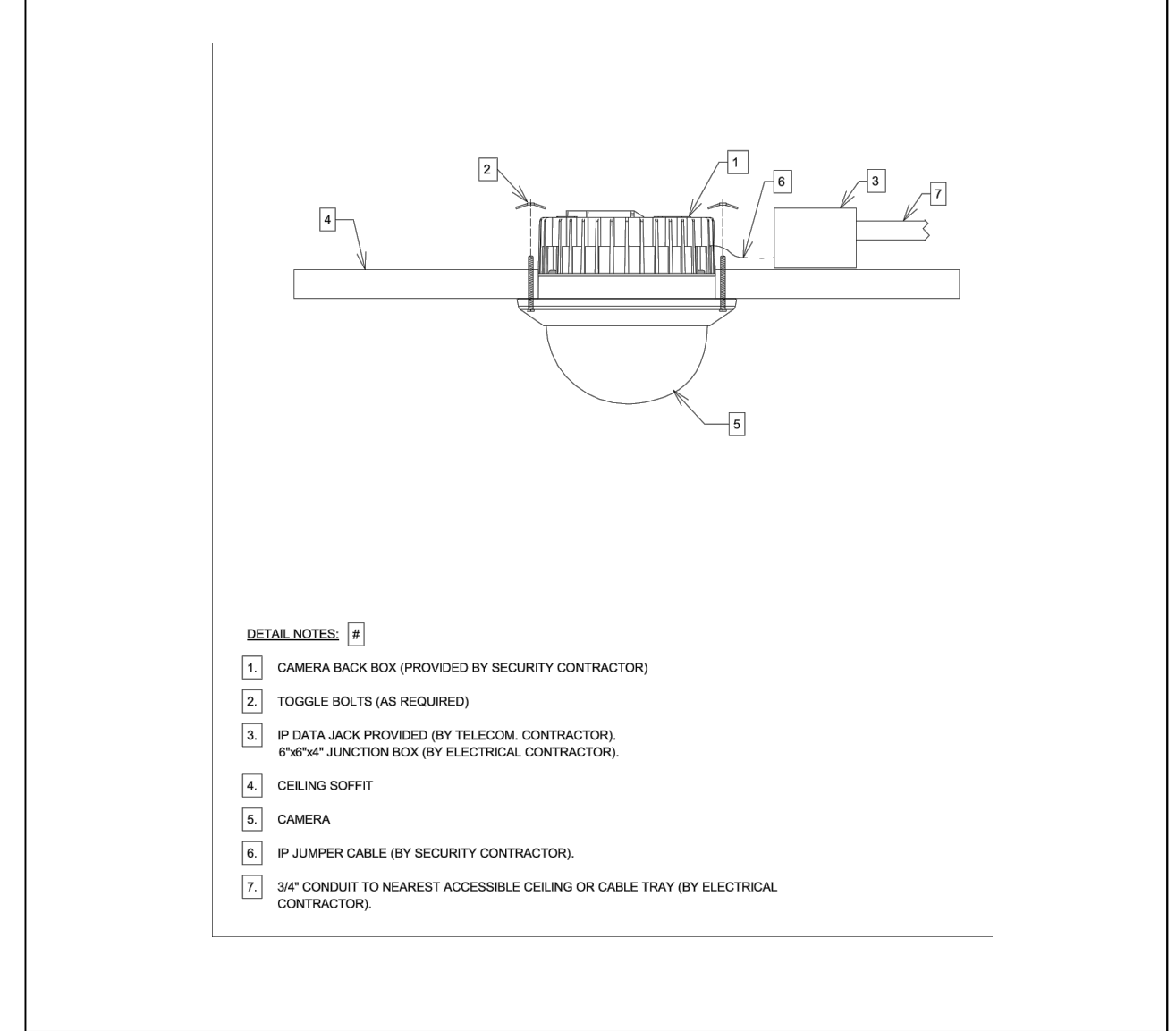
**5** VIDEO SURVEILLANCE - FIXED IP DOME WALL PENDANT MOUNTED - EXTERIOR N.T.S.



**2** MAGNETIC CONTACT - DOUBLE DOOR FLUSH MOUNTED N.T.S.

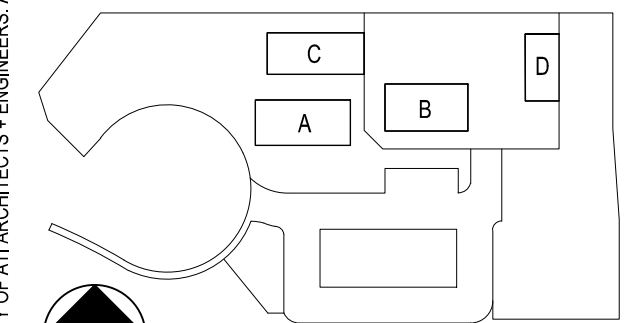


**6** VIDEO SURVEILLANCE - FIXED IP DOME-CEILING FLUSH MOUNTED - INTERIOR N.T.S.



**3** MAGNETIC CONTACT - SINGLE DOOR FLUSH MOUNTED N.T.S.

KEY PLAN:



ITEM	REVISION / ISSUE	DATE

CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

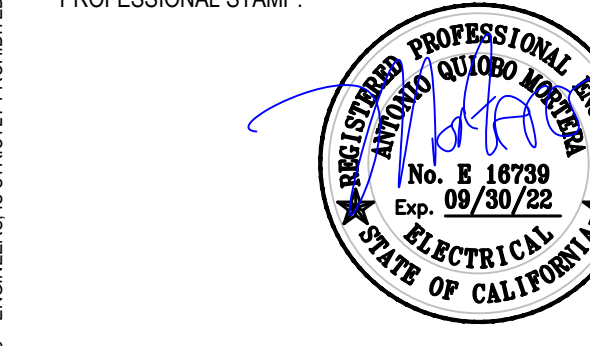
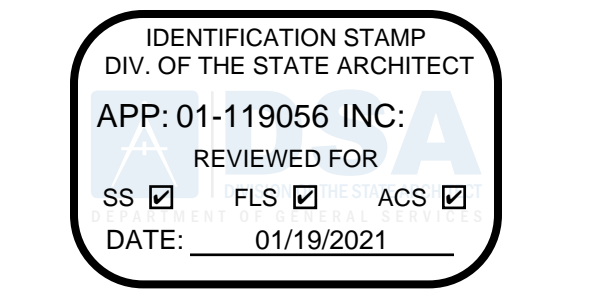
ELECTRICAL  
 DETAILS  
 SECURITY

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO: \_\_\_\_\_

E501

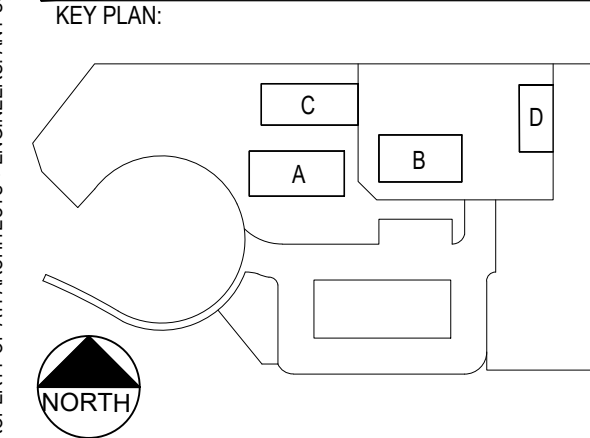
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DSA:



CONSULTANT:  
**METRO POWER ENGINEERS, INC.**  
3150 HILLTOP MALL ROAD, SUITE 22  
RICHMOND, CA 94806  
TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:



**CLPCCD - LAS POSITAS COLLEGE**  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**FIRE ALARM LEGEND, NOTES & SYMBOLS**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**F000**

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### FIRE ALARM LIST OF EQUIPMENT

DESCRIPTION OF DEVICE	MANUFACTURER	MODEL NUMBER	CSFM LISTING NUMBER
ADDRESSABLE FIRE ALARM CONTROL PANEL WITH BUILT-IN 80-CHARACTER LCD DISPLAY PLUG-IN DIGITAL ALARM COMMUNICATOR TRANSMITTER & EXPANDABLE EMERGENCY/VOICE ALARM COMMUNICATION SYSTEM	FCI-GAMEWELL	E3 SERIES	7165-1703:0125
REMOTE POWER SUPPLY	FCI-GAMEWELL	HPF2458	7315-1637:0102
PHOTOELECTRIC SMOKE DETECTOR/CO W/SOUNDER BASE ADDRESSABLE	FCI-GAMEWELL	MCS-COF3	7272-1703:0508
135° F FIXED TEMPERATURE ADDRESSABLE HEAT DETECTOR	FCI-GAMEWELL	ATD-L3R	7270-1703:0502
ADDRESSABLE DUCT SMOKE DETECTOR - NON RELAY	FCI-GAMEWELL	XP95-PD	7272-1703:0155
MANUAL PULL STATION	FCI-GAMEWELL	MS-7AF	7150-1703:0119
ADDRESSABLE CONTROL MODULE	FCI-GAMEWELL	AOM-2SF	7300-1703:0102
ADDRESSABLE RELAY MODULE	FCI-GAMEWELL	AOM-2RF	7300-0075:0102
ADDRESSABLE MONITOR MODULE	FCI-GAMEWELL	AMM-2F	7300-0075:0102
ISOLATOR MODULE	FCI-GAMEWELL	M500X	7300-1653:0103
SPEAKER/STROBE 15/75, 15, 30, 110 CANDELA	FCI-GAMEWELL	SPSWL	7320-1653:0505
STROBE 15/75, 15, 30, 110 CANDELA	FCI-GAMEWELL	P2WH-LF	7125-1653:0224
OUTDOOR SPEAKER - WEATHERPROOF WITH WEATHERPROOF BACK BOX #WPBB	FCI-GAMEWELL	SPRK	7320-1653:0201
FIRE ALARM DOCUMENT CABINET	SPACEAGE ELECT, INC	ACE 11	-

NOTES:  
1. PROVIDE ADDITIONAL REQUIRED MODULES AND ACCESSORIES NOT LISTED ABOVE AS PART OF THE FIRE ALARM SYSTEM.

### FIRE ALARM SYSTEM SCOPE OF WORK

1. NEW ADDRESSABLE FIRE ALARM CONTROL PANEL. SEE DRAWING FA121 FOR PANEL LOCATION.
2. PROVIDE NEW FIRE ALARM POWER SUPPLIES AT LOCATION INDICATED ON THE RESPECTIVE FIRE ALARM PLANS. NEW FIRE ALARM POWER SUPPLIES WILL BE CONTROLLED AND MONITORED BY THE NEW FACP. NEW FACP HAS INTEGRAL EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM PER CBC 907.2.1.1 (SEE SPECS).
3. PROVIDE NEW INITIATING AND NOTIFICATION FIRE ALARM DEVICES AT THE LOCATIONS INDICATED ON RESPECTIVE PLANS. CONNECT NEW FIRE ALARM DEVICES TO THE NEW FIRE ALARM CONTROL PANEL AS SHOWN ON FIRE ALARM RISER DIAGRAM ON DRAWING F003.
4. ALL BACK BOXES FOR FIRE ALARM DEVICES SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL PROVIDE A COMPLETE PROGRAMMING OF THE NEW FIRE ALARM CONTROL SYSTEM AS DIRECTED BY THE OWNER AND PROVIDE MINIMUM 4 HOURS TRAINING FOR SCHOOL PERSONNEL.
6. ALL PENETRATION THROUGH THE FIRE RATED WALLS SHALL COMPLY WITH THE CALIFORNIA BUILDING CODE, AND SHALL BE MADE AS SHOWN ON DETAIL 3/F300.
7. ALL NEW FIRE ALARM WIRING SHALL BE INSTALLED IN 3/4" MIN CONDUIT. MAXIMUM CONDUIT FILL SHALL BE 40% PER CEC.
8. ALL NOTIFICATION FIRE ALARM DEVICES INSTALLED IN ALL BUILDINGS SHALL BE SYNCHRONIZED.
9. FIRE ALARM RACEWAYS AND CONDUITS ROUTING ON FIRE ALARM PLANS IS SHOWN DIAGRAMMATICALLY. THE FINAL FIRE ALARM RACEWAYS ROUTING SHALL BE DETERMINED IN THE FIELD TO SUIT FIELD CONDITION.
10. ALL ADDRESSABLE INITIATING FIRE ALARM DEVICES AND MODULES SHALL BE LABELED WITH THEIR RESPECTIVE ADDRESSES; INCLUDING LOOP AND POINT NUMBER. ALL DEVICES LABELS SHALL BE MADE USING AN ELECTRONIC LABELING SYSTEM WITH BLACK LETTERING ON WHITE BACKGROUND. WHITE ON LABELS ARE PROHIBITED.

### FIRE ALARM SYSTEM DESCRIPTION

1. THE FIRE ALARM SYSTEM IS A FULLY AUTOMATIC AND ADDRESSABLE.
2. NEW INITIATING AND NOTIFICATION FIRE ALARM CIRCUITS ARE ADDRESSABLE AND WIRED AS CLASS B CIRCUIT.
3. AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY ARTICLE 45. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UJFX OR UJUS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011.

### FIRE ALARM GENERAL NOTES

1. FINAL FIRE ALARM TEST SHALL BE MADE WITH DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
2. UNDERGROUND AND EXTERIOR CONDUITS WILL HAVE WATERTIGHT FITTING.
3. FIRE ALARM DEVICE MOUNTING HEIGHTS:
  - PULL STATION: 48" TO THE HIGHEST POINT OF THE ACTIVATING LEVER OR HANDLE OF DEVICE ABOVE FINISHED FLOOR.
  - HORN INTERIOR: 90" TO TOP OF DEVICE ABOVE FINISHED FLOOR, NOT LESS THAN 6" FROM CEILING.
  - WALL MOUNTED STROBE OR HORN/STROBE: 80" TO BOTTOM OF DEVICE AND NOT GREATER THAN 96" ABOVE FINISHED FLOOR TO TOP OF DEVICE, NOT LESS THAN 6" FROM CEILING.
4. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75dBA AT 10'-0" OR MORE THAN 110dBA IN TOTAL THROUGHOUT.
5. AUDIBLE DEVICES SHALL SOUND THE CALIFORNIA UNIFORM FIRE ALARM SIGNAL IN TEMPORAL MODE.
6. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND.
7. ALL WIRE SHALL BE INSTALLED AND PROTECTED IN APPROVED RACEWAYS.
8. DRAWINGS SHALL BE IN ACCORDANCE WITH:
  - CALIFORNIA BUILDING CODE 2019 AND CFC., 2016 EDITION
  - NFPA, CALIFORNIA/NATIONAL ELECTRICAL CODE 760-7., 2016
  - CMC 2016
  - NFPA 72, 2016 EDITION
9. ALL CIRCUITS SHALL BE SUPERVISED AGAINST OPENS, SHORTS AND GROUNDS.
10. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTION AND CEC.
11. FIRE ALARM CIRCUIT SHALL BE IDENTIFIED IN ACCORDANCE WITH CEC. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH NEC.
12. ALL OUTSIDE FIRE ALARM DEVICES SHALL BE CFM LISTED AS WEATHERPROOF TYPE.
13. ALL FIRE ALARM WIRING SHALL BE CONTINUOUS WITHOUT SPLICES AND TERMINATED IN TERMINAL BLOCKS OF THE DEVICE OR FA APPROVED TERMINAL BLOCKS IN TERMINAL CABINETS OR JUNCTION BOXES. SPLICES WILL NOT BE PERMITTED IN UNDERGROUND PULL BOXES.
14. ALL FIRE ALARM WIRING SHALL BE TYPE FPL TWISTED.
15. ALL FIRE ALARM WIRING INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE TYPE FPL TWISTED UL LISTED FOR WET LOCATIONS.
16. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOOR SHALL BE INSTALLED IN ACCORDANCE WITH CEC.
17. ALL SYSTEMS SHALL TEST FREE OF GROUNDS, AS REQUIRED PER NFPA-72.
18. FA CABLE INSTALLED IN THE DUCTS, PLENUM AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
19. PROVIDE AT LEAST ONE EXTERIOR HORN ON BUILDINGS FOR E OCCUPANCIES PER CFC.
  - a) CABLES INSTALLED IN THE VERTICAL RUNS AND PENETRATION MORE THAN ONE FLOOR OR
  - b) CABLES INSTALLED IN VERTICAL RUNS IN SHAFT SHALL BE TYPE FPLR.
20. AREA SMOKE DETECTOR SHALL BE INSTALLED PER NFPA-72 AND SHALL MAINTAIN A MINIMUM 3'-0" SEPARATION FROM ANY SOURCE OF AIR SUPPLY REGISTERS OR RETURN GRILLS.
21. ALL NEW FA WIRING SHALL BE INSTALLED IN CONDUIT MINIMUM SIZE 3/4" U.O.N.
22. CONTRACTOR SHALL COORDINATE ALL NEW WORK WITH EXISTING CONDITION.
23. QUESTIONS DURING CONSTRUCTION SHALL BE DIRECTED TO THE DISTRICT PROJECT MANAGER.
24. SIZE OUTLET BOXES IN CONFORMITY WITH NEC FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.
25. ALL NEW FA CONDUITS AND RACEWAYS ARE SHOWN ON PLANS DIAGRAMMATIC. EXACT RACEWAYS AND CONDUITS ROUTING SHALL BE DETERMINED IN THE FIELD TO SUITE FIELD CONDITION.
26. A STAMPED SET OF DSA APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF COMPONENTS AND/OR DEVICES SHALL BE APPROVED BY THE ARCHITECT OF RECORD.
27. FIRE ALARM CONTRACTOR SHALL PROVIDE A COMPLETED & SIGNED "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR) AND DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS.

### FIRE ALARM APPLICABLE CODES

CBC 2019; CEC 2016;  
STATE FIRE MARSHAL TITLE 19, PUBLIC SAFETY.  
NFPA 72, 2016 EDITION WITH CALIFORNIA AMENDMENTS, FIRE ALARM CODE.  
NFPA 70, CALIFORNIA ELECTRICAL CODE, 2016  
CFC 2016 EDITION WITH CALIFORNIA AMENDMENTS.  
CMC 2016 EDITION.

- DEMONSTRATE COMPLIANCE WITH NFPA 72, 10.6.5.2:
- DEDICATED CIRCUIT
  - MECHANICALLY PROTECTED (LOCKOUT)
  - RED MARKING
  - ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL
  - ID'D AS FIRED ALARM, EMERGENCY COMMUNICATIONS OR FIRE ALARM/ECS
  - LOCATION OF CIRCUIT DISCONNECT (BREAKER) PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT

A FIRE ALARM ACCEPTANCE TEST OF ALL DEVICES AND APPLIANCES, INCLUDING THE BACKUP BATTERY(ES), SHALL BE PERFORMED. ALL MANUFACTURER OPERATING RANGES SHALL BE MET. TESTING OF THE SUPERVISING STATION SIGNALS AS WELL AS RELAY TO THE APPROPRIATE RESPONDING AGENCY, SHALL BE INCLUDED IN THE ACCEPTANCE TESTING. THE PROJECT INSPECTOR SHALL WITNESS THE ACCEPTANCE INSPECTION AND SHALL SIGN AS THE AHJ REPRESENTATIVE ON THE "SYSTEM RECORD OF COMPLETION" AT SECTION 12.3 [NFPA 72, FIGURE 7.8.2(a)], AND THE "SYSTEM RECORD OF INSPECTION AND TESTING" AT SECTION 10.1 [NFPA 72, FIGURE 7.8.2(g)]. ALL SUPPLEMENTARY RECORDS SHALL BE ATTACHED AS APPLICABLE. THE PROJECT INSPECTOR SHALL VERIFY THAT THE FIRE ALARM SYSTEM IS IN SERVICE PRIOR TO COMPLETION OF THE "SYSTEM RECORD OF COMPLETION" FORM. ALL ORIGINAL DOCUMENTATION SHALL BE RETAINED IN THE REQUIRED DOCUMENT CABINET (NFPA 72, 7.7.2).

### FIRE ALARM SYMBOLS

- WP EXTERIOR SPEAKER WITH WEATHERPROOF BACK BOX, WALL MOUNTED AT 90° AFG. TO TOP OF DEVICE  
WP = WEATHERPROOF
- 110cd TEMPORAL SPEAKER/STROBE, +80" AFF. TO BOTTOM OF DEVICE, OR 6" BELOW CEILING, WHICHEVER IS LOWER.  
x = NOTIFICATION ALARM CIRCUIT NUMBER  
y = DEVICE NUMBER
- 15cd WALL MOUNTED VISUAL STROBE, 80" AFF TO BOTTOM OF DEVICE OR NOT GREATER THAN 96" AFF TO TOP OF DEVICE  
15cd = 15 CANDELLA SETTING  
x = NOTIFICATION ALARM CIRCUIT NUMBER  
y = DEVICE NUMBER
- SD ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR/CO W/SOUNDER BASE
- ADDRESSABLE BEAM DETECTOR
- RP RECEIVER/TRANSMITTER
- HD ADDRESSABLE HEAT DETECTOR
- DD ADDRESSABLE SMOKE DUCT DETECTOR
- F ADDRESSABLE MANUAL PULL STATION
- FACP FIRE ALARM CONTROL PANEL-SURFACE MOUNTED
- FAPS FIRE ALARM POWER SUPPLY-SURFACE MOUNTED
- FATC FIRE ALARM TERMINAL CABINET
- M ADDRESSABLE MONITOR MODULE
- R CONTROL RELAY MODULE
- TS TAMPER SWITCH (BY SPRINKLER CONTRACTOR)
- FS WATER FLOW SWITCH (BY SPRINKLER CONTRACTOR)
- PIV POST INDICATING VALVE (BY SPRINKLER CONTRACTOR)
- DDCV DOUBLE CHECK VALVE (BY SPRINKLER CONTRACTOR)
- FSD FIRE SMOKE DAMPER (BY MECHANICAL)
- EOL END OF LINE RESISTOR
- J JUNCTION BOX CEILING MOUNTED
- WP EXTERIOR JUNCTION BOX NEMA 3R WP = WEATHERPROOF
- FA CONDUIT WITH CONDUCTORS CONCEALED IN WALL OR CEILING
- FA CONDUIT WITH CONDUCTORS INSTALLED UNDERGROUND
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- F1 FIRE ALARM CONDUIT AND CABLE TAG  
SEE EXTERIOR FIRE ALARM CONDUIT AND WIRE SCHEDULE ON SHEET F1.1.
- SHEET NOTE TAG
- 1/FS.1 DETAIL REFERENCE NUMBER DETAIL NUMBER AND SHEET NUMBER.

TYPE	DESCRIPTION	USE(S)
A	1PAIR #16 AWG FPL TWISTED NON-SHIELDED	FIRE ALARM DATA & INITIATING CIRCUIT - SLC LOOP
B	2 #12 AWG THHN/THWN	FIRE ALARM NOTIFICATION CIRCUIT
C	2 #14 AWG THHN/THWN	FIRE ALARM INITIATING CIRCUIT (NON ADDRESSABLE)
D	2 #12 AWG THHN/THWN	SIGNAL
E	2 #12 AWG THHN/THWN OR WEST PENN AQUA 226	24V DC POWER

INITIATION RESPONSE											
	MANUAL PULL STATION	AREA SMOKE DETECTORS	SYSTEM TROUBLE	SYSTEM SUPERVISION	FAULT GROUND	HEAT DETECTOR	SMOKE DUCT DETECTOR	SHORTED WIRES	WATER FLOW SWITCH	TAMPER SWITCH	KITCHEN ANSUL SYSTEM
ANNUNCIATE CONDITION AT FACP	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
ANNUNCIATE CONDITION AT FA REMOTE ANNUNCIATOR	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
TRANSMIT SIGNAL TO CENTRAL STATION	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
ACTIVATE NOTIFICATION APPLIANCES	YES	YES	NO	NO	NO	YES	YES	NO	YES	YES	YES
HVAC UNIT SHUTDOWN	NO	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO

VOLTAGE DROP CALCULATIONS- SIGNAL CIRCUIT NO. NAC-1(FACP-N1)									
PROJECT: LPC-HORTICULTURE						SEE RISER DIAGRAM			
DEVICE #	AMP/DEVICE	AMP ADDED	DISTANCE(ft)	WIRE GA	OHMS/1000'	VOLT DROP/AL	VOLT DROP	REMARKS	
N1-6	0.094	0.094	4	12	1.6	0.00		30cd	
N1-5	0.06	0.154	40	12	1.6	0.03		15cd	
N1-4	0.06	0.214	30	12	1.6	0.03		15cd	
N1-3	0.202	0.416	40	12	1.6	0.09		110cd	
N1-2	0.158	0.574	40	12	1.6	0.12		75cd	
N1-1	0.06	0.634	20	12	1.6	0.06		15cd	
<b>TOTAL VOLT DROP:</b>							<b>0.33</b>	<b>1.39</b>	<b>% @ 24V</b>
<b>NOTES:</b>							<b>1.64</b>	<b>% @ 20.4V</b>	
1 Voltage Drop (VD) = 2 x Amp x Distance x Ohms/1k'									
2 Ohmic value of conductor per 1000' of run are as follows: 1.0 for #10; 1.6 for #12; 2.6 for #14; 4.1 for #16; 6.5 for #18									

VOLTAGE DROP CALCULATIONS- SIGNAL CIRCUIT NO. NAC-1(FACP-N2)									
PROJECT: LPC-HORTICULTURE						SEE RISER DIAGRAM			
DEVICE #	AMP/DEVICE	AMP ADDED	DISTANCE(ft)	WIRE GA	OHMS/1000'	VOLT DROP/AL	VOLT DROP	REMARKS	
N2-1	0.202	0.202	50	12	1.6	0.05		110cd	
<b>TOTAL VOLT DROP:</b>							<b>0.05</b>	<b>0.22</b>	<b>% @ 24V</b>
<b>NOTES:</b>							<b>0.25</b>	<b>% @ 20.4V</b>	
1 Voltage Drop (VD) = 2 x Amp x Distance x Ohms/1k'									
2 Ohmic value of conductor per 1000' of run are as follows: 1.0 for #10; 1.6 for #12; 2.6 for #14; 4.1 for #16; 6.5 for #18									

VOLTAGE DROP CALCULATIONS- SIGNAL CIRCUIT NO. NAC-1(FACP-N3)									
PROJECT: LPC-HORTICULTURE						SEE RISER DIAGRAM			
DEVICE #	AMP/DEVICE	AMP ADDED	DISTANCE(ft)	WIRE GA	OHMS/1000'	VOLT DROP/AL	VOLT DROP	REMARKS	
N3-2	0.202	0.202	220	12	1.6	0.23		110cd	
N3-1	0.094	0.296	4	12	1.6	0.01		30cd	
<b>TOTAL VOLT DROP:</b>							<b>0.23</b>	<b>0.97</b>	<b>% @ 24V</b>
<b>NOTES:</b>							<b>1.15</b>	<b>% @ 20.4V</b>	
1 Voltage Drop (VD) = 2 x Amp x Distance x Ohms/1k'									
2 Ohmic value of conductor per 1000' of run are as follows: 1.0 for #10; 1.6 for #12; 2.6 for #14; 4.1 for #16; 6.5 for #18									

VOLTAGE DROP CALCULATIONS- SIGNAL CIRCUIT NO. NAC-1(FACP-N4)									
PROJECT: LPC-HORTICULTURE						SEE RISER DIAGRAM			
DEVICE #	AMP/DEVICE	AMP ADDED	DISTANCE(ft)	WIRE GA	OHMS/1000'	VOLT DROP/AL	VOLT DROP	REMARKS	
N4-2	0.202	0.202	180	12	1.6	0.19		110cd	
N4-1	0.202	0.404	90	12	1.6	0.19		110cd	
<b>TOTAL VOLT DROP:</b>							<b>0.37</b>	<b>1.55</b>	<b>% @ 24V</b>
<b>NOTES:</b>							<b>1.83</b>	<b>% @ 20.4V</b>	
1 Voltage Drop (VD) = 2 x Amp x Distance x Ohms/1k'									
2 Ohmic value of conductor per 1000' of run are as follows: 1.0 for #10; 1.6 for #12; 2.6 for #14; 4.1 for #16; 6.5 for #18									

### System Power Requirements E3 Fire Alarm Control Panel with Broadband

Protected Premises: <u>Mintie White ES</u>		Date: <u>5/12/2020</u>
Address: <u>515 Palm Avenue</u>	City: <u>Watsonville</u>	State: <u>CA</u> Zip: <u>95076</u>
Prepared By: <u>MPEI</u>	Phone: <u>510.275.3000</u>	
Address: <u>3150 Hilltop Mall Road, Ste 22</u>	City: <u>Richmond</u>	State: <u>CA</u> Zip: <u>94806</u>

Clear Project Information

**Secondary Load Requirements 30.00 Amp Hours**

Total Secondary Load from the calculation table below.

Current Draw	Time (hours)	Total (AH)
Secondary Standby Load 0.964 A	24 hours	23.12
Secondary Alarm Load 7.491 A	0.250 hours	1.87
<b>Total Secondary Load</b>		<b>25.00</b>
Derating factor x 1.20		
<b>Secondary Load Requirements</b>		<b>30.00 AH</b>

**Battery Selection 31.00 Amp Hours**

Select batteries from the list

31 AH Battery (12 volt)

**Battery Distribution Chart**  
Shows amp-hour distribution of your selections.

Spare Battery Capacity	1.00 Amp Hours
Secondary Standby Load	27.75 Amp Hours
Secondary Alarm Load	2.25 Amp Hours

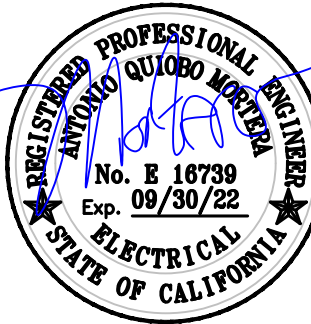
System Current Draw E3 Series Control Panel with Broadband											
Total Standby					0.964 A	Total Alarm					7.491 A
Device	Qty	Draw	Standby	Alarm	Alarm	Qty	Draw	Standby	Alarm	Alarm	
<b>1. System Device</b>											
Intel Loop Interface Main Board (LI-MB-E3)	1	x	0.08100	0.08100	1	x	0.15000	0.15000	0.15000	0.15000	
Intel Loop Interface Supplement Board (LI-S-E3)	0	x	0.08100	0.08100	0	x	0.15000	0.15000	0.15000	0.15000	
Intel Loop Interface Main Board - Apollo (LI95-MB-E3)	0	x	0.05000	0.05000	0	x	0.09100	0.09100	0.09100	0.09100	
Intel Loop Interface Supplement Board - Apollo (LI95-S-E3)	0	x	0.05000	0.05000	0	x	0.09100	0.09100	0.09100	0.09100	
7100 Panel 1 SLC	1	x	0.05600	0.05600	1	x	0.07600	0.07600	0.07600	0.07600	
7100 Panel 1 SLC with DACT	0	x	0.07500	0.07500	0	x	0.09500	0.09500	0.09500	0.09500	
7100 Panel 2 SLC	0	x	0.06500	0.06500	0	x	0.08500	0.08500	0.08500	0.08500	
7100 Panel 2 SLC with DACT	0	x	0.08500	0.08500	0	x	0.10500	0.10500	0.10500	0.10500	
<b>2. E3 Optional Modules</b>											
120V Power Supply Sub-Assembly (PM-9)	0	x	0.05000	0.05000	0	x	0.05000	0.05000	0.05000	0.05000	
240V Power Supply Sub-Assembly (PM-9G)	0	x	0.02700	0.02700	0	x	0.05000	0.05000	0.05000	0.05000	
LCD Display & Switch Control (LCD-E3)	1	x	0.02400	0.02400	1	x	0.02800	0.02800	0.02800	0.02800	
ARCNET Repeater (PPE-E3)	0	x	0.01300	0.01300	0	x	0.01300	0.01300	0.01300	0.01300	
Digital Communicator (DACT-E3)	0	x	0.01300	0.01300	0	x	0.01300	0.01300	0.01300	0.01300	
Optional Remote Serial Annunciator (LCD-7100)	0	x	0.05000	0.05000	0	x	0.07500	0.07500	0.07500	0.07500	
Network LCD Annunciator (NGA)	0	x	0.20000	0.20000	1	x	0.20000	0.20000	0.20000	0.20000	
Auxiliary Switch Sub-Assembly (ASM-16)	1	x	0.01100	0.01100	1	x	0.01100	0.01100	0.01100	0.01100	
Remote LED Driver Module (LDM-7100)	0	x	0.01100	0.01100	0	x	0.01100	0.01100	0.01100	0.01100	
Addressable Node Expander (ANX)	1	x	0.06500	0.06500	1	x	0.06500	0.06500	0.06500	0.06500	
<b>3. 7100 Optional Modules</b>											
Intelligent Network Interface Module (INI-7100)	1	x	0.04000	0.04000	1	x	0.04000	0.04000	0.04000	0.04000	
Printer Transient Module (PTRM)	1	x	0.02000	0.02000	1	x	0.02000	0.02000	0.02000	0.02000	
Remote LED Driver Module (LDM-7100)	0	x	0.03500	0.03500	0	x	0.02000	0.02000	0.02000	0.02000	
Class A Option Module (CAOM)	0	x	0.00100	0.00100	0	x	0.00100	0.00100	0.00100	0.00100	
Municipal Circuit Option Module (MCOM)	0	x	0.00100	0.00100	0	x	0.00100	0.00100	0.00100	0.00100	
<b>4. INI-VGC Command Center</b>											
Intel Network Command Center (INI-VGC)	0	x	0.15000	0.15000	0	x	0.15000	0.15000	0.15000	0.15000	
Addressable Switch Sub-assembly (ASM-16)	0	x	0.01100	0.01100	0	x	0.01100	0.01100	0.01100	0.01100	
Voice Paging Microphone (Microphone)	1	x	0.00100	0.00100	1	x	0.00100	0.00100	0.00100	0.00100	
Firefighter's Telephone (Handset)	1	x	0.02000	0.02000	1	x	0.02000	0.02000	0.02000	0.02000	
Addressable Output Module-Telephone (AOM-TEL)	1	x	0.00200	0.00200	1	x	0.00650	0.00650	0.00650	0.00650	
<b>5. INI-VGX Voice Gateway</b>											
Intel Network Voice Gateway (INI-VGX)	1	x	0.15000	0.15000	1	x	0.15000	0.15000	0.15000	0.15000	
120V Power Supply Sub-Assembly (PM-9)	1	x	0.05000	0.05000	1	x	0.05000	0.05000	0.05000	0.05000	
240V Power Supply Sub-Assembly (PM-9G)	0	x	0.02700	0.02700	0	x	0.05000	0.05000	0.05000	0.05000	
Amplifier Sub-assembly 50 watt 25V (AM-50)	2	x	0.09600	0.17200	2	x	2.20600	4.41200	4.41200	4.41200	
Amplifier Sub-assembly 50 watt 70V (AM-50-70)	0	x	0.49000	0.49000	0	x	2.30000	2.30000	2.30000	2.30000	
Addressable Output Module-Signal (AOM-2SF)	4	x	0.00200	0.00800	4	x	0.00650	0.02600	0.02600	0.02600	
Addressable Output Module-Telephone (AOM-TEL)	1	x	0.00200	0.00200	1	x	0.00650	0.00650	0.00650	0.00650	
Addressable Output Module-Audio (AOM-MUX)	1	x	0.00200	0.00200	1	x	0.00650	0.00650	0.00650	0.00650	
<b>6. INI-VGE Command Center Voice Gateway</b>											
Intel Network Command Voice Gateway (INI-VGE)	0	x	0.15000	0.15000	0	x	0.15000	0.15000	0.15000	0.15000	
Addressable Switch Sub-assembly (ASM-16)	0	x	0.01100	0.01100	0	x	0.01100	0.01100	0.01100	0.01100	
Voice Paging Microphone (Microphone)	0	x	0.00100	0.00100	0	x	0.00100	0.00100	0.00100	0.00100	
Firefighter's Telephone (Handset)	0	x	0.02000	0.02000	0	x	0.02000	0.02000	0.02000	0.02000	
Addressable Output Module-Signal (AOM-2SF)	0	x	0.00200	0.00200	0	x	0.00650	0.00650	0.00650	0.00650	
Addressable Output Module-Telephone (AOM-TEL)	0	x	0.00200	0.00200	0	x	0.00650	0.00650	0.00650	0.00650	
Addressable Output Module-Audio (AOM-MUX)	0	x	0.00200	0.00200	0	x	0.00650	0.00650	0.00650	0.00650	
<b>7. Smoke Detectors/Modules</b>											
Smoke Detector/Module 1	13	x	0.00350	0.04550	13	x	0.03500	0.45500	0.45500	0.45500	
Heat Detector/Module 2	3	x	0.00350	0.01050	3	x	0.03500	0.10500	0.10500	0.10500	
Manual Pull Station	1	x	0.00350	0.00350	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 4	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 5	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 6	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 7	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 8	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 9	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
Smoke Detector/Module 10	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
<b>8. Notification Appliances</b>											
SFSR110	4	x	0.00000	0.00000	4	x	0.20200	0.80800	0.80800	0.80800	
SFSR75	1	x	0.00000	0.00000	1	x	0.15800	0.15800	0.15800	0.15800	
SR110	2	x	0.00000	0.00000	2	x	0.20200	0.40400	0.40400	0.40400	
SR30	1	x	0.00000	0.00000	1	x	0.09400	0.09400	0.09400	0.09400	
SR15	3	x	0.00000	0.00000	3	x	0.06600	0.19800	0.19800	0.19800	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
	0	x	0.00000	0.00000	0	x	0.00000	0.00000	0.00000	0.00000	
<b>Total Standby Load:</b>					<b>0.964 A</b>				</		

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 APP: 01-119056 INC:  
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 DATE: 01/19/2021

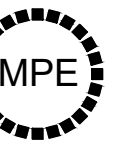


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CONSULTANT:

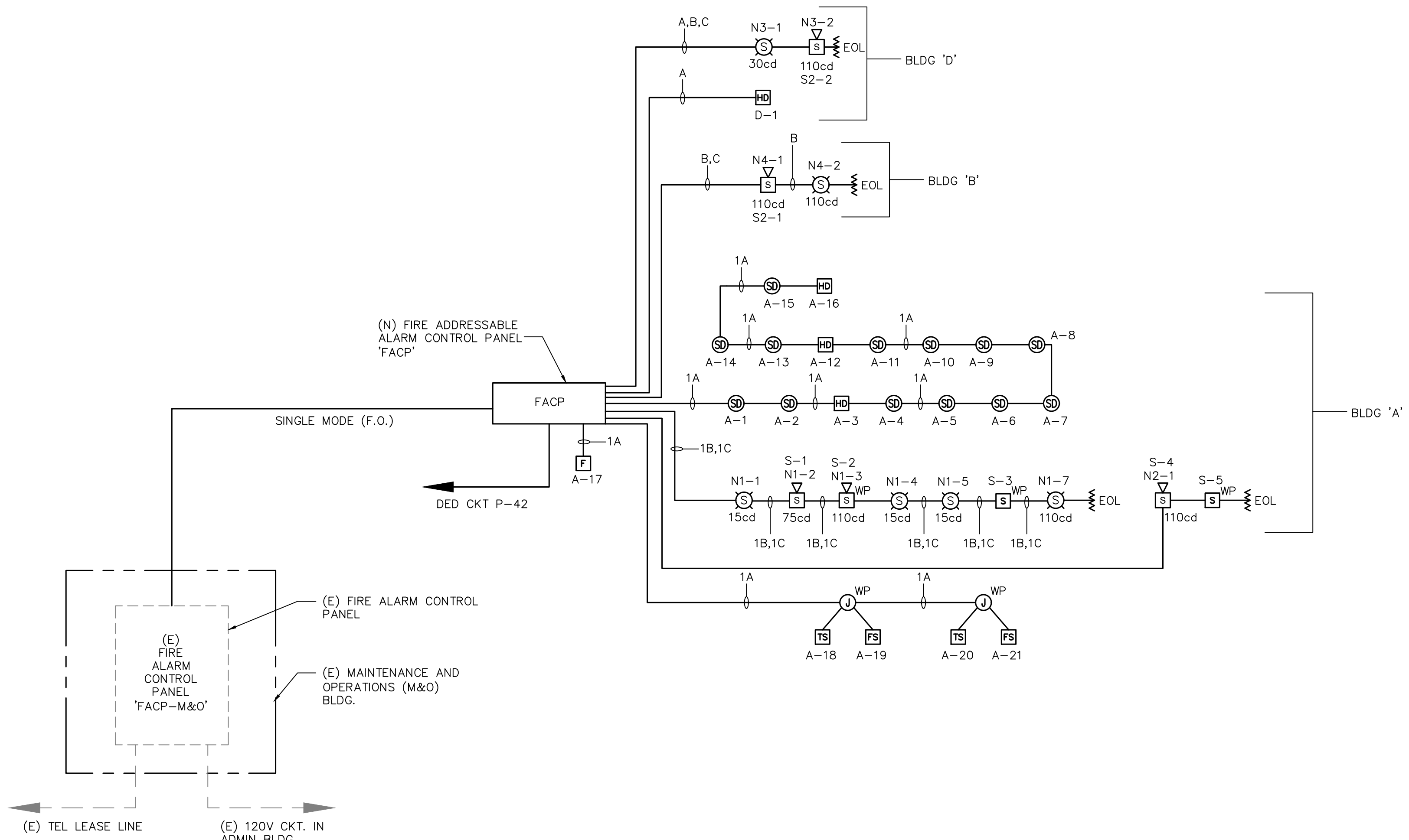
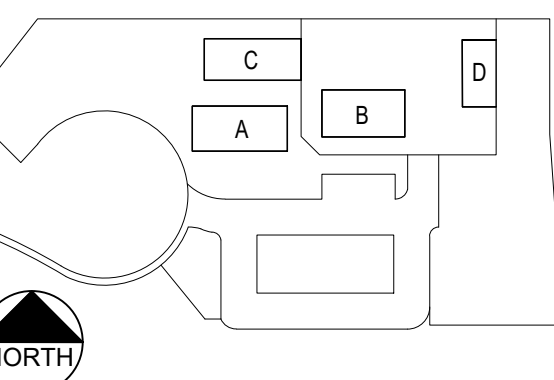


**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 22  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

ITEM: REVISION / ISSUE: DATE:

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



**GENERAL NOTES:**

- SEE DRAWING F101 FOR EXTERIOR FA CONDUIT SCHEDULE.
- PROVIDE FAULT GROUND ISOLATOR MODULES IN THE SIGNALING LINE CIRCUIT EVERY 25 ADDRESSABLE DEVICES WITHIN THE BUILDING.
- PROVIDE ALL EQUIPMENT, MATERIALS AND CONNECTIONS NECESSARY (WHETHER SHOWN ON THE RISER DIAGRAM OR NOT) TO SYNCHRONIZE ALL NEW FIRE ALARM NOTIFICATION DEVICES THROUGHOUT THE CAMPUS. ALL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ALL MODULES INSTALLED INSIDE OF FATC SHALL BE PROPERLY SECURED TO 3/4" PLYWOOD BACK BOARD.
- (N) FACP WITH VOICE EVAC/EXPANDABLE AND WITH INTEGRAL 150W AMPLIFIER, UON.

1 FIRE ALARM RISER DIAGRAM

N.T.S

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**FIRE ALARM RISER DIAGRAM**

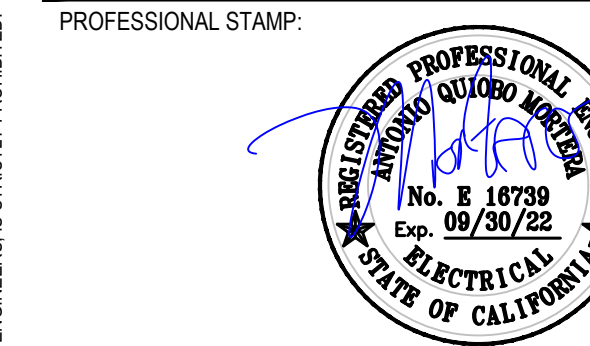
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**F003**

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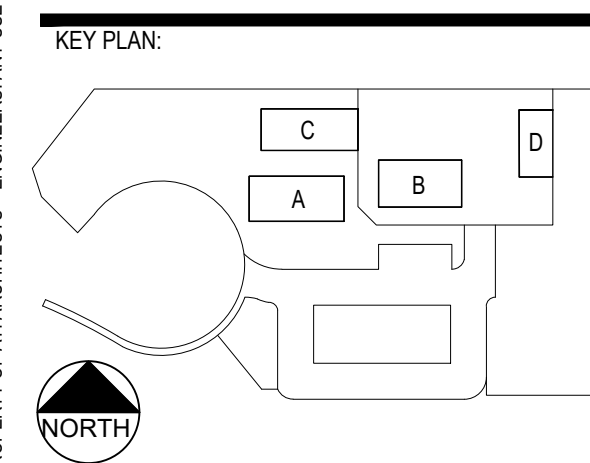


4750 Willow Road #250 Pleasanton, CA 94568 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600



CONSULTANT:  
  
**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 222  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

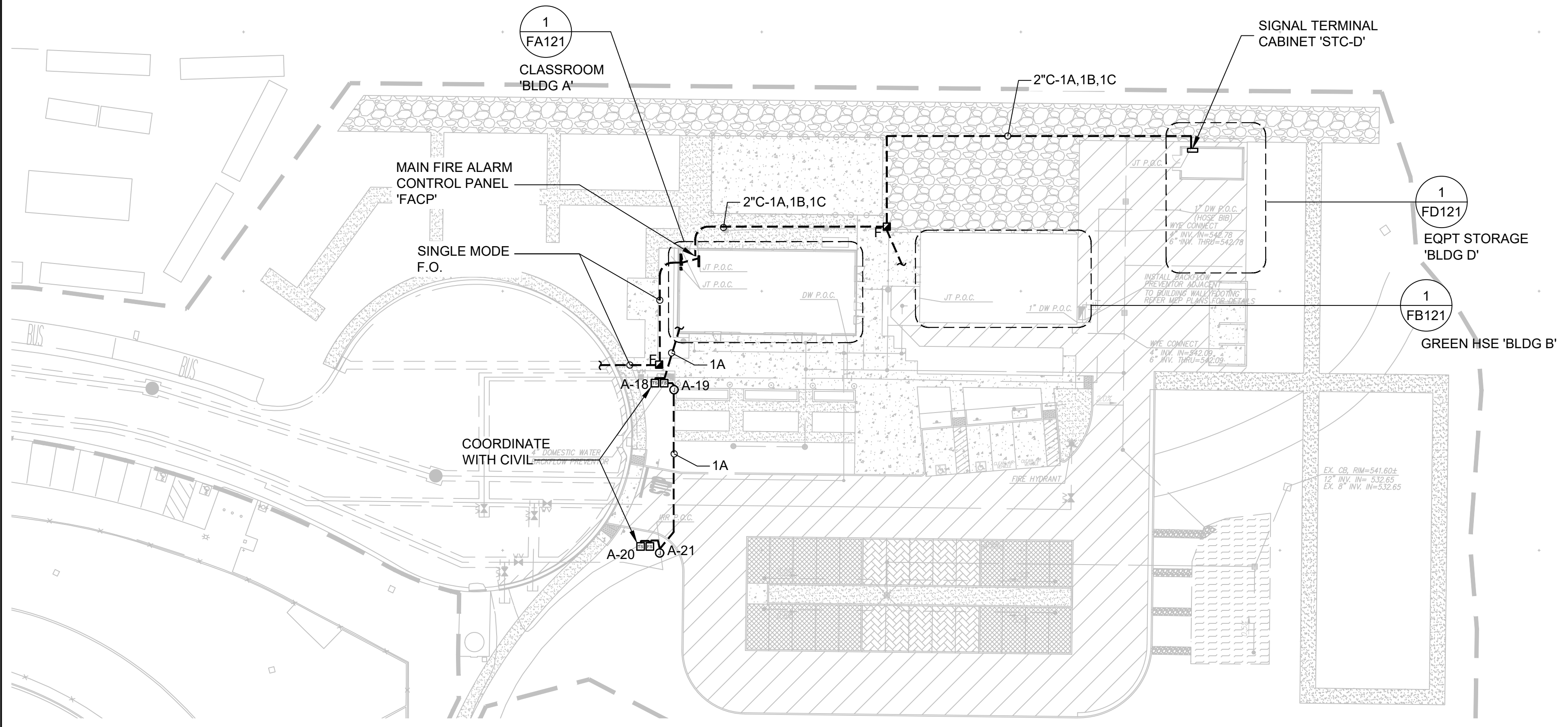
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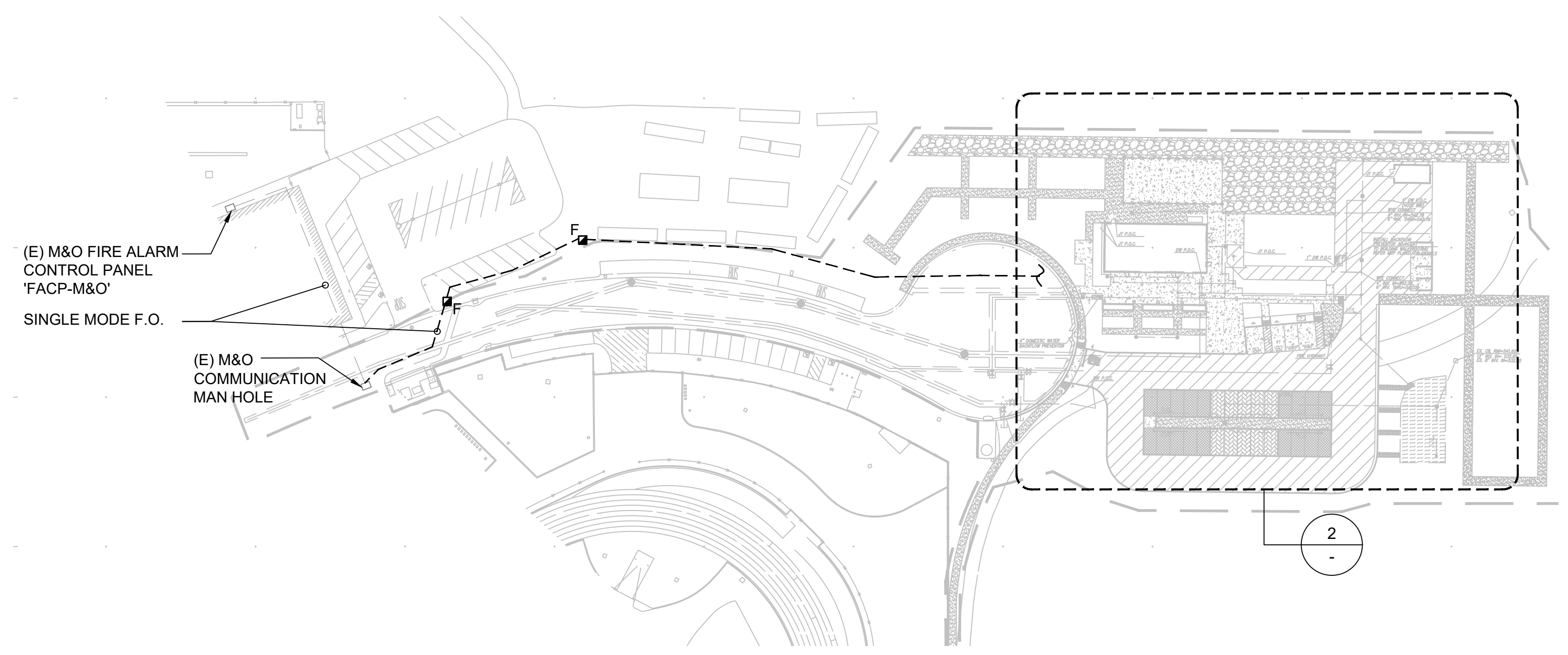
CLPCCD - LAS POSITAS COLLEGE  
 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**FIRE ALARM SITE PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:



2 ENLARGED SITE PLAN SCALE : 1/32" = 1'-0"

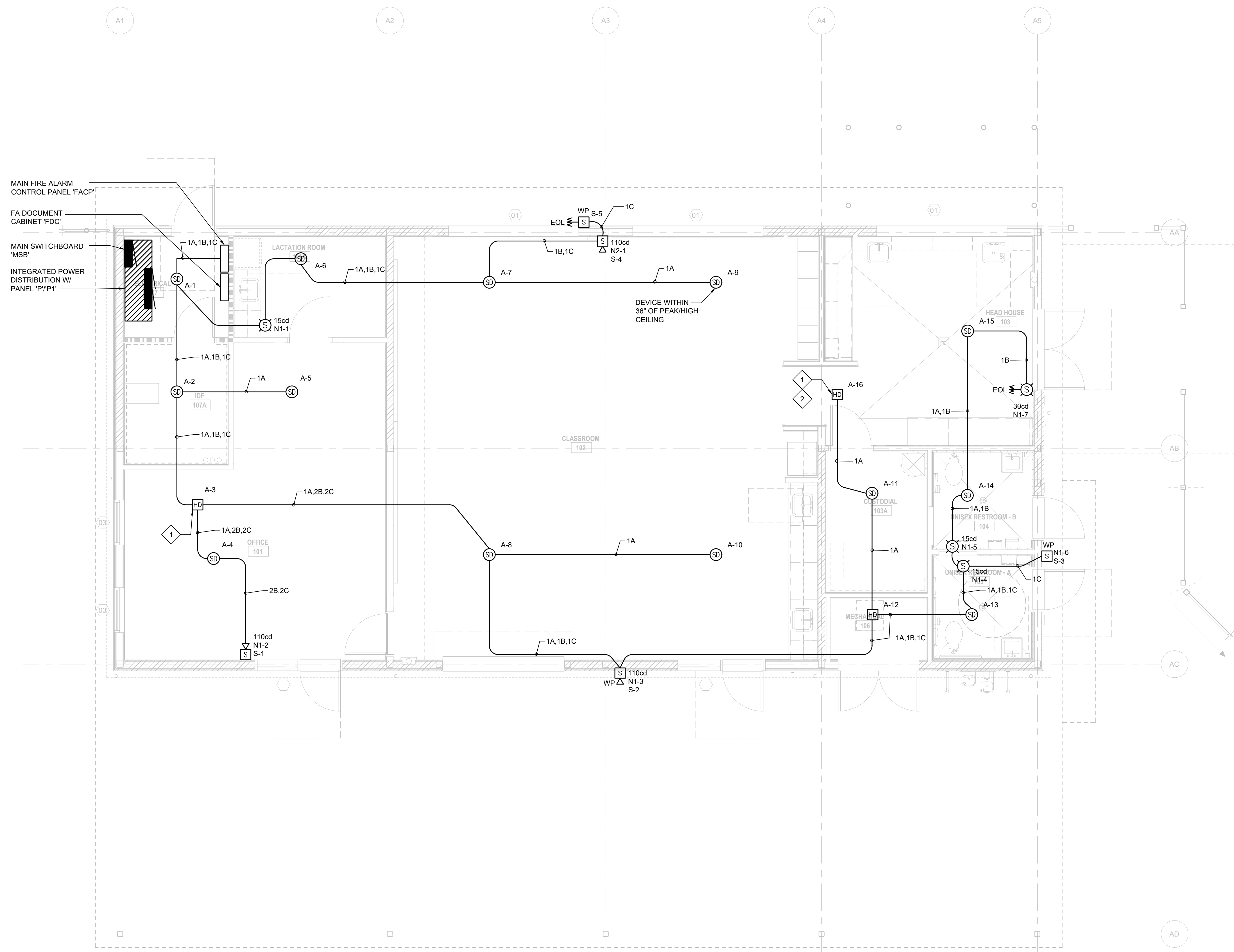


1 OVERALL SITE PLAN SCALE : 1/64" = 1'-0"

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KEY NOTES:

- 1 HEAT DETECTOR INSIDE CEILING SPACE.
- 2 PROVIDE MIN 12"SQ ACCESS DOOR TO CEILING.



1 CLASSROOM BUILDING — FIRE ALARM PLAN

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

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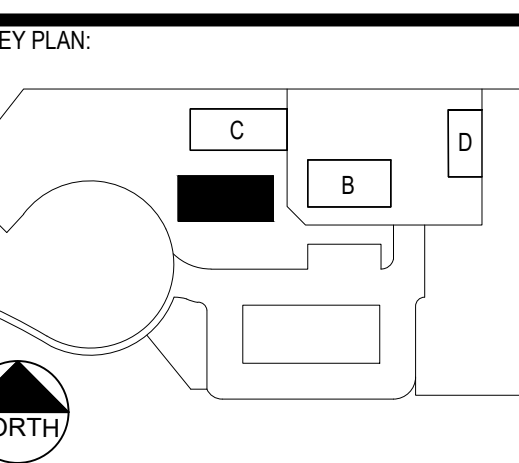
ATI  
 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

PROFESSIONAL STAMP:

CONSULTANT:  
  
**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 222  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**CLASSROOM  
 BUILDING FLOOR  
 FIRE PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO: \_\_\_\_\_

**FA121**

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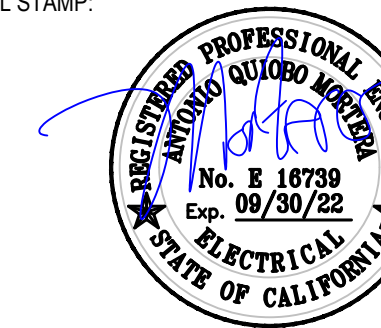
DSA:

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021



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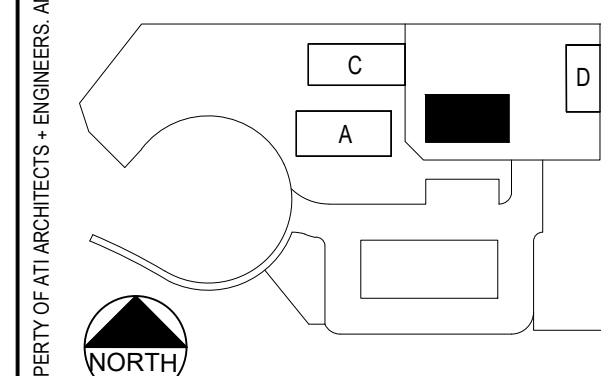


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ITEM: REVISION / ISSUE: DATE:

ITEM	REVISION / ISSUE	DATE

KEY PLAN:



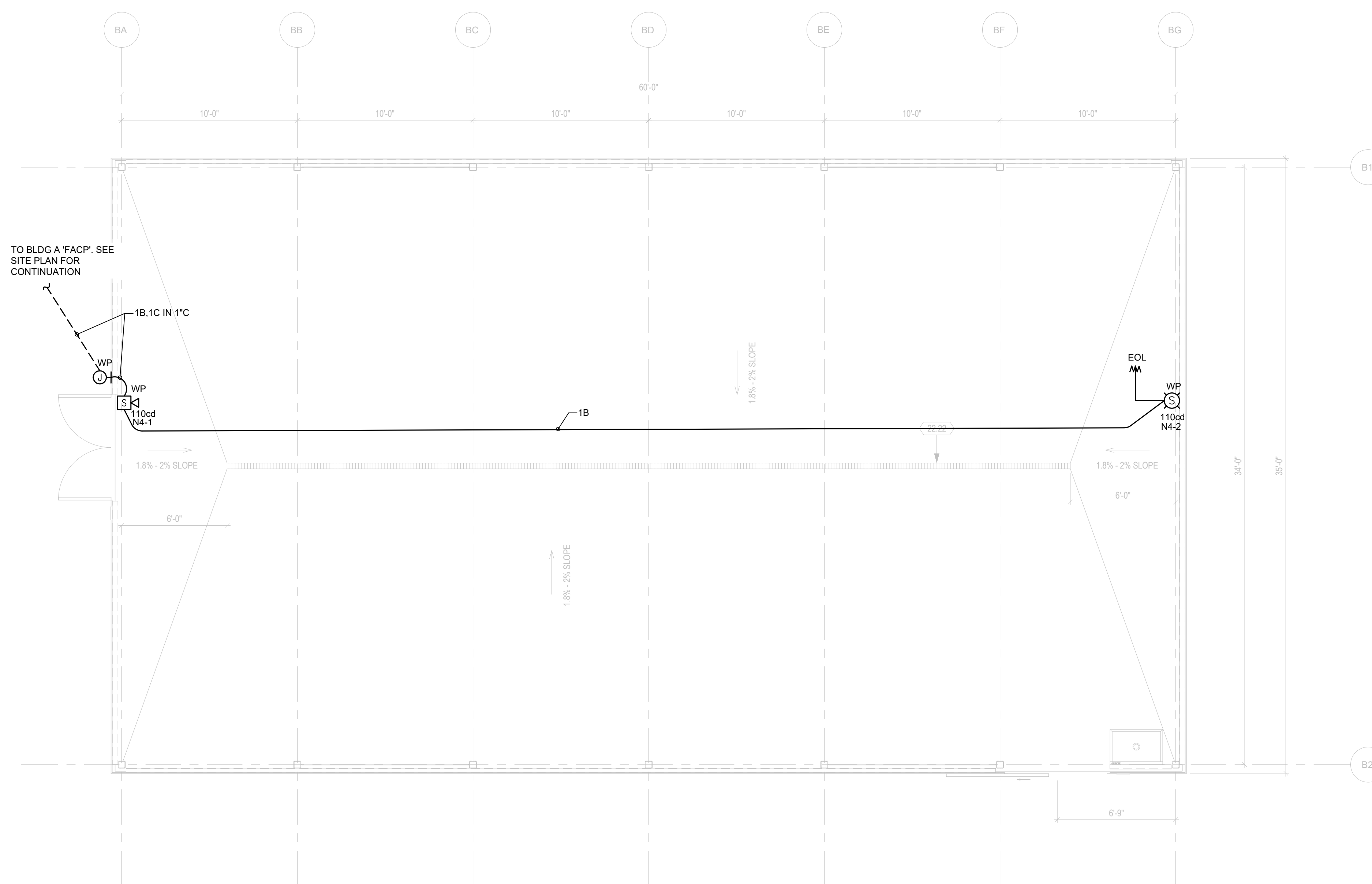
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**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**GREENHOUSE BUILDING FIRE ALARM PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**FB121**

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**1 GREEN HOUSE FLOOR PLAN – FIRE ALARM**

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

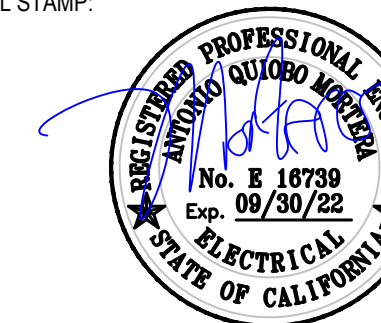
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PROFESSIONAL STAMP:



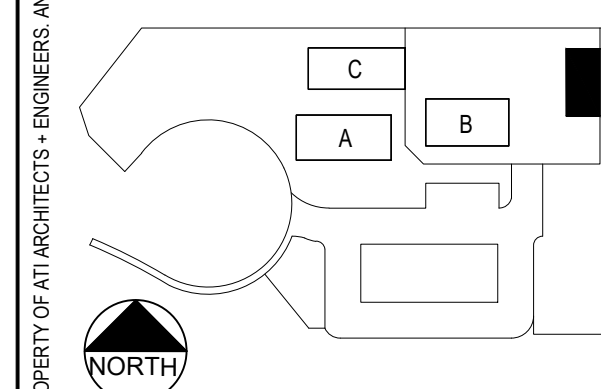
CONSULTANT:



**METRO POWER ENGINEERS, INC.**  
3150 HILLTOP MALL ROAD, SUITE 22  
RICHMOND, CA 94806  
TEL: 510.275.3000 FAX: 510.275.3002

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:

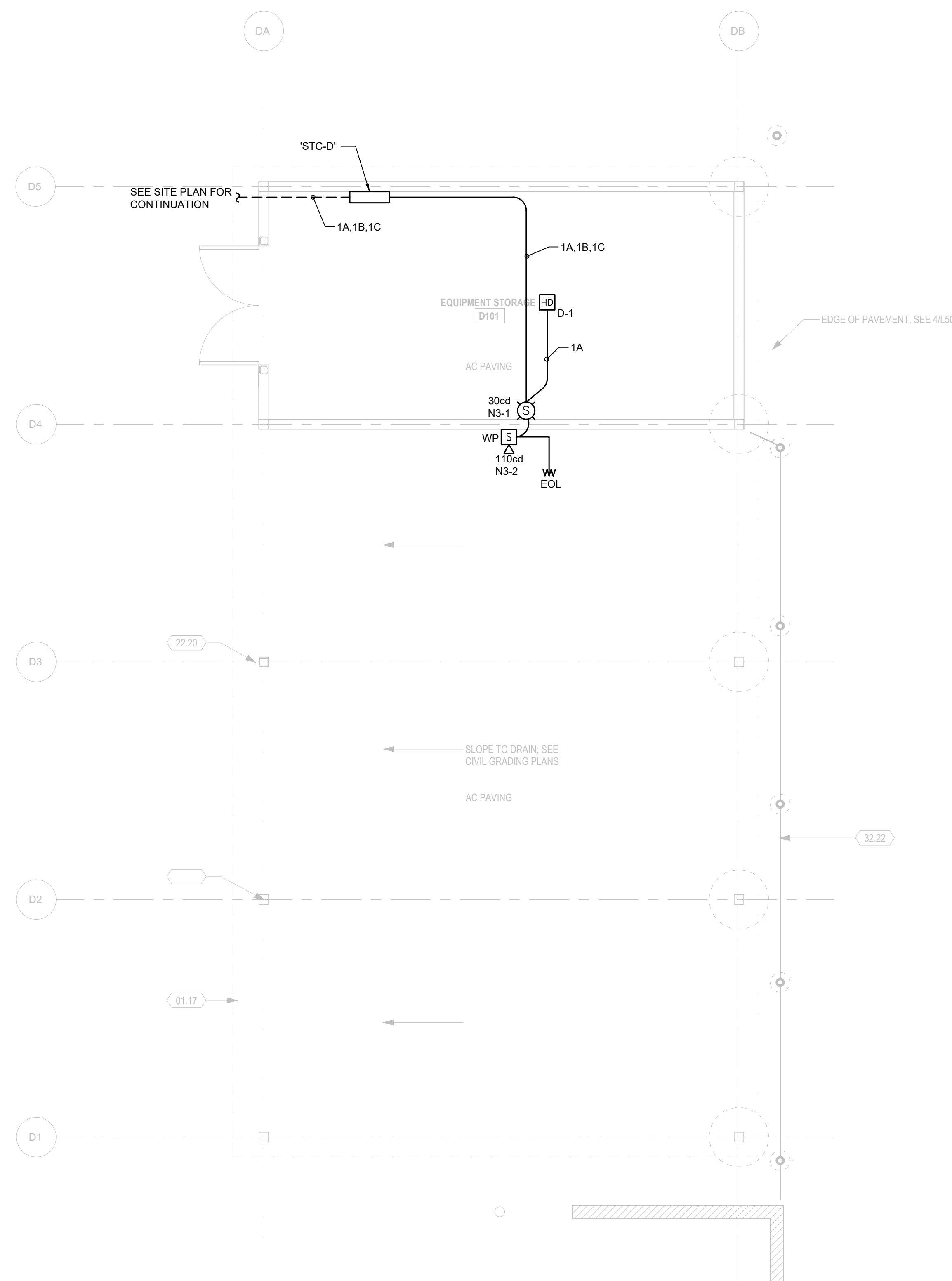


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COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551**

**EQPT. STORAGE  
BUILDING FIRE  
ALARM PLAN**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO: \_\_\_\_\_

**FD121**



**1** EQPT. STORAGE FLOOR PLAN — FIRE ALARM

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

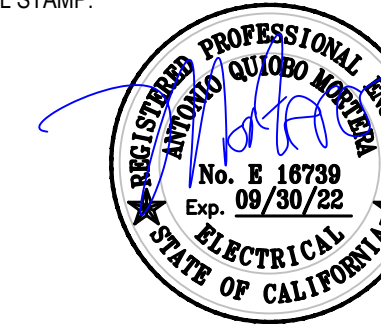
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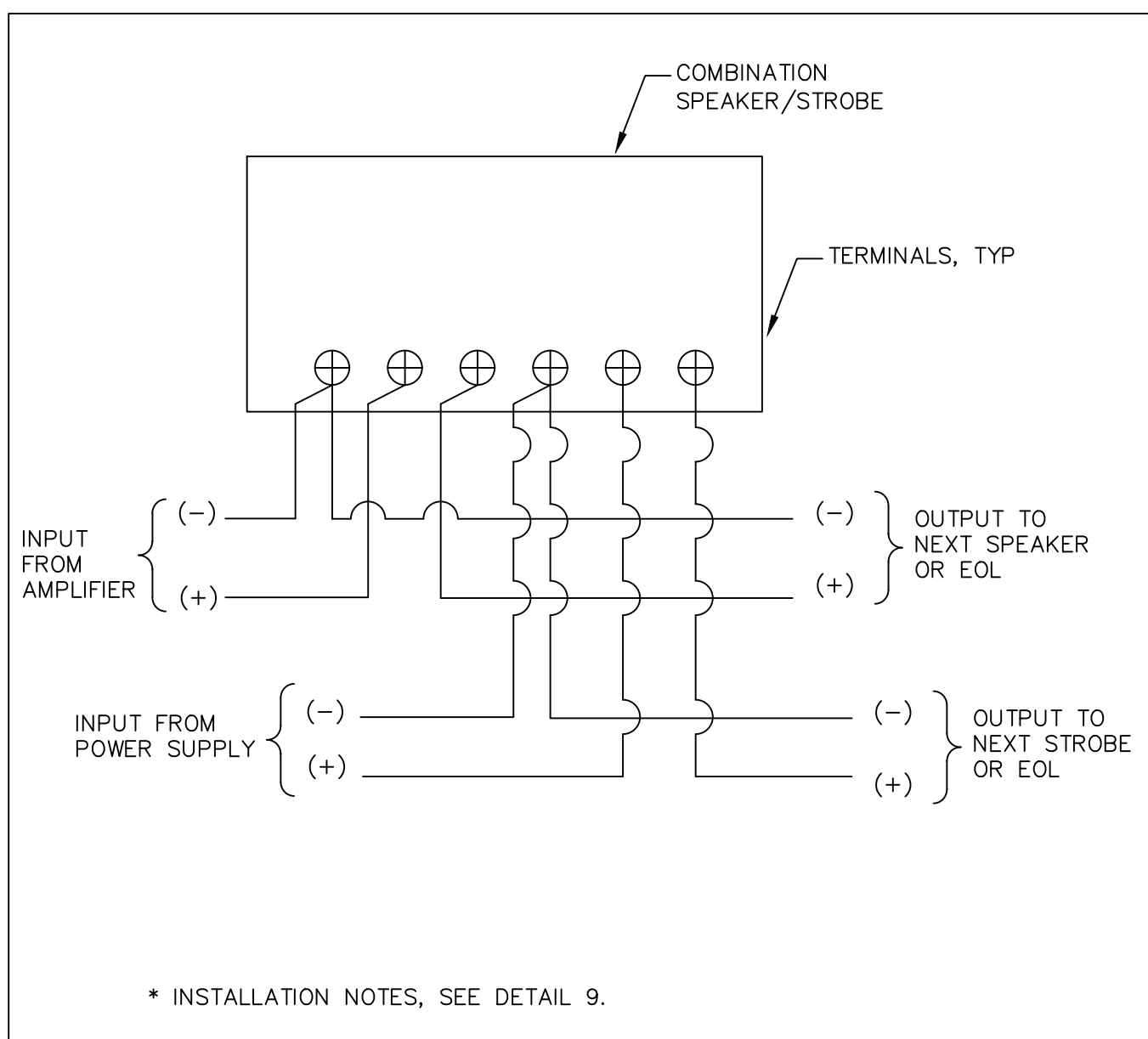
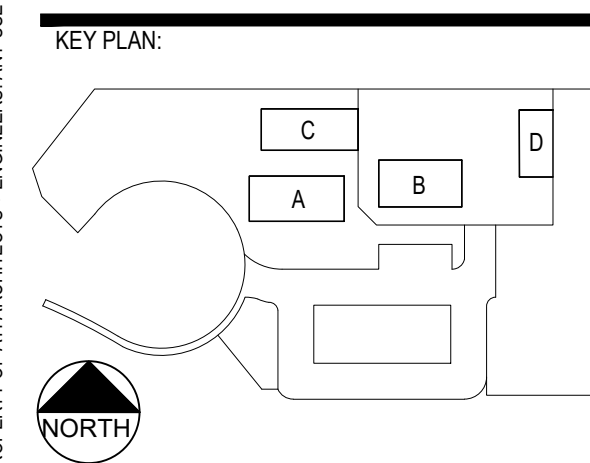
**ATI**  
 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

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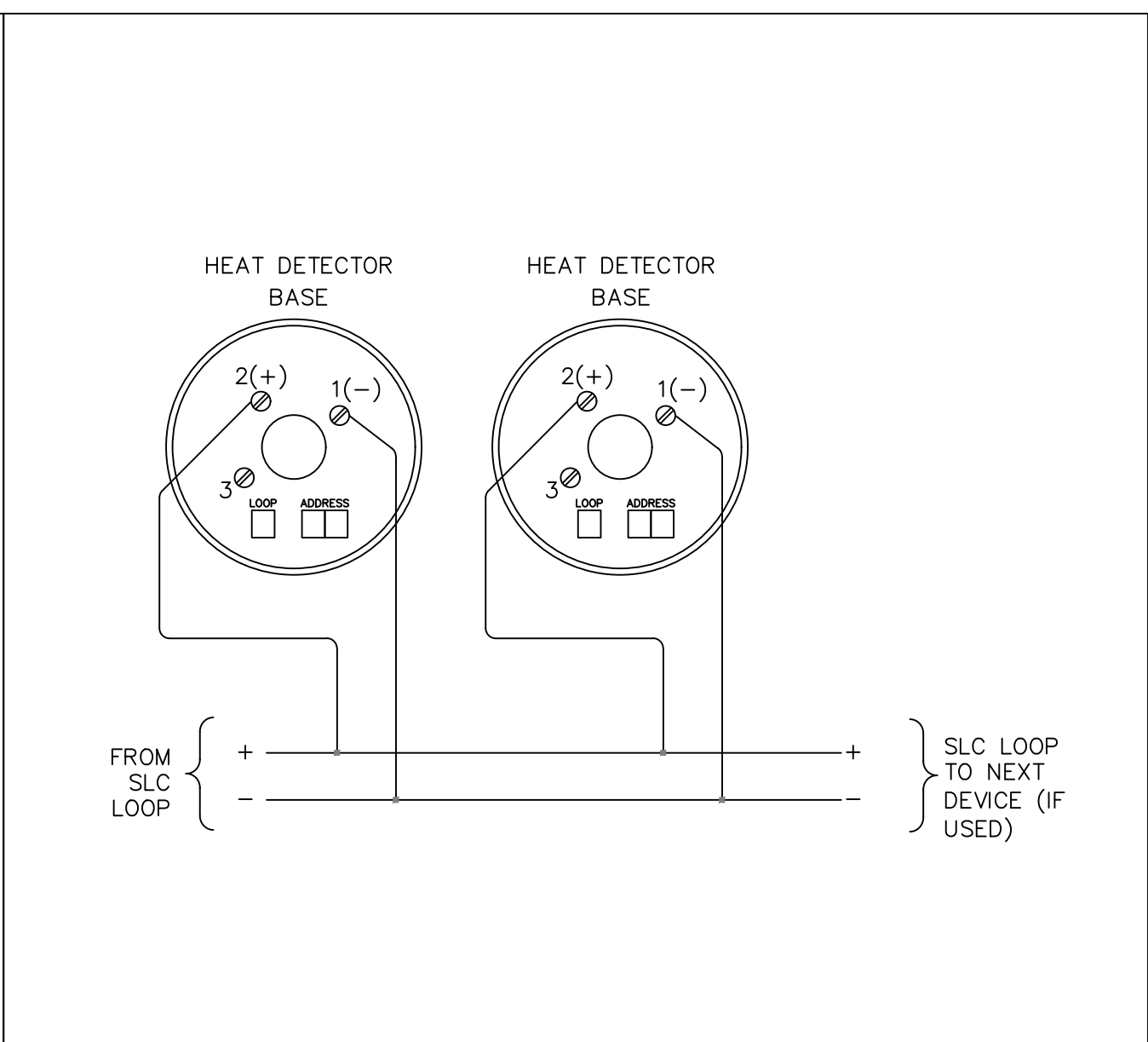
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CONSULTANT:  
  
**METRO POWER ENGINEERS, INC.**  
 3150 HILLTOP MALL ROAD, SUITE 22  
 RICHMOND, CA 94806  
 TEL: 510.275.3000 FAX: 510.275.3002

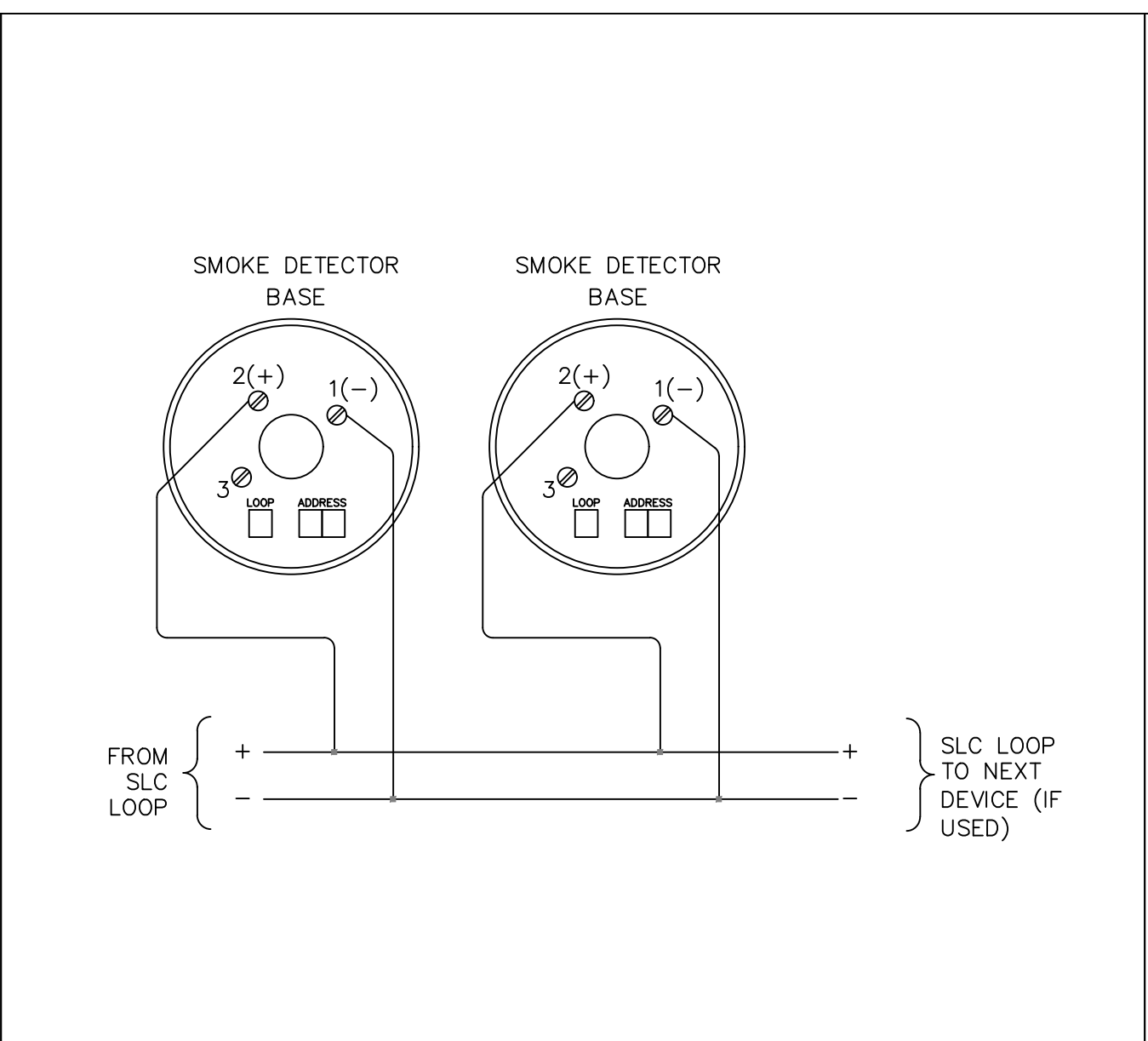
ITEM:	REVISION / ISSUE:	DATE:



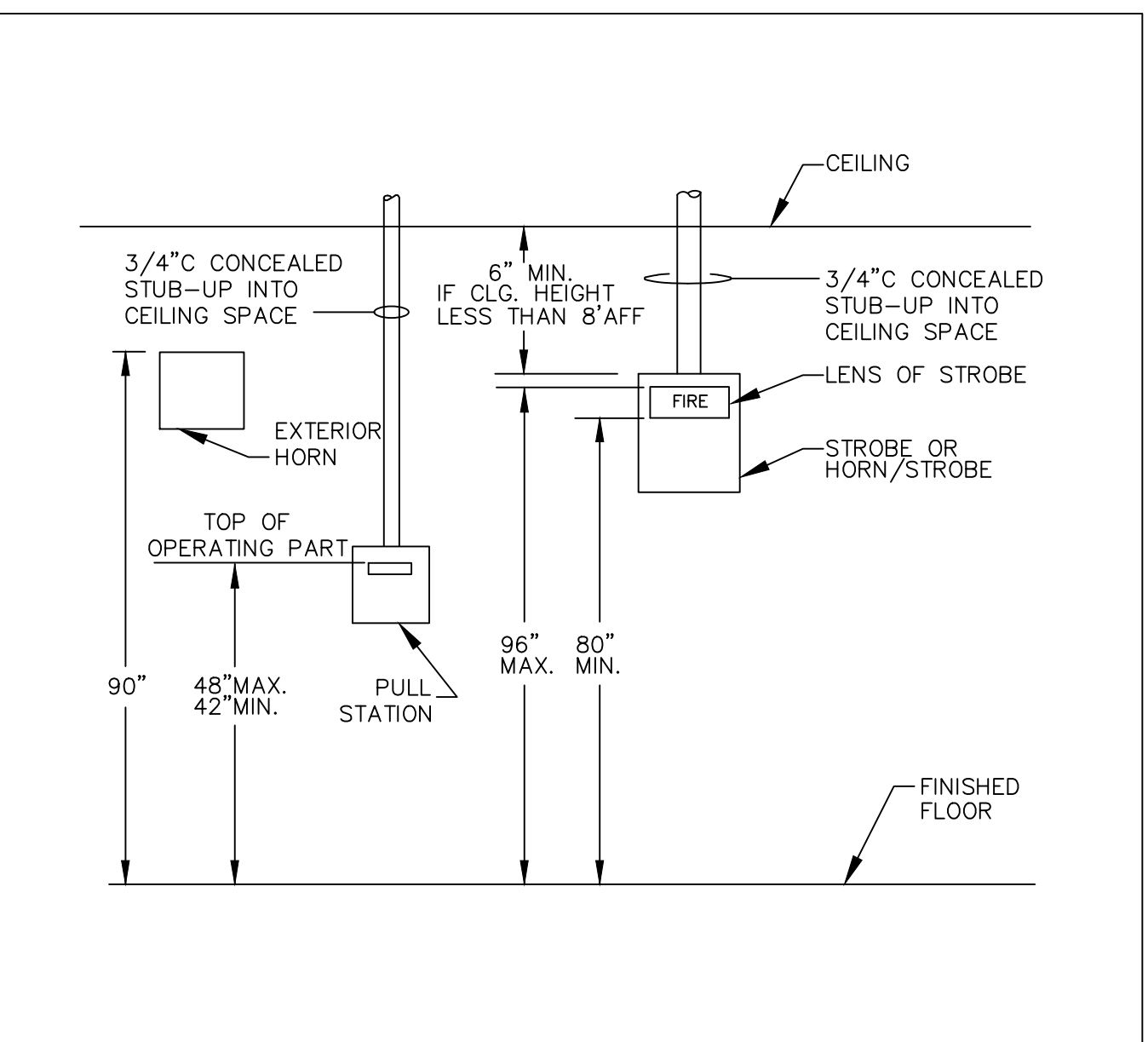
10 SPEAKER/STROBE WIRING DIAGRAM  
 N.T.S.



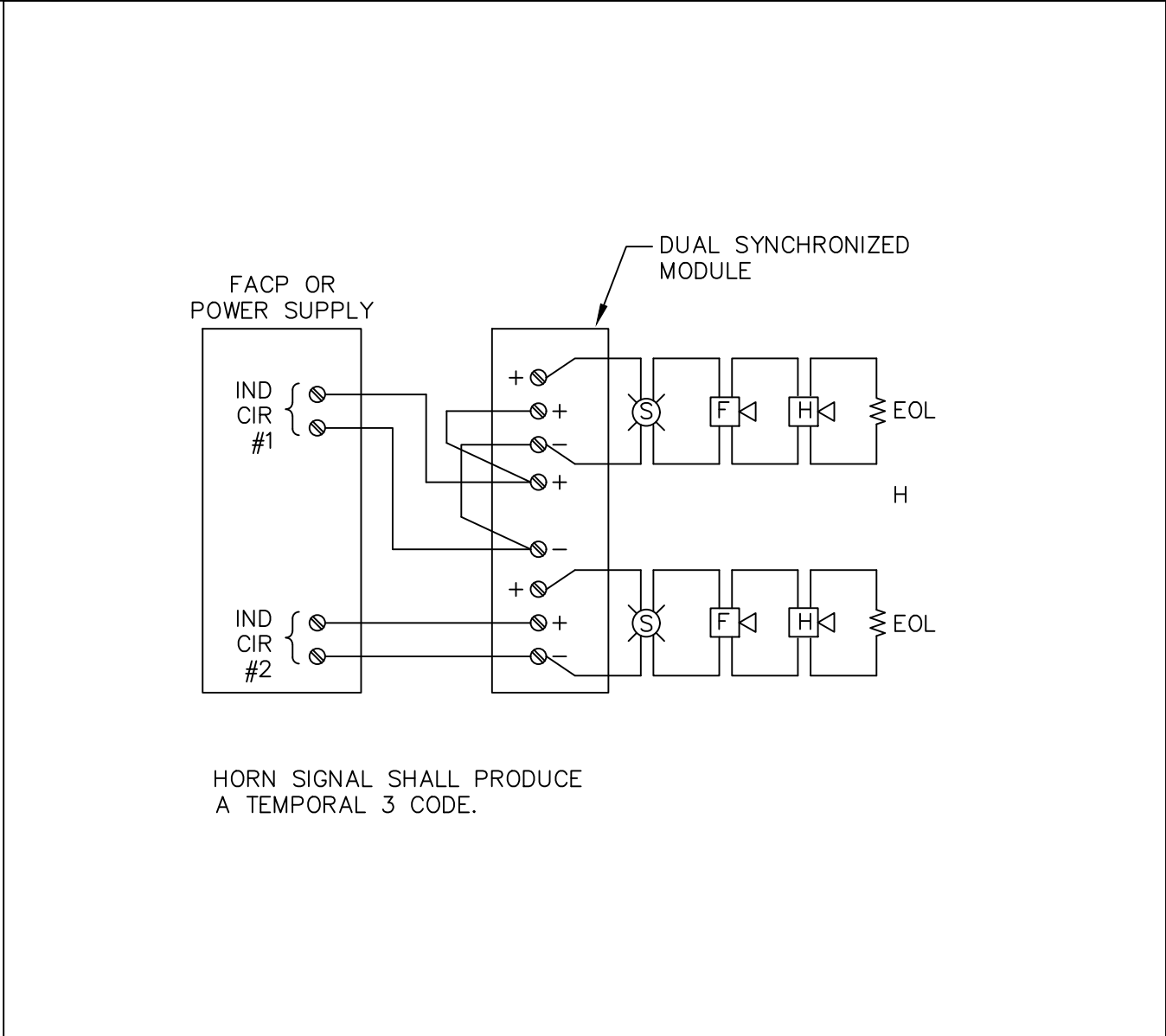
7 HEAT DETECTOR BASE WIRING DIAGRAM  
 EF-035.DWG  
 N.T.S.



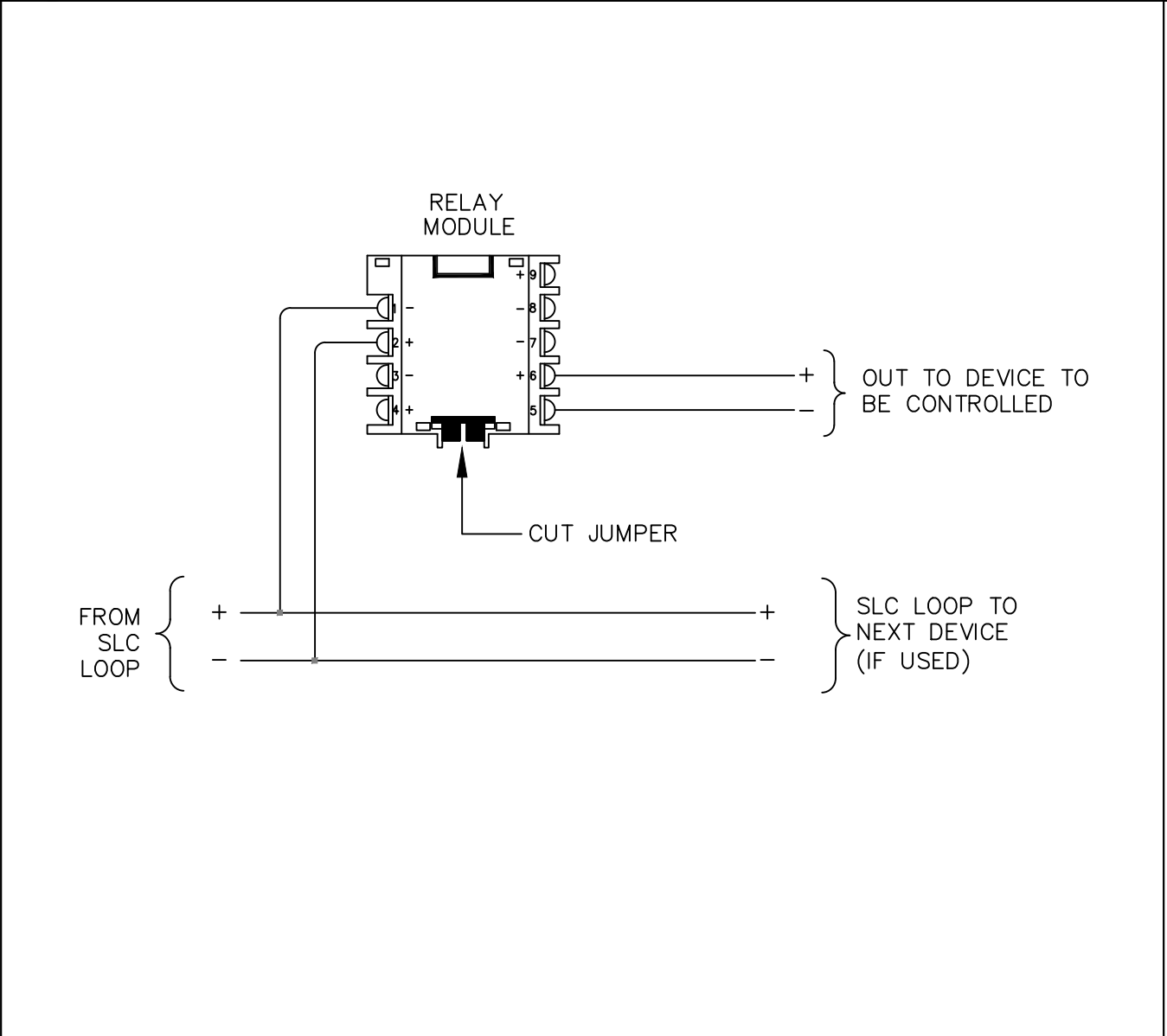
4 SMOKE DETECTOR BASE WIRING DIAGRAM  
 EF-035.DWG  
 N.T.S.



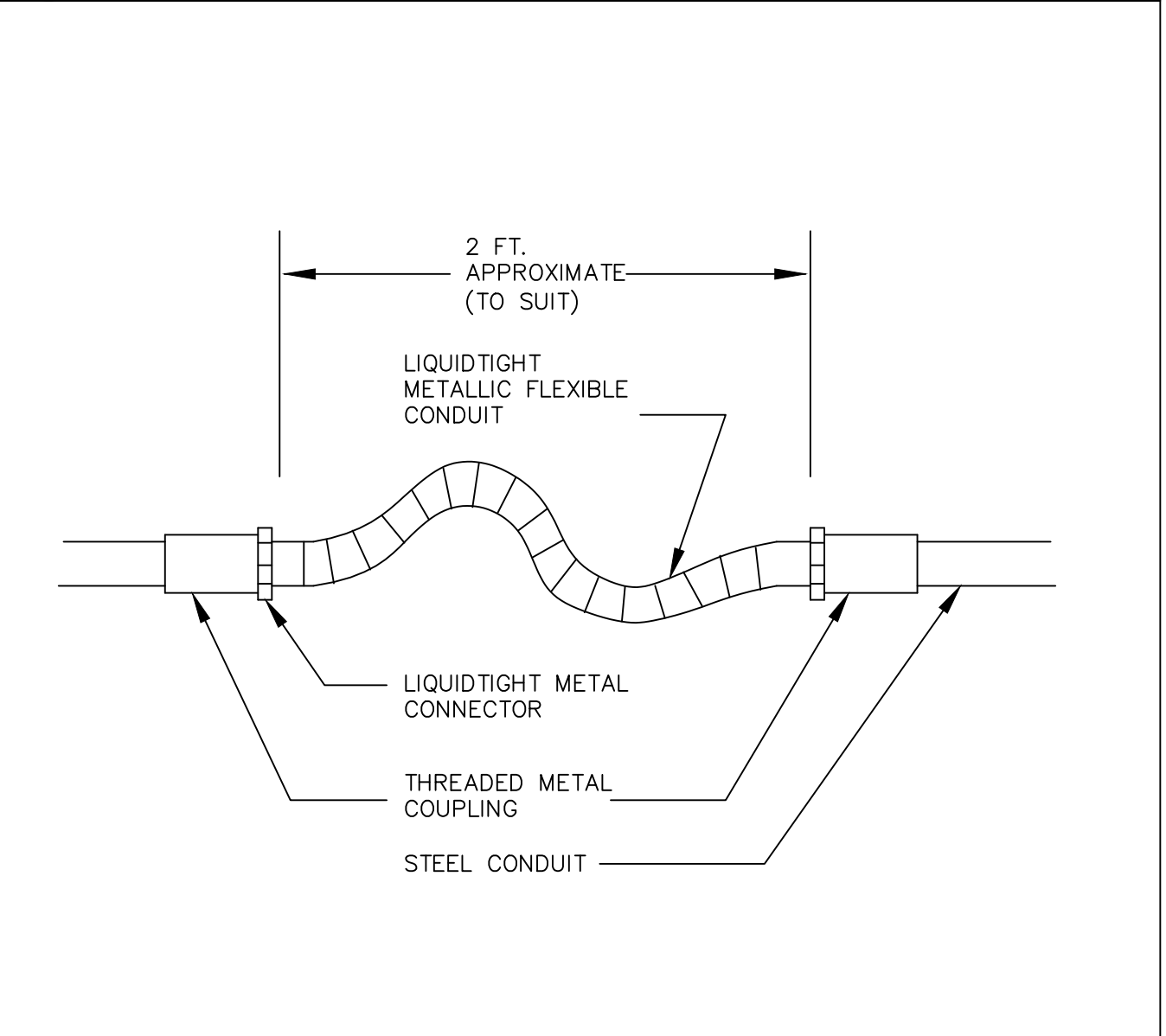
1 ELEVATION - FIRE ALARM DEVICES  
 EF-020.DWG  
 N.T.S.



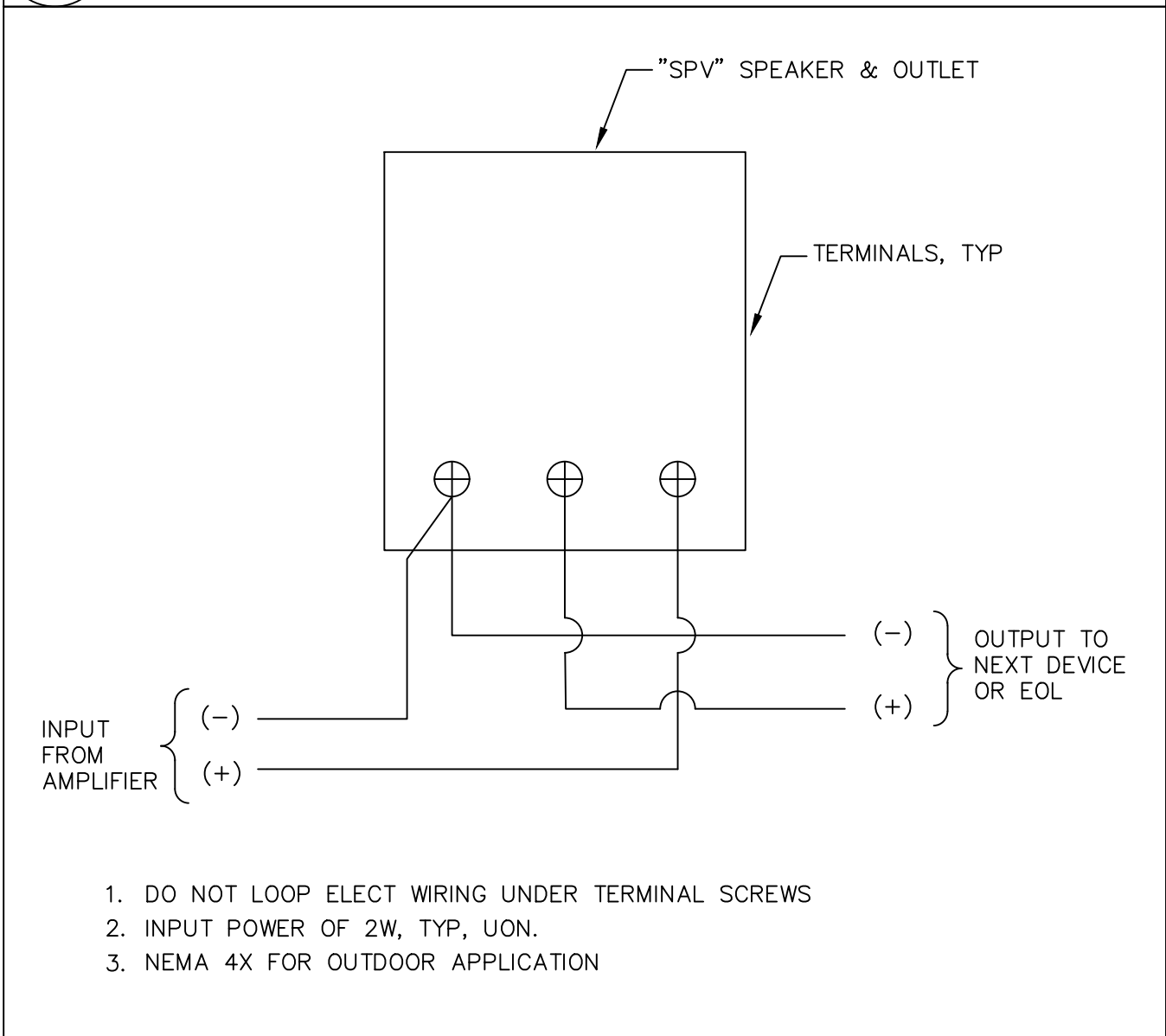
8 TYPICAL HORN/STROBE WIRING DIAGRAM  
 EF-043.DWG  
 N.T.S.



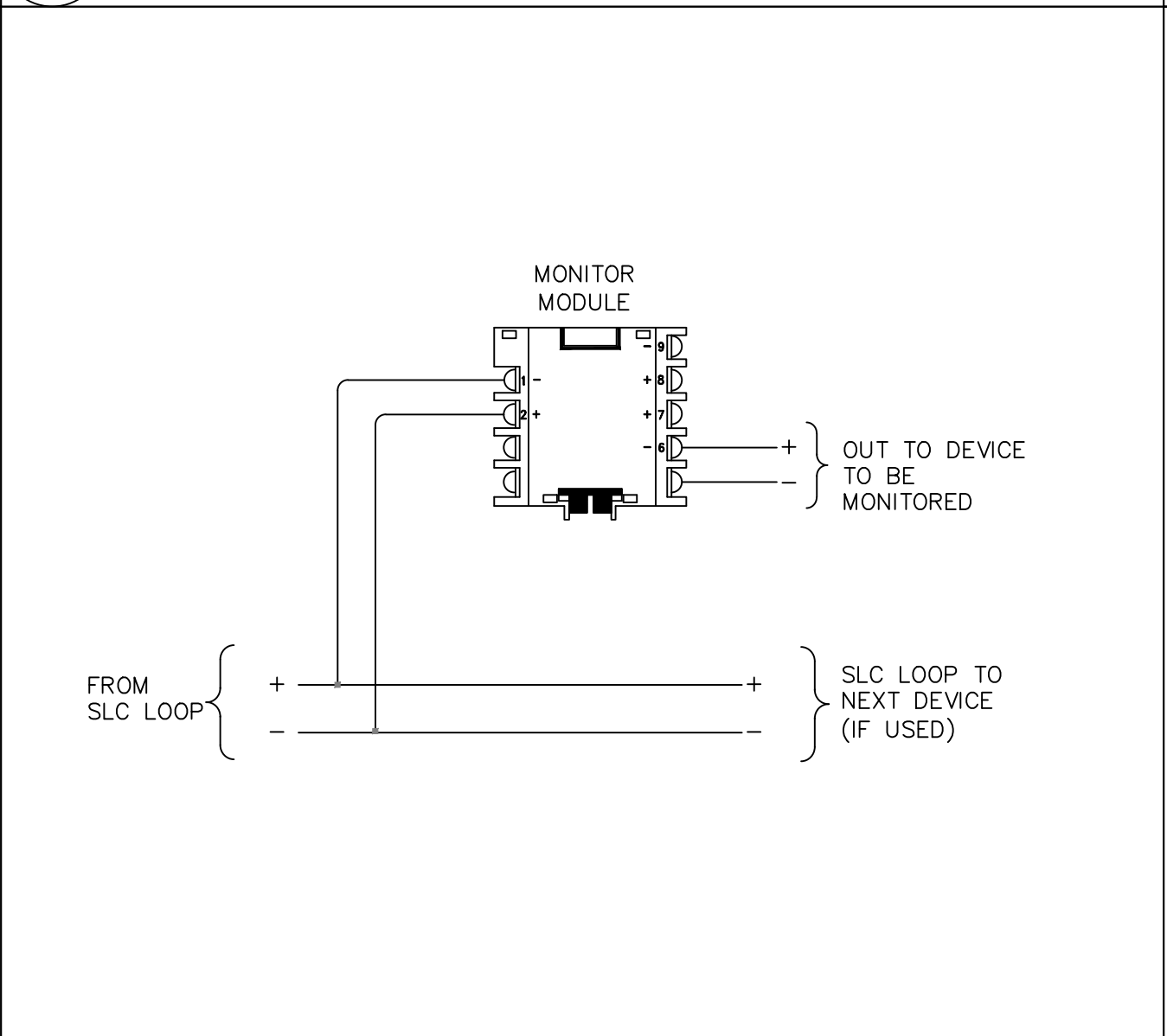
5 CONTROL RELAY MODULE WIRING DIAGRAM  
 EF-036.DWG  
 N.T.S.



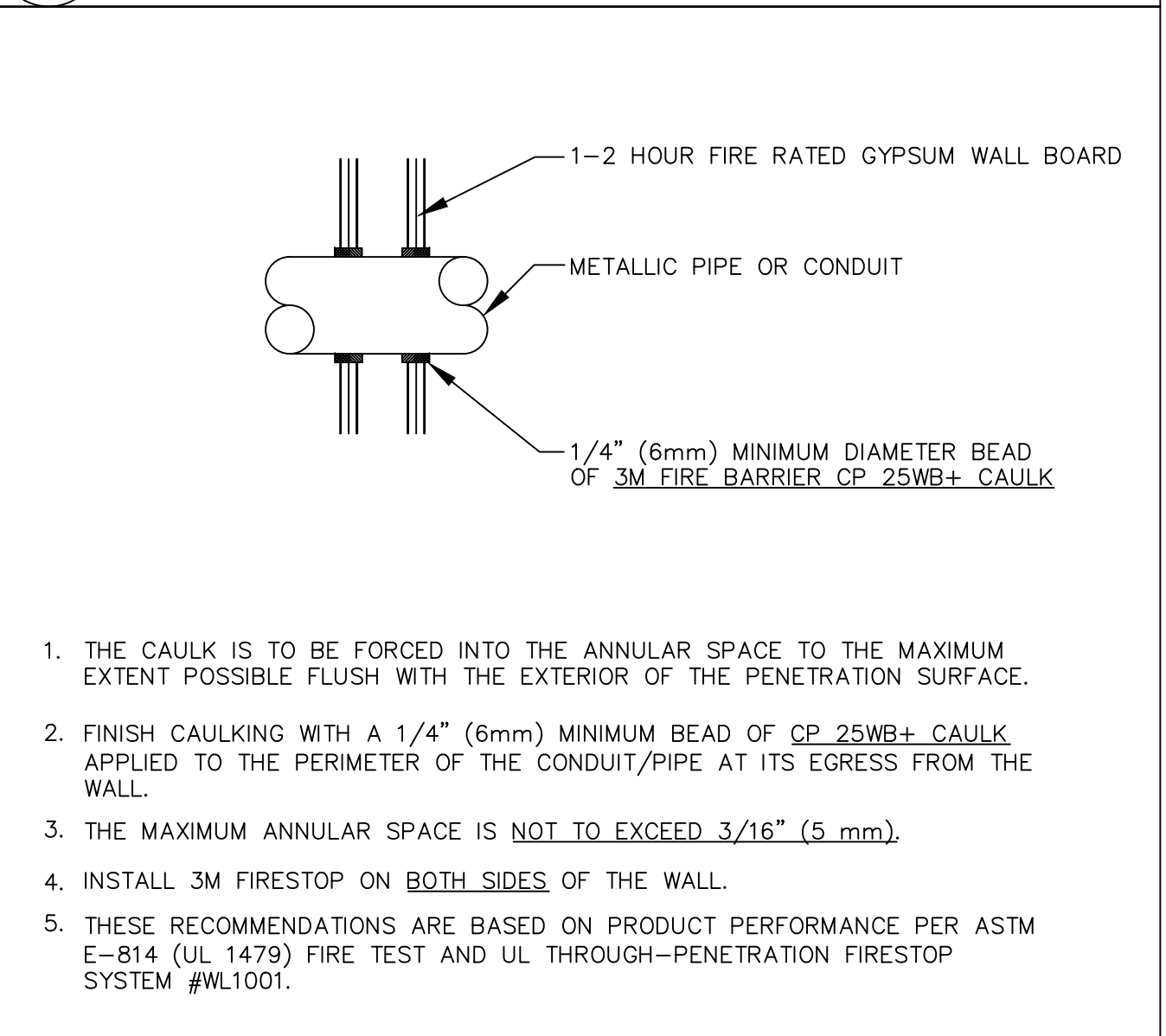
2 FLEXIBLE CONDUIT/EXPANSION SECTION  
 N.T.S.



9 SPEAKER WIRING DIAGRAM  
 N.T.S.



6 MONITOR MODULE WIRING DIAGRAM  
 EF-034.DWG  
 N.T.S.



3 FIRE STOP PENETRATION DETAIL  
 EL320.DWG  
 N.T.S.

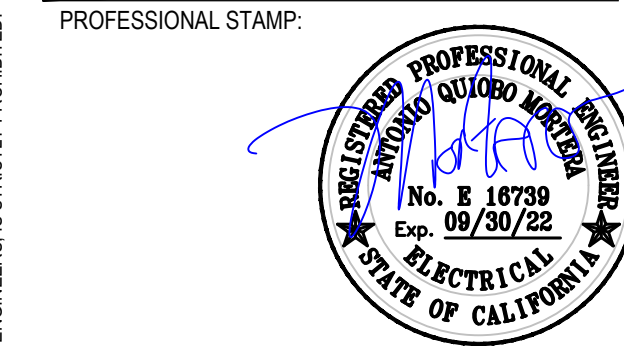
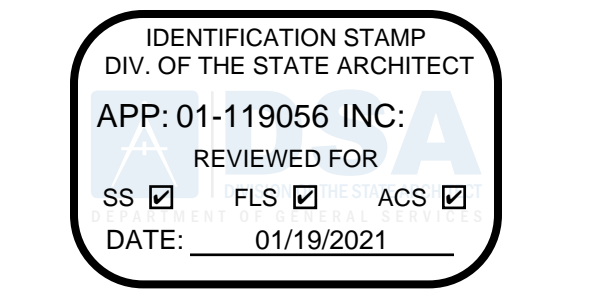
CLPCCD - LAS POSITAS COLLEGE  
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 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**FIRE ALARM DETAILS**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

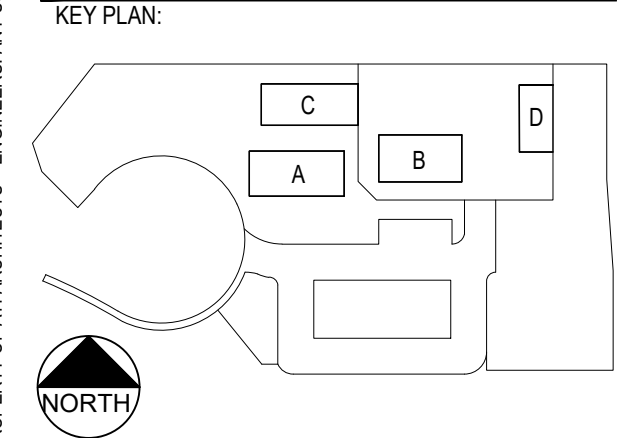
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CONSULTANT: METRO POWER ENGINEERS, INC. 3150 HILLTOP MALL ROAD, SUITE 22 RICHMOND, CA 94806 TEL: 510. 275. 3000 FAX: 510. 275. 3002

Table with columns: ITEM, REVISION / ISSUE, DATE. Multiple empty rows for tracking changes.



CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

TITLE 24 COMPLIANCE DOCUMENTATION

DRAWN BY: CHECKED BY: DATE: 01/14/2021 PROJECT NO: C9508 SHEET NO:

EN101

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 3 of 7. Includes tables for Controls Compliance, Exceptional Conditions, and Modular Lighting Systems.

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 4 of 7. Includes tables for Additional Lighting Allowance, Power Adjustment, and Declaration of Required Certificates of Acceptance.

STATE OF CALIFORNIA INDOOR LIGHTING (SIC) NRCCLTI-E (Created 01/20) CERTIFICATE OF INSTALLATION. Project Name: LPPC-AGRI SCI HORT FACILITY. Report Page: Page 2 of 2. Includes documentation author's declaration and responsible person's declaration.

ELECTRICAL CONTRACTOR SHALL BE COMPLETING AND SIGNING T24 INSTALLATION AND ACCEPTANCE FORMS AT THE COMPLETION OF THE JOB.

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 2 of 7. Includes tables for Controls Compliance, Exceptional Conditions, and Indoor Lighting Fixture Schedule.

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 4 of 7. Includes tables for Additional Lighting Allowance, Power Adjustment, and Declaration of Required Certificates of Acceptance.

STATE OF CALIFORNIA INDOOR LIGHTING (SIC) NRCCLTI-E (Created 01/20) CERTIFICATE OF INSTALLATION. Project Name: LPPC-AGRI SCI HORT FACILITY. Report Page: Page 1 of 2. Includes general information, scope of responsibility, and a table for lighting plans and title 24 compliance.

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 1 of 7. Includes general information, project scope, and compliance results.

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 4 of 7. Includes tables for Lighting Power Allowance, Additional Lighting Allowance, and Tailored Method General Lighting Power Allowance.

STATE OF CALIFORNIA Indoor Lighting NRCCLTI-E (Created 01/20) CERTIFICATE OF COMPLIANCE. Project Name: LPPC-AGRI SCIENCE HORTICULTURE FACILITY. Report Page: Page 7 of 7. Includes documentation author's declaration and responsible person's declaration.

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STATE OF CALIFORNIA  
**Outdoor Lighting**  
 NRCC-LTO-E (Revised 11/19)

CERTIFICATE OF COMPLIANCE  
 This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)(2)(L) for outdoor lighting scopes using the prescriptive path.  
 Project Name: LPOC-AGRI SCIENCE HORTICULTURE FACILITY Report Page: Page 1 of 5  
 Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 Date Prepared: 3/27/20

A. GENERAL INFORMATION  
 01 Project Location (City) LIVERMORE 04 Total Illuminated Hardscape Area (ft²) 32,503  
 02 Climate Zone 12  
 03 Outdoor Lighting Zone per Title 24, Part 1, §10-114 or as designated by Authority Having Jurisdiction (AHJ):  
 L2-0: Very Low - Undeveloped Parkland L2-2: Moderate - Rural Areas L2-4: High - Must be reviewed by CA Energy Commission for Approval  
 L2-1: Low - Developed Parkland L2-3: Moderately High - Urban Areas

B. PROJECT SCOPE  
 Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)(2)(L) for alterations.  
 My project consists of:  
 New Lighting System Must Comply with Allowances from §140.7  
 Altered Lighting System Is your alteration increasing the connected lighting load (Watts)?  Yes  No  
 % of Existing Luminaires Being Altered Sum Total of Luminaires Being Added or Altered Calculation Method  
 FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100

C. COMPLIANCE RESULTS  
 Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES WITH EXCEPTIONAL CONDITIONS" refer to Table D, for guidance.  
 Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)(2)(L)  
 01 General Hardscape Allowance §140.7(a) 02 Per Application §140.7(a)(2) 03 Sales Frontage §140.7(a)(2) 04 Ornamental §140.7(a)(2) 05 Per Specific Area §141.0(b)(2)(L) 06 Existing Power §141.0(b)(2)(L) 07 Total Allowed (Watts) 08 Total Actual (Watts) 09 Must be ≤ 208

01	02	03	04	05	06	07	08	09
Cut-off Compliance (See Table G for Details)							Not Applicable	
Controls Compliance (See Table H for Details)							COMPLIES	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> November 2019

STATE OF CALIFORNIA  
**Outdoor Lighting**  
 NRCC-LTO-E (Revised 11/19)

CERTIFICATE OF COMPLIANCE  
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 Project Name: LPOC-AGRI SCIENCE HORTICULTURE FACILITY Report Page: Page 2 of 5  
 Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 Date Prepared: 3/27/20

D. EXCEPTIONAL CONDITIONS  
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.  
 No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS  
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. OUTDOOR LIGHTING FIXTURE SCHEDULE  
 Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)(2)(L) (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).  
**Designed Wattage:**

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Watts per luminaire <sup>1,2</sup>	How Wattage is determined	Total number luminaire <sup>2</sup>	Luminaire Status <sup>3</sup>	Excluded per §140.7(a)	Design Watts	Cutoff Req. 6,200 initial lumen output §130.2(b) <sup>1</sup>	Field Inspector
F	LED WALL SCONCE Linear	42	Mfr. Spec <sup>4</sup>	25	New		1,050	NA <6,200 lumens	Pass Fail
G	LED STRIP LIGHT Linear	35	Mfr. Spec <sup>4</sup>	10	New		350	NA <6,200 lumens	Pass Fail
S1	18" LED POLE LTG-1HD Linear	150	Mfr. Spec <sup>4</sup>	5	New		900	NA <6,200 lumens	Pass Fail
Total Designed Watts:							2,360		

\* NOTES: Selections with a \* require a note in the space below explaining how compliance is achieved.  
 Ex: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).  
 FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)  
<sup>1</sup> For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 05 instead of number of luminaires.  
<sup>2</sup> Select "New" for new luminaires in a new outdoor lighting project or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstated" for existing luminaires which are being removed and reinstalled as part of the project scope  
<sup>3</sup> Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output ≥ 6,200 unless exempted by §130.2(b).

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> November 2019

STATE OF CALIFORNIA  
**Outdoor Lighting**  
 NRCC-LTO-E (Revised 11/19)

CERTIFICATE OF COMPLIANCE  
 This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)(2)(L) for outdoor lighting scopes using the prescriptive path.  
 Project Name: LPOC-AGRI SCIENCE HORTICULTURE FACILITY Report Page: Page 3 of 5  
 Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 Date Prepared: 3/27/20

G. CUTOFF REQUIREMENTS (BUG)  
 This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS  
 Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (swiping only) do not need to be included in this table even if they are within the spaces covered by the permit application.  
 When an option having a \* is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 04, do not leave the field blank. Instead select "N/A or Exempt\*" from the dropdown list to indicate not applicable or an exemption.

01	02	03	04	05
Area Description	Shut-Off §130.2(c)(1)	Auto-Schedule §130.2(c)(2)	Motion Sensor §130.2(c)(3)	Field Inspector
BLDG PERIMETER	Astronomical Timer	Yes	NA: Façade, etc. ≤ 24ft	Pass Fail

\*NOTES: Controls with a \* require a note in the space below explaining how compliance is achieved.  
 Ex: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c).  
 Reset Add Row Remove Last

I. LIGHTING POWER ALLOWANCE (per §140.7)  
 Table Instructions: Please complete this table for areas using the alternative calculation method per §140.7. General Hardscape Allowance is per Table 140.7.A while "Use it or lose it" Allowances are per Table 140.7.B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.  
 General Hardscape Allowance  
 Per Application  
 Sales Frontage  
 Ornamental  
 Per Specific Area  
 Table J (below) Table K Table L Table M

J. LIGHTING ALLOWANCE: PER APPLICATION  
 This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE  
 This Section Does Not Apply

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> November 2019

STATE OF CALIFORNIA  
**Outdoor Lighting**  
 NRCC-LTO-E (Revised 11/19)

CERTIFICATE OF COMPLIANCE  
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 Project Name: LPOC-AGRI SCIENCE HORTICULTURE FACILITY Report Page: Page 4 of 5  
 Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 Date Prepared: 3/27/20

L. LIGHTING ALLOWANCE: ORNAMENTAL  
 This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA  
 This Section Does Not Apply

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)  
 This Section Does Not Apply

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION  
 Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at [https://www.energy.ca.gov/title24/2019standards/2019\\_compliance\\_documents/Nonresidential\\_Documents/NRCL/](https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCL/)

YES	NO	Form/Title	Field Inspector
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-LTO-01-E - Must be submitted for all buildings.	Pass Fail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	Pass Fail

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE  
 Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTTP). For more information visit: <http://www.energy.ca.gov/title24/2019standards/atttpp/>

YES	NO	Form/Title	Field Inspector
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	Pass Fail

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> November 2019

STATE OF CALIFORNIA  
**Outdoor Lighting**  
 NRCC-LTO-E (Revised 11/19)

CERTIFICATE OF COMPLIANCE  
 This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)(2)(L) for outdoor lighting scopes using the prescriptive path.  
 Project Name: LPOC-AGRI SCIENCE HORTICULTURE FACILITY Report Page: Page 5 of 5  
 Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 Date Prepared: 3/27/20

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  
 I certify that this Certificate of Compliance documentation is accurate and complete  
 Documentation Author Name: TONY Q. MORTERA, PE Documentation Author Signature: [Signature]  
 Company: METRO POWER ENGINEERS, INC Signature Date: 3/27/20  
 Address: 3150 HILLTOP MALL RD, SUITE 22 CEJA/ HERS Certification Identification (if applicable):  
 City/State/Zip: RICHMOND, CA 94806 Phone: 510.275.3000

RESPONSIBLE PERSON'S DECLARATION STATEMENT  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with the building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: TONY Q. MORTERA, PE Responsible Designer Signature: [Signature]  
 Company: METRO POWER ENGINEERS, INC Date Signed: 3/27/20  
 Address: 3150 HILLTOP MALL RD, SUITE 22 License: E16739  
 City/State/Zip: RICHMOND, CA 94806 Phone: 510.275.3000

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> November 2019

STATE OF CALIFORNIA  
**Outdoor Lighting**  
 NRCC-LTO-E (Revised 11/19)

CERTIFICATE OF COMPLIANCE  
 This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)(2)(L) for outdoor lighting scopes using the prescriptive path.  
 Project Name: LPOC-AGRI SCIENCE HORTICULTURE FACILITY Report Page: Page 6 of 6  
 Project Address: 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551 Date Prepared: 3/27/20

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  
 I certify that this Certificate of Compliance documentation is accurate and complete  
 Documentation Author Name: TONY Q. MORTERA, PE Documentation Author Signature: [Signature]  
 Company: METRO POWER ENGINEERS, INC Signature Date: 3/27/20  
 Address: 3150 HILLTOP MALL RD, SUITE 22 CEJA/ HERS Certification Identification (if applicable):  
 City/State/Zip: RICHMOND, CA 94806 Phone: 510.275.3000

RESPONSIBLE PERSON'S DECLARATION STATEMENT  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with the building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: TONY Q. MORTERA, PE Responsible Designer Signature: [Signature]  
 Company: METRO POWER ENGINEERS, INC Date Signed: 3/27/20  
 Address: 3150 HILLTOP MALL RD, SUITE 22 License: E16739  
 City/State/Zip: RICHMOND, CA 94806 Phone: 510.275.3000

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: <http://www.energy.ca.gov/title24/2019standards> November 2019

STATE OF CALIFORNIA  
**OUTDOOR LIGHTING**  
 CEI-NRCLTO-01-E (Revised 01/20)

CERTIFICATE OF INSTALLATION  
 Outdoor Lighting  
 Project Name: LPOC-AGRI SCI HORT FACILITY Enforcement Agency: [Signature]  
 Project Address: 3000 CAMPUS DR City: LIVERMORE Zip Code: 94551

GENERAL INFORMATION  
 DATE OF BUILDING PERMIT: PERMIT #:  
 BUILDING TYPE:  Nonresidential Outdoor Lighting  
 PHASE OF CONSTRUCTION:  New Construction  Addition  Alteration

SCOPE OF RESPONSIBILITY  
 Enter the date of approval by enforcement agency of the Certificate of Compliance that provides the specifications for the energy efficiency measures for the scope of responsibility for this Installation Certificate. Date: \_\_\_\_\_

In the table below, identify all construction documents that show that the outdoor lighting and controls were installed as it was proposed in the Certificates of Compliance.

Document Title or Description	Applicable Sheets or Pages, Tables, Schedules, etc.	Date Approved by the Enforcement Agency
LIGHTING PLANS	E101	
TITLE 24 COMPLIANCE	EN102	

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance January 2020

STATE OF CALIFORNIA  
**OUTDOOR LIGHTING**  
 CEI-NRCLTO-01-E (Revised 01/20)

CERTIFICATE OF INSTALLATION  
 Outdoor Lighting  
 Project Name: LPOC-AGRI SCI HORT FACILITY Enforcement Agency: [Signature]  
 Project Address: 3000 CAMPUS DR City: LIVERMORE Zip Code: 94551

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  
 I certify that this Certificate of Installation documentation is accurate and complete.  
 Documentation Author Name: TONY Q. MORTERA, PE Documentation Author Signature: [Signature]  
 Company: METRO POWER ENGINEERS, INC Date Signed: 3/27/20  
 Address: 3150 HILLTOP MALL RD, SUITE 22 CEJA/ HERS Certification Identification (if applicable):  
 City/State/Zip: RICHMOND, CA 94806 Phone: 510.275.3000

RESPONSIBLE PERSON'S DECLARATION STATEMENT  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Installation is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation and attest to the declarations in this statement (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer.  
 3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations, and the installation conforms to the requirements given on the plans and specifications approved by the enforcement agency.  
 4. I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met.  
 5. I will ensure that a completed signed copy of this Certificate of Installation shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name: TONY Q. MORTERA, PE Responsible Builder/Installer Signature: [Signature]  
 Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) Position With Company (Title):  
 Address: CSR License:  
 City/State/Zip: Phone: Date Signed: \_\_\_\_\_

ELECTRICAL CONTRACTOR SHALL BE COMPLETING AND SIGNING T24 INSTALLATION AND ACCEPTANCE FORMS AT THE COMPLETION OF THE JOB.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance January 2020

STATE OF CALIFORNIA  
**ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM**  
 CEI-NRCLTO-02-E (01/20)

CERTIFICATE OF INSTALLATION  
 Energy Management Control System or Lighting Control System  
 Project Name: LPOC-AGRI SCI HORT FACILITY Enforcement Agency: [Signature]  
 Project Address: 3000 CAMPUS DR City: LIVERMORE Zip Code: 94551

GENERAL INFORMATION  
 DATE OF BUILDING PERMIT: PERMIT #:  
 BUILDING TYPE:  Nonresidential Outdoor Lighting  
 PHASE OF CONSTRUCTION:  New Construction  Addition  Alteration

SCOPE OF RESPONSIBILITY  
 Enter the date of approval by enforcement agency of the Certificate of Compliance that provides the specifications for the energy efficiency measures for the scope of responsibility for this Installation Certificate. Date: \_\_\_\_\_

Requirements in the Standards:  
 §130.4(b) - Before an Energy Management Control System (EMCS), or Lighting Control System can be recognized for compliance with the lighting control requirements in Part 6 of Title 24, the person who is eligible under Division 3 of the Business and Professions Code to accept responsibility for the construction or installation of features, materials, components, or manufactured devices shall sign and submit this Installation Certificate.  
**Check all that apply:**  
 PART 1 What type of Lighting Control System has been installed?  
 A. Energy Management Control System (EMCS) - is an automated control system that regulates the energy consumption of a building by controlling the operation of energy consuming systems and is capable of monitoring loads, and adjusting operations in order to optimize energy usage and respond to demand response signals.  
 The Energy Management Control System is installed to function as a lighting control required by Part 6 and its functionality meets all applicable requirements for each application for which it is installed, in accordance with Section 110.9, 130.2, 130.4, 150.0(k), and 150.2, and complies with Nonresidential Appendix NA7.7.2.  
 B. Lighting Control System - Requires two or more components to be installed in the building to provide all of the functionality required to make up a fully functional and compliant lighting control.  
 The installed Lighting Control System is installed to comply with applicable requirements in Section 110.9, 130.2, 130.4, 150.0(k), and 150.2, and complies with Reference Nonresidential Appendix NA7.7.1.  
 PART 2 Lighting Control functional requirements:  
**Check all that are in compliance with the Standards when verifying the installation of an EMCS or Lighting Control System.**  
 A. All outdoor lighting controls and equipment have been installed in accordance with the manufacturer's instructions.  
 B. All installed EMCS systems meet each respective lighting control for which it is installed for meeting requirements in Section 110.9, 130.2, 130.4, 150.0(k), and 150.2.  
 C. Components of all installed lighting control systems meet applicable requirements in Section 110.9, 130.2, 130.4, 150.0(k), and 150.2.

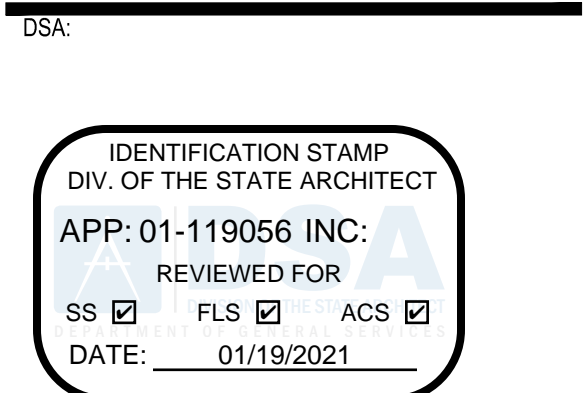
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance January 2020

STATE OF CALIFORNIA  
**ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM**  
 CEI-NRCLTO-02-E (01/20)

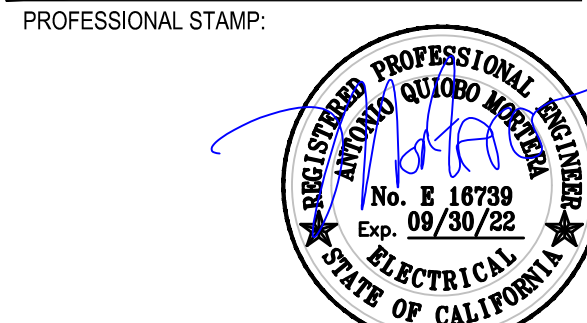
CERTIFICATE OF INSTALLATION  
 Energy Management Control System or Lighting Control System  
 Project Name: LPOC-AGRI SCI HORT FACILITY Enforcement Agency: [Signature]  
 Project Address: 3000 CAMPUS DR City: LIVERMORE Zip Code: 94551

D. The EMCS or Lighting Control System functions as one or more of the checked items below, and complies with the applicable requirements:  
 1. The installed controls meet applicable requirements for automatic scheduling controls in Section 110.9(b)(1).  
 Check all that are applicable to the installed controls:  
 Time-switch controls  
 Astronomical time-switch controls  
 Multi-level time-switch controls  
 Time-switch controls installed outdoors  
 2. The installed controls meet applicable requirements for motion sensing controls in Section 110.9(b)(4).  
**PART 3 Requirements for which the control is being installed to comply with:**  
 Identify all requirements in the Standards for which the EMCS or Lighting Control System is installed to function as and comply with:  
**Check all that are in compliance with the Standards, Section 130.2:**  
 A. During daytime, the installed EMCS or lighting control system turn off all controlled outdoor lighting.  
 Check all that are applicable to the installed controls:  
 Photocouplers  
 Astronomical time-switch control;  
 Other control capable of automatically shutting OFF the outdoor lighting when daylight is available  
 B. (Automatic scheduling control functionality) During normally unoccupied schedule, the installed EMCS or lighting control system function as one or more of the checked items below. Check all that are applicable to the installed controls:  
 Reduce the outdoor lighting power between 50 percent and 90 percent.  
 Turn the lighting off.  
 C. (Automatic scheduling control functionality) For an override function included with the installed EMCS or lighting control system, the override function turns lighting on during its scheduled dim or off state for no more than 2 hours when an override is initiated.  
 D. (Motion sensing control functionality) During unoccupied periods, the installed controls either reduce the lighting power of each controlled luminaire by at least 50 percent, or turn off the luminaire.  
 E. (Motion sensing control functionality) After 15 minutes of vacancy in the outdoor area covered by the motion sensing controls, the installed controls either dim or turn off the lighting.  
 F. (Motion sensing control functionality) No more than 1500 watts of lighting power is controlled by a single motion sensor.  
 G. (Motion sensing control functionality) Motion sensing controls must be installed for the following luminaires, and may be installed for other outdoor lighting and in combination with other outdoor lighting controls. Check all that are applicable:  
 Outdoor luminaires other than building façade, ornamental hardscape, outdoor dining, or outdoor sales frontage lighting, where the bottom of luminaire is mounted 24 feet or less above grade.  
 Outdoor wall mounted luminaires installed for building façade, ornamental hardscape or outdoor dining lighting that have a bilaterally symmetric distribution as described in the IES handbook (typically referred to as "wall packs") mounted 24 feet above grade or lower.

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance January 2020

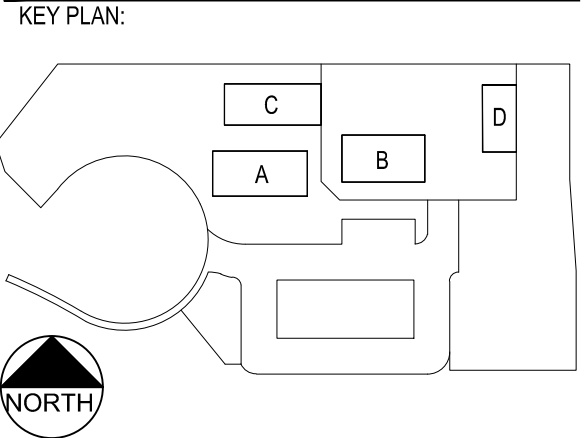


4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600



CONSULTANT:  
 METRO POWER ENGINEERS, INC.  
 3150 HILLTOP MALL ROAD, SUITE 22  
 RICHMOND, CA 94806  
 TEL: 510. 275. 3000 FAX: 510. 275. 3002

ITEM:	REVISION / ISSUE:	DATE:



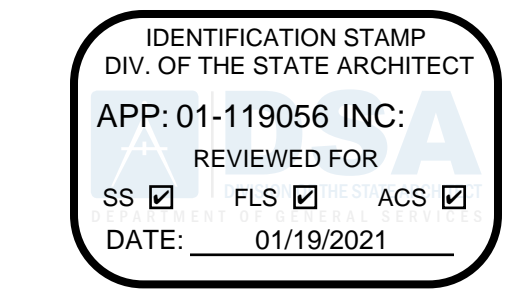
CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

TITLE 24  
 COMPLIANCE  
 DOCUMENTATION

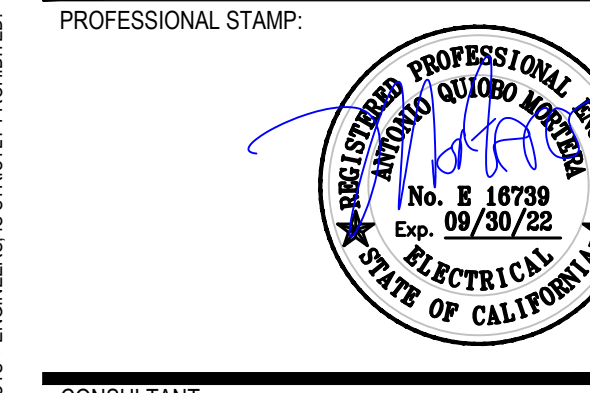
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO: \_\_\_\_\_

EN102

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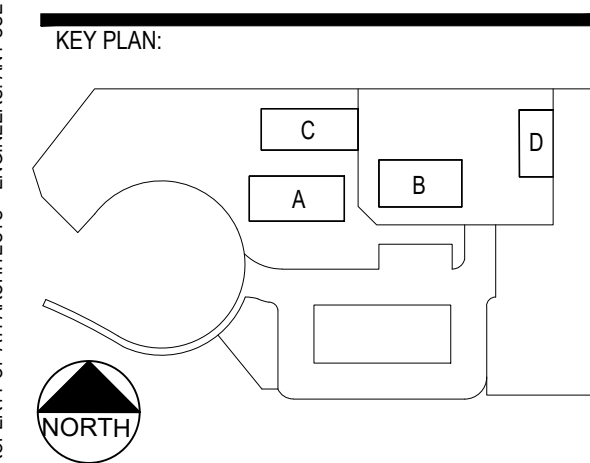


4750 Willow Road #250 Pleasanton, CA 94568 - T 925.648.8800
3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600



METRO POWER ENGINEERS, INC.
3150 HILLTOP MALL ROAD, SUITE 22
RICHMOND, CA 94806
TEL: 510.275.3000 FAX: 510.275.3002

Table with columns: ITEM, REVISION / ISSUE, DATE. Contains multiple rows for tracking changes.



CLPCCD - LAS POSITAS COLLEGE
AGRICULTURE SCIENCE HORTICULTURE FACILITY
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

TITLE 24 COMPLIANCE DOCUMENTATION

DRAWN BY: CHECKED BY:
DATE: 01/14/2021 PROJECT NO: C9508
SHEET NO:

EN103

ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM
CERTIFICATE OF INSTALLATION
Project Name: LPCC-AGRI SCI HORT FACILITY
Project Address: 3000 CAMPUS DR LIVERMORE
Form includes compliance checklist and signature block.

ENERGY MANAGEMENT CONTROL SYSTEM OR LIGHTING CONTROL SYSTEM
CERTIFICATE OF INSTALLATION
Documentation Author Name: TONY Q. MORTERA, PE
Address: METRO POWER ENGINEERS, INC
3150 HILLTOP MALL RD, STE 22
RICHMOND, CA 94806

CERTIFICATE OF INSTALLATION—USER INSTRUCTIONS
Energy Management Control System or Lighting Control System
This Certificate of Installation must be submitted whenever a lighting control system, and whenever an Energy Management Control System (EMCS), has been installed to comply with any of the outdoor lighting control requirements in the Standards.

Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
Table with columns: 01 (Project Location), 02 (Occupancy Types), 03 (Demand Response Controls), 04 (Rating), 05 (Utility Provided Metering System), 06 (Field Inspector)
Status: DOES NOT COMPLY

Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
D. EXCEPTIONAL CONDITIONS
E. ADDITIONAL REMARKS
Table with columns: 01 (Electrical Service Designation/Description), 02 (Rating), 03 (Instantaneous Demand, Historical Peak Demand, Tracking kWh for user-defined period), 04 (Location of Requirements), 05 (Field Inspector)
Status: Pass

Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING
Table with columns: 01 (Load Type), 02 (Minimum Required Separation of Load), 03 (Compliance Method), 04 (Location of Requirements), 05 (Field Inspector)
Status: Pass

Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
Table with columns: 01 (Electrical Service Designation/Description), 02 (Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method), 03 (Location of Voltage Drop Calculations), 04 (Sheet Number for Voltage Drop Calculations), 05 (Field Inspector)
Status: Pass

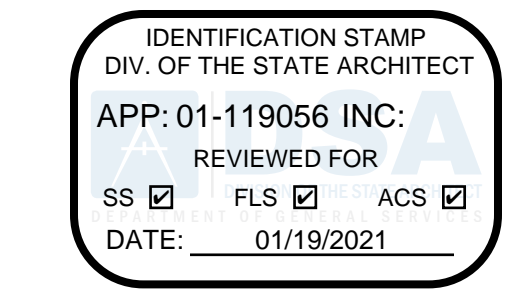
Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
Table with columns: 01 (Room Name or Description), 02 (Location/Type of Controlled Receptacles), 03 (Shut-Off Controls), 04 (Permanent Durable Marking Will be Used), 05 (Location of Requirements), 06 (Field Inspector)
Status: Pass

Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
Documentation Author Name: TONY Q. MORTERA, PE
Address: METRO POWER ENGINEERS, INC
3150 HILLTOP MALL RD, SUITE 22
RICHMOND, CA 94806

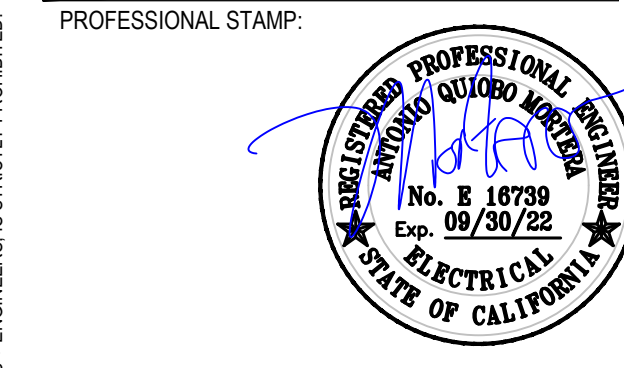
Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
Table with columns: 01 (Plug Loads and appliances < 25kVA), 02 (Minimum Required Separation of Load), 03 (Compliance Method), 04 (Location of Requirements), 05 (Field Inspector)
Status: Pass

Electrical Power Distribution
CERTIFICATE OF COMPLIANCE
Table with columns: 01 (Electrical Service Designation/Description), 02 (Voltage drop < 5%), 03 (Permitted by CA Elec Code), 04 (Exception to Code), 05 (Field Inspector)
Status: Pass

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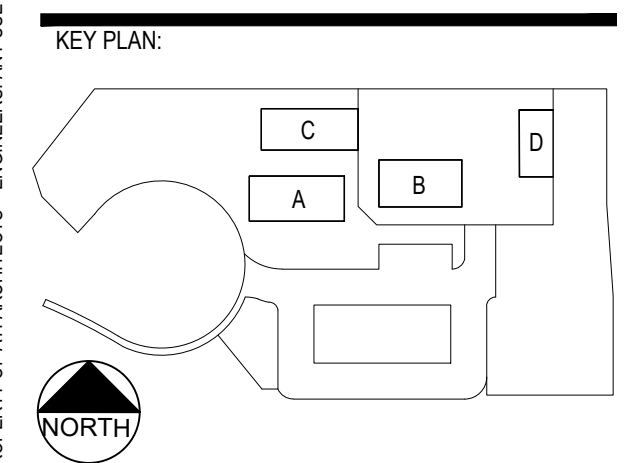


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3009 Douglas Blvd #290 Roseville, CA 95661 - T 916 772 1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600



CONSULTANT: METRO POWER ENGINEERS, INC.  
3150 HILLTOP MALL ROAD, SUITE 22  
RICHMOND, CA 94806  
TEL: 510. 275. 3000 FAX: 510. 275. 3002

Table with 3 columns: ITEM, REVISION / ISSUE, DATE. Multiple empty rows for tracking changes.



CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

# TITLE 24 COMPLIANCE DOCUMENTATION

DRAWN BY: CHECKED BY:  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

# EN104

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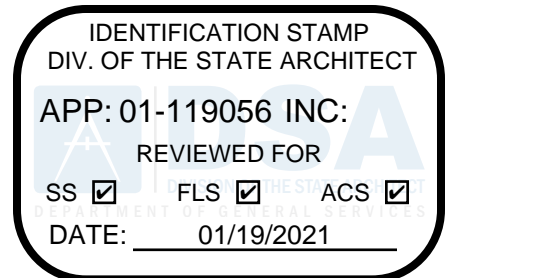
STATE OF CALIFORNIA ELECTRICAL POWER DISTRIBUTION CERTIFICATE OF INSTALLATION (Page 4 of 5)
Project Name: LPCC - AGRICULTURE SCIENCE HORTICULTURE FACILITY
City: LIVERMORE
Permit Number: 94551
Section C: Voltage Drop
Section D: Circuit Controls for 120-Volt Receptacles and Controlled Receptacles

STATE OF CALIFORNIA ELECTRICAL POWER DISTRIBUTION CERTIFICATE OF INSTALLATION (Page 3 of 5)
Project Name: LPCC - AGRICULTURE SCIENCE HORTICULTURE FACILITY
City: LIVERMORE
Permit Number: 94551
Section B: Separation of Electrical Circuits for Electrical Energy Monitoring
Table with columns: General Information, Electrical Power Distribution System Information and Method of Compliance, Electrical Service Rating

STATE OF CALIFORNIA ELECTRICAL POWER DISTRIBUTION CERTIFICATE OF INSTALLATION (Page 2 of 5)
Project Name: LPCC - AGRICULTURE SCIENCE HORTICULTURE FACILITY
City: LIVERMORE
Permit Number: 94551
Section A: Service Electrical Metering
Table with columns: Electrical Service Schedule, Electrical Service Rating, Metering Capabilities, Exception to 130.5(a)

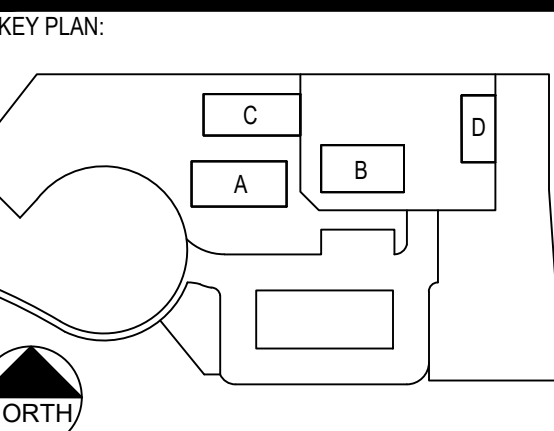
STATE OF CALIFORNIA ELECTRICAL POWER DISTRIBUTION CERTIFICATE OF INSTALLATION (Page 1 of 5)
Project Name: LPCC - AGRICULTURE SCIENCE HORTICULTURE FACILITY
City: LIVERMORE
Permit Number: 94551
Section 1: General Information
Section 2: Scope of Responsibility
Section 3: In the table below identify all applicable construction documents that specify the requirements for the scope of responsibility reported by this installation Certificate (continued).

STATE OF CALIFORNIA ELECTRICAL POWER DISTRIBUTION CERTIFICATE OF INSTALLATION (Page 5 of 5)
Project Name: LPCC - AGRICULTURE SCIENCE HORTICULTURE FACILITY
City: LIVERMORE
Permit Number: 94551
Section 4: Documentation Author's Declaration Statement
Section 5: Responsible Person's Declaration Statement
Section 6: Electrical Contractor shall be completing and signing T24 installation and acceptance forms at the completion of the job.



CONSULTANT:

Table with 3 columns: ITEM, REVISION / ISSUE, DATE



CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

TITLE-24 COMPLIANCE DOCUMENTATION

DRAWN BY: CM CHECKED BY: LS DATE: 01/14/2021 PROJECT NO: C9508 SHEET NO:

Project Name: Nonresidential Building NRCC-PRF-01-E Page 3 of 15
Project Address: 3000 Campus Hill Drive Livermore 94551 Calculation Date/Time: 09-46, Mon, Sep 14, 2020
Input File Name: C9508\_BLDG - A\_Test.cibd19x

A. GENERAL INFORMATION Table with 14 columns: 1. Project Location (city), 2. CA Zip Code, 3. Climate Zone, 4. Total Conditioned Floor Area in Scope, 5. Total Unconditioned Floor Area, 6. Total # of Stories (Habitable Above Grade), 7. Total # of dwelling units, 8. Standards Version, 9. Compliance Software (version), 10. Weather File, 11. Building Orientation (deg), 12. Permitted Scope of Work, 13. Building Type(s), 14. Gas Type

B. PROJECT SUMMARY Table with 2 columns: Building Components Complying via Performance, Building Components Complying Prescriptively. Includes Envelope, Mechanical, Domestic Hot Water, Lighting, and Solar Thermal Water Heating details.

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04172020-6104 Report Generated at: 2020-09-14 09:48:33

Project Name: Nonresidential Building NRCC-PRF-01-E Page 2 of 15
Project Address: 3000 Campus Hill Drive Livermore 94551 Calculation Date/Time: 09-46, Mon, Sep 14, 2020
Input File Name: C9508\_BLDG - A\_Test.cibd19x

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft^2-yr) Table with 4 columns: Energy Component, Standard Design (TDV), Proposed Design (TDV), Compliance Margin (TDV)^1. Includes Space Heating, Space Cooling, Indoor Fans, Heat Rejection, Pumps & Misc., Domestic Hot Water, Indoor Lighting. ENERGY STANDARDS COMPLIANCE TOTAL: 281.06 (Standard) vs 172.63 (Proposed) = 108.43 (38.6%)

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS^1 Table with 4 columns: Miscellaneous Energy Component, Standard Design (TDV), Proposed Design (TDV), Compliance Margin (TDV)^1. Includes Receptacle, Process, Other Ltg, Process Motors. COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS: 410.59 (Standard) vs 302.16 (Proposed) = 108.4 (26.4%)

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04172020-6104 Report Generated at: 2020-09-14 09:48:33

Project Name: Nonresidential Building NRCC-PRF-01-E Page 3 of 15
Project Address: 3000 Campus Hill Drive Livermore 94551 Calculation Date/Time: 09-46, Mon, Sep 14, 2020
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D. EXCEPTIONAL CONDITIONS
This project includes partial performance compliance scope options. The building must show compliance with all other applicable compliance scope options (performance or prescriptively) before occupying.
The building does not include service water heating. Verify that service water heating is not required and is not included in the design.
This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylit Control requirements are met. PRESCRIPTIVE COMPLIANCE documentation (form NRCC-LTI-02-E) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylit Zones is required.
The user model includes space(s) that are designed to be served by mechanical cooling systems, but the cooling systems were not included in the simulation model. A cooling system has been modeled for both the proposed and standard cases.
The user model includes space(s) without sufficient cooling equipment. Cooling equipment has been added to the model to meet cooling loads.

E. HERS VERIFICATION
This Section Does Not Apply

F. ADDITIONAL REMARKS
This Section Does Not Apply

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04172020-6104 Report Generated at: 2020-09-14 09:48:33

Project Name: Nonresidential Building NRCC-PRF-01-E Page 6 of 15
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K2. ECONOMIZER & FAN SYSTEMS SUMMARY §140.4^1 Table with 13 columns: 1. Name or Item Tag, 2. System Type, 3. Design OA, 4. CFM, 5. BHP, 6. Watts, 7. Control, 8. CFM, 9. BHP, 10. Watts, 11. Control, 12. Economizer Type (if present), 13. Status. Includes FC-A1 through FC-A5.

Status: N - New, A - Altered, E - Existing

K3. EXHAUST FAN SUMMARY
This Section Does Not Apply

K4. Wet System Equipment (boilers, chillers, cooling towers, etc.)
This Section Does Not Apply

K5. SYSTEM FEATURES §120.2 Table with 6 columns: 1. System Name, 2. Optimum Start, 3. Window Interlocks per §140.4(n), 4. Evaporative Cooling, 5. Heat Recovery, 6. Other Controls. Includes FC-A1 through FC-A3.

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04172020-6104 Report Generated at: 2020-09-14 09:48:33

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Status: N - New, A - Altered, E - Existing

I2. OVERHANG DETAILS
This Section Does Not Apply

I3. OPAQUE DOOR SUMMARY Table with 3 columns: 1. Assembly Name, 2. Overall U-factor, 3. Status^1. Includes Insulated Metal Door12.

Status: N - New, A - Altered, E - Existing

J. CRRC ROOFING PRODUCT SUMMARY §140.3
This Section Does Not Apply

K. HVAC SYSTEM SUMMARY §110.1 & §110.2

K1. Dry System Equipment (furnaces, air handling units, heat pumps, VRF, etc.) Table with 10 columns: 1. Equipment Name, 2. Equipment Type, 3. Qty, 4. Total Heating Output (kBtu/h), 5. Supp Heat Source (Y/N), 6. Supp Heat Output (kBtu/h), 7. Efficiency, 8. Total Cooling Output (kBtu/h), 9. Efficiency, 10. Status. Includes FC-A1 through FC-A5.

Status: N - New, A - Altered, E - Existing

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04172020-6104 Report Generated at: 2020-09-14 09:48:33

Project Name: Nonresidential Building NRCC-PRF-01-E Page 4 of 15
Project Address: 3000 Campus Hill Drive Livermore 94551 Calculation Date/Time: 09-46, Mon, Sep 14, 2020
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H. FENESTRATION ASSEMBLY SUMMARY §110.6 Table with 9 columns: 1. Fenestration Assembly Name / Tag or I.D., 2. Fenestration Type / Product Type / Frame Type, 3. Certification Method^1, 4. Assembly Method, 5. Area ft^2, 6. Overall U-factor, 7. Overall SHGC, 8. Overall VT, 9. Status. Includes Double Metal Clear, Solatube.

Status: N - New, A - Altered, E - Existing

I. ENVELOPE DETAILS §120.7 & §140.3

I1. OPAQUE SURFACE ASSEMBLY SUMMARY Table with 9 columns: 1. Surface Name, 2. Surface Type, 3. Description of Assembly Layers, 4. Area (ft^2), 5. Framing Type, 6. Cavity R-Value, 7. Continuous R-Value, 8. U-Factor / F-Factor / C-Factor, 9. Status. Includes Type A Wall\_90pct\_C95086, Roof\_C9508\_90pct15, Slab On Grade21.

CA Building Energy Efficiency Standards- 2019 Nonresidential Compliance Report Version: NRCC-PRF-01-E-04172020-6104 Report Generated at: 2020-09-14 09:48:33

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Project Name: Nonresidential Building, Project Address: 3000 Campus Hill Drive Livermore 94551, Input File Name: C9508\_BLDG - A\_Test.cibd19x

L2. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

L3. SOLAR HOT WATER HEATING SUMMARY

This Section Does Not Apply

M. COVERED PROCESS SUMMARY §140.9

This Section Does Not Apply

N. INDOOR LIGHTING SUMMARY §140.6

This Section Does Not Apply

Project Name: Nonresidential Building, Project Address: 3000 Campus Hill Drive Livermore 94551, Input File Name: C9508\_BLDG - A\_Test.cibd19x

K7. DISTRIBUTION SUMMARY §120.4(140.4(I))

Table with columns: Equipment Name, Duct Leakage Verification Y/N, Ducts, Insulation R-Value, Location, Status.

Does the Project Include Zonal Systems? Yes

K8. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY § 140.4

Table with columns: System ID, Zone Name, System Type, Rated Capacity, Airflow (cfm), Fan, ECM Motor.

K9. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

L. DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY

This Section Does Not Apply

Project Name: Nonresidential Building, Project Address: 3000 Campus Hill Drive Livermore 94551, Input File Name: C9508\_BLDG - A\_Test.cibd19x

K5. SYSTEM FEATURES §120.2

Table with columns: System Name, Optimum Start, Window Interlocks per §140.4(n), Evaporative Cooling, Heat Recovery, Other Controls.

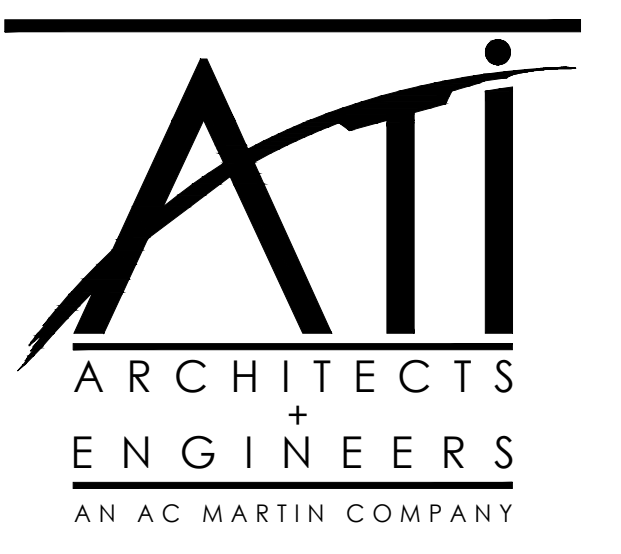
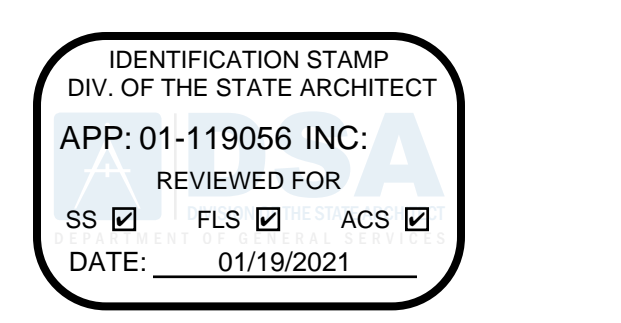
Note: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

K6. MECHANICAL VENTILATION AND REHEAT §120.1

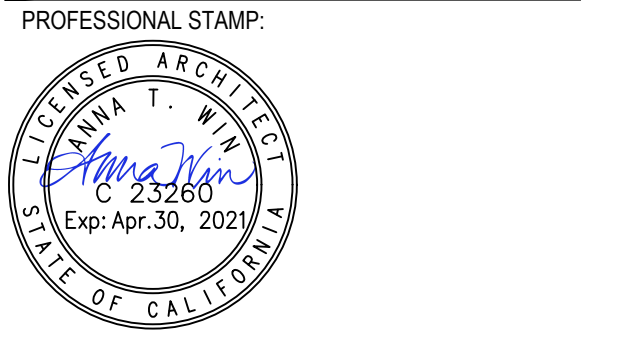
Table with columns: Zone Name, Mechanical Ventilation, DCV or Occupant Sensor Controls, or Both.

K7. DISTRIBUTION SUMMARY §120.4(140.4(I))

Table with columns: Equipment Name, Duct Leakage Verification Y/N, Insulation R-Value, Location, Status.



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CONSULTANT:

Project Name: Nonresidential Building, Project Address: 3000 Campus Hill Drive Livermore 94551, Input File Name: C9508\_BLDG - A\_Test.cibd19x

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance.

Table with columns: Building Component, YES, NO, Form/Title, Field Inspector Pass/Fail.

Project Name: Nonresidential Building, Project Address: 3000 Campus Hill Drive Livermore 94551, Input File Name: C9508\_BLDG - A\_Test.cibd19x

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance.

Table with columns: Building Component, YES, NO, Form/Title, Field Inspector Pass/Fail.

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance.

Table with columns: Building Component, YES, NO, Form/Title, Field Inspector Pass/Fail.

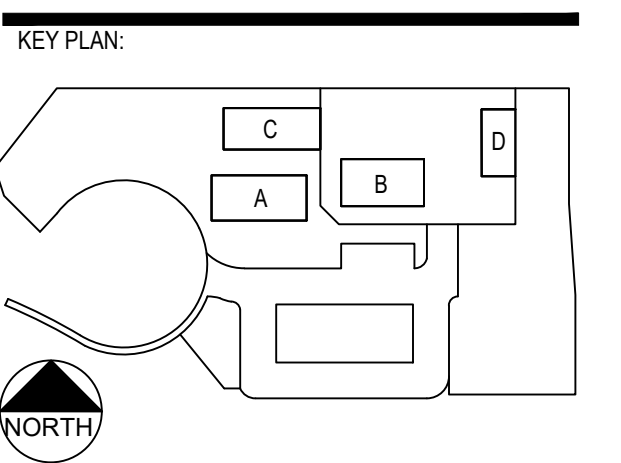
Project Name: Nonresidential Building, Project Address: 3000 Campus Hill Drive Livermore 94551, Input File Name: C9508\_BLDG - A\_Test.cibd19x

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Table with columns: Building Component, YES, NO, Form/Title, Field Inspector Pass/Fail.

REVISION / ISSUE / DATE table with columns for tracking changes.



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TITLE-24 COMPLIANCE DOCUMENTATION

DRAWN BY: CM CHECKED BY: LS DATE: 01/14/2021 PROJECT NO: C9508 SHEET NO:

EN-106

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Project Address:	3000 Campus Hill Drive Livermore 94551	Calculation Date/Time:	09:46, Mon, Sep 14, 2020
Input File Name:	C9508_BLDG - A_Test.cibd19x		

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT § 10-103**

Documentation Author Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Company: ATi Architects & Engineers  
 Address: \_\_\_\_\_ Signature Date: 2020-09-14  
 City/State/Zip: \_\_\_\_\_ CEA/HERS Certification Identification (if applicable): \_\_\_\_\_  
 Phone: \_\_\_\_\_

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name: \_\_\_\_\_ Signature: *Anna Kim*  
 Company: \_\_\_\_\_ Date Signed: 11/16/2020  
 Address: \_\_\_\_\_ Declaration Statement Type: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_ Title: Architect of Record License #: C23260  
 Phone: \_\_\_\_\_  
 Responsible Lighting Designer Name: \_\_\_\_\_ Signature: **NOT IN SCOPE**  
 Company: \_\_\_\_\_ Date Signed: \_\_\_\_\_  
 Address: \_\_\_\_\_ Declaration Statement Type: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_ Title: \_\_\_\_\_ License #: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Responsible Mechanical Designer Name: Elliot Lee  
 Company: ATi Architects + Engineers Signature: *Elliot Lee*  
 Address: 4750 Willow Road Date Signed: 10/13/2020  
 City/State/Zip: Pleasanton CA 94588 Declaration Statement Type: \_\_\_\_\_  
 Phone: 9256488800 Title: Mechanical Engineer License #: M39970

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 14 of 15
Project Address:	3000 Campus Hill Drive Livermore 94551	Calculation Date/Time:	09:46, Mon, Sep 14, 2020
Input File Name:	C9508_BLDG - A_Test.cibd19x		

**Q. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION**

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at: [https://www.energy.ca.gov/title24/2019standards/2019\\_compliance\\_documents/Nonresidential\\_Documents/NRCCV/](https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCCV/)

Building Component	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Mechanical	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-04-H Duct Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-24-H Enclosure Air Leakage	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-MCH-32-H Local Mechanical Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
Plumbing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-PLB-21-H - HERS verified central systems in high-rise residential, hotel/motel application	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application	<input type="checkbox"/>	<input type="checkbox"/>

**R. UNMET LOAD HOURS**

This Section Does Not Apply

Project Name:	Nonresidential Building	NRCC-PRF-01-E	Page 13 of 15
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Input File Name:	C9508_BLDG - A_Test.cibd19x		

**P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: [https://www.energy.ca.gov/title24/2019standards/2019\\_compliance\\_documents/Nonresidential\\_Documents/NRCA/](https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/)

Building Component	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Indoor Lighting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-03-A - Automatic Daylight Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-04-A - Demand Responsive Lighting Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTI-05-A - Institutional Tuning Power Adjustment Factor (PAF)	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor Lighting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTO-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-LTO-02-A - Outdoor Lighting Controls	<input type="checkbox"/>	<input type="checkbox"/>
Sign Lighting	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-01-F - Compressed Air Systems	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-02-F - Kitchen Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-03-F - Garage Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-04-F - Refrigerated Warehouse - Evaporator Fan Motor Controls	<input type="checkbox"/>	<input type="checkbox"/>
Covered Process	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-05-F - Refrigerated Warehouse - Evaporative Condenser Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-06-F - Refrigerated Warehouse - Air Cooled Condenser Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-07-F - Refrigerated Warehouse - Variable Speed Compressor	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-08-F - Electrical Resistance Underslab Heating System	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-15-F - Fume Hood Automatic Sash Closures System	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NRCA-PRC-16-A - Adiabatic Condensers	<input type="checkbox"/>	<input type="checkbox"/>

DSA:

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021



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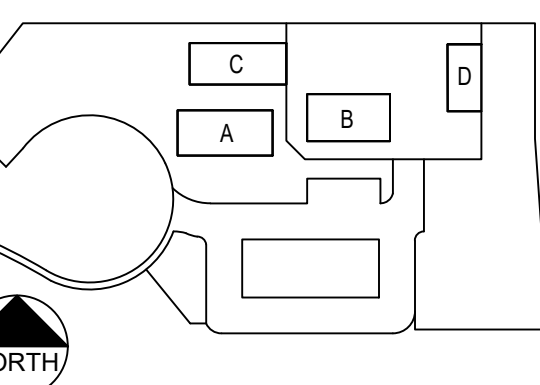
**PROFESSIONAL STAMP:**



CONSULTANT:

ITEM:	REVISION / ISSUE:	DATE:

**KEY PLAN:**



CLPCCD - LAS POSITAS COLLEGE  
 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**TITLE-24 COMPLIANCE DOCUMENTATION**

DRAWN BY: CM CHECKED BY: LS  
 DATE: 01/14/2021 PROJECT NO: C9508

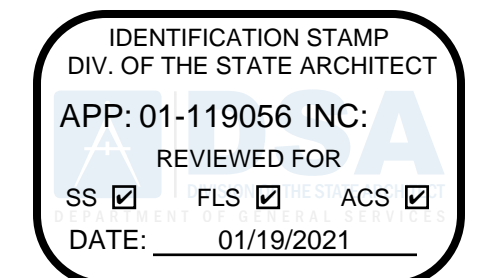
SHEET NO:

**EN-107**

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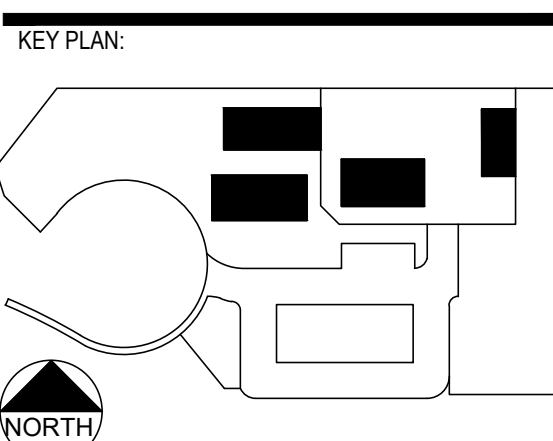
4750 Willow Road #250 Pleasanton, CA 94568 - T 925.648.8800 3009 Douglas Blvd #250 Roseville, CA 95661 - T 916.772.1800 444 S Flower St #1200, Los Angeles, CA 90011 - T 714.538.1600

PROFESSIONAL STAMP:



CONSULTANT: Smith & Fausch & McDonald Inc. Communication Engineering Group 301 8th Street San Francisco, California 94103 (415) 255-9140 www.smfm.com

Table with columns: ITEM, REVISION / ISSUE, DATE. Includes a table for revision tracking.



CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

GENERAL NOTES, LEGEND, ABBREVIATIONS & SCHEDULES

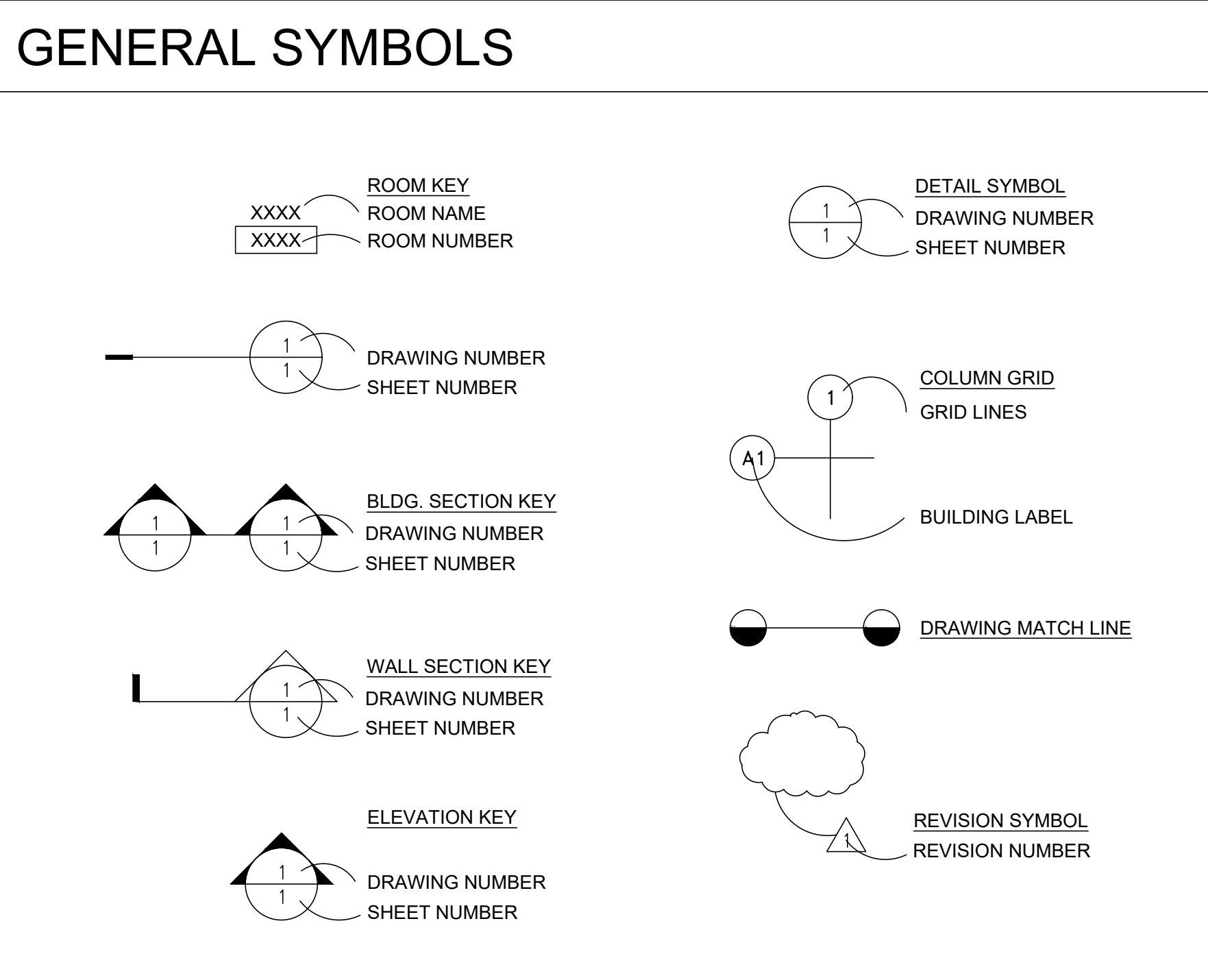
DRAWN BY: IK CHECKED BY: RLE DATE: 01/14/2021 PROJECT NO: C9508 SHEET NO:

ABBREVIATIONS table listing codes and descriptions for raceways, conduits, and equipment.

MATERIAL & EQUIPMENT LEGEND table listing codes and descriptions for innerducts, patch panels, fiber optic cables, and termination equipment.

TELECOMM. SYSTEMS LEGEND table listing symbols and descriptions for raceways, conduits, and junction boxes.

TELECOMMUNICATIONS SYSTEMS GENERAL NOTES 1 REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS. 2 PROVIDE RACEWAY, BOXES AND FITTINGS SHOWN ON TELECOMMUNICATIONS SYSTEMS (T) DRAWINGS UNDER THE WORK OF SECTION 27 05 33 COMMUNICATIONS RACEWAYS, BOXES AND FITTINGS. UNLESS OTHERWISE INDICATED, PROVIDE 1.25" C. TRADE SIZE MINIMUM. PROVIDE RACEWAY SIZE AS REQUIRED FOR A MAXIMUM OF 40 PERCENT WIRE FILL. 3 PROVIDE FIRESTOPPING. SEE SHEET TN-507. 4 LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON THE COMMUNICATIONS SYSTEMS DRAWINGS. 5 DEVICE QUANTITIES SHOWN ON FLOOR PLANS AND REFLECTED CEILING PLANS TAKE PRECEDENCE OVER DEVICE QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS. 6 QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS TAKE PRECEDENCE OVER QUANTITIES SHOWN ON RACK ELEVATIONS. 7 QUANTITIES SHOWN ON DEVICE SCHEDULES TAKE PRECEDENCE OVER QUANTITIES SHOWN ON FUNCTIONAL DIAGRAMS, FLOOR PLANS AND REFLECTED CEILING PLANS. 8 LOCATIONS SHOWN ON LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON SMALL SCALE DRAWINGS. 9 WHERE COMMUNICATIONS SYSTEMS WIRING IS INDICATED BUT RACEWAY IS NOT INDICATED, PROVIDE SUCH WIRING SUPPORTED BY ABOVE CEILING J-HOOKS. LOCATE SUCH J-HOOKS IN LOCATIONS THAT ARE ACCESSIBLE AS DEFINED IN THE CALIFORNIA ELECTRICAL CODE. 10 ALL CONDUITS, CABLE TRAY AND J-HOOKS SHOWN ON PLANS FOR VOICE/DATA COMMUNICATIONS CABLING AND ITS SUSPENSION SYSTEM SHALL BE DEDICATED AND NOT SHARED WITH OTHER CABLING SYSTEMS. PROVIDE SEPARATE CONDUITS AND SUSPENSION SYSTEM FOR THE A/V CABLING SYSTEMS.



PULL BOX SCHEDULE table with columns: SYMBOL, DEVICE/FUNCTION, MOUNTING, NOTES. Lists various pull box types and their specifications.

GENERAL PULL BOX NOTES 1. LIDS SHALL BE MARKED WITH "COMMUNICATIONS". 2. INSTALL U.G. CONDUITS TO THE BODY OF THE PULL BOX AND PROVIDE END BELLS. CONDUITS RISING UP INSIDE THE PULL BOX WILL NOT BE ACCEPTED.



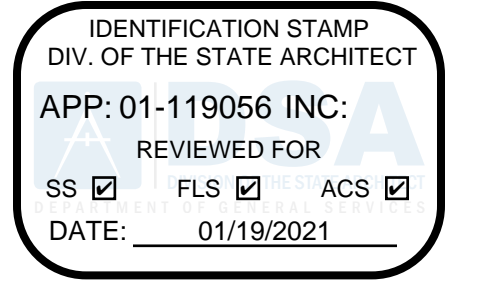
JUNCTION BOX SCHEDULE table with columns: SYMBOL, H (INCHES), W (INCHES), D (INCHES). Lists junction box types and dimensions.

SUFFIX: NONE - NEMA 1, A - NEMA 12, B - NEMA 3R, C - NEMA 4, D - NEMA 4X. NOTE: ALL JUNCTION BOXES TO BE HINGED TYPE, PROVIDED WITHOUT PRE-PUNCHED KNOCKOUTS, PENETRATIONS IN JUNCTION BOXES SHALL BE CUT OR PUNCHED AS REQUIRED FOR INSTALLATION. PAINT ALL INTERIOR BOXES TO MATCH WALL FINISH. COORDINATE FINISH WITH ARCH. PLANS.

**SYMBOL SCHEDULE**

	DEVICE	FUNCTION OR SERVICE	LOCATION	WORK OF	ROUGH-IN	RACEWAY	ELEVATION	CABLE FILL & HOMERUN DESTINATION, U.O.N.	FINISH	WEIGHT, LB	DETAIL SHEET(S)
A∇	VOICE (1V) AND DATA (1D) DEVICE OUTLET. THE SUBSCRIPT DEFINES THE TYPE OF OUTLET AS DETAILED ON TN-501.	COMMUNICATIONS	INDICATED	27 15 00	PROVIDE ONE (1) 5" SQUARE x 2.875" DEEP BOX WITH 1 GANG RING EQUAL TO RANDL INDUSTRIES 5 SQUARE. www.randl-inc.com	(1) 1.25" C. UP TO ACCESSIBLE CEILING.	+18" A.F.F. TO C.L. TYPICAL, U.O.N.	2 UTP6A-4P, PLENUM CAT 6A. H.R. TO THE NEAREST IDF OR BDF.	MATCH ADJACENT ELECTRICAL U.O.N.		
B∇	DATA (2D) DEVICE OUTLET. THE SUBSCRIPT DEFINES THE TYPE OF OUTLET AS DETAILED ON TN-501.	COMMUNICATIONS	INDICATED	27 15 00	FOR WALL MOUNT, PROVIDE 5S BOX.  FOR ABOVE CEILING, PROVIDE (2) 2-PORT PLENUM RATED BISCUIT SMB ON A J-HOOK.	FOR WALL MOUNT, PROVIDE(1) 1.25" C. UP TO ACCESSIBLE CEILING.  FOR ABOVE CEILING, PROVIDE A J-HOOK.	FOR WALL MOUNT, +18" A.F.F. TO C.L. TYPICAL.  AT ACCESSIBLE CEILING, 12" MAX ABOVE SUSPENDED CEILING.	2 UTP6A-4P, PLENUM CAT 6A. H.R. TO THE NEAREST IDF OR BDF.	MATCH ADJACENT ELECTRICAL U.O.N.		
C∇	VOICE (2V) AND DATA (2D) OUTLET. THE SUBSCRIPT DEFINES THE TYPE OF OUTLET AS DETAILED ON TN-501.	COMMUNICATIONS	INDICATED	27 15 00	PROVIDE ONE (1) 5" SQUARE x 2.875" DEEP BOX WITH 1 GANG RING EQUAL TO RANDL INDUSTRIES 5 SQUARE. www.randl-inc.com	(1) 1.25" C. UP TO ACCESSIBLE CEILING.	+18" A.F.F. TO C.L. TYPICAL, U.O.N.	4 UTP6A-4P, PLENUM CAT 6A. H.R. TO THE NEAREST IDF OR BDF.	MATCH ADJACENT ELECTRICAL U.O.N.		
D∇	DATA (4D) OUTLET. THE SUBSCRIPT DEFINES THE TYPE OF OUTLET AS DETAILED ON TN-501.	COMMUNICATIONS	INDICATED	27 15 00	FOR WALL MOUNT, PROVIDE 5S BOX.  FOR ABOVE CEILING, PROVIDE (2) 2-PORT PLENUM RATED BISCUIT SMB ON A J-HOOK.	FOR WALL MOUNT, PROVIDE(1) 1.25" C. UP TO ACCESSIBLE CEILING.  FOR ABOVE CEILING, PROVIDE A J-HOOK.	FOR WALL MOUNT, +18" A.F.F. TO C.L. TYPICAL.  AT ACCESSIBLE CEILING, 12" MAX ABOVE SUSPENDED CEILING.	4 UTP6A-4P, PLENUM CAT 6A. H.R. TO THE NEAREST IDF OR BDF.			
E∇	WALL TELEPHONE (1V) (630A TYPE PLATE). PROVIDE 12" CLEARANCE ON ALL SIDES IN ORDER TO MOUNT THE TEL HANDSET.	COMMUNICATIONS	FLUSH IN WALL. PROVIDE 12" CLEARANCE ON ALL SIDES.	27 15 00	PROVIDE ONE (1) 5" SQUARE x 2.875" DEEP BOX WITH 1 GANG RING EQUAL TO RANDL INDUSTRIES 5 SQUARE. www.randl-inc.com	(1) 1.25" C. UP TO ACCESSIBLE CEILING.	+48" A.F.F. TO C.L.	1 UTP6A-4P, PLENUM CAT 6A. H.R. TO THE NEAREST IDF OR BDF.	STAINLESS STEEL		
R15	FLOOR MOUNTED STATION CABLING/SWITCH RACK, 2 POST, 44 RU, ZONE 4 RATED.	COMMUNICATIONS	FLOOR	27 11 16					BLACK	200	
A	ASSISTIVE LISTENING EMITTER	AUDIO VISUAL SYSTEMS	WALL	27 41 16	FLUSH 4S BOX, 1 G	(1) 3/4" C. H.R. TO ACCESSIBLE CEILING, U.O.N.	+96" A.F.F.	PER FUNCTIONAL AND AS NOTED.	WHITE	2	
MP2	CUSTOM MEDIA PORT, TEACHERS STATION	AUDIO-VISUAL SYSTEMS	WALL	27 41 16	FLUSH 4S BOX, 4G. RING. COVER CONNECTORS PER FUNCTIONAL DIAGRAM, COVER PLATE	R1	+18" A,F,F, U.O.N.	PER FUNCTIONAL AND AS NOTED.	WHITE	N/A	6/TN506
SA	LOUDSPEAKER, CEILING, ACCESSIBLE.	AUDIO VISUAL SYSTEMS	CEILING	27 41 16	BACKBOX AS SPECIFIED IN SECTION 27 41 16.	AT ACCESSIBLE CEILING, PROVIDE ABOVE CEILING PATHWAY USING CABLE HOOKS. WHERE MOUNTED IN GYP CEILING, EXTEND 3/4" C. TO ACCESSIBLE CEILING.	CEILING	PER FUNCTIONAL AND AS NOTED.	WHITE	10	
SCR	FLUSH IN-CEILING MOTORIZED RETRACTABLE TAB-TENSIONED PROJECTION SCREEN	AUDIO VISUAL SYSTEMS	CEILING	27 41 16	MFG. SCREEN HOUSING	R5	CEILING	PER FUNCTIONAL AND AS NOTED.	WHITE	350	
W	WIRELESS MICROPHONE ANTENNA	AUDIO VISUAL SYSTEMS	AV RACK	27 41 16	N/A	N/A	AV RACK	PER FUNCTIONAL AND AS NOTED.	BLACK	N/A	
VPROJ	VIDEO PROJECTOR, HIGH OUTPUT MTD. FROM POLE SUPPORT.	AUDIO VISUAL SYSTEMS	INDICATED	27 41 16	FLUSH 4S BOX, 1 G RING	(1) 3/4" C. H.R. TO ACCESSIBLE CEILING, U.O.N.	AS DETAILED - ALIGN TOP OF PROJECTOR LENS WITH TOP OF SCREEN.	PER FUNCTIONAL AND AS NOTED.		40	1/TN506

DSA:

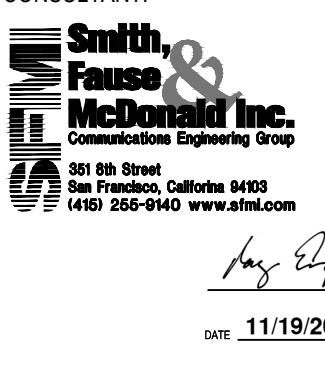


4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
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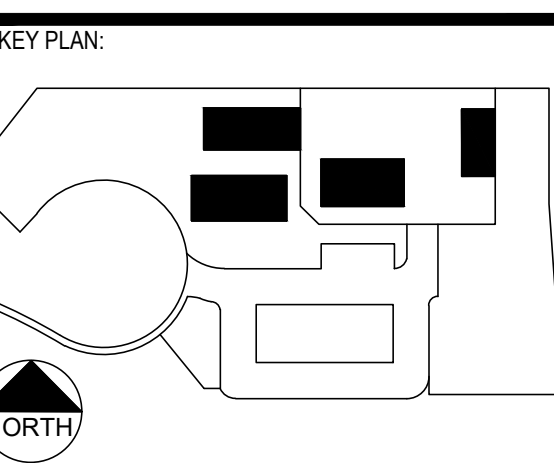
PROFESSIONAL STAMP:



CONSULTANT:



ITEM:	REVISION / ISSUE:	DATE:



**CLPCCD - LAS POSITAS COLLEGE**  
**AGRICULTURE SCIENCE HORTICULTURE FACILITY**  
 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

**SYMBOL SCHEDULE**

DRAWN BY: IK CHECKED BY: RLE  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**T002**

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**BLDG # BUILDING NAME**

100	CLASSROOMS
400	ENGLISH CLASSROOMS & LAB
500	FINE ARTS
600	CLASSROOMS, ILC (INTEGRATED LEARNING CENTER), OPEN MATH LAB
600	A/B FIRE SERVICE TECHNOLOGY TRAINING
700	VISUAL COMMUNICATIONS, PHOTOGRAPHY STUDIO, COMPUTER LAB
800	LECTURE HALL, COMPUTER LABS, AUTO & WELDING LABS, SMOG REFEREE CENTER, HORTICULTURE VITICULTURE, GARDEN CLASSROOMS, GREENHOUSE
1000	CLASSROOM BUILDING
1100	CENTRAL UTILITY PLANT
1300	BOOKSTORE
1310	VETERANS RESOURCE CENTER
1600	STUDENT SERVICES & ADMINISTRATION BUILDING
1700	CAMPUS SAFETY, STUDENT HEALTH CENTER, COPY CENTER, MAIL ROOM
1800	SCIENCE TECHNOLOGY CENTER 1
1850	SCIENCE TECHNOLOGY CENTER 2
1900	INFORMATION TECHNOLOGY SERVICES (ITS)
2000	LIBRARY (LEARNING RESOURCE CENTER)
2100	FACULTY OFFICES
2200	CLASSROOMS
2300	CHILD DEVELOPMENT CENTER
2400	MULTI-DISCIPLINARY EDUCATION BUILDING
2500	PHYSICAL EDUCATION COMPLEX (GYM)
2600	AQUATIC CENTER
2700	CAMPUS HILL VINEYARD
3000	MAINTENANCE & OPERATIONS BUILDING
3100	MAINTENANCE & OPERATIONS BUILDING
3200	FIELD HOUSE
4000	MERTES CENTER FOR THE ARTS



**LEGEND**  
 TELECOM LINE

**1 CAMPUS TELECOM SITE PLAN**  
 1"=150'



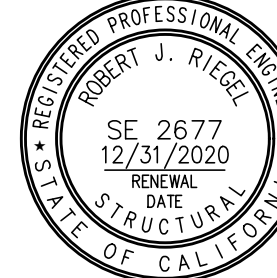
**KEYNOTES**

- TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
- TN1** THE CAMPUS MDF IS IN B1900A. PROVIDE 48 STRAND SINGLE MODE TO IDF ROOM, HORTICULTURE BLDG. SEE SHEET TA101, TN801 AND TN802.
- TN2** (E) COMM VAULT TO BE USED TO CONNECT TO IDF ROOM IN HORTICULTURE BLDG. SEE E101 AND TA101 FOR CONTINUATION. REFER TO SHEET TN505 FOR OUTSIDE PLANT DETAILS.
- TN3** (E) FMO FIRE ALARM CONTROL PANEL 'FACP-FMO'. PROVIDE 12 STRAND SINGLE MODE FIBER FOR FIRE ALARM USE FROM ELEC ROOM B3100 TO ELEC ROOM, HORTICULTURE BLDG. SEE SHEET E101, TA101 AND TN802.

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 APP: 01-119056 INC.  
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**ARCHITECTS**  
**+ ENGINEERS**  
 AN AC MARTIN COMPANY

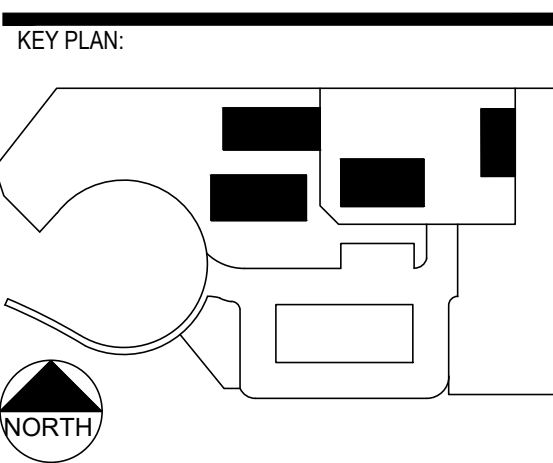
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 3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  


CONSULTANT:  
**Smith Fausch & McDonald Inc.**  
 Communications Engineering Group  
 301 8th Street  
 San Francisco, California 94103  
 (415) 255-9140 www.sfm.com

*Ray Enriquez*  
 DATE: 11/19/2020  
 EXPIRES: 12/31/2022

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**TELECOM SYSTEM  
 DIAGRAM**

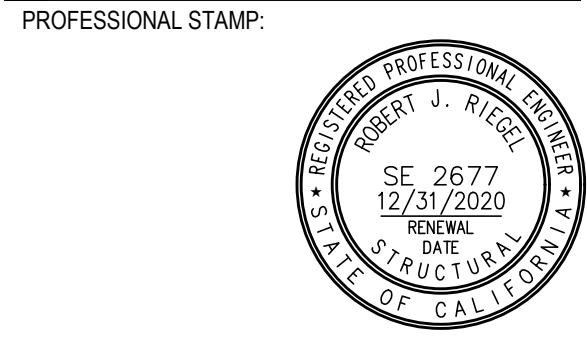
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 DATE: 01/14/2021      PROJECT NO: C9508  
 SHEET NO:

**TA100**

KEYNOTES

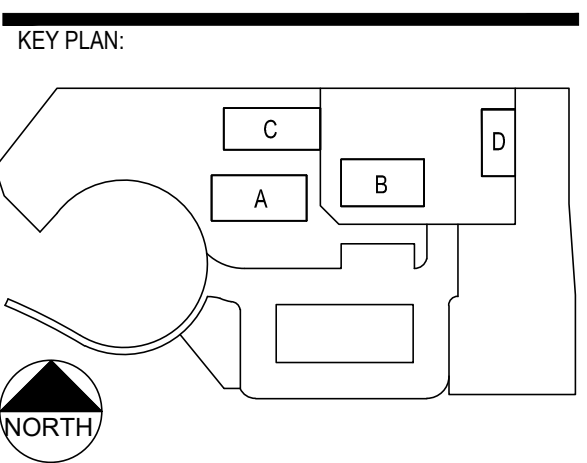
- TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
- TN1 PROVIDE (3) 4" C (U.G.) FROM EXISTING TELECOM VAULT TO IDF ROOM. REFER TO E101 FOR EXACT LOCATION AND ROUTING.
- TN2 PROVIDE (2) 2" C (U.G.)
- TN3 PROVIDE 1.25" C. FOR THE SECURITY CAMERA USE. PROVIDE COMMSCOPE POWERED FIBER CABLE (4F SINGLEMODE, OUTDOOR, 12 AWG PART NUMBER PFC-S04L12) AND COMMSCOPE 2-PORT 60W POE EXTENDER (PFU-P-C-O-060-02). PROVIDE 1 OSP RATED COMMSCOPE CAT 6A PATCH CORD. LENGTH TBD IN THE FIELD. HOMERUN BACK TO IDF ROOM 109. PROVIDE COMMSCOPE 57VDC POWER SUPPLY (PFP-PX-8M FOR 8 DEVICES) AND INSTALL IN THE RACK IN THE IDF.
- TN4 PROVIDE (1) 1.25" C (U.G) FROM PARKING PERMIT MACHINE TO IDF ROOM.

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ITEM	REVISION / ISSUE	DATE

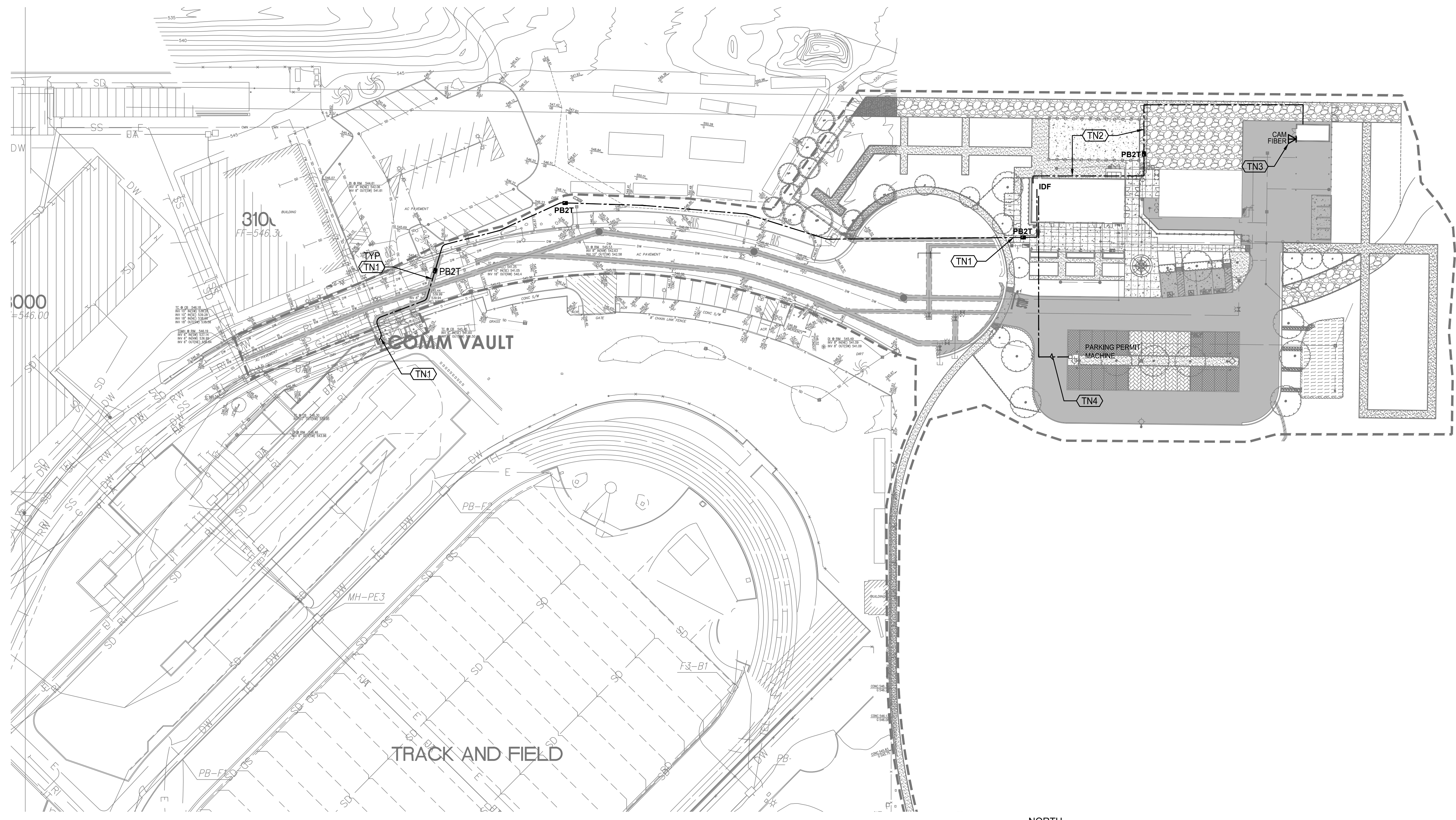


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 AGRICULTURE SCIENCE HORTICULTURE FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**SITE PLAN**

DRAWN BY: IK CHECKED BY: RLE  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**TA101**



**1 CAMPUS TELECOM SITE PLAN**  
 1"=40'



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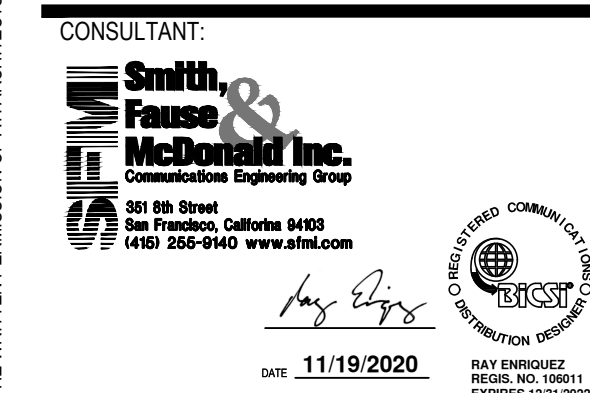
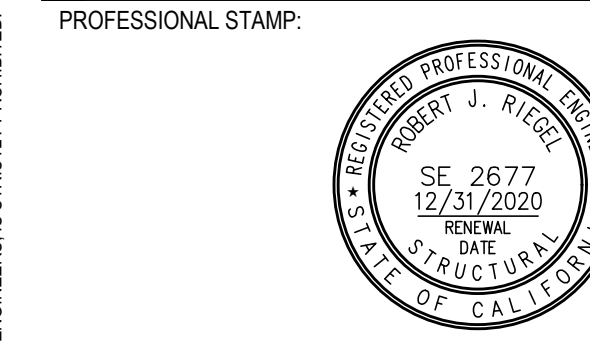
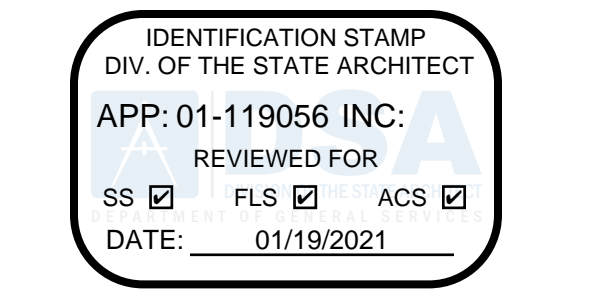
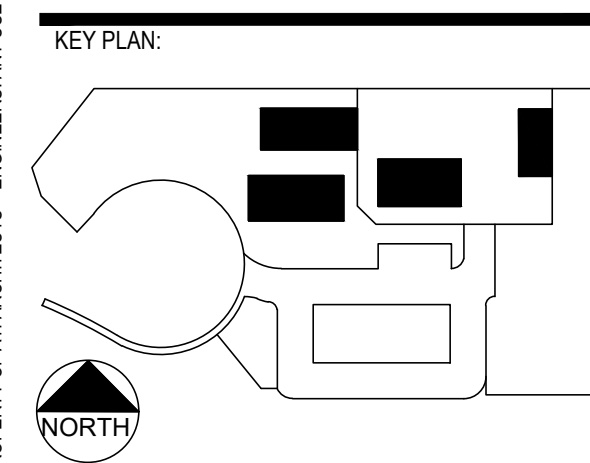


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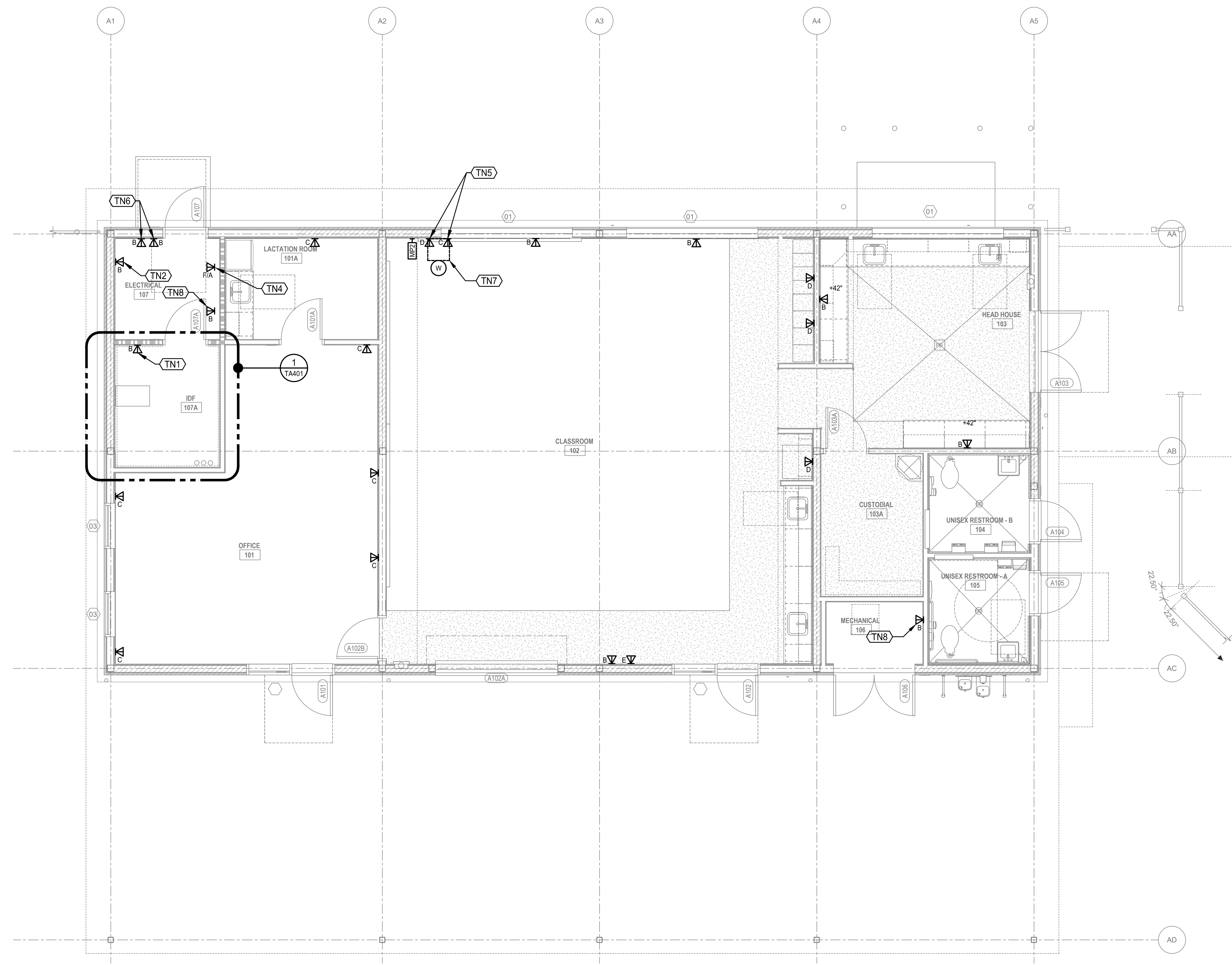


CLPCCD - LAS POSITAS COLLEGE AGRICULTURE SCIENCE HORTICULTURE FACILITY 3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

BUILDING A DEVICE PLAN DRAWN BY: IK CHECKED BY: RLE DATE: 01/14/2021 PROJECT NO: C9508 SHEET NO:

TA121

- KEYNOTES: TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27. TN1 DATA FOR SECURITY ACCESS CONTROL PANEL... TN2 DATA FOR MAIN SERVICE PANEL... TN3 DATA FOR LIGHTING CONTROL PANEL... TN4 PROVIDE A 12 PORT LIU WALL MOUNT BOX... TN5 MOUNT OUTLETS 5'-5" TO 6'-5" FROM THE WEST WALL... TN6 DATA FOR IRRIGATION CONTROLLERS 'A' AND 'L'... TN7 INSTRUCTOR'S STATION WITH EQUIPMENT RACKBAY... TN8 DATA FOR BACNET PANEL...



1 BUILDING A DEVICE PLAN 1/4"=1'-0"

**KEYNOTES**

TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.

PROVIDE A 16" X 14" X 8"D POLYCARBONATE NEMA 4 BOX EQUAL TO OBERON 1026-16148-00. INSTALL 2 PORT SMB INSIDE THE BOX. PROVIDE (1)1.25" CONDUIT SLEEVE TO ACCESSIBLE CEILING SPACE.

PROVIDE (1) 1.25" C. TO ACCESSIBLE CEILING FOR CCTV CAMERA USE. INSTALL 2 PORT SMB IN ACCESSIBLE CEILING SPACE.

H.R. TO EQUIPMENT RACKBAY IN INSTRUCTOR'S STATION.

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ENGINEERS  
AN AC MARTIN COMPANY

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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916 772 1800  
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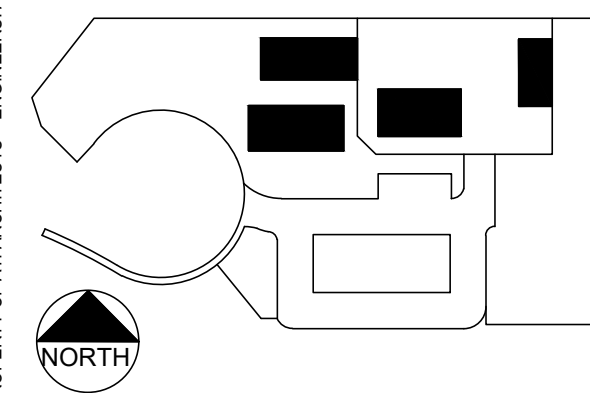


CONSULTANT:

**Smith & Fausch & McDonald Inc.**  
Commissioning Engineering Group  
331 8th Street  
San Francisco, California 94103  
(415) 252-9140 www.sfm.com

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KEY PLAN:

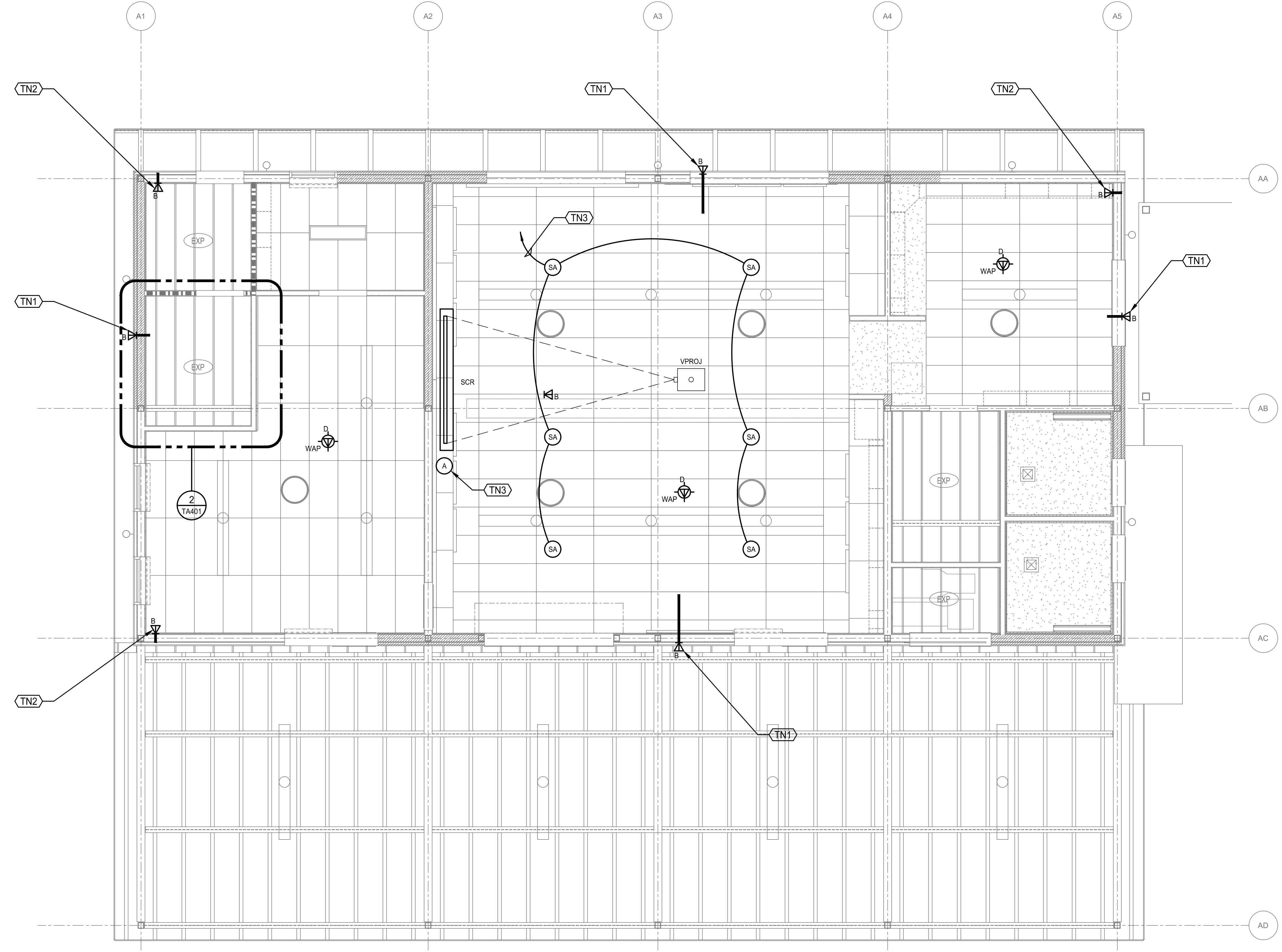


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FACILITY**  
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LIVERMORE, CA 94551

**BUILDING A  
DEVICE RCP**

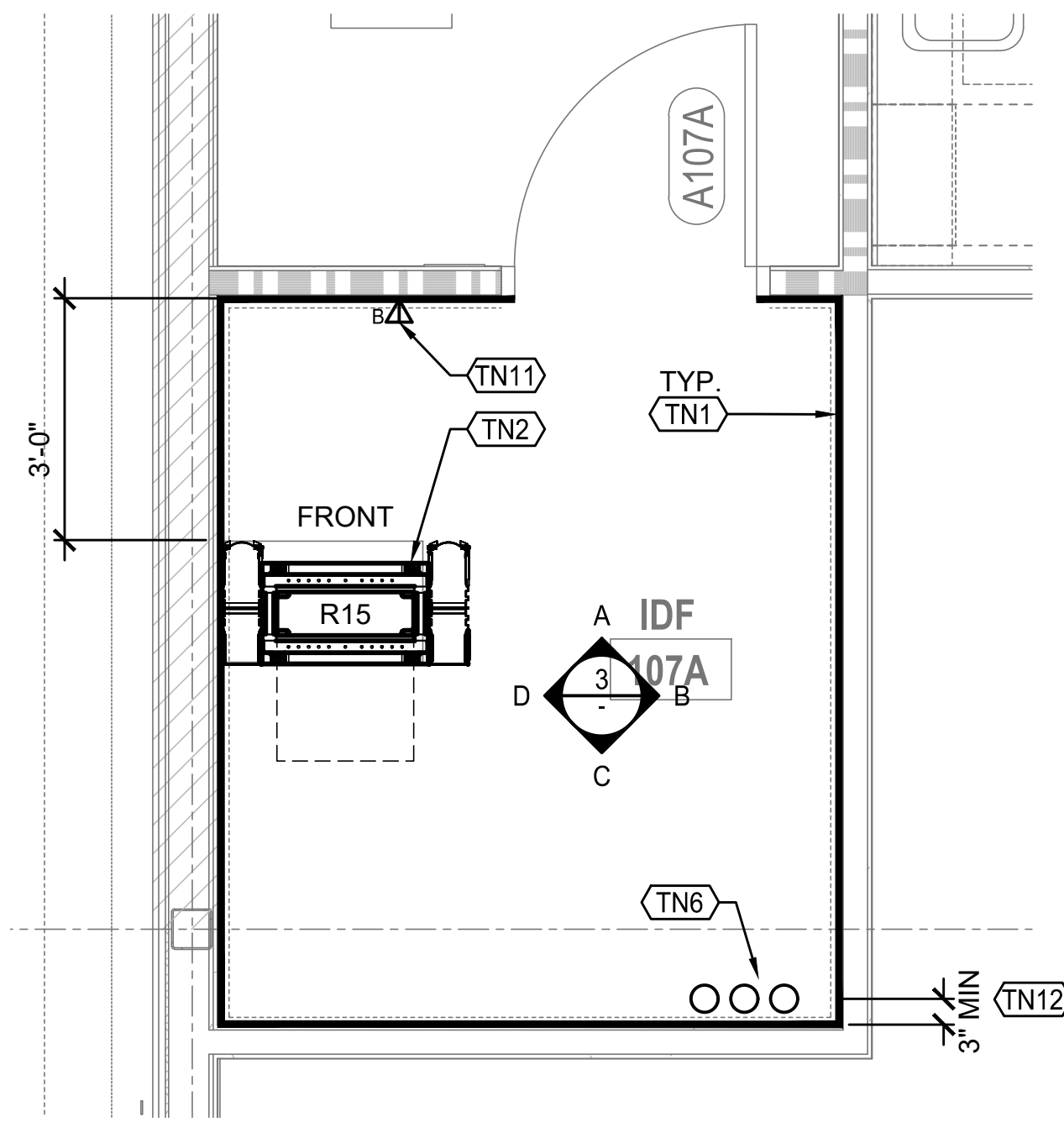
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DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**TA161**

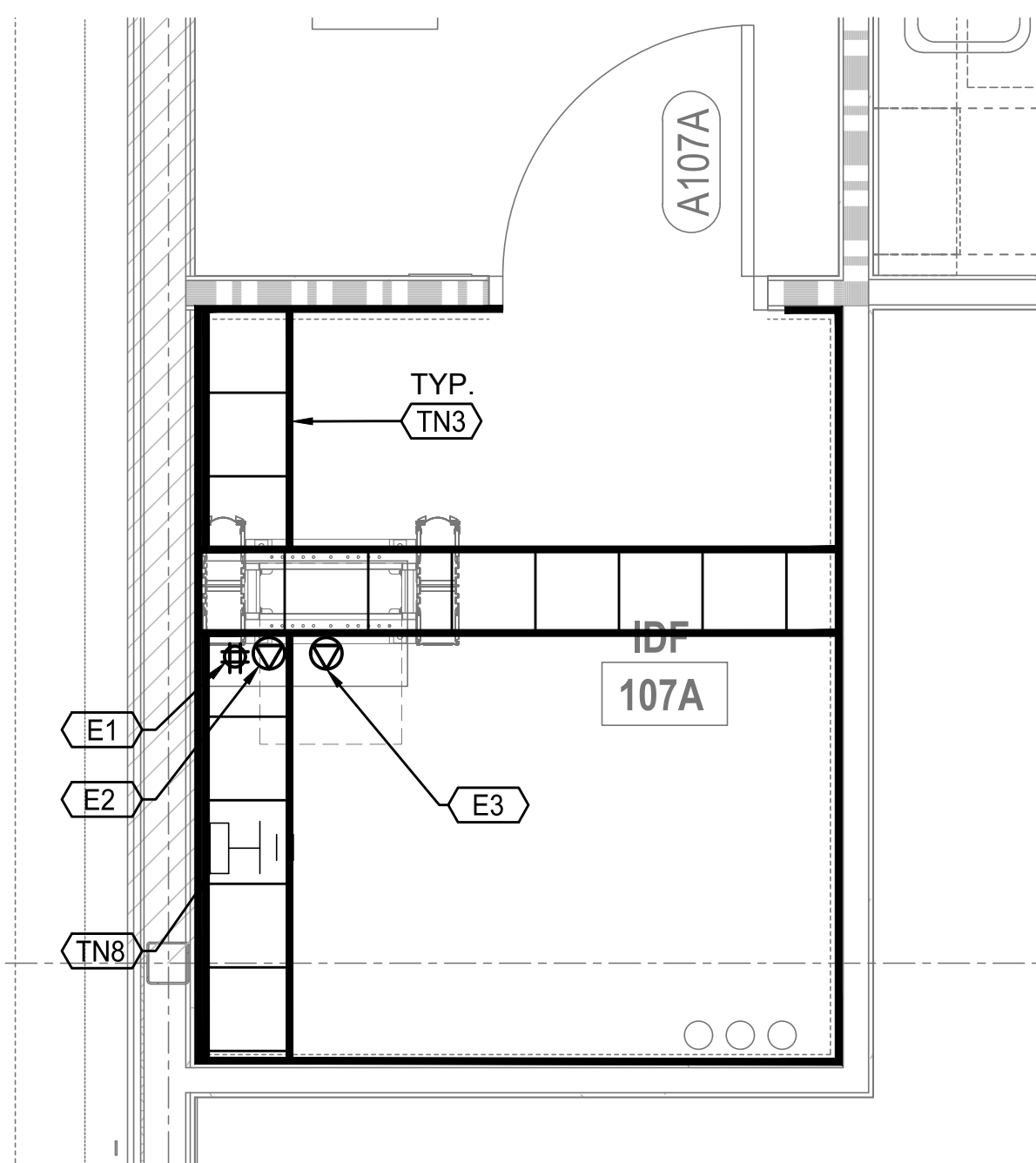


**1 BUILDING A DEVICE RCP** 1/4"=1'-0"

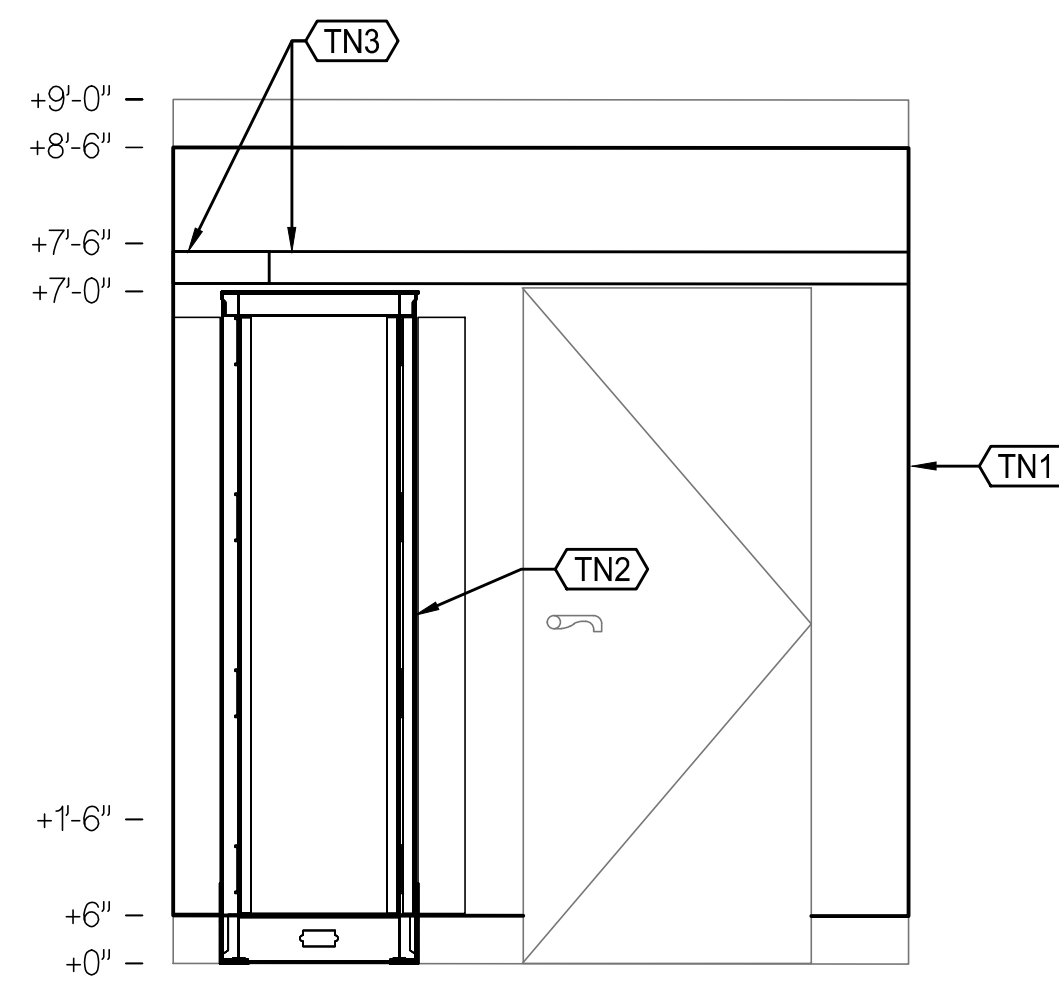
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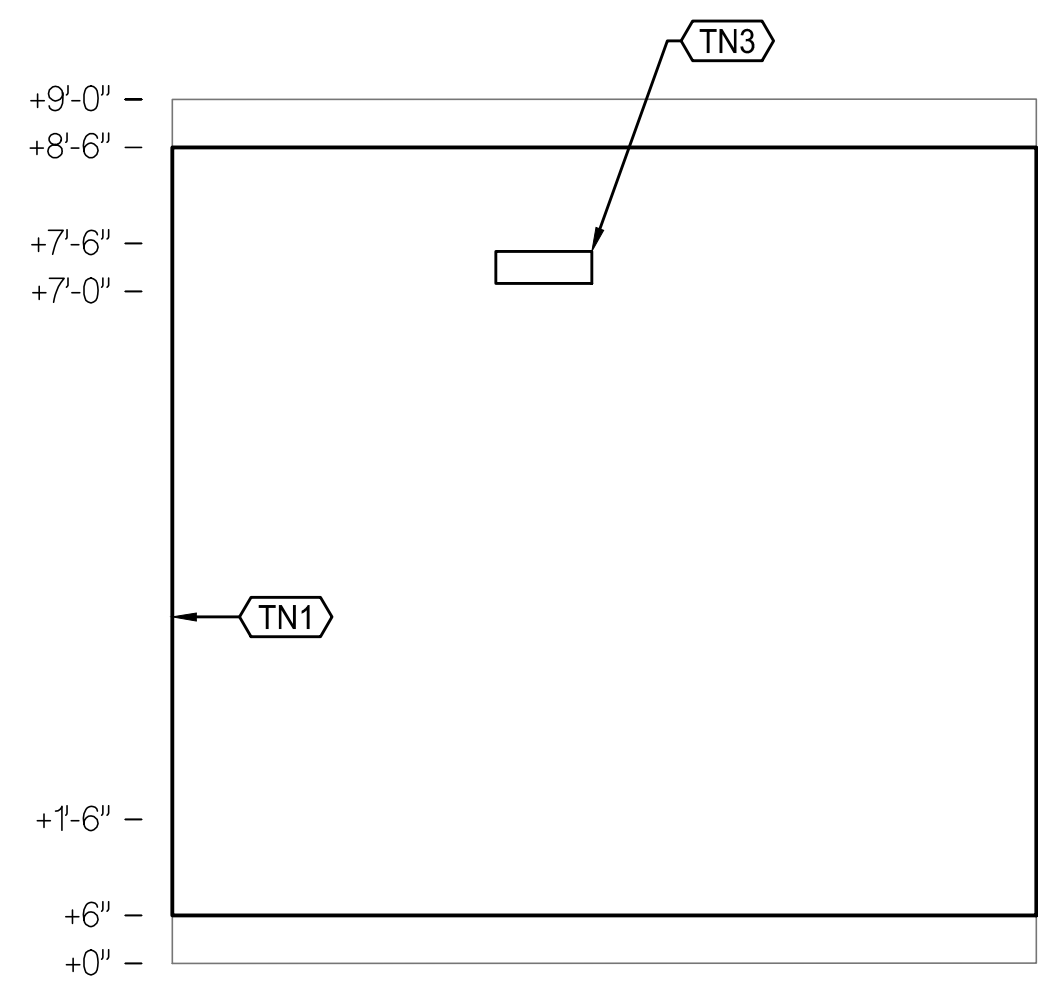
1 IDF ROOM 107A ENLARGED PLAN  
1/2"=1'-0"



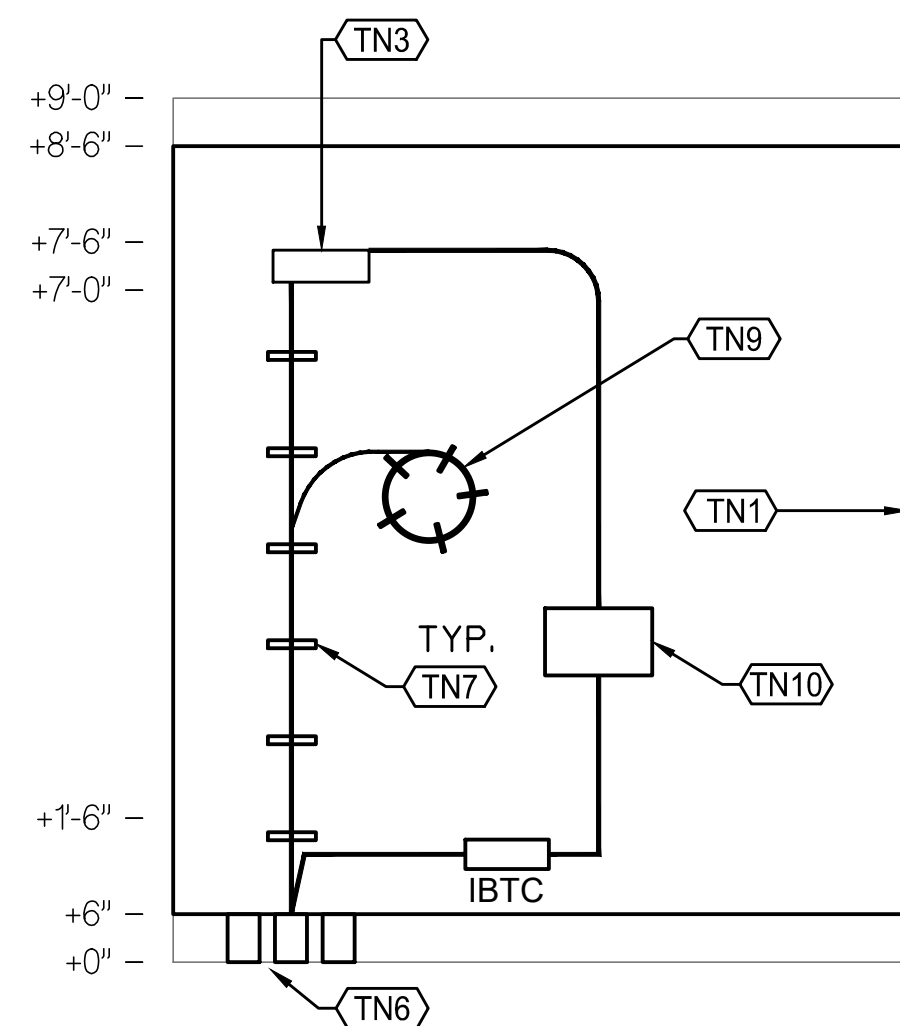
2 IDF ROOM 107A ENLARGED RCP  
1/2"=1'-0"



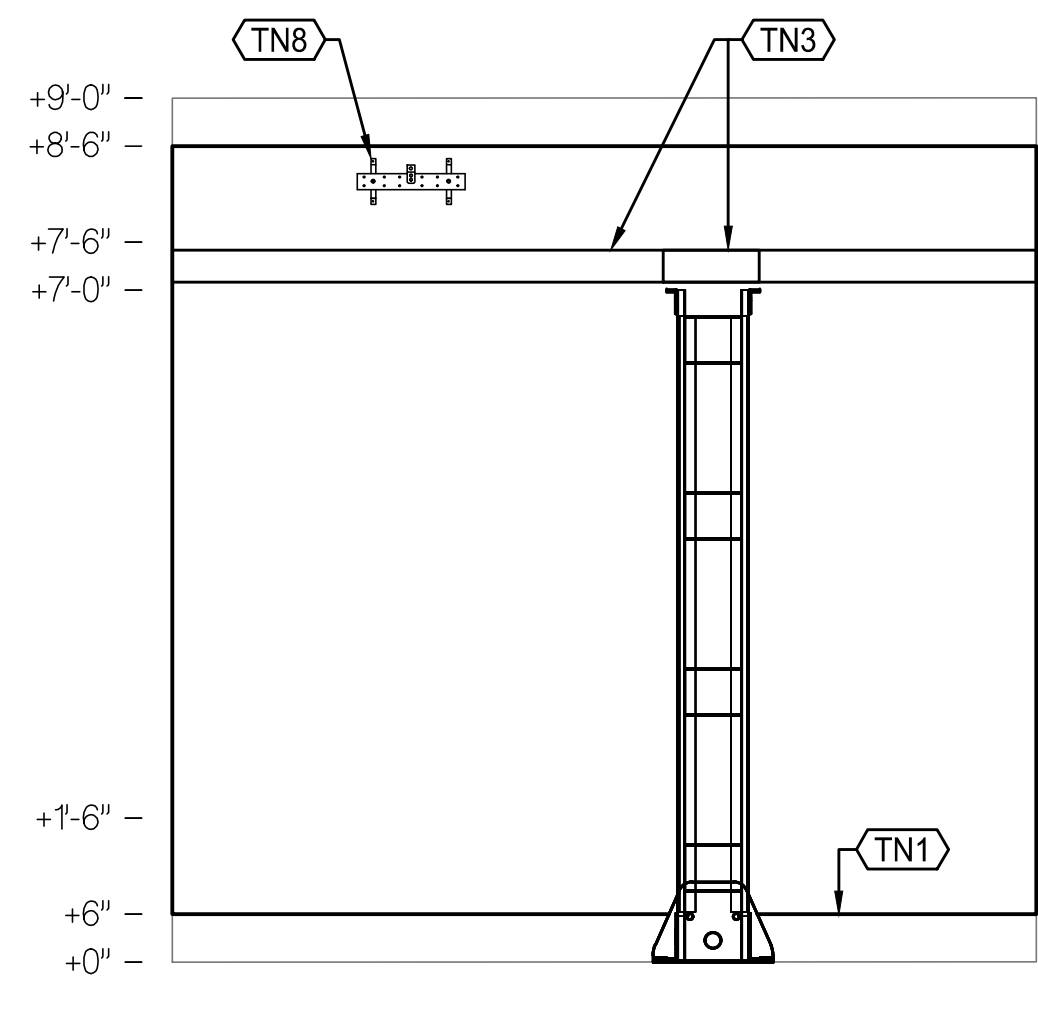
A NORTH  
1/2"=1'-0"



B EAST  
1/2"=1'-0"



C SOUTH  
1/2"=1'-0"



D WEST  
1/2"=1'-0"

3 ELEVATIONS  
1/2"=1'-0"

**SHEET NOTE**

- CLPCCD ITS WILL APPROVE PLACEMENT OF ALL IDF EQUIPMENT PRIOR TO FINAL INSTALLATION.

**KEYNOTES**

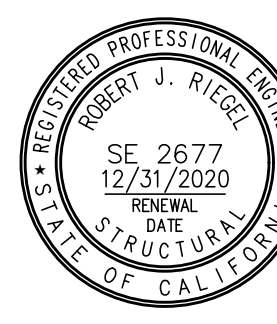
- E ELECTRICAL: WORK OF DIVISION 26
- E1 PROVIDE ONE QUAD 5-20R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
  - E2 PROVIDE ONE L6-20R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
  - E3 PROVIDE ONE L5-30R ON A DEDICATED CKT MOUNTED ON THE CABLE RUNWAY.
- TN COMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
- TN1 PROVIDE 3/4" THICK, 1-HR RATED FIRE-RESISTANT TREATED PLYWOOD BACKBOARD FROM 6" A.F.F. TO 8'-6" A.F.F. PROVIDE AS MANY AS SHOWN ON PLAN. PAINT, COLOR WHITE. TRIM TO FIT. COORDINATE WITH ARCH DRAWINGS.
  - TN2 2 POST, ZONE 4 - STATION CABLING RACK. PROVIDE 12" WIDE CABLE MANAGER ON BOTH SIDES AS SHOWN AND AS SPECIFIED.
  - TN3 PROVIDE 12"W CABLE RUNWAY, CR-12 MOUNT BOTTOM @ 7'-6" A.F.F.
  - TN4 PROVIDE 4" CONDUIT SPILLWAY AT THE END OF EACH SLEEVE EQUAL TO BEJED BJ-2049B.
  - TN5 PROVIDE (2) 4"C SLEEVES.
  - TN6 PROVIDE (3) 4" C. (U.G). SEE SHEET TA101.
  - TN7 PROVIDE 4" D-RINGS AT 2' O.C.
  - TN8 PROVIDE GROUNDING BUS BAR EQUIVALENT TO B-LINE SB-477-K. MOUNT ON TOP OF THE BACKBOARD AT APPROX +96" A.F.F.
  - TN9 PROVIDE 30' OF SLACK FIBER AND COIL IN A FIBER MANAGEMENT RING (FMR) EQUAL TO LEVITON 48900-OFR.
  - TN10 LP-110TB100.
  - TN11 DATA FOR SECURITY ACCESS CONTROL PANEL. PROVIDE A 2-PORT MSB MOUNTED ON THE WALL, OUTSIDE THE PANEL. COORDINATE LOCATION WITH DIV 28 CONTRACTOR.
  - TN12 COORDINATE WITH STRUCTURAL DRAWINGS REGARDING REBAR SPACING REQUIREMENTS. INSTALL CONDUITS TO MISS REBARS.

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DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC:  
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3099 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
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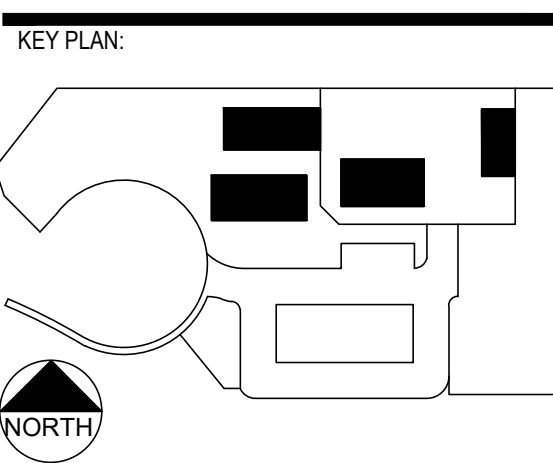
PROFESSIONAL STAMP:



CONSULTANT:  
**Smith Fausch & McDonald Inc.**  
Commissioning Engineering Group  
321 8th Street  
San Francisco, California 94103  
(415) 255-9140 www.sfm.com

DATE: 11/19/2020  
RAY ENRIQUEZ  
REG. NO. 18611  
EXPIRES 12/31/2022

ITEM:	REVISION / ISSUE:	DATE:

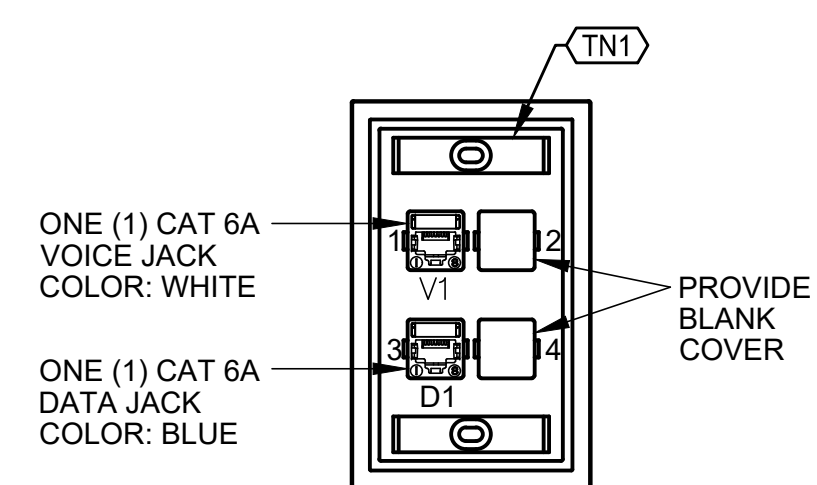


CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

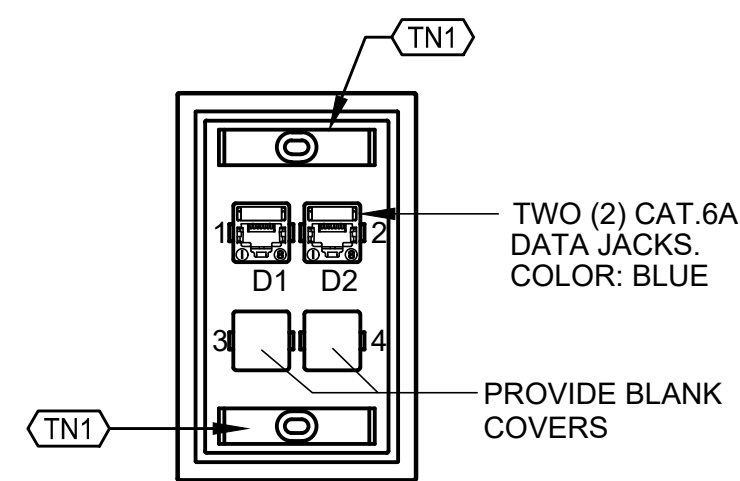
IDF ROOM 107A ENLARGED PLANS AND ELEVATIONS

DRAWN BY: IK CHECKED BY: RLE  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

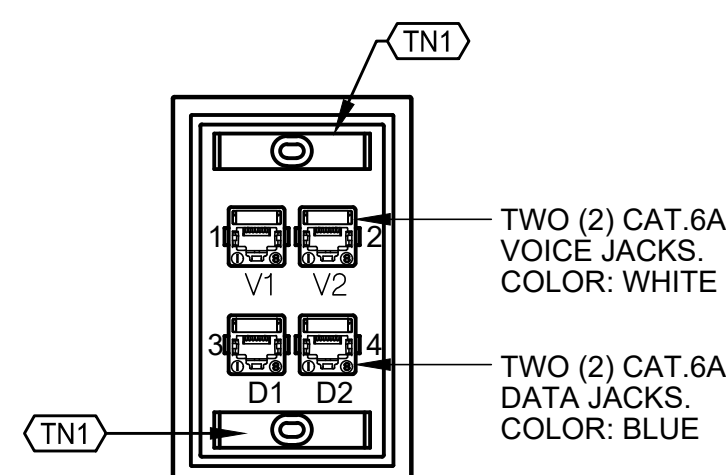
**TA401**



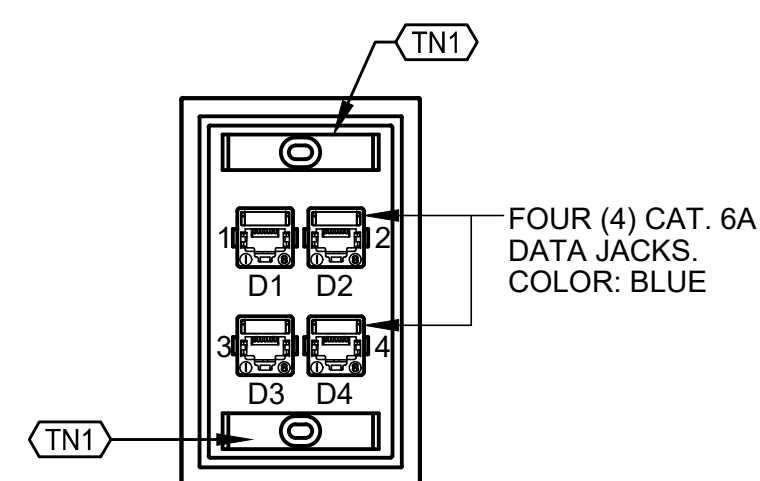
**1 TYPE A OUTLET (1V, 1D)** NTS



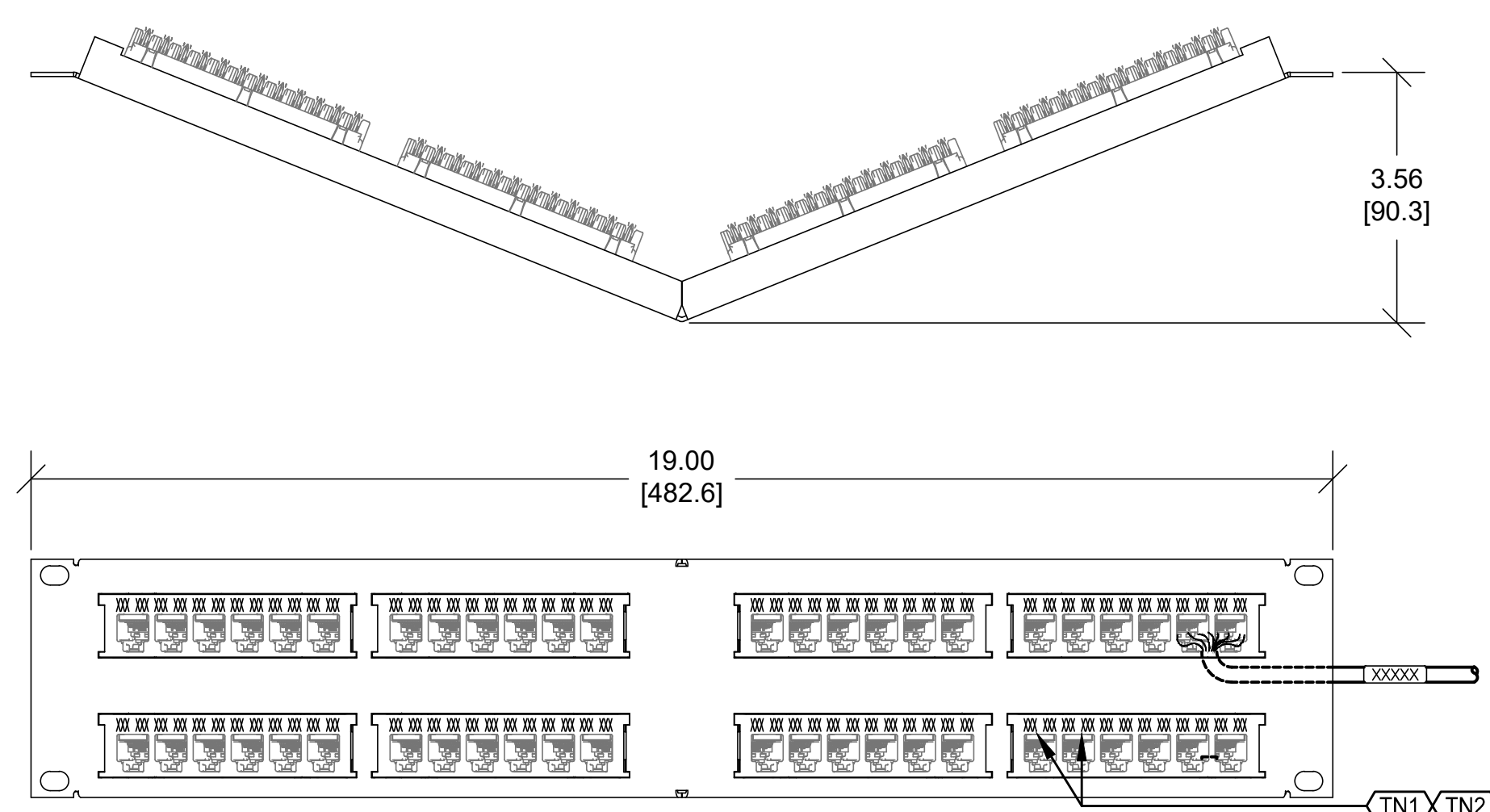
**2 TYPE B OUTLET (2D)** NTS



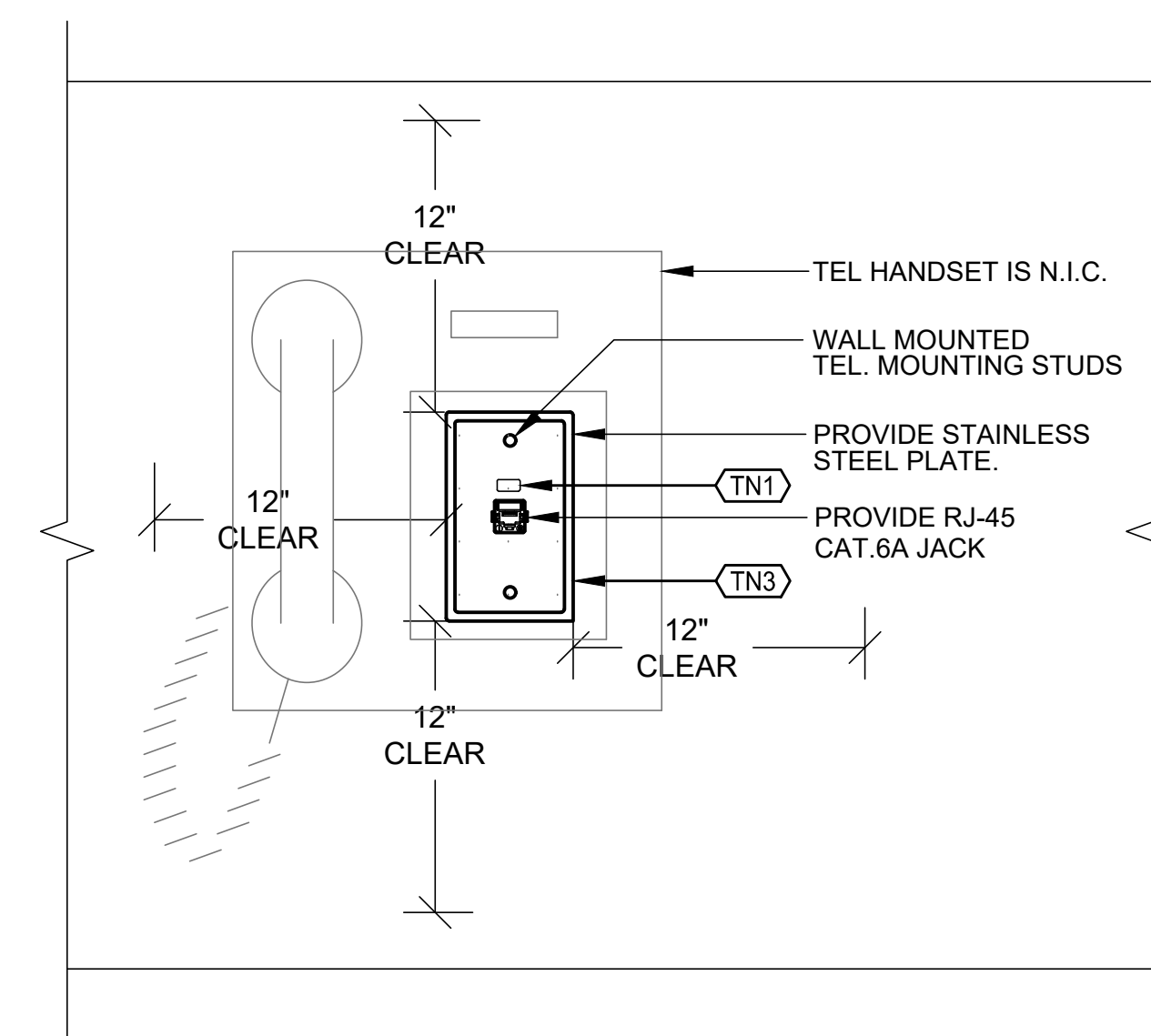
**3 TYPE C OUTLET (2V, 2D)** NTS



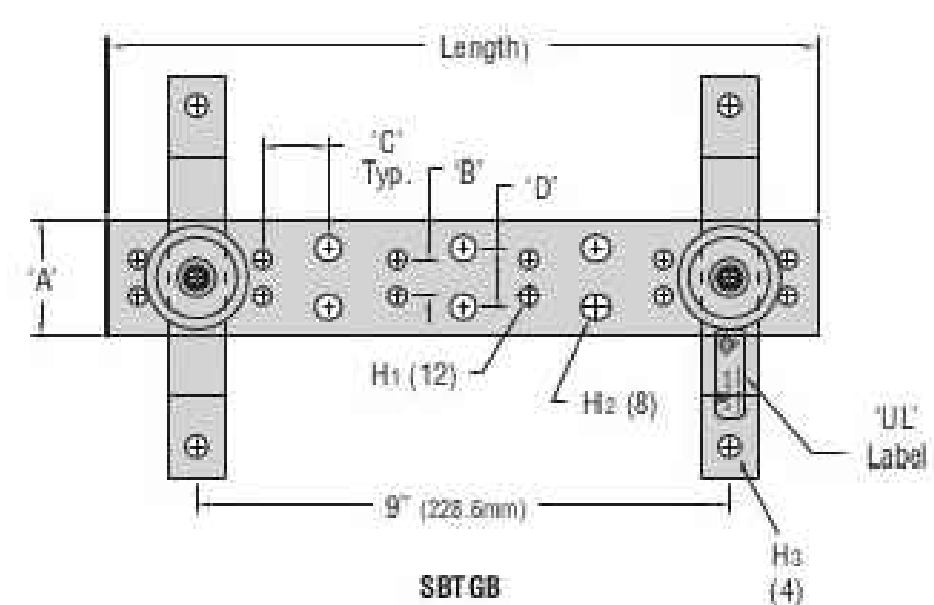
**4 TYPE D OUTLET (4D)** NTS



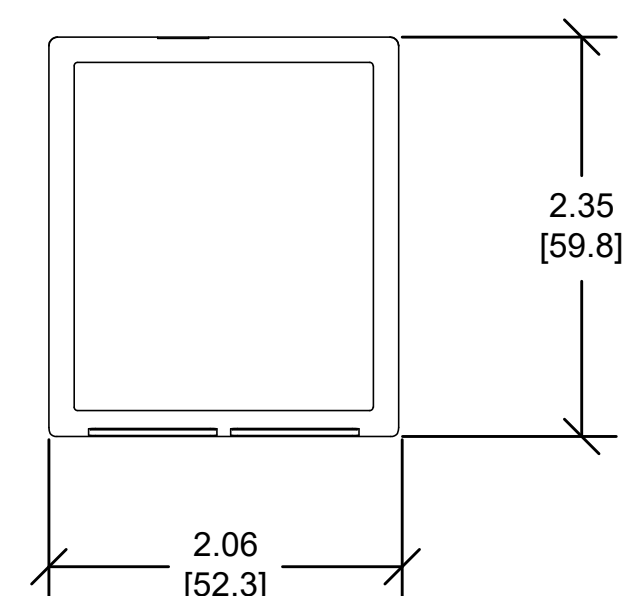
**6 ANGLED PATCH PANEL/CABLE LABELING** NTS



**5 TYPE E OUTLET (1V)** NTS

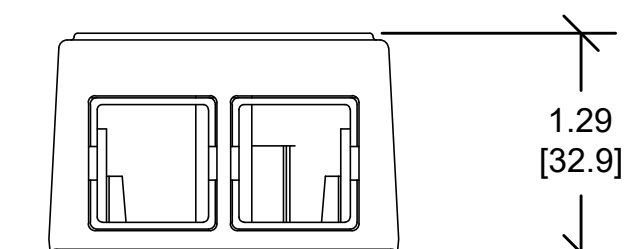


**7 GROUNDING BUS BAR DETAIL** NTS



**9 2-PORT SMB** NTS

MATERIAL ID	DESCRIPTION	WEIGHT (lbs.)
M102SMB-B-262	SURFACE MOUNTING BOX, 2 PORT	0.1

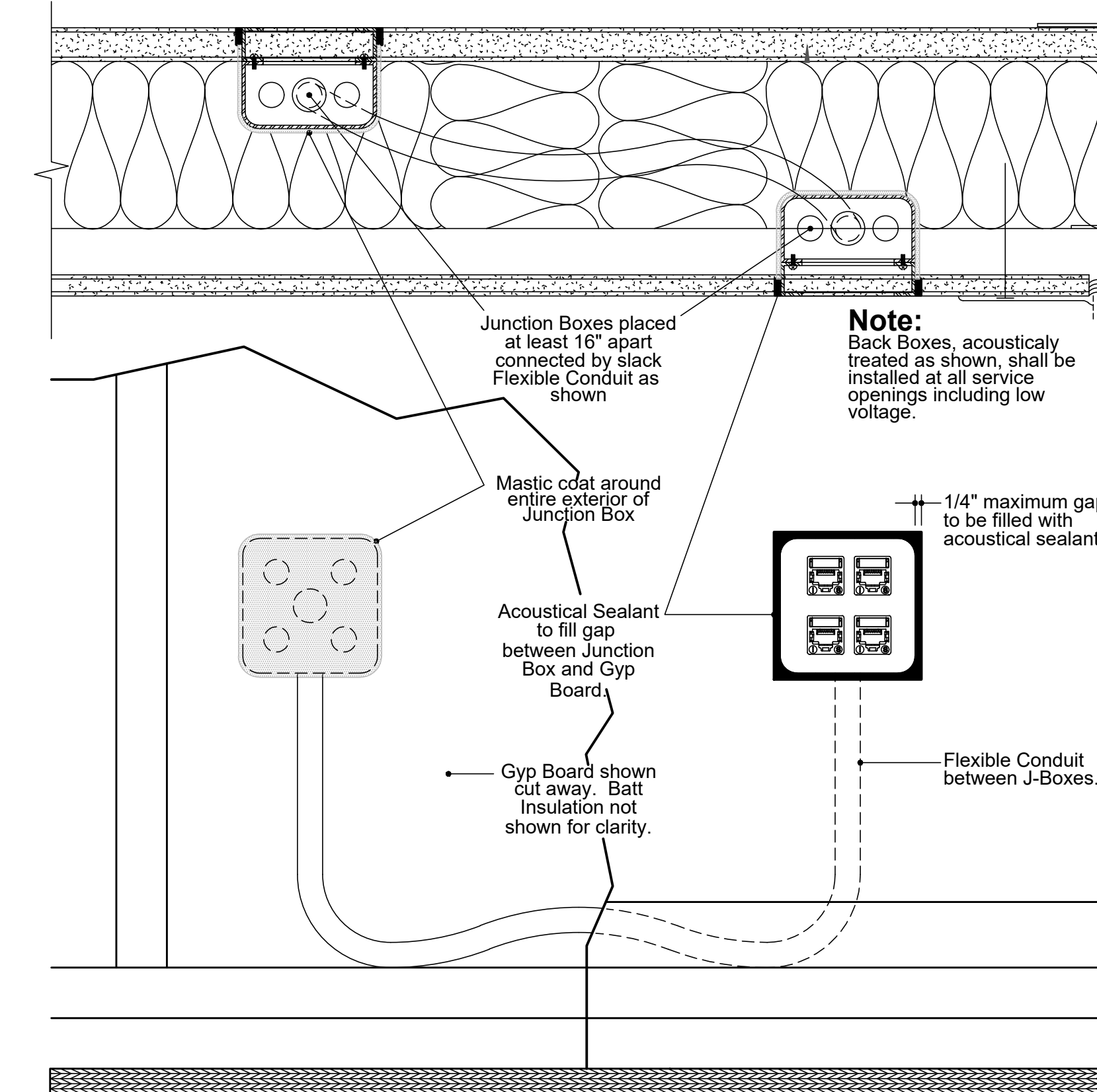


**SHEET NOTES**

- RECEPTACLE ELEVATIONS ARE PROVIDED AS A CONVENIENCE FOR THE CONTRACTOR ONLY. RECEPTACLE ELEVATIONS GENERALLY REFLECT DESIGN BASIS OR SYSTEMS DESIGN BASIS ALTERNATES. CONTRACTOR TO COORDINATE ELEVATION WITH ALTERNATE SUBMITTED.
- RECEPTACLE ELEVATIONS MAY BE INCOMPLETE, REFER TO RECEPTACLE SCHEDULE FOR COMPLETE DETAILS.
- WHERE RECEPTACLE ELEVATIONS AND RECEPTACLE SCHEDULE CONFLICT, RECEPTACLE SCHEDULE TAKES PRECEDENCE OVER RECEPTACLE ELEVATIONS.

**KEYNOTES**

- TN TELECOMMUNICATIONS SYSTEMS, WORK OF DIVISIONS 27.
- △TN1 CONTRACTOR SHALL COORDINATE THE FINAL LABELING SCHEME WITH THE DISTRICT'S REPRESENTATIVE DURING THE PRE-CONSTRUCTION MEETING.
- △TN2 LABEL THE CABLE AND PATCH PANEL PORTS. MATCH THE JACKS LABEL.
- △TN3 PROVIDE 12" CLEAR ON ALL SIDES IN ORDER TO MOUNT THE TEL HANDSET. COORDINATE WITH ELECTRICAL AND SECURITY CONTRACTORS. HANDSET IS N.I.C.



**8 ACOUSTIC SEALANT & INSULATION AT INTERIOR PARTITIONS** NTS

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC.  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021

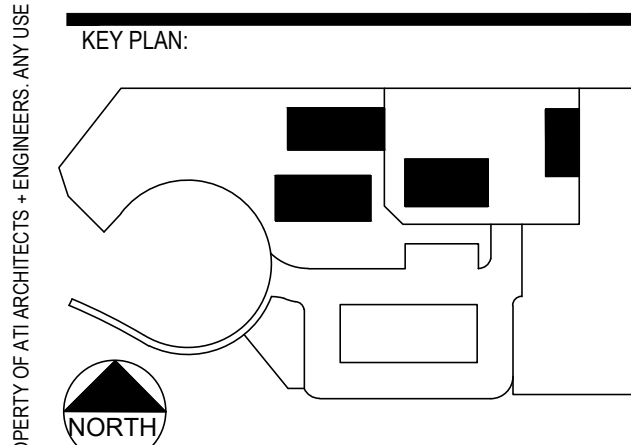
**ATI ARCHITECTS + ENGINEERS**  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #280 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
 REGISTERED PROFESSIONAL ENGINEER  
 SE 2677  
 12/31/2020  
 DATE: 11/19/2020  
 RAY ENRIQUETA

CONSULTANT:  
**Smith Fausch & McDonald Inc.**  
 Commissioned Engineering Group  
 381 8th Street  
 San Francisco, California 94103  
 (415) 255-9140 www.sfm.com

ITEM	REVISION / ISSUE	DATE

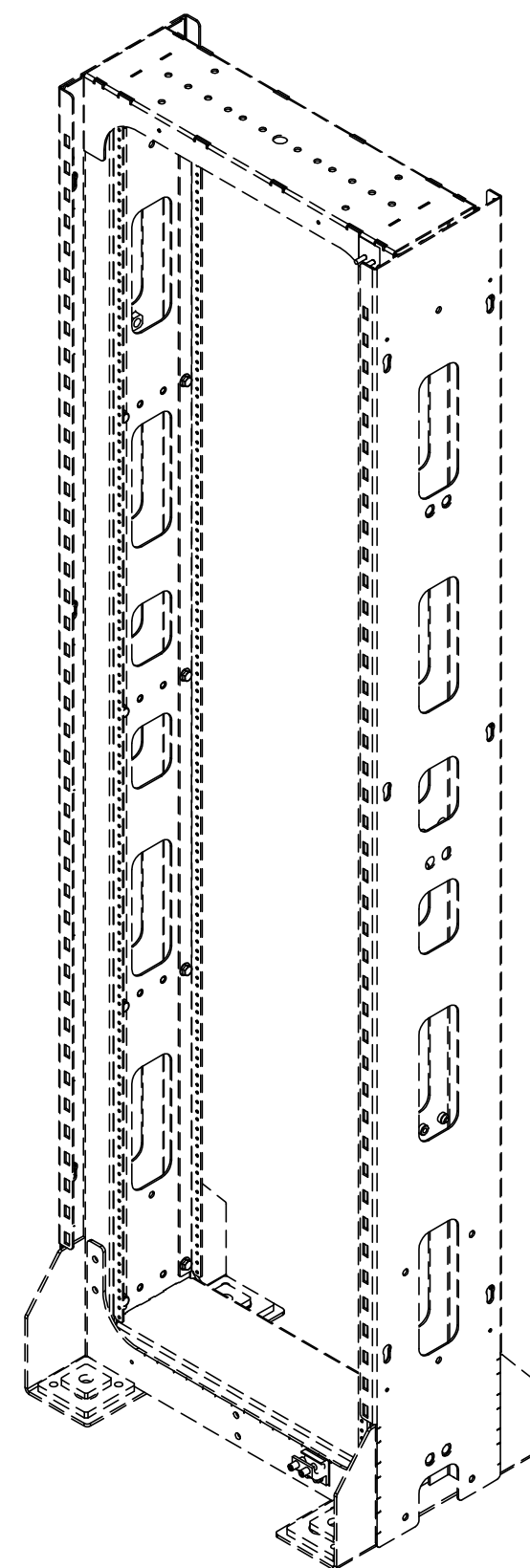
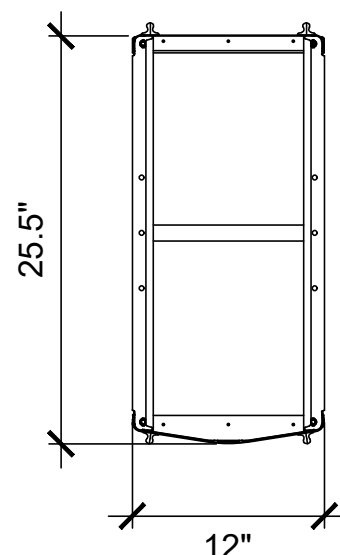
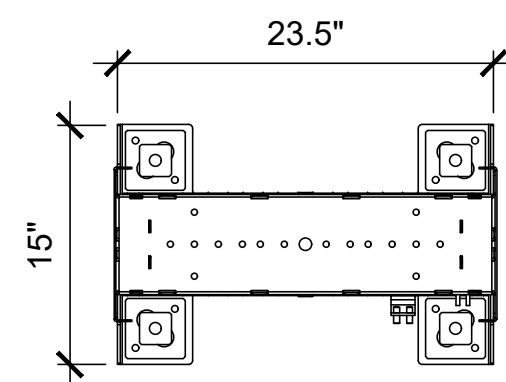


**DETAILS DEVICE**

DRAWN BY: IK CHECKED BY: RLE  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**TN501**

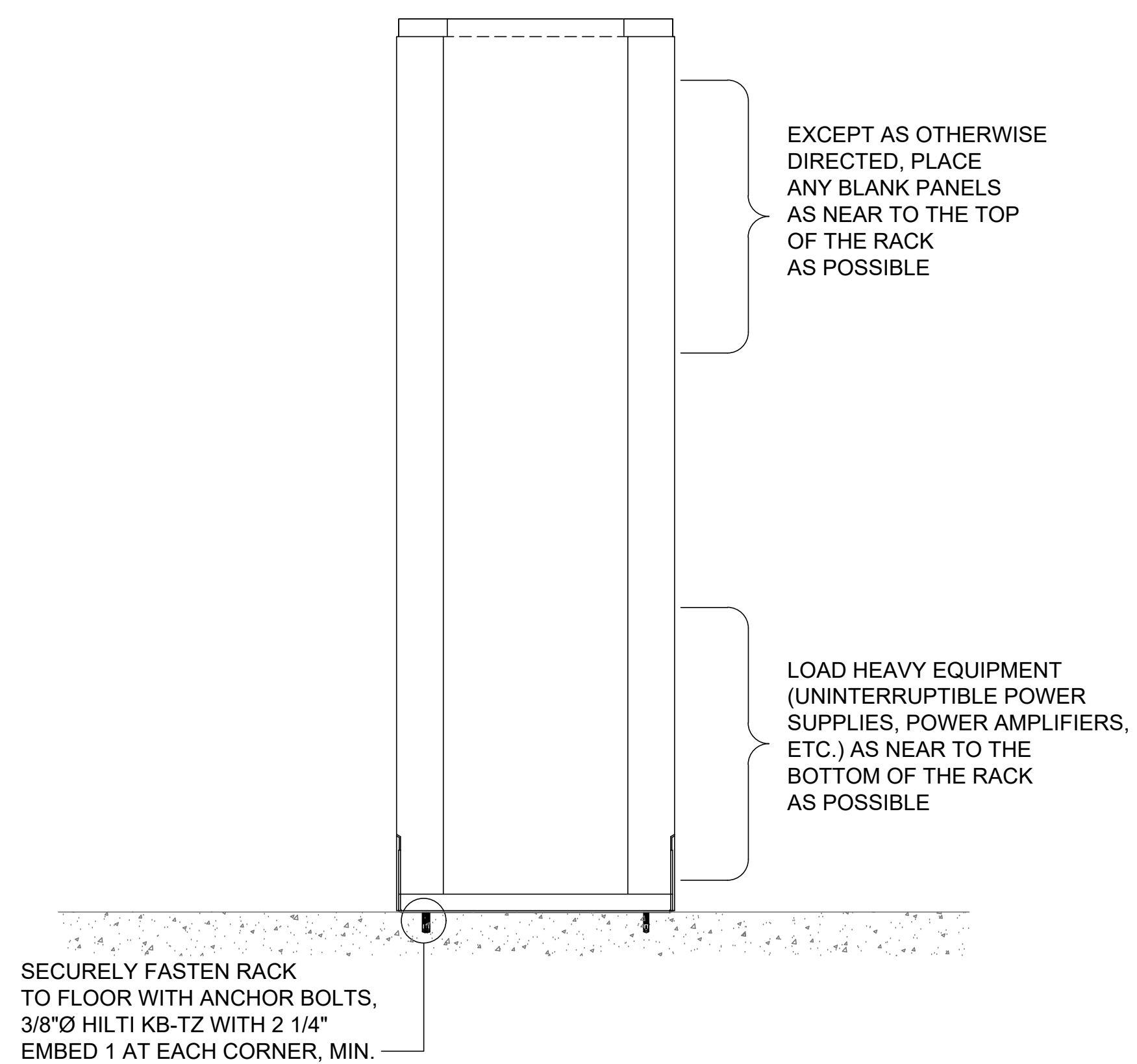
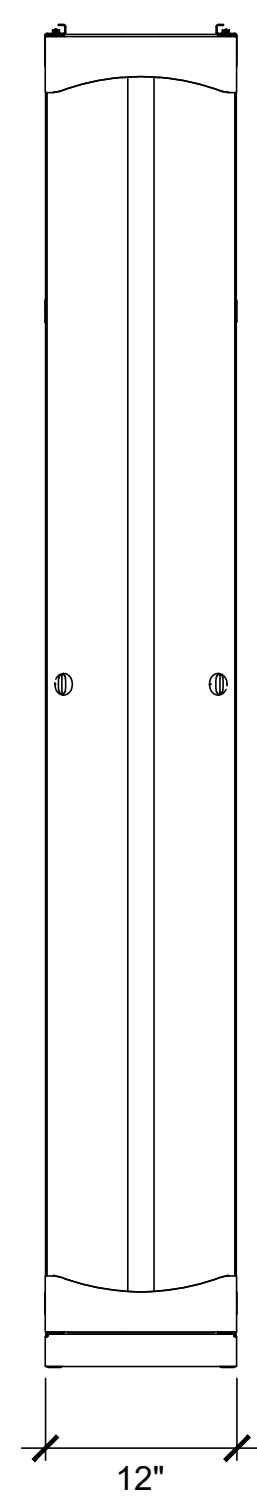
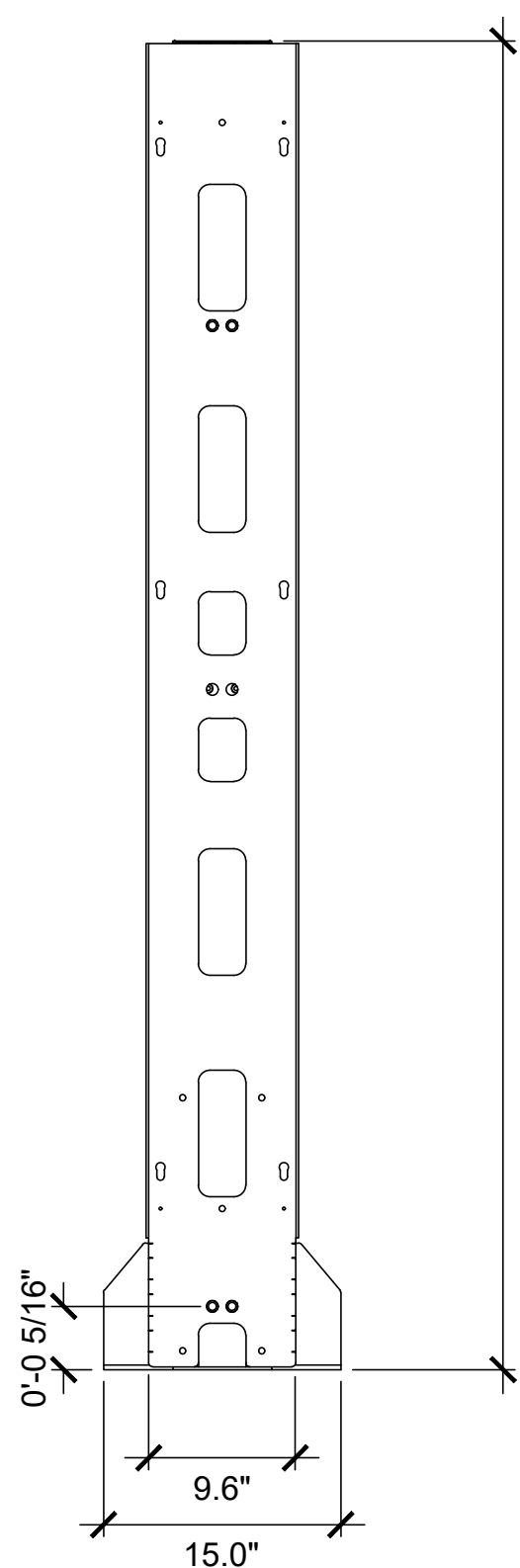
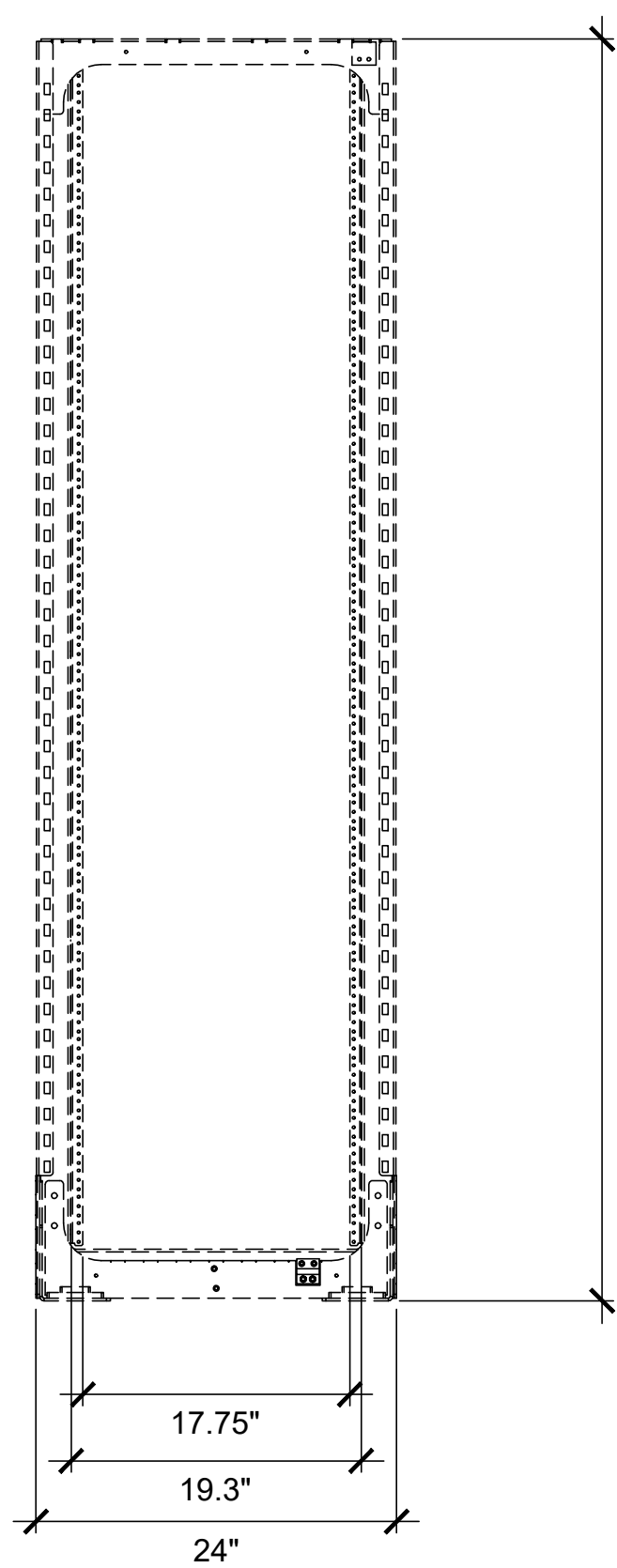




1 R15 TOP VIEW NTS

2 WIRE MANAGER TOP VIEW NTS

3 ISOMETRIC NTS



4 R15 FRONT VIEW NTS

5 R15 SIDE VIEW NTS

6 WIRE MANAGER FRONT VIEW NTS

7 RACK LOADING DETAILS NTS

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC.  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021

**ATI**  
 ARCHITECTS  
 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925 648 8800  
 3009 Douglas Blvd #200 Roseville, CA 95661 - T 916 772 1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

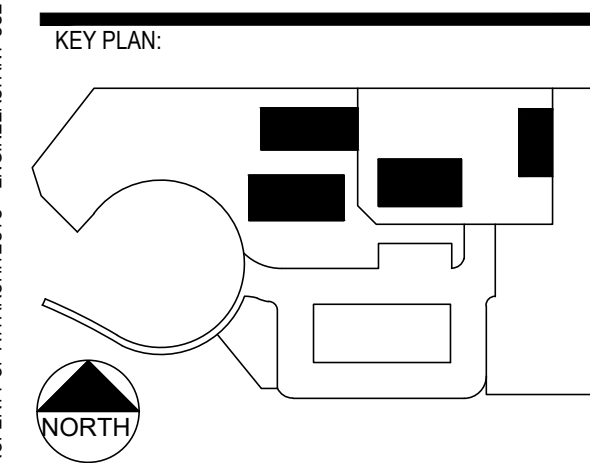
PROFESSIONAL STAMP:  

 CONSULTANT:

Smith  
 Fausch &  
 McDonald Inc.  
 Communication Engineering Group  
 301 9th Street  
 San Francisco, California 94103  
 (415) 255-9140 www.sfm.com  

 DATE: 11/19/2020

ITEM:	REVISION / ISSUE:	DATE:



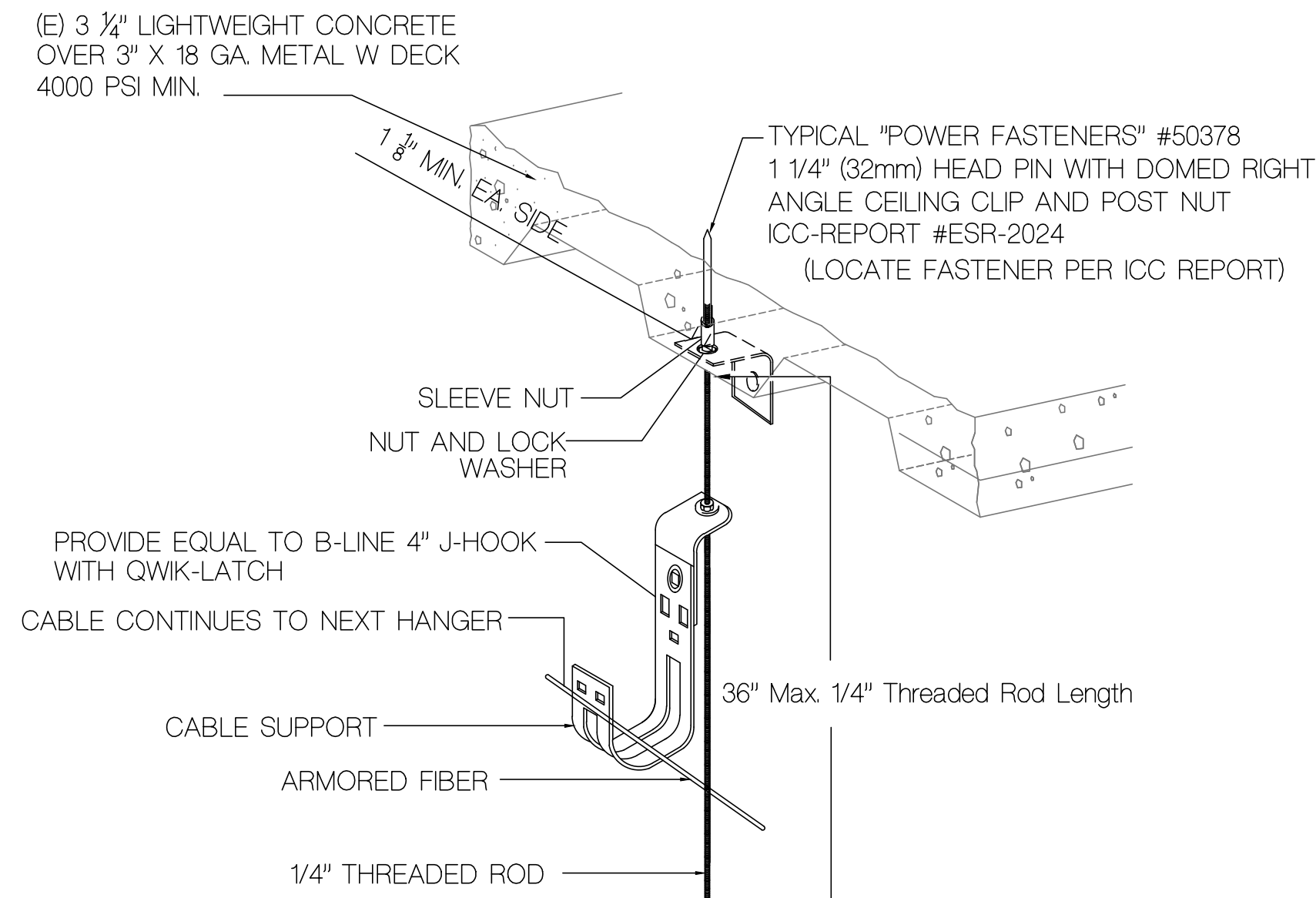
CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

**DETAILS  
 RACK R15**

DRAWN BY: IK CHECKED BY: RLE  
 DATE: 01/14/2021 PROJECT NO: C9508  
 SHEET NO:

**TN502**

1/20/2021 09:26:05 AM  
 G:\2001215A\Drawings\TN502.dwg - Iraj



MAX. WEIGHT PER CONNECTION = 10 LBS

### 1 J-HOOK MOUNTING DETAIL

NTS

DSR:


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 DIV. OF THE STATE ARCHITECT  
 APP: 01-119056 INC:  
 REVIEWED FOR  
 SS  FLS  ACS   
 DATE: 01/19/2021



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 +  
 ENGINEERS  
 AN AC MARTIN COMPANY

4750 Willow Road #250 Pleasanton, CA 94588 - T 925.648.8800  
 3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
 444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:



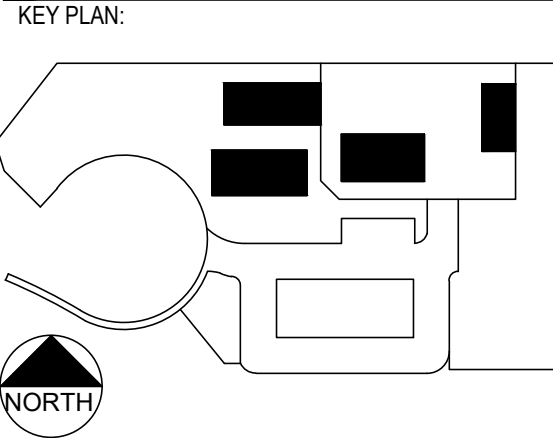
CONSULTANT:



Smith  
 Fausse  
 &  
 McDonald Inc.  
 Communication Engineering Group  
 301 9th Street  
 San Francisco, California 94103  
 (415) 255-9140 www.sfm.com

*Ray Enriquez*  
 DATE: 11/19/2020  
 RAY ENRIQUEZ  
 EXPIRES: 12/31/2022

ITEM:	REVISION / ISSUE:	DATE:



CLPCCD - LAS POSITAS  
 COLLEGE  
 AGRICULTURE  
 SCIENCE  
 HORTICULTURE  
 FACILITY  
 3000 CAMPUS HILL DRIVE,  
 LIVERMORE, CA 94551

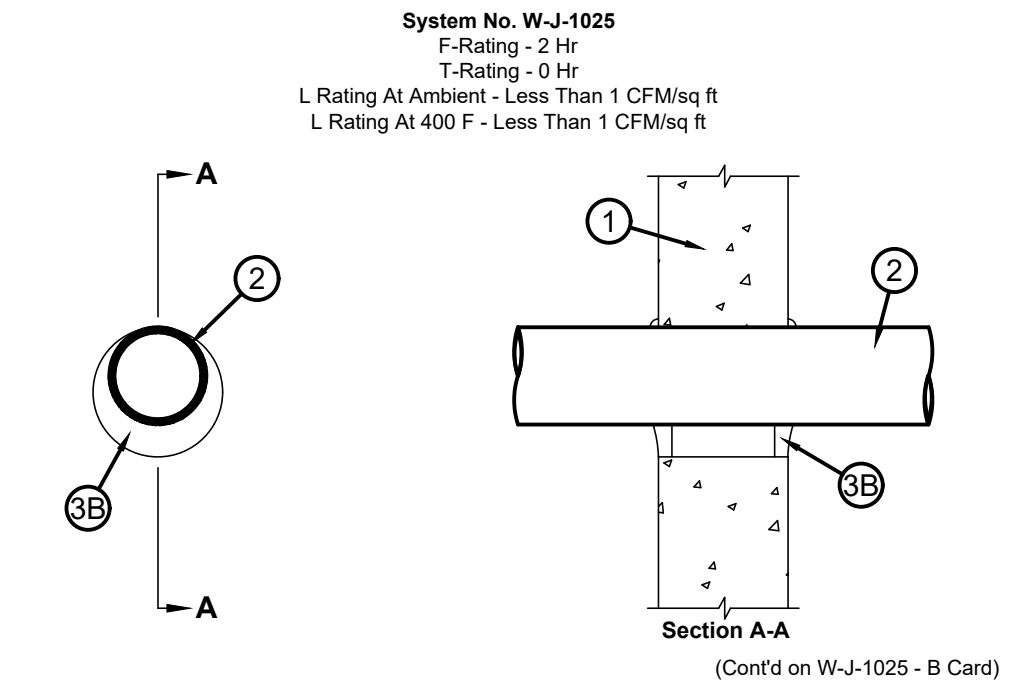
### DETAILS INTERIOR FASTENING

DRAWN BY: IK      CHECKED BY: RLE  
 DATE: 01/14/2021      PROJECT NO: C9508  
 SHEET NO:

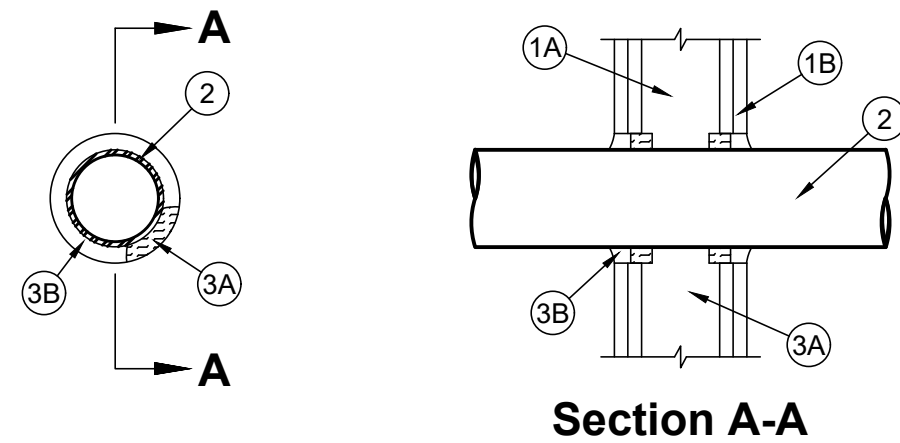
# TN503

1/20/2020 09:26:22 AM  
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xsm1.12.qc: **System No. W-L-1029**  
g2:(Formerly System No. 467)  
F Ratings - 1 and 2 Hr (See Item 1B)  
T Rating - 0 Hr  
L Rating At Ambient - Less Than 1 CFM/sq ft  
L Rating At 400 F - Less Than 1 CFM/sq ft  
b0.25.a0.25:



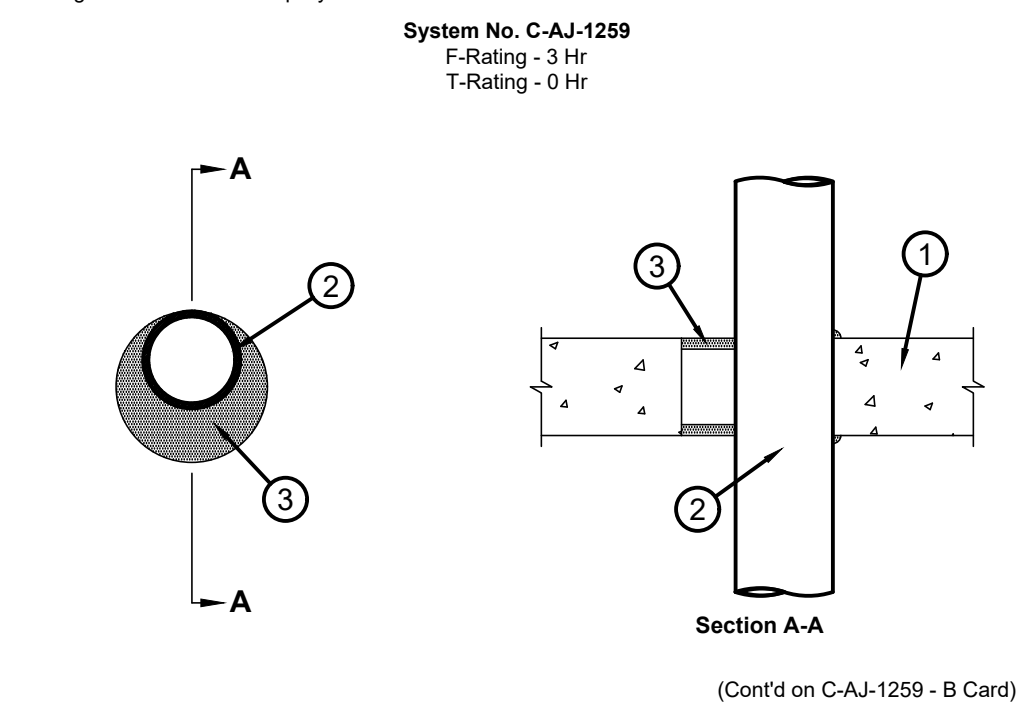
Guide XHEZ (W-L-1029 - B Card)  
Through-Penetration Firestop Systems (Cont'd from W-L-1029 - A Card)

Guide XHEZ (W-J-1025 - B Card)  
Through-Penetration Firestop Systems (Cont'd from W-J-1025 - A Card)

System No. W-J-1025  
December 17, 1996  
F Rating - 2 Hr  
T Rating - 0 Hr  
L Rating At Ambient - Less Than 1 CFM/sq ft  
L Rating At 400 F - Less Than 1 CFM/sq ft

- Wall Assembly - Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 6 in.  
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space within the firestop system is dependent upon the type of through penetrant, use of the packing material, and type and thickness of fill materials as tabulated in Item 3B. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
  - Steel Pipe - Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - Iron Pipe - Nom 4 in. diam (or smaller) cast or ductile iron pipe.
  - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or rigid steel conduit.
  - Copper Tubing - Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
  - Copper Pipe - Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
- Firestop System - The firestop system shall consist of the following:
  - Packing Material - Pipe and Equipment Covering Materials\* - Nom 1 in. thick by min 2-1/2 in. long hollow cylindrical heavy density (min 3.5 pcf) unfaced glass fiber units wrapped around pipe and secured together by means of No. 24 AWG steel tie wire on both sides of the wall. Packing material shall be recessed from both surfaces of wall as required to accommodate the required thickness of fill material. The use of packing material within the firestop system is dependent upon the type of through penetrant and type and thickness of fill material within the firestop system used as tabulated in Item 3B. See Pipe and Equipment Covering - Materials (BRGU) - category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specification and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
  - Fill, Void or Cavity Material\* - Caulk or Putty - Fill material applied within the annulus, on both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the through penetrant. At the point contact location between through penetrant and concrete, a min 3/8 in. diam bead of fill material shall be applied at the concrete/through penetrant interface on both surfaces of wall. The type and thickness of fill material is dependent upon the type of through penetrant, annular within the firestop system and use of packing material within the firestop system as tabulated below:

TYPE OF THROUGH PENETRANT	NOM ANNUAL SPACE IN.	MIN. MAX. ANNUAL IN.	USE OF PACKING MTL.	TYPE OF MTL.	MIN THKNS OF FILL MTL IN.
STEEL OR IRON PIPE	3/4	0, 1-1/2	OPTIONAL	SEALANT	5/8
STEEL OR IRON PIPE	3/4	-	REQUIRED	PUTTY	3/4
STEEL CONDUIT OR TUBING	-	0, 1-1/2	OPTIONAL	SEALANT	5/8



Guide XHEZ (C-AJ-1259 - B Card)  
Through-Penetration Firestop Systems (Cont'd from C-AJ-1259 - A Card)

System No. C-AJ-1259  
March 09, 1999  
F Rating - 3 Hr  
T Rating - 0 Hr

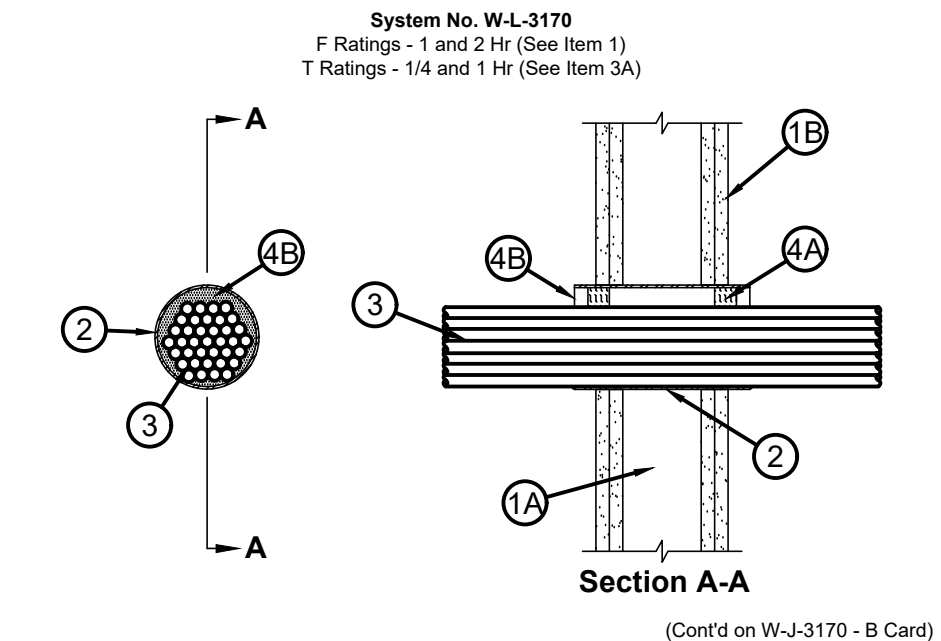
- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core Precast Concrete Units\*. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 7 in.  
See Concrete Blocks (CAZT) and Precast Concrete Units (CFTV) categories in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit or tubing and the periphery of the opening shall be a min of 0 in. (point contact) to a max of 3 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduit or tubing may be used:
  - Steel Pipe - Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - Iron Pipe - Nom 6 in. diam (or smaller) cast or ductile iron pipe.
  - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
  - Copper Tube - Nom 4 in. diam (or smaller) Type L (or heavier) copper tube.
- Fill, Void or Cavity Material\* - Sealant - Min 1 in. thickness of fill material applied within the annulus, flush with both surfaces of floor or wall. At the point contact location between penetrating item and concrete, a min 3/8 in. thick bead of fill material shall be applied at the concrete/penetrating item interface and on both surfaces of floor or wall.  
SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101, 102 or 105 Sealant.  
\*Bearing the UL Classification Marking

Guide XHEZ (W-L-1029 - B Card)  
Through-Penetration Firestop Systems (Cont'd from W-L-1029 - A Card)

Guide XHEZ (W-L-1029 - B Card)  
Through-Penetration Firestop Systems (Cont'd from W-L-1029 - A Card)

System No. W-L-1029  
December 16, 1994  
(Formerly System No. 467)  
F Ratings - 1 and 2 Hr (See Item 1B)  
T Rating - 0 Hr  
L Rating At Ambient - Less Than 1 CFM/sq ft  
L Rating At 400 F - Less Than 1 CFM/sq ft

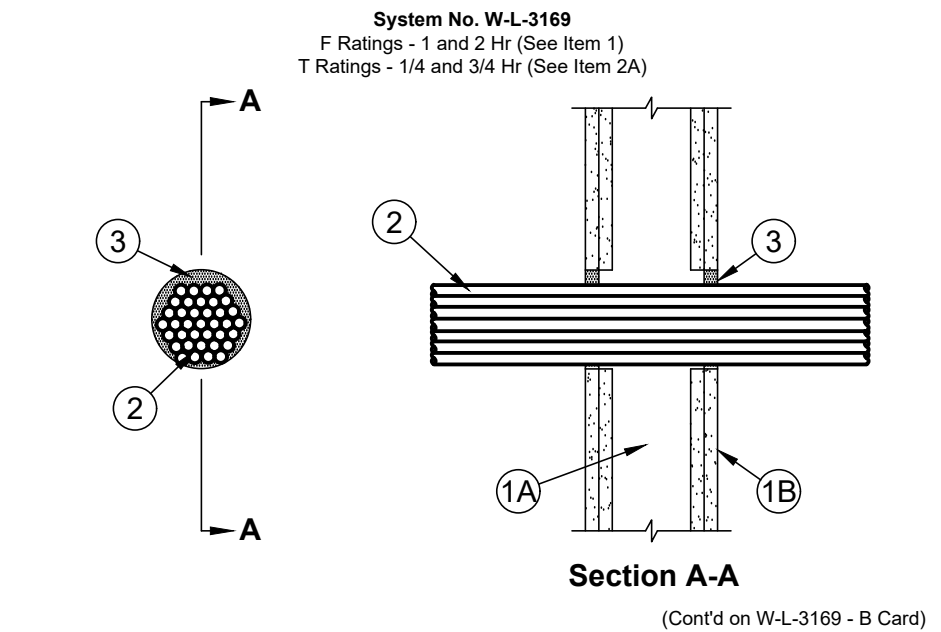
- Wall Assembly - The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 and U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
  - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC.
  - Gypsum Board\* - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 6 in. The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. A nom annular space of 3/4 in. is required within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
  - Steel Pipe - Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
  - Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
  - Copper Tubing - Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
  - Copper Pipe - Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
- Firestop System - The firestop system shall consist of the following:
  - Packing Material - Min 1 in. thickness of min 3.5 pcf fiberglass insulation shall be wrapped around the through-penetrant and secured together by means of No. 24 AWG steel tie wire. Packing material shall be centered at mid-depth of opening and recessed from both surfaces of wall assembly required to accommodate the required thickness of fill material.
  - Fill, Void or Cavity Material\* - Caulk or Putty - In 2 hr fire rated assemblies min 3/4 in. thickness fill material applied within the annulus, flush both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. crown is formed around the penetrating item. In 1 hr fire-rated assemblies, min 5/8 in. thickness of fill material applied within annulus on both surfaces of wall. Additional fill material to be installed such that a min 3/8 in. crown is formed around the penetrating item and lapping 1 in. beyond the periphery of the opening.  
SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101 or 105 Sealant and SpecSeal Putty  
\*Bearing the UL Classification Marking



Guide XHEZ (W-L-3170 - B Card)  
Through-Penetration Firestop Systems (Cont'd from W-L-3170 - A Card)

System No. W-L-3170  
October 04, 2000  
F Ratings - 1 and 2 Hr (See Item 1)  
T Ratings - 1/4 and 1 Hr (See Item 3A)

- Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
  - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
  - Gypsum Board\* - Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 6 in.  
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Steel Sleeve - Cylindrical sleeve fabricated from 0.0125 in. thick (30 gauge) galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of the sleeve to be eq or max 2 in. greater than the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers. The ends of the steel sleeve shall be flush with or extend a max 1 in. beyond each surface of the wall.  
As an alternate, steel sleeve may consist of nom 6 in. diam (or smaller) Schedule 5 (or heavier) steel pipe sleeve friction-fitted into circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with or extend a max 1 in. beyond each surface of the wall.
- Cables - Max 4-1/2 in. diam tight bundle of cables to be installed eccentrically or concentrically within the opening. The annular space between the cables and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. Cable bundle to be rigidly supported on both sides of the wall assembly. The following types and sizes of cables may be used:
  - Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
  - Max 1/C No. 350 kmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
  - Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
  - Max 3/C No. 2/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
  - Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.
  - Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
  - Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
  - Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
  - Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.
- Through Penetrating Product\* - As an alternate to the cables (Item 3), max 4-1/2 in. diam tight bundle of max 4/C No. 2/0 AWG (or smaller) aluminum or steel Armored Cable\* or Metal Clad Cable\* installed within the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1-1/2 in. Through penetrating product rigidly supported on both sides of wall assembly. When Armored Cable or Metal Clad Cable is used, T Rating is 1/4 hr.  
AFC CABLE SYSTEMS INC  
4. Firestop System - The firestop system shall consist of the following:
  - Packing Material - Min 1 in. thickness of 4 pcf mineral wool batt insulation compressed and tightly packed into each end of sleeve. Recess packing material as required to accommodate fill material (Item 4B).
  - Fill, Void or Cavity Material\* - Sealant - Min 1/2 in. thickness of fill material applied within annulus, flush with each end of steel sleeve. At point contact location, min 1/4 in. diam bead of fill material applied at cable bundle/steel sleeve interface on both sides of wall.  
SPECIFIED TECHNOLOGIES INC - SpecSeal LCI Sealant  
\*Bearing the UL Classification Marking

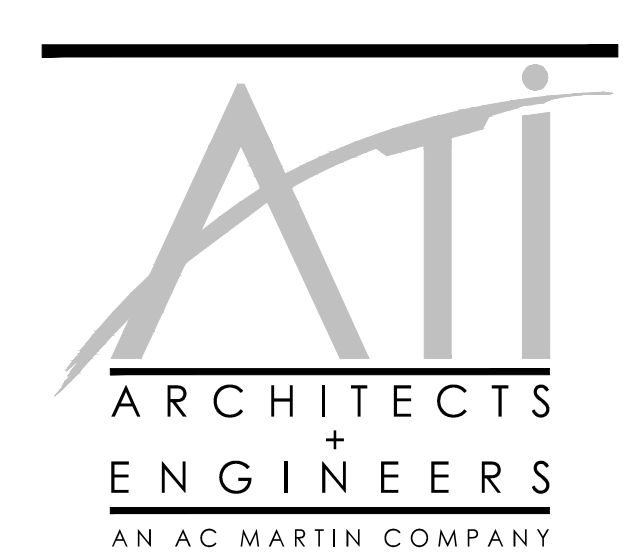
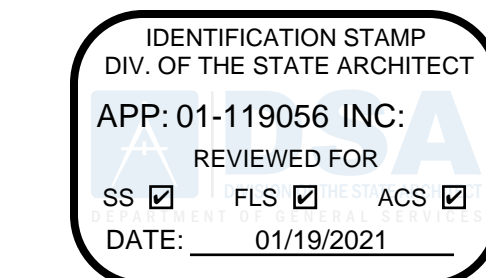


Guide XHEZ (W-L-3169 - B Card)  
Through-Penetration Firestop Systems (Cont'd from W-L-3169 - A Card)

System No. W-L-3169  
October 04, 2000  
F Ratings - 1 and 2 Hr (See Item 1)  
T Ratings - 1/4 and 3/4 Hr (See Item 2A)

- Wall Assembly - The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
  - Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
  - Gypsum Board\* - Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 5 in.  
The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Cables - Max 4-1/2 in. diam tight bundle of cables to be installed eccentrically or concentrically within the opening. The annular space between the cables and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable bundle to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of cables may be used:
  - Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
  - Max 1/C No. 350 kmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
  - Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
  - Max 3/C No. 2/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
  - Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.
  - Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
  - Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
  - Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.
  - Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.
- Through Penetrating Product\* - As an alternate to the cables (Item 2), max 4 in. diam tight bundle of max 4/C No. 2/0 AWG (or smaller) aluminum or steel Armored Cable\* or Metal Clad Cable\* installed within the opening. Annular space between through-penetrating products and periphery of opening to be min 0 in. (point contact) to max 1 in. Through penetrating product rigidly supported on both sides of floor or wall assembly. When Armored Cable or Metal Clad Cable is used, T Rating is 1/4 hr.  
AFC CABLE SYSTEMS INC  
3. Fill, Void or Cavity Material\* - Sealant - Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. Sealant to be forced into interstices of cable bundle to max extent possible. At point contact location, min 1/4 in. diam bead of fill material applied at cable bundle/gypsum board interface on both surfaces of wall.  
SPECIFIED TECHNOLOGIES INC - SpecSeal LCI Sealant  
\*Bearing the UL Classification Marking

DSA:



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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
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PROFESSIONAL STAMP:



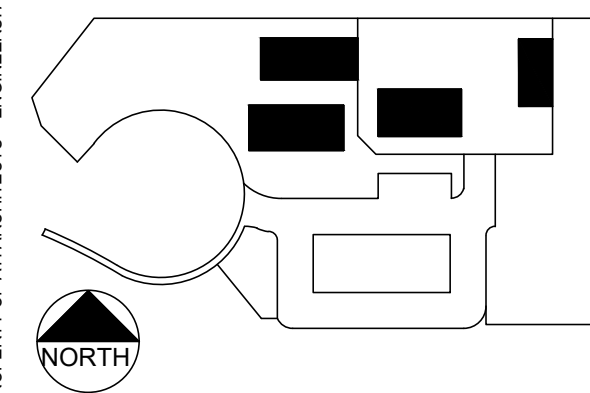
CONSULTANT:



DATE: 11/19/2020  
RAY ENRIQUEZ  
REGISTERED PROFESSIONAL ENGINEER  
EXPIRES: 12/31/2022

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



CLPCCD - LAS POSITAS  
COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

DETAILS  
FIRESTOPPING

COORDINATE THROUGH PENETRATION  
ASSEMBLIES W/ FIRE RATED PARTITIONS  
AS SHOWN ON THE ARCHITECTURAL  
DRAWINGS.

DRAWN BY: IK  
CHECKED BY: RLE  
DATE: 01/14/2021  
PROJECT NO: C9508  
SHEET NO:

TN504

1/20/2020, 09:26:37 AM  
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### KEYNOTES

TN COMMUNICATIONS SYSTEMS COMPLY WITH DIV. 27

TN1 BELL END ENTRY DUCT TERMINATIONS.

TN2 PROVIDE INTEGRAL FRAME ELEMENT TO RECEIVE COLLEGE'S VAULT NUMBER. APPLY VAULT NUMBER TO A 1/2" TALL GREEN OR BLACK LAMACOID LABEL RIVETED TO FRAME OR VAULT LID. ALTERNATIVELY, CAST NUMBER INTO VAULT COVER OR WELD ON THE FACE OF DIAMOND PLATE LID.

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DIV. OF THE STATE ARCHITECT  
APP: 01-119056 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021

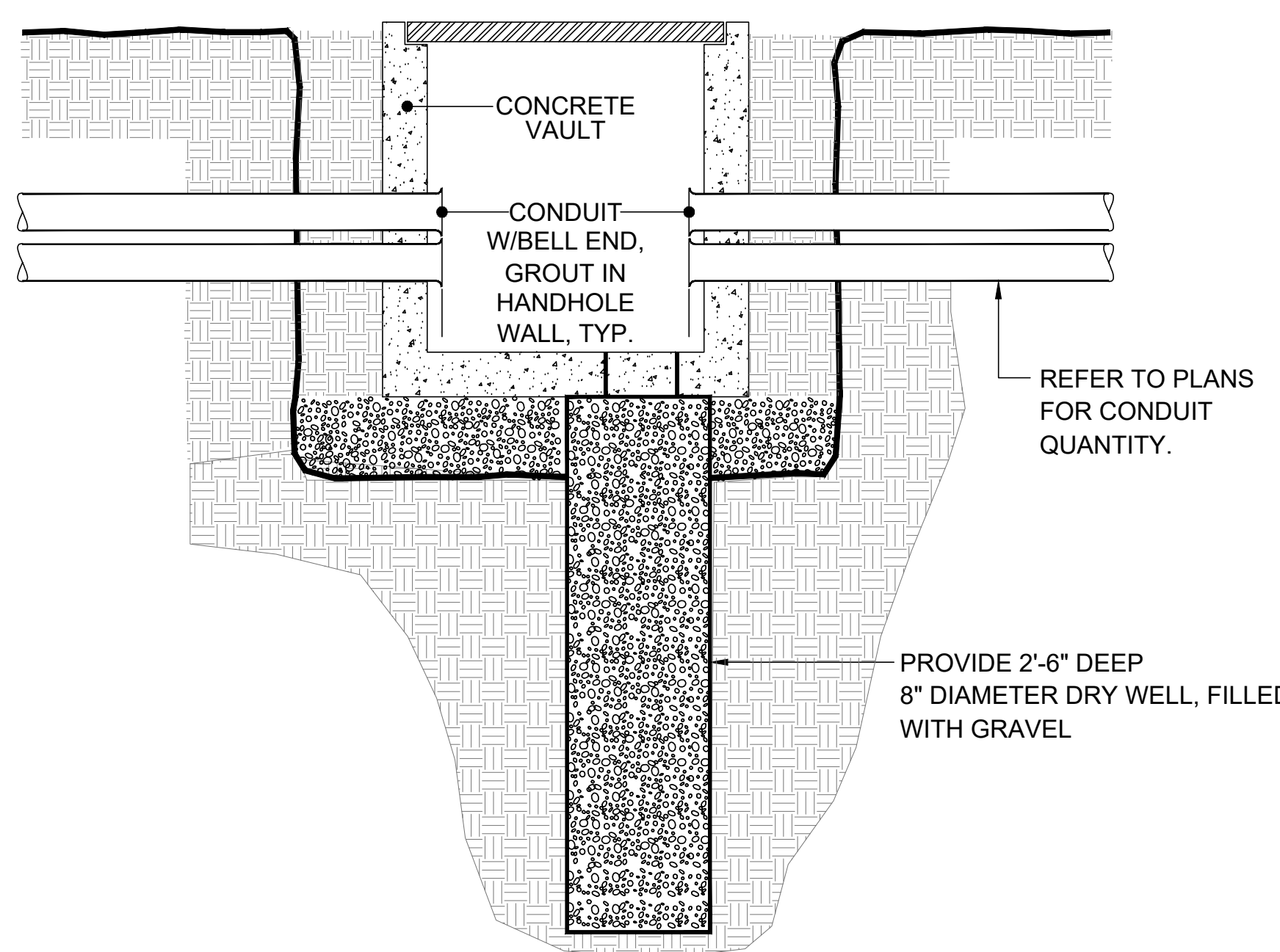
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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
REGISTERED PROFESSIONAL ENGINEER  
PROJECT: J. RILEY  
SE 2677  
12/31/2020  
RENEWAL  
DATE: STRUCTURAL  
STATE OF CALIFORNIA

CONSULTANT:  
Smith Fausch & McDonald Inc.  
Communication Engineering Group  
301 8th Street  
San Francisco, California 94103  
(415) 205-9140 www.sfm.com  
DATE: 11/19/2020  
RAY ENRICOZ  
PROJ. NO. 10891  
EXPIRES: 12/31/2022

ITEM:	REVISION / ISSUE:	DATE:



**1 CONDUIT ENTRANCE ON PULL BOX**  
REFER TO PLANS FOR CONDUIT SIZE & QUANTITY  
NTS

**24"x36"**  
**PRECAST CONCRETE VAULT**

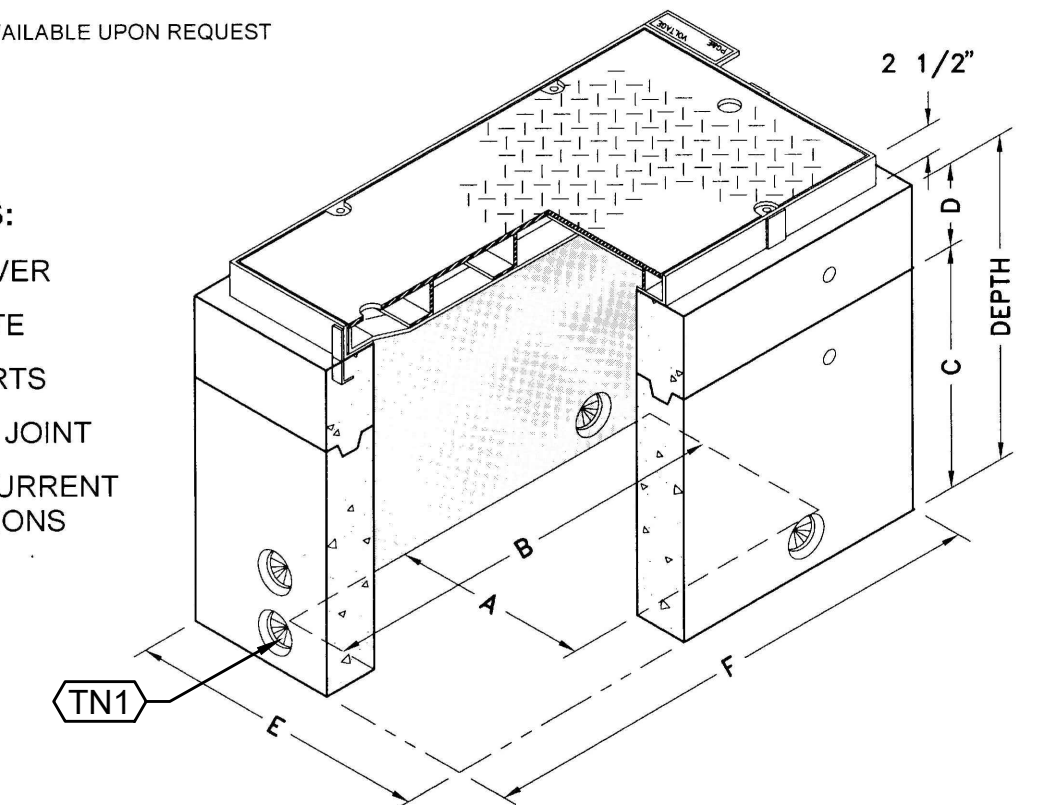
**24"x36" COMPLETE CONCRETE BOX ASSEMBLIES**

TYPE	DEPTH	CODE	LBS
FULL VEHICULAR AND PEDESTRIAN TRAFFIC (SLIP RESISTANT)	2'-6"	01-9598	1,653
	3'-0"	01-9599	1,903

\* EXTENSION NOT SHOWN IS SIMILAR TO TOP SECTION WITH GROOVE ON TOP IN LIEU OF FRAME.  
NOTE: SPECIAL 12" EXTENSIONS AVAILABLE UPON REQUEST

**ASSEMBLIES INCLUDES:**

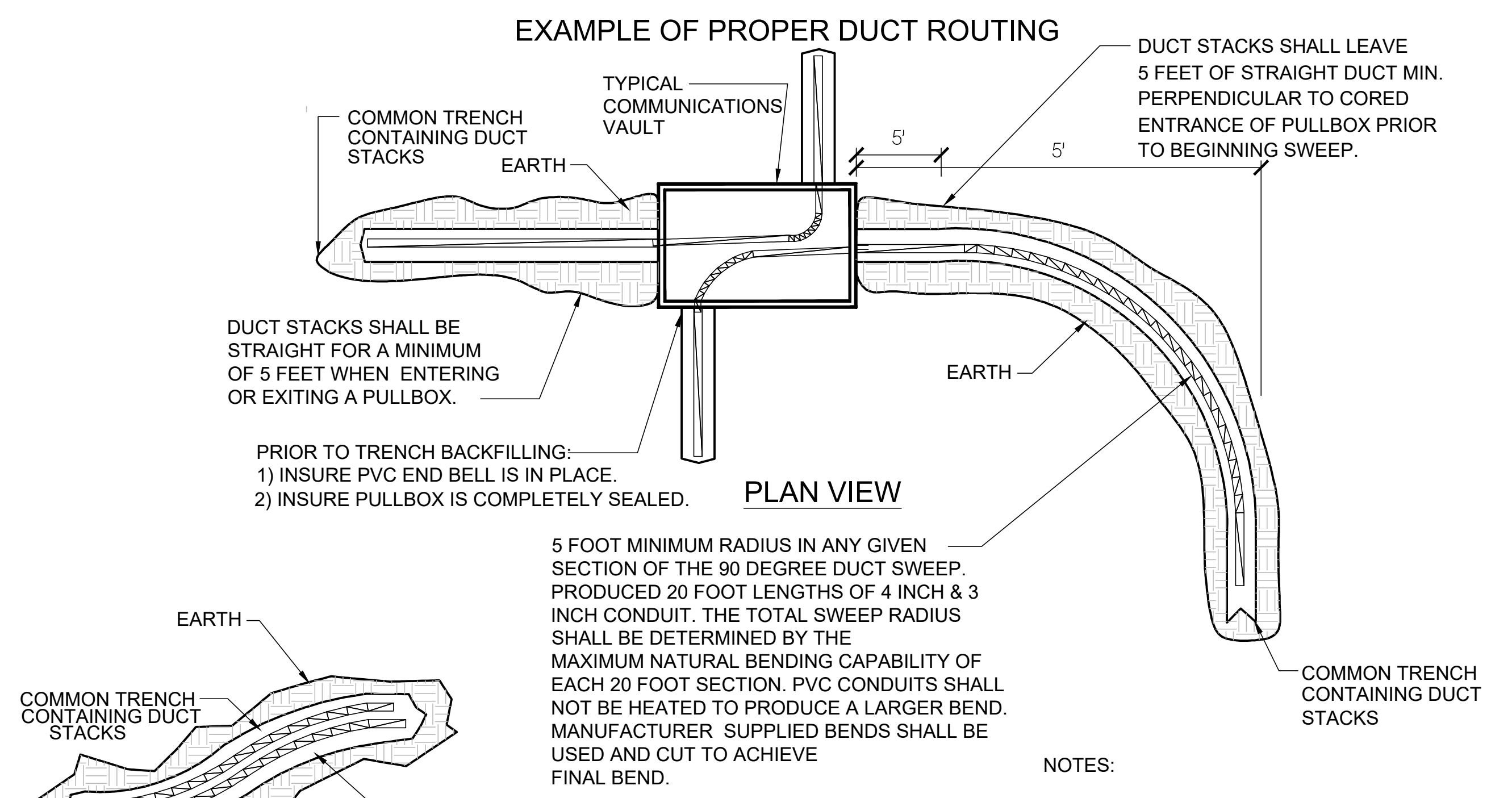
- \* CAST-IN FRAME w/ COVER
- \* "VOLTAGE" NAME PLATE
- \* 7/8" DIA. LIFTING INSERTS
- \* MASTIC SEALANT FOR JOINT
- \* TERM-A-DUCTS PER CURRENT P.G.&E. SPECIFICATIONS



TYPE	A	B	C	D	E	F
24"x36"x2'-6"	24"	36"	24"	6"	32"	45"
24"x36"x3'-0"	24"	36"	24"	12"	32"	45"

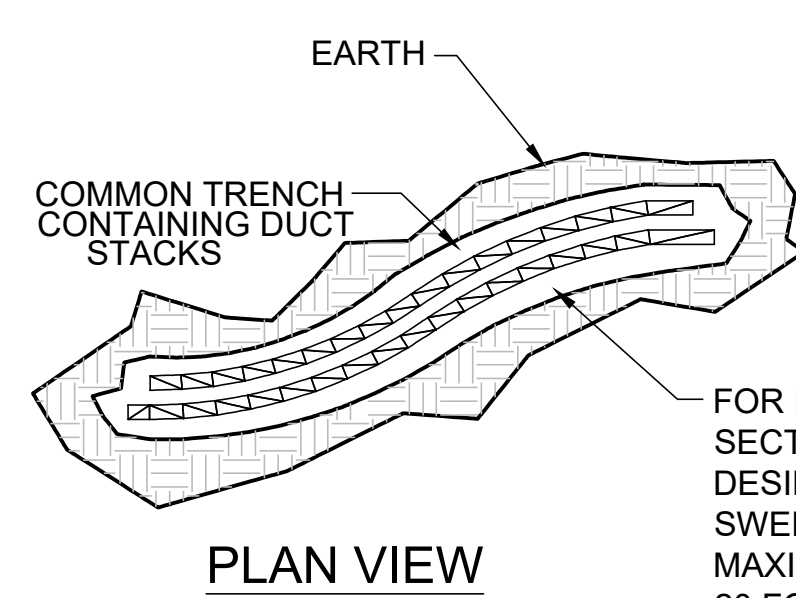
DRAWING MAY NOT CONFORM TO THE MOST CURRENT SPECIFICATION

**3 PB2 PULL BOX DETAIL**  
NTS



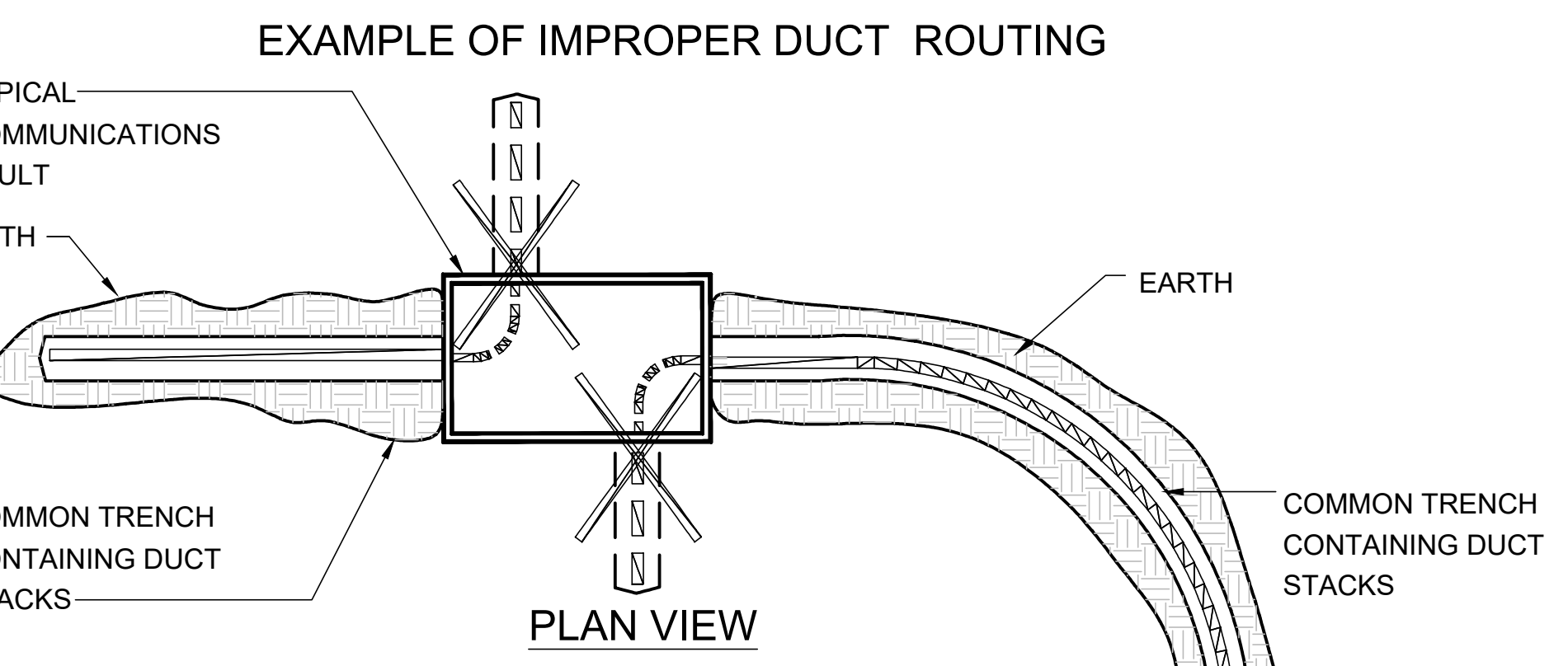
PRIOR TO TRENCH BACKFILLING:  
1) INSURE PVC END BELL IS IN PLACE.  
2) INSURE PULLBOX IS COMPLETELY SEALED.

**PLAN VIEW**  
5 FOOT MINIMUM RADIUS IN ANY GIVEN SECTION OF THE 90 DEGREE DUCT SWEEP. PRODUCED 20 FOOT LENGTHS OF 4 INCH & 3 INCH CONDUIT. THE TOTAL SWEEP RADIUS SHALL BE DETERMINED BY THE MAXIMUM NATURAL BENDING CAPABILITY OF EACH 20 FOOT SECTION. PVC CONDUITS SHALL NOT BE HEATED TO PRODUCE A LARGER BEND. MANUFACTURER SUPPLIED BENDS SHALL BE USED AND CUT TO ACHIEVE FINAL BEND.

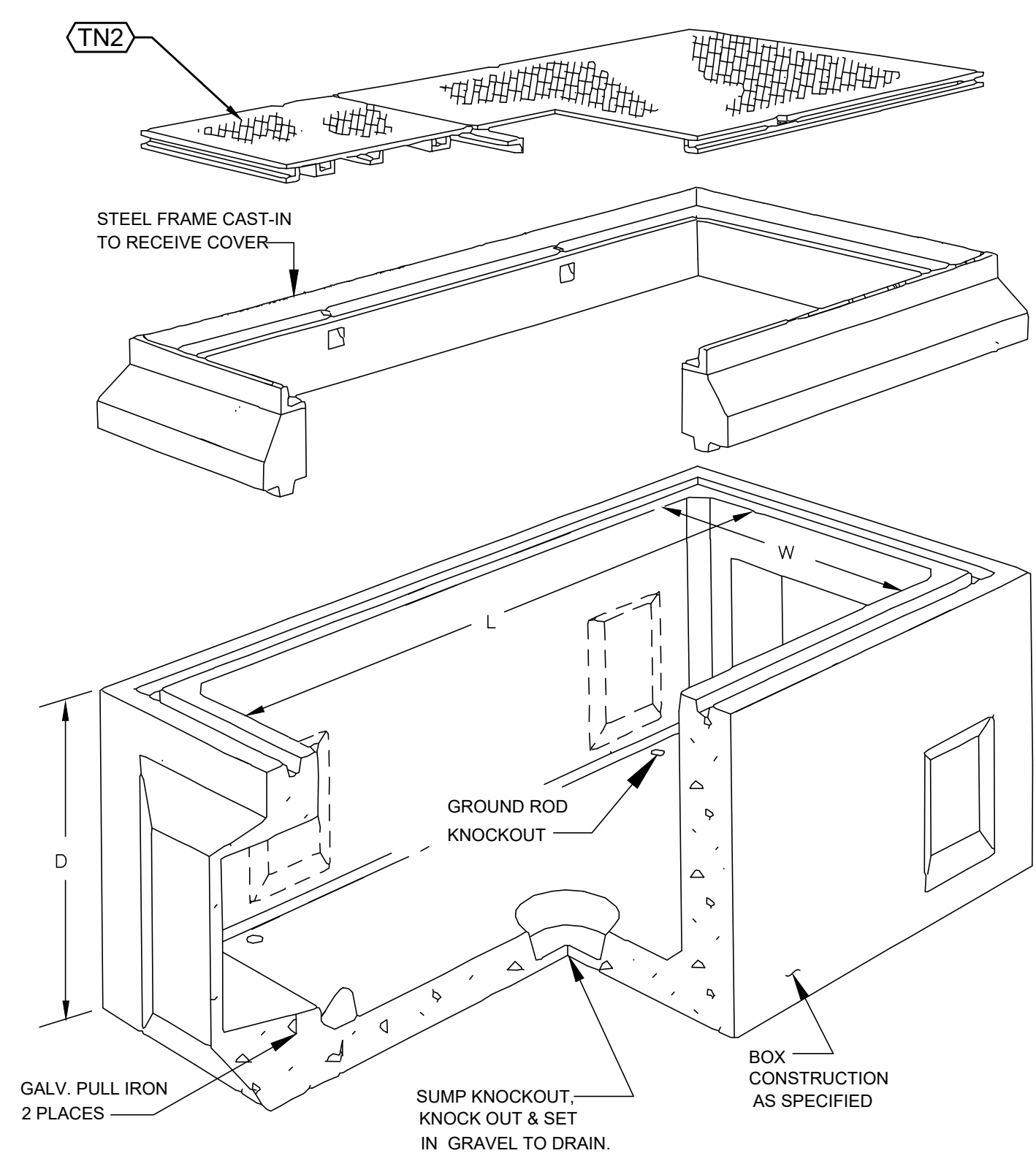


**PLAN VIEW**  
FOR PARTIAL SWEEP ANGLES, 20 FOOT SECTIONS SHALL BE USED TO PRODUCE THE DESIRED TOTAL BEND. HOWEVER, THE TOTAL SWEEP RADIUS SHALL BE DETERMINED BY THE MAXIMUM NATURAL BENDING CAPABILITY OF A 20 FOOT SECTION OF CONDUIT. PVC CONDUITS SHALL NOT BE HEATED TO PRODUCE A LARGER BEND. MANUFACTURER SUPPLIED BENDS SHALL BE USED AND CUT TO PRODUCE A TIGHTER BEND.

- NOTES:**
1. COMPLETE BACKFILL IN TRENCH NOT SHOWN FOR CLARITY CONTRACTOR REFER TO DETAILS.
  2. TOP OF DUCT STACKS SHALL BE BURIED A MINIMUM OF 36 INCHES BELOW GRADE.
  3. PRIOR TO FINAL ACCEPTANCE OF DUCT WORK INSURE MANDRAL TEST OF EACH DUCT HAS BEEN COMPLETED. REFER TO SECTION 270543.



**2 COMMUNICATIONS DUCT SWEEP & APPROACH AT VAULT**  
NTS



**4 TYPICAL UNDERGROUND VAULT ISOMETRIC**  
NTS

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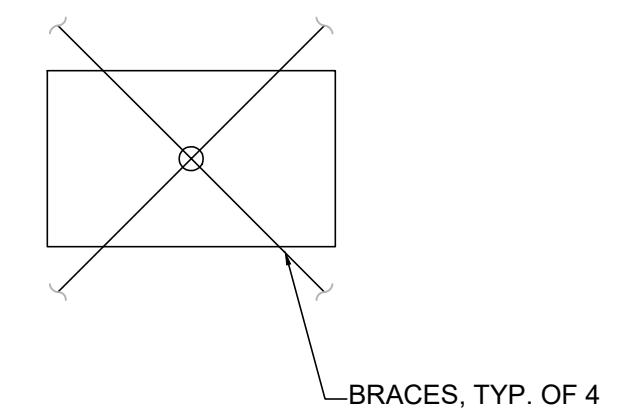
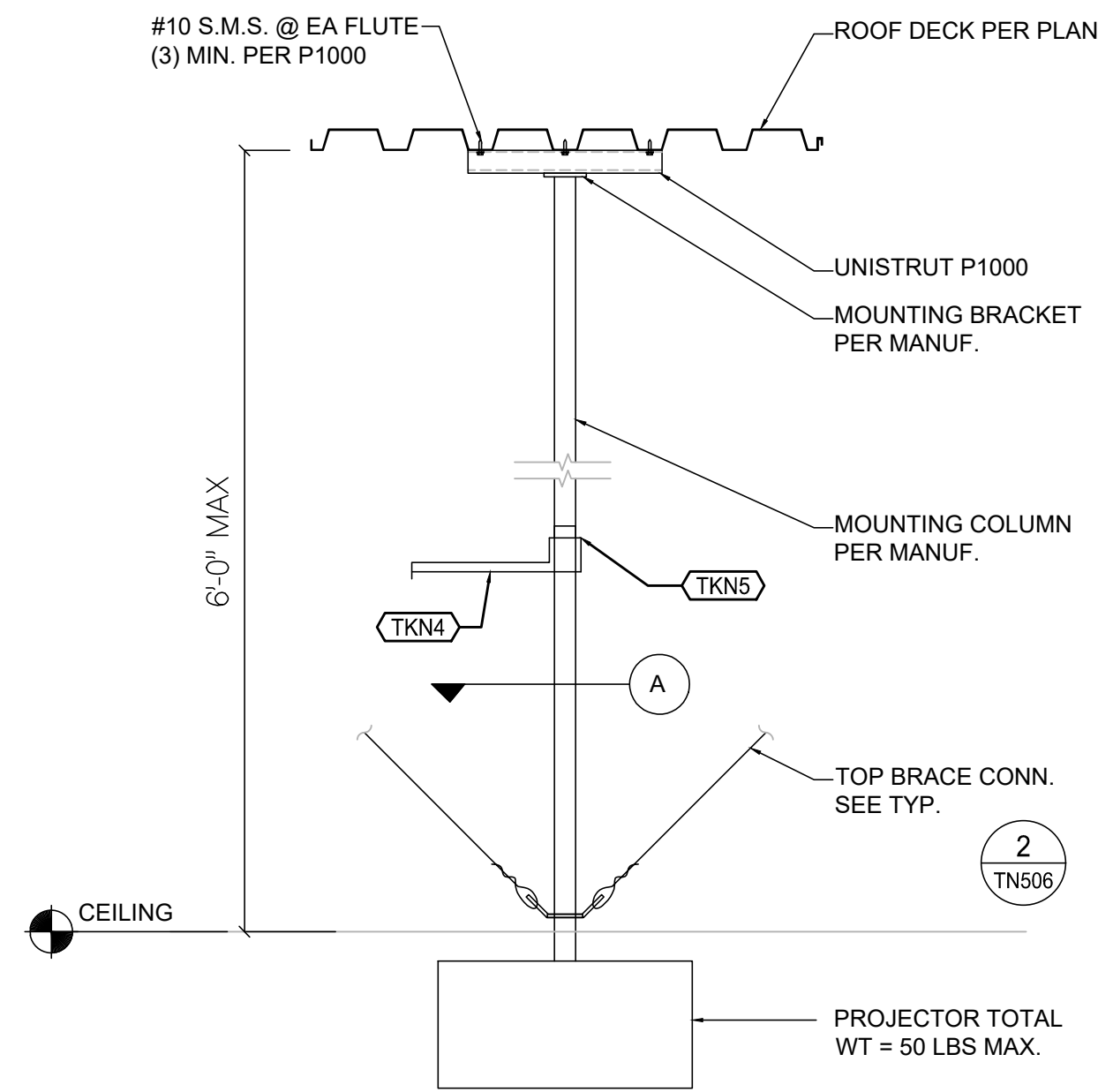
KEY PLAN:  
NORTH

CLPCCD - LAS POSITAS  
COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**DETAILS  
OUTSIDE  
PLANT**

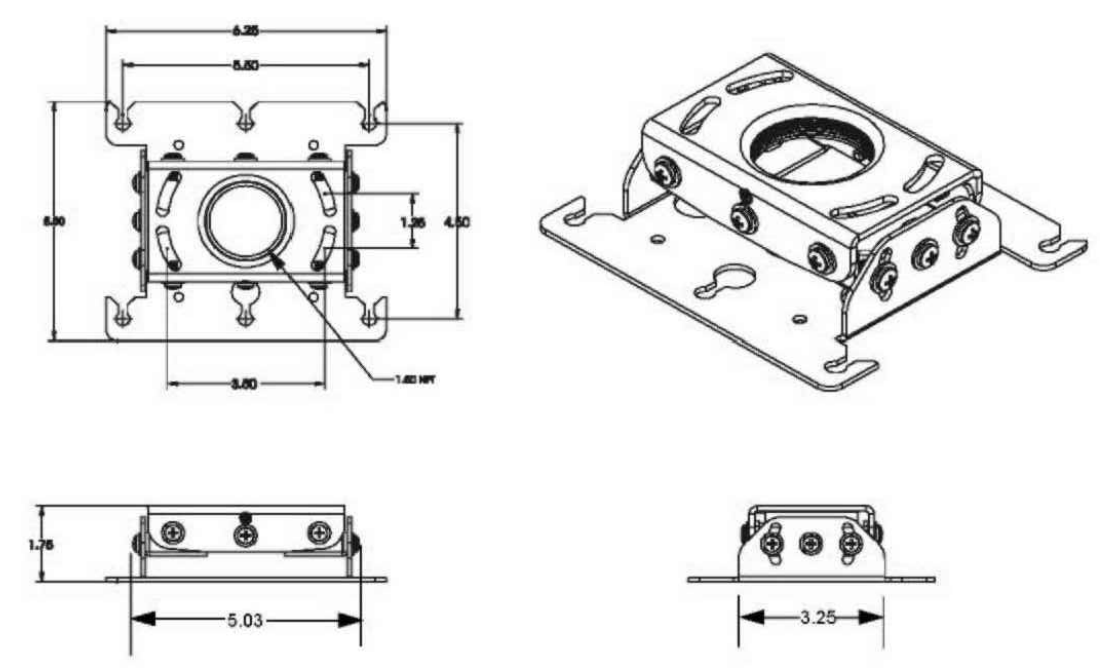
DRAWN BY: IK CHECKED BY: RLE  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**TN505**

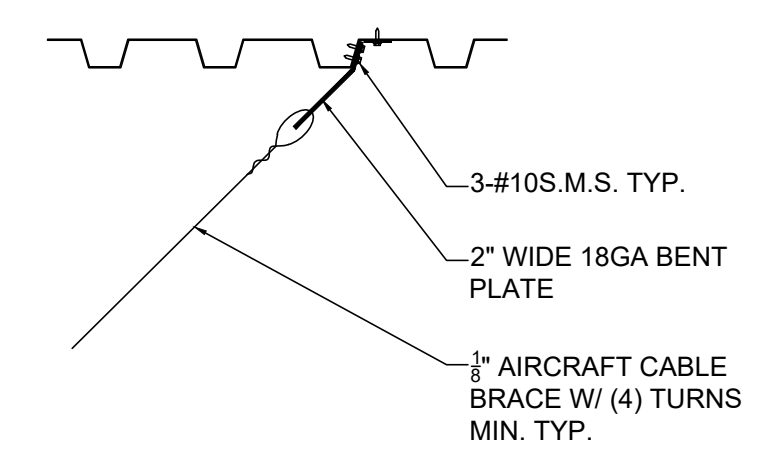


**A PLAN VIEW**  
NTS

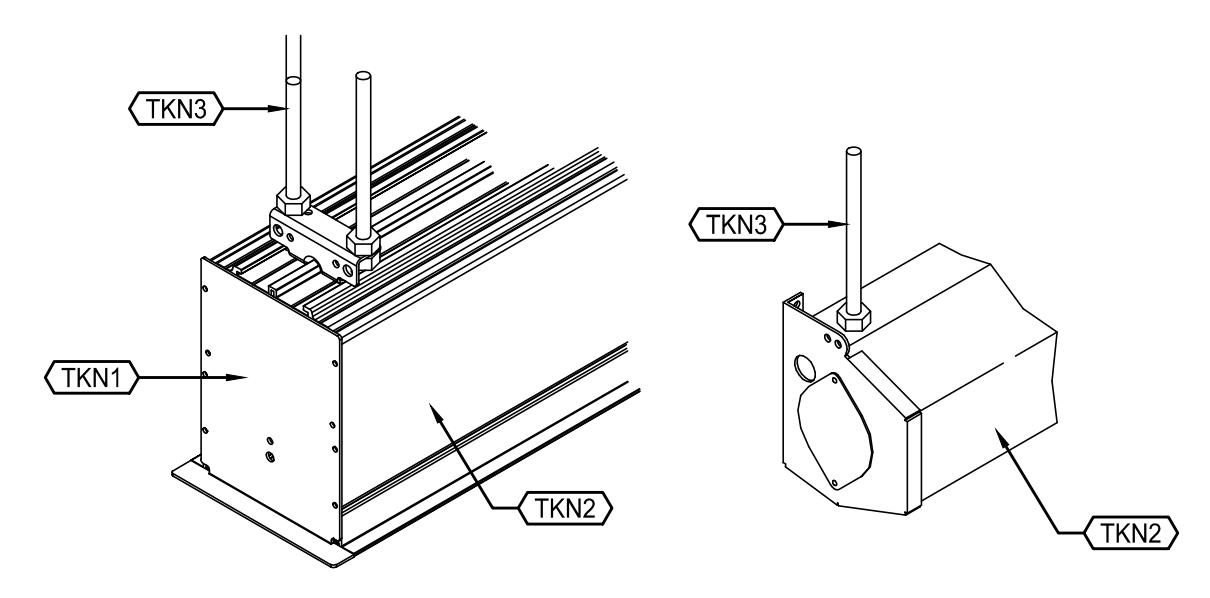
**1 PROJECTOR SUPPORT**  
NTS



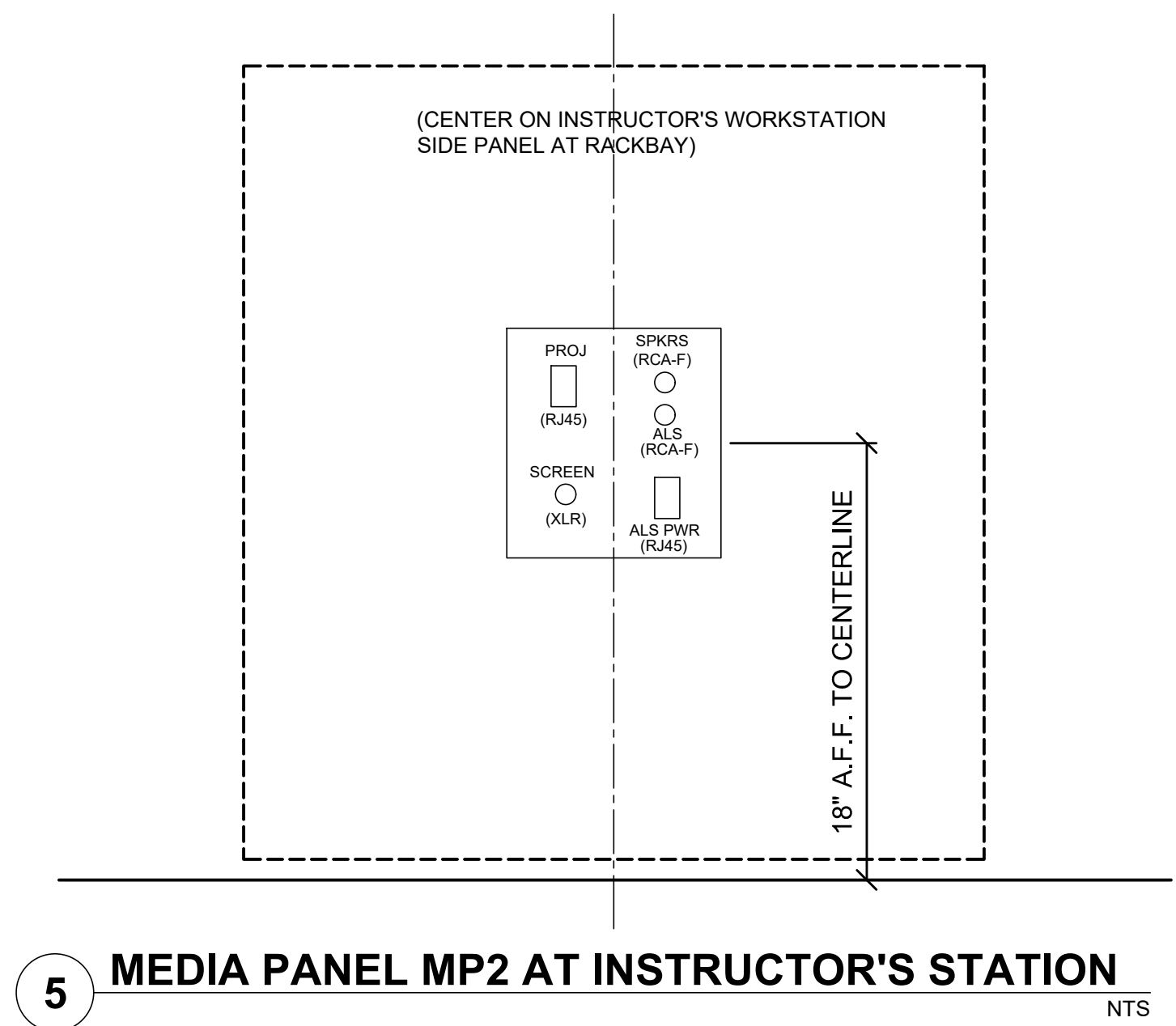
**3 RPA SERIES CEILING MOUNT**  
NTS  
PROVIDE EXPANSION ANCHOR PER S-013 TO CONC FILLED DECK ABOVE WITH COUPLER AT EACH THREADED ROD HANGER



**2 BRACE TO METAL DECK**  
NTS



**4 PROJECTOR SCREEN MOUNTING DETAIL**  
NTS



**5 MEDIA PANEL MP2 AT INSTRUCTOR'S STATION**  
NTS

**KEYNOTES**

TKN COMMUNICATIONS SYSTEMS: COMPLY WITH DIVISION 27.

TKN1 TRIM FLANGE.

TKN2 STEEL CASING.

TKN3 THREADED ROD.

TKN4 SHELF FOR THE CRESTRON "CMPO". PROVIDE EQUAL TO Nigel B Design PART # NB-PMP. FOR MORE INFORMATION PLEASE CALL Nigel B Design AT (818) 487-9323 OR GO TO nigelbdesign.com.

TKN5 INSTALL POWER RECEPTACLE ON THE POLE SEE ELECTRICAL DRAWINGS.

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DIV. OF THE STATE ARCHITECT  
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REVIEWED FOR  
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DATE: 01/19/2021

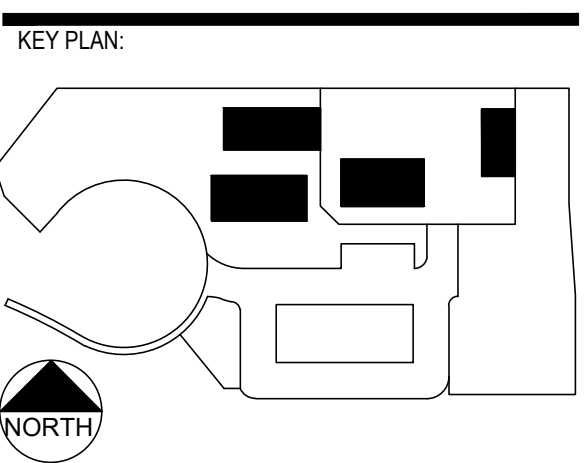
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PROFESSIONAL STAMP:  
REGISTERED PROFESSIONAL ENGINEER  
RAY ENRIQUEZ  
NO. 50104  
EXPIRES 12/31/2022  
DATE 11/19/2020  
STRUCTURAL  
STATE OF CALIFORNIA

CONSULTANT:  
**Smith Fausch & McDonald Inc.**  
Consultation Engineering Group  
301 8th Street  
San Francisco, California 94103  
(415) 255-9140 www.sfm.com

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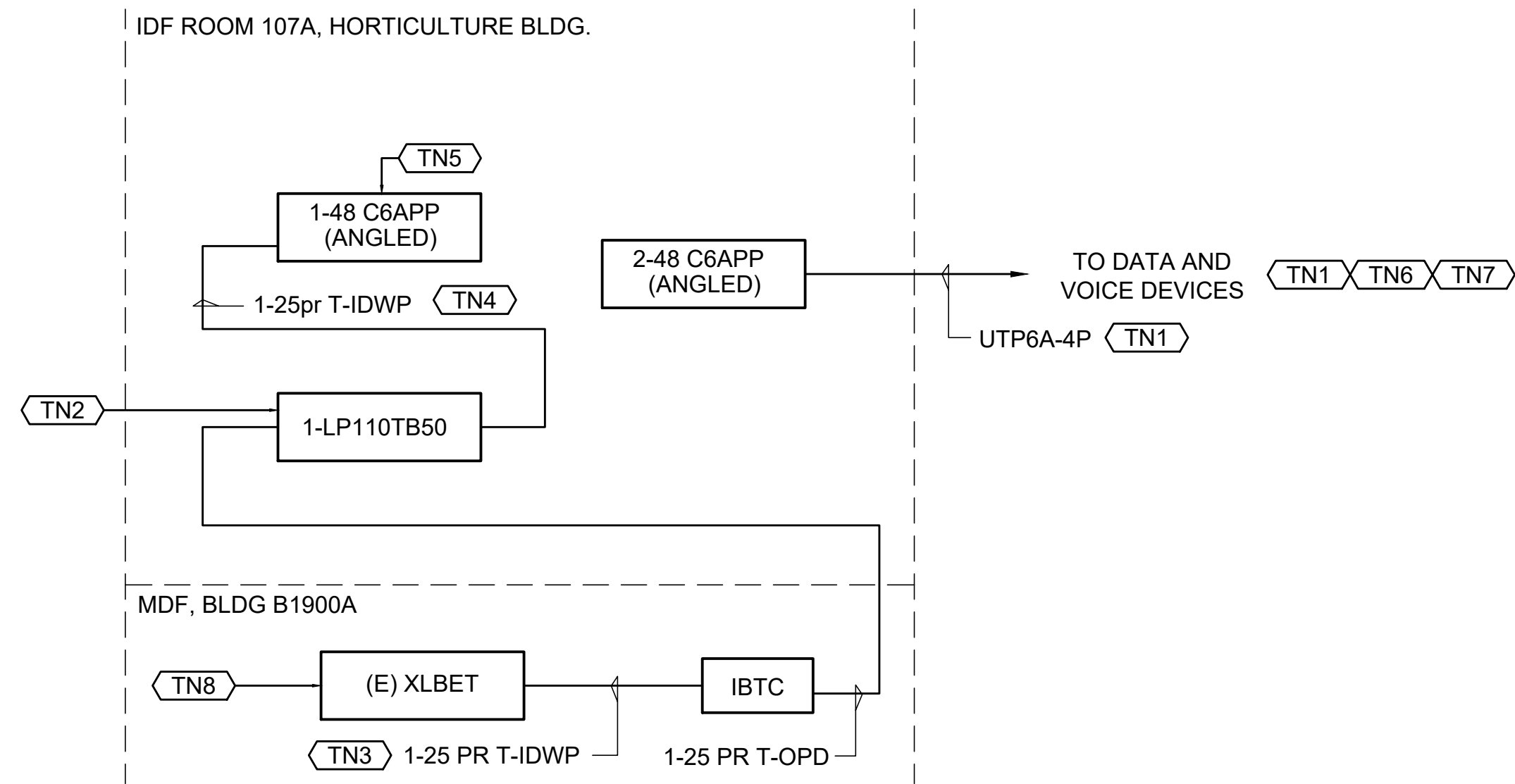


CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**DETAILS -  
PROJECTION  
POLE MOUNT**

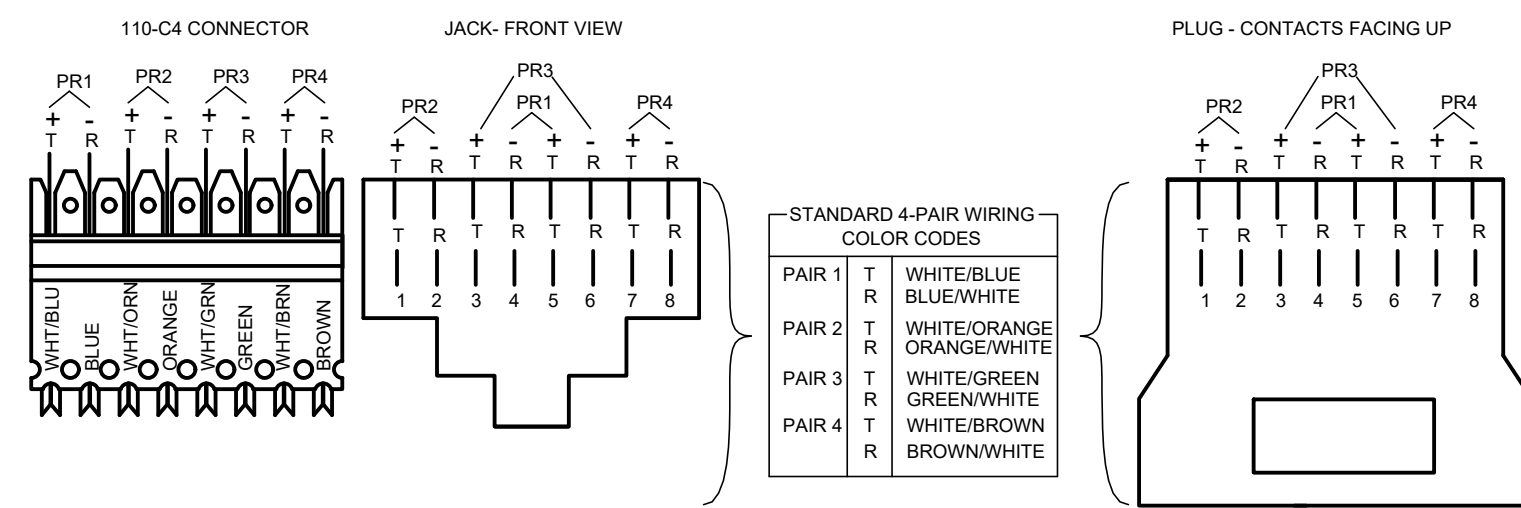
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DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**TN506**



### 1 COPPER CABLING SINGLE LINE DIAGRAM

NTS



### 2 T568B WIRING

NTS

### KEYNOTES

- TN COMMUNICATIONS SYSTEMS COMPLY WITH DIV. 27
- TN1 SEE PLANS FOR QUANTITY.
- TN2 MOUNT ON THE BACKBOARD.
- TN3 TERMINATE CABLE TO EXISTING SPLICE CASE LOCATED IN B1900A. PROVIDE 30' SLACK CABLE. LABEL THE CABLE. COORDINATE WITH DISTRICT'S REPRESENTATIVE.
- TN4 TERMINATE 1 PAIR OF CROSS-CONNECT WIRES PER RJ45 PORT FOR TELEPHONE USE. USE USOC WIRING SCHEME.
- TN5 RISER TEL. PATCH PANEL. LABEL AS SUCH ON THE FRONT FACE.
- TN6 PROVIDE DATA CAT 6A SLIM TYPE PATCH CORDS - 50 LIGHT BLUE 5' CORDS PER DATA PATCH PANEL AND ONE 14' LIGHT BLUE CORD PER STATION JACK. EXACT COUNTS TO BE COORDINATED WITH CLPCCD ITS BEFORE ORDERING.
- TN7 PROVIDE VOICE CAT 6A SLIM TYPE PATCH CORDS - (50) 5' WHITE CORDS
- TN8 THE MPOE IN B1900A HAS AN XLBET WITH TAILS TO A SPLICE CASE. SPLICE THE NEW COPPER BACKBONE CABLE TO THE EXISTING TAILS (PAIRS 376-400 AND WILL BE IDENTIFIED) USING AMPHENOL CONNECTORS. PROVIDE FUSES WITH THE QUANTITY MATCHING THE NUMBER OF COPPER PAIRS. COORDINATE WITH DISTRICT'S REPRESENTATIVE.

DSA:

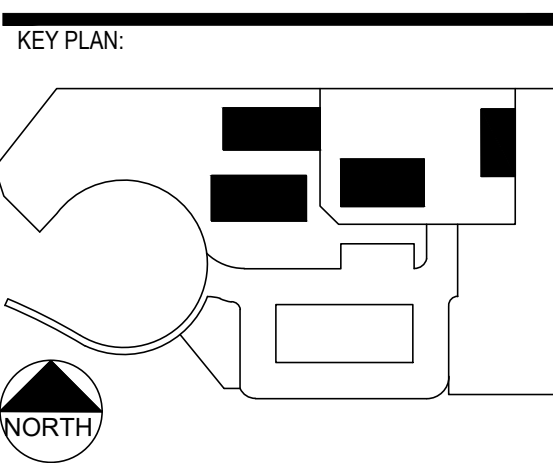
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APP: 01-119056 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021

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AN AC MARTIN COMPANY

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3009 Douglas Blvd #290 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1800

PROFESSIONAL STAMP:  
REGISTERED PROFESSIONAL ENGINEER  
SE 2677  
12/31/2020  
RENEWAL  
DATE: 11/19/2020  
RAY ENRIQUEZ  
REG. NO. 19661  
EXPIRES 12/31/2022  
CONSULTANT: Smith, Fausch & McDonald Inc. Consulting Engineers Group

ITEM	REVISION / ISSUE	DATE

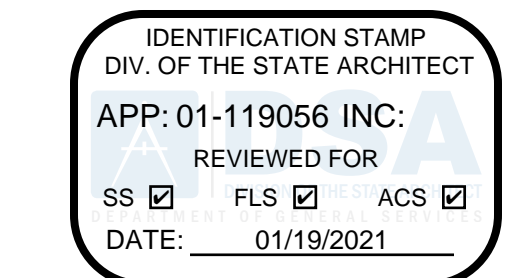


CLPCCD - LAS POSITAS COLLEGE  
AGRICULTURE SCIENCE HORTICULTURE FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

COPPER CABLING SINGLE LINE DIAGRAM

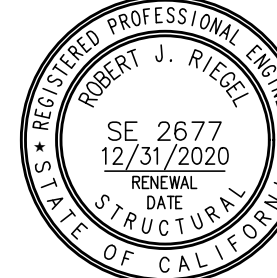
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DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

# TN801



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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916 772 1600  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714 338 1600

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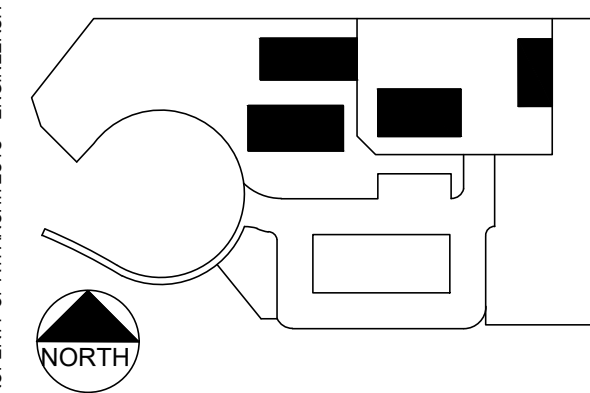
CONSULTANT:



301 8th Street San Francisco, California 94103 (415) 255-9140 www.sfm.com  
DATE: 11/19/2020 RAY ENRIQUEZ REG. NO. 19891 EXPIRES 12/31/2022

ITEM:	REVISION / ISSUE:	DATE:

KEY PLAN:



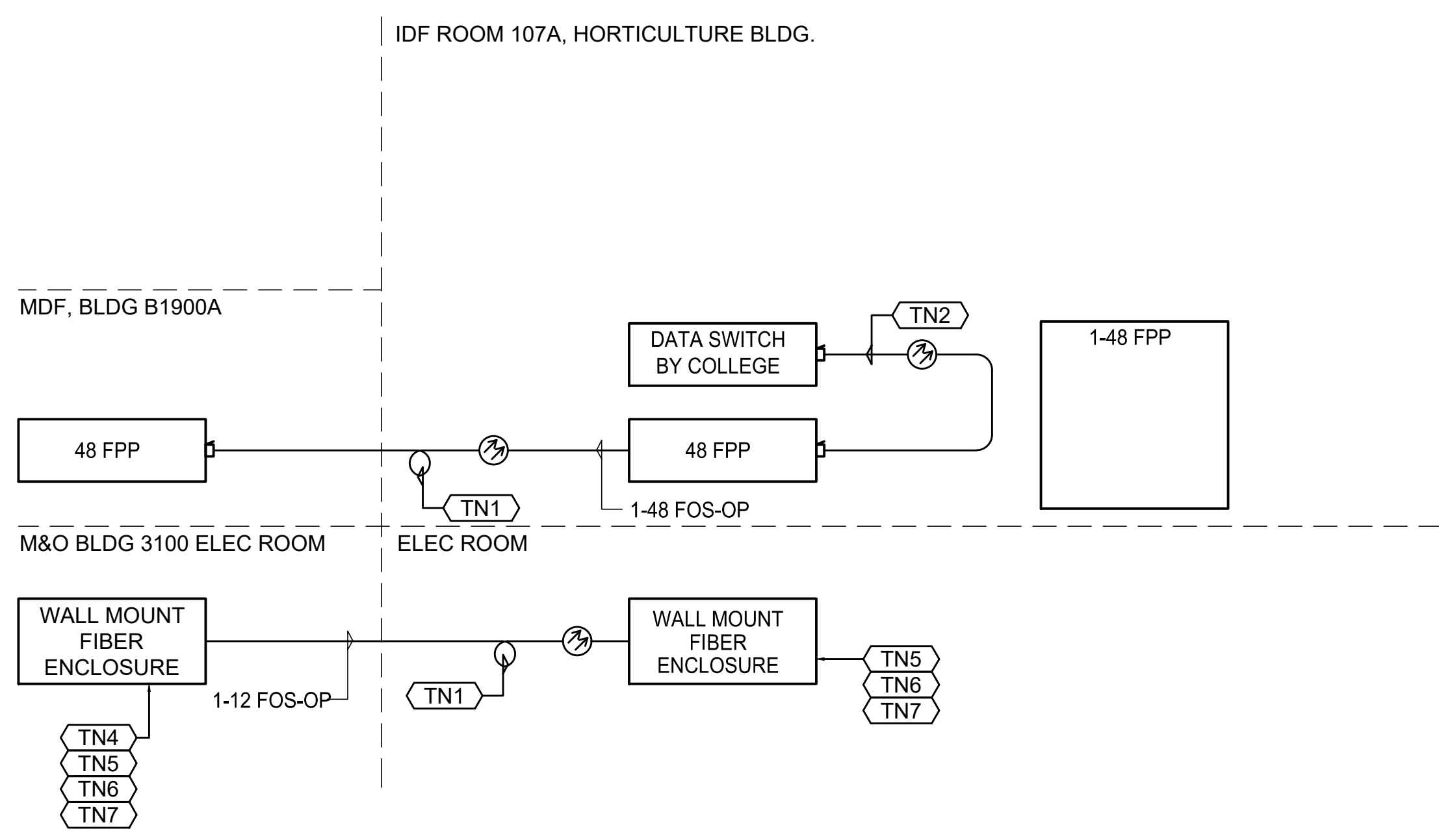
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3000 CAMPUS HILL DRIVE, LIVERMORE, CA 94551

### FIBER CABLING SINGLE LINE DIAGRAM

DRAWN BY: IK CHECKED BY: RLE  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

# TN802

- KEYNOTES**
- TN TELECOMMUNICATIONS SYSTEMS: WORK OF DIVISION 27.
  - ◻ TN1 PROVIDE 30' MIN. SLACK CABLE COILED IN AN FIBER MANAGEMENT RING (FMR) MOUNTED ON THE BACKBOARD.
  - ◻ TN2 PROVIDE SIX (6) 10' SC-LC YELLOW TERASPEED PATCH CORDS.
  - ◻ TN3 NOT USED.
  - ◻ TN4 FIRE ALARM. VERIFY PATHWAYS AND LOCATION IN THE FIELD WITH DISTRICT'S REPRESENTATIVE
  - ◻ TN5 PROVIDE SYSTIMAX SME-4-G2 WITH 12 LC CONNECTORS.
  - ◻ TN6 FOR FIRE ALARM USE.
  - ◻ TN7 PROVIDE TEN (10) 1M LC-LC AND EIGHT (8) 3M LC-LC RED TERASPEED PATCH CORDS.



1 FIBER CABLING SINGLE LINE DIAGRAM NTS

FRONT OF RACK

INSTRUCTOR'S STATION  
RACKING BAY

CEILING

INSTRUCTOR'S  
LECTERN SURFACE

(FINAL  
CONNECTION TO  
NETWORK BY  
DISTRICT)

**SYMBOL LEGEND**

ALS	ASSISTIVE LISTENING EMITTER
ALS-TX	ASSISTIVE LISTENING TRANSMITTER
AVSW1	AUDIOVISUAL SWITCH
CTP	CONTROL TOUCH PANEL
DCAM	DOCUMENT CAMERA
DMTX	DIGITAL MEDIA TRANSMITTER
NSW	PoE+ NETWORK SWITCH
OFE CPU	OWNER-FURNISHED COMPUTER
PAxx-70	70V AMPLIFIER (xx = WATTAGE)
SA	LOUDSPEAKER, CEILING
SCR	PROJECTION SCREEN
VPROJ	PROJECTOR
WCG	WIRELESS CONNECTION GATEWAY
WREC	WIRELESS MICROPHONES RECEIVER

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APP: 01-119056 INC:  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 01/19/2021

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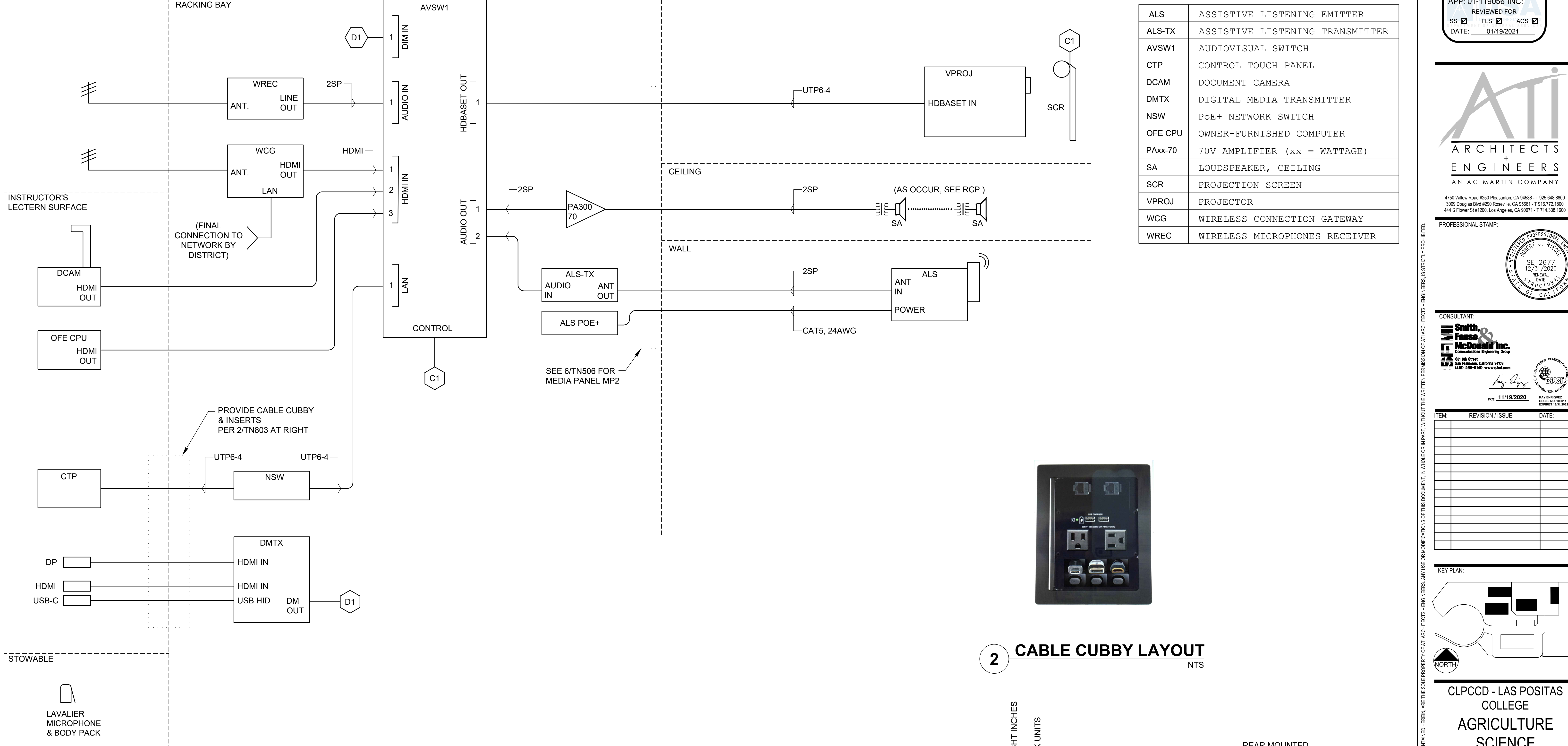
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3009 Douglas Blvd #200 Roseville, CA 95661 - T 916.772.1800  
444 S Flower St #1200, Los Angeles, CA 90071 - T 714.338.1600

PROFESSIONAL STAMP:  
REGISTERED PROFESSIONAL ENGINEER  
No. 2677  
12/31/2020  
RENEWAL  
DATE  
STRUCTURAL  
STATE OF CALIFORNIA

CONSULTANT:  
**Smith & Fausch & McDonald Inc.**  
Construction Engineering Group  
381 9th Street  
San Francisco, California 94103  
(415) 252-9140 www.sfm.com

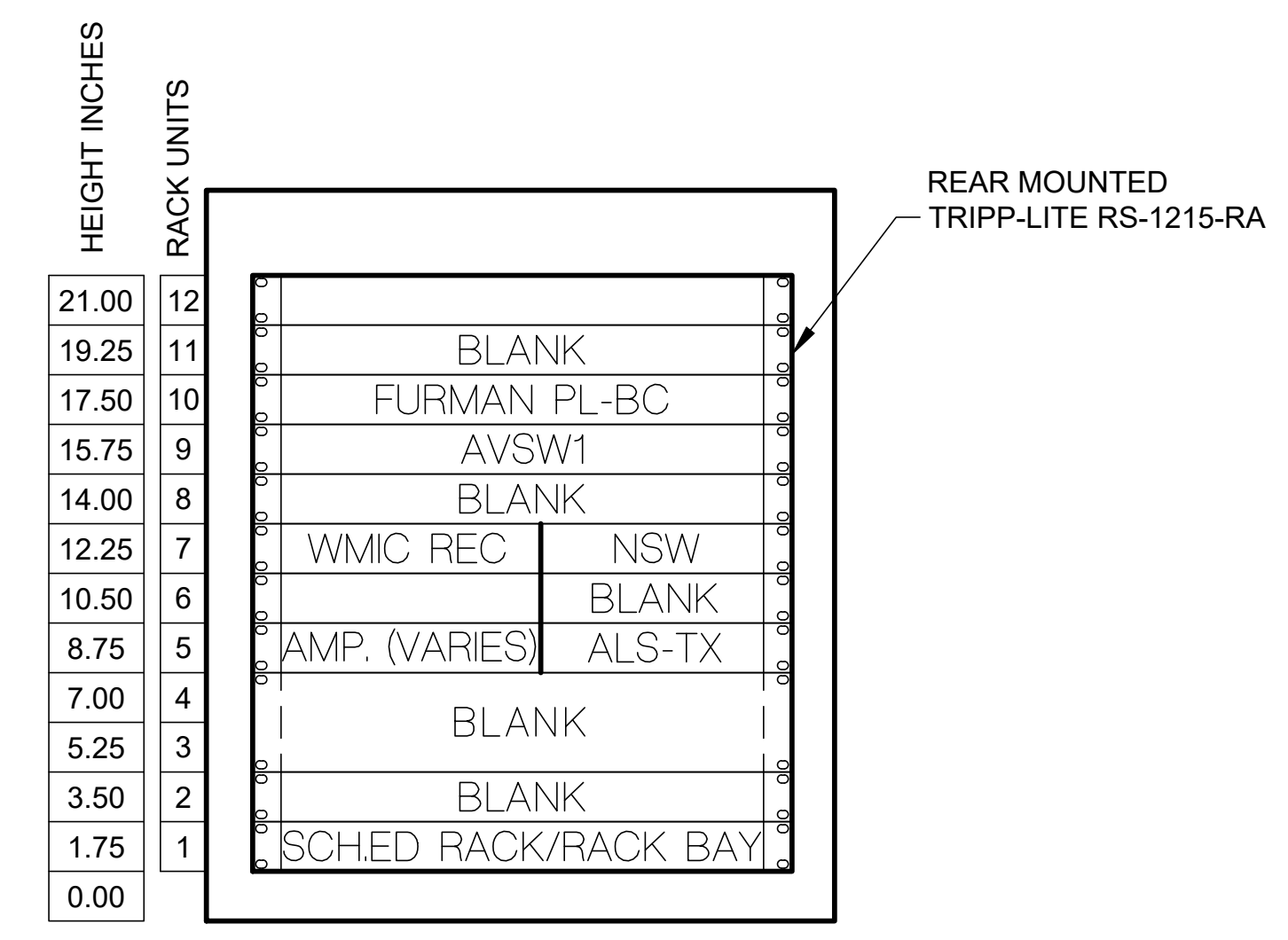
DATE: 11/19/2020  
RAY ENRIQUEZ  
PROJ. NO. 19611  
EXPIRES 12/31/2022

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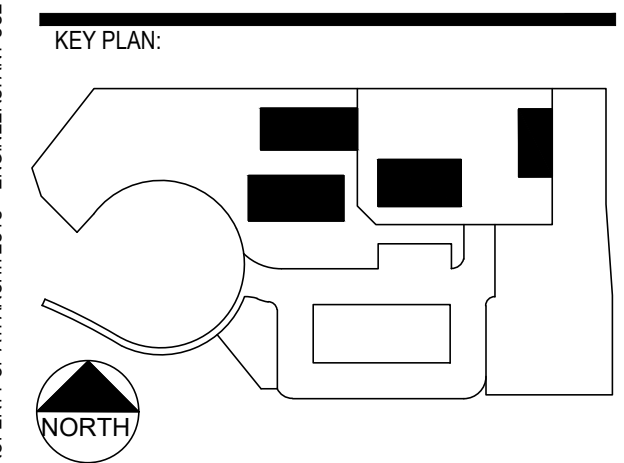


**1 TYPICAL CLASSROOM AUDIOVISUAL FUNCTIONAL DIAGRAM**  
NTS

**2 CABLE CUBBY LAYOUT**  
NTS



**3 TYP. RACK ELEVATION**  
NTS



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COLLEGE  
AGRICULTURE  
SCIENCE  
HORTICULTURE  
FACILITY  
3000 CAMPUS HILL DRIVE,  
LIVERMORE, CA 94551

**TYPICAL CLASSROOM  
AUDIOVISUAL  
FUNCTIONAL DIAGRAM**

DRAWN BY: IK CHECKED BY: RLE  
DATE: 01/14/2021 PROJECT NO: C9508  
SHEET NO:

**TN803**

11/09/2020, 03:48:38 PM  
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