THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG AT THIS SHEETS ORIGINAL PAGE SIZE

**LODI UNIFIED SCHOOL DISTRICT**

# LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS

## 2375 GIANNONI WAY LODI, CA 95242

## GENERAL NOTES

1. CONSTRUCTION DOCUMENTS DESCRIBE THE PRODUCTS, SYSTEMS, QUANTITIES, CONFIGURATION, AND PERFORMANCE SPECIFICATIONS THAT DELIVER THE OVERALL DESIGN INTENT OF THE PROJECT.
2. THE CONSTRUCTION DOCUMENT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH.
3. PERFORMANCE BY THE CONSTRUCTION TEAM SHALL BE CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AS NECESSARY TO DELIVER THE INDICATED RESULTS OF THE DESIGN INTENT.
4. VERIFY ALL DIMENSIONS, LOCATIONS OF EXISTING UTILITIES, AND CONDITIONS ON THE JOB SITE PRIOR TO THE START OF WORK OR PORTIONS OF THE WORK. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS. EXISTING CONDITIONS ARE INDICATED AS A RESULT OF FIELD OBSERVATIONS, INFORMATION SHOWN ON AVAILABLE DOCUMENTS AND FIELD CONDITIONS AT THE TIME OF PREPARATION.
5. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES, ORDINANCES, REGULATIONS AND LAWS.
6. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND SCAFFOLDING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
8. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWINGS.
9. DETAILS MARKED 'TYPICAL' SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY NOTED OTHERWISE.
10. ENACT ALL MEASURES TO PROTECT AND SAFEGUARD ALL EXISTING ELEMENTS TO REMAIN FROM BEING DAMAGED. REPLACE OR REPAIR EXISTING ELEMENTS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION.
11. PRIOR TO THE START OF WORK THE CONTRACTOR SHALL COORDINATE BETWEEN THE REQUIREMENTS OF ALL DISCIPLINES HEREIN AND BETWEEN THE REQUIREMENTS OF ALL DRAWINGS AND SPECIFICATIONS IN ORDER THAT ALL ITEMS SATISFACTORILY RELATE TO ONE ANOTHER. NOTIFY ARCHITECT IMMEDIATELY REGARDING ANY ITEMS THAT CANNOT BE COORDINATED.
12. CONTRACTOR SHALL EXCERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING, CONDUIT, ETC. AND TO PREVENT HAZARD TO PERSONNEL AND/OR TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
13. PROVIDE SAFE MEANS OF EGRESS THROUGH THE BUILDING AND ON SITE AT ALL TIMES.
14. PROVIDE FIRE EXTINGUISHERS PER CFC AT ALL TIMES THROUGHOUT CONSTRUCTION AREA.
15. PROVIDE CONSTRUCTION BARRIERS BETWEEN CONSTRUCTION AREAS AND OCCUPIED AREAS AT ALL TIMES.
16. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS SHALL NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD.
17. AVOID DISRUPTION TO ADJACENT AREAS. KEEP NOISE TO A LEVEL ACCEPTABLE TO THE OWNER BY SCHEDULING EXCESSIVE NOISE TASKS WITH OWNER REPRESENTATIVE. THIS MAY REQUIRE AFTER HOURS WORK.
18. **STATEMENT OF HAZARDOUS MATERIAL DISCOVERY**
    IF THE CONTRACTOR ENCOUNTERS A HAZARDOUS MATERIAL OR SUBSTANCE NOT ADDRESSED IN THE HAZARDOUS MATERIAL REPORT OR IN A CONCEALED CONDITION, THE CONTRACTOR SHALL, UPON RECOGNIZING THE CONDITION, IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND REPORT THE CONDITION TO THE OWNER AND ARCHITECT IN WRITING. UPON RECEIPT OF THE CONTRACTOR'S WRITTEN NOTICE, THE OWNER SHALL OBTAIN THE SERVICES OF A LICENSED LABORATORY TO VERIFY THE PRESENCE OR ABSENCE OF THE MATERIAL OR SUBSTANCE REPORTED BY THE CONTRACTOR AND, IN THE EVENT SUCH MATERIAL OR SUBSTANCE IS FOUND TO BE PRESENT, TO PROVIDE RECOMMENDATIONS TO CAUSE IT TO BE ABATED AND RENDERED HARMLESS.
    WHEN THE MATERIAL OR SUBSTANCE HAS BEEN ABATED AND RENDERED HARMLESS, WORK IN THE AFFECTED AREA SHALL RESUME UPON WRITTEN AGREEMENT OF THE OWNER AND CONTRACTOR.
19. PENETRATIONS TO FIRE RATED MATERIALS OR ASSEMBLIES SHALL BE RESTORED TO EQUAL RATING. SPECIAL INSPECTOR DSA 103 REQ'D.
21. COMPLY WITH TITLE 24, PART 9, CALIFORNIA FIRE CODE, CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, DURING ALL PHASES OF PROJECT.
22. ALL WORK SHALL CONFORM TO 2019 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
23. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGED DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
24. A "DSA CERTIFIED" CLASS 3 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
25. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
26. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR)
27. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
28. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION PER DSA IR A-6 AND SECTION 338(c) PART 1, TITLE 24, CCR.

## CODES

**PARTIAL LIST OF APPLICABLE CODES**

| | |
|---|---|
| 2022 | CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R. |
| 2022 | CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2021 INTERNATIONAL BUILDING CODE VOLUMES 1 & 2 AND 2022 CALIFORNIA AMENDMENTS) |
| 2022 | CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2020 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS) |
| 2022 | CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R. (2021 UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS) |
| 2022 | CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2021 UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS) |
| 2022 | CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R. |
| 2022 | CALIFORNIA HISTORICAL BUILDING CODE (CHBC), PART 8, TITLE 24 C.C.R. |
| 2022 | CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2021 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS) |
| 2022 | CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 C.C.R. (2021 INTERNATIONAL EXISTING CODE AND 2022 CALIFORNIA AMENDMENTS) |
| 2022 | CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R. |
| 2022 | CALIFORNIA REFERENCED STANDARDS, PART 12,TITLE 24 C.C.R. |
| TITLE 19 | C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS. |
| 2019 | ASME A17.1/B44-19 SAFETY CODE FOR ELEVATORS AND ESCALATORS |
| 2020 | ASME 18.1 - SAFETY STANDARD FOR PLATFORM LIFTS AND STAIRWAY CHAIR LIFTS |

**NOTE TO CONTRACTOR:**

THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH ENERGY CODE.
LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT).
MECHANICAL SYSTEM ACCEPATANCE TEST MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.
A LISTING OF CERTIFIED ATTs CAN BE FOUND AT: HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGAM/ACCEPTANCETHE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNITL THE CONSTUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.
PROJECT INSPECTORS WILL BE COLLECTING THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

**PARTIAL LIST OF APPLICABLE STANDARDS**

| | | |
|---|---|---|
| NFPA 13 | STANDARD FOR AUTOMATIC FIRE SPRINKLER SYSTEMS (CA AMENDED) | 2022 ED. |
| NFPA 14 | STANDARD FOR STANDPIPE AND HOSE SYSTEMS (CA AMENDED) | 2019 ED. |
| NFPA 17 | STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS | 2021 ED. |
| NFPA 17A | STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS | 2021 ED. |
| NFPA 20 | STANDARD FOR STATIONARY PUMPS FOR FIRE PROTECTION | 2019 ED. |
| NFPA 22 | STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION | 2013 ED. |
| NFPA 24 | STANDARD FOR THE INSTALLATION OF PRIVATE FIRE MAINS AND THEIR APPURTENANCES (CA AMENDED) | 2019 ED. |
| NFPA 72 | NATIONAL FIRE ALARM & SIGNALING CODE (CA AMENDED) | 2022 ED. |
| NFPA 80 | STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES | 2019 ED. |
| NFPA 2001 | STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED) | 2018 ED. |
| UL 300 | STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT | 2005 (R2014) |
| UL 464 | AUDIBLE SIGNAL APPLIANCES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES | 2003 ED. |
| UL 521 | STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS | 1999 ED. (R2005) |
| UL 1971 | STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED | 2002 ED. (R2018) |
| ICC 300 | STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS | 2017 ED. |

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2022 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.
SEE CALIFORNIA BUILDING CODE, CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

## PROJECT DESCRIPTION

SCOPE OF WORK

INSTALLATION OF 3 PC PORTABLES TO CAMPUS CLASSROOM BUILDINGS, PC RAMP AND ASSOCIATED UTILITY CONNECTIONS AND SITE WORK

## PROJECT DATA

PROJECT ADDRESS:
2375 GIANNONI WAY,
LODI, CA 95242

PROJECT INFORMATION:

BUILDING NAME: P10

CONSTRUCTION TYPE: V-B
OCCUPANCY: 'E'
SPRINKLERED: YES
NUMBER OF STORIES: 1
BUILDING AREA: 1,128 SF

BUILDING NAME: P11

CONSTRUCTION TYPE: V-B
OCCUPANCY: 'E'
SPRINKLERED: YES
NUMBER OF STORIES: 1
BUILDING AREA: 1,128 SF

BUILDING NAME: P12

CONSTRUCTION TYPE: V-B
OCCUPANCY: 'E'
SPRINKLERED: YES
NUMBER OF STORIES: 1
BUILDING AREA: 1,128 SF

## DEFERRED ITEMS

NONE

## BID NOTES

BUILDING MANUFACTURER SHALL PROVIDE AND INSTALL PC CLASSROOM BUILDING IN ITS ENTIRETY, WOOD FOUNDATIONS, FIRE RISER AND FIRE SPRINKLER SYSTEM, UTILITY CONNECTIONS FROM 5' OUTSIDE OF THE BUILDING INWARD.

GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL OTHER ITEMS SHOW AND DESCRIBED, INCLUDING, BUT NOT LIMITED TO ALL SITEWORK, UTILITES, SIGNAGE, AND FIRE ALARM.

## SHEET INDEX

| | |
|---|---|
| GENERAL SHEET | |
| G0.11 | COVER SHEET |
| G1.10 | LOCAL FIRE AUTHORITY SITE ACCESS PLAN |
| G1.11 | CODE INFORMATION SITE PLAN |
| 3 | |
| CIVIL | |
| C1.1 | TITLE SHEET |
| C2.1 | DEMOLITION SHEET |
| C3.1 | GRADING, DRAINAGE AND PAVING PLAN |
| C4.1 | UTILITY PLAN |
| C5.1 | DETAILS |
| 5 | |
| ARCHITECTURE | |
| A1.11 | PARTIAL SITE PLAN |
| A10.01 | SITE AND GATE DETAILS |
| A10.81 | SIGNAGE DETAILS |
| 3 | |
| FIRE PROTECTION | |
| FP-1 | SITE PLAN |
| FP-2 | DETAILS |
| FP-3 | PIPING PLANS AND REFLECTED CEILING PLANS |
| 3 | |
| ELECTRICAL | |
| E0.01 | ELECTRICAL COVER SHEET |
| E0.02 | ELECTRICAL NOTES |
| E1.01 | ELECTRICAL SITE PLAN |
| E1.10 | PARTIAL SITE PLANS |
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| E2.11 | FIRE ALARM FLOOR PLANS |
| E3.01 | ELECTRICAL DETAILS |
| E3.02 | ELECTRICAL DETAILS |
| E4.01 | FIRE ALARM CALCULATIONS |
| 9 | |
| PC 04-123059 | |
| A0.0 | COVER SHEET |
| A0.0.1 | PROJECT OPTIONS SCHEDULE |
| A0.1 | TYPICAL KEY PLAN AND SCHEDULES, GEN NOTES, |
| A0.2 | SIGNAGE AND SYMBOLS |
| A0.5 | CALGREEN SPEC'S |
| A0.6 | CALGREEN CHECKLIST |
| A0.7 | CALGREEN CHECKLIST |
| A0.8 | CALGREEN CHECKLIST |
| A1.0 | 24x40 FLOOR PLAN |
| A2.1(B) | ARCHITECTURAL WUI DETAILS (WOOD FRAMING SHTG FINISH) |
| A2.7 | WUI NOTES AND CRITERIA |
| A2.9 | ARCHITECTURAL DETAILS (FLOOR) |
| A3.0.1 | FIRE SEPARATION & PENETRATION DETAILS |
| A3.2 | RCP |
| A3.2.1 | CEILING NOTES |
| A3.3 | CEILING DETAILS (T-GRID) |
| A4.0.1 | ROOF PLAN MONO SLOPE (STANDING SEAM) |
| A4.1 | ROOF DETAILS (STANDING SEAM) |
| A4.2.1 | ROOF PLAN MONO SLOPE (EPDM) |
| A5.0 | SIDEWALL ELEVATION |
| A5.1 | ENDWALL ELEVATIONS |
| A5.2 | INTERIOR ELEVATIONS |
| A6.0 | SECTION - STANDING SEAM (MONO) |
| A6.2 | SECTION |
| A7.2 | ADDITIONAL OPTION DETAILS |
| E0.1 | ELECTRICAL GENERAL NOTES |
| E1.0 | ELECTRICAL PLAN 24x40 |
| E1.1 | ELECTRICAL SCHEDULES 24x40 |
| F1.10 | WOOD FOUNDATION NOTES SCHED FOR BLDG W/ 50+15 |
| F1.11 | WOOD FOUNDATION PLAN 24x40 BLDG W/ 50+15 |
| F1.40 | WOOD FOUNDATION DETAILS |
| F2.10 | CONCRETE FOUNDATION PLAN |
| F2.20 | CONCRETE FOUNDATION DETAILS |
| F2.22 | CONCRETE FOUNDATION DETAILS |
| F2.23 | CONCRETE FOUNDATION DETAILS |
| M0.1 | MISCELLANEOUS NOTES & DETAILS |
| M0.2 | MISCELLANEOUS NOTES & DETAILS |
| M2.10 | 24'x40' T24 CZ 14 (WALL AC) |
| M2.11 | 24'x40' T24 CZ 14 (WALL AC) |
| M2.12 | 24'x40' T24 CZ 14 (WALL AC) |
| M2.13 | 24'x40' T24 CZ 14 (WALL AC) |
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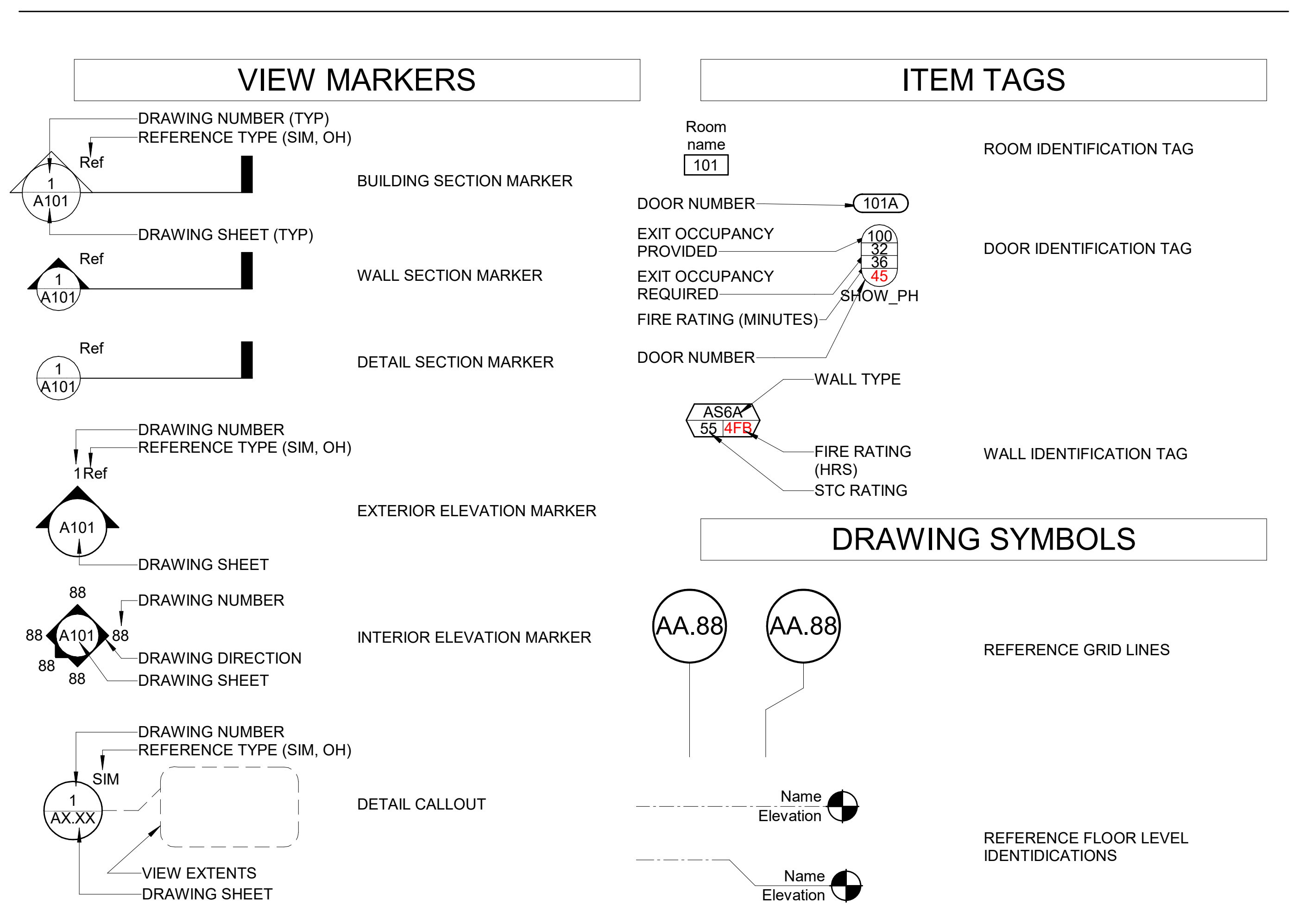
| M5.1 | MECHANICAL CEILING PLAN 24x40 |
| S0.1 | STRUCTURAL GEN NOTES |
| S1.0.4 | WD SHTH'G FLR FRAMING PLAN CROSS-STRAP OPT. |
| S1.1.1 | CONC FLR FRM'G PLAN 1 (50 + 15 PSF 100 PSF 150 PSF |
| S1.2 | STRUCTURAL DETAILS (FLOOR) |
| S3.0.3 | MONO SLOPE ROOF FRM'G PLAN CROSS-STRAP OPT. |
| S3.1 | STRUCTURAL DETAILS (ROOF) |
| S3.3 | ROOF PERIMETER TRUSS |
| S4.1 | WD WALL FRAMING ELEVATIONS |
| S4.2 | WALL DETAILS (WOOD FRAMING) |
| S4.4 | TYP FRAMING |
| S4.5 | FRAMING SCHEDULES |
| S5.0 | LONG. SECTION -(MONO) |
| SR0 | MODULE PLAN AND NOTES |
| SR1 | RAMP LANDING |
| SR2 | LANDING FRAME |
| SR3 | FOUNDATION PLAN |
| SR4 | RAMP ELEVATION |
| SR6 | RAMP DETAILS |
| SR7 | STAIR CONN |
| 63 | |
| Grand total: 86 | |

## SYMBOL LEGEND



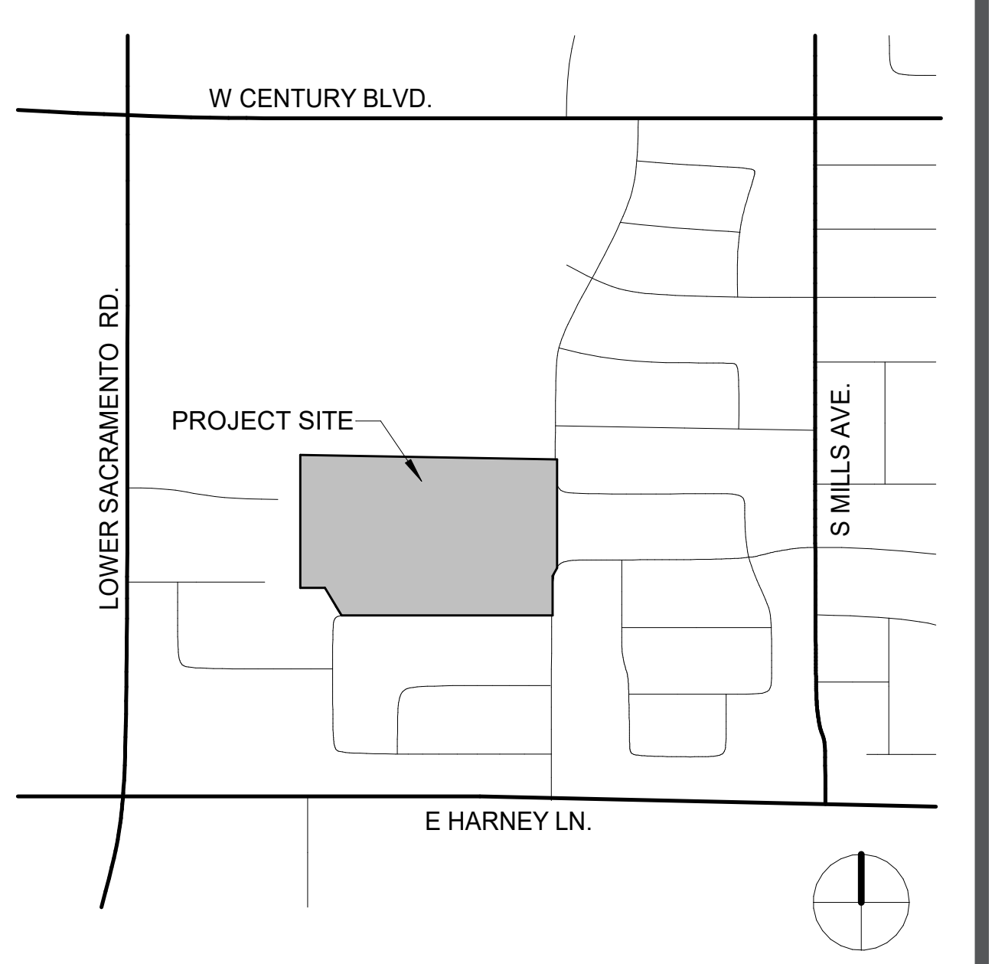
## ABBREVIATIONS

| | |
|---|---|
| (E) | EXISTING |
| AB | ANCHOR BOLT |
| AC PAVING | ASPHALTIC CONCRETE PAVING |
| ACC | ACCESS/ACCESSIBLE |
| ACP | ACOUSTICAL CEILING PANEL |
| ACT | ACOUSTICAL CEILING TILE |
| ADJ | ADJACENT/ADJUSTABLE |
| AFF | ABOVE FINISH FLOOR |
| AGG | AGGREGATE |
| AHU | AIR HANDLING UNIT |
| ARCH | ARCHITECTURAL |
| ATT | ATTENUATION |
| AUTO | AUTOMATIC |
| BD | BOARD |
| BLCG | BLOCKING |
| BUR | BUILT UP ROOFING |
| CABT | CABINET |
| CF | CUBIC FEET |
| CFCI | CONTRACTOR FURNISHED, CONTRACTOR INSTALLED |
| CFOI | CONTRACTOR FURNISHED, OWNER INSTALLED |
| CG | CORNER GUARD |
| CJ | CONTROL JOINT |
| CL | CENTER LINE |
| CLF | CHAIN LINK FENCE |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| CO | CLEANOUT |
| COL | COLUMN |
| COMP | COMPRESSION / COMPOSITE |
| CF | CUBIC FEET |
| COORD | COORDINATE |
| CORR | CORRUGATED |
| CT | CERAMIC TILE |
| CTSK | COUNTER SKUNK |
| CW | CURTAINWALL |
| DEPR | DEPRESSED / DEPRESSION |
| DF | DRINKING FOUNTAIN |
| DIM | DIMENSION |
| DISP | DISPENSER |
| DS | DOWNSPOUT |
| DTL | DETAIL |
| DW | DISHWASHER |
| E/W | EACH WAY |
| EIFS | EXTERIOR INSULATION FINISH |
| SYSTEM | |
| EJ | EXPANSION JOINT |
| ELEC | ELECTRICAL |
| ELEV | ELEVATION / ELEVATOR |
| ENCL | ENCLOSE / ENCLOSURE |
| EOS | EDGE OF SLAB |
| EP | ELECTRICAL PANEL |
| EQ | EQUAL |
| ESC | EXCUTCHEON |
| EWC | ELECTRIC WATER COOLER |
| EXP | EXPOSED |
| FA | FIRE ALARM |
| FD | FLOOR DRAIN |
| FDC | FIRE DEPARTMENT CONNECTION |
| FE | FIRE EXTINGUISHER |
| FEC | FIRE EXTINGUISHER W/ CABINET |
| FF | FINISH FLOOR |
| FG | FINISH GRADE |
| FH | FIRE HYDRANT |
| FHC | FIRE HOSE CABINET |
| FSH | FLAT HEAD SCREW |
| FIN | FINISH |
| FLR | FLOOR |
| FOC | FACE OF CONCRETE |
| FOF | FACE OF FINISH |
| FOM | FACE OF MASONRY |
| FOS | FACE OF STUD |
| FP | FIREPROOFING |
| FR | FIRE RATED |
| FRG | FIRE RATED GLASS |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| FRT | FIRE RETARDANT TREATED |
| FS | FINISH SURFACE |
| FTG | FOOTING |
| GB | GRAB BAR |
| GFRC | GLASS FIBER REINFORCED CONCRETE |
| GL | GLASS TYPE |
| GLB | GLUE LAMINATED BEAM |
| GYP BD | GYPSUM BOARD |
| GYP PLAS | GYPSUM PLASTIC |
| HB | HOSE BIBB |
| HD | HEAVY DUTY |
| HDR | HEADER |
| HDWR | HARDWARE |
| HGT | HEIGHT |
| HM | HOLLOW METAL |
| HP | HIGH POINT |
| HSS | HOLLOW STEEL SECTION |
| ID | INSIDE DIAMTER |
| INT | INTERIOR |
| INV | INVERT |
| LANDS | LANDSCAPE |
| LAV | LAVATORY |
| LLH | LONG LEG HORIZONTAL |
| LLV | LONG LEG VERTICAL |
| LP | LOW POINT |
| LT WT | LIGHT WEIGHT |
| LVR | LOUVER |
| MACH | MACHINE |
| MB | MACHINE BOLT |
| MDF | MEDIUM DENSITY FIBERBOARD |
| MDO | MEDIUM DENSITY OVERLAY |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MEMB | MEMBRANE |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MO | MASONRY OPENING |
| MTD | MOUNTED |
| MTL | METAL |
| NIC | NOT IN CONTRACT |
| NR | NON RATED |
| NRC | NOISE REDUCTION COEFFICIENT |
| NTS | NOT TO SCALE |
| O/ | OVER |
| O/A | OVERALL |
| OC | ON CENTER |
| OD | OUTSIDE DIAMTER |
| OFCI | OWNER FURNISHED, CONTRACTOR INSTALLED |
| OFOI | OWNER FURNISHED, OWNER INSTALLED |
| OFVI | OWNER FURNISHED, VENDOR INSTALLED |
| OH | OPPOSITE HAND |
| OPER | OPERABLE |
| OPNG | OPENING |
| ORD | OVERFLOW ROOF DRAIN |
| P/L | PROPERTY LINE |
| PA | PUBLIC ADDRESS |
| PAF | POWDER ACTUATED FASTENER PAVING |
| PCC | PORTLAND CEMENT CONCRETE PAVING |
| PED | PEDESTRIAN |
| PERF | PERFORATED |
| PERIM | PERIMETER |
| PERP | PERPENDICULAR |
| PH | PANIC HARDWARE |
| PIV | POST INDICATOR VALVE |
| PL | PLATE |
| PLAM | PLASTIC LAMINATE |
| PLAS | PLASTER |
| PLUMB | PLUMBING |
| PNL | PANEL |
| PNT | PAINT / PAINTED |
| POC | POINT OF CONNECTION |
| POLY ISO | POLYISOCYANURATE |
| PREFIN | PREFINISHED |
| PREP | PREP / PREPARATION |
| PTC | POST TENSIONED CONCRETE |
| PTD | PAPER TOWEL DISPENSER |
| PTN | PARTITION |
| PTS | PNEUMATIC TUBE STATION / SYSTEM |
| PVC | POLYVINYL CHLORIDE |
| PVMT | PAVEMENT |
| QT | QUARRY TILE |
| R | RADIUS, RISER |
| RB | RESILIENT BASE |
| RD | ROOF DRAIN |
| RECEPT | ECEPTACLE |
| REF | REFERENCE |
| REFL | REFLECT(ED), (IVE) |
| REFL | REFLECT(ED), (IVE) |
| REFR | REFRIGERATOR |
| REINF | REINFORCE/REINFORCED/ REINFORCEMENT |
| REM | REMOVE |
| RH | ROUND HEAD |
| RHS | ROUND HEAD SCREW |
| RO | ROUGH OPENING |
| ROW | RIGHT OF WAY |
| SCH | SCHEDULE (FOR PIPE) |
| SCHED | SCHEDULE / SCHEDULING |
| SD | STORM DRAIN / SOAP DISPENSER |
| SECT | SECTION |
| SG | SAFETY GLASS |
| SHT | SHEET |
| SHTG | SHEATHING |
| SMS | SHEET METAL SCREW |
| SND | SANITARY NAPKIN DISPOSAL |
| SOV | SHUT OFF VALVE |
| SPEC | SPECIFICATIONS |
| SS | STAINLESS STEEL |
| STC | SOUND TRAMISSION CLASS |
| STL | STEEL |
| STSMS | SELF TAPPING SHEET METAL |
| SCREW | |
| SUSP | SUSPENDED |
| SV | SHEET VINYL |
| SYM | SYMMETRICAL |
| T | TREAD |
| T&B | TOP AND BOTTOM |
| TO | TOP OF |
| TOC | TOP OF CURB / CONCRETE |
| TOP | TOP OF PARAPET |
| TOS | TOP OF STEEL |
| TOW | TOP OF WALL |
| TPD | TOILET PAPER DISPENSER |
| TS | TACKABLE SURFACE |
| U/C | UNDER CABINET (OR COUNTER |
| UNO | UNLESS NOTED OTHERWISE |
| UR | URINAL |
| VAC | VACUUM |
| VB | VAPOR BARRIER |
| VCT | VINYL COMPOSITION TILE |
| VIF | VERIFY IN FIELD |
| VTR | VENT THROUGH ROOF |
| VWC | VINYL WALL COVERING |
| W/ | WITH |
| W/O | WITHOUT |
| WB | WOOD BASE |
| WC | WATER CLOSET |
| WD | WOOD |
| WDW | WINDOW |
| WGT | WEIGHT |
| WH | WATER HEATER |
| WP | WATERPROOFING/WALL PROTECTION |
| WR | WATER RESISTANT |
| WRGB | WATER RESISTANT GYPSUM BOARD |
| WS | WOOD SCREW |
| WSCT | WAINSCOT |
| WWF | WELDED WIRE FABRIC |

NOTE:
OTHER ABBREVIATIONS USED ON THESE DRAWINGS ARE CONSIDERED STANDARDS IN THE BUILDING INDUSTRY. CONTACT ARCHITECT FOR NECESSARY CLARIFICATION.

## STATE MAP

## VICINITY MAP



## STATEMENT OF GENERAL CONFORMANCE

( X ) THE DRAWINGS OR SHEETS LISTED ON THE INDEX SHEET
( X ) THIS DRAWING PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND
2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344" OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317 (B))

I CERTIFY THAT:

THE PC APPROVED MANUFACTURER DRAWINGS LISTED ON THE INDEX SHEET ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND THEY HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.

SIGNATURE
ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE

DATE 12/20/2024

Jeffrey Grau
PRINT NAME

C-14648
LICENSE NUMBER

05-31-25
EXPIRATION DATE

**AGENCY APPROVAL:**

REVIEWING AGENCIES STAMP HERE

LODI USD

HMC Architects

2101 CAPITOL AVENUE, SUITE 100,
SACRAMENTO, CA, 95816
916 368 7990 / www.hmcarchitects.com

## PROJECT TEAM

**OWNER**
**LODI UNIFIED SCHOOL DISTRICT**
1305 EAST VINE STREET, LODI, CA 95240
(209) 331-7000

**ARCHITECT**
**HMC ARCHITECTS**
2101 CAPITOL AVENUE STE. 100, SACRAMENTO, CA 95816
(916) 368-7990

**CIVIL**
**WARREN GREEN CIVIL ENGINEER**
3114 BRENNANS ROAD, LOOMIS, CA 95650
(916) 663-2323

**ELECTRICAL**
**EDGE ELECTRICAL CONSULTING**
400 R STREET STE. 333, SACRAMENTO, CA 95811
(916) 256-2460

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**COVER SHEET**

**DSA SUBMITTAL**

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**G0.11**

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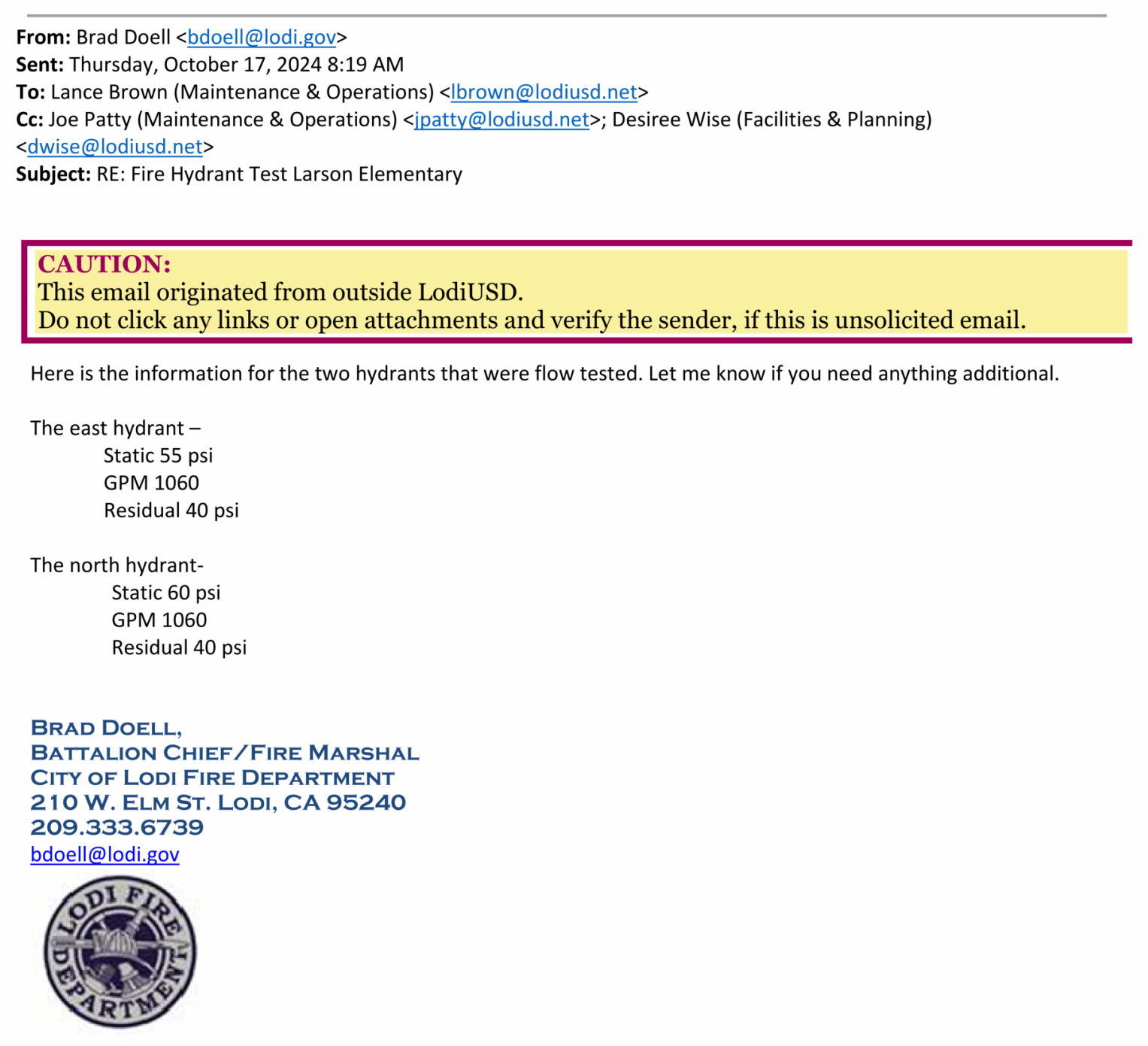


**From:** Brad Doell <bdoell@lodi.gov>
**Sent:** Thursday, October 17, 2024 8:19 AM
**To:** Lance Brown (Maintenance & Operations) <lbrown@lodiusd.net>
**Cc:** Joe Patty (Maintenance & Operations) <jpatty@lodiusd.net>; Desiree Wise (Facilities & Planning) <dwise@lodiusd.net>
**Subject:** RE: Fire Hydrant Test Larson Elementary

**CAUTION:**
This email originated from outside LodiUSD.
Do not click any links or open attachments and verify the sender, if this is unsolicited email.

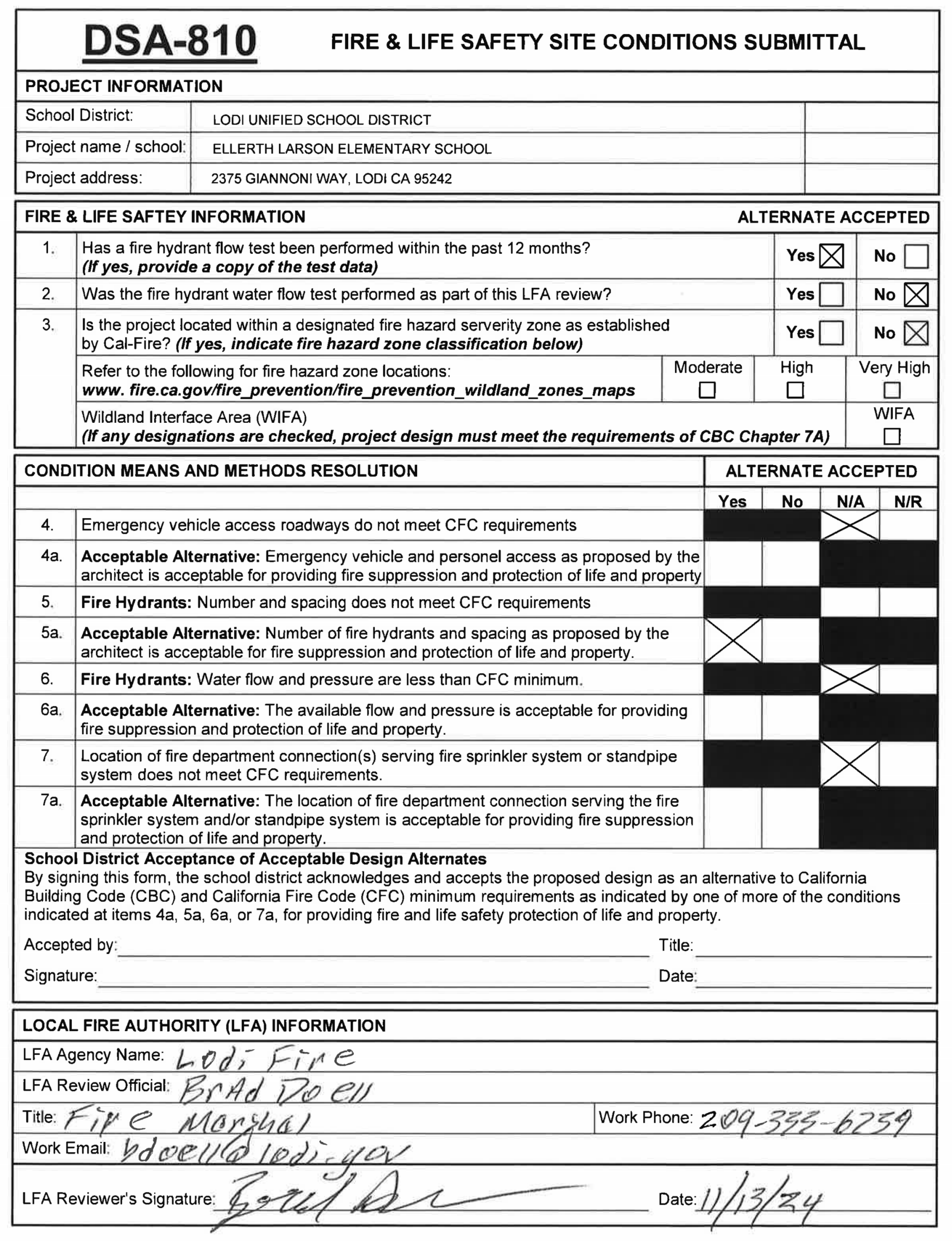
Here is the information for the two hydrants that were flow tested. Let me know if you need anything additional.

The east hydrant –
Static 55 psi
GPM 1060
Residual 40 psi

The north hydrant-
Static 60 psi
GPM 1060
Residual 40 psi

BRAD DOELL,
BATTALION CHIEF/FIRE MARSHAL
CITY OF LODI FIRE DEPARTMENT
210 W. ELM ST. LODI, CA 95240
209.333.6739
bdoell@lodi.gov

1



# DSA-810 FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

**PROJECT INFORMATION**

| | | |
|---|---|---|
| School District: | LODI UNIFIED SCHOOL DISTRICT | |
| Project name / school: | ELLERTH LARSON ELEMENTARY SCHOOL | |
| Project address: | 2375 GIANNONI WAY, LODI CA 95242 | |

| FIRE & LIFE SAFTEY INFORMATION | | ALTERNATE ACCEPTED | |
|---|---|---|---|
| 1. | Has a fire hydrant flow test been performed within the past 12 months? ***(If yes, provide a copy of the test data)*** | Yes ☒ | No ☐ |
| 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 serverity zone as established by Cal-Fire? ***(If yes, indicate fire hazard zone classification below)*** | Yes ☐ | No ☒ |

Refer to the following for fire hazard zone locations: ***www. fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps*** Moderate ☐ High ☐ Very High ☐

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

| CONDITION MEANS AND METHODS RESOLUTION | | ALTERNATE ACCEPTED | | | |
|---|---|---|---|---|---|
| | | Yes | No | N/A | N/R |
| 4. | Emergency vehicle access roadways do not meet CFC requirements | | | ☒ | |
| 4a. | **Acceptable Alternative:** Emergency vehicle and personel access as proposed by the architect is acceptable for providing fire suppression and protection of life and property | | | | |
| 5. | **Fire Hydrants:** Number and spacing does not meet CFC requirements | | | | |
| 5a. | **Acceptable Alternative:** Number of fire hydrants and spacing as proposed by the architect is acceptable for fire suppression and protection of life and property. | ☒ | | | |
| 6. | **Fire Hydrants:** Water flow and pressure are less than CFC minimum. | | | ☒ | |
| 6a. | **Acceptable Alternative:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property. | | | | |
| 7. | Location of fire department connection(s) serving fire sprinkler system or standpipe system does not meet CFC requirements. | | | ☒ | |
| 7a. | **Acceptable Alternative:** 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. | | | | |

**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 of 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**

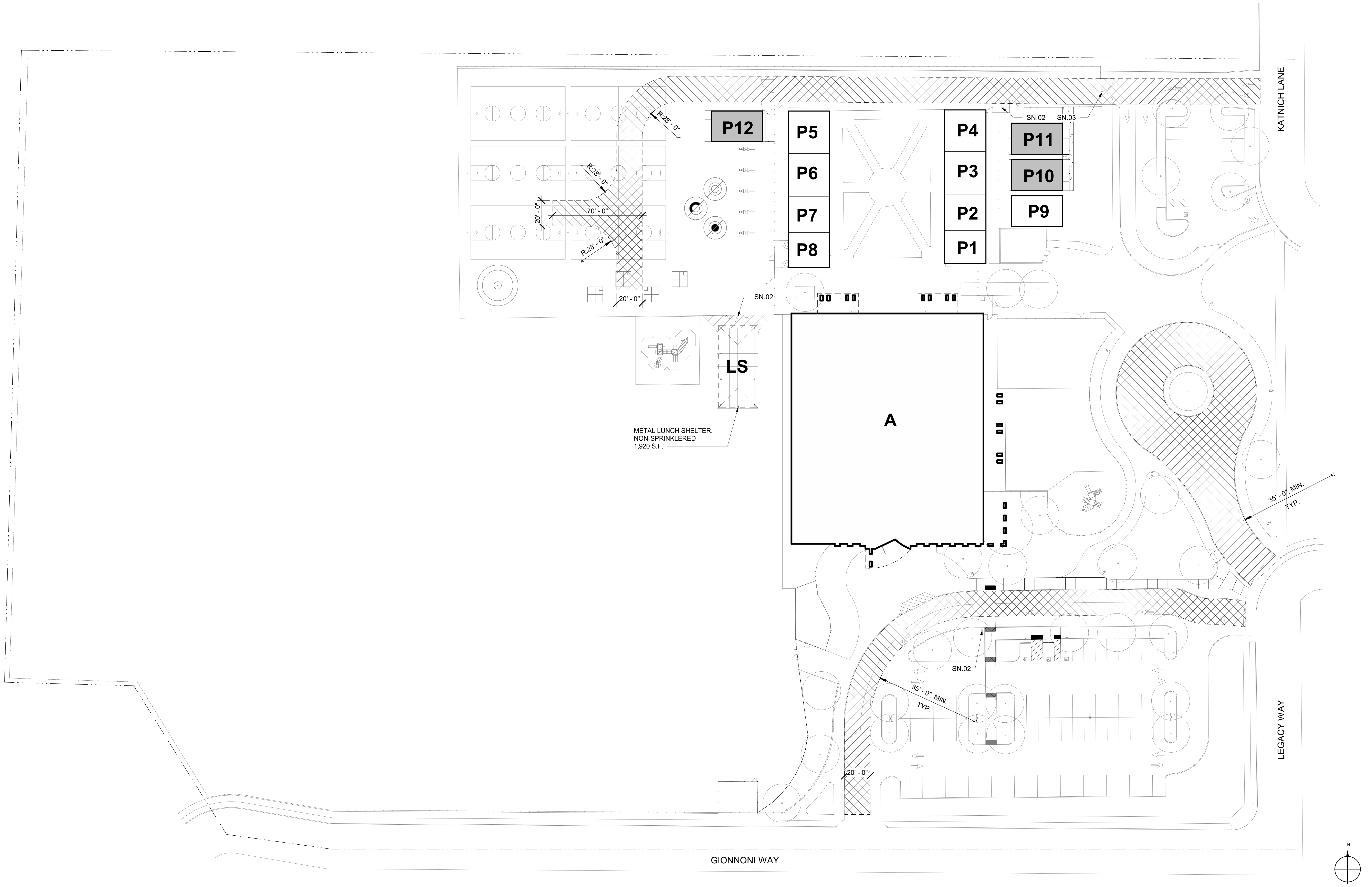
LFA Agency Name: Lodi Fire
LFA Review Official: BrAd Doell
Title: Fire Marshal Work Phone: 209-333-6239
Work Email: bdoell@lodi.gov
LFA Reviewer's Signature: Date: 11/13/24

## LEGEND

| | |
|---|---|
| — · · — · · — | PROPERTY LINE |
| —×—×— | EXISTING CHAINLINK FENCE |
| —✕—✕— | NEW CHAINLINK FENCE |
| —□—□— | EXISTING ORNAMENTAL FENCE |
| ☐ X | EXISTING BUILDINGS |
| ▨ X | NEW BUILDING |
| ▨ | EXISTING 20' - 0" WIDE FIRE LANE |
| ○ | EXISTING FIRE HYDRANT |

## SHEET NOTES

| | |
|---|---|
| SN.02 | EXISTING FIRE HYDRANT |
| SN.03 | EXISTING 20'-0" WIDE CHAIN LINK GATES. PROVIDE KNOX LOCK |



LOCAL FIRE AUTHORITY ACCESS PLAN 1
1" = 40'-0"

AGENCY APPROVAL:

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LODI USD

HMC Architects

2101 CAPITOL AVENUE, SUITE 100,
SACRAMENTO, CA, 95816
916 368 7990 / www.hmcarchitects.com

## ISSUE

| Δ | DESCRIPTION | DATE |
|---|---|---|

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**LOCAL FIRE AUTHORITY SITE ACCESS PLAN**

## DSA SUBMITTAL

DATE: **1/22/2025** CLIENT PROJ NO:

SHEET:
**G1.10**

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## BUILDING DATA AND ALLOWABLE AREA ANALYSIS

| BUILDING | OCCUPANCY | CONSTRUCTION TYPE | ALLOWABLE AREA (TABLE 506.2) | ACTUAL BLDG. AREA (S.F) | OCCUPANCY CALCULATION |
|---|---|---|---|---|---|
| P10 | E | V-B SPRINKLERED | 28,500 S.F. | P10: 960<br>OVERHANG: 168<br>TOTAL: 1,128 | 960 S.F. / 20 NET = 48 OCC. |
| P11 | E | V-B SPRINKLERED | 28,500 S.F. | P11: 960<br>OVERHANG: 168<br>TOTAL: 1,128 | 960 S.F. / 20 NET = 48 OCC. |
| P12 | E | V-B SPRINKLERED | 28,500 S.F. | P12: 960<br>OVERHANG: 168<br>TOTAL: 1,128 | 960 S.F. / 20 NET = 48 OCC. |

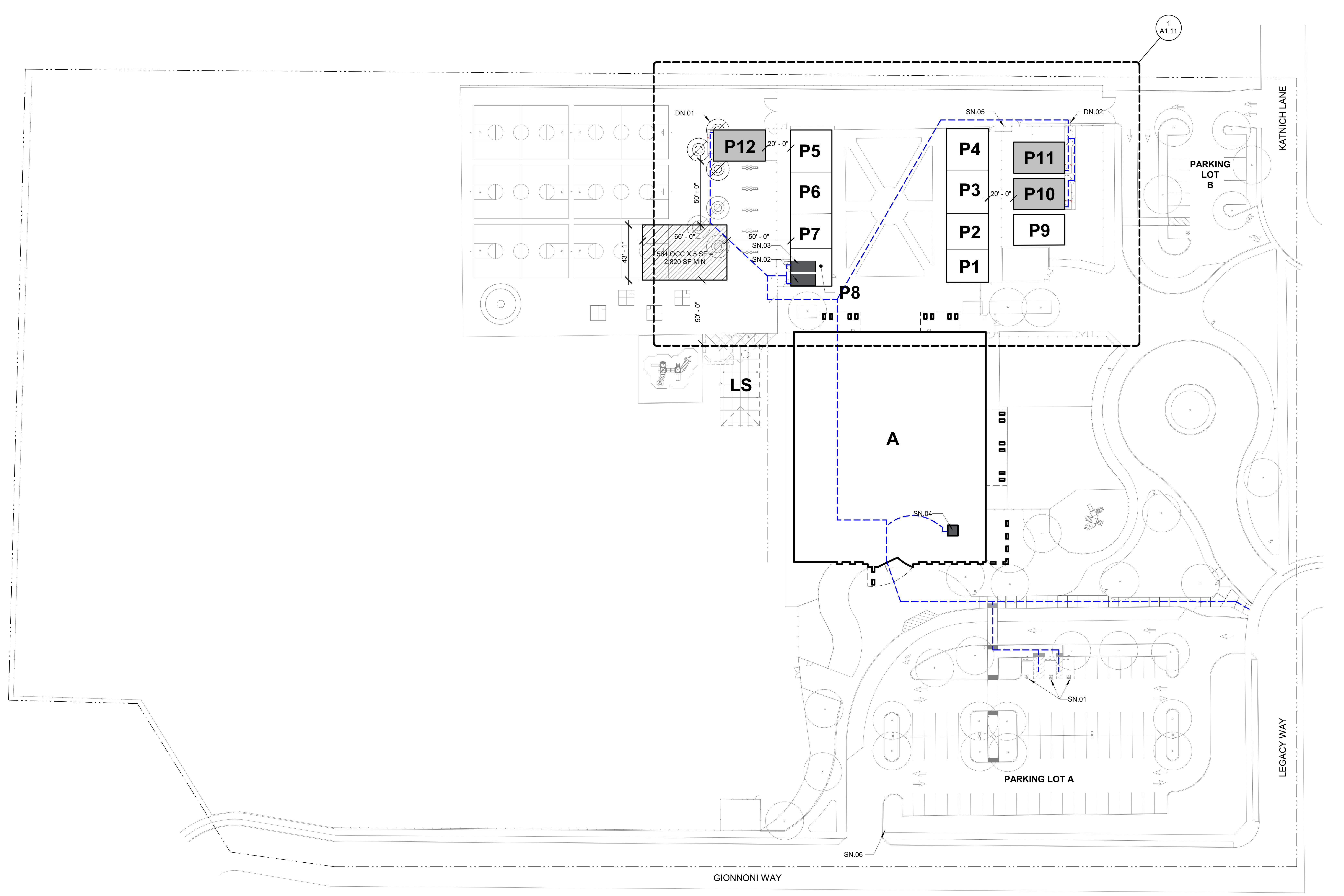
## EXISTING PATH OF TRAVEL (POT): ARCHITECT STATEMENT

**DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE IN CHARGE STATEMENT:** THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS**. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NON-COMPLIANT

1) HAVE BEEN IDENTIFIED AND
2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS, AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS.

ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NON-CONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT TO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.



TN

CODE INFORMATION SITE PLAN 1
1" = 40'-0"

## LEGEND

| | |
|---|---|
| — · · — | PROPERTY LINE |
| - - - - | ACCESSIBLE PATH OF TRAVEL |
| —×— | EXISTING CHAINLINK FENCE |
| ✕—✕—✕ | NEW CHAINLINK FENCE |
| □—□—□ | EXISTING ORNAMENTAL FENCE |
| ⚲ | EXISTING FIRE HYDRANT |
| ▨ | SAFE DISPERSAL AREA |
| X | EXISTING BUILDINGS |
| X | NEW BUILDINGS |
| ⛆ | NEW CONCRETE PAVING |

## DEMOLITION NOTES

| | |
|---|---|
| DN.01 | REMOVE (E) TETHERBALL COURTS, TYP. |
| DN.02 | DEMO (E) GATE |

## SHEET NOTES

| | |
|---|---|
| SN.01 | ACCESSIBLE PARKING STALL PER DSA #02-121836 |
| SN.02 | (E) BOYS' TOILET ROOM PER DSA #02-121836 |
| SN.03 | (E) GIRLS' TOILET ROOM PER DSA #02-121836 |
| SN.04 | (E) STAFF TOILET ROOM PER DSA #02-121836 |
| SN.05 | (E) FIRE HYDRANT |
| SN.06 | (E) PARKING LOT ENTRANCE SIGN VERIFIED PER DSA #02-121836 |

### ACCESSIBLE PARKING LOT A STALL CALCULATION

| | |
|---|---|
| TOTAL PARKING STALL COUNT: | 72 STALLS |
| ACCESSIBLE PARKING STALLS: | (TABLE 11B-6) |
| REQUIRED ACCESSIBLE STALLS: | 3 (51-75 TOTAL STALLS) |
| REQUIRED VAN ACCESSIBLE STALLS: | 1 (1-6 ACCESSIBLE STALLS) |
| ACCESSIBLE STALLS PROVIDED | 2 STANDARD & 1 VAN |

### ACCESSIBLE PARKING LOT B STALL CALCULATION

| | |
|---|---|
| TOTAL PARKING STALL COUNT: | 14 STALLS |
| ACCESSIBLE PARKING STALLS: | (TABLE 11B-6) |
| REQUIRED ACCESSIBLE STALLS: | 1 (01-25 TOTAL STALLS) |
| REQUIRED VAN ACCESSIBLE STALLS: | 1 (1-6 ACCESSIBLE STALLS) |
| ACCESSIBLE STALLS PROVIDED | 1 VAN |

## BUILDING DESIGNATIONS

DSA #02-105414

UNIT A - ADMIN / MULTI-USE / LIBRARY / CLASSROOMS

UNIT P1 - PORTABLE CLASSROOM BUILDING
UNIT P2 - PORTABLE CLASSROOM BUILDING
UNIT P3 - PORTABLE CLASSROOM BUILDING
UNIT P4 - PORTABLE CLASSROOM BUILDING
UNIT P5 - PORTABLE CLASSROOM BUILDING
UNIT P6 - PORTABLE CLASSROOM BUILDING
UNIT P7 - PORTABLE CLASSROOM BUILDING
UNIT P8 - PORTABLE CLASSROOM BUILDING

DSA #02-118372

UNIT P9 - PORTABLE CLASSROOM BUILDING

DSA #02-121836

UNIT LS - 30 X 64 LUNCH SHELTER

THIS APPLICATION
P10 - PORTABLE CLASSROOM BUILDING
P11 - PORTABLE CLASSROOM BUILDING
P12 - PORTABLE CLASSROOM BUILDING

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## ISSUE

| Δ | DESCRIPTION | DATE |
|---|---|---|

ACCESSIBLE PATH OF TRAVEL

1. ACCESSIBLE PATH OF TRAVEL (P.O.T.): SITE WALKWAYS SHALL PROVIDE A BARRIER-FREE P.O.T. ABRUPT CHANGES IN LEVEL ALONG ANY P.O.T. ARE ALLOWED UP TO 1/2". ONLY ABRUPT CHANGES IN ELEVATION UP TO 1/4" ARE ALLOWED TO HAVE A VERTICAL TRANSITION. ABRUPT CHANGES IN ELEVATION BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1-UNIT VERTICAL TO 2-UNITS HORIZONTAL. GATES IN THE P.O.T. SHALL HAVE A SIGN ADJACENT TO THE GATE, IN ALL CAPITALIZED LETTERS, WHICH READS: "THIS GATE TO REMAIN LOCKED IN OPEN POSITION DURING SCHOOL HOURS OR ANY PUBLIC EVENT".
2. THE CONTRACTOR SHALL PROVIDE A P.O.T. FROM THE DISABLED ACCESSIBLE PARKING STALLS TO ALL BUILDINGS AND SITE FUNCTIONS. CONTRACTOR SHALL VERIFY THAT THE P.O.T. IS BARRIER-FREE AS DESCRIBED IN THESE NOTES.
3. WALKWAYS SHALL BE FREE OF GRATINGS WHEREVER POSSIBLE. GRATING WHICH OCCUR WITHIN THE P.O.T. SHALL HAVE OPENINGS WHICH DO NOT EXCEED 1/2" IN THE DIRECTION OF TRAVEL PER CBC SECTION 1133B.7.2.
4. AN ABRUPT DROP-OFF CHANGE IN ELEVATION AT THE EDGE OF ANY WALK INTO AN ADJACENT PLANTER SHALL NOT EXCEED 4".
5. SLOPES IN THE DIRECTION OF THE P.O.T. GREATER THAN 1-UNIT VERTICAL TO 20-UNITS HORIZONTAL SHALL BE CONSIDERED A RAMP AND WILL REQUIRE HANDRAILS ON BOTH SIDES PER CBC SECTION 1133B.5.5 SLOPES IN THE DIRECTION OF THE P.O.T. ALONG WALKWAYS SHALL NOT EXCEED 5%. CROSS SLOPES IN THE P.O.T. ALONG WALKWAYS SHALL NOT EXCEED 2%.
6. ALL WALKWAYS WITHIN THE P.O.T. SHALL BE A MINIMUM OF 48" IN WIDTH. SURFACES WITH A SLOPE OF LESS THAN 6% SHALL BE AT LEAST AS SLIP-RESISTANT AS THAT PROVIDED BY A MEDIUM BROOM FINISH. SURFACES WITH A SLOPE OF MORE THAN 6% SHALL BE SLIP-RESISTANT.
7. OBJECTS PROTRUDING INTO THE P.O.T. SHALL NOT REDUCE THE C LEAR WIDTH OR MANEUVERING SPACE WITHIN THE P.O.T. PER CBC SECTION 1133B.8.6.
8. ARCHITECT HAS SURVEYED/ INSPECTED THE PATH OF TRAVEL (P.O.T.) AS INDICATED ON THE PLANS AND HAS FOUND IT TO BE, OR HAS INDICATED ON THE PLANS REMEDIAL WORK WHICH WOULD CAUSE IT TO BE, A BARRIER-FREE ACCESSIBLE ROUTE:
   a. AT LEAST 48" IN. WIDTH; OR AS APPROVED BY CODE;
   b. WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BELVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4";
   c. WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE;
   d. WITH A RUNNING SLOPE OF 1:20 OR LESS, UNLESS OTHERWISE INDICATED, AND A CROSS SLOPE OF 1:50 OR LESS;
   e. IS FREE OF OVERHEAD OBSTRUCTIONS WITHIN 80" ABOVE THE WALKING SURFACE; AND
   f. IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE.

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**CODE INFORMATION SITE PLAN**

**DSA SUBMITTAL**

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**G1.11**

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# GENERAL NOTES

1. BENCHMARK: LOCATION OF TEMPORARY BENCH MARKS SHOWN ON SHEET C 3.1

2. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITIES 48 HOURS PRIOR TO ANY EXCAVATION SO THAT THEIR LINES CAN BE MARKED.

3. THOSE TO BE NOTIFIED INCLUDE, BUT MAY NOT BE LIMITED TO:

   UNDERGROUND SERVICE ALERT (800) 227-2600 (NEW NUMBER)

4. ANY DEVIATIONS OR CHANGES IN THESE PLANS WITHOUT OFFICIAL APPROVAL OF THE DESIGN ENGINEER SHALL ABSOLVE THE DESIGN ENGINEER OF ANY AND ALL RESPONSIBILITY OF SAID DEVIATION OR CHANGE.

5. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONALS.

6. PAVEMENT CLEANING AND FLUSHING OF STREETS/PARKING LOTS TO REMOVE DIRT AND CONSTRUCTION DEBRIS IS PROHIBITED UNLESS PROPER SEDIMENT CONTROLS ARE USED. PREFERABLY, AREAS REQUIRING CLEANING SHOULD BE SWEPT.

7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED AT ALL TIMES.

8. FOR ONSITE INSPECTION CONTACT LODI UNIFIED SCHOOL DISTRICT INSPECTOR.

9. CONTRACTOR SHALL KEEP EXISTING STREETS FREE FROM DIRT AND DEBRIS DURING ALL PHASES OF CONSTRUCTION.

10. CONTRACTOR SHALL PROVIDE DUST CONTROL AT ALL TIMES. PRIOR TO OBTAINING WATER FROM FIRE HYDRANTS, CONTRACTOR MUST OBTAIN A WATER METER AND PERMIT FROM GOLDEN STATE WATER DIST.

11. ALL TRENCHES OVER FIVE FEET IN DEPTH SHALL BE SHORED IN ACCORDANCE WITH CAL OSHA "CONSTRUCTION SAFETY ORDERS" CURRENT EDITION. CONTRACTOR MUST HAVE A VALID TRENCH SHORING PERMIT ISSUED BY CAL-OSHA.

12. ALL UNDERGROUND UTILITIES SHALL BE CONSTRUCTED UP STATION AND UP GRADE BEGINNING AT THE POINT OF CONNECTION. VERIFY POINT OF CONNECTION IS AT LOCATION AND GRADE SHOWN ON DRAWINGS PRIOR TO BEGINNING WORK.

13. THE EXISTENCE AND LOCATIONS OF ANY UNDERGROUND UTILITY PIPELINES OR STRUCTURES SHOWN ON THESE DRAWINGS, WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS AND IN SOME CASES BY A FIELD SURVEY. CONTRACTOR SHALL USE CAUTION IN ALL EXCAVATION OPERATIONS. THE DESIGN ENGINEER MAKES NO REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION, OR EXISTENCE OR NONEXISTENCE OF ANY UNDERGROUND UTILITIES OR STRUCTURES, WITHIN THE LIMITS OF THE PROJECT. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEANS TO PROTECT EXISTING AND NEW UTILITIES AND STRUCTURES WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE DESIGN ENGINEER OF ANY DIFFERENCES OF LOCATION OF EXISTING UTILITIES FROM THAT SHOWN, OR OF ANY CONFLICTS WITH THE DESIGN BEFORE CONTINUING WORK IN THAT AREA.

14. IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING OR OTHER ONSITE EXCAVATION, EARTHWORK WITHIN 100 FEET OF THE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO IS CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGY(SCA) AND THE SOCIETY OF PROFESSIONAL ARCHAEOLOGY (SOPA) HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE DEEMED NECESSARY.

# ABBREVIATIONS

| | | | |
|---|---|---|---|
| AC | ASPHALT CONCRETE | LD | LANDSCAPE DRAIN |
| AB | AGGREGATE BASE | LF | LINEAR FEET |
| ADD. ALT. | ADDITIVE ALTERNATE | MH | MANHOLE |
| BLDG | BUILDING | MIN | MINIMUM |
| BO | BLOW OFF | MS | MOW STRIP |
| BOW | BACK OF WALK | (N) | NEW |
| BW | BOTTOM OF WALL | N.I.C. | NOT IN CONTRACT |
| CC | CONCRETE (TOP OF CONCRETE WALK) | OG | ORIGINAL GRADE |
| CL | CENTER LINE | P | PROPOSED |
| CONC | CONCRETE | PD | PLANTER DRAIN |
| CONST. | CONSTRUCT | PIV | POST INDICATOR VALVE |
| COTG | CLEANOUT TO GRADE | POC | POINT OF CONNECTION |
| DI | DRAIN INLET | PP | POWER POLE |
| DIP | DUCTILE IRON PIPE | PUE | PUBLIC UTILITY EASEMENT |
| DS | DOWNSPOUT | RCP | REINFORCED CONCRETE PIPE |
| DWY | DRIVEWAY | RD | ROOF DRAIN |
| (E) | EXISTING | RDWD | REDWOOD |
| E. BOX | ELECTRICAL BOX | RET | RETAINING |
| E. COND. | ELECTRICAL CONDUIT | RP | REDUCED PRESSURE |
| ELEC | ELECTRIC | R/W | RIGHT OF WAY |
| EP | EDGE OF PAVEMENT | RWL | RAIN WATER LEADER |
| EXIST. | EXISTING | S | SLOPE |
| FDC | FIRE DEPARTMENT CONNECTION | SD | STORM DRAIN |
| FF | FINISH FLOOR | SS | SANITARY SEWER |
| FG | FINISH GRADE | ST. LT. | STREET LIGHT |
| FH | FIRE HYDRANT | TBM | TEMPORARY BENCH MARK |
| FL | FLOW LINE | T | TRANSFORMER |
| FM | FIRE MAIN | TEL | TELEPHONE |
| FS | FIRE SERVICE | TC | TOP OF CURB |
| G | GAS | TW | TOP OF WALL |
| GB | GRADE BREAK | TYP | TYPICAL |
| GR | GRATE | VCP | VITRIFIED CLAY PIPE |
| GV | GATE VALVE | W | WATER |
| HDR | HEADER | WV | WATER VALVE |
| HP | HIGH POINT | VB | VALVE BOX |
| INV | INVERT ELEVATION | YD | YARD DRAIN |
| JP | JOINT POLE | | |

# LEGEND

| | |
|---|---|
| 40 | EXISTING CONTOUR |
| × 43.15 | EXISTING ELEVATION |
| 8"SD | EXISTING STORM DRAIN |
| 6"SS | EXISTING SANITARY SEWER |
| 8"W | EXISTING WATER MAIN |
| 8"W (R) | EXISTING UTILITY FROM RECORD DOCUMENTS<br>TYPE AS NOTED - LOCATION NOT CONFIRMED |
| ⋈ | EXISTING WATER VALVE |
| ○ | EXIST. FIRE HYDRANT |
| C | EXISTING COMMUNICATION LINE |
| IR | EXISTING IRRIGATION CONTROL LINE |
| E | EXISTING ELECTRICAL LINE |
| T | EXISTING TELEPHONE LINE |
| 31.90 | NEW ELEVATION |
| 8" SD | NEW STORM DRAIN |
| 6" SS | NEW SANITARY SEWER |
| RWL | NEW RAIN WATER LEADER/DOWNSPOUT CONNECTION (RWL) |
| 6" W | NEW WATER MAIN |
| 8" FM | NEW FIRE MAIN - C900 CL 150 PIPE |
| 8" FS | NEW FIRE SPRINKLER MAIN - C900 CL 200 PIPE |
| IRR | NEW IRRIGATION MAIN - SEE LANDSCALE PLANS/SPECIFICATIONS |
| ⧓ | NEW WATER VALVE IN TRAFFIC RATED VALVE BOX |
| ▲ | NEW THRUST BLOCK |
| ● | NEW FIRE HYDRANT |
| ⊥ | NEW POST INDICATOR VALVE (PIV) |
| Y | NEW FIRE DEPARTMENT CONNECTION (FDC) |
| ◪ | NEW BACKFLOW ASSEMBLY (TYPE AS NOTED) |
| 400 | NEW FINISH GRADE CONTOUR |
| → - - → | DRAINAGE SWALE |
| Y Y Y | EMBANKMENT / SLOPE |
| → → | DIRECTION OF SURFACE FLOW |
| ⬬ | NEW C.O.T.G. |
| ● | NEW 48" MANHOLE |
| ▤ | NEW DRAIN INLET (DI) |
| ▤ | NEW YARD DRAIN (YD) |
| • | NEW PLANTER DRAIN (PD) |

# INDEX OF CIVIL DRAWINGS

C1.1 TITLE SHEET
C2.1 DEMOLITION PLAN
C3.1 GRADING, DRAINAGE AND PAVING PLAN
C4.1 UTILITY PLAN
C5.1 DETAILS

AGENCY
APPROVAL:

LODI USD

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∆ DESCRIPTION DATE

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**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**TITLE SHEET**

**CONSTRUCTION DOCUMENTS**

**FILE NO.: 24-334-CD** **A NO.: 3431011000**

DATE: 1/22/2025 CLIENT PROJ NO:

SHEET:
**C1.1**

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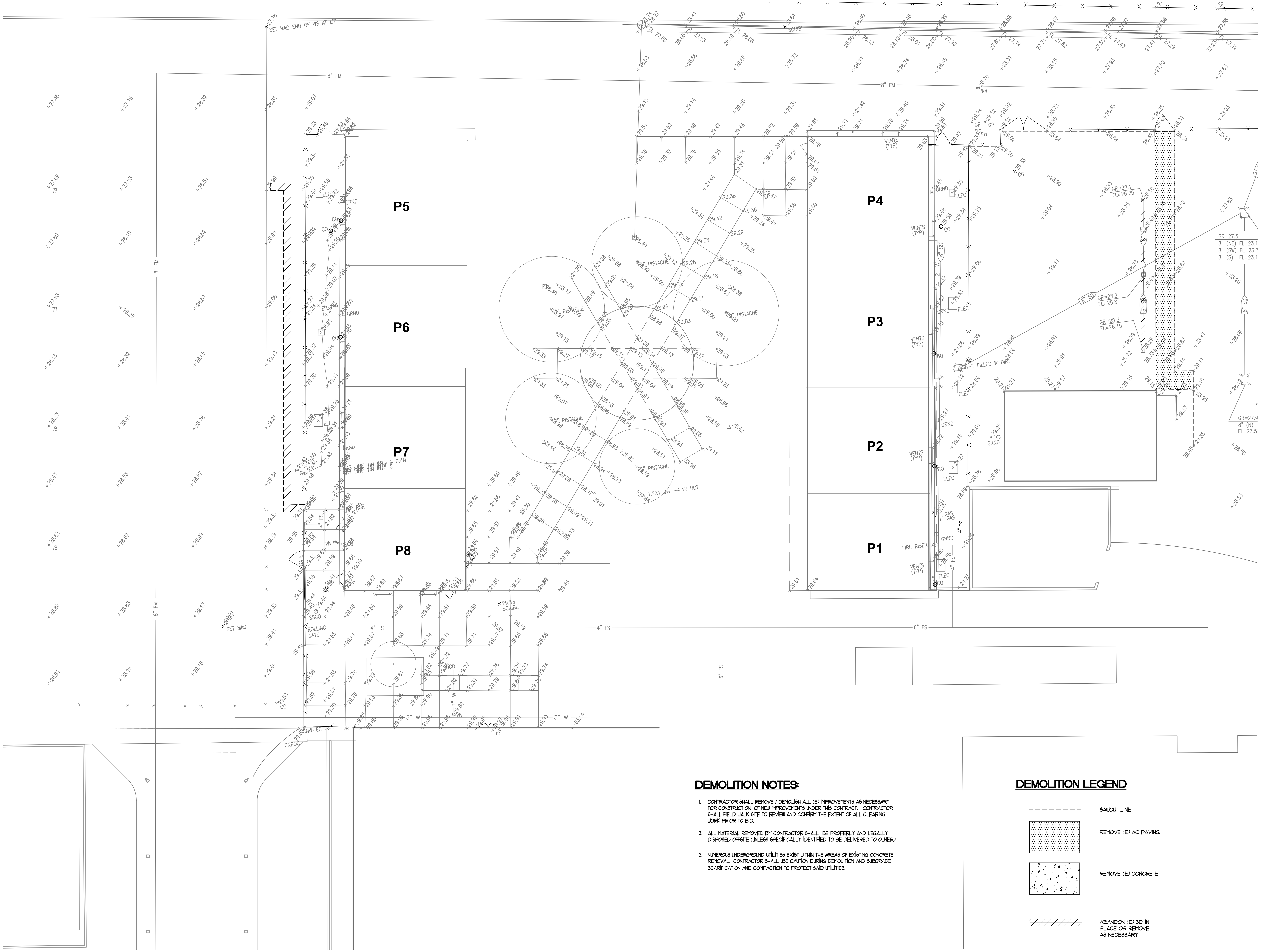
AGENCY
APPROVAL:



1 DEMOLITION PLAN
C2.1

SCALE: 1"=10'

## DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE / DEMOLISH ALL (E) IMPROVEMENTS AS NECESSARY FOR CONSTRUCTION OF NEW IMPROVEMENTS UNDER THIS CONTRACT. CONTRACTOR SHALL FIELD WALK SITE TO REVIEW AND CONFIRM THE EXTENT OF ALL CLEARING WORK PRIOR TO BID.
2. ALL MATERIAL REMOVED BY CONTRACTOR SHALL BE PROPERLY AND LEGALLY DISPOSED OFFSITE (UNLESS SPECIFICALLY IDENTIFIED TO BE DELIVERED TO OWNER.)
3. NUMEROUS UNDERGROUND UTILITIES EXIST WITHIN THE AREAS OF EXISTING CONCRETE REMOVAL. CONTRACTOR SHALL USE CAUTION DURING DEMOLITION AND SUBGRADE SCARIFICATION AND COMPACTION TO PROTECT SAID UTILITIES.

## DEMOLITION LEGEND

| | |
|---|---|
| - - - - - - | SAWCUT LINE |
| ▒ | REMOVE (E) AC PAVING |
| ⁘ | REMOVE (E) CONCRETE |
| ⫽⫽⫽⫽⫽ | ABANDON (E) SD IN PLACE OR REMOVE AS NECESSARY |

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PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**DEMOLITION PLAN**

**CONSTRUCTION DOCUMENTS**

FILE NO.: 24-334-CD
A NO.: 3431011000
DATE: 1/22/2025
CLIENT PROJ NO:

SHEET:
**C2.1**

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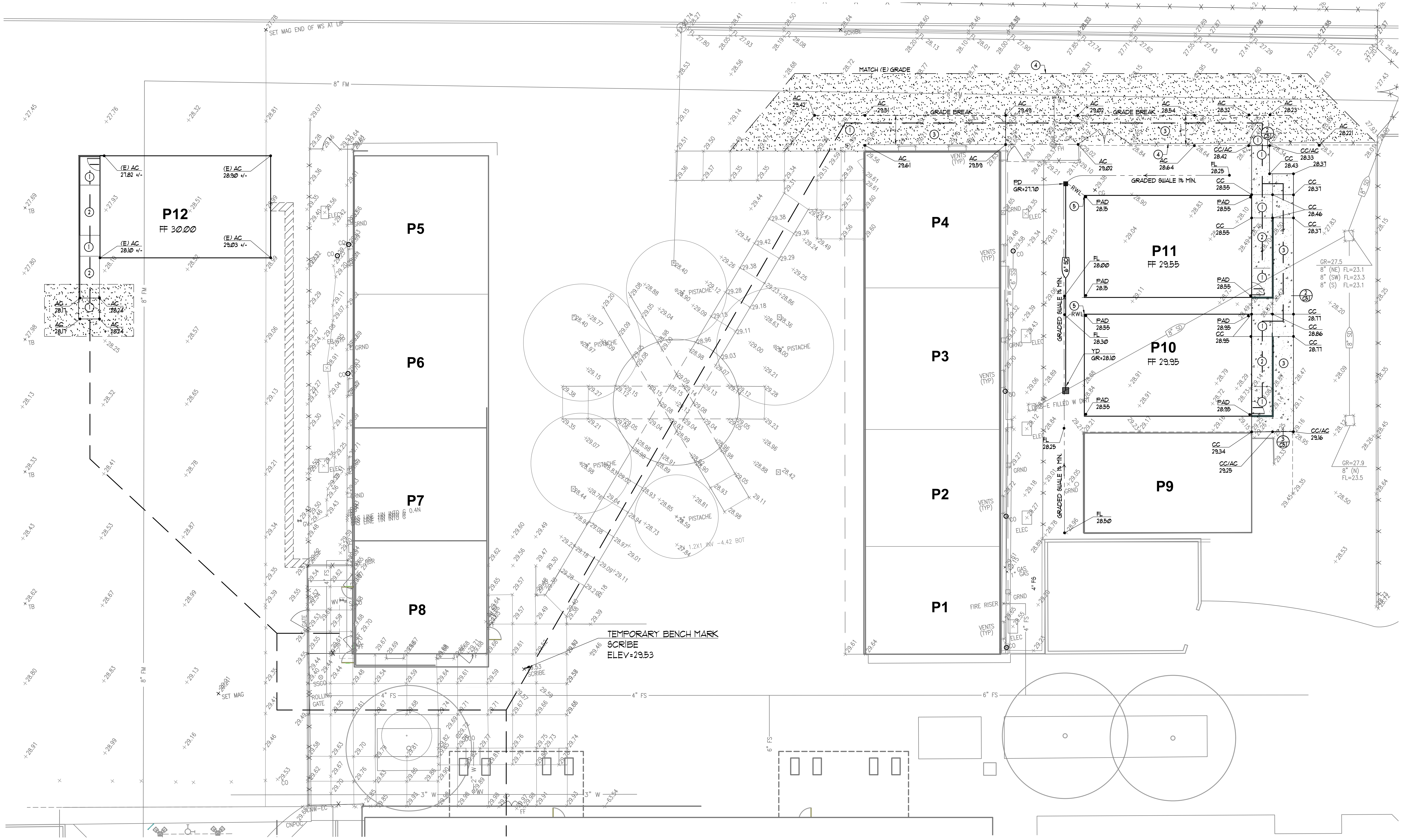

## GRADING, DRAINAGE AND PAVING PLAN

SCALE: 1"=10'

## NOTES:

1. CONCRETE SLAB IS NOT PART OF STRUCTURAL SUPPORT FOR SHADE STRUCTURE
2. CONTRACTOR SHALL LOCATE ALL UTILITIES IN AREA OF WORK PRIOR TO START OF CONSTRUCTION. NOTIFY ARCHITECT IF ANY CONFLICTS WITH NEW FOOTINGS OCCUR.
3. ALL UTILITIES (VALVE BOX COVERS, VAULTS, CLEANOUTS, ETC. SHALL BE ADJUSTED TO NEW FINISH GRADES.
4. DRINKING FOUNTAINS SHALL BE RESET AS NECESSARY TO MEET HEIGHT STANDARDS FOR ACCESSIBILITY (SEE ARCHITECTURAL)

## KEY NOTE LEGEND

① 1.8% MAX. SLOPE IN ANY DIRECTION.

② RAMP - 8% MAX. SLOPE IN DIRECTION OF TRAVEL, 1.8% MAX. CROSS SLOPE

③ 1.8% MAX. CROSS SLOPE 4.75% MAX. SLOPE IN DIRECTION OF TRAVEL.

④ MATCH (E) GRADE

⑤ CONNECT NEW 4" PIPE @ s=0.02 MIN. TO BUILDING DOWNSPOUT PER DETAIL 5, SHEET C5.1

## PAVING LEGEND

| | |
|---|---|
| ░ | 5" CONCRETE ON<br>6" AGGREGATE BASE ON<br>COMPACTED SUBGRADE W/<br>#3 REBAR AT 18" O.C. EACH WAY<br>PER PROJECT SPECIFICATIONS |
| ▨ | 3" AC ON 4" AB ON<br>COMPACTED SUBGRADE<br>PER PROJECT SPECIFICATIONS |
| ░ | VARIABLE THICKNESS AC<br>OVERLAY |

AGENCY
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PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**GRADING, DRAINAGE AND PAVING PLAN**

**CONSTRUCTION DOCUMENTS**

FILE NO.: 24-334-CD
A NO.: 3431011000
DATE: 1/22/2025
CLIENT PROJ NO:

SHEET:
**C3.1**

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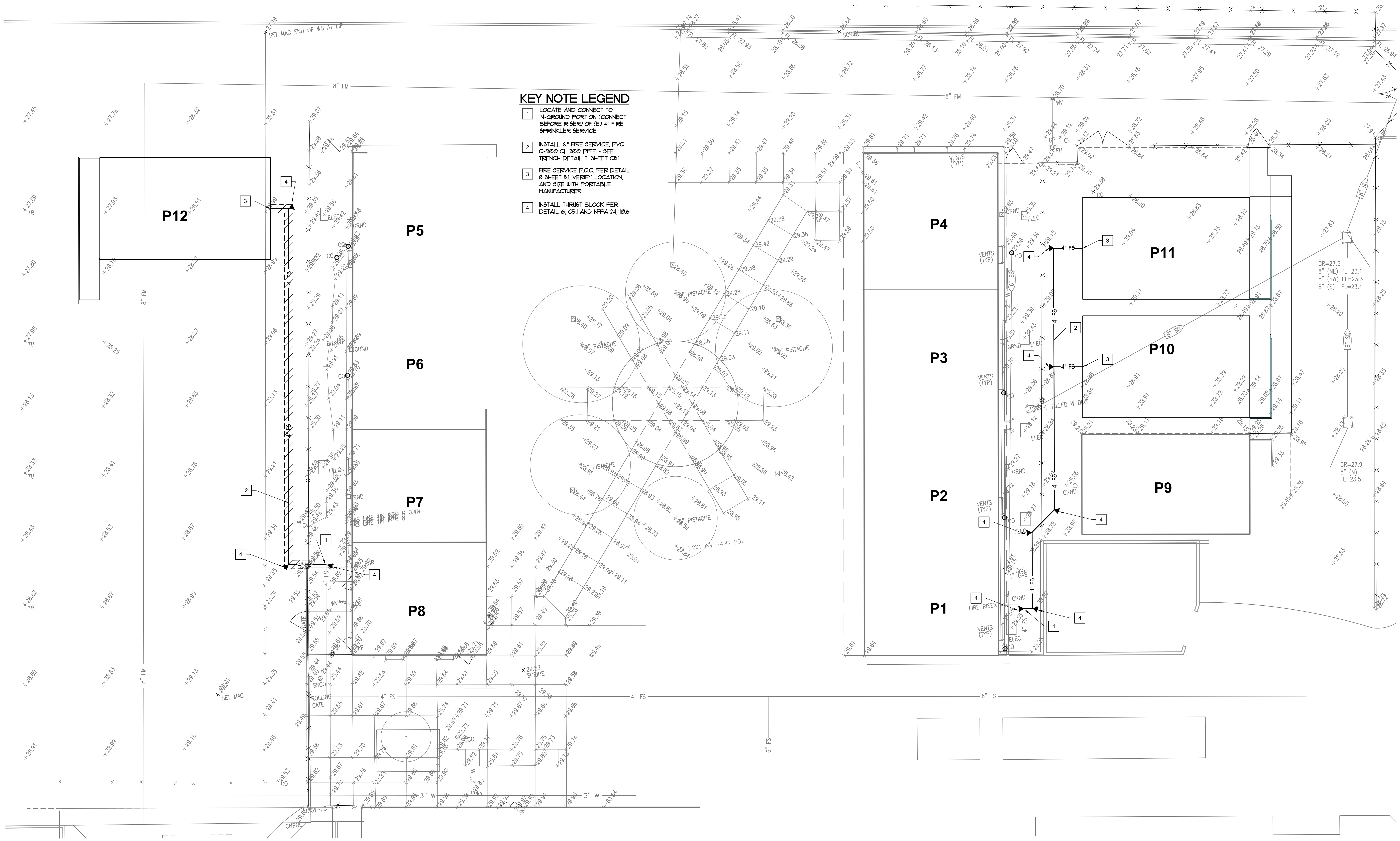
## KEY NOTE LEGEND

| | |
|---|---|
| 1 | LOCATE AND CONNECT TO IN-GROUND PORTION (CONNECT BEFORE RISER) OF (E) 4" FIRE SPRINKLER SERVICE |
| 2 | INSTALL 6" FIRE SERVICE, PVC C-900 CL 200 PIPE - SEE TRENCH DETAIL 7, SHEET C5.1 |
| 3 | FIRE SERVICE P.O.C. PER DETAIL 8 SHEET 5.1, VERIFY LOCATION, AND SIZE WITH PORTABLE MANUFACTURER |
| 4 | INSTALL THRUST BLOCK PER DETAIL 6, C5.1 AND NFPA 24, 10.6 |



1 UTILITY PLAN
C4.1

SCALE: 1"=10'

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PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**UTILITY PLAN**

**CONSTRUCTION DOCUMENTS**

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DATE: 1/22/2025
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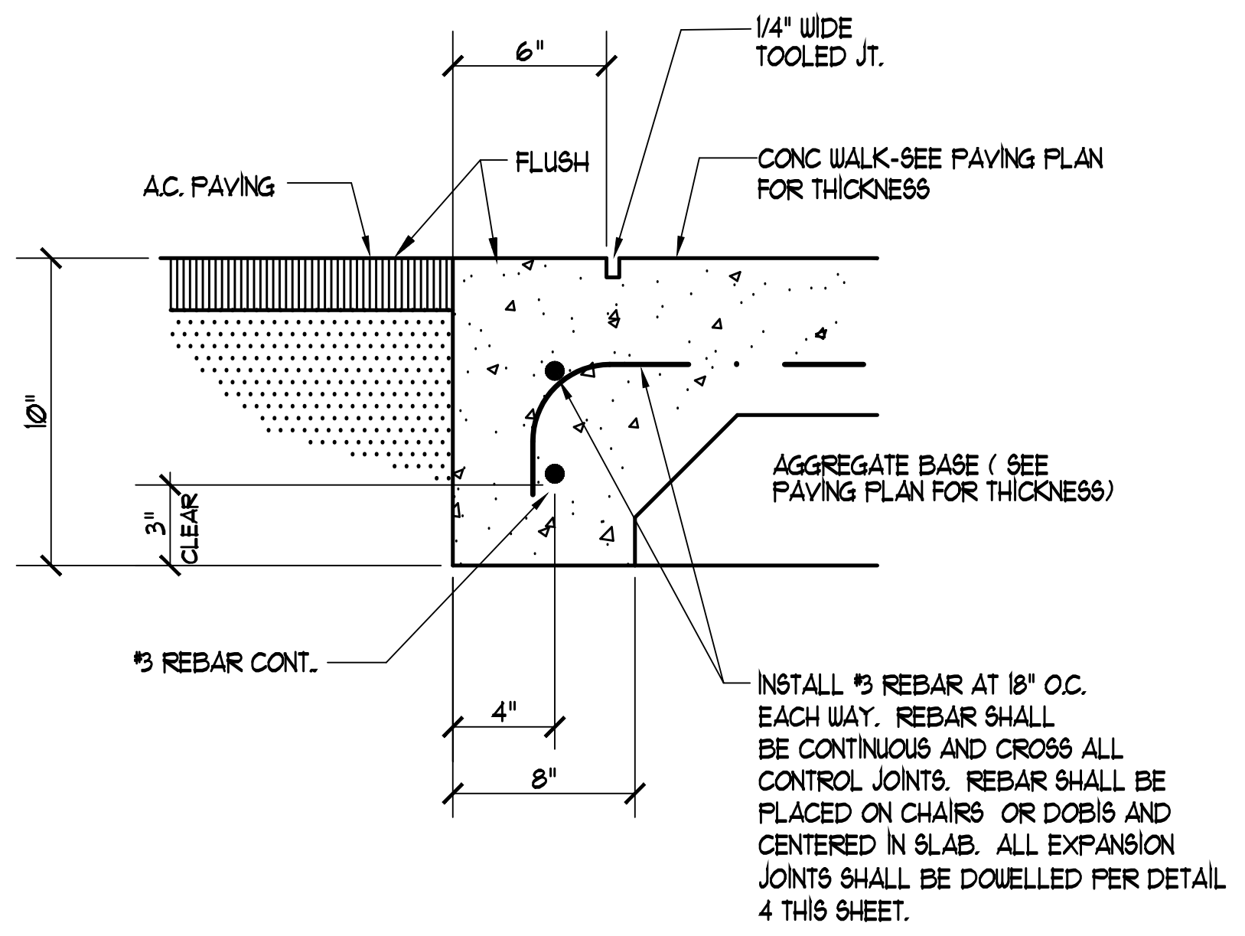
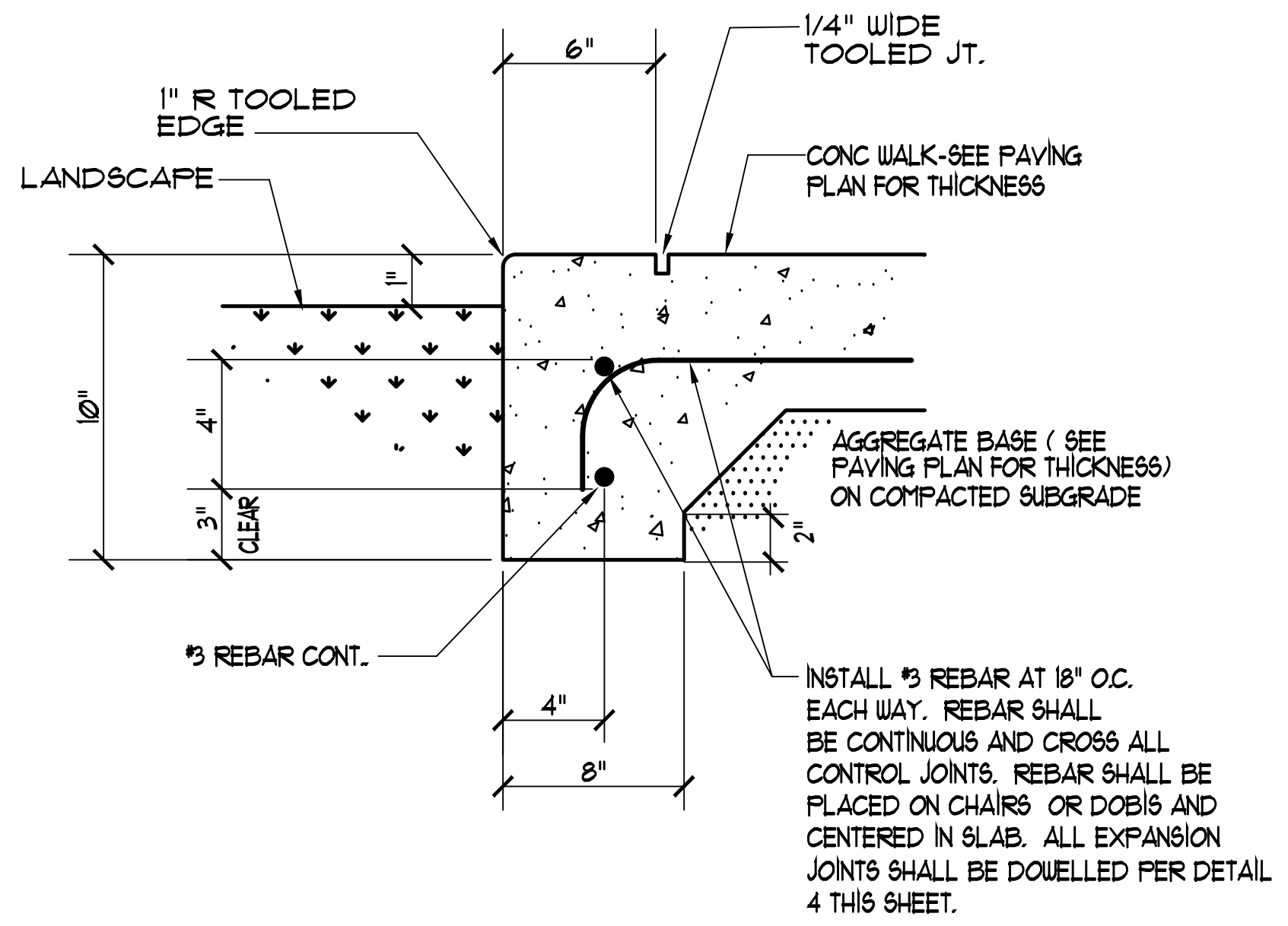

6"
1/4" WIDE TOOLED JT.
A.C. PAVING
FLUSH
CONC WALK-SEE PAVING PLAN FOR THICKNESS
10"
3" CLEAR
AGGREGATE BASE ( SEE PAVING PLAN FOR THICKNESS)
#3 REBAR CONT.
4"
8"

INSTALL #3 REBAR AT 18" O.C. EACH WAY. REBAR SHALL BE CONTINUOUS AND CROSS ALL CONTROL JOINTS. REBAR SHALL BE PLACED ON CHAIRS OR DOBIS AND CENTERED IN SLAB. ALL EXPANSION JOINTS SHALL BE DOWELLED PER DETAIL 4 THIS SHEET.

1
C5.1
FLUSH CONC. WALK @ AC
N.T.S.

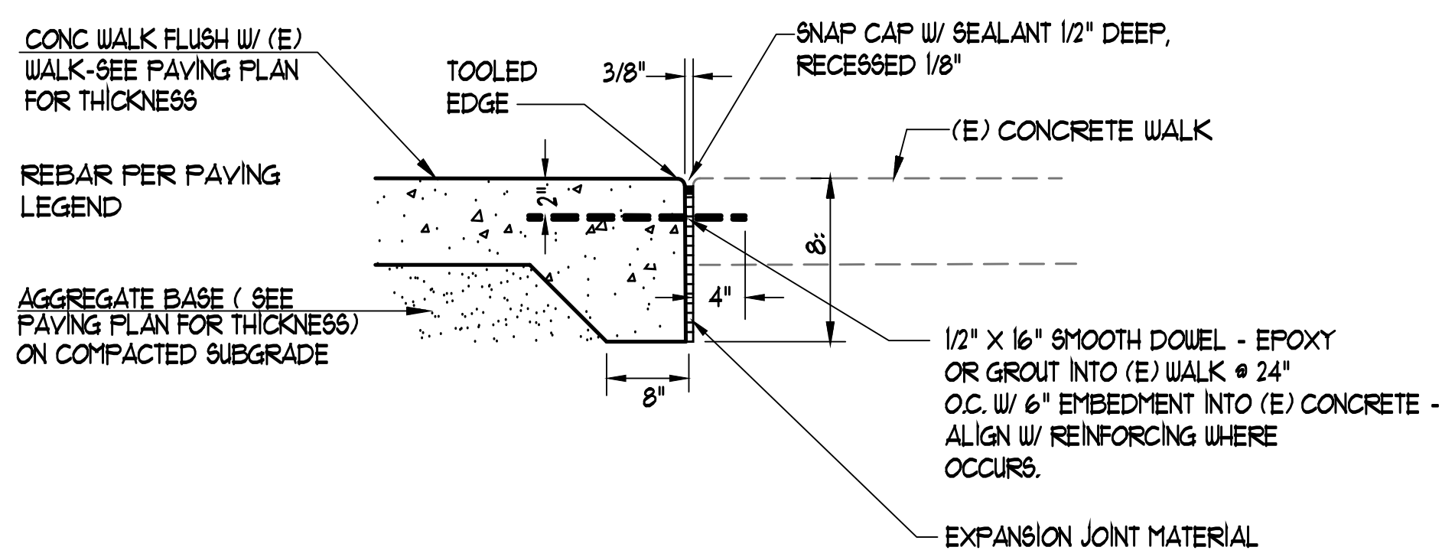
NOTE:
TRANSITION FROM NEW CONCRETE WALKWAYS TO EXISTING LANDSCAPE GRADE TO BE AT A MAXIMUM OF 5 : 1 SLOPE UNLESS OTHERWISE NOTED ON PLANS.


6"
1/4" WIDE TOOLED JT.
1" R TOOLED EDGE
LANDSCAPE
CONC WALK-SEE PAVING PLAN FOR THICKNESS
1"
10"
4"
3" CLEAR
AGGREGATE BASE ( SEE PAVING PLAN FOR THICKNESS) ON COMPACTED SUBGRADE
2"
#3 REBAR CONT.
4"
8"

INSTALL #3 REBAR AT 18" O.C. EACH WAY. REBAR SHALL BE CONTINUOUS AND CROSS ALL CONTROL JOINTS. REBAR SHALL BE PLACED ON CHAIRS OR DOBIS AND CENTERED IN SLAB. ALL EXPANSION JOINTS SHALL BE DOWELLED PER DETAIL 4 THIS SHEET.

2
C5.1
FLUSH CONC. WALK @ LANDSCAPE
N.T.S.

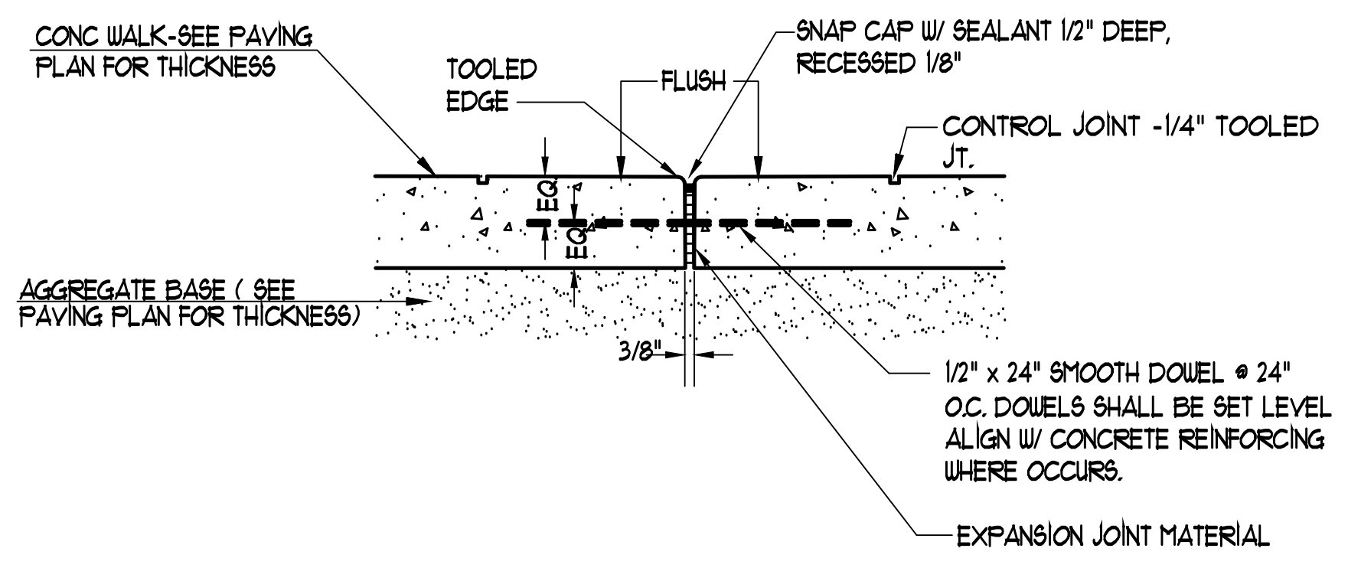
NOTE:
SEE ARCHITECTURAL PLANS FOR EXPANSION JOINT SPACING


CONC WALK FLUSH W/ (E) WALK-SEE PAVING PLAN FOR THICKNESS
TOOLED EDGE
3/8"
SNAP CAP W/ SEALANT 1/2" DEEP, RECESSED 1/8"
(E) CONCRETE WALK
REBAR PER PAVING LEGEND
2"
8"
4"
AGGREGATE BASE ( SEE PAVING PLAN FOR THICKNESS) ON COMPACTED SUBGRADE
8"
EXPANSION JOINT MATERIAL

1/2" X 16" SMOOTH DOWEL - EPOXY OR GROUT INTO (E) WALK @ 24" O.C. W/ 6" EMBEDMENT INTO (E) CONCRETE - ALIGN W/ REINFORCING WHERE OCCURS.

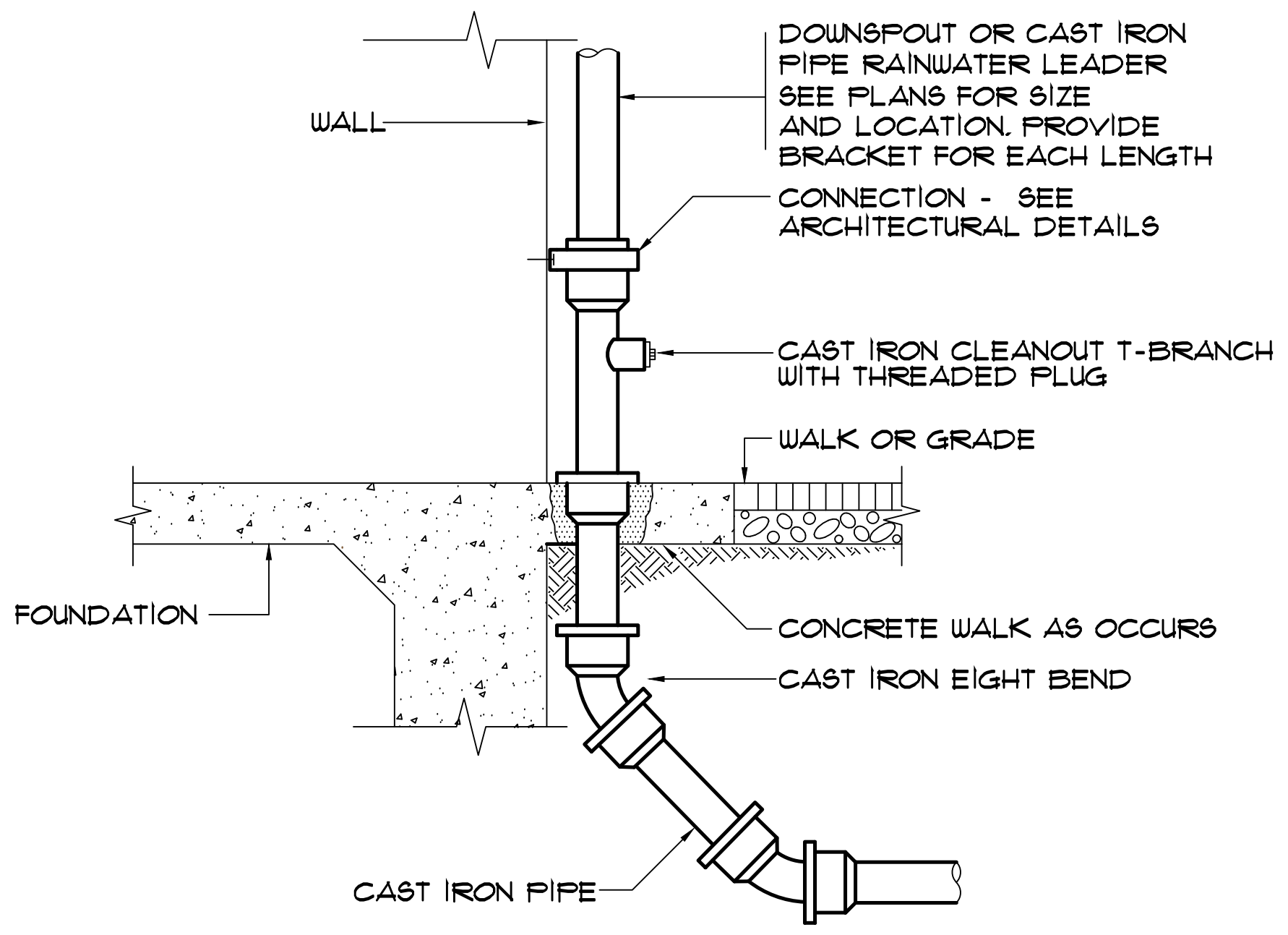
3
C5.1
CONC. WALK AT EXISTING CONDITIONS
N.T.S.

NOTE:
SEE ARCHITECTURAL PLANS FOR EXPANSION JOINT SPACING

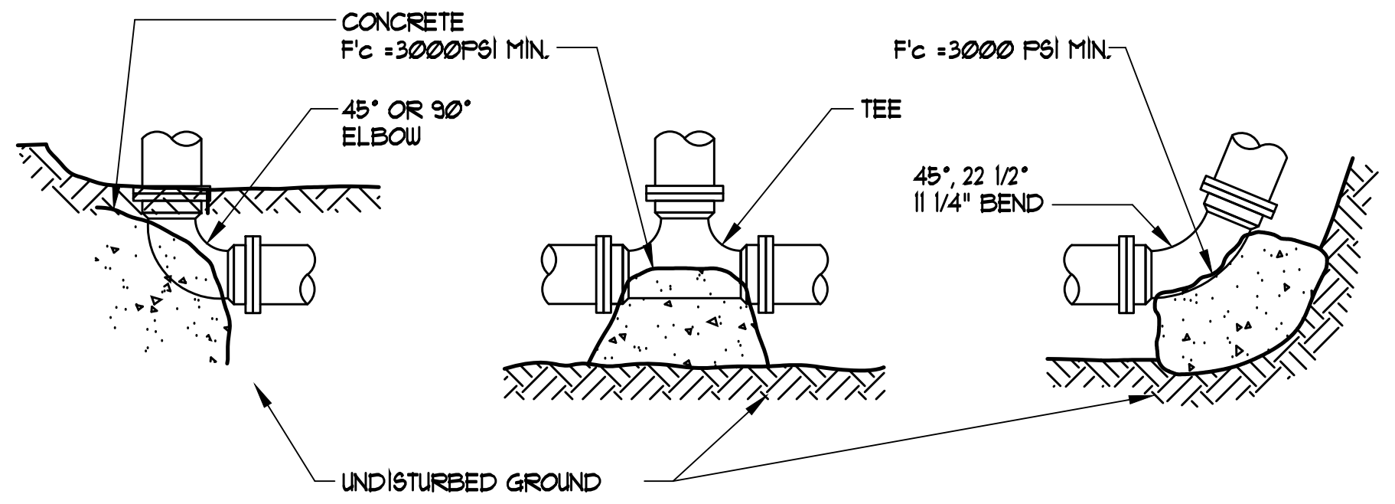

CONC WALK-SEE PAVING PLAN FOR THICKNESS
TOOLED EDGE
FLUSH
SNAP CAP W/ SEALANT 1/2" DEEP, RECESSED 1/8"
CONTROL JOINT -1/4" TOOLED JT.
EQ
EQ
AGGREGATE BASE ( SEE PAVING PLAN FOR THICKNESS)
3/8"
EXPANSION JOINT MATERIAL

1/2" x 24" SMOOTH DOWEL @ 24" O.C. DOWELS SHALL BE SET LEVEL ALIGN W/ CONCRETE REINFORCING WHERE OCCURS.

4
C5.1
EXPANSION JOINT
N.T.S.


WALL
DOWNSPOUT OR CAST IRON PIPE RAINWATER LEADER SEE PLANS FOR SIZE AND LOCATION. PROVIDE BRACKET FOR EACH LENGTH
CONNECTION - SEE ARCHITECTURAL DETAILS
CAST IRON CLEANOUT T-BRANCH WITH THREADED PLUG
WALK OR GRADE
FOUNDATION
CONCRETE WALK AS OCCURS
CAST IRON EIGHT BEND
CAST IRON PIPE

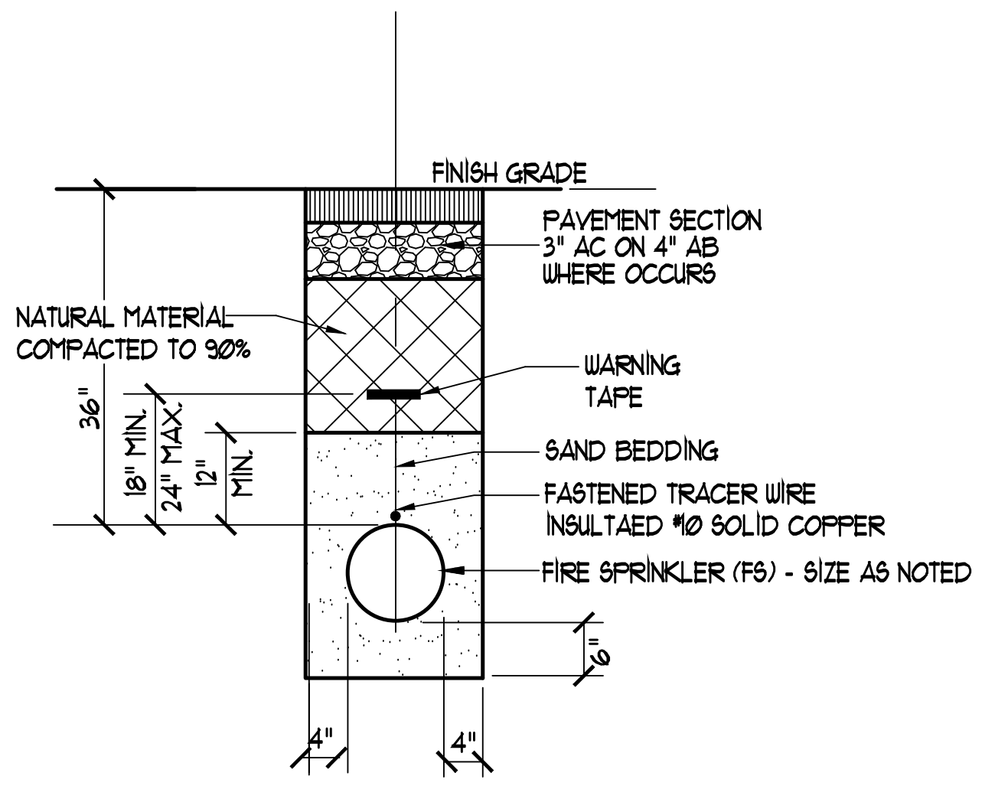
5
C5.1
DOWNSPOUT/RWL CONNECTION TO STORM DRAIN



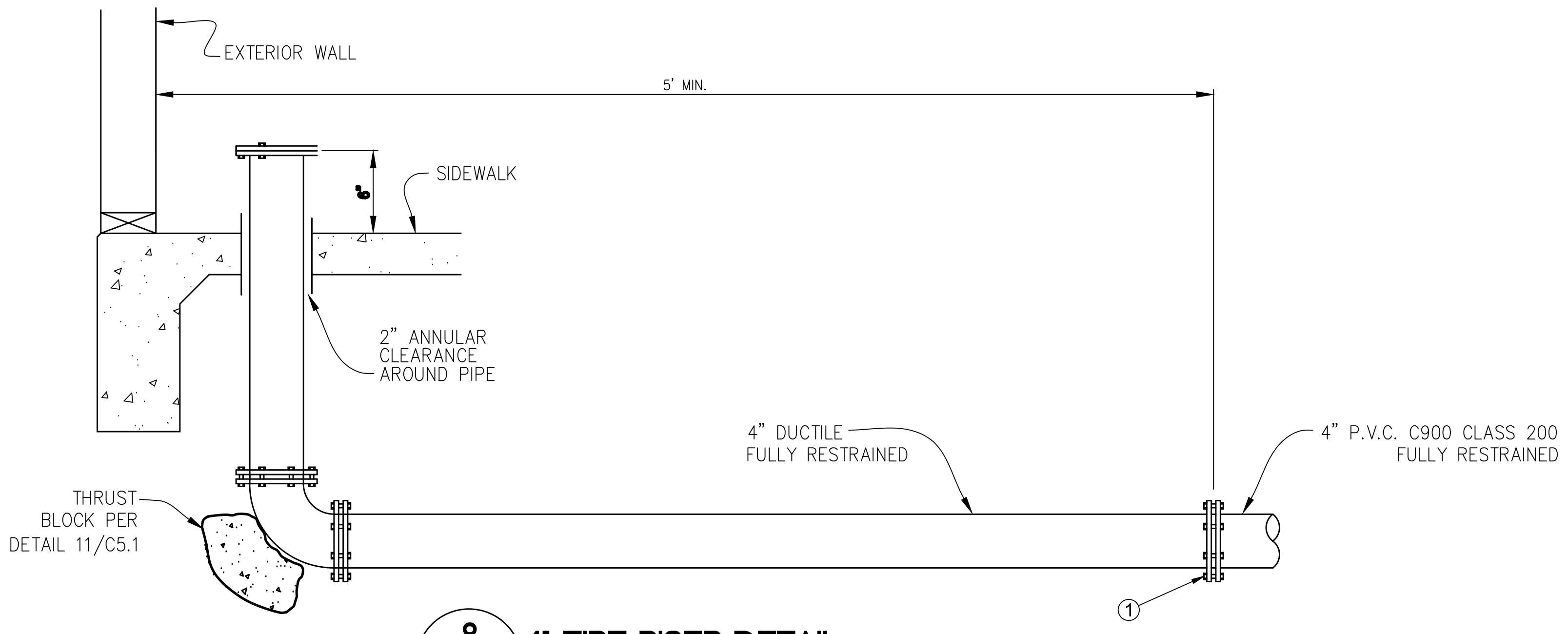
| PIPE ⌀ | BASE AREA SQ.FT. | | | |
|---|---|---|---|---|
| | TEE & PLUG | 90° BEND | 45° BEND | 22 1/2° BEND<br>11 1/4° BEND |
| 4" | 2.5 | 3.5 | 2.0 | 1.0 |
| 6" | 5.0 | 6.5 | 4.0 | 2.0 |
| 8" | 11.5 | 11.5 | 6.0 | 3.5 |
| 10" | 12.5 | 17.5 | 9.5 | 5.0 |

AREAS GIVEN ARE FOR CL 200 PIPE AT TEST PRESSURE OF 200 P.S.I. IN SOIL WITH 1500 P.S.F. BEARING CAPACITY.

6
C5.1
HORIZONTAL THRUST BLOCK


FINISH GRADE
PAVEMENT SECTION 3" AC ON 4" AB WHERE OCCURS
NATURAL MATERIAL COMPACTED TO 90%
WARNING TAPE
36"
18" MIN.
24" MAX.
12" MIN.
SAND BEDDING
FASTENED TRACER WIRE INSULTAED #10 SOLID COPPER
FIRE SPRINKLER (FS) - SIZE AS NOTED
6"
4"
4"

7
C5.1
UTILITY TRENCH
N.T.S.


EXTERIOR WALL
5' MIN.
SIDEWALK
6"
2" ANNULAR CLEARANCE AROUND PIPE
4" DUCTILE FULLY RESTRAINED
4" P.V.C. C900 CLASS 200 FULLY RESTRAINED
THRUST BLOCK PER DETAIL 11/C5.1
①

8
C5.1
4" FIRE RISER DETAIL
N.T.S.

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**DETAILS**

**CONSTRUCTION DOCUMENTS**

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**A NO.: 3431011000**
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SHEET:
**C5.1**

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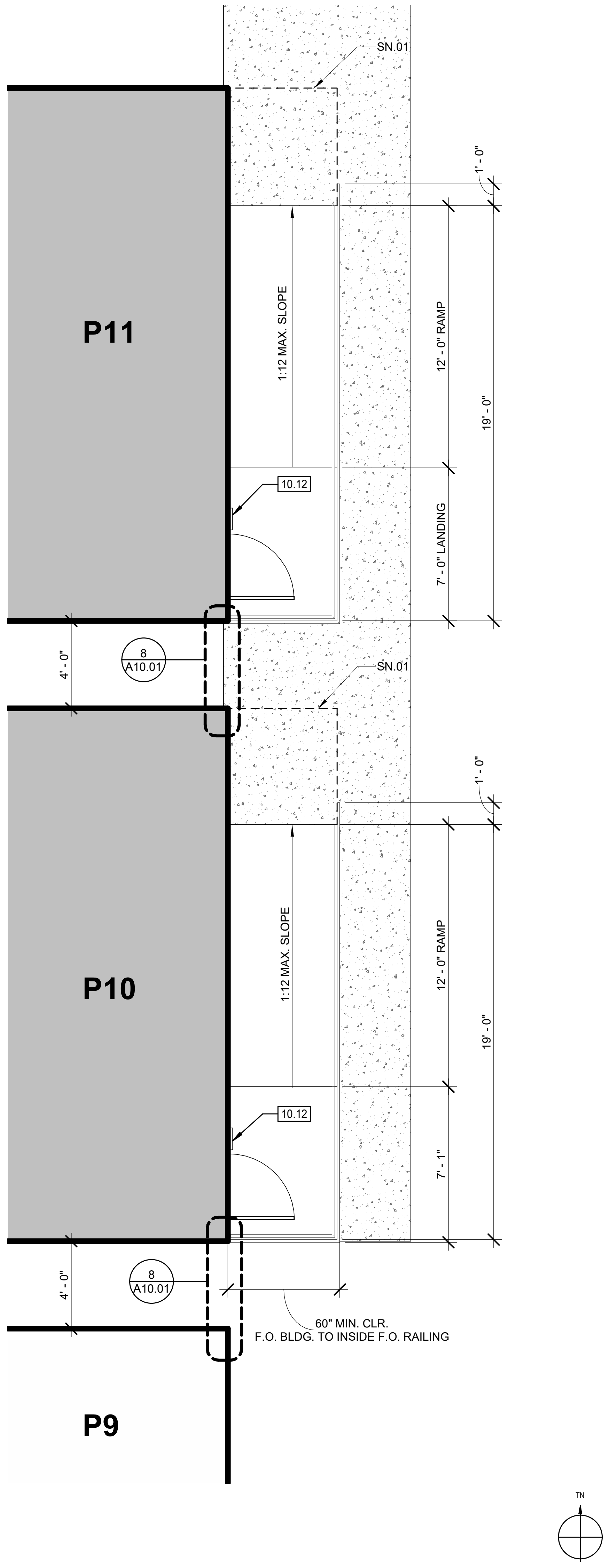
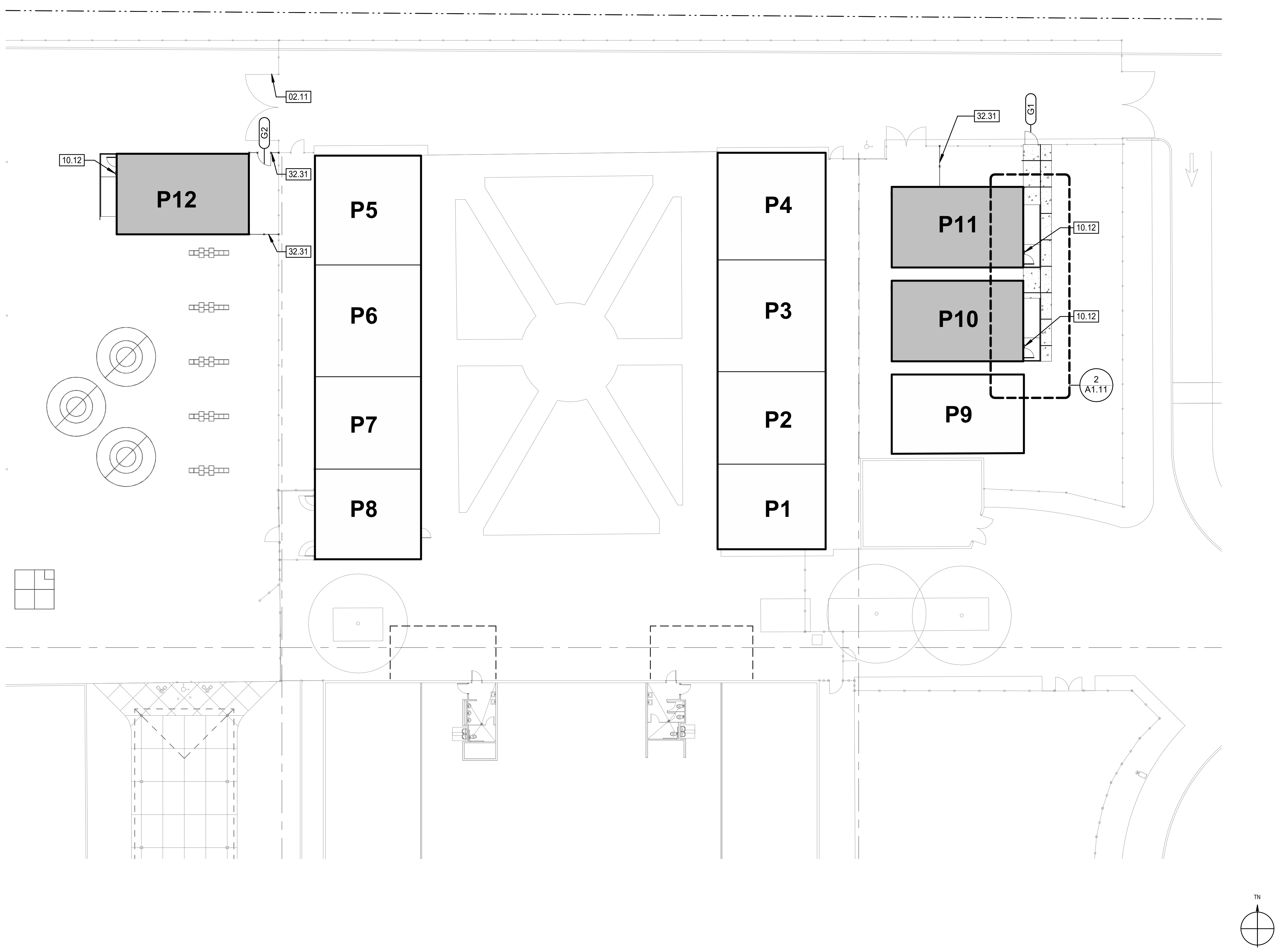
## GATE SCHEDULE

| NUMBER | WIDTH | HEIGHT | DOOR MATERIAL | DOOR HARDWARE | PANIC HARDWARE | DETAIL | COMMENTS |
|---|---|---|---|---|---|---|---|
| G1 | 4'-0" | 6'-0" | CHAINLINK | 01 | Yes | 4 | |
| G2 | 4'-0" | 6'-0" | CHAINLINK | 02 | No | 3 | |



**ENLARGED RAMP PLAN, TYP.** 2
1/4" = 1'-0"



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

## LEGEND

PROPERTY LINE
EXISTING CHAINLINK FENCE
NEW CHAINLINK FENCE
EXISTING ORNAMENTAL FENCE
EXISTING FIRE HYDRANT
X EXISTING BUILDINGS
X NEW BUILDINGS
▨ NEW CONCRETE

## SHEET NOTES

SN.01 LINE OF ROOF ABOVE

AGENCY
APPROVAL:

REVIEWING AGENCIES
STAMP HERE

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## ISSUE

| Δ | DESCRIPTION | DATE |
|---|---|---|

## KEYNOTES

02.11 (E) FIRE LANE GATE TO REMAIN; PROTECT IN PLACE
10.12 ROOM ID SIGN | 5/A10.81
32.31 NEW 6' CHAIN LINK FENCING | 1/A10.01

FACILITY:
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**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**PARTIAL SITE PLAN**

**DSA SUBMITTAL**

DATE: 1/22/2025
CLIENT PROJ NO:
SHEET:

# A1.11

Autodesk Docs://3431011000 LODI USD LARSON ES PORTABLE CLASSROOMS R22/3431011000-A-LARSON ES-SITE.rvt
1/22/2025 2:19:52 PM

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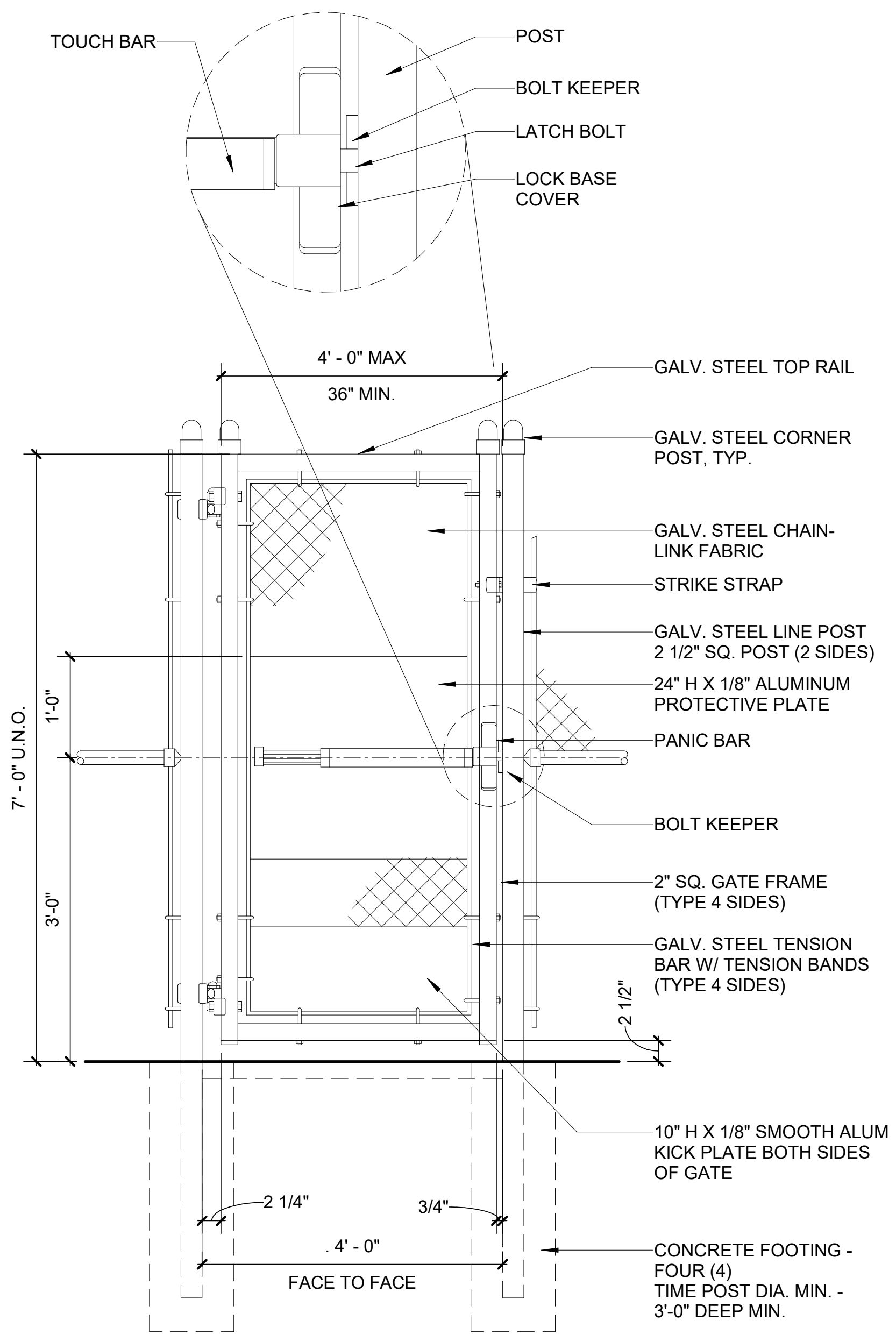
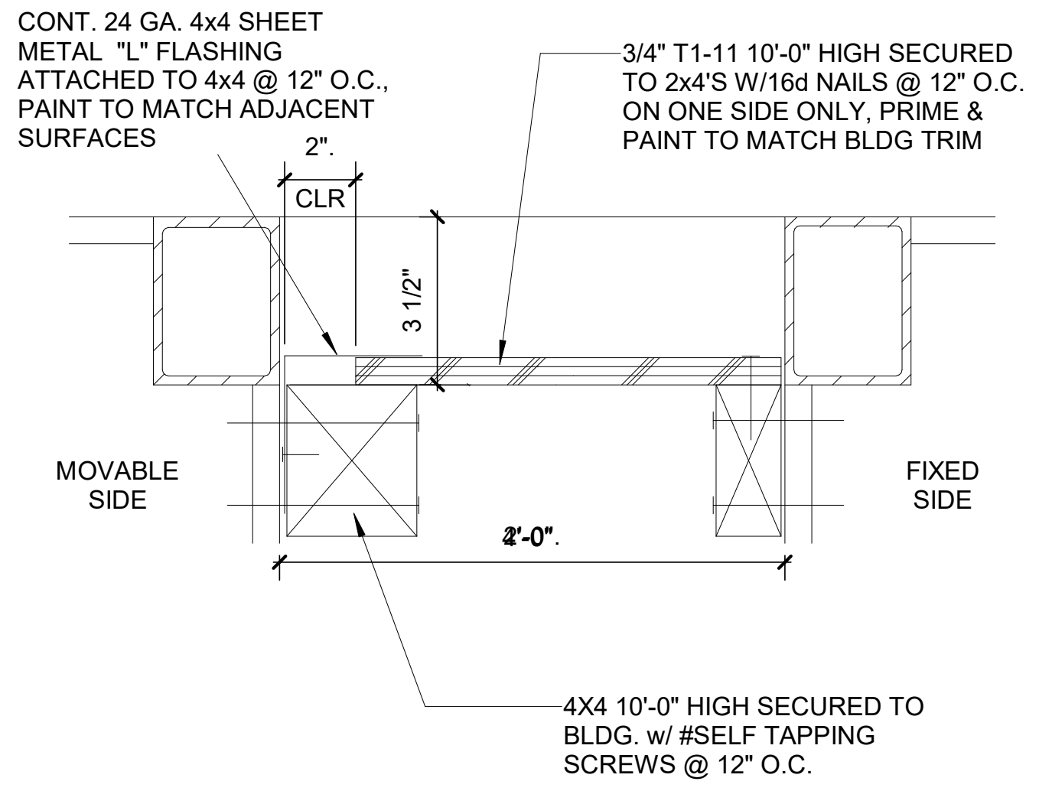

TOUCH BAR
POST
BOLT KEEPER
LATCH BOLT
LOCK BASE COVER
4' - 0" MAX
36" MIN.
GALV. STEEL TOP RAIL
GALV. STEEL CORNER POST, TYP.
GALV. STEEL CHAIN-LINK FABRIC
STRIKE STRAP
GALV. STEEL LINE POST 2 1/2" SQ. POST (2 SIDES)
24" H X 1/8" ALUMINUM PROTECTIVE PLATE
PANIC BAR
BOLT KEEPER
2" SQ. GATE FRAME (TYPE 4 SIDES)
GALV. STEEL TENSION BAR W/ TENSION BANDS (TYPE 4 SIDES)
7' - 0" U.N.O.
1'-0"
3'-0"
2 1/2"
10" H X 1/8" SMOOTH ALUM KICK PLATE BOTH SIDES OF GATE
2 1/4"
3/4"
. 4' - 0"
FACE TO FACE
CONCRETE FOOTING - FOUR (4)
TIME POST DIA. MIN. - 3'-0" DEEP MIN.

## CHAIN LINK GATE WITH P.H.

4

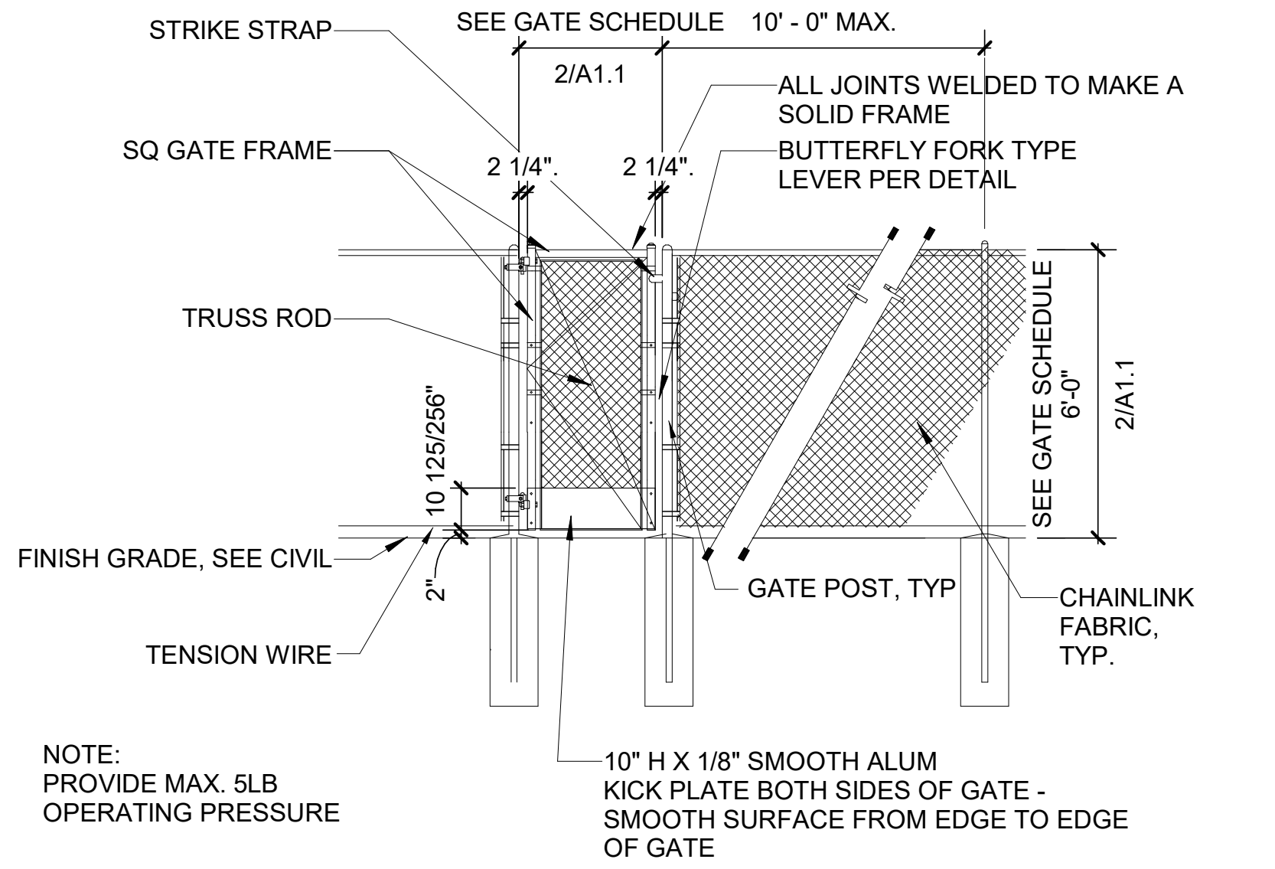
3/4" = 1'-0"


CONT. 24 GA. 4x4 SHEET METAL "L" FLASHING ATTACHED TO 4x4 @ 12" O.C., PAINT TO MATCH ADJACENT SURFACES
2".
CLR
3 1/2"
3/4" T1-11 10'-0" HIGH SECURED TO 2x4'S W/16d NAILS @ 12" O.C. ON ONE SIDE ONLY, PRIME & PAINT TO MATCH BLDG TRIM
MOVABLE SIDE
FIXED SIDE
4'-0".
4X4 10'-0" HIGH SECURED TO BLDG. w/ #SELF TAPPING SCREWS @ 12" O.C.

## CLOSURE PANEL BETWEEN PORTABLES

8

3" = 1'-0"

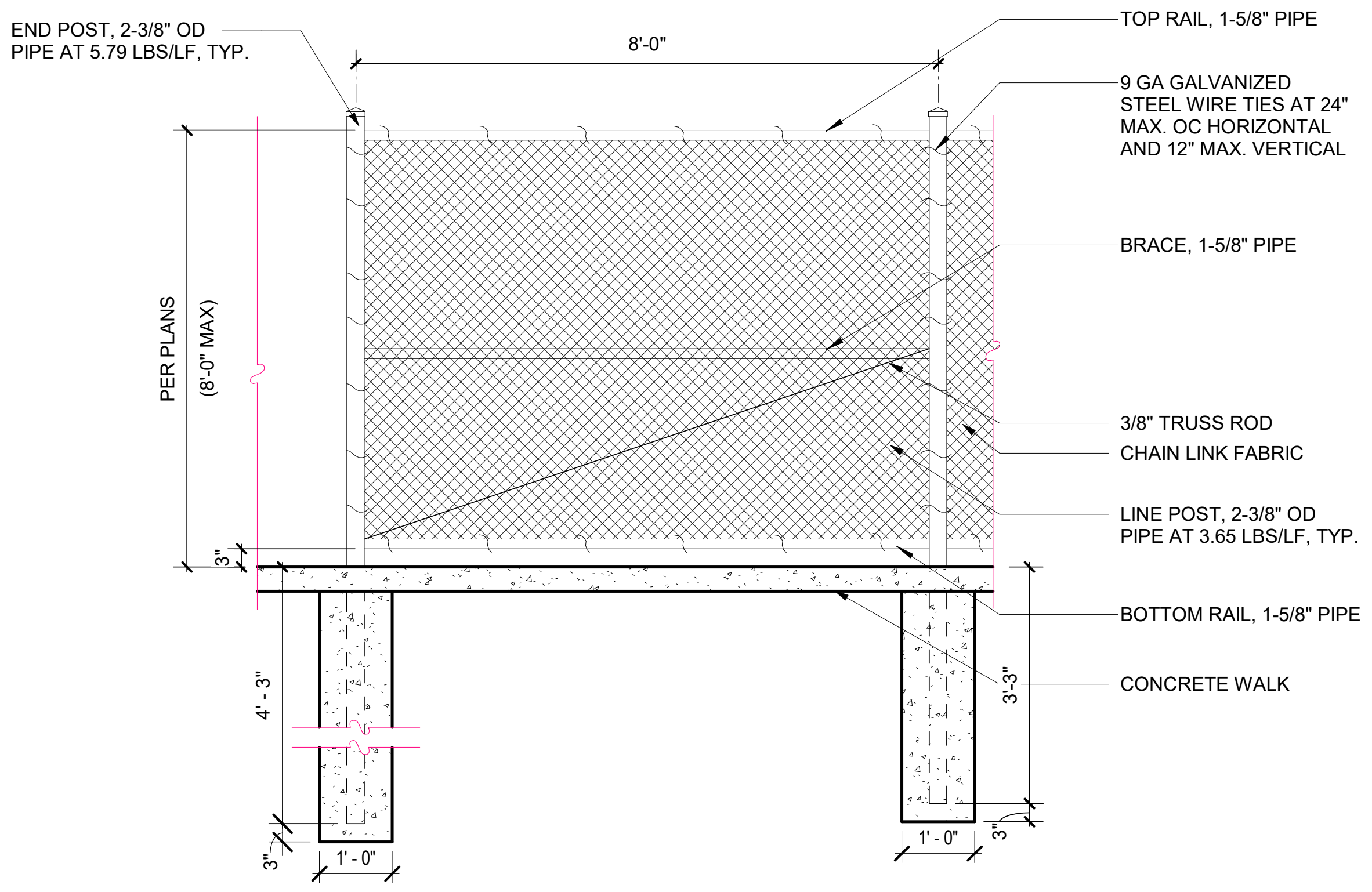


NOTE:
PROVIDE MAX. 5LB
OPERATING PRESSURE

## CHAINLINK GATE

3

1/4" = 1'-0"


END POST, 2-3/8" OD PIPE AT 5.79 LBS/LF, TYP.
8'-0"
TOP RAIL, 1-5/8" PIPE
9 GA GALVANIZED STEEL WIRE TIES AT 24" MAX. OC HORIZONTAL AND 12" MAX. VERTICAL
BRACE, 1-5/8" PIPE
PER PLANS
(8'-0" MAX)
3/8" TRUSS ROD
CHAIN LINK FABRIC
LINE POST, 2-3/8" OD PIPE AT 3.65 LBS/LF, TYP.
3"
BOTTOM RAIL, 1-5/8" PIPE
CONCRETE WALK
4' - 3"
3'-3"
1' - 0"
1' - 0"
3"
3"

## CHAINLINK FENCE

1

1/2" = 1'-0"

**AGENCY APPROVAL:**

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HMC Architects

2101 CAPITOL AVENUE, SUITE 100,
SACRAMENTO, CA, 95816
916 368 7990 / www.hmcarchitects.com

**ISSUE**

| Δ | DESCRIPTION | DATE |
|---|---|---|

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**SITE AND GATE DETAILS**

**DSA SUBMITTAL**

DATE: **1/22/2025**

CLIENT PROJ NO:

SHEET:

# A10.01

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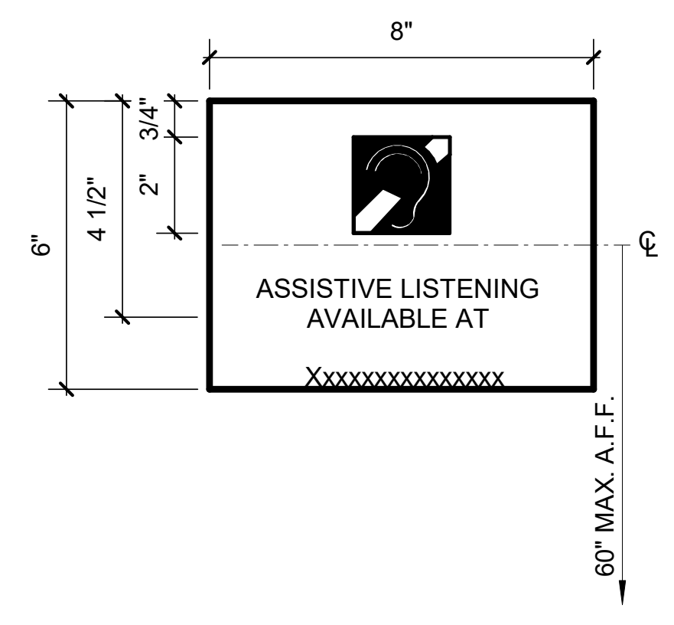
THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG AT THIS SHEETS ORIGINAL PAGE SIZE

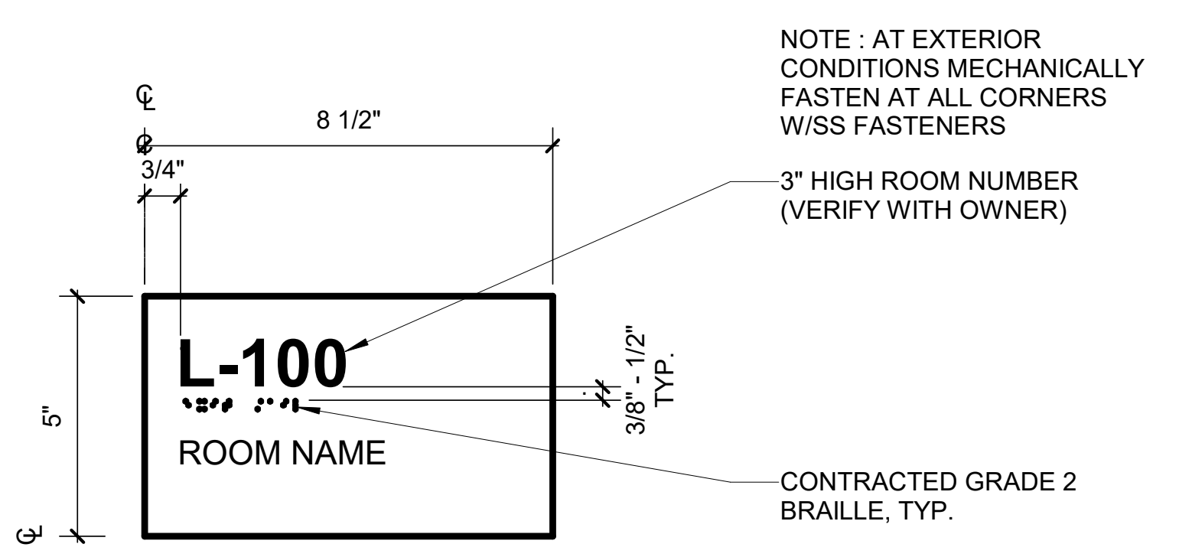


**NOTE:**
1. SEE 1/A10.81 FOR ADDITIONAL INFORMATION.

2. CONFIRM LOCATION OF ASSISTIVE LISTENING DEVICE LOCATION WITH OWNER PRIOR TO FABRICATION.

10.14.10.01

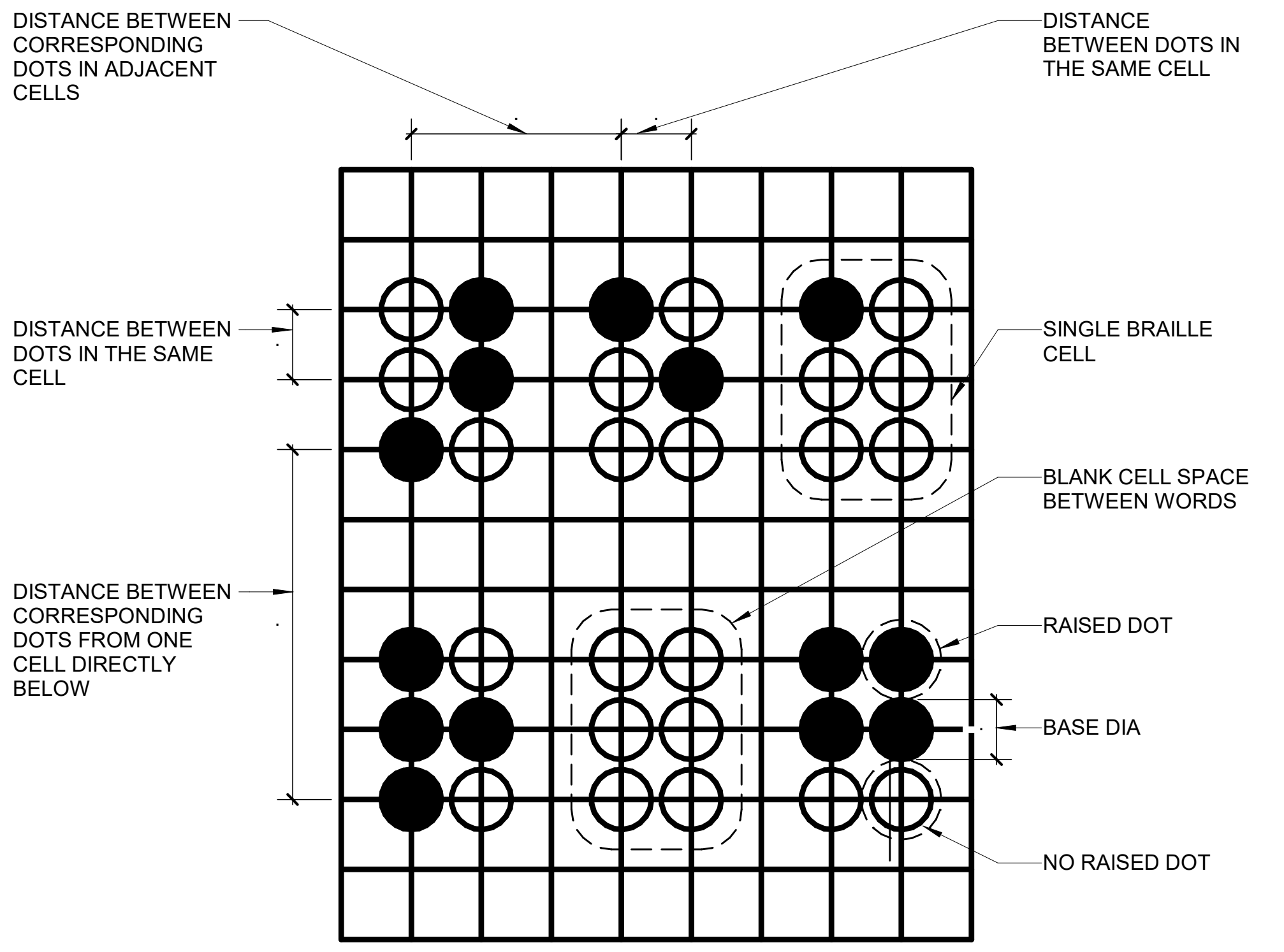
## ASSISTIVE LISTENING DEVICE SIGN 10
3" = 1'-0"


℄
8 1/2"
3/4"
5"
L-100
ROOM NAME
3/8" - 1/2" TYP.
NOTE : AT EXTERIOR CONDITIONS MECHANICALLY FASTEN AT ALL CORNERS W/SS FASTENERS
3" HIGH ROOM NUMBER (VERIFY WITH OWNER)
CONTRACTED GRADE 2 BRAILLE, TYP.

**NOTE:** SEE 2/A10.81 FOR ADDITIONAL INFORMATION AND SIGNAGE MOUNTING HEIGHTS.

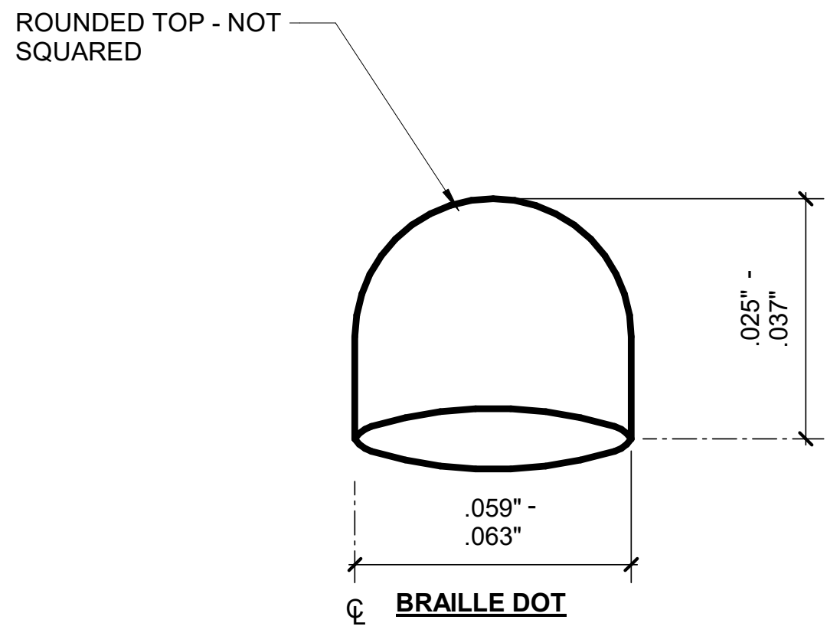
10.14.25.01

## ROOM NAME SIGN TYPE A1 5
3" = 1'-0"


DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS
DISTANCE BETWEEN DOTS IN THE SAME CELL
DISTANCE BETWEEN DOTS IN THE SAME CELL
DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW
SINGLE BRAILLE CELL
BLANK CELL SPACE BETWEEN WORDS
RAISED DOT
BASE DIA
NO RAISED DOT

**BRAILLE MEASUREMENT**

**CBC FIGURE 11B-703.3.1**



**BRAILLE DOT**

**NOTES:**

1. CHARACTER TYPE: CHARACTERS ON SIGN SHALL BE RAISED 1/32" MINIMUM AND SHALL BE "FUTURA MEDIUM" UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE.

2. CHARACTER SIZE: RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8" AND A MAXIMUM OF 2" HIGH.

3. FINISH AND CONTRAST: CHARACTERS, SYMBOLS, AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH AND CONTRAST 70% MINIMUM WITH THEIR BACKGROUNDS.

   CHARACTER & SYMBOLS - "APCO" COLOR #A01 WHITE, UNO

   BACKGROUND - "APCO" COLOR #A54 GRAPHITE, UNO

   INTEGRAL COLOR FRAME: "APCO" COLOR PEARL GREY, UNO

   PANEL: 1/4" THICK ACRYLIC PANEL WITH PHOTO POLYMER RAISED TACTILE COPY SUB-SURFACE SYMBOL, UNO

4. BRAILLE: CONTRACTED CALIFORNIA GRADE 2 BRAILLE SHALL BE USED WHERE BRAILLE IS REQUIRED, DOTS SHALL BE 1/10 INCH ON CENTER IN EACH CELL WITH 2/10 INCH SPACE BETWEEN CELLS AND HAVE DOMED OR ROUNDED TOPS. CBC TABLE 11B-703.3.1.

5. EXTERIOR SIGNS SHALL BE METAL COMPONENTS SUITABLE TO EXTERIOR USE AND SIMILAR TO INTERIOR SIGNS FOR SHAPE AND FORM.

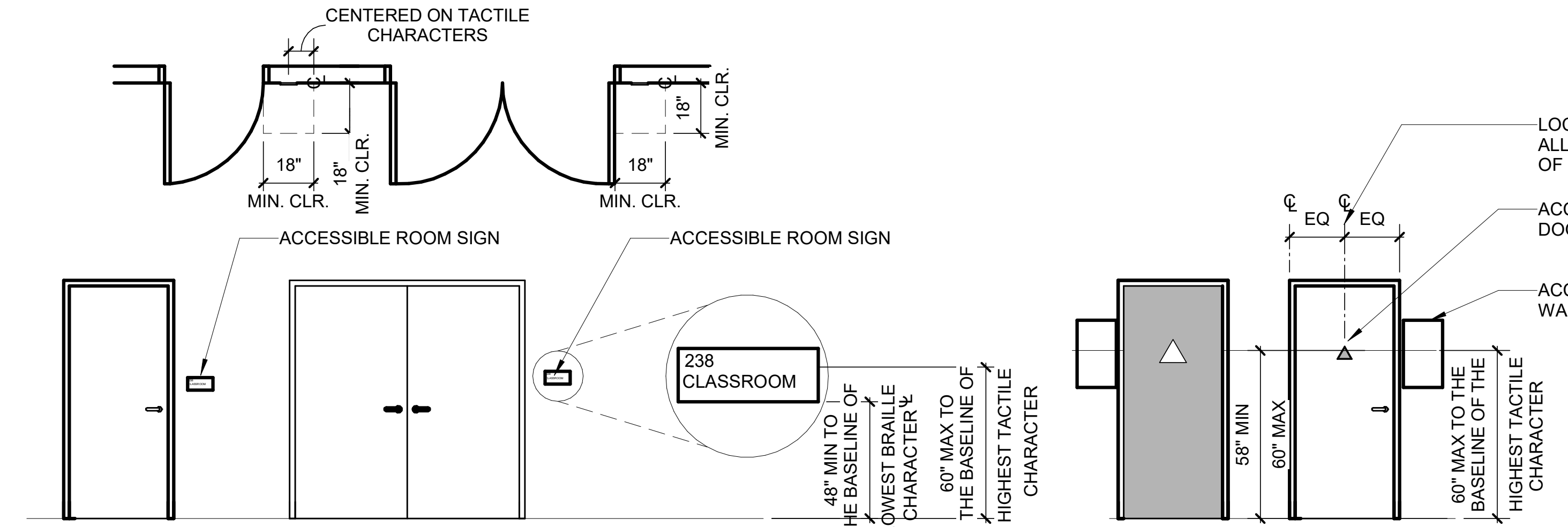
*MEASURED CENTER TO CENTER

**CBC TABLE 11B-703.3.1**

| MEASUREMENT RANGE | MINIMUM IN INCHES MAXIMUM IN INCHES |
|---|---|
| DOT BASE DIAMETER | 0.059 IN TO 0.063 IN |
| DISTANCE BETWEEN TWO DOTS IN THE SAME CELL* | 0.100 IN |
| DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS* | 0.300 IN |
| DOT HEIGHT | 0.025 IN TO 0.037 IN |
| DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW* | 0.395 TO 0.400 IN |

10.14.03.01

## BRAILLE REQUIREMENTS 3
NTS


CENTERED ON TACTILE CHARACTERS
18"
MIN. CLR.
18" MIN. CLR.
18"
MIN. CLR.
18" MIN. CLR.
ACCESSIBLE ROOM SIGN
ACCESSIBLE ROOM SIGN
238 CLASSROOM
48" MIN TO THE BASELINE OF LOWEST BRAILLE CHARACTER ℄
60" MAX TO THE BASELINE OF HIGHEST TACTILE CHARACTER
LOCATION OF SIGN ALLOWED TO BE WITHIN 1" OF CENTERLINE
ACCESSIBLE RESTROOM DOOR SYMBOL
ACCESSIBLE RESTROOM WALL ID SIGN
℄
EQ
EQ
58" MIN
60" MAX
60" MAX TO THE BASELINE OF THE HIGHEST TACTILE CHARACTER

**NOTES:**
1. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. WHERE A TACTILE SIGN IS PROVIDED AT DOUBLE DOORS WITH TWO ACTIVE LEAVES, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR.
   FOR PAIRS OF DOORS WHERE DOOR SWING IS LIMITED TO 90 DEGREE, MOUNT SIGN 9" FROM EDGE OF DOOR. FOR PAIRS OF DOORS WHERE DOOR SWING EXCEEDS 90 DEGREES, MOUNT SIGN AT DOOR WIDTH PLUS 9" FROM EDGE OF DOOR. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18" MIN BY 18" MIN, CENTERED ON THE TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND THE 45 DEGREE OPEN POSITION.

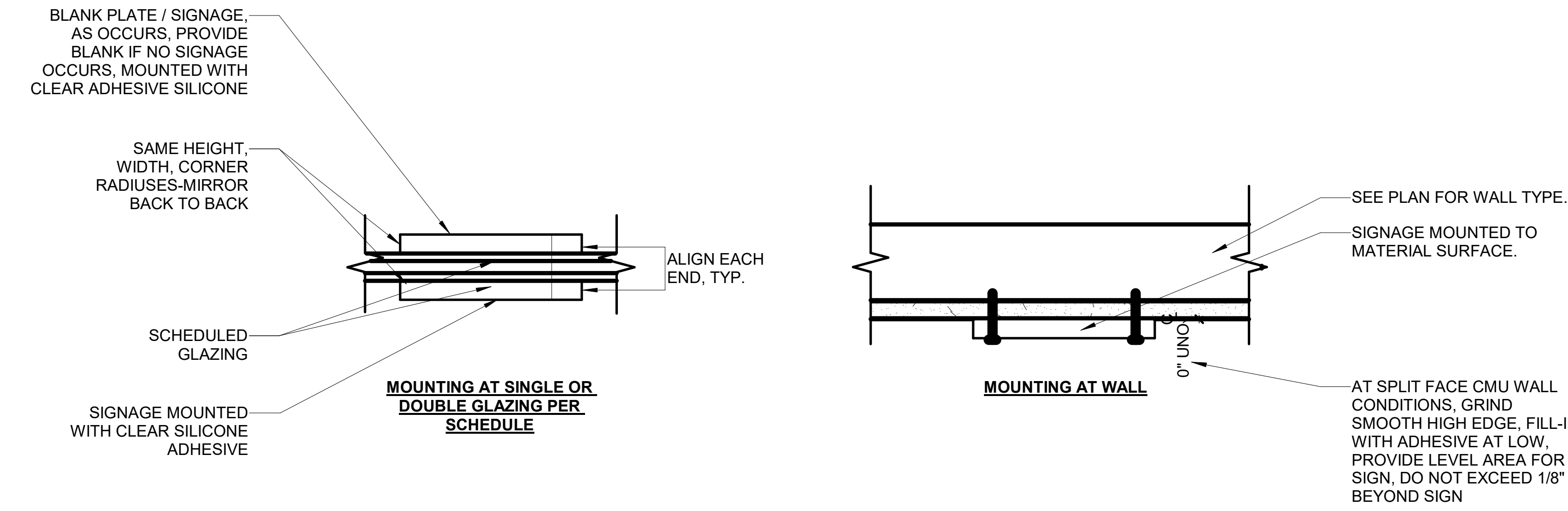
2. RESTROOM GEOMETRIC SYMBOLS SHALL BE INSTALLED CENTERED ON THE DOOR. MOUNTING HEIGHT SHALL BE 60" MAX (58" MIN - 60" MAX) ABOVE THE FINISH FLOOR TO THE CENTERLINE OF THE SIGN. THE COLOR AND CONTRAST OF THE SYMBOL SHALL BE DISTINCTLY DIFFERENT FROM THE COLOR AND CONTRAST OF THE DOOR.

3. AT RESTROOM SIGNAGE, CONTRAST DOOR TO GEOMETRIC SYMBOL 70% LIGHT/DARK.

4. SEE 6/A10.81 FOR SIGNAGE ON GLAZING.

10.14.02.01

## DOOR SIGNAGE LOCATIONS 2
NTS


BLANK PLATE / SIGNAGE, AS OCCURS, PROVIDE BLANK IF NO SIGNAGE OCCURS, MOUNTED WITH CLEAR ADHESIVE SILICONE
SAME HEIGHT, WIDTH, CORNER RADIUSES-MIRROR BACK TO BACK
SCHEDULED GLAZING
SIGNAGE MOUNTED WITH CLEAR SILICONE ADHESIVE
ALIGN EACH END, TYP.
SEE PLAN FOR WALL TYPE.
SIGNAGE MOUNTED TO MATERIAL SURFACE.
0" UNO
AT SPLIT FACE CMU WALL CONDITIONS, GRIND SMOOTH HIGH EDGE, FILL-IN WITH ADHESIVE AT LOW, PROVIDE LEVEL AREA FOR SIGN, DO NOT EXCEED 1/8" BEYOND SIGN

**MOUNTING AT SINGLE OR DOUBLE GLAZING PER SCHEDULE**

**MOUNTING AT WALL**

10.14.09.01

## SIGN MOUNTING 6
3" = 1'-0"

**MATERIALS KEYNOTES :**

1. SIGN MOUNTING METHOD :
   SEE DTL. 6/A10.81 FOR SIGN MOUNTING, U.N.O.

2. SIGN MOUNTING HEIGHT:
   SEE DTL. 2/A10.81 FOR MOUNTING HEIGHT, U.N.O.

3. TEXT SIZE: 5/8" U.N.O.

4. COLOR : ARCHITECT / PROJECT TEAM TO DETERMINE.

5. SIGNAGE (BACKGROUND COLOR) : ARCHITECT / PROJECT TEAM TO DETERMINE.

6. BRAILLE:
   WHERE BRAILLE IS INDICATED REFER TO DTL 3/A10.81 FOR REQUIREMENTS.

7. SIGN THICKNESS PER SPECIFICATIONS:
   ROUNDED EDGES: 1/4" RADIUS.

8. ISA SYMBOLS SHALL BE 4" x 4" UNO .

10.14.01.01

## SIGNAGE MATERIALS AND COLOR KEYNOTES 1
NTS

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3546 CONCOURS STREET
ONTARIO, CA 91764
909 989 9979 / www.hmcarchitects.com

**ISSUE**

| Δ | DESCRIPTION | DATE |
|---|---|---|

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ELEMENTARY SCHOOL PORTABLE CLASSROOMS**

SHEET NAME:
**SIGNAGE DETAILS**

**DSA SUBMITTAL**

DATE: **1/22/2025**

CLIENT PROJ NO:

SHEET:
**A10.81**

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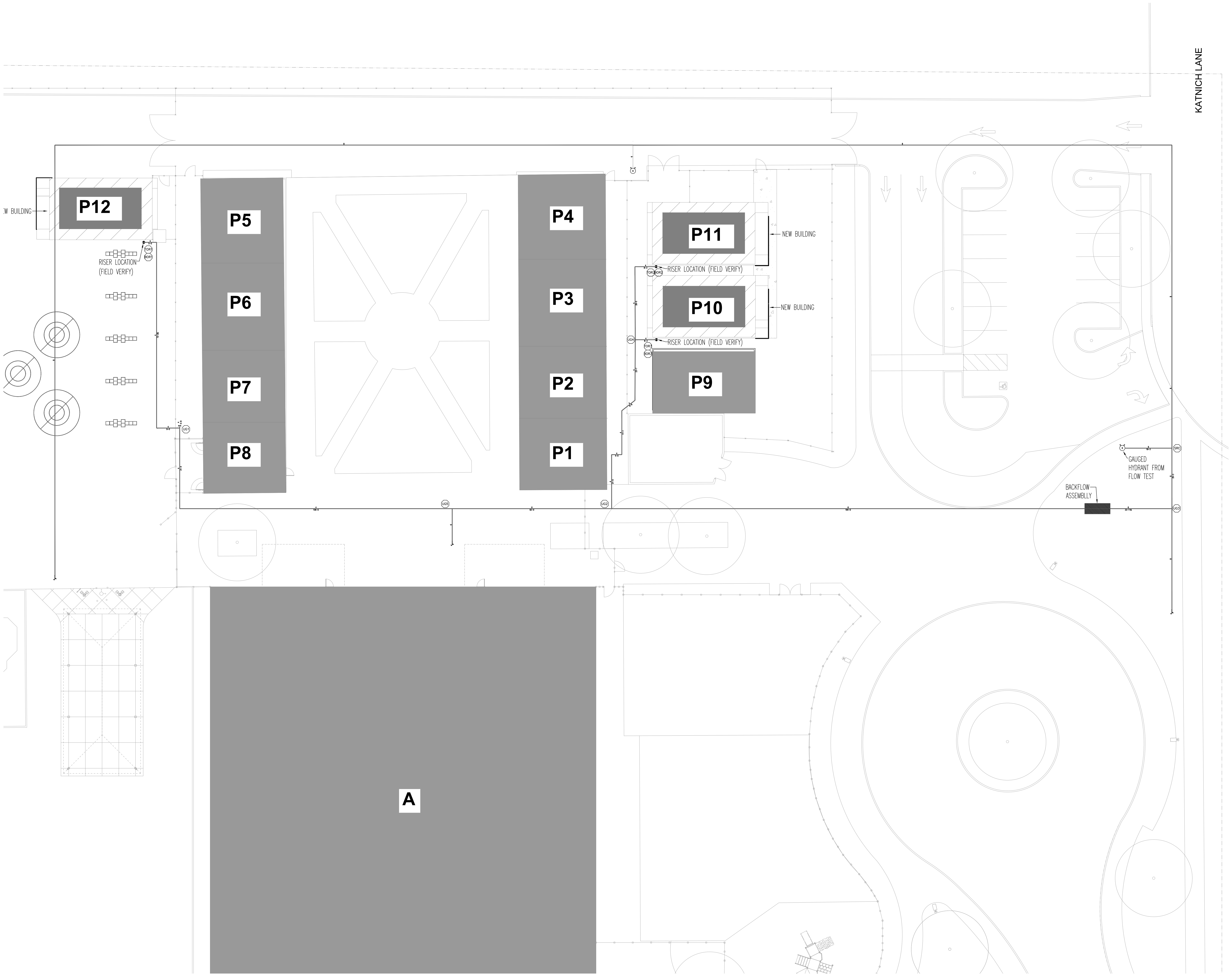


## GENERAL NOTES

1. THE AUTOMATIC SPRINKLER SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF THE 2022 EDITION OF NFPA 13.
2. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE OF AN APPROVED MATERIAL AS PRESCRIBED IN CBC SECTION 713.
3. INSTALLATION OF THE SPRINKLER SYSTEM SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND SPECIFICATIONS (INCLUDING WATER SUPPLY INFORMATION AND TYPE OF EXISTING SPRINKLER SYSTEM, IF ANY) HAVE BEEN APPROVED BY THE AUTHORITY HAVING JURISDICTION.
4. AT VARIOUS STAGES AND UPON COMPLETION, THE SPRINKLER SYSTEM MUST BE TESTED IN THE PRESENCE OF THE ENFORCING AGENCY MENTIONED ABOVE OR A REPRESENTATIVE THEREOF.
5. ALL DEVICES SHALL BE U.L. LISTED OR F.M. APPROVED FOR FIRE SERVICE.
6. HANGER RODS SHALL BE RUN DOWN TIGHT ONTO THE PIPE AT THE END OF EACH BRANCH LINE AND CROSS MAIN.
7. ARMOVERS LONGER THAN 24" SHALL BE PROVIDED WITH A HANGER PER NOTE 6.
8. EARTHQUAKE BRACING OF THE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED AS PRESCRIBED IN NFPA 13 SECTION 18.1 (SEE CALCULATIONS AND DETAILS)
9. THE NEW SYSTEM IS HYDRAULICALLY CALCULATED FOR LIGHT HAZARD.
10. MARQUEE FIRE PROTECTION TO BEGIN WORK AT 6" ABOVE FINISH GRADE. SEE PLAN.
11. ALL ELECTRICAL WIRING TO BE PERFORMED BY OTHERS.
12. BUILDING CONSTRUCTION IS OF LIMITED COMBUSTIBLE CONSTRUCTION.
13. IT IS THE RESPONSIBILITY OF THE OWNER OF THE PROTECTED PROPERTY OR THEIR AUTHORIZED AGENT TO PROVIDE PYE–BARKER FIRE AND SAFETY, LLC WITH ANY KNOWLEDGE THAT THE WATER SUPPLY MIGHT BE CONTAMINATED WITH OR CONDUCIVE TO THE DEVELOPMENT OF MICROBIOLOGICALLY INFLUENCED CORROSION (MIC), INCLUDING AS REQUIRED BY NFPA 13, FAILURE TO IDENTIFY ADVERSE WATER QUALITY ISSUES MAY AFFECT THE FIRE PROTECTION SYSTEM AND VOID ANY MANUFACTURER OR INSTALLER WARRANTIES.
14. OWNER:

LODI UNIFIED SCHOOL DISTRICT
1305 E VINE STREET
LODI, CA 95240

## SCOPE OF WORK

**BUILDING DESIGN**

**NUMBER OF STORIES:** 1
**OCCUPANCY:** "E" and "B" (Design with Floor Live Load **150 psf** only must be used for occupancy B)
**CONSTRUCTION TYPE:** VB
**FLOOR LIVE LOAD:** ☒ 50+15 PSF PARTITION
☐ 100 PSF ☐ 150 PSF
**FLOOR DEAD LOAD:** ☒ WOOD FLOOR - 11 PSF
☐ CONC. FLOOR - 33 PSF

**ROOF LIVE LOAD:** 20 PSF
**ROOF SNOW LOAD:** 20 PSF
**ROOF DEAD LOAD:** 18.5 PSF (INCLUDES SPRINKLERS & 3PSF SOLAR PANEL)
**RAMPLIVE LOAD:** 100PSF
**FLOOD DESIGN:** This PC has not been designed to accommodate flood loads. If located in a zone other than X, a letter stamped and signed from a soils engineer is needed to validate the allowable soil values assumed in this PC are still applicable. (OWNER SUPPLIED)

**FLOOD DESIGN DATA: PROJECT NOT LOCATED IN A FLOOD ZONE**

| BUILDING AREA | NO OVERHANG | WITH OVERHANG (5' @ EA. END) |
|---|---|---|
| ALLOWABLE AREA | ☐ 24x40 960 sf | ☒ 24x40 1200 sf |
| =9,500 sf | ☐ 36x40 1440 sf | ☐ 36x40 1800 sf |
| ACTUAL AREA | ☐ 48x40 1920 sf | ☐ 48x40 2400 sf |
| =4,800 SF | ☐ 60x40 2400 sf | ☐ 60x40 3000 sf |
| | ☐ 72x40 2880 sf | ☐ 72x40 3600 sf |
| | ☐ 84x40 3360 sf | ☐ 84x40 4200 sf* |
| | ☐ 96x40 3840 sf | ☐ 96x40 4800 sf* |
| | ☐ 108x40 4320 sf* | ☐ 108x40 5400 sf* |
| | ☐ 120x40 4800 sf* | ☐ 120x40 6000 sf* |

*Geo-hazard site specific report must be provided and approved by CGS for building area more than 4000 sf

**ALLOWABLE SOIL PRESSURE:** ☒ WOOD FTG -1000PSF ☐ CONCRETE FTG 1500PSF

**FOUNDATION:** ☒ WOOD (conditional) ☐ CONCRETE ABOVE GRADE
☐ CONCRETE BELOW GRADE <2160sf (conditional)
☐ CONCRETE BELOW GRADE (AMM)
SEE GENERAL NOTE 14 BELOW
PC IS DESIGNED BASED ON A PINNED CONNECTION TO THE FOUNDATION.

**CEC CLIMATE ZONE:** 1-16
~~☐ CZ 1-2 RIGID R-10 / 2" ☐ CZ 3-15 RIGID R-5 / 1" ☐ CZ 16 RIGID R-15 / 4"~~

SEE ALT-D1

**WIND DESIGN**

**ULTIMATE DESIGN SPEED:** Vult = 110 mph, 3 sec GUST, Kzt = 1.0
**RISK CATEGORY:** II
**EXPOSURE:** C

1. ARCHITECT OF RECORD SHALL PROVIDE FIRE ALARM DRAWINGS WITH SITE ADAPTED PROJECTS. FIRE ALARM IS NOT PART OF THIS PC.
2. THIS PC HAS BEEN STRUCTURALLY DESIGNED TO SUPPORT THE WEIGHT OF A FIRE SPRINKLER SYSTEM
3. ALLOWABLE AREA IS BASED ON 10'-0" SETBACK FROM ASSUMED LINE
4. PC DESIGNED AS A SINGLE-STORY MODULAR BUILDING
5. SEE STRUCTURAL FOR SOIL TYPES & BEARING STRENGTHS
6. WORK SHALL CONFORM TO TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS
7. THIS PC IS NOT APPROVED FOR "A" OCCUPANCY USAGE
8. EXTERIOR PROJECTIONS TO BE FIRE PROTECTED WHERE REQUIRED

PARTIAL LIST OF APPLICABLE CODES .

**2022** Administrative Code, Part 1, Title 24 C.C.R. *
**2022** California Building Code (CBC), Part 2, Title 24 C.C.R.
(2021 International Building Code Volumes 1-2 and 2022 California Amendments)
**2022** California Electrical Code (CEC), Part 3, Title 24 C.C.R.
(2020 National Electrical Code and 2022 California Amendments)
**2022** California Mechanical Code (CMC), Part 4, Titlte 24 C.C.R.
(2021 Uniform Mechanical Code and 2022 California Amendments)
**2022** California Plumbing Code (CPC), Part 5, Title 24 C.C.R.
(2021 Uniform Plumbing Code and 2022 California Amendments)
**2022** California Energy Code (CEC), Part 6, Title 24 C.C.R
**2022** California Fire Code, Part 9, Title 24 C.C.R.
(2021 International Fire Code and 2022 California Amendments)
**2022** California Green Building Standards Code, Part 11, Title 24 C.C.R.
**2022** California Referenced Standards, Part 12, Title 24 C.C.R
Title 19 C.C.R., Public Safety, State Fire Marshal Regulations.
**2019** ASME A17.1 (w/ A17.1a/CSA B44a-08 addenda) Safety Code for Elevators and Escalators

PARTIAL LIST OF APPLICABLE STANDARDS

| | | |
|---|---|---|
| NFPA 13 | Automatic Sprinkler Systems | **2022** Edition |

DESIGN RESPONSIBILITY NOTES:
MARQUEE FIRE PROTECTION PERFORMED THE DEIGN OF THIS FIRE SPRINKLER SYSTEM. CALIFORNIA LAW STATES THAT THIS DESIGN IS ONLY VALID IF THE SAME C-16 LICENSED CONTRACTOR WHO DESIGNED THE SYSTEM PERFORMS THE INSTALLATION. DSA PROJECT APPROVAL WILL BECOME INVALID IF A DIFFERENT CONTRACTOR INSTALLS ANY PORTION OF THE FIRE SPRINKLER SYSTEM (INCLUDING THE RISER). IF ANOTHER CONTRACTOR INSTALLS ANY PORTION OF THE FIRE SPRINKLER SYSTEM, RESPONSIBILITY FOR THE ENTIRE FIRE SPRINKLER SYSTEM (INCLUDING THE RISER) MUST BE ACCEPTED BY A CALIFORNIA REGISTERED MECHANICAL ENGINEER OR FIRE PROTECTION ENGINEER. ACCEPTANCE OF RESPONSIBILITY IS INDICATED BY SIGNING AND STAMPING ALL FIRE SPRINKLER DRAWINGS. SIGNED AND STAMPED DRAWINGS MUST BE SUBMITTED TO DSA AND APPROVED PRIOR TO PROCEEDING WITH CONSTRUCTION. NOTE THAT THESE REQUIREMENTS MAY APPLY IF THE BUILDING IS SUBSEQUENTLY RELOCATED TO A NEW LOCATION IN THE FUTURE.

## UNDERGROUND SITE PLAN

1. INFORMATION SHOWN IS FOR REFERENCE OF HYDRAULIC DESIGN INFORMATION ONLY. DESIGN AND INSTALLATION IS BY OTHERS.
2. U.G. PIPING SHALL BE FLUSHED AND TESTED (BY OTHERS) BEFORE TIE–IN.
3. MARQUEE FIRE PROTECTION TO BEGIN WORK AT 6" ABOVE FINISHED GRADE AT THE THREE RISER LOCATIONS SHOWN ON SITE PLAN.

## INDEX OF DRAWINGS

FP–1 SITE PLAN & GENERAL NOTES
FP–2 DETAILS
FP–3 PIPING PLAN & REFLECTED CEILING PLAN FOR BUILDINGS 10, 11, AND 12.

2' 4' 6' 8' 10' 12' 14' 16' 18'

**LEGEND**

- 2–WAY EARTHQUAKE BRACE
- 4–WAY EARTHQUAKE BRACE
- FLEX – FLEXIBLE GROOVED COUPLING
- RIGID "0–FLEX" GRV'D COUPLING
- GROOVED CAP
- #4 – HANGER No.
- APPROX. HANGER LOCATION
- XX – HYDRAULIC REFERENCE NODE
- SYSTEM RISER
- [XX–XX] – PIPE ELEVATION (Ref: AFF)
- X–X – CEILING HEIGHT

UNO – UNLESS NOTED OTHERWISE
AFF – ABOVE FINISH FLOOR
Bts – BELOW TOP of STRUCTURE
BOB – BOTTOM OF BEAM
BOD – BOTTOM OF DECK
BOF – BOTTOM OF FRAMING
COJ – CUT ON JOB
TOE – THREAD ONE END
GOE – GROOVE ONE END
GxG – GROOVE x GROOVE
TxG – THREAD x GROOVE
FxG – FLANGE x GROOVE
TOR – TOP OF RISER
BOR – BOTTOM OF RISER
MC – MALLEABLE COUPLING
UG – UNDERGROUND
OH – OVERHEAD
RN – RISER NIPPLE
SU – SPRIG UP
DR – DROP TO SPRINKLER
(E) – EXISTING
(N) – NEW
(R) – RELOCATE

**SPRINKLERS**

| SYM | COUNT | ORIF, K–FACTOR | NPT | MFG. | TEMP. | FINISH | RESPONSE–STYLE | S.I.N. | MODEL | ESCUTCHEON |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

SEE PIPING PLAN

# ELLERTH E. LARSON E.S. PORTABLE CLASSROOMS

2375 GIANNONI WAY - LODI, CA 95242

## SITE PLAN

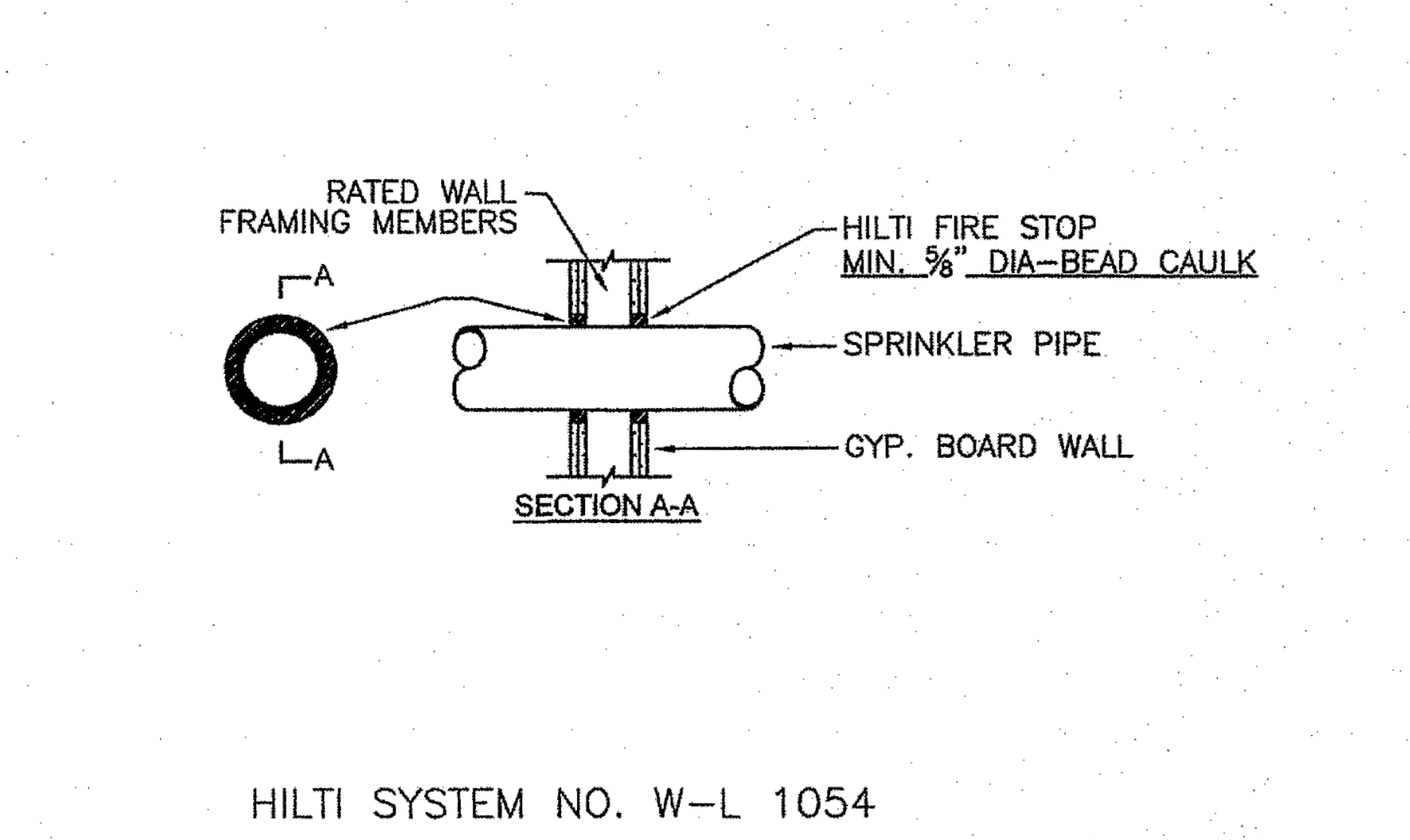
| REV. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |
| | | | |

LICENSE No. C-16 1077494

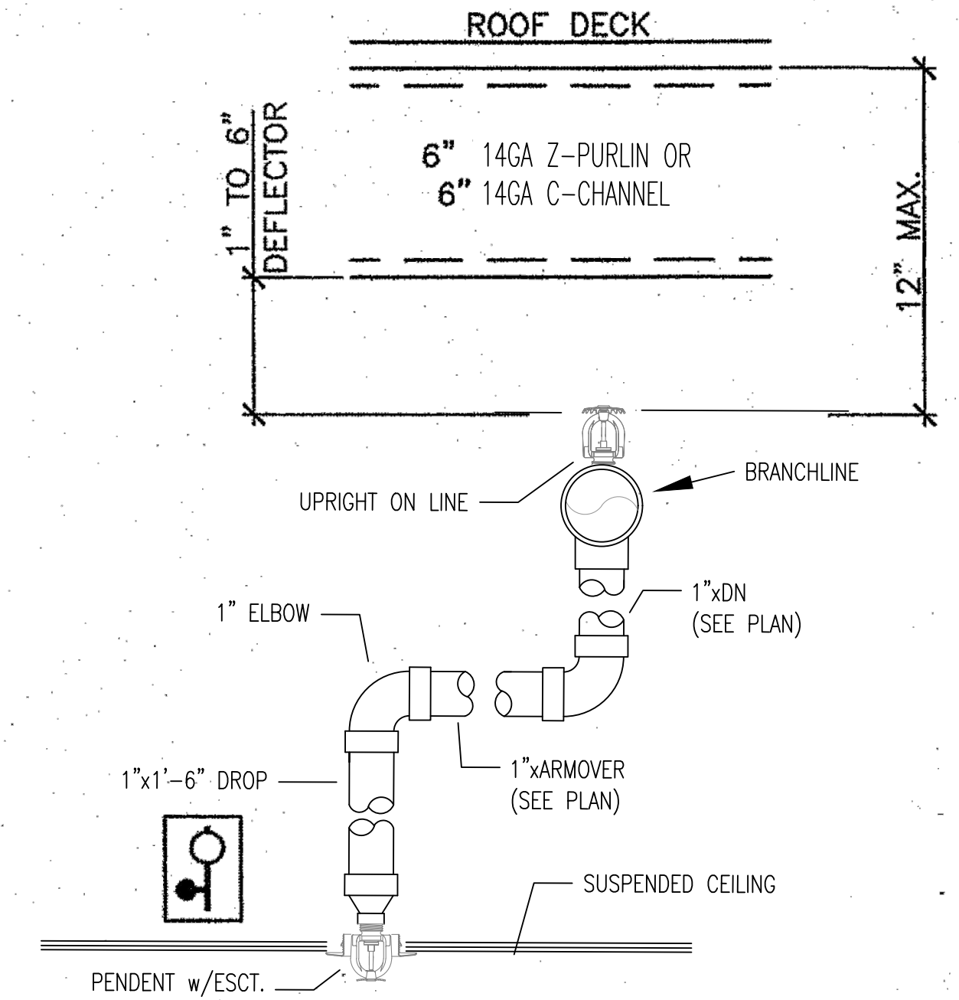
MARQUEE FIRE PROTECTION
a company of: PYE+BARKER

3875 Atherton Rd. Ste. #200
Rocklin, CA. 95765-3716
TEL. 916. 641-7997 FAX. 916. 641-0775
CA. LIC. 1077494 C-16

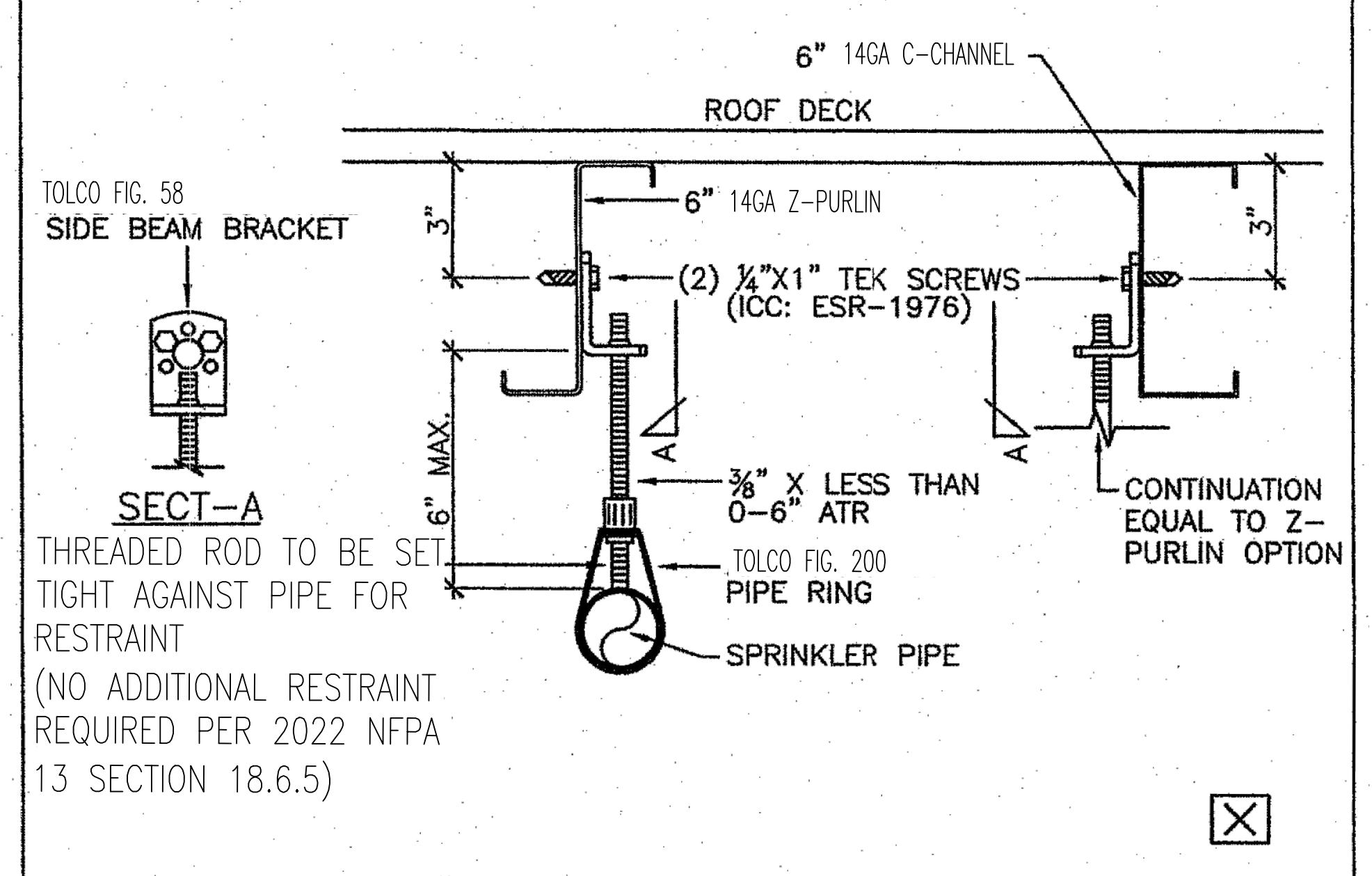
Date: 1/14/2025
Contract With: CLASS LEASING, LLC
Scale: 1/16" =1'–0"
Drawn: S. DE FERRARI
Job No: 1824–141
Sheet: FP–1
Of 3 Sheets



RATED WALL PENETRATION — DETAIL–4

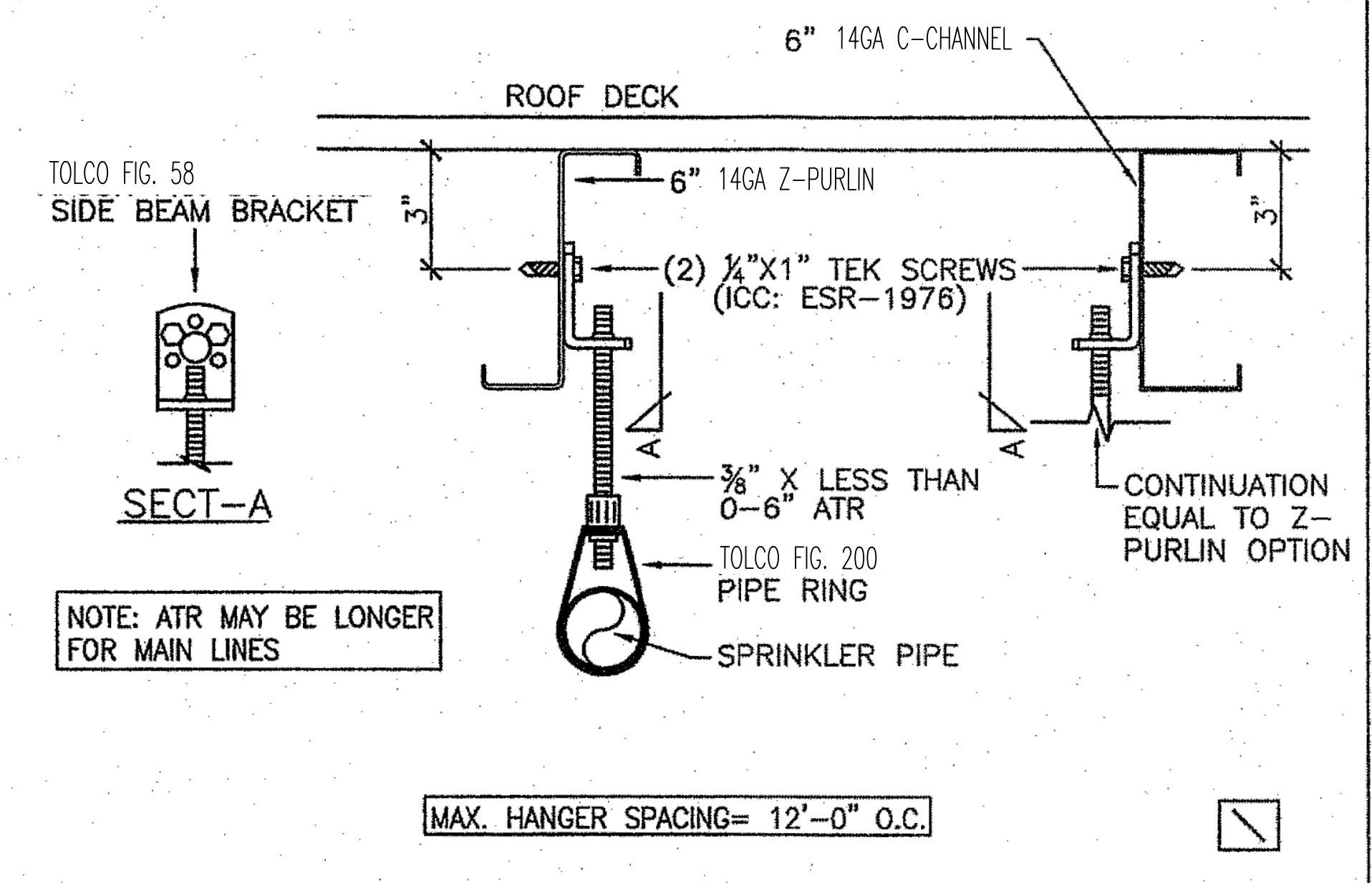


ARMOVER AND DROP DETAIL — DETAIL–3



THREADED ROD TO BE SET TIGHT AGAINST PIPE FOR RESTRAINT
(NO ADDITIONAL RESTRAINT REQUIRED PER 2022 NFPA 13 SECTION 18.6.5)

END OF LINE HANGER/RESTRAINT — DETAIL–2



NOTE: ATR MAY BE LONGER FOR MAIN LINES

MAX. HANGER SPACING= 12'–0" O.C.

TYPICAL MAIN/BRANCH LINE HANGER — DETAIL–1

## HANGER NOTES

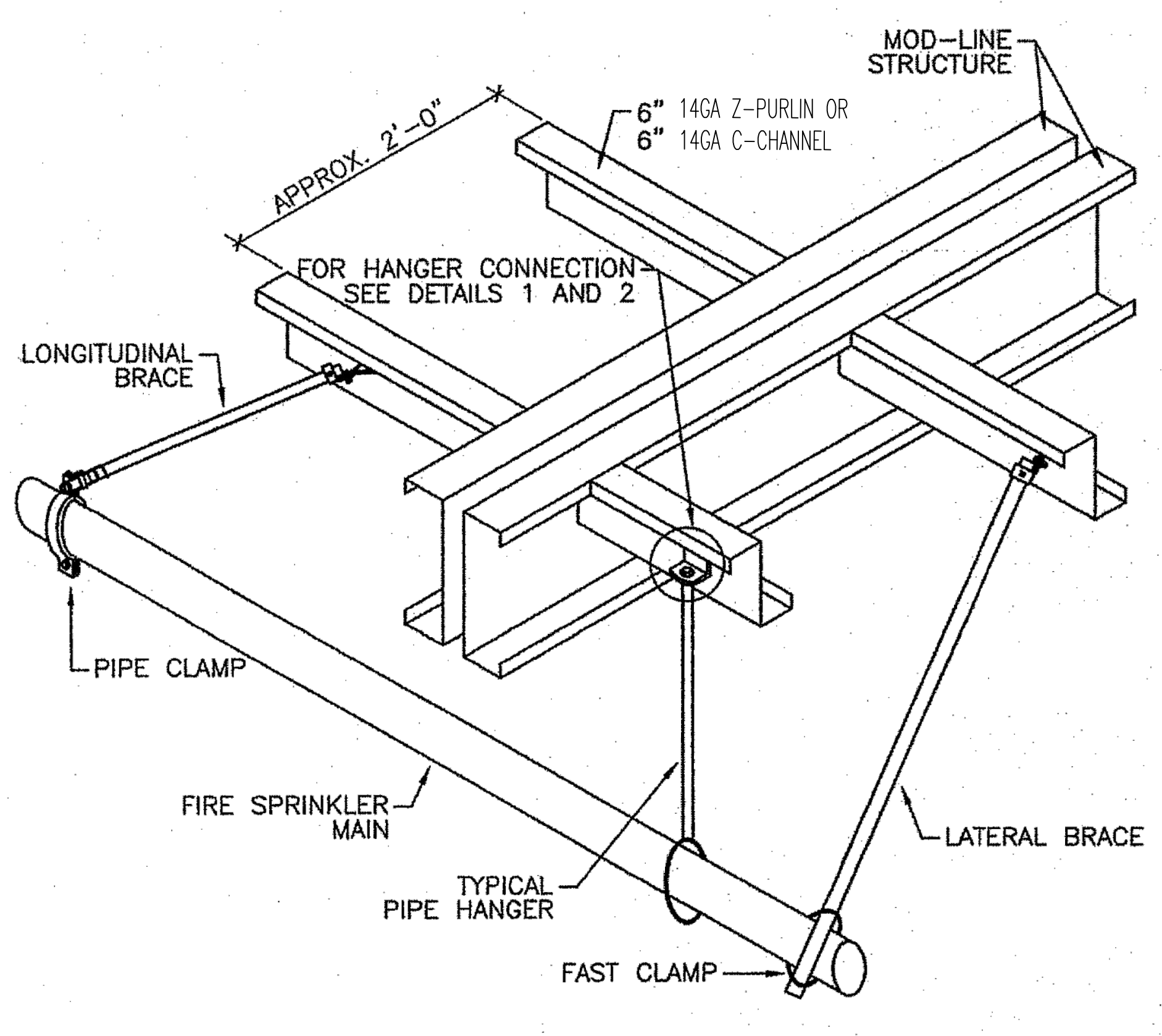
1. ALL HANGER ASSEMBLIES ARE PER NFPA 13 & MANUFACTURER DETAILS.
2. PER CBC AND NFPA 13 THE BUILDING STRUCTURE MUST BE CAPABLE OF SUPPORTING THE ADD LOAD OF THE WATER FILLED PIPE PLUS A MINIMUM OF 250 LBS. (NFPA 13, 17.4.1.3.1)
3. HANGER SPACING SHALL BE PER NFPA 13 TABLE 17.5.2.1(a).

AGENCY APPROVAL:

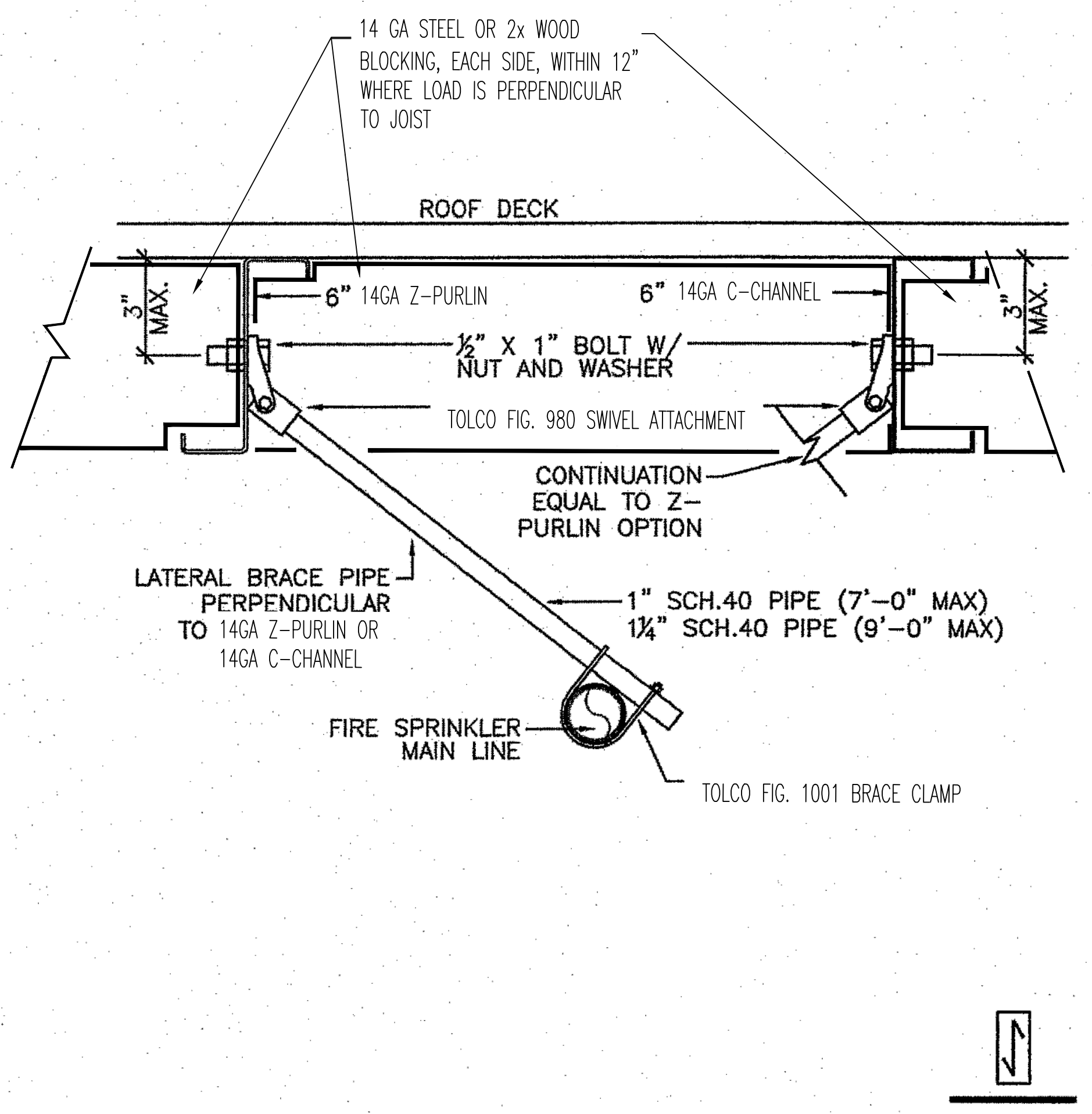
## EARTHQUAKE BRACING NOTES

1. EARTHQUAKE BRACING SHALL BE PROVIDED PER NFPA 13, 2022 ed., SECTION 18.1.
2. 18.5.5.8: LATERAL BRACES SHALL BE ALLOWED TO ACT AS LONGITUDINAL BRACES IF THEY ARE WITHIN 24" OF THE CENTERLINE OF THE PIPING BRACED LONGITUDINALLY AND THE LATERAL BRACE IS ON A PIPE OF EQUAL OR GREATER SIZE THAN THE PIPE BEING BRACED LONGITUDINALLY.
3. 18.5.6.3: LONGITUDINAL BRACES SHALL BE ALLOWED TO ACT AS LATERAL BRACES IF THEY ARE WITHIN 24" OF THE CENTERLINE OF THE PIPING BRACED LATERALLY.
4. 18.5.7.1: EACH RUN OF PIPE BETWEEN A CHANGE IN DIRECTION SHALL BE PROVIDED WITH BOTH LATERAL AND LONGITUDINAL BRACING UNLESS THE REQUIREMENTS OF 18.5.7.2 ARE MET.
5. 18.5.7.2: PIPE RUNS LESS THAN 12 ft. SHALL BE PERMITTED TO BE SUPPORTED BY THE BRACES ON ADJACENT RUNS OF PIPE.
6. 18.5.9.3: THE HORIZONTAL FORCE, Fpw, ACTING ON THE BRACE SHALL BE TAKEN AS Fpw=CpWp, WHERE Cp IS THE SEISMIC COEFFICIENT SELECTED IN TABLE 18.5.9.3 UTILIZING THE SHORT PERIOD RESPONSE PARAMETER, Ss.

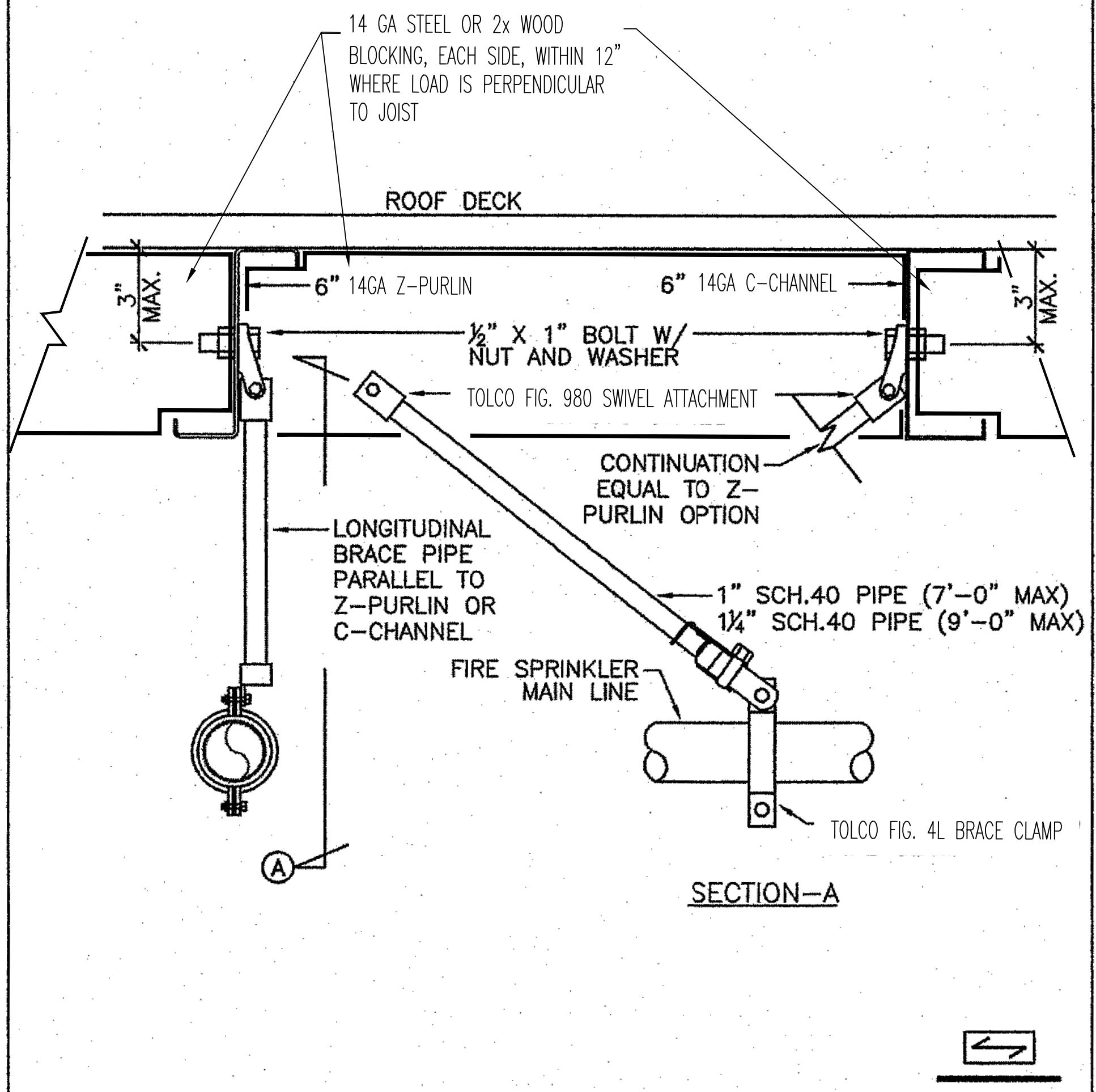
   **Ss** **Cp**
   **.75** = **0.45** (SEE TABLE 18.5.9.3)
7. 18.5.10: WHERE THE HORIZONTAL SEISMIC LOADS USED EXCEED 0.5 Wp AND THE BRACE ANGLE IS LESS THAN 45° FROM VERTICAL OR WHERE THE HORIZONTAL SEISMIC LOAD EXCEEDS 1.0Wp AND THE BRACE ANGLE IS LESS THAN 60° FROM VERTICAL, THE BRACES SHALL BE ARRANGED TO RESIST THE NET VERTICAL REACTION PRODUCED BY THE HORIZONTAL LOAD. (WHEN APPLIES, AN ADDITIONAL VERTICAL SEISMIC BRACE SHALL BE INSTALLED WITHIN CLOSE PROXIMITY (±24") OF THE BRACE)



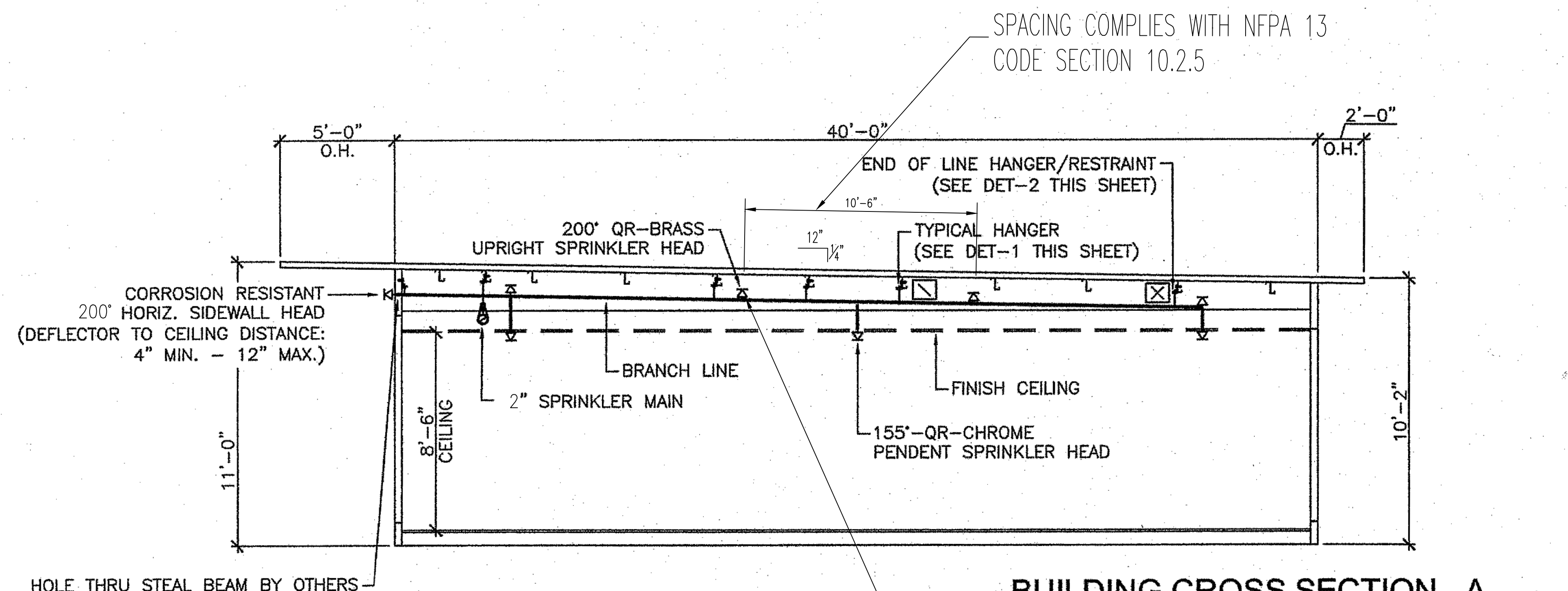
ISOMETRIC SWAY BRACE VIEW


14 GA STEEL OR 2x WOOD BLOCKING, EACH SIDE, WITHIN 12" WHERE LOAD IS PERPENDICULAR TO JOIST
ROOF DECK
3" MAX.
6" 14GA Z–PURLIN
6" 14GA C–CHANNEL
½" X 1" BOLT W/ NUT AND WASHER
TOLCO FIG. 980 SWIVEL ATTACHMENT
CONTINUATION EQUAL TO Z– PURLIN OPTION
LATERAL BRACE PIPE PERPENDICULAR TO 14GA Z–PURLIN OR 14GA C–CHANNEL
1" SCH.40 PIPE (7'–0" MAX)
1¼" SCH.40 PIPE (9'–0" MAX)
FIRE SPRINKLER MAIN LINE
TOLCO FIG. 1001 BRACE CLAMP

LATERAL SWAY BRACE — DETAIL–6


14 GA STEEL OR 2x WOOD BLOCKING, EACH SIDE, WITHIN 12" WHERE LOAD IS PERPENDICULAR TO JOIST
ROOF DECK
3" MAX.
6" 14GA Z–PURLIN
6" 14GA C–CHANNEL
½" X 1" BOLT W/ NUT AND WASHER
TOLCO FIG. 980 SWIVEL ATTACHMENT
CONTINUATION EQUAL TO Z– PURLIN OPTION
LONGITUDINAL BRACE PIPE PARALLEL TO Z–PURLIN OR C–CHANNEL
1" SCH.40 PIPE (7'–0" MAX)
1¼" SCH.40 PIPE (9'–0" MAX)
FIRE SPRINKLER MAIN LINE
TOLCO FIG. 4L BRACE CLAMP
A
SECTION–A

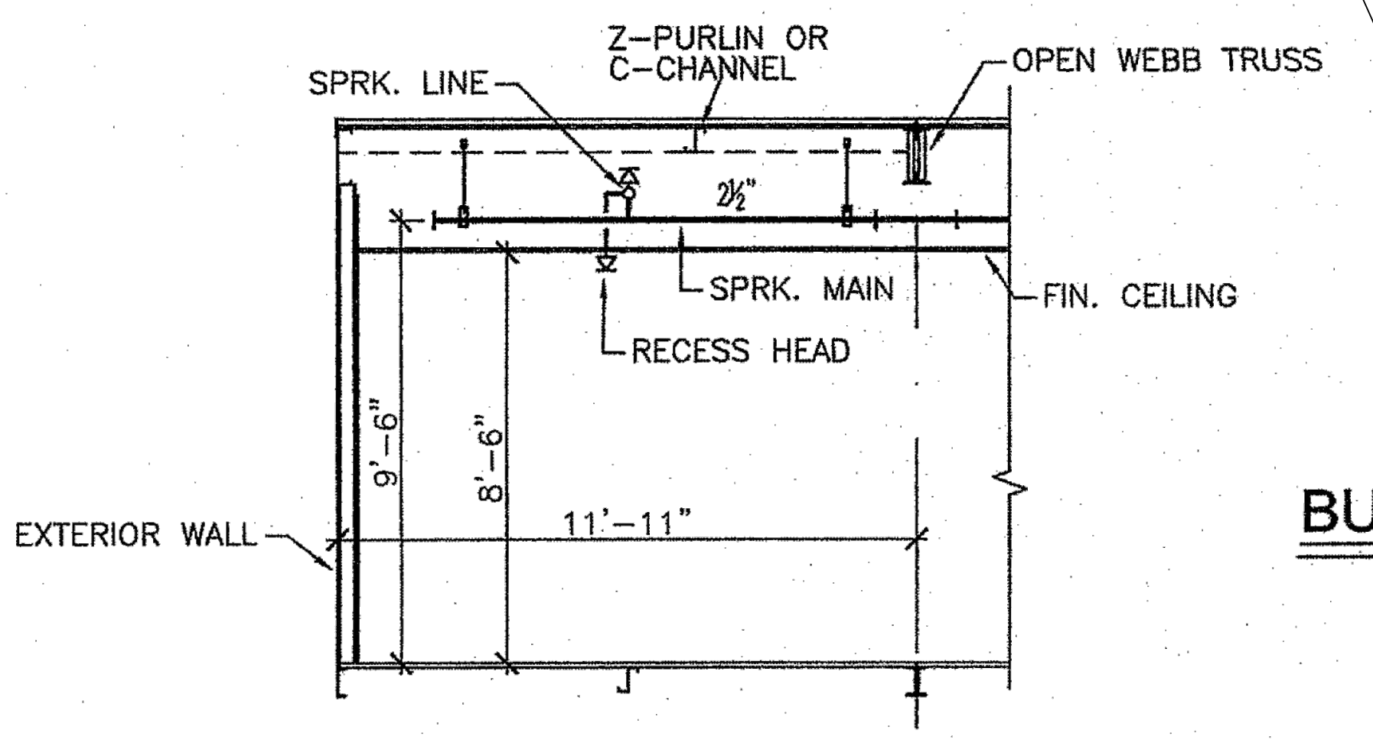
LONGITUDINAL SWAY BRACE — DETAIL–5


SPACING COMPLIES WITH NFPA 13 CODE SECTION 10.2.5
5'–0" O.H.
40'–0"
2'–0" O.H.
END OF LINE HANGER/RESTRAINT (SEE DET–2 THIS SHEET)
10'–6"
12" ¼"
TYPICAL HANGER (SEE DET–1 THIS SHEET)
200° QR–BRASS UPRIGHT SPRINKLER HEAD
CORROSION RESISTANT 200° HORIZ. SIDEWALL HEAD (DEFLECTOR TO CEILING DISTANCE: 4" MIN. – 12" MAX.)
BRANCH LINE
2" SPRINKLER MAIN
FINISH CEILING
155°–QR–CHROME PENDENT SPRINKLER HEAD
11'–0"
8'–6" CEILING
10'–2"
HOLE THRU STEAL BEAM BY OTHERS (TYP)
CLEARANCE PER NFPA 13 SECT.–18.4.2

## BUILDING CROSS SECTION - A

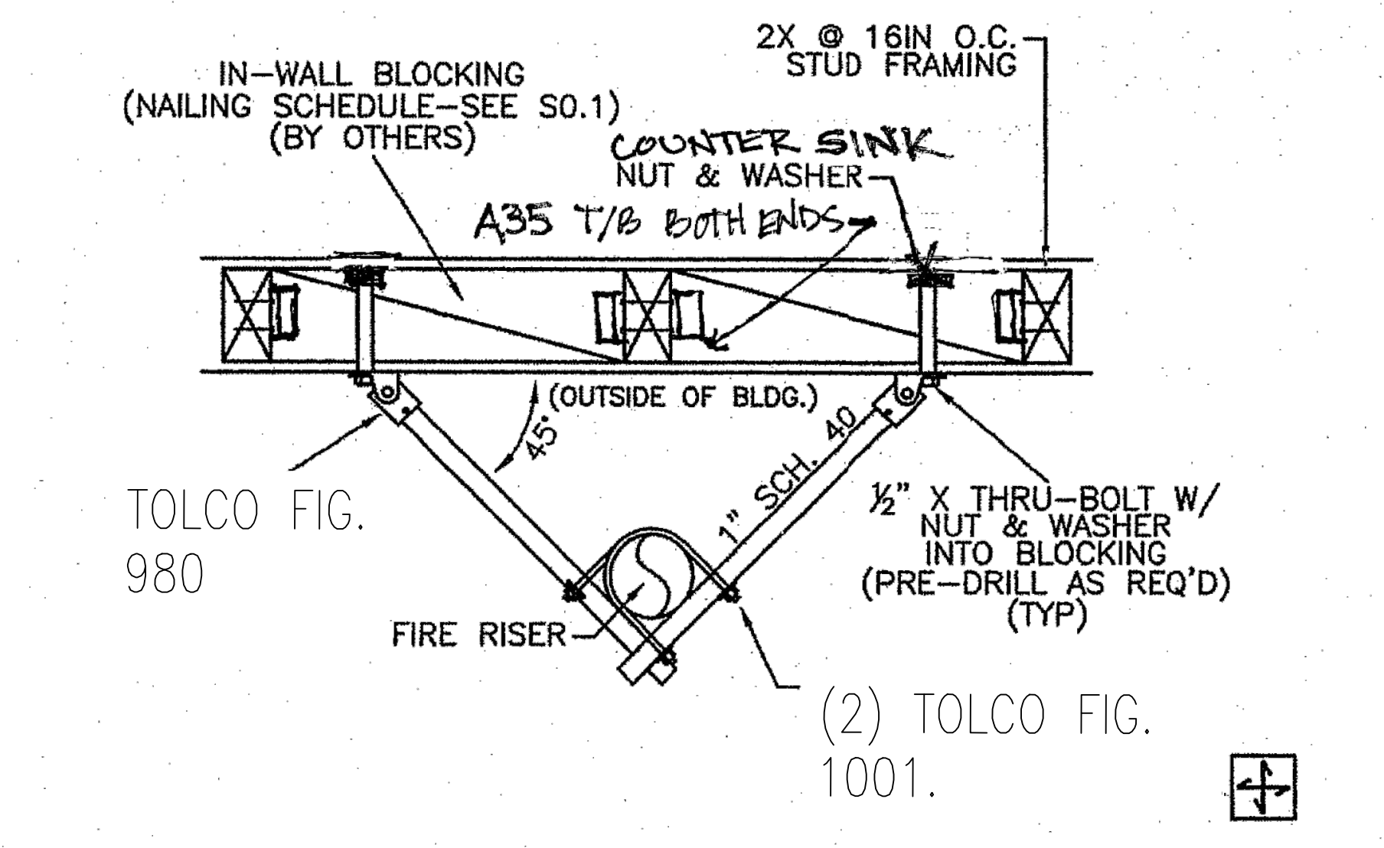
SCALE: 3/16" = 1'-0"

UPRIGHT SPRINKLERS SHALL BE 1" TO 6" BELOW THE STRUCTURAL MEMBERS & NOT TO EXCEED 22" BELOW THE DECK

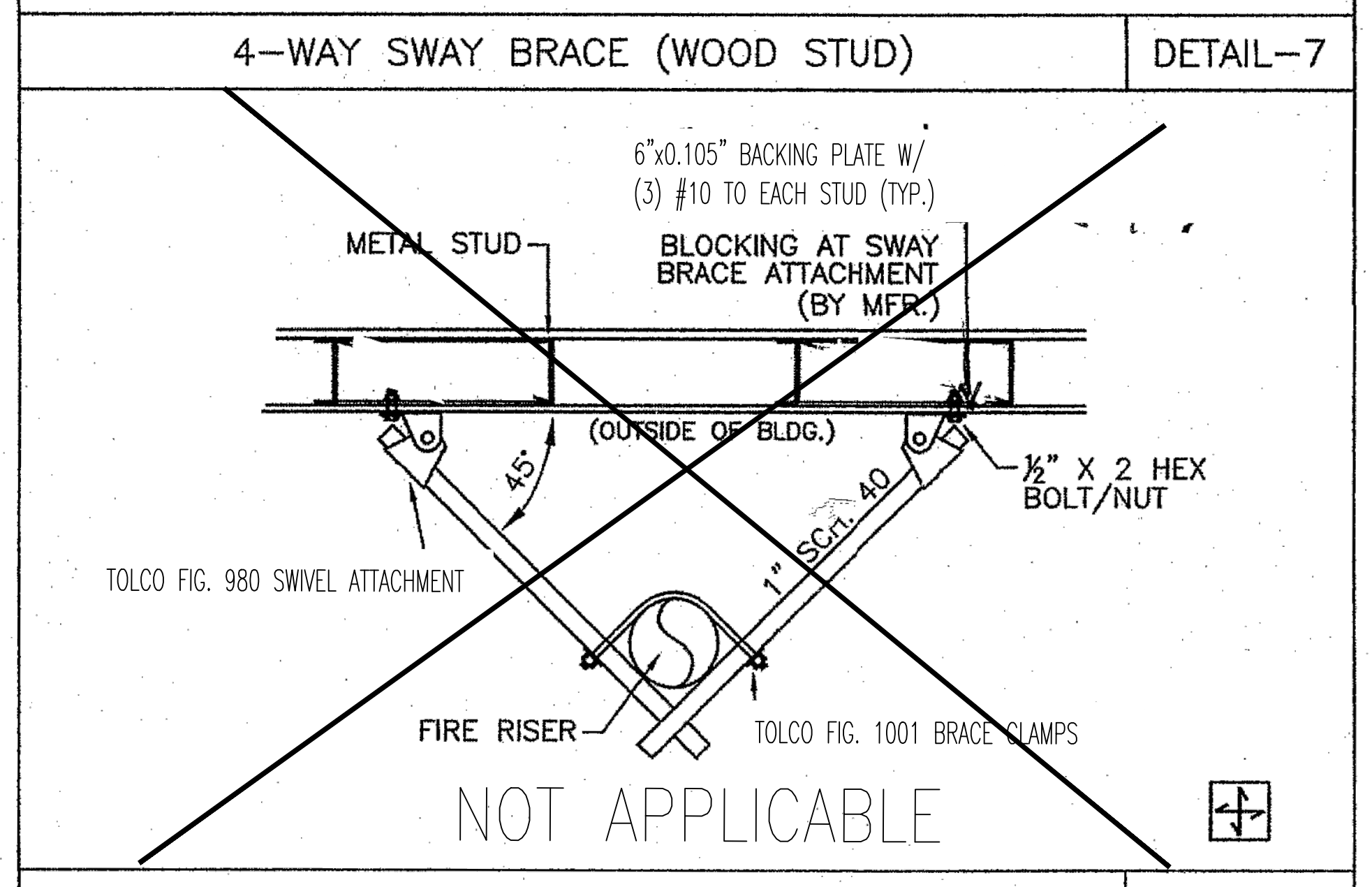


## BUILDING CROSS SECTION - B

SCALE: 3/16" = 1'-0"


IN–WALL BLOCKING (NAILING SCHEDULE–SEE S0.1) (BY OTHERS)
2X @ 16IN O.C. STUD FRAMING
COUNTER SINK
NUT & WASHER
A35 T/B BOTH ENDS
(OUTSIDE OF BLDG.)
45°
1" SCH. 40
½" X THRU–BOLT W/ NUT & WASHER INTO BLOCKING (PRE–DRILL AS REQ'D) (TYP)
TOLCO FIG. 980
FIRE RISER
(2) TOLCO FIG. 1001.

4–WAY SWAY BRACE (WOOD STUD) — DETAIL–7


6"x0.105" BACKING PLATE W/ (3) #10 TO EACH STUD (TYP.)
METAL STUD
BLOCKING AT SWAY BRACE ATTACHMENT (BY MFR.)
(OUTSIDE OF BLDG.)
45°
1" SCH. 40
½" X 2 HEX BOLT/NUT
TOLCO FIG. 980 SWIVEL ATTACHMENT
FIRE RISER
TOLCO FIG. 1001 BRACE CLAMPS

NOT APPLICABLE

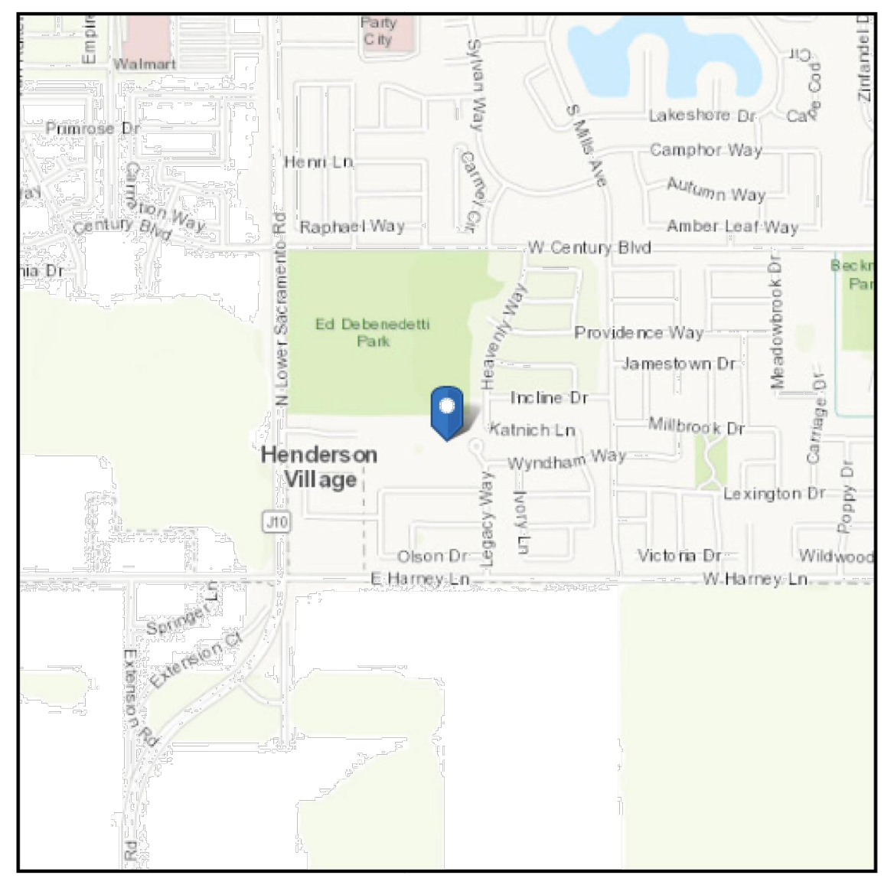
4–WAY SWAY BRACE (METAL STUD) — DETAIL–7B

## ASCE Hazards Report

**Address:**
2375 Giannoni Way
Lodi, California
95242

**Standard:** ASCE/SEI 7-22
**Risk Category:** II
**Soil Class:** Default

**Latitude:** 38.104036
**Longitude:** -121.301694
**Elevation:** 34.884982087448 ft (NAVD 88)



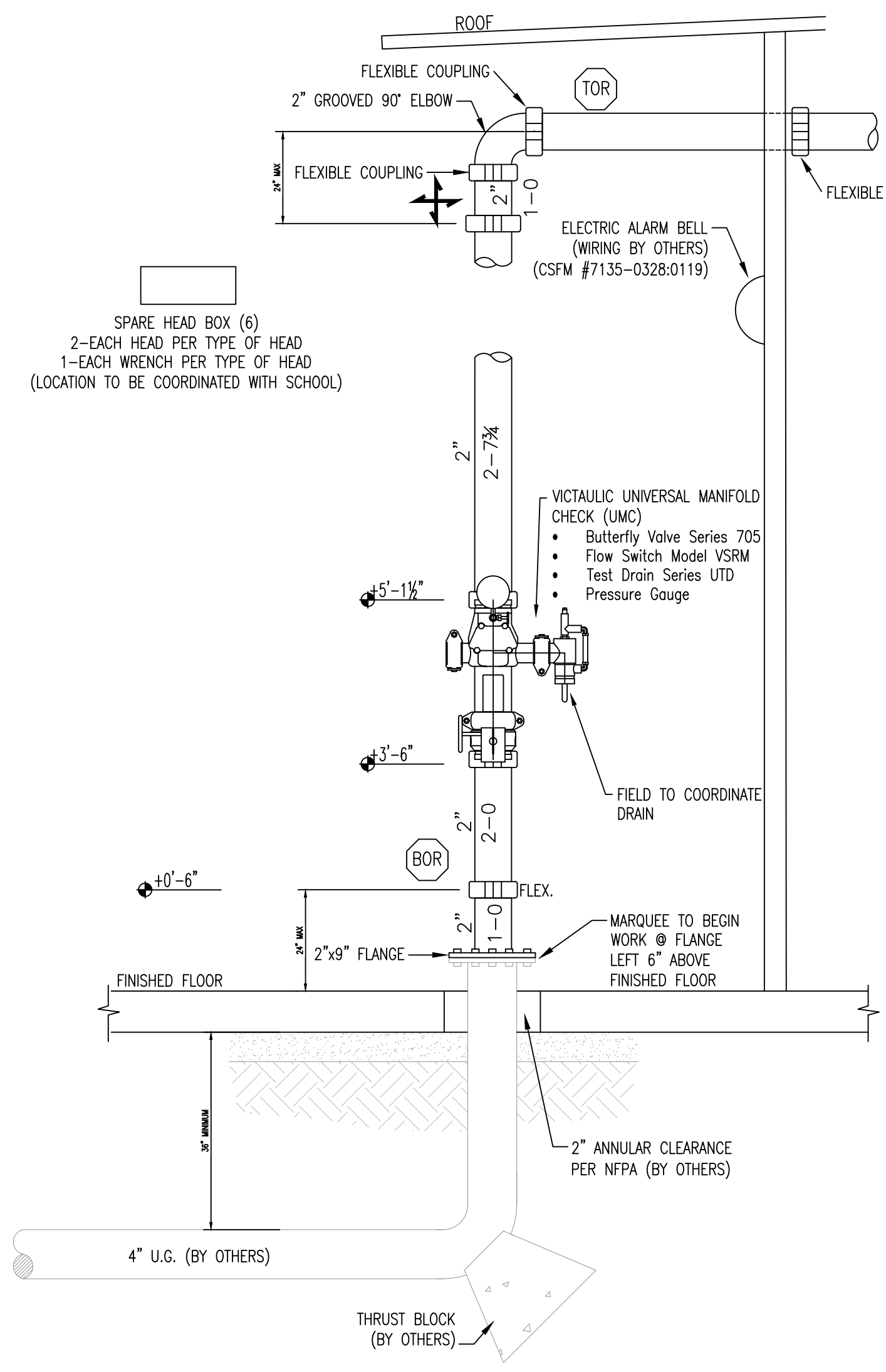
## Seismic

**Site Soil Class:** Default

**Results:**

| | | | |
|---|---|---|---|
| $PGA_M$ : | 0.38 | $T_L$ : | 12 |
| $S_{MS}$ : | 1.08 | $S_S$ : | 0.75 |
| $S_{M1}$ : | 0.68 | $S_1$ : | 0.25 |
| $S_{DS}$ : | 0.72 | $V_{S30}$ : | 260 |
| $S_{D1}$ : | 0.45 | | |

**Seismic Design Category: D**



SPARE HEAD BOX (6)
2–EACH HEAD PER TYPE OF HEAD
1–EACH WRENCH PER TYPE OF HEAD
(LOCATION TO BE COORDINATED WITH SCHOOL)

FIRE SPRINKLER RISER DETAIL
NTS

## SEISMIC BRACING CALCULATIONS
(PER NFPA 13)

MARQUEE FIRE PROTECTION
3875 ATHERTON ROAD, STE 200
ROCKLIN, CA 95756
PHONE: (916) 641–7997
FAX: (916) 641–0775
DESIGNER: STEFAN DE FERRARI

DATE: 1/14/2025 SHEET 1 OF 2
PROJECT: LARSON PORTABLE CLASSROOMS
ADDRESS: 12375 GIANNONI WAY
LODI, CA 95242

BRACE IDENTIFICATION No. 5
(REFERENCE PLANS)
LATERAL BRACE. . . . . . . . . X
LONGITUDINAL BRACE. . . . . .

BRACE INFORMATION

LENGTH OF SWAY BRACE: . . 7'–0"
DIAMETER OF SWAY BRACE: . 1"
TYPE OF BRACE: . . . . . . . . SCH. 40
ANGLE OF BRACE: . . . . . . . 45°–90°
LEAST RADIUS OF GYRATION: .42
L/R VALUE: . . . . . . . . . . . 200
MAXIMUM HORIZONTAL LOAD:. **1310 lbs**

FASTENER INFORMATION

ORIENTATION OF CONNECTING SURFACE: H
FASTENER TYPE: CONNECTION TO STEEL
DIAMETER: . . . . . . . . . . . . 1/2"
LENGTH: . . . . . . . . . . . . . 1"
MAXIMUM LOAD: . . . . . . . . **2050 lbs**

SEISMIC BRACE ATTACHMENTS

**STRUCTURAL ATTACHMENT FITTING:**
MAKE: TOLCO MODEL: 980
LISTED LOAD RATING: 2014 lbs
ADJUSTED LOAD RATING PER 18.5.2.3: **1424 lbs**
**PIPE ATTACHMENT FITTING:**
MAKE: TOLCO MODEL: 1001
LISTED LOAD RATING: 2015 lbs
ADJUSTED LOAD RATING PER 18.5.2.3: **1425 lbs**

SEISMIC BRACE ASSEMBLY DETAIL

SEE LATERAL BRACING DETAIL THIS SHEET

MAX. LOAD PER TABLE 18.5.5.2(a) FOR **40'** SPACING = **769**lbs

SPRINKLER SYSTEM LOAD CALCULATION (Fpw=CpWp)

| PIPE DIAMETER | PIPE TYPE | PIPE LENGTHS | WEIGHT PER FT | TOTAL WEIGHT PER LENGTH (Wp) | COEFFICIENT (Cp) | TOTAL WEIGHT (Fpw) |
|---|---|---|---|---|---|---|
| 1" | SCH. 40 | 55 | 2.05 | 112.75 | .45 | 50.74 |
| 1¼" | SCH. 40 | 38 | 2.93 | 111.34 | .45 | 50.10 |
| 1½" | SCH. 40 | 0 | 3.61 | 0.00 | .45 | 0.00 |
| 2" | SCH. 10 | 19 | 4.01 | 76.19 | .45 | 34.29 |
| 2½" | SCH. 10 | 0 | 5.89 | 0.00 | .45 | 0.00 |
| 3" | SCH. 10 | 0 | 7.94 | 0.00 | .45 | 0.00 |
| 4" | SCH. 10 | 0 | 11.78 | 0.00 | .45 | 0.00 |
| 6" | SCH. 10 | 0 | 23.03 | 0.00 | .45 | 0.00 |
| TOTAL LOAD – WEIGHT OF WATER FILLED PIPE = | | | | | | 135.13 lbs |
| TOTAL LOAD x 15% = | | | | | | **155.39** lbs |

## SEISMIC BRACING CALCULATIONS
(PER NFPA 13)

MARQUEE FIRE PROTECTION
3875 ATHERTON ROAD, STE 200
ROCKLIN, CA 95756
PHONE: (916) 641–7997
FAX: (916) 641–0775
DESIGNER: STEFAN DE FERRARI

DATE: 1/14/2025 SHEET 2 OF 2
PROJECT: LARSON PORTABLE CLASSROOMS
ADDRESS: 2375 GIANNONI WAY
LODI, CA 95242

BRACE IDENTIFICATION No. 6
(REFERENCE PLANS)
LATERAL BRACE. . . . . . . . .
LONGITUDINAL BRACE. . . . . . X

BRACE INFORMATION

LENGTH OF SWAY BRACE: . . 7'–0"
DIAMETER OF SWAY BRACE: . 1"
TYPE OF BRACE: . . . . . . . . SCH. 40
ANGLE OF BRACE: . . . . . . . 45°–90°
LEAST RADIUS OF GYRATION: .42
L/R VALUE: . . . . . . . . . . . 200
MAXIMUM HORIZONTAL LOAD:. **1310 lbs**

FASTENER INFORMATION

ORIENTATION OF CONNECTING SURFACE: H
FASTENER TYPE: CONNECTION TO STEEL
DIAMETER: . . . . . . . . . . . . 1/2"
LENGTH: . . . . . . . . . . . . . 1"
MAXIMUM LOAD: . . . . . . . . **1830 lbs**

SEISMIC BRACE ATTACHMENTS

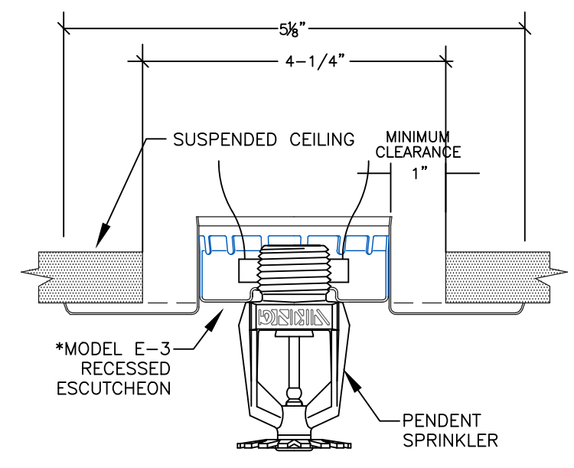
**STRUCTURAL ATTACHMENT FITTING:**
MAKE: TOLCO MODEL: 980
LISTED LOAD RATING: 2014 lbs
ADJUSTED LOAD RATING PER 18.5.2.3: **1424 lbs**
**PIPE ATTACHMENT FITTING:**
MAKE: TOLCO MODEL: 4L
LISTED LOAD RATING: 2015 lbs
ADJUSTED LOAD RATING PER 18.5.2.3: **1425 lbs**

SEISMIC BRACE ASSEMBLY DETAIL

SEE LONG. BRACING DETAIL THIS SHEET

SPRINKLER SYSTEM LOAD CALCULATION (Fpw=CpWp)

| PIPE DIAMETER | PIPE TYPE | PIPE LENGTHS | WEIGHT PER FT | TOTAL WEIGHT PER LENGTH (Wp) | COEFFICIENT (Cp) | TOTAL WEIGHT (Fpw) |
|---|---|---|---|---|---|---|
| 1" | SCH. 40 | 0 | 2.05 | 0.00 | .45 | 0.00 |
| 1¼" | SCH. 40 | 0 | 2.93 | 0.00 | .45 | 0.00 |
| 1½" | SCH. 40 | 0 | 3.61 | 0.00 | .45 | 0.00 |
| 2" | SCH. 10 | 19 | 4.01 | 76.19 | .45 | 34.29 |
| 2½" | SCH. 10 | 0 | 5.89 | 0.00 | .45 | 0.00 |
| 3" | SCH. 10 | 0 | 7.94 | 0.00 | .45 | 0.00 |
| 4" | SCH. 10 | 0 | 11.78 | 0.00 | .45 | 0.00 |
| 6" | SCH. 10 | 0 | 23.03 | 0.00 | .45 | 0.00 |
| TOTAL LOAD – WEIGHT OF WATER FILLED PIPE = | | | | | | 34.29 lbs |
| TOTAL LOAD x 15% = | | | | | | **39.43** lbs |



PENDENT SPRINKLER THROUGH SUSPENDED CEILING
*Model E–3 Meets IBC–ASCE/SEI7 Codes for Seismic Areas C, D, and E

LEGEND

- 2–WAY EARTHQUAKE BRACE
- 4–WAY EARTHQUAKE BRACE
- FLEXIBLE GROOVED COUPLING
- RIGID "0–FLEX" GRV'D COUPLING
- GROOVED CAP
- #4 – HANGER No.
- APPROX. HANGER LOCATION
- (XX) – HYDRAULIC REFERENCE NODE
- SYSTEM RISER
- [XX–XX] – PIPE ELEVATION (Ref: AFF)
- (X–X) – CEILING HEIGHT
- UNO UNLESS NOTED OTHERWISE
- AFF – ABOVE FINISH FLOOR
- Bts – BELOW TOP of STRUCTURE
- BOB – BOTTOM OF BEAM
- BOD – BOTTOM OF DECK
- BOF – BOTTOM OF FRAMING
- COJ – CUT ON JOB
- TOE – THREAD ONE END
- GOE – GROOVE ONE END
- GxG – GROOVE x GROOVE
- TxG – THREAD x GROOVE
- FxG – FLANGE x GROOVE
- TOR – TOP OF RISER
- BOR – BOTTOM OF RISER
- MC – MALLEABLE COUPLING
- UG – UNDERGROUND
- OH – OVERHEAD
- RN – RISER NIPPLE
- SU – SPRIG UP
- DR – DROP TO SPRINKLER
- (E) – EXISTING
- (N) – NEW
- (R) – RELOCATE

SPRINKLERS

| SYM | COUNT | ORIF, K–FACTOR | NPT | MFG. | TEMP. | FINISH | RESPONSE–STYLE | S.I.N. | MODEL | ESCUTCHEON |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

SEE PIPING PLAN

# ELLERTH E. LARSON E.S. PORTABLE CLASSROOMS

2375 GIANNONI WAY - LODI, CA 95242

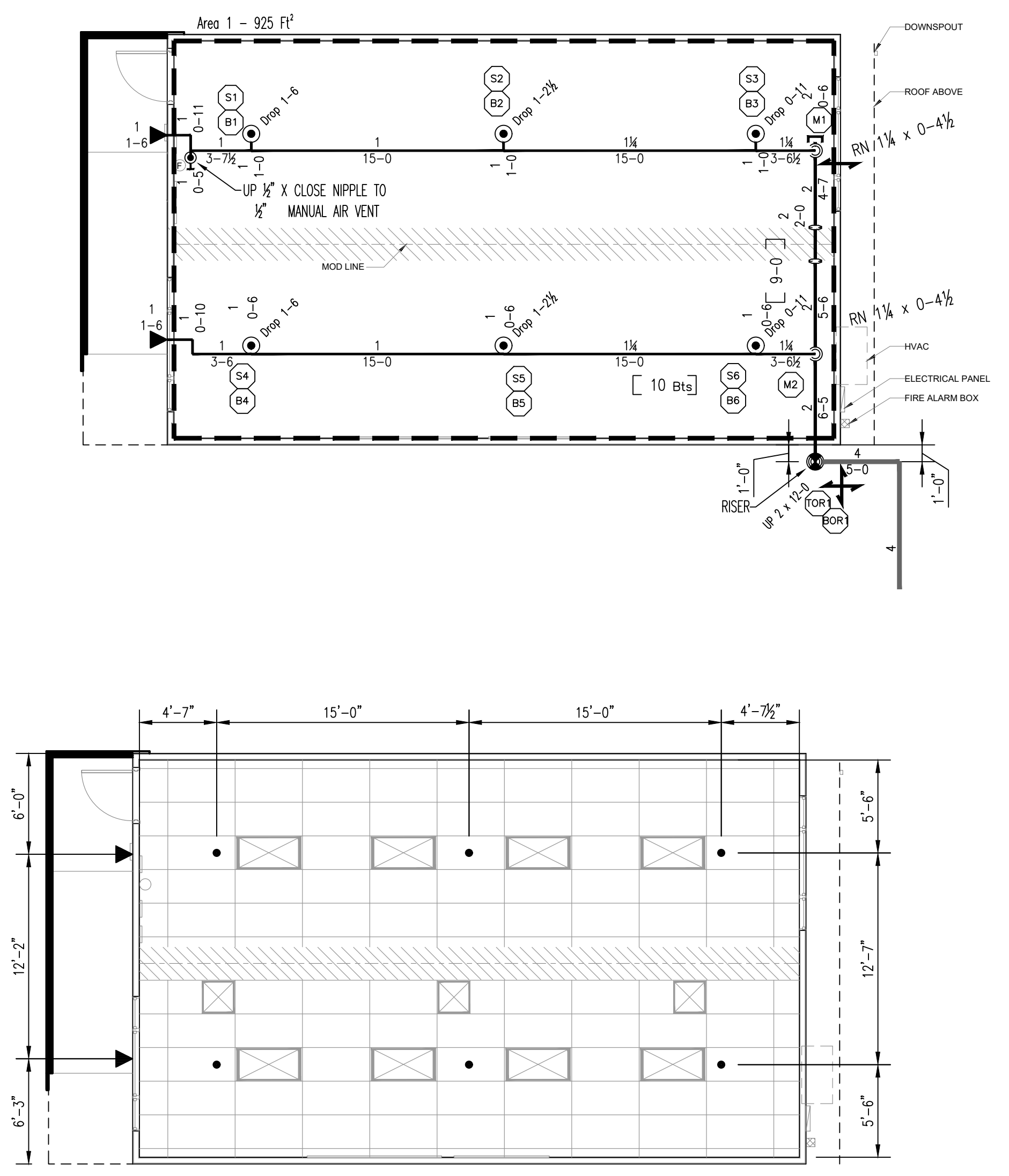
DETAILS

| REV. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |
| | | | |

C–16 1077494

MARQUEE FIRE PROTECTION
a company of: PYE BARKER
3875 Atherton Rd. Ste. #200
Rockln, CA. 95765-3716
TEL. 916. 641-7997 FAX. 916. 641-0775
CA. LIC. 1077494 C-16

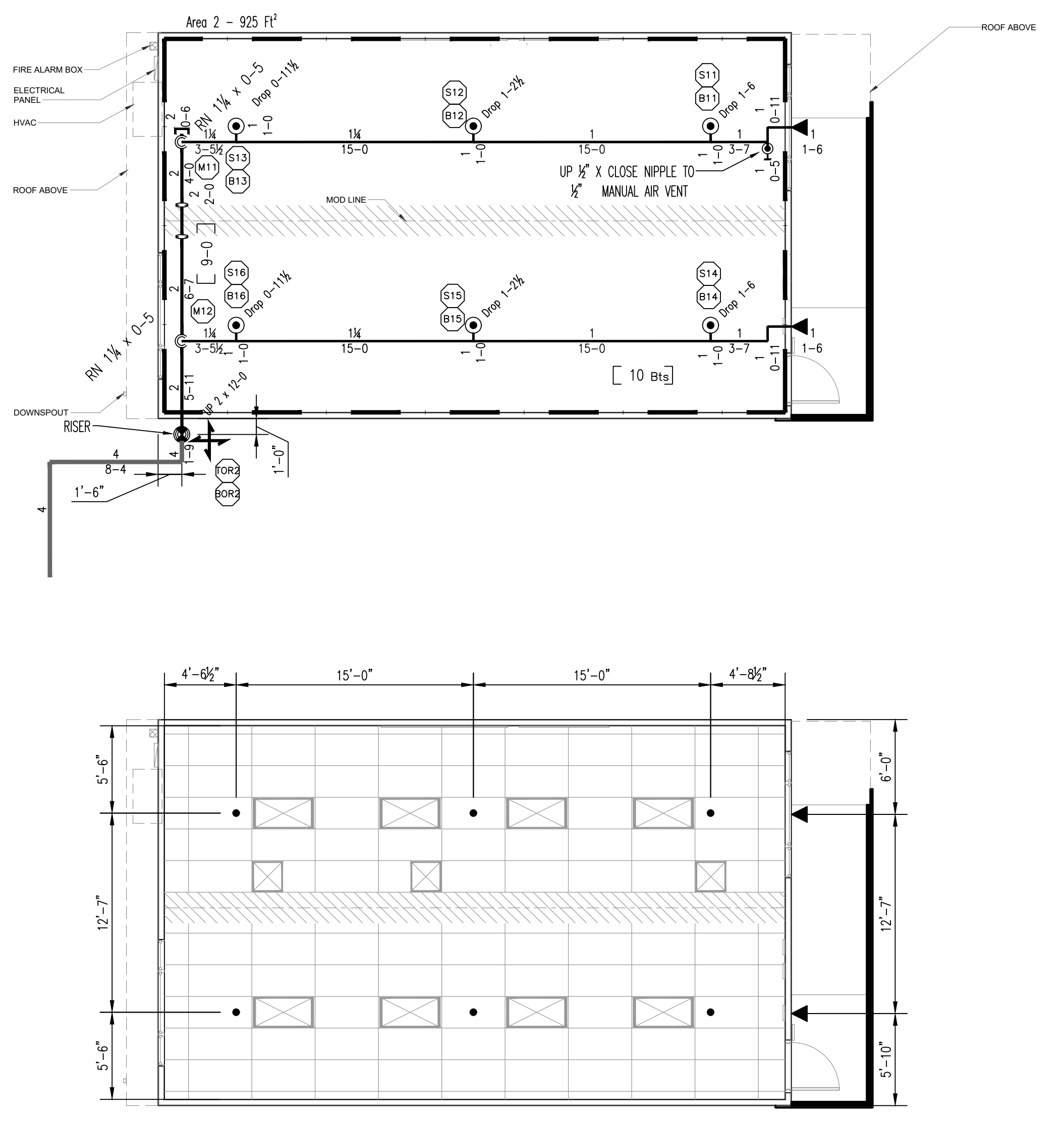
Date: 1/14/2025
Contract With: CLASS LEASING
Scale: 1/8" =1'–0"
Drawn: STEFAN D.
Job No: 1824–141
Sheet: FP–2
Of 3 Sheets



## PORTABLE BUILDING 12

SCALE: 1/8" = 1'-0"

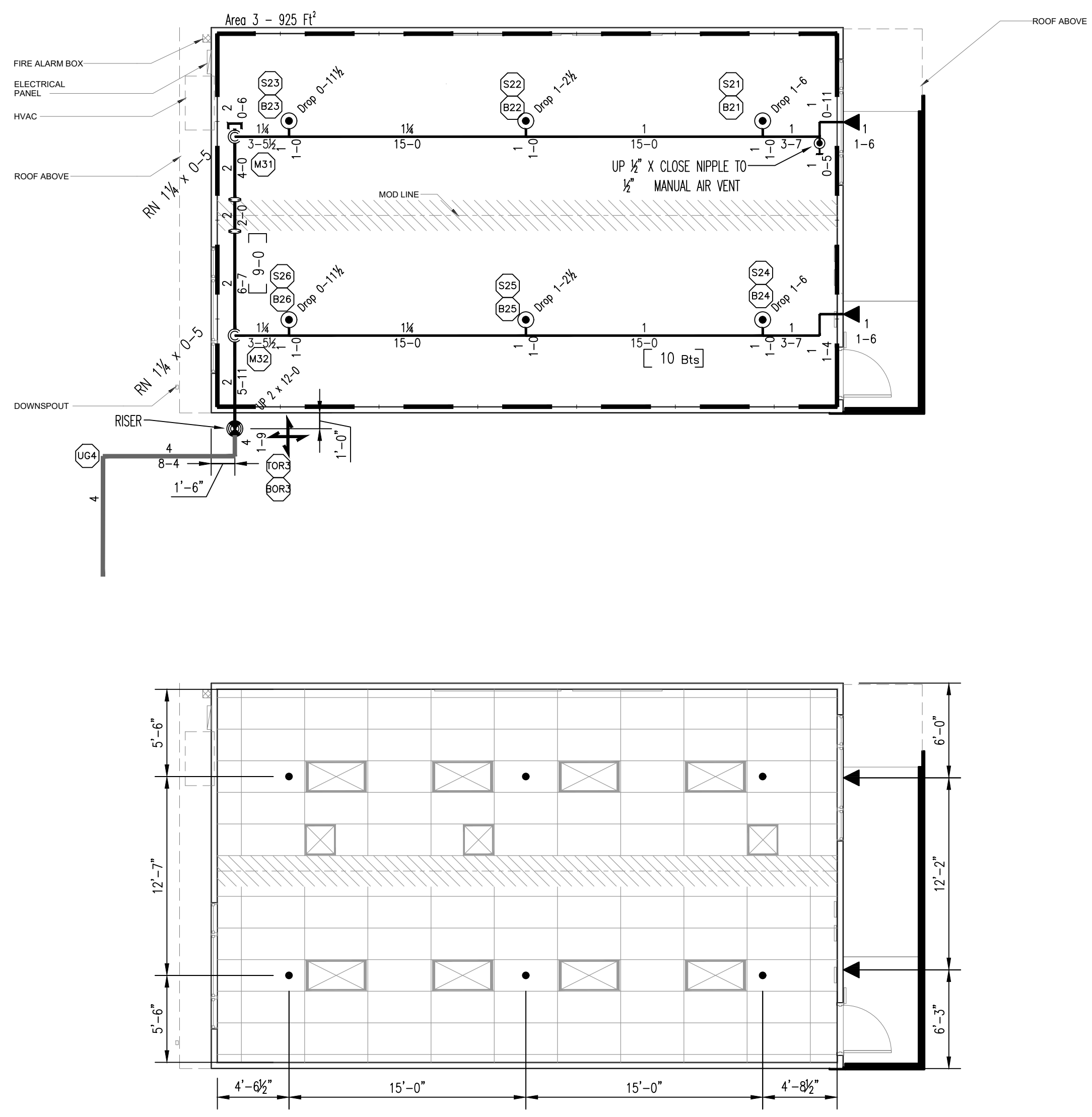
| CALCULATION DESIGN INFORMATION | |
|---|---|
| SYSTEM; 1 – AREA No. 1 | |
| QUICK RESPONSE SPRINKLERS? | YES |
| SYSTEM TYPE. | WET |
| K–FACTOR. | 5.6 |
| HAZARD. | LIGHT |
| DENSITY (GPM/FT²) | .10 |
| MAX. AREA PER SPRINKLER (FT²) | 196 |
| AREA OF OPERATION (FT²) | 925 |
| **AREA OF OPERATION ADJUSTED AS FOLLOWS:** | |
| DRY PIPE INCREASE (30%) | N/A |
| SLOPE >2:12 INCREASE (30%) | N/A |
| CEILING HEIGHT: | 8'–6" |
| % REDUCTION: | N/A |
| CEILING HEIGHT REDUCTION (FT²) | 0 |
| ADJ. AREA OF OPERATION (FT²) | N/A |
| WATER SUPPLY | |
| STATIC (PSI) | 55 |
| RESIDUAL (PSI) | 40 |
| FLOW (GPM) | 1060 |
| PUMP (GPM @ PSI) | N/A @ N/A |
| SYSTEM DEMAND | |
| REQUIRED AT:N/A | |
| TOTAL DEMAND (GPM) | 226.44 |
| PSI AVAILABLE | 11.90 |
| PSI REQUIRED | 42.24 |
| SAFETY MARGIN | 22.0% |
| HOSE STREAM DEMAND (GPM): | |
| INSIDE: 0 – OUTSIDE: 100 | |
| LOCATION: P12 | |



## PORTABLE BUILDING 11

SCALE: 1/8" = 1'-0"

| CALCULATION DESIGN INFORMATION | |
|---|---|
| SYSTEM; 2 – AREA No. 1 | |
| QUICK RESPONSE SPRINKLERS? | YES |
| SYSTEM TYPE. | WET |
| K–FACTOR. | 5.6 |
| HAZARD. | LIGHT |
| DENSITY (GPM/FT²) | .10 |
| MAX. AREA PER SPRINKLER (FT²) | 196 |
| AREA OF OPERATION (FT²) | 925 |
| **AREA OF OPERATION ADJUSTED AS FOLLOWS:** | |
| DRY PIPE INCREASE (30%) | N/A |
| SLOPE >2:12 INCREASE (30%) | N/A |
| CEILING HEIGHT: | 8'–6" |
| % REDUCTION: | N/A |
| CEILING HEIGHT REDUCTION (FT²) | 0 |
| ADJ. AREA OF OPERATION (FT²) | N/A |
| WATER SUPPLY | |
| STATIC (PSI) | 55 |
| RESIDUAL (PSI) | 40 |
| FLOW (GPM) | 1060 |
| PUMP (GPM @ PSI) | N/A @ N/A |
| SYSTEM DEMAND | |
| REQUIRED AT: | |
| TOTAL DEMAND (GPM) | 226.35 |
| PSI AVAILABLE | 12.25 |
| PSI REQUIRED | 41.89 |
| SAFETY MARGIN | 22.6% |
| HOSE STREAM DEMAND (GPM): | |
| INSIDE: 0 – OUTSIDE: 100 | |
| LOCATION: P11 | |



## PORTABLE BUILDING 10

SCALE: 1/8" = 1'-0"

| CALCULATION DESIGN INFORMATION | |
|---|---|
| SYSTEM; 3 – AREA No. 1 | |
| QUICK RESPONSE SPRINKLERS? | YES |
| SYSTEM TYPE. | WET |
| K–FACTOR. | 5.6 |
| HAZARD. | LIGHT |
| DENSITY (GPM/FT²) | .10 |
| MAX. AREA PER SPRINKLER (FT²) | 196 |
| AREA OF OPERATION (FT²) | 925 |
| **AREA OF OPERATION ADJUSTED AS FOLLOWS:** | |
| DRY PIPE INCREASE (30%) | N/A |
| SLOPE >2:12 INCREASE (30%) | N/A |
| CEILING HEIGHT: | 8'–6" |
| % REDUCTION: | N/A |
| CEILING HEIGHT REDUCTION (FT²) | 0 |
| ADJ. AREA OF OPERATION (FT²) | N/A |
| WATER SUPPLY | |
| STATIC (PSI) | 55 |
| RESIDUAL (PSI) | 40 |
| FLOW (GPM) | 1060 |
| PUMP (GPM @ PSI) | N/A @ N/A |
| SYSTEM DEMAND | |
| REQUIRED AT:HYDRANT | |
| TOTAL DEMAND (GPM) | 226.35 |
| PSI AVAILABLE | 12.36 |
| PSI REQUIRED | 41.78 |
| SAFETY MARGIN | 22.8% |
| HOSE STREAM DEMAND (GPM): | |
| INSIDE: 0 – OUTSIDE: 100 | |
| LOCATION: P12 | |

### PIPING PLAN

1. AT UNOBSTRUCTED CONSTRUCTION (FINISH CEILING) SPRINKLER DEFLECTOR SHALL BE BETWEEN 1" AND 12" BELOW THE BOTTOM OF THE CEILING OR DECK.
2. MAIN PIPING SHALL HANG AT +9'–0" AFF.
   LINE PIPING SHALL HANG AT 4" CENTERLINE BELOW THE 6" C–CHANNEL FRAMING. (10" BELOW TOP OF STEEL)
3. HANGERS SHALL BE ⅜" SIDE BEAM BRACKET. (SEE HANGER DETAILS)
4. DROPS TO SPRINKLERS SHALL BE 1" x 1'–0" WITH 1"x ½" R.C. (UNO)
5. MAIN PIPING SHALL BE SCHEDULE 10 STEEL (THINWALL) AND SHALL BE ROLL GROOVED PER NFPA 13.
   LINE PIPING SHALL BE SCHEDULE 40 STEEL (STANDARD) AND SHALL BE GROOVED OR THREADED DUCTILE IRON FITTINGS PER NFPA 13.
6. BRANCH LINES RESTRAINTS WILL BE OMITTED DUE TO THE CONDITIONS BEING MET PER NFPA 13 18.6.5.

### REFLECTED CEILING PLAN

1. PENDENT SPRINKLERS SHALL BE LOCATED EITHER CENTER OR "QUARTER POINT" OF THE 2x4 CEILING TILE.
2. PENDENT SPRINKLERS SHALL BE CHROME WITH WHITE SEMI–RECESSED ESCUTCHEONS.
3. ALL CEILINGS TO BE AT +8'–6" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE.

N

**LEGEND**

– 2–WAY EARTHQUAKE BRACE
– 4–WAY EARTHQUAKE BRACE
FLEX – FLEXIBLE GROOVED COUPLING
– RIGID "0–FLEX" GRV'D COUPLING
– GROOVED CAP
#4 – HANGER No.
– APPROX. HANGER LOCATION
XX – HYDRAULIC REFERENCE NODE

⊗ – SYSTEM RISER
[XX–XX] – PIPE ELEVATION (Ref: AFF)
X–X – CEILING HEIGHT
UNO UNLESS NOTED OTHERWISE
AFF – ABOVE FINISH FLOOR
Bts – BELOW TOP of STRUCTURE
BOB – BOTTOM OF BEAM
BOD – BOTTOM OF DECK
BOF – BOTTOM OF FRAMING
COJ – CUT ON JOB
TOE – THREAD ONE END

GOE – GROOVE ONE END
GxG – GROOVE x GROOVE
TxG – THREAD x GROOVE
FxG – FLANGE x GROOVE
TOR – TOP OF RISER
BOR – BOTTOM OF RISER
MC – MALLEABLE COUPLING
UG – UNDERGROUND
OH – OVERHEAD
RN – RISER NIPPLE
SU – SPRIG UP
DR – DROP TO SPRINKLER
(E) – EXISTING
(N) – NEW
(R) – RELOCATE

◉ = UPRIGHT OVER PENDENT

**SPRINKLERS**

| SYM | COUNT | ORIF, K–FACTOR | NPT | MFG. | TEMP. | FINISH | RESPONSE–STYLE | S.I.N. | MODEL | ESCUTCHEON |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | 18 | (1/2",K=5.6) | 1/2" | VKG | 155° | CHRM | QR–PENDENT | VK3021 | MICROFAST | WHITE E–3 RECESSED |
| ○ | 18 | (1/2",K=5.6) | 1/2" | VKG | 200° | BRASS | QR–UPRIGHT | VK950 | COIN | NONE |
| | | | | | | | | | | |
| | | | | | | | | | | |
| ◀ | 6 | (1/2",K=5.6) | 1/2" | VKG | 200° | ENT | QR–SIDEWALL | VK305 | MICROFAST | WHITE #401 CANOPY |
| | | | | | | | | | | |

40 = TOTAL SPRINKLERS THIS SHEET

# ELLERTH E. LARSON E.S. PORTABLE CLASSROOMS

2375 GIANNONI WAY - LODI, CA 95242

2' 4' 6' 8' 10' 12' 14' 16' 18'

## PIPING PLANS AND REFLECTED CEILING PLANS

| REV. | DATE | REVISION | BY |
|---|---|---|---|

LICENSE No. C–16 1077494

MARQUEE FIRE PROTECTION
a company of: PYE BARKER

3875 Atherton Rd. Ste. #200
Rockiln, CA. 95765-3716
TEL. 916. 641-7997 FAX. 916. 641-0775
CA. LIC. 1077494 C-16

Date: 1/14/2025
Contract With: CLASS LEASING, LLC
Scale: 1/8" =1'–0"
Drawn: STEFAN D.
Job No: 1824–141
Sheet: FP–3
Of 3 Sheets

THE LINE SHOWN ABOVE IS
EXACTLY ONE INCH LONG AT THIS
SHEETS ORIGINAL PAGE SIZE

## WIRE SCHEDULE

| TYPE | DESCRIPTION |
|---|---|
| A | SUPERIOR ESSEX 54-246-3A OR<br>SUPERIOR ESSEX 04-001-68 FOR UNDERGROUND LOCATIONS<br>(TELEPHONE HANDSET CABLE) |
| B | WEST PENN 293<br>(SPEAKER CABLE) |
| BX | WEST PENN AQC293<br>(SPEAKER TRUNK) |
| C | WEST PENN 238<br>(CLOCK SYSTEM CABLE) |
| CX | 3#10 THWN<br>(CLOCK SYSTEM TRUNK) |
| D | REFER TO SPECIFICATIONS<br>(DATA CABLE) |
| E | WEST PENN 292<br>(EXTERIOR SPEAKER CABLE) |
| EX | WEST PENN AQC292<br>(EXTERIOR SPEAKER TRUNK) |
| F | REFER TO SPECIFICATIONS<br>(FIBER OPTIC CABLE) |
| G | WEST PENN 3244<br>(INTRUSION ALARM SYSTEM WIRING) |
| GX | WEST PENN AQ3245<br>(INTRUSION ALARM SYSTEM TRUNK) |
| H | 2 #14 THHN/THWN (RED, BLACK)<br>(FIRE ALARM CONVENTIONAL INITIATION WIRING) |
| HX | 2 #12 THHN/THWN (RED, BLACK)<br>(FIRE ALARM CONVENTIONAL INITIATION TRUNK) |
| I | WEST PENN D980<br>(FIRE ALARM ADDRESSABLE CABLE) |
| IX | WEST PENN AQ293<br>(FIRE ALARM ADDRESSABLE TRUNK) |
| JX | REFER TO SPECIFICATIONS<br>(TV COAX TRUNK) |
| K | SUPERIOR ESSEX SEALPIC-FSF, 12 PR, 24 AWG<br>(TELEPHONE TRUNK - 12 PAIR) |
| L | SUPERIOR ESSEX SEALPIC-FSF, 25 PR, 24 AWG<br>(TELEPHONE TRUNK - 25 PAIR) |
| M | SUPERIOR ESSEX SEALPIC-FSF, 50 PR, 24 AWG<br>(TELEPHONE TRUNK - 50 PAIR) |
| N | 2#12 THHN/THWN<br>(FIRE ALARM NOTIFICATION WIRING) |
| NX | 2#10 THWN<br>(FIRE ALARM NOTIFICATION TRUNK) |
| S | 2#12 THHN/THWN<br>(VOICE EVACUATION SPEAKER CABLE) |
| SX | 2#10 THWN<br>(VOICE EVACUATION SPEAKER TRUNK) |
| T | (2) WEST PENN D980<br>(VOICE EVACUATION BOOSTER CABLE) |
| TX | (2) WEST PENN AQ293<br>(VOICE EVACUATION BOOSTER TRUNK) |

NOTES:

1. VERIFY ALL WIRING TYPES AND QUANTITY WITH SYSTEM VENDOR REQUIREMENTS.
2. PROVIDE SPARE CABLES WHERE SHOWN.

## STANDARD ELECTRICAL SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| ⟨XXXX⟩ | FEEDER TAG, SEE FEEDER SCHEDULE. |
| ⬡XX | NUMBERED NOTE. |
| ⊖ | ENLARGED PLAN OR DETAIL CALL-OUT. |
| ▭ PB## | PULLBOX. REFER TO PULLBOX SCHEDULE & PULLBOX DETAIL. |
| Ⓙ ⒿH | JUNCTION BOX, SIZE AND TYPE AS INDICATED, IF SIZE IS NOT CALLED OUT, SIZE PER CODE. |
| —— | RACEWAY INSTALLED IN CEILING OR WALL. ROUTE EXPOSED IN ALL UNFINISHED AREAS. |
| - - - - - | RACEWAY INSTALLED BELOW FINISHED FLOOR OR GRADE. |
| —- - — | EXISTING CONDUIT RUN, FIELD VERIFY ROUTING. |
| ←—— | ARROW AT END OF RACEWAY INDICATES HOME RUN TO RESPECTIVE PANELBOARD, SWITCHBOARD, CABINET, TERMINAL, ETC. |
| ⌒ | BRANCH CIRCUIT WITHOUT FURTHER DESIGNATION INDICATES A 2 #12 AWG CIRCUIT WITH 1 #12 AWG GROUND. |
| ⌒ǁǀǀ | STRAIGHT CROSS-LINES IN BRANCH CIRCUIT RACEWAY INDICATE NUMBER OF #12 AWG WIRES IN A CIRCUIT. SHORT LINES INDICATE UNGROUNDED CONDUCTORS. LONG LINES INDICATE NEUTRAL CONDUCTORS. WIRES SHOWN ARE IN ADDITION TO 1 #12 AWG GROUNDING CONDUCTOR. |
| ⌒ #10 | BRANCH CIRCUIT WITH GROUNDING WIRE LARGER THAN #12 AWG. NUMBER ADJACENT TO CURVED CROSS-LINE INDICATES WIRE SIZE. |
| ⌒ǁǀǀ #10 | BRANCH CIRCUIT RACEWAY WITH WIRE OTHER THAN #12 AWG. NUMBER ADJACENT TO STRAIGHT OR CURVED CROSS-LINES INDICATES WIRE SIZE. UNGROUNDED AND NEUTRAL CONDUCTORS SHALL BE THE SAME SIZE UNLESS OTHERWISE NOTED. |
| ⊏—— | INDICATES RACEWAY STUB, TERMINATE ABOVE GRADE CONDUITS WITH BUSHING, CAP UNDERGROUND CONDUITS. |
| —J——J— | J-HOOK CABLE SUPPORT PATHWAY. |
| 2D —— | NUMBER/LETTER NEXT TO RACEWAY INDICATES SIGNAL CABLE QUANTITY AND TYPE. REFER TO CABLE SCHEDULE. |
| ▨ | SWITCHBOARD. |
| ⊖ | 20 AMP 125V 3W DUPLEX CONVENIENCE RECEPTACLE. |
| ⊕ | 20 AMP 125V 3W DOUBLE DUPLEX CONVENIENCE RECEPTACLE. |

## SIGNAL SYSTEMS SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| ▭ | TERMINAL CABINET, SURFACE MOUNTED, SIZE AND TYPE AS INDICATED. |
| ▽◷ | COMBINATION CLOCK / INTERCOM SPEAKER. |
| ▼ | EXTERIOR INTERCOM SPEAKER. |
| ▽# | DATA OUTLET. NUMBER INDICATES QUANTITY OF JACKS. |
| CB | EMERGENCY/CHECK-IN CALL SWITCH. |
| ID | JUNCTION BOX FOR FUTURE INTRUSION ALARM DETECTOR WITH 0.75"MT STUBBED ABOVE CEILING |
| IS | JUNCTION BOX FOR FUTURE INTRUSION ALARM DOOR SWITCH WITH 0.75"MT STUBBED ABOVE CEILING |

## FIRE ALARM SYMBOLS

| SYMBOL | DESCRIPTION |
|---|---|
| EOL | FIRE ALARM END OF LINE RESISTOR. |
| MM | FIRE ALARM MONITOR MODULE. |
| SM | FIRE ALARM SYNC MODULE. |
| ⟨S⟩ | FIRE ALARM SMOKE DETECTOR. |
| ▶S | FIRE ALARM SPEAKER, WALL MOUNTED. |
| ⊠ | FIRE ALARM SPEAKER / STROBE COMBINATION, CEILING MOUNTED. |

NOTES:

1. NUMBER NEXT TO STROBES INDICATED CANDELA, NO NUMBER = 15 CANDELA.
2. NUMBER NEXT TO SPEAKERS INDICATES WATTAGE, NO NUMBER = 1/4 WATT.

## SUBSCRIPTS

SUBSCRIPTS: DEVICE SUBSCRIPTS DESIGNATE THE FOLLOWING:

| | |
|---|---|
| AC | = ABOVE CEILING MOUNTED |
| C | = ABOVE COUNTER MOUNTED. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. |
| CAM | = LOCATE FOR CAMERA. VERIFY LOCATION AND REQUIREMENTS WITH ARCHITECT PRIOR TO ROUGH-IN. |
| TV | = LOCATE FOR TV. VERIFY LOCATION AND REQUIREMENTS WITH OWNER. |
| WAP | = LOCATE FOR WIRELESS ACCESS. VERIFY LOCATION AND REQUIREMENTS WITH OWNER. |

## ABBREVIATIONS

| | |
|---|---|
| 1PH, 3PH | 1 PHASE, 3 PHASE |
| 1P, 2P, 3P | 1 POLE, 2 POLE, 3 POLE |
| 3W, 4W | 3 WIRE, 4 WIRE |
| (D) | DEMO, DEMOLISH |
| (E) | EXISTING |
| (ER) | EXISTING RELOCATED |
| (N) | NEW |
| (R) | RELOCATE |
| | -A- |
| A, AMPS | AMPERES |
| AC | ALTERNATING CURRENT |
| AF | FRAME RATING IN AMPERES |
| AFF | ABOVE FINISHED FLOOR |
| AIC | AMPERES INTERRUPTING CAPACITY |
| AL, ALUM | ALUMINUM |
| ATS | AUTO TRANSFER SWITCH |
| AT | TRIP RATING IN AMPERES |
| AWG | AMERICAN WIRE GAUGE |
| | -B- |
| BTR | BUILDING TELECOM ROOM |
| | -C- |
| C | CONDUIT |
| CB,C/B | CIRCUIT BREAKER |
| CEC | CALIFORNIA ELECTRICAL CODE |
| CT | CURRENT TRANSFORMER |
| CU | COPPER |
| | -D- |
| DC | DIRECT CURRENT |
| | -E- |
| EA | EACH |
| ELEC | ELECTRICAL |
| EMT | ELECTRICAL METALLIC TUBING |
| | -F- |
| FA | FIRE ALARM |
| FACP | FIRE ALARM CONTROL PANEL |
| FATC | FIRE ALARM TERMINAL CABINET |
| FLA | FULL LOAD AMPS |
| FS | FIRE SPRINKLER |
| FT | FOOT OR FEET |
| | -G- |
| G, GND | GROUND |
| GA | GAUGE |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GFI | GROUND FAULT INTERRUPTER |
| | -H- |
| HOA | HAND-OFF-AUTO |
| HP | HORSE POWER |
| | -J- |
| J-BOX | JUNCTION BOX |
| | -K- |
| KVA | ONE THOUSAND VOLT-AMPS |
| KW | ONE THOUSAND WATTS |
| | -L- |
| LCP | LIGHTING CONTROL PANEL |
| LTG | LIGHTING |
| | -M- |
| MCA | MINIMUM CIRCUIT AMPACITY |
| MCB | MAIN CIRCUIT BREAKER |
| MCC | MOTOR CONTROL CENTER |
| MLO | MAIN LUGS ONLY |
| MOCP | MAXIMUM OVER-CURRENT PROTECTION |
| MT | EMPTY CONDUIT W/ PULL-LINE |
| | -N- |
| NC | NORMALLY CLOSED |
| NCTC | NURSE CALL TERMINAL CABINET |
| NEC | NATIONAL ELECTRIC CODE |
| NEMA | NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION |
| NIES | NOT INCLUDED IN ELECTRICAL SCOPE |
| NL | NIGHT LIGHT |
| NO | NORMALLY OPEN |
| NTS | NOT TO SCALE |
| | -O- |
| OCP | OVER-CURRENT PROTECTION |
| OFCI | OWNER FURNISHED CONTRACTOR INSTALLED |
| OFOI | OWNER FURNISHED OWNER INSTALLED |
| | -P- |
| PT | POTENTIAL TRANSFORMER |
| PVC | POLYVINYL CHLORIDE CONDUIT |
| | -R- |
| RLA | RUNNING LOAD AMP |
| RSC | RIGID STEEL CONDUIT |
| | -S- |
| SPD | SURGE PROTECTION DEVICE |
| SPDT | SINGLE POLE DOUBLE THROW |
| SPST | SINGLE POLE SINGLE THROW |
| SST | SOLID STATE TRIP |
| | -T- |
| TER | TELECOM EQUIPMENT ROOM |
| TR | TELECOM ROOM |
| TM | THERMAL MAGNETIC |
| TTB | TERMINAL BACKBOARD |
| | -U- |
| UG | UNDERGROUND |
| UL | UNDERWRITERS LAB. |
| UON | UNLESS OTHERWISE NOTED |
| UPS | UNINTERRUPTIBLE POWER SUPPLY |
| | -V- |
| V | VOLTS |
| VA | VOLT-AMPS |
| VAC | VOLTS ALTERNATE CURRENT |
| | -W- |
| W | WATTS |
| WCR | WITHSTAND & CLOSING RATING |
| WP | WEATHERPROOF |
| | -X- |
| XFMR | TRANSFORMER |
| XFER | TRANSFER SWITCH |

## SHEET INDEX

| SHEET | DESCRIPTION |
|---|---|
| E0.01 | ELECTRICAL COVER SHEET |
| E0.02 | ELECTRICAL NOTES |
| E1.01 | ELECTRICAL SITE PLAN |
| E1.10 | PARTIAL SITE PLANS |
| E2.10 | SIGNAL FLOOR PLANS |
| E2.11 | FIRE ALARM FLOOR PLANS |
| E3.01 | ELECTRICAL DETAILS |
| E3.02 | ELECTRICAL DETAILS |
| E4.01 | FIRE ALARM CALCULATIONS |

AGENCY
APPROVAL:

LODI USD

HMC Architects

2101 CAPITOL AVENUE, SUITE 100,
SACRAMENTO, CA, 95816
916 368 7990 / www.hmcarchitects.com

[redacted]

| Δ | DESCRIPTION | DATE |
|---|---|---|

YIP SHING DONNY LEE
No. E 017376
12/18/2024

EDGE
ELECTRICAL CONSULTING

Project Number L454
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FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**ELECTRICAL COVER SHEET**

[redacted]

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
# E0.01

THE LINE SHOWN ABOVE IS EXACTLY ONE INCH LONG AT THIS SHEET'S ORIGINAL PAGE SIZE

## FIRE ALARM RECORD DOCUMENTS CABINET

1. THE FIRE ALARM SYSTEM WORK SHALL INCLUDE A DOCUMENTATION CABINET, INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION PER NFPA 72, 7.7.2.
2. THE DOCUMENTATION CABINET SHALL BE RED WITH A HINGED, LOCKING DOOR AND SHALL BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS".
3. ALL RECORD AND TESTING DOCUMENTATION SHALL BE STORED INSIDE THE CABINET.
4. CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
5. WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT, ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.
6. PROVIDE SYSTEM DOCUMENTS AS APPLICABLE:
   a. RECORD DRAWINGS/AS-BUILTS
   b. EQUIPMENT CUT SHEETS AND CA SFM LISTINGS
   c. ALTERNATIVE MEANS AND METHODS
   d. PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
   e. SYSTEM RECORD OF COMPLETION AND ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72, 7.8.2)
   f. EMERGENCY RESPONSE PLAN (NFPA 72, 7.3.8)
   g. EVALUATION DOCUMENTATION (NFPA 72, 7.3.9)
   h. RISK ANALYSIS DOCUMENTATION (NFPA 72, 7.3.6)
   i. SOFTWARE AND FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2)

## LUMINAIRE SCHEDULE

| TAG | MANUFACTURER & CATALOG NUMBER | DESCRIPTION | LAMP TYPE | VOLTS | WATTS | REMARKS |
|---|---|---|---|---|---|---|
| A1 | WILLIAMS<br>WPCS-L30/840-BZ-PC-OCC-S23-UNV | WALL PACK | LED | UNV | 28 | - |
| A2 | WILLIAMS<br>WPCS-L44/840-BZ-PC-OCC-S23-UNV | WALL PACK | LED | UNV | 42 | - |
| B | GARDCO<br>ECF-S-32L-1A-NW-G2-AR-3-120-HB-IMRI3-HB-TLRPC-BZ | POLE FIXTURE | LED | 120 | 106 | NOTE 1 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

NOTES:

1. PROVIDE WITH 4" x 20' STRAIGHT SQUARE ALUMINUM POLE. FINISH TO MATCH HEAD.

## FIRE ALARM GENERAL NOTES

1. FURNISH AND INSTALL A EXTENSIONS TO THE EXISTING FIRE ALARM SYSTEM INCLUDING ALL WIRING AND CONNECTIONS AND OTHER MATERIALS AS SHOWN ON PLANS AND SPECIFIED HEREIN. IT IS THE INTENT THAT A COMPLETE OPERATING SYSTEM CONFORMING TO ALL APPLICABLE CODES BE INSTALLED AND THAT ANY POWER SUPPLIES, RELAYS, RESISTORS, CARDS, MODULES, PROGRAMMING, OR OTHER ITEMS REQUIRED TO ACHIEVE THIS END RESULT SHALL BE FURNISHED WHETHER OR NOT SUCH ITEM OR ITEMS ARE SHOWN OR SPECIFIED.
2. THE CONTRACT DRAWINGS AND SPECIFICATIONS INDICATE THE GENERAL SCOPE OF THE FIRE ALARM SYSTEM. THE FIRE ALARM SYSTEM CONTRACTOR SHALL LAYOUT ALL DEVICES, EQUIPMENT, CONDUIT, WIRING, ETC. AND SUBMIT DRAWINGS AS REQUIRED BY THE SPECIFICATIONS. ALL LOCATIONS AND SPACINGS SHALL CONFORM TO APPLICABLE CODES. ANY ADDITIONAL DETECTION AND SIGNALING DEVICES REQUIRED BY CODES AND THE ENFORCING AUTHORITY SHALL BE PROVIDED AS PART OF THIS CONTRACT.
3. THE SYSTEM SHALL BE FULLY AUTOMATIC WITH MANUAL STATIONS AT MAIN OFFICE AND IN ASSEMBLY AREAS.
4. THE SYSTEM SHALL BE ADDRESSABLE WITH CLASS B SIGNALING CIRCUITS (NAC'S) AND CLASS B WIRING FOR NON-ADDRESSABLE PORTIONS OF INITIATION CIRCUITS.
5. INSTALLATION OF THE FIRE ALARM SYSTEM EQUIPMENT SHALL NOT BE STARTED UNTIL SUBMITTAL HAS BEEN APPROVED BY ARCHITECT.
6. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE FOLLOWING CODES:
   CALIFORNIA BUILDING CODE (CBC)
   CALIFORNIA ELECTRICAL CODE (CEC)
   CALIFORNIA FIRE CODE (CFC)
   NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) NFPA 72 WITH CALIFORNIA AMENDMENTS
7. IF FIRE ALARM TESTING RESULTS DETERMINE ALARM AUDIBILITY DOES NOT REACH 15db OVER AMBIENT NOISE LEVELS, ADDITIONAL SIGNALING DEVICES SHALL BE REQUIRED. AUDIBLE DEVICES SHALL PROVIDE A SOUND LEVEL OF NOT LESS THAN 75db AT 10 FT. OR MORE THAN 110db MAXIMUM.
8. AUDIBLE DEVICES SHALL PROVIDE THE CALIFORNIA UNIFORM FIRE ALARM SIGNAL IN TEMPORAL MODE.
9. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH PER SECOND. ALL DEVICES WITHIN THE NORMAL VIEW RANGE SHALL BE SYNCHRONIZED.
10. REFER TO "DETAIL-FA DEVICE ELEVATIONS" FOR DEVICE MOUNTING HEIGHTS.
11. UPON COMPLETION OF THE INSTALLATION OF THE FIRE PROTECTIVE SIGNALING EQUIPMENT, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE PROJECT INSPECTOR/DSA.
12. POWER SERVICE FOR FIRE ALARM CONTROL PANELS AND/OR REMOTE POWER SUPPLIES SHALL BE ON DEDICATED CIRCUITS. CIRCUIT BREAKER HANDLES FOR SUCH DEDICATED CIRCUITS SHALL BE PAINTED RED AND IDENTIFIED IN DIRECTORY AS "FIRE ALARM CIRCUIT". CIRCUIT BREAKER(S) SERVING CONTROL PANELS AND POWER SUPPLIES SHALL BE EQUIPPED WITH HANDLE LOCKS TO PREVENT BREAKERS FROM BEING OPENED BY UNAUTHORIZED PERSONS.
13. THE LOCATION OF THE DEDICATED CIRCUIT BREAKER SERVING CONTROL PANELS AND POWER SUPPLIES SHALL BE PERMANENTLY IDENTIFIED AT THE CONTROL PANELS AND POWER SUPPLIES. PROVIDE ADHESIVE BACKED NAMEPLATE TO READ "DEDICATED 120V CIRCUIT FROM _____" WITH CIRCUIT NUMBER INCLUDED IN TEXT. ATTACH TO INSIDE OF DOOR.
14. FINAL FIRE TEST SHALL BE MADE WITH PROJECT INSPECTOR AS A MINIMUM. LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
15. FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE PROJECT INSPECTOR/ DSA AFTER COMPLETION OF THE OPERATIONAL ACCEPTANCE TESTS. THE RECORD OF COMPLETION MUST BE SIGNED BY CONTRACTOR.

## FIRE ALARM MONITORING NOTE

AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER.

## MEP COMPONENT ANCHORAGE NOTES

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 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 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 110/120 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. 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 MATTER APPROVED BY DSA.

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. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS 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 ACCEPTANCE 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 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24; 1617.A1.25 AND 1617.A1.26.

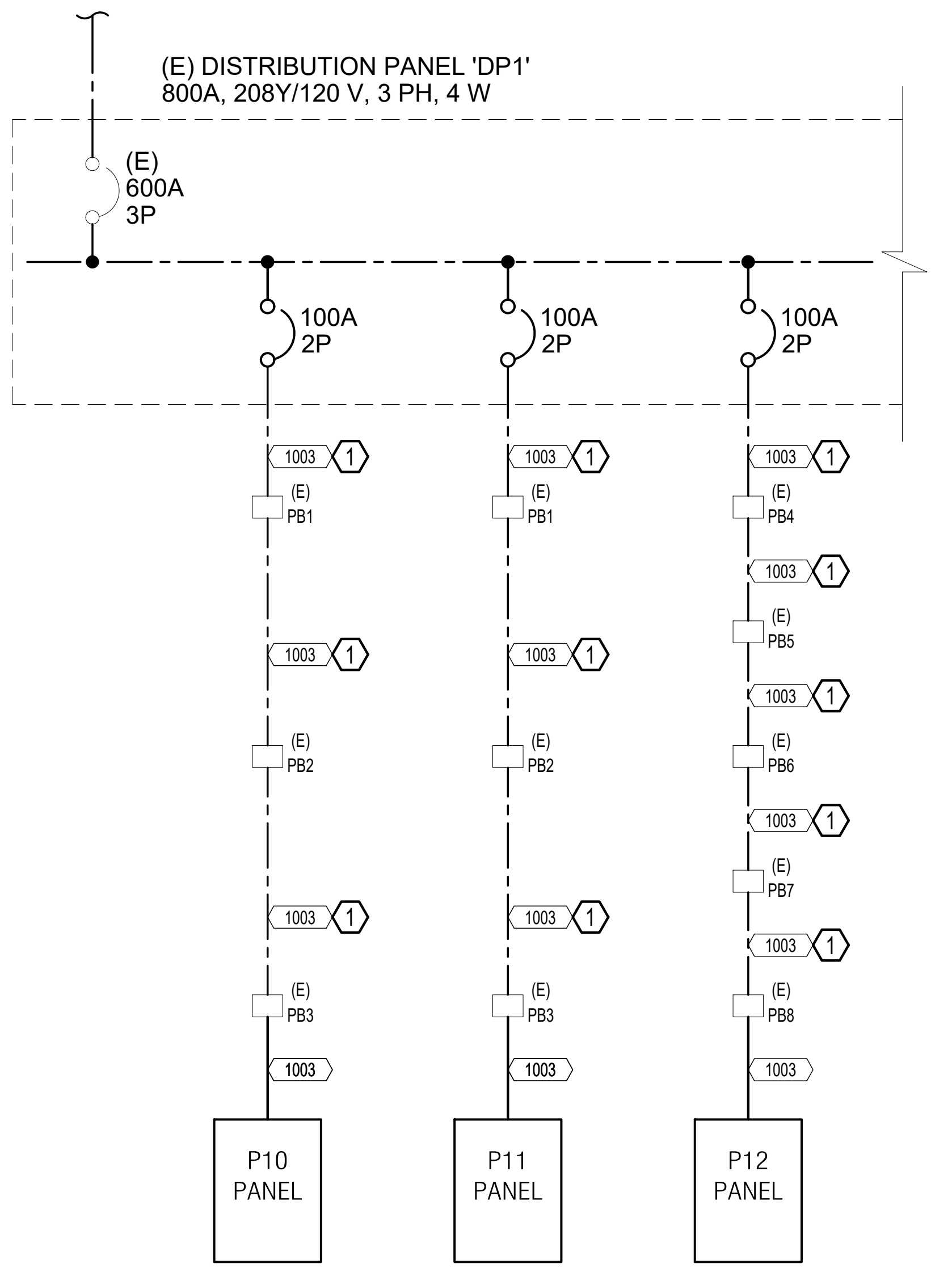
THE METHOD SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G. OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

| | |
|---|---|
| MP☐ MD☐ PP☐ E■ | OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. |
| MP☐ MD☐ PP☐ E☐ | OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #0052-13. |

## GENERAL NOTES

1. EXISTING UNDERGROUND UTILITIES ARE PRESENT, BUT THEIR EXACT LOCATIONS ARE NOT KNOWN. CONTRACTOR SHALL LOCATE AND PROTECT BEFORE TRENCHING OR EXCAVATING IN ANY AREA. CONSULT UTILITY COMPANIES, "AS-BUILT" DRAWINGS, AND SCHOOL MAINTENANCE PERSONNEL FOR LOCATION OF EXISTING UNDERGROUND WORK. IF EXISTING PIPING OR UTILITIES ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL REPAIR IMMEDIATELY AT OWN EXPENSE. NEW UNDERGROUND SHALL BE MODIFIED AS NECESSARY TO CONFORM TO EXISTING CONDITIONS.
2. INFORMATION GIVEN, CONCERNING EXISTING ELECTRICAL INSTALLATION IS AS EXACT AS COULD BE SECURED, BUT EXTREME ACCURACY IS NOT GUARANTEED. CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BIDS AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
3. EXISTING CIRCUITS AND SERVICES SHALL NOT BE INTERRUPTED EXCEPT BY SPECIFIC APPROVAL OF THE SCHOOL. ALL SHUTDOWNS SHALL BE SCHEDULED WITH THE SCHOOL.
4. ALL INTERIOR CONDUIT SHALL BE RUN CONCEALED. FISH FLEX IN EXISTING WALLS AND USE CUT-IN BOXES, UNLESS NOT POSSIBLE. WHERE CONDUIT MUST RUN EXPOSED, PROVIDE WIREMOLD SURFACE NONMETALLIC RACEWAY, SIZE AS REQUIRED (800 SERIES MINIMUM SIZE). ROUTE AS INCONSPICUOUS AS POSSIBLE. MAKE ANGLES CUTS AS REQUIRED. ATTACH TO WALL WITH SCREWS SPACED 48" MAX. SCREWS MUST PENETRATE STRUCTURAL MEMBERS WITH 1" PENETRATION. COORDINATE ROUTING WITH ARCHITECT PRIOR TO INSTALLATION.
5. CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING AND WALK ROUTES OF NEW UNDERGROUND CONDUITS. NOTE AREAS OF CONCRETE AND ASPHALT BEING CROSSED AND INCLUDE IN BID ALL COSTS FOR CUTTING AND PATCHING AS SHOWN ON DETAILS.
6. PROVIDE TRAFFIC RATED (H/20 LOAD) COVER AND BOXES FOR ALL PULLBOXES UNLESS SPECIFICALLY NOTED OTHERWISE.
7. REFER TO DETAILS ON STRUCTURAL DRAWINGS FOR PENETRATION REQUIREMENTS THROUGH FRAMING TOP PLATES, SILL PLATES, BEAMS, JOIST, RAFTERS, ETC. PROVIDE NOTCHING BORING, DRILLING, ANCHOR BOLTS AND OTHER WORK IN STRICTEST CONFORMANCE TO STRUCTURAL DETAILS.
8. PROVIDE GROUND ROD AND GROUND BOX AT EACH RELOCATABLE CLASSROOM AND CONNECT TO (E) PANEL, METAL WATER PIPING, AND BUILDING STEEL FRAME. SEE "GROUNDING DETAIL".
9. PORTABLE BUILDINGS HAVING NON-PINNED SLIDING FOUNDATIONS SHALL BE CONNECTED USING 10. FLEXIBLE CONDUIT PER DETAILS. PORTABLE BUILDINGS WITH NON-SLIDING PINNED FOUNDATIONS SHALL BE CONNECTED WITH RIGID CONDUIT, TIGHT TO BUILDING (FLEX CONNECTIONS WILL NOT BE ACCEPTABLE). VERIFY FOUNDATION TYPE WITH INSPECTOR OF RECORD OR DISTRICT PRIOR TO INSTALLATION OF ANY CONDUIT ON BACK OF BUILDING.



1 PROVIDE (N) WIRING IN (E) CONDUIT.

### 1 ONE-LINE DIAGRAM

SCALE: NONE

## COPPER FEEDER SCHEDULE

| FEEDER TAG | FEEDER DESCRIPTION | CONDUIT | CONDUCTORS |  | NOTES |
|---|---|---|---|---|---|
|  |  |  | PHASE/NEUTRAL | GROUND |  |
| 1003 | 100 AMP, 1 PHASE, 3 WIRE | 1-2.00" | 3 #1 AWG | 1 #6 AWG |  |

**AGENCY APPROVAL:**

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[redacted]

| Δ | DESCRIPTION | DATE |
|---|---|---|

No. E 017376
12/18/2024

EDGE ELECTRICAL CONSULTING

Project Number L454
Contact CHRIS

400 R Street, Ste 333
Sacramento, CA 95811
916.256.2460

Sacramento | Alameda | Irvine

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**ELECTRICAL NOTES**

[redacted]

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**E0.02**

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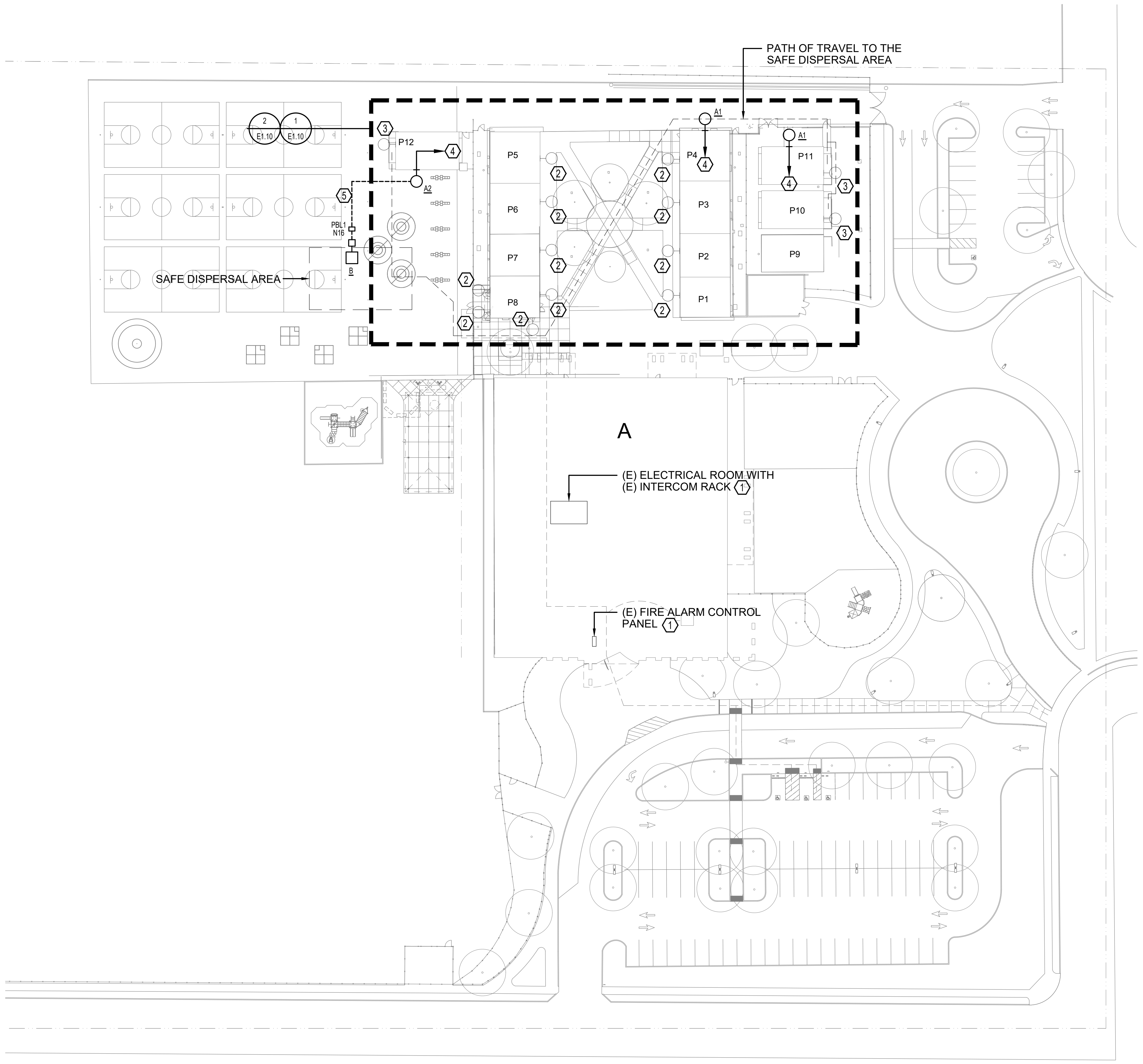
PATH OF TRAVEL TO THE SAFE DISPERSAL AREA

SAFE DISPERSAL AREA

(E) ELECTRICAL ROOM WITH (E) INTERCOM RACK ①

(E) FIRE ALARM CONTROL PANEL ①

① ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"

NORTH

## NUMBERED NOTES

① PROVIDE ALL PARTS, PIECES, PROGRAMMING, ETC. AS REQUIRED.

② (E) LIGHT FIXTURE ILLUMINATING THE PATH OF TRAVEL.

③ LIGHT FIXTURE PROVIDED WITH (N) BUILDING ILLUMINATING THE PATH OF TRAVEL.

④ TO BUILDING PANEL. PROVIDE A (N) 20/1 BREAKER AND UPDATE THE CIRCUIT DIRECTORY.

⑤ 1"C-2#8, 1#10G.

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| Δ | **DESCRIPTION** | **DATE** |
|---|---|---|

YIP SHING DONNY LEE
No. E 017376
12/18/2024

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**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**ELECTRICAL SITE PLAN**

[redacted]

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**E1.01**

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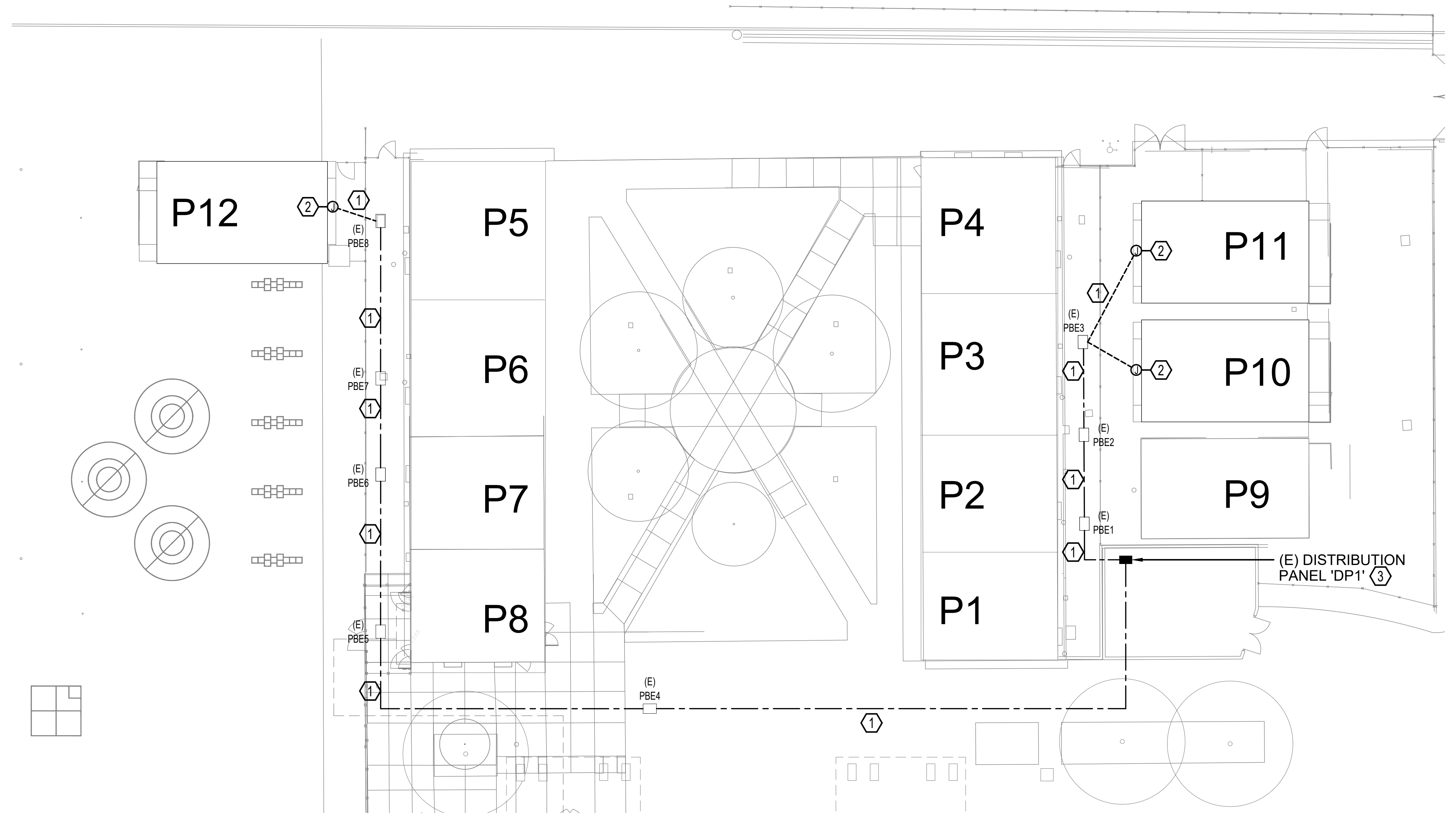
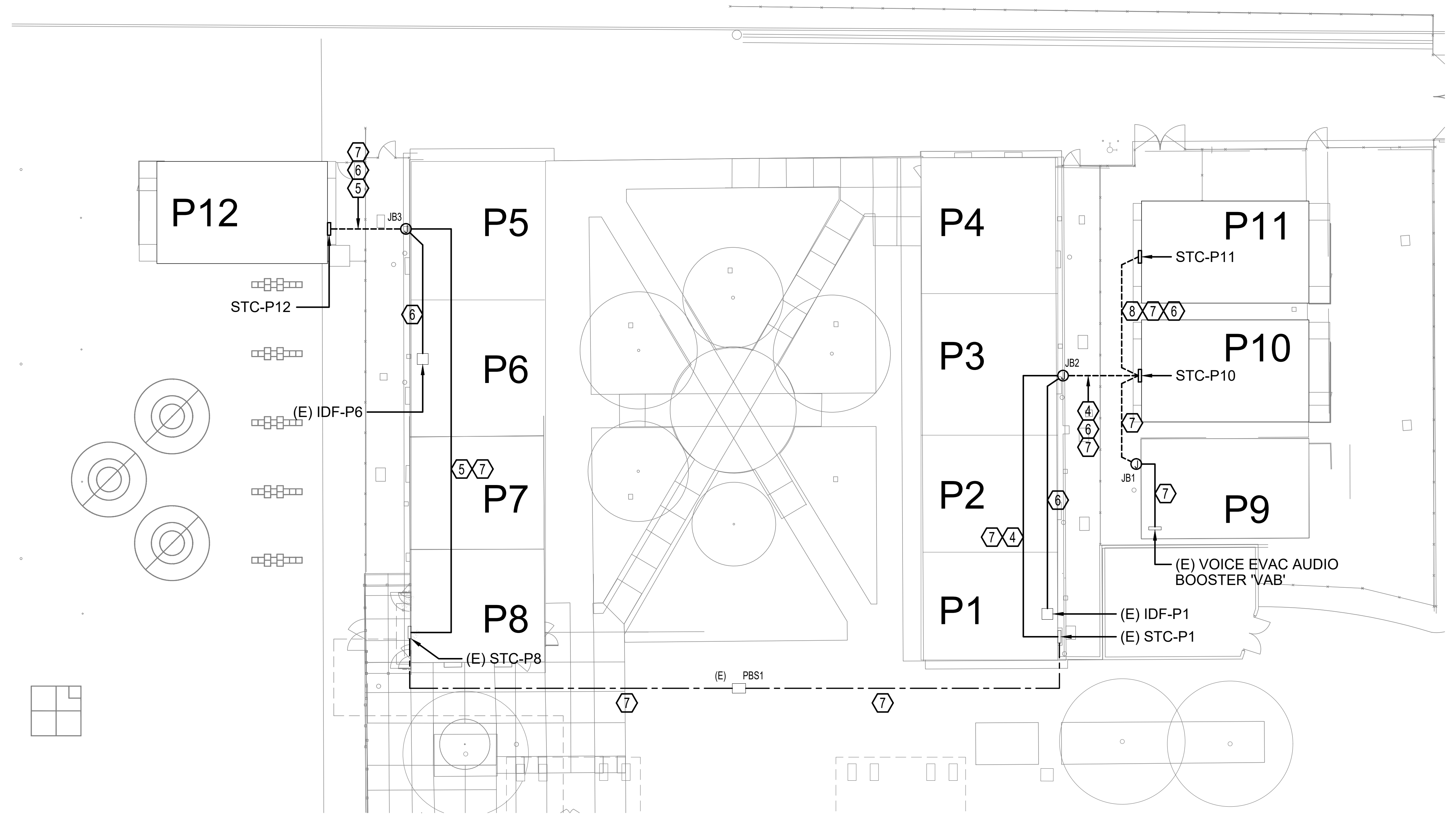


① PARTIAL POWER SITE PLAN

SCALE: 1" = 20'-0"

NORTH



② PARTIAL SIGNAL SITE PLAN

SCALE: 1" = 20'-0"

NORTH

## NUMBERED NOTES

- ① REFER TO ONE LINE DIAGRAM
- ② CONNECT PANEL PROVIDED WITH PORTABLE BUILDING. FIELD VERIFY EXACT REQUIREMENTS.
- ③ PROVIDE (N) BREAKERS PER ONE LINE DIAGRAM. TYPE AND AIC SHALL MATCH (E).
- ④ 2"C-2BX,1CX,2EX; 2" MT.
- ⑤ 2"C-4BX,1CX,2EX; 2" MT.
- ⑥ 2"C FOR DATA CABLES.
- ⑦ REFER TO FIRE ALARM RISER DIAGRAM.
- ⑧ 2"C-1BX,1CX,1EX; 2" MT.

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12/18/2024

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PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**PARTIAL SITE PLANS**

DATE: **1/22/2025**

CLIENT PROJ NO:

SHEET:

**E1.10**

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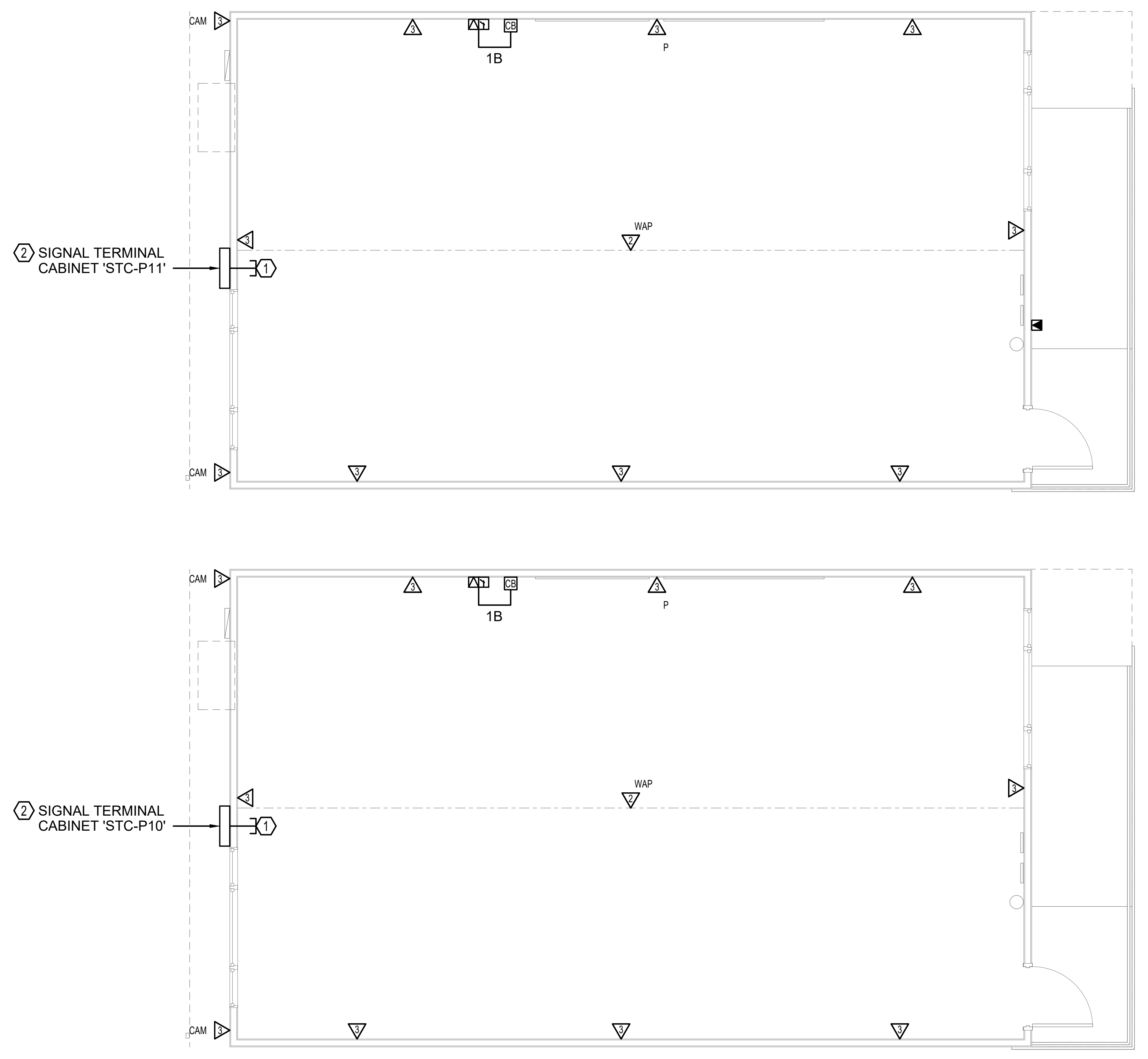
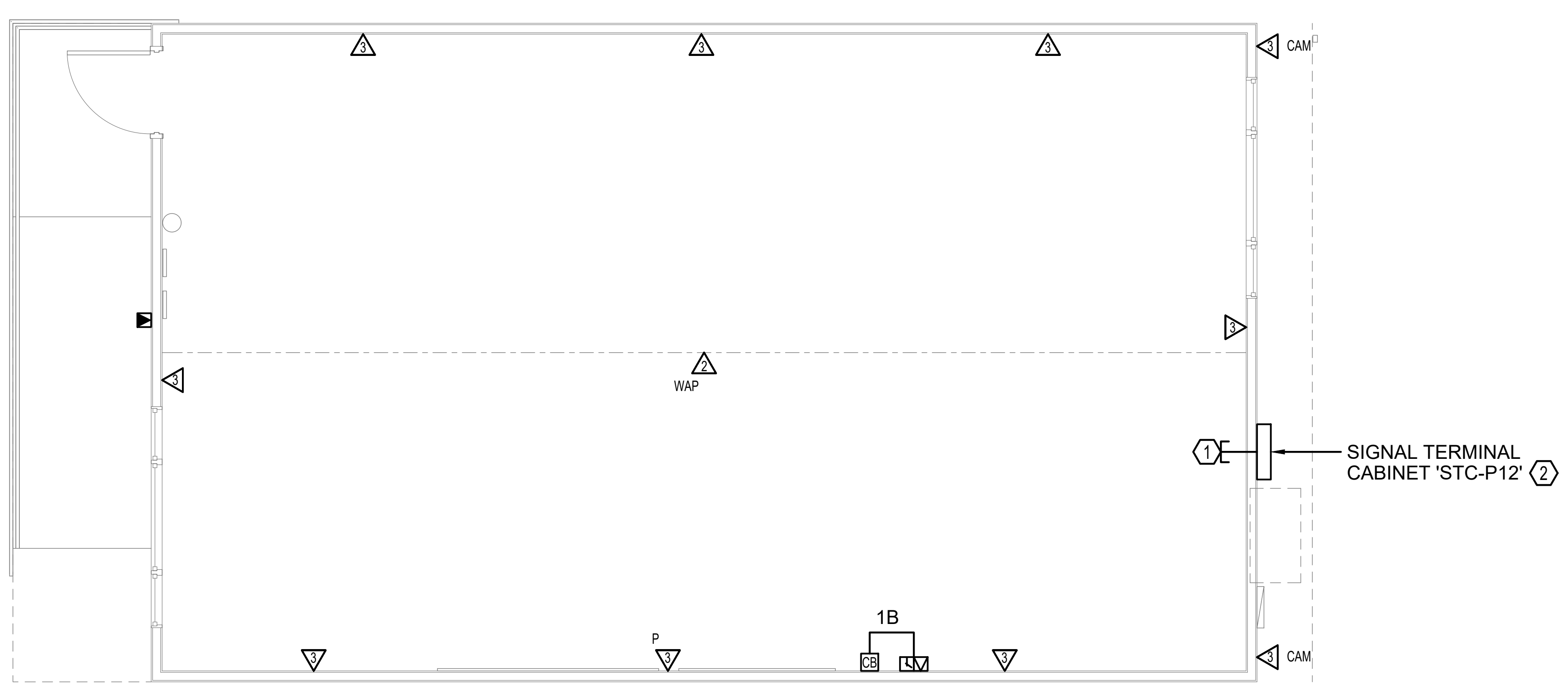

CAM
1B
P
WAP
CAM
2 SIGNAL TERMINAL CABINET 'STC-P11'
1
CAM
1B
P
WAP
CAM
2 SIGNAL TERMINAL CABINET 'STC-P10'
1

NOTE: VERIFY LOCATION OF ALL DEVICES WITH OWNER.

1 SIGNAL FLOOR PLAN
1/4"= 1'-0

NORTH



NOTE: VERIFY LOCATION OF ALL DEVICES WITH OWNER.

2 SIGNAL FLOOR PLAN
1/4"= 1'-0

NORTH

## GENERAL SIGNAL CABLE NOTES

1. FROM EACH DATA OUTLET, PROVIDE 1"C TO SIGNAL TERMINAL CABINET ON BUILDING EXTERIOR. FROM EACH JACK, PROVIDE 1D TO THE EXISTING IDF VIA CONDUITS SHOWN ON SITE PLAN (OUTLETS MAY HAVE MULTIPLE JACKS). TYPICAL FROM EACH DATA OUTLET, U.O.N. ON PLANS
2. FROM EACH INTERIOR SPEAKER, PROVIDE 3/4"C STUBBED ABOVE ACCESSIBLE CEILING. PROVIDE 2B "FREE AIR" TO BUILDING STC. TYPICAL FROM EACH INTERIOR SPEAKER, U.O.N. ON PLANS.
3. FROM EACH EXTERIOR SPEAKER, PROVIDE 3/4"C STUBBED ABOVE ACCESSIBLE CEILING. PROVIDE 1E "FREE AIR" TO BUILDING STC. TYPICAL FROM EACH EXTERIOR SPEAKER, U.O.N. ON PLANS.
4. FROM EACH CLOCK, PROVIDE 3/4"C STUBBED ABOVE ACCESSIBLE CEILING. PROVIDE 1C "FREE AIR" TO BUILDING STC. TYPICAL FROM EACH CLOCK, U.O.N. ON PLANS.
5. "FREE AIR" WIRING SHALL BE INSTALLED ON J-HOOKS OR CABLE TRAY AS SPECIFIED.
6. PROVIDE CONDUIT SLEEVES THROUGH SHEAR WALLS, DRAFT STOPS, ETC.
7. WIRING ABOVE NON-ACCESSIBLE CEILINGS SHALL BE IN RACEWAY.

## NUMBERED NOTES

⟨1⟩ (4) 2"C STUBBED ABOVE CEILING.

⟨2⟩ 30" x 24" x 10" NEMA 3R CABINET WITH HINGED COVER AND PADLOCK HASP - B-LINE 302410RHC. PROVIDE GUTTER ABOVE CABINET PER DETAIL.

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| Δ | DESCRIPTION | DATE |
|---|---|---|

REGISTERED PROFESSIONAL ENGINEER
YIP SHING DONNY LEE
No. E 017376
ELECTRICAL
STATE OF CALIFORNIA
12/18/2024

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**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**SIGNAL FLOOR PLANS**

[redacted]

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**E2.10**

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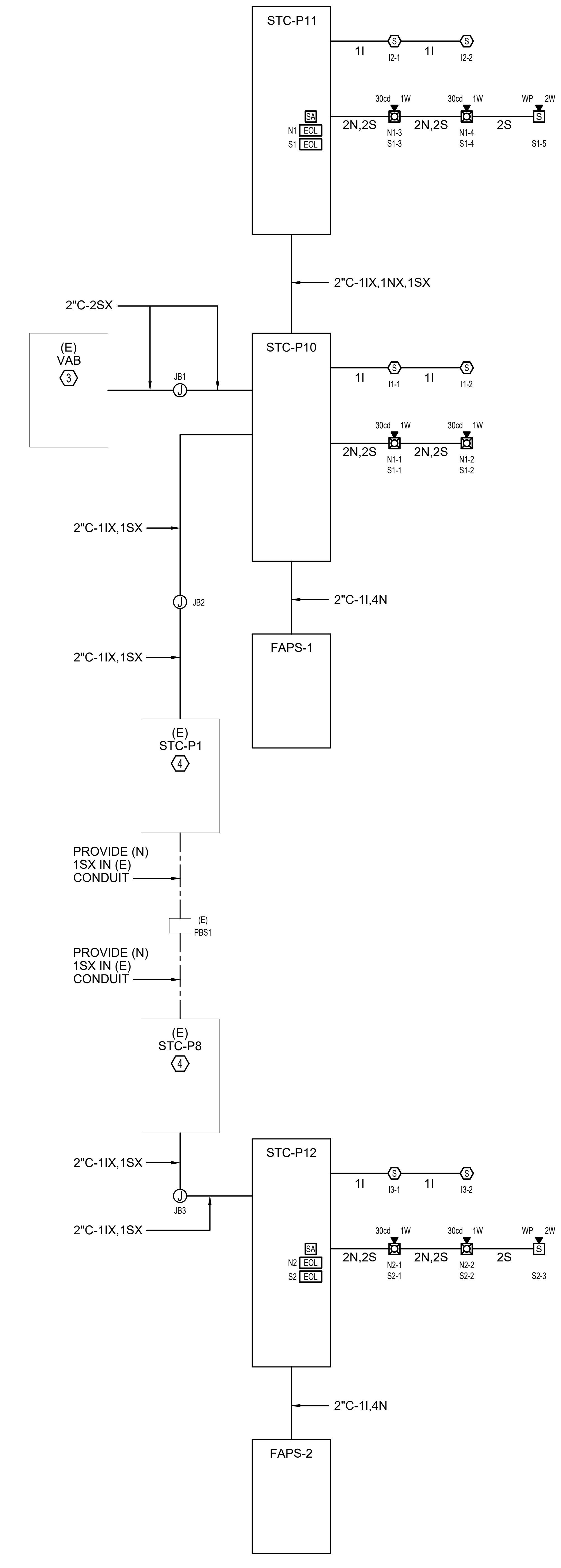
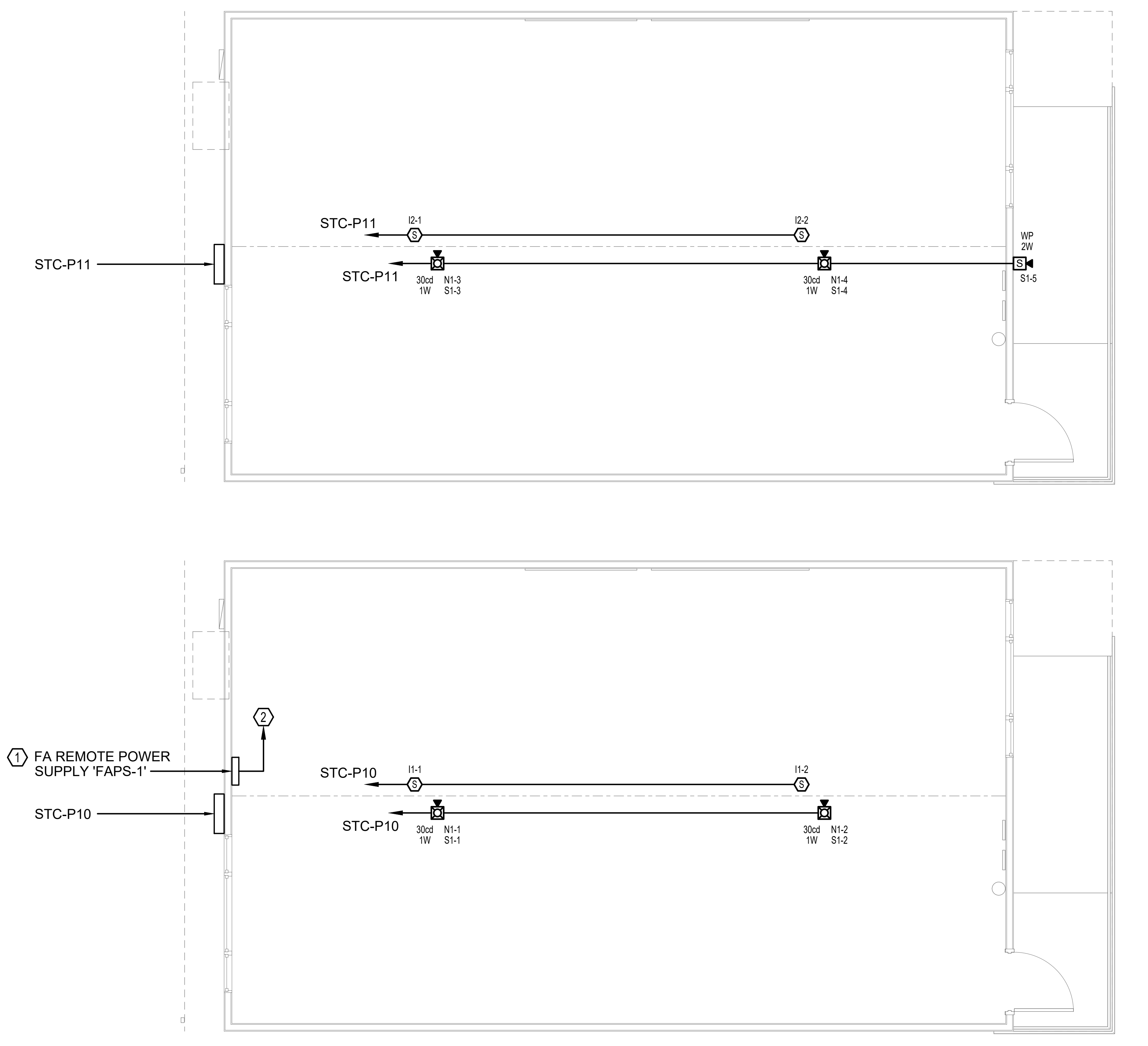
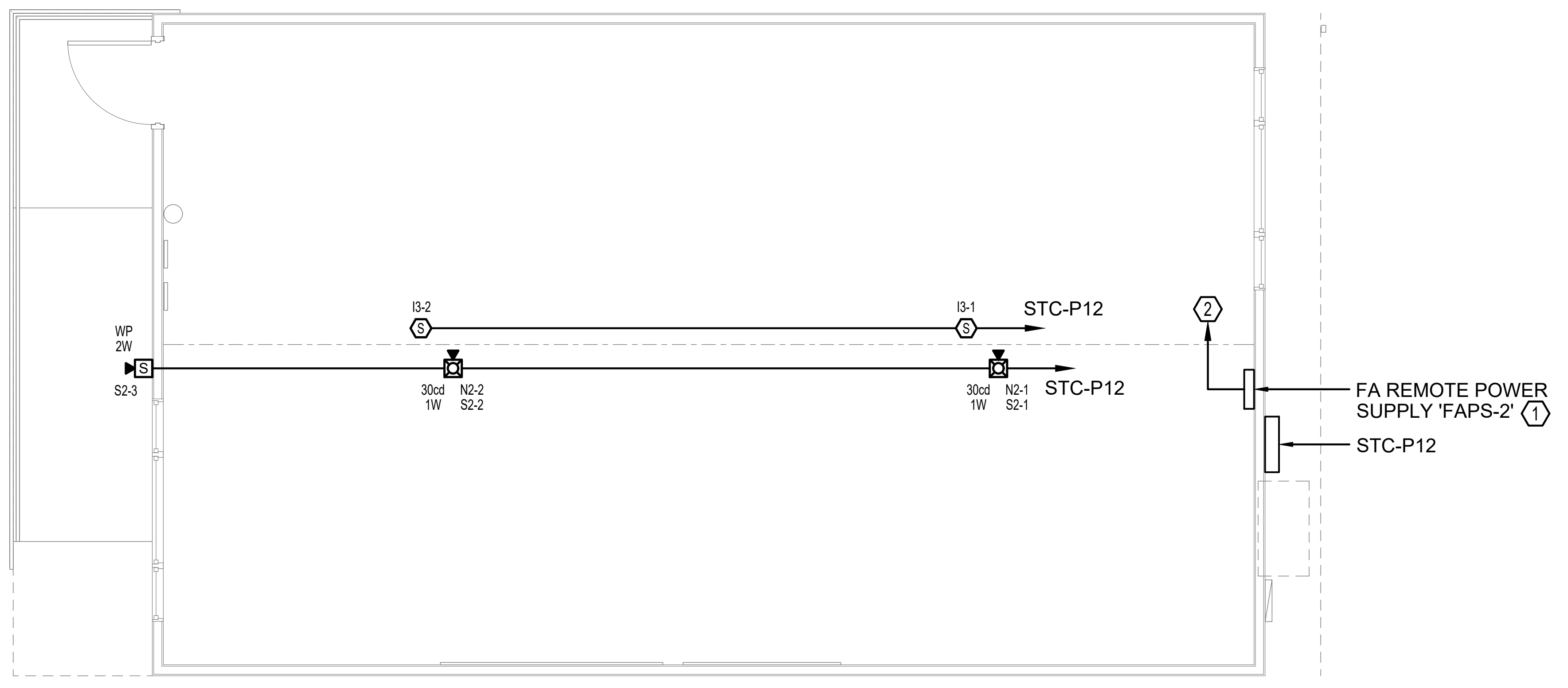


3 FIRE ALARM RISER DIAGRAM
NO SCALE



1 FIRE ALARM FLOOR PLAN
1/4"= 1'-0

NORTH



2 FIRE ALARM FLOOR PLAN
1/4"= 1'-0

NORTH

## NUMBERED NOTES

1. INSTALL HIGH ON WALL SUCH THAT THE TOP OF ENCLOSURE IS 1" BELOW THE CEILING, LEAVING 80" CLEARANCE BELOW THE ENCLOSURE TO COMPLY WITH CBC 11B-307.
2. 0.75"C - 2#12, 1#12G TO BUILDING PANEL. PROVIDE A (N) 20/1 BREAKER. UPDATE CIRCUIT DIRECTORY.
3. CONNECT TO (2) SPARE SPEAKER CIRCUITS.
4. CONNECT INTO (E) FA ADDRESSABLE LOOP.

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PROJECT:

**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:

**FIRE ALARM FLOOR PLANS**

[redacted]

DATE: **1/22/2025**
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**E2.11**

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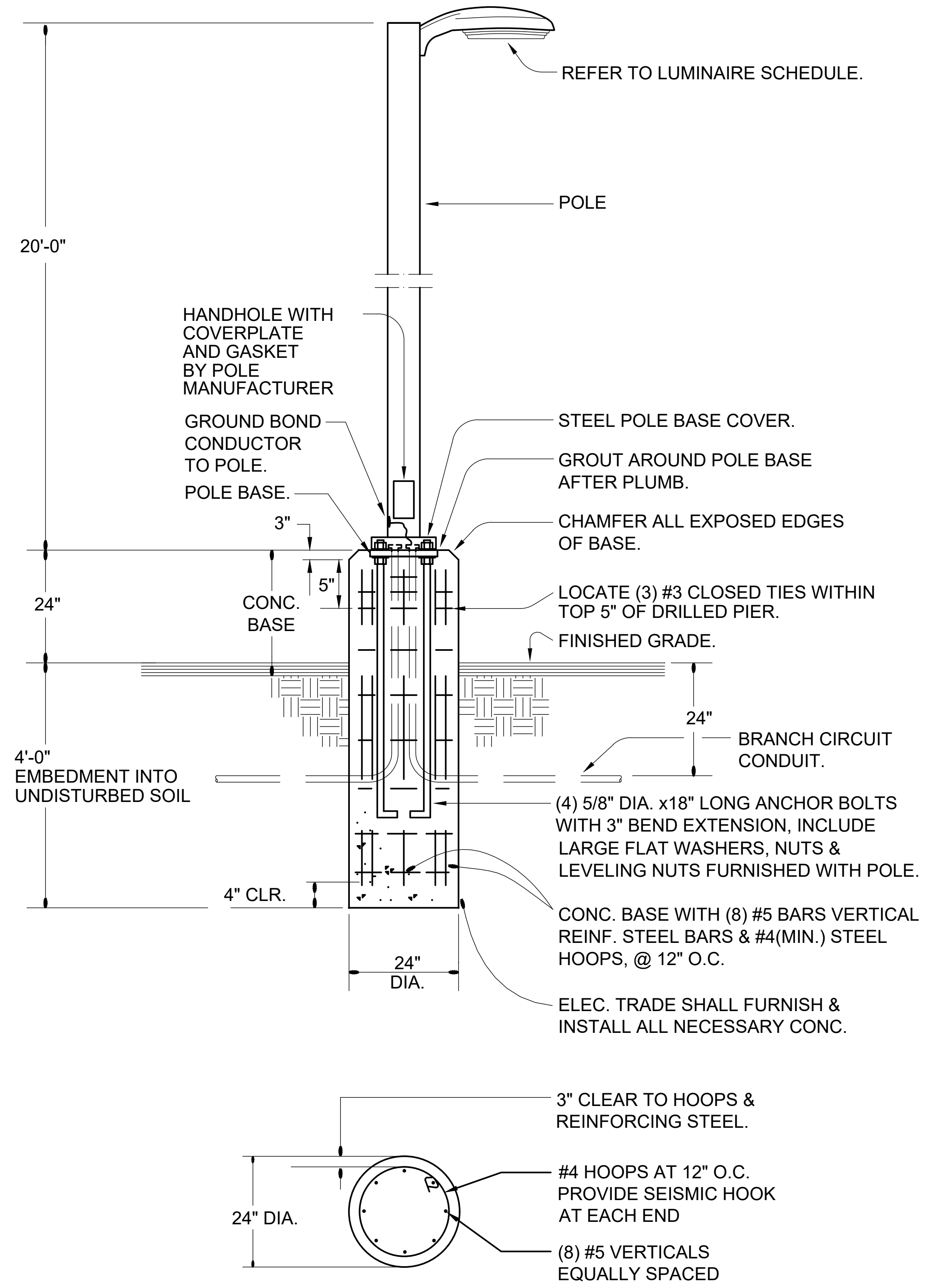
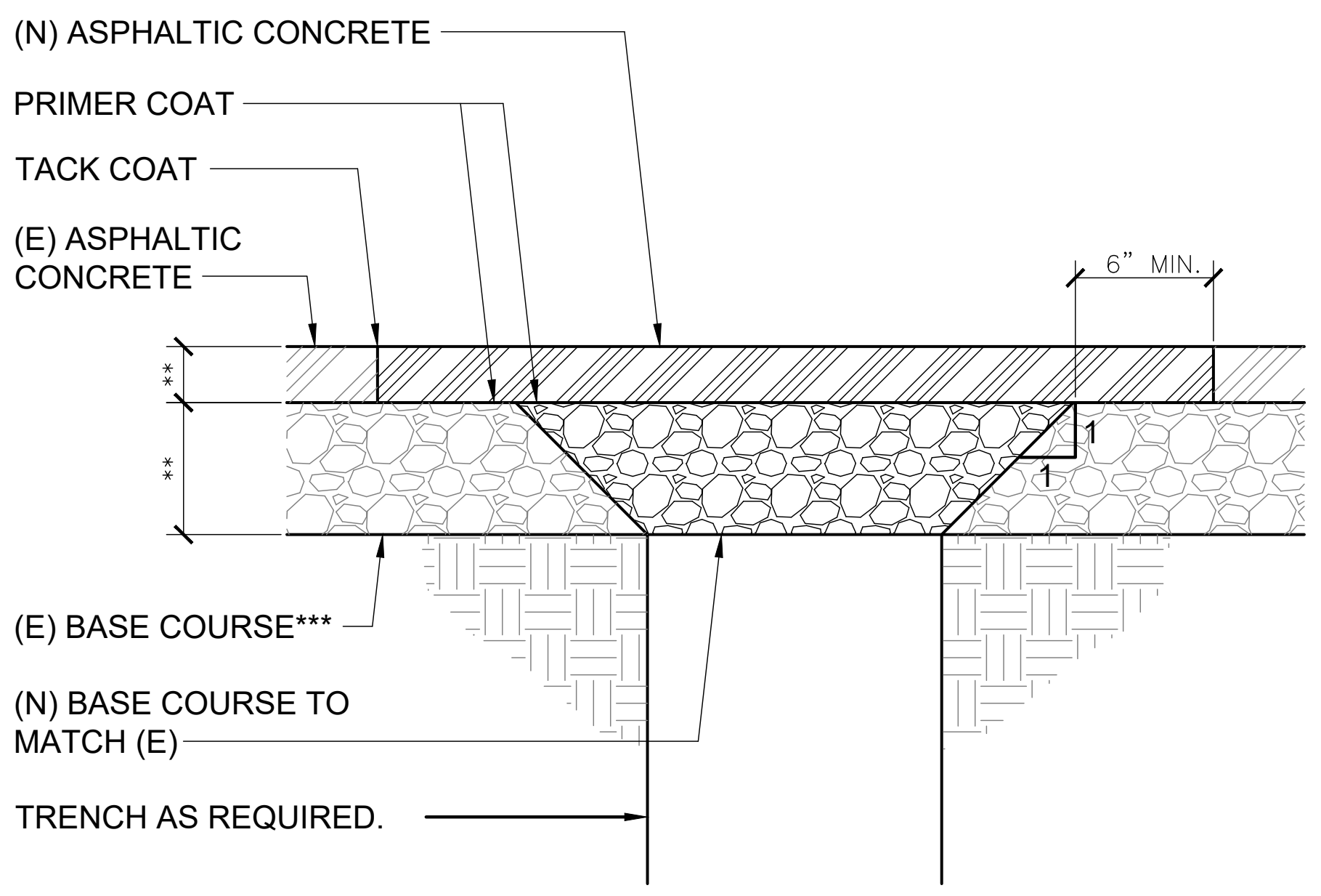


REFER TO LUMINAIRE SCHEDULE.
POLE
20'-0"
HANDHOLE WITH COVERPLATE AND GASKET BY POLE MANUFACTURER
GROUND BOND CONDUCTOR TO POLE.
POLE BASE.
STEEL POLE BASE COVER.
GROUT AROUND POLE BASE AFTER PLUMB.
CHAMFER ALL EXPOSED EDGES OF BASE.
3"
5"
24"
CONC. BASE
LOCATE (3) #3 CLOSED TIES WITHIN TOP 5" OF DRILLED PIER.
FINISHED GRADE.
24"
BRANCH CIRCUIT CONDUIT.
4'-0" EMBEDMENT INTO UNDISTURBED SOIL
(4) 5/8" DIA. x18" LONG ANCHOR BOLTS WITH 3" BEND EXTENSION, INCLUDE LARGE FLAT WASHERS, NUTS & LEVELING NUTS FURNISHED WITH POLE.
4" CLR.
CONC. BASE WITH (8) #5 BARS VERTICAL REINF. STEEL BARS & #4(MIN.) STEEL HOOPS, @ 12" O.C.
24" DIA.
ELEC. TRADE SHALL FURNISH & INSTALL ALL NECESSARY CONC.
3" CLEAR TO HOOPS & REINFORCING STEEL.
24" DIA.
#4 HOOPS AT 12" O.C. PROVIDE SEISMIC HOOK AT EACH END
(8) #5 VERTICALS EQUALLY SPACED

## 6 POLE LIGHT DETAIL - RAISED BASE

NO SCALE



NOTE: PROVIDE SEAL COAT OVER NEW WORK AND EXTEND A MINIMUM OF 12" OVER EXISTING ASPHALT.

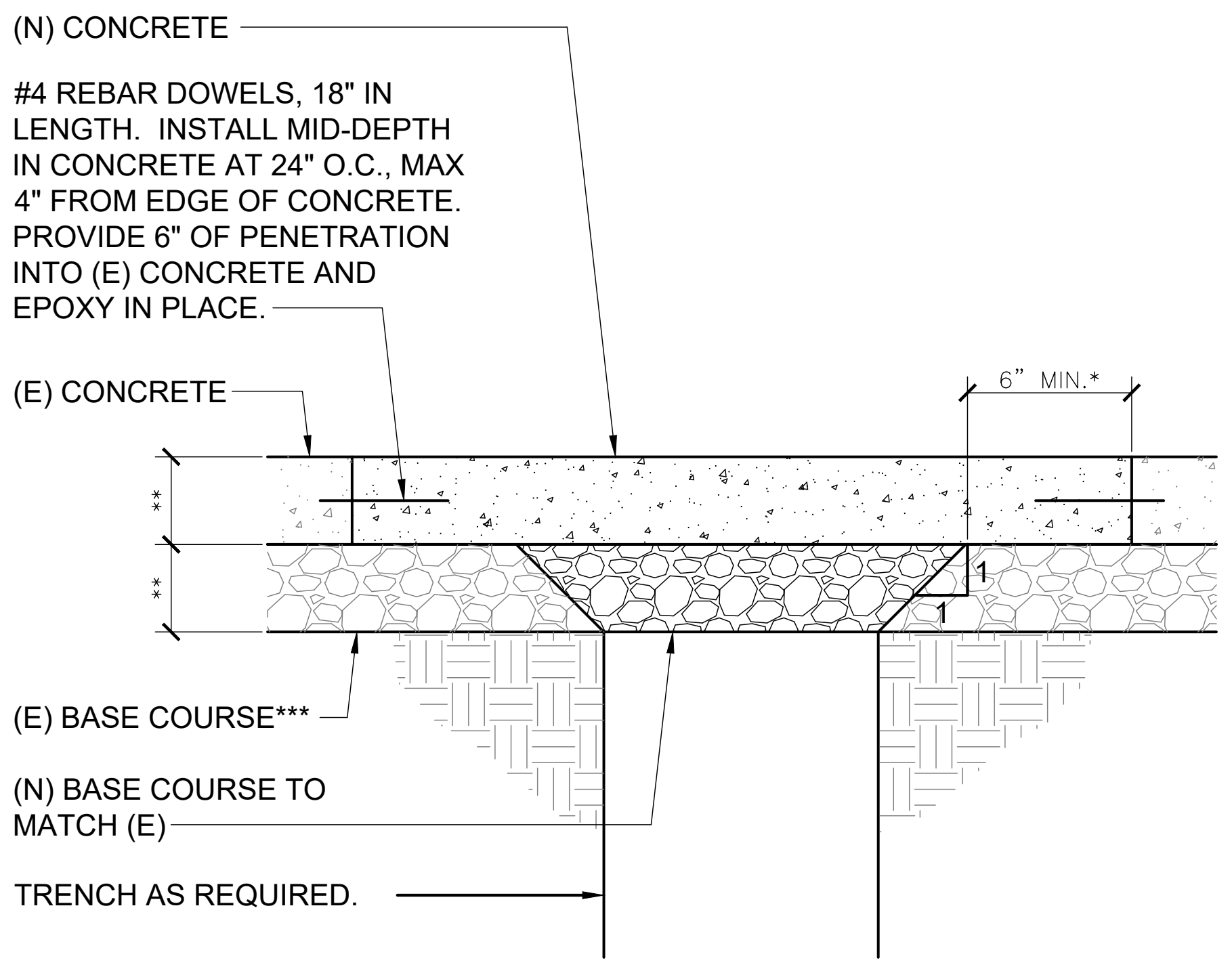
* WHERE JOINT EXISTS WITHIN 18" OF CUT, REMOVE CONCRETE TO (E) JOINT.

** TO MATCH (E).

*** (E) BASE COURSE TO BE PROTECTED AND TO REMAIN UNDISTURBED TO PREVENT LOSS OF DENSITY AND SUPPORT UNDER (E) CONCRETE.

## 4 ASPHALTIC CONCRETE REPAIR DETAIL

NO SCALE



(N) CONCRETE
#4 REBAR DOWELS, 18" IN LENGTH. INSTALL MID-DEPTH IN CONCRETE AT 24" O.C., MAX 4" FROM EDGE OF CONCRETE. PROVIDE 6" OF PENETRATION INTO (E) CONCRETE AND EPOXY IN PLACE.
(E) CONCRETE
6" MIN.*
**
**
1
1
(E) BASE COURSE***
(N) BASE COURSE TO MATCH (E)
TRENCH AS REQUIRED.

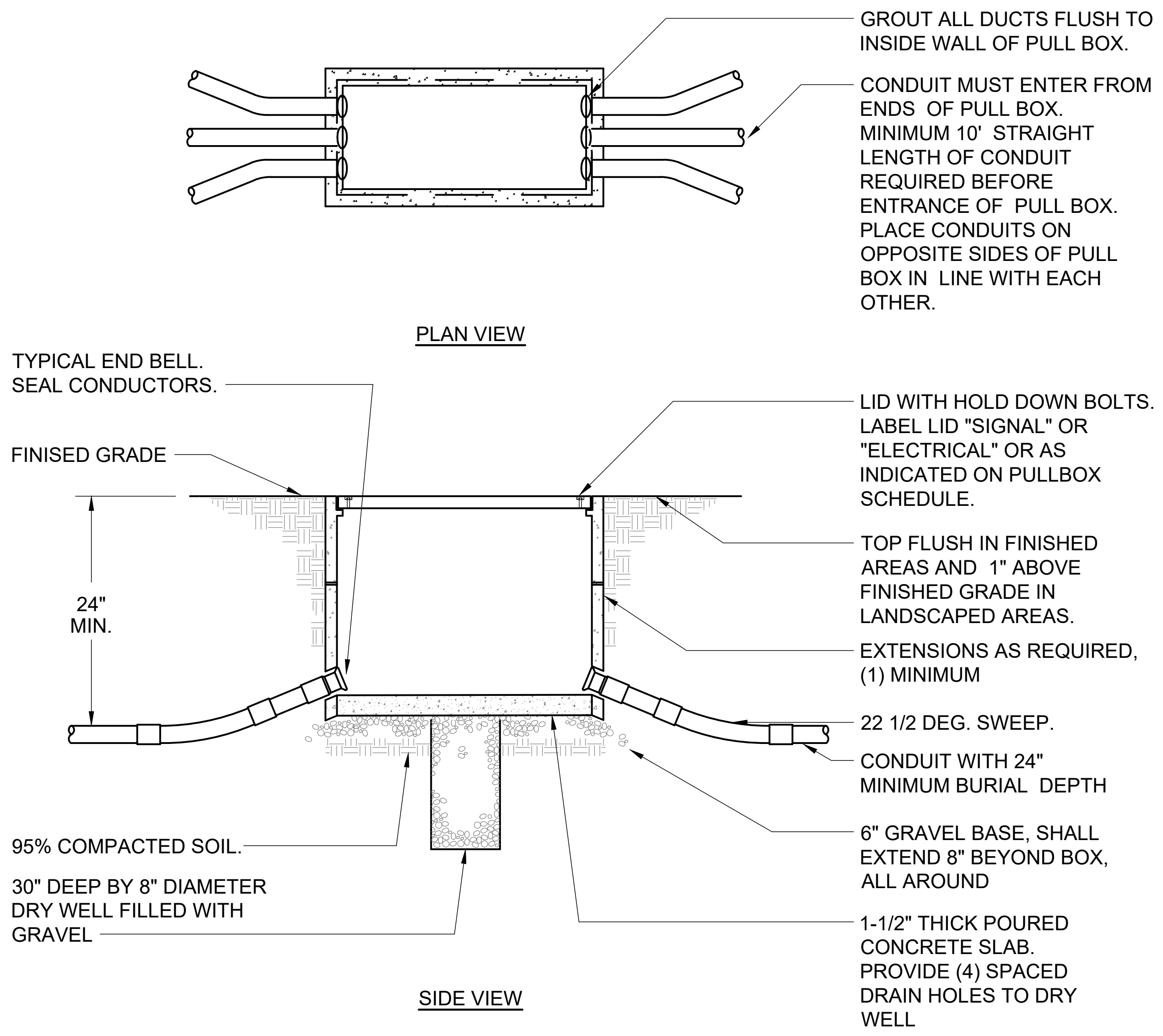
* WHERE JOINT EXISTS WITHIN 18" OF CUT, REMOVE CONCRETE TO (E) JOINT.

** TO MATCH (E).

*** (E) BASE COURSE TO BE PROTECTED AND TO REMAIN UNDISTURBED TO PREVENT LOSS OF DENSITY AND SUPPORT UNDER (E) CONCRETE.

## 5 CONCRETE REPAIR DETAIL

NO SCALE



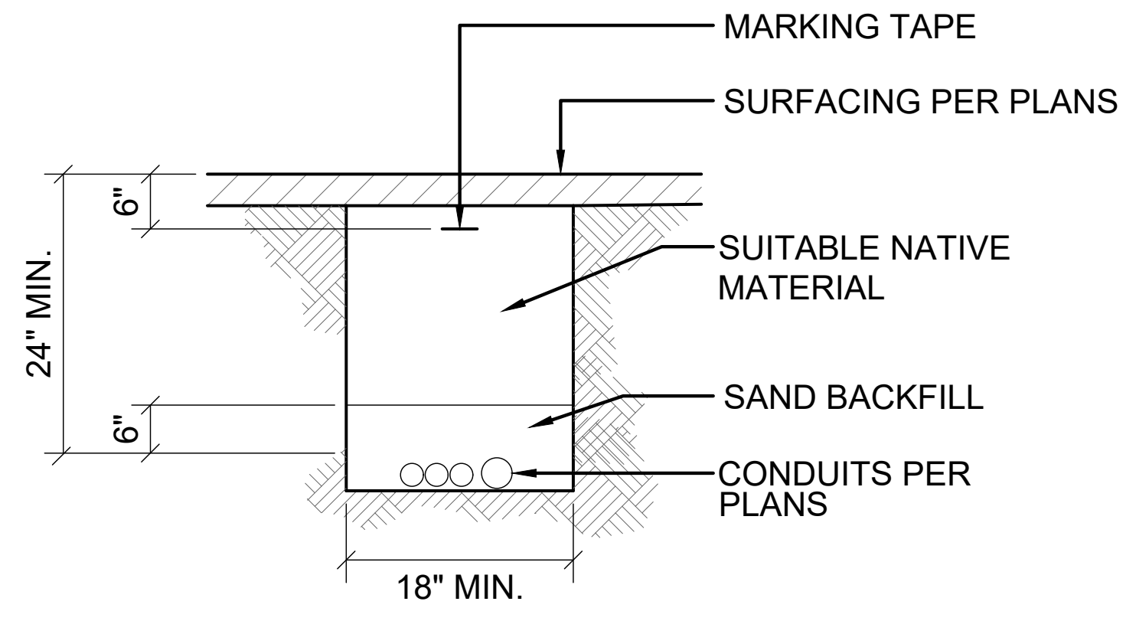
GROUT ALL DUCTS FLUSH TO INSIDE WALL OF PULL BOX.
CONDUIT MUST ENTER FROM ENDS OF PULL BOX. MINIMUM 10' STRAIGHT LENGTH OF CONDUIT REQUIRED BEFORE ENTRANCE OF PULL BOX. PLACE CONDUITS ON OPPOSITE SIDES OF PULL BOX IN LINE WITH EACH OTHER.
PLAN VIEW
TYPICAL END BELL. SEAL CONDUCTORS.
FINISED GRADE
24" MIN.
LID WITH HOLD DOWN BOLTS. LABEL LID "SIGNAL" OR "ELECTRICAL" OR AS INDICATED ON PULLBOX SCHEDULE.
TOP FLUSH IN FINISHED AREAS AND 1" ABOVE FINISHED GRADE IN LANDSCAPED AREAS.
EXTENSIONS AS REQUIRED, (1) MINIMUM
22 1/2 DEG. SWEEP.
CONDUIT WITH 24" MINIMUM BURIAL DEPTH
95% COMPACTED SOIL.
6" GRAVEL BASE, SHALL EXTEND 8" BEYOND BOX, ALL AROUND
30" DEEP BY 8" DIAMETER DRY WELL FILLED WITH GRAVEL
1-1/2" THICK POURED CONCRETE SLAB. PROVIDE (4) SPACED DRAIN HOLES TO DRY WELL
SIDE VIEW

NOTES:

1. PROVIDE CONCRETE LID AT ASPHALT OR CONCRETE WALKWAY. PROVIDE GALVANIZED STEEL CHECKER PLATE LID AT ALL OTHER NON-VEHICULAR AREAS.
2. AT VEHICULAR TRAFFIC AREAS, PULLBOXES, EXTENSIONS AND LIDS SHALL BE TRAFFIC (H20) RATED. SLAB SHALL BE REINFORCED CONCRETE.

## 1 PULLBOX DETAIL

NO SCALE

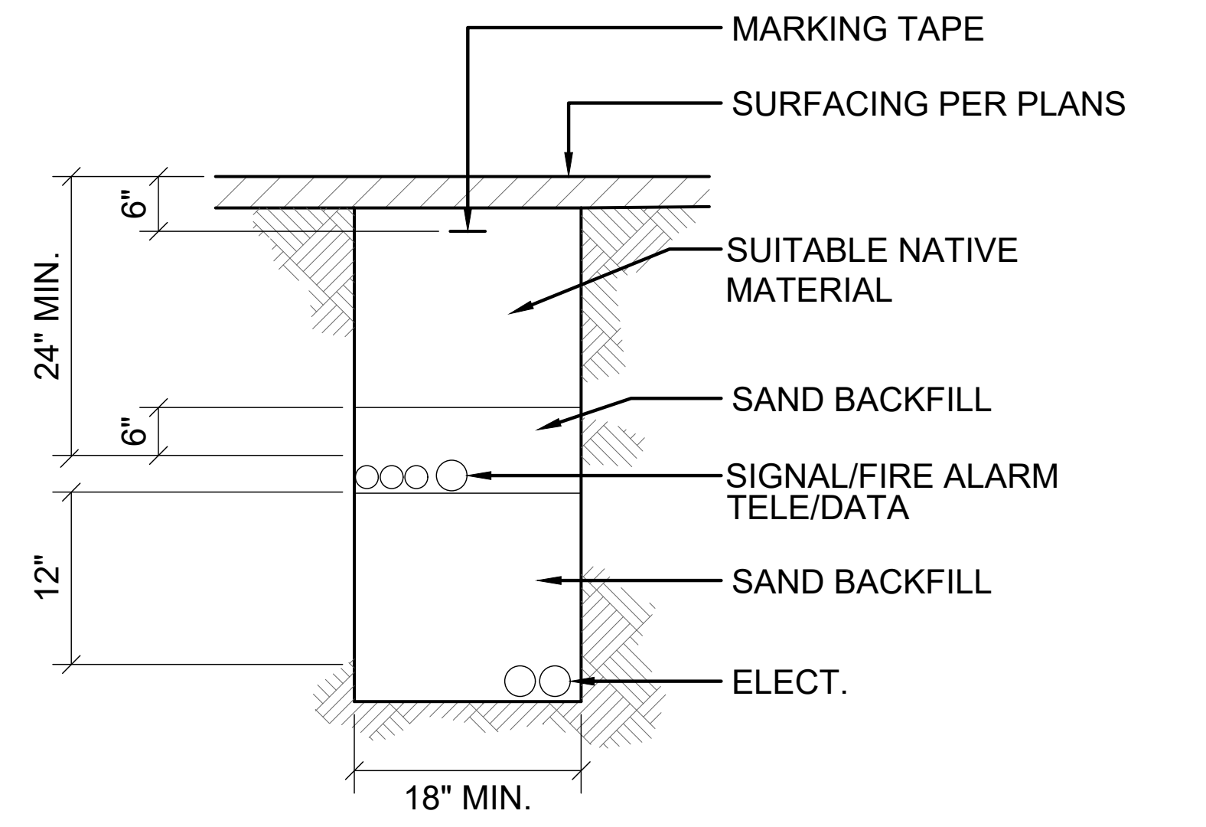


NOTES:

1. BOTTOM OF TRENCH SHALL BE SQUARE AND CLEAN.
2. REFER TO PLANS FOR QUANTITY AND SIZES OF CONDUITS.
3. NATIVE MATERIALS SHALL BE NATIVE TO THE PROJECT SITE, FREE OF WOOD, ORGANICS, AND OTHER DELETERIOUS SUBSTANCES. ROCKS SHALL NOT BE GREATER THAN 3" INCHES.
4. SAND SHALL BE FINE GRANULAR MATERIAL, FREE OF ORGANIC MATTER, MICA, LOAM OR CLAY.

## 2 UTILITY TRENCH DETAIL

NO SCALE



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4. SAND SHALL BE FINE GRANULAR MATERIAL, FREE OF ORGANIC MATTER, MICA, LOAM OR CLAY.

## 3 JOINT UTILITY TRENCH DETAIL

NO SCALE

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| Δ | **DESCRIPTION** | **DATE** |
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No. E 017376
12/18/2024

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**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**ELECTRICAL DETAILS**

[redacted]

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**E3.01**

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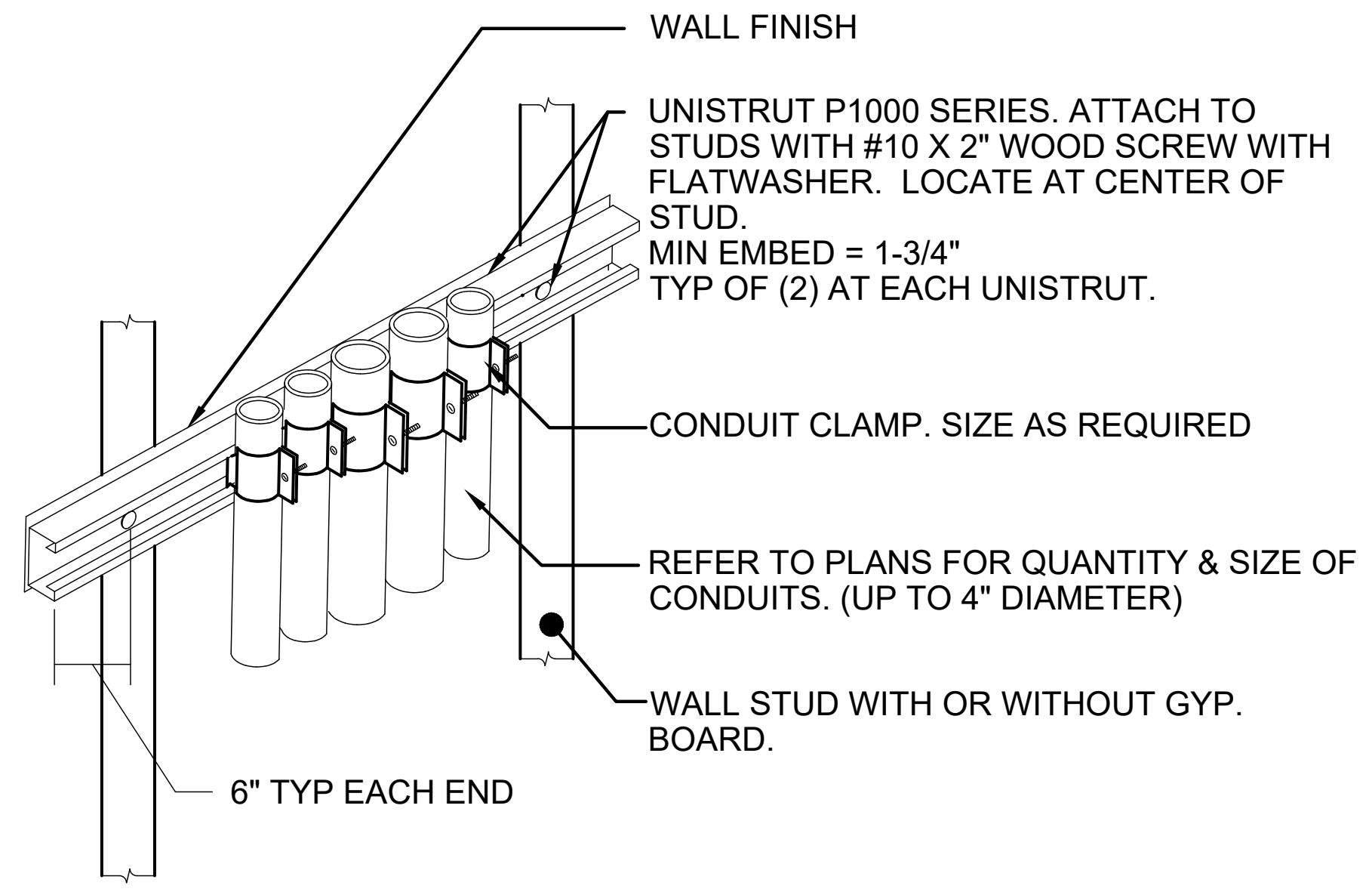
EXACTLY ONE INCH LONG AT THIS
SHEETS ORIGINAL PAGE SIZE

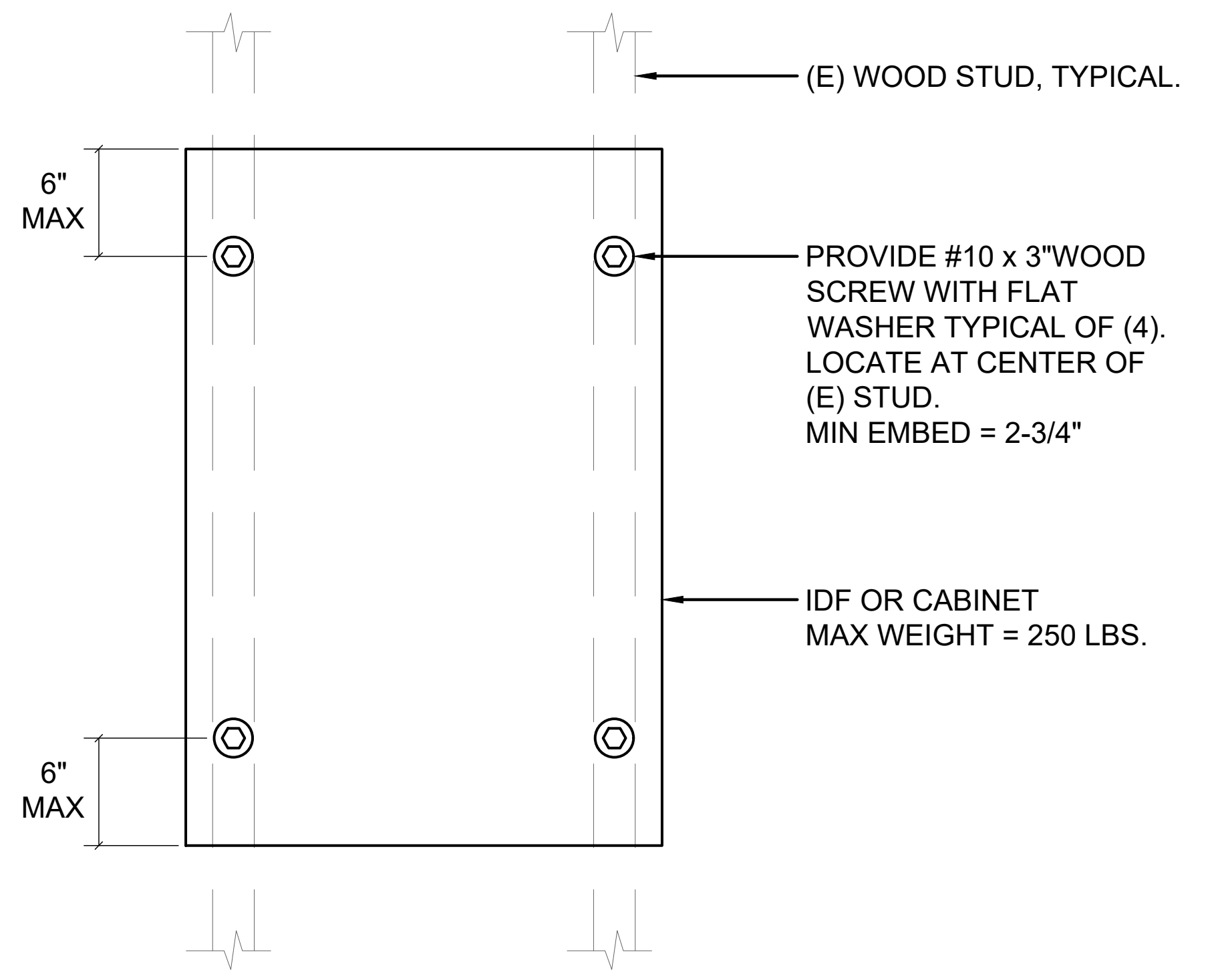

WALL FINISH
UNISTRUT P1000 SERIES. ATTACH TO STUDS WITH #10 X 2" WOOD SCREW WITH FLATWASHER. LOCATE AT CENTER OF STUD.
MIN EMBED = 1-3/4"
TYP OF (2) AT EACH UNISTRUT.
CONDUIT CLAMP. SIZE AS REQUIRED
REFER TO PLANS FOR QUANTITY & SIZE OF CONDUITS. (UP TO 4" DIAMETER)
WALL STUD WITH OR WITHOUT GYP. BOARD.
6" TYP EACH END

NOTES:

1. SUPPORTS @ 6'-0" O.C. MAX.

### 11 DETAIL - CONDUIT SUPPORT

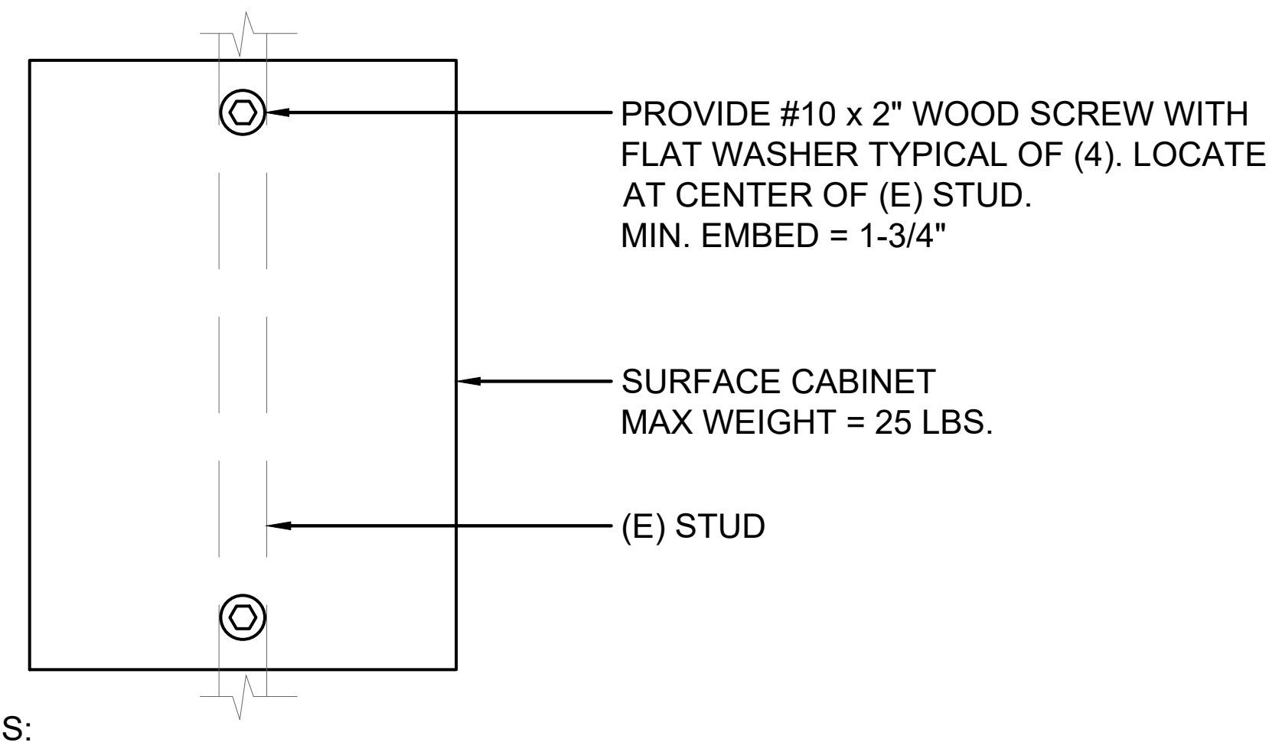
SCALE: NONE


(E) WOOD STUD, TYPICAL.
6" MAX
PROVIDE #10 x 3"WOOD SCREW WITH FLAT WASHER TYPICAL OF (4). LOCATE AT CENTER OF (E) STUD.
MIN EMBED = 2-3/4"
IDF OR CABINET
MAX WEIGHT = 250 LBS.
6" MAX

NOTE: ENCLOSURE SHALL COMPLY WITH CBC 11B-307. REFER TO FLOOR PLAN FOR MOUNTING HEIGHT.

### 6 SURFACE IDF OR CABINET MOUNTING DETAIL

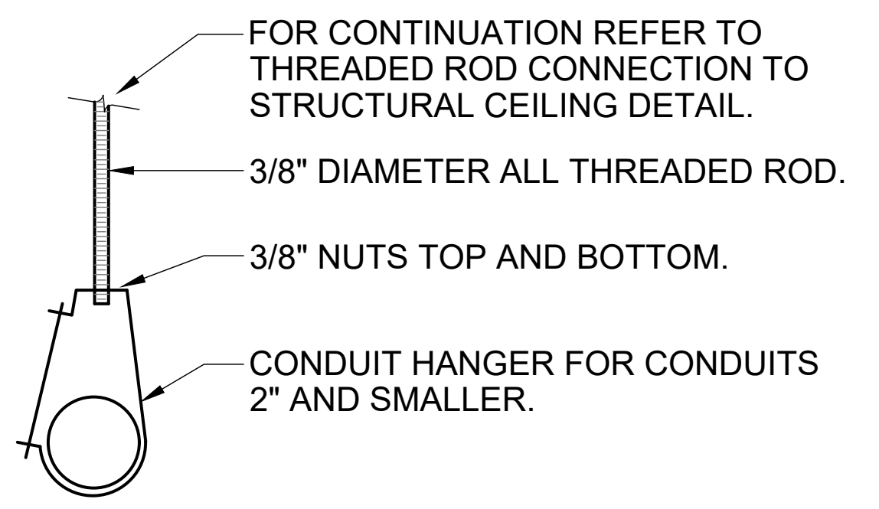
NO SCALE


PROVIDE #10 x 2" WOOD SCREW WITH FLAT WASHER TYPICAL OF (4). LOCATE AT CENTER OF (E) STUD.
MIN. EMBED = 1-3/4"
SURFACE CABINET
MAX WEIGHT = 25 LBS.
(E) STUD

NOTES:
1. THIS DETAIL APPLIES TO EQUIPMENT THAT IS LESS THAN 16" WIDE.
2. ENCLOSURE SHALL COMPLY WITH CBC 11B-307. REFER TO FLOOR PLAN FOR MOUNTING HEIGHT.

### 7 SURFACE CABINET MOUNTING DETAIL

NO SCALE

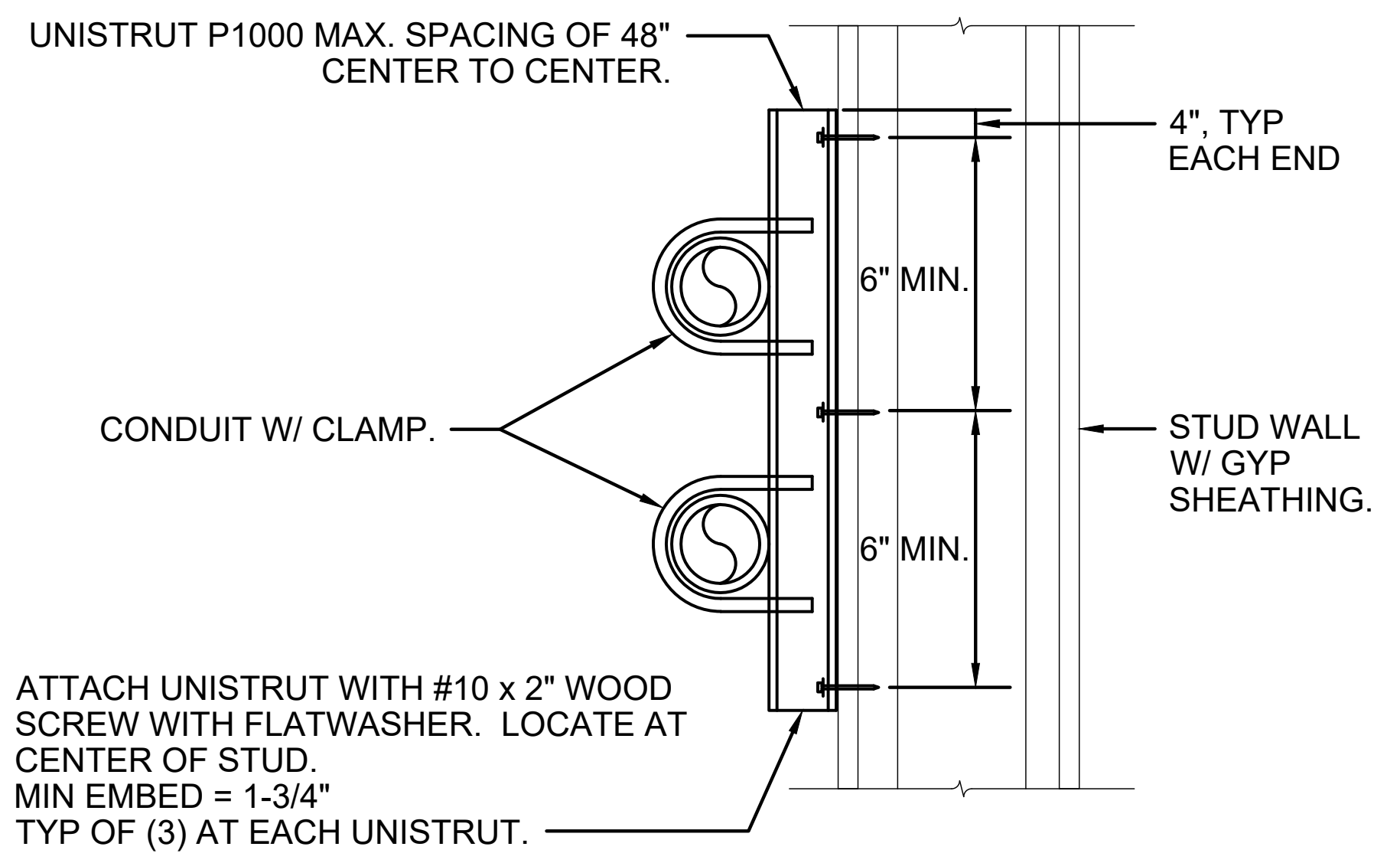

FOR CONTINUATION REFER TO THREADED ROD CONNECTION TO STRUCTURAL CEILING DETAIL.
3/8" DIAMETER ALL THREADED ROD.
3/8" NUTS TOP AND BOTTOM.
CONDUIT HANGER FOR CONDUITS 2" AND SMALLER.

| ELECTRICAL METALLIC TUBING (EMT) | |
|---|---|
| TRADE SIZE | COMBINED WEIGHT (LBS/LINEAL FOOT) |
| 3/4" | 0.84 |
| 1" | 1.30 |
| 1-1/4" | 2.12 |
| 1-1/2" | 2.70 |
| 2" | 4.02 |

NOTES:
1. SPACING BETWEEN HANGERS SHALL BE PER CEC REQUIREMENTS. DO NOT EXCEED 3 FEET BETWEEN EACH RACEWAY TERMINATION AND MAXIMUM OF 10 FEET BETWEEN SUPPORTS.
2. PLACEMENT OF HANGER SHALL NOT OBSTRUCT THE REMOVAL AND/OR INSTALLATION OF CEILING MATERIALS WHETHER FOR CONSTRUCTION OR MAINTENANCE.

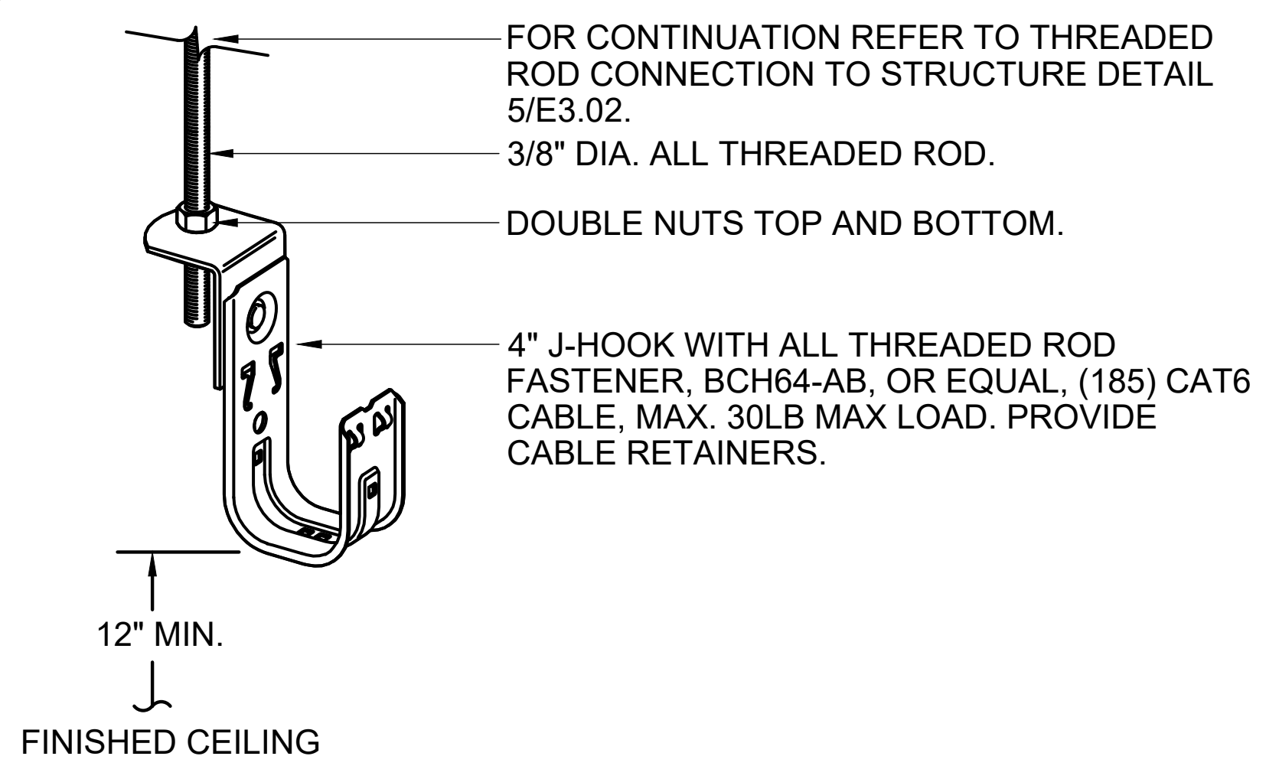
### 8 CONDUIT SUPPORT DETAIL

SCALE: NONE


UNISTRUT P1000 MAX. SPACING OF 48" CENTER TO CENTER.
4", TYP EACH END
6" MIN.
6" MIN.
CONDUIT W/ CLAMP.
STUD WALL W/ GYP SHEATHING.
ATTACH UNISTRUT WITH #10 x 2" WOOD SCREW WITH FLATWASHER. LOCATE AT CENTER OF STUD.
MIN EMBED = 1-3/4"
TYP OF (3) AT EACH UNISTRUT.

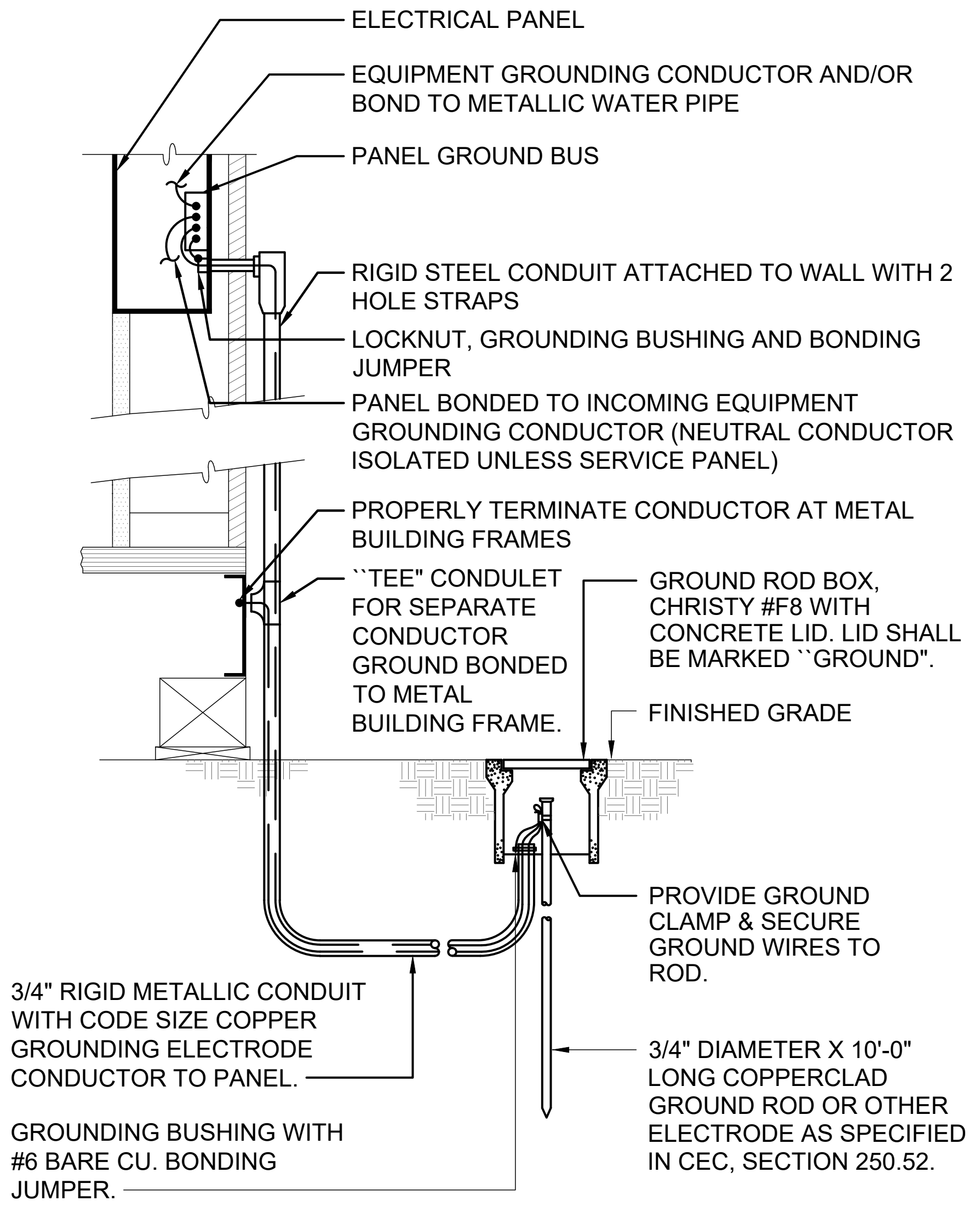
### 9 DETAIL - HORIZONTAL CONDUIT TO WALL

SCALE: NONE


FOR CONTINUATION REFER TO THREADED ROD CONNECTION TO STRUCTURE DETAIL 5/E3.02.
3/8" DIA. ALL THREADED ROD.
DOUBLE NUTS TOP AND BOTTOM.
4" J-HOOK WITH ALL THREADED ROD FASTENER, BCH64-AB, OR EQUAL, (185) CAT6 CABLE, MAX. 30LB MAX LOAD. PROVIDE CABLE RETAINERS.
12" MIN.
FINISHED CEILING

### 10 LOW VOLTAGE CABLE SUPPORT DETAIL - J-HOOK

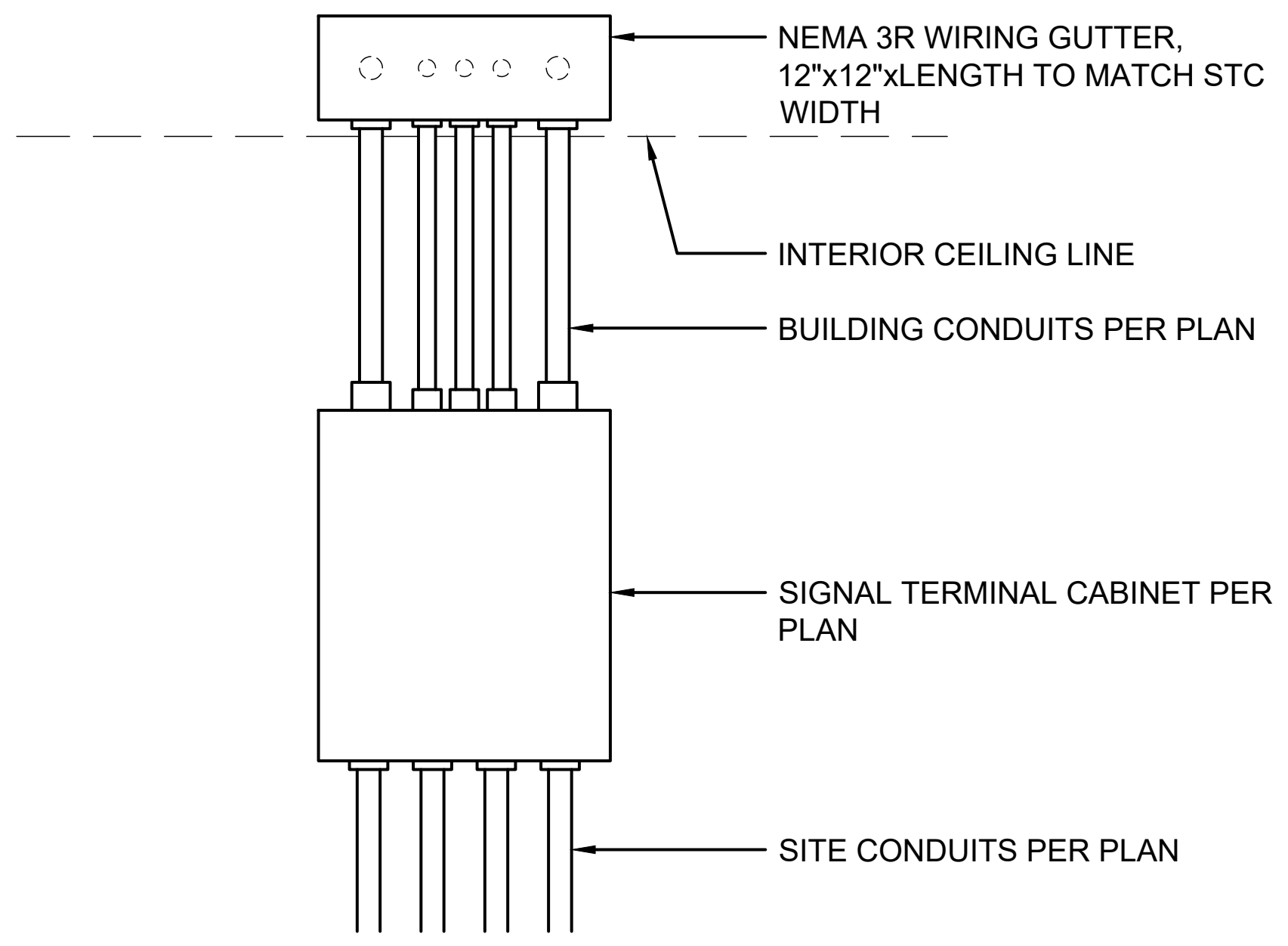
SCALE: NONE


ELECTRICAL PANEL
EQUIPMENT GROUNDING CONDUCTOR AND/OR BOND TO METALLIC WATER PIPE
PANEL GROUND BUS
RIGID STEEL CONDUIT ATTACHED TO WALL WITH 2 HOLE STRAPS
LOCKNUT, GROUNDING BUSHING AND BONDING JUMPER
PANEL BONDED TO INCOMING EQUIPMENT GROUNDING CONDUCTOR (NEUTRAL CONDUCTOR ISOLATED UNLESS SERVICE PANEL)
PROPERLY TERMINATE CONDUCTOR AT METAL BUILDING FRAMES
``TEE" CONDULET FOR SEPARATE CONDUCTOR GROUND BONDED TO METAL BUILDING FRAME.
GROUND ROD BOX, CHRISTY #F8 WITH CONCRETE LID. LID SHALL BE MARKED ``GROUND".
FINISHED GRADE
PROVIDE GROUND CLAMP & SECURE GROUND WIRES TO ROD.
3/4" RIGID METALLIC CONDUIT WITH CODE SIZE COPPER GROUNDING ELECTRODE CONDUCTOR TO PANEL.
3/4" DIAMETER X 10'-0" LONG COPPERCLAD GROUND ROD OR OTHER ELECTRODE AS SPECIFIED IN CEC, SECTION 250.52.
GROUNDING BUSHING WITH #6 BARE CU. BONDING JUMPER.

1. SIZE OF CONDUCTORS SHALL COMPLY CEC TABLE 250.66.
2. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL TO METAL BUILDING FRAME (CEC 250.52). IN ADDITION TO THE DETAIL SHOWN ABOVE, BOND THE ELECTRICAL GROUND TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10 FT. OR MORE, IF AVAILABLE (CEC250.52).
3. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND ROD GREATER SIX FEET AWAY (CEC 250.56). ONCE THE SECOND GROUND ROD IS INSTALLED, ADDITIONAL GROUND RESISTANCE TESTING IS NOT REQUIRED.
4. WHERE MODULAR BUILDINGS ARE GROUPED TOGETHER, A GROUND ROD MAY BE INSTALLED AT THE END BUILDINGS AND GROUND RING MAY BE INSTALLED BETWEEN THEM. EACH INTERMEDIATE MODULAR BUILDING MAY BE BONDED TO THAT GROUNDING RING. WHERE THIS METHOD IS USED, GROUND RESISTANCE TESTING SHALL NOT BE REQUIRED.
5. WHERE MODULAR BUILDINGS ARE INSTALLED ON CONCRETE FOUNDATIONS, A UFER GROUND SHALL BE INSTALLED IN THE FOOTING PER [CEC 250.52 (A)(3)].
6. OTHER GROUNDING METHODS IDENTIFIED CEC 250 SHALL BE ACCEPTABLE MEANS TO ACHIEVE ADEQUATE GROUNDING OF METAL BUILDINGS IN COMPLIANCE WITH THE ABOVE.
7. ALL MODULES OF METAL FRAME BUILDINGS SHALL BE ELECTRICALLY BONDED TOGETHER. (BOLTING ONLY IS NOT ACCEPTABLE BONDING). BONDING SHALL INCLUDE METAL RAMP.
8. ELECT. TRADE SHALL CHECK AREA FOR EXIST. CONDUITS, SEWER, GAS & WATER PIPING BEFORE DRIVING GROUND RODS.
9. TESTING FOR GROUNDING SHALL BE WITNESSED AND VERIFIED BY THE PROJECT INSPECTOR.

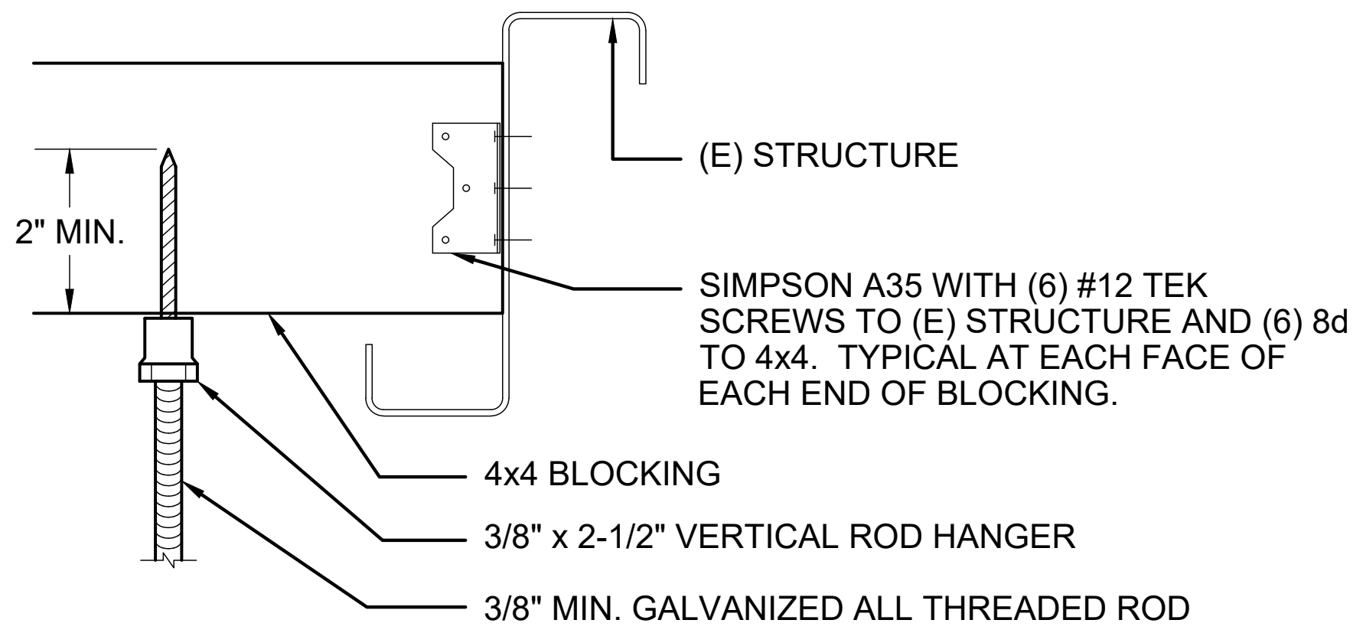
### 3 PORTABLE BUILDING GROUNDING DETAIL

NO SCALE


NEMA 3R WIRING GUTTER, 12"x12"xLENGTH TO MATCH STC WIDTH
INTERIOR CEILING LINE
BUILDING CONDUITS PER PLAN
SIGNAL TERMINAL CABINET PER PLAN
SITE CONDUITS PER PLAN

### 4 SIGNAL TERMINAL CABINET AT PORTABLE

NO SCALE


(E) STRUCTURE
2" MIN.
SIMPSON A35 WITH (6) #12 TEK SCREWS TO (E) STRUCTURE AND (6) 8d TO 4x4. TYPICAL AT EACH FACE OF EACH END OF BLOCKING.
4x4 BLOCKING
3/8" x 2-1/2" VERTICAL ROD HANGER
3/8" MIN. GALVANIZED ALL THREADED ROD

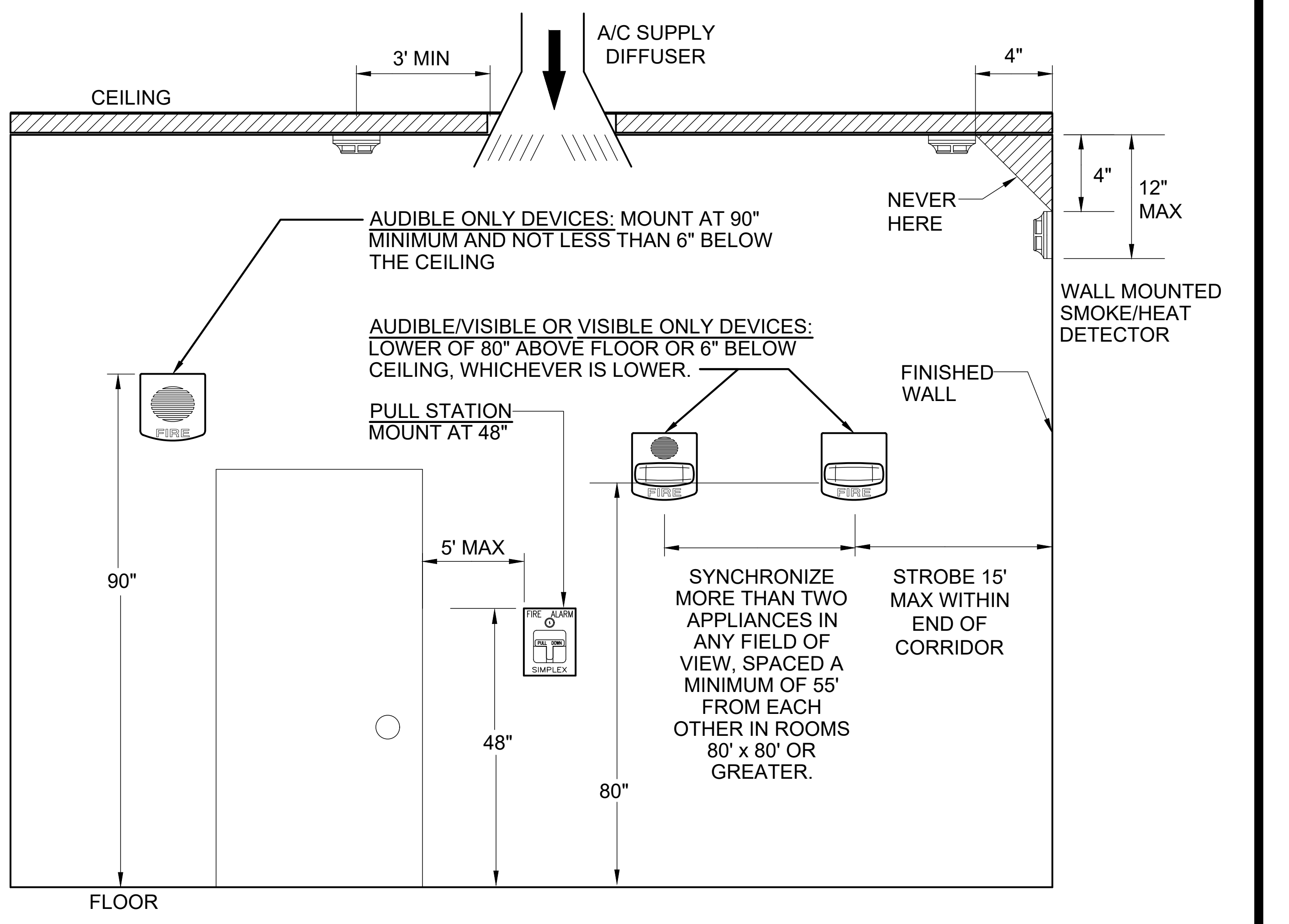
### 5 THREADED ROD TO STRUCTURE

NO SCALE

## FIRE ALARM SYSTEM SEQUENCE OF OPERATION

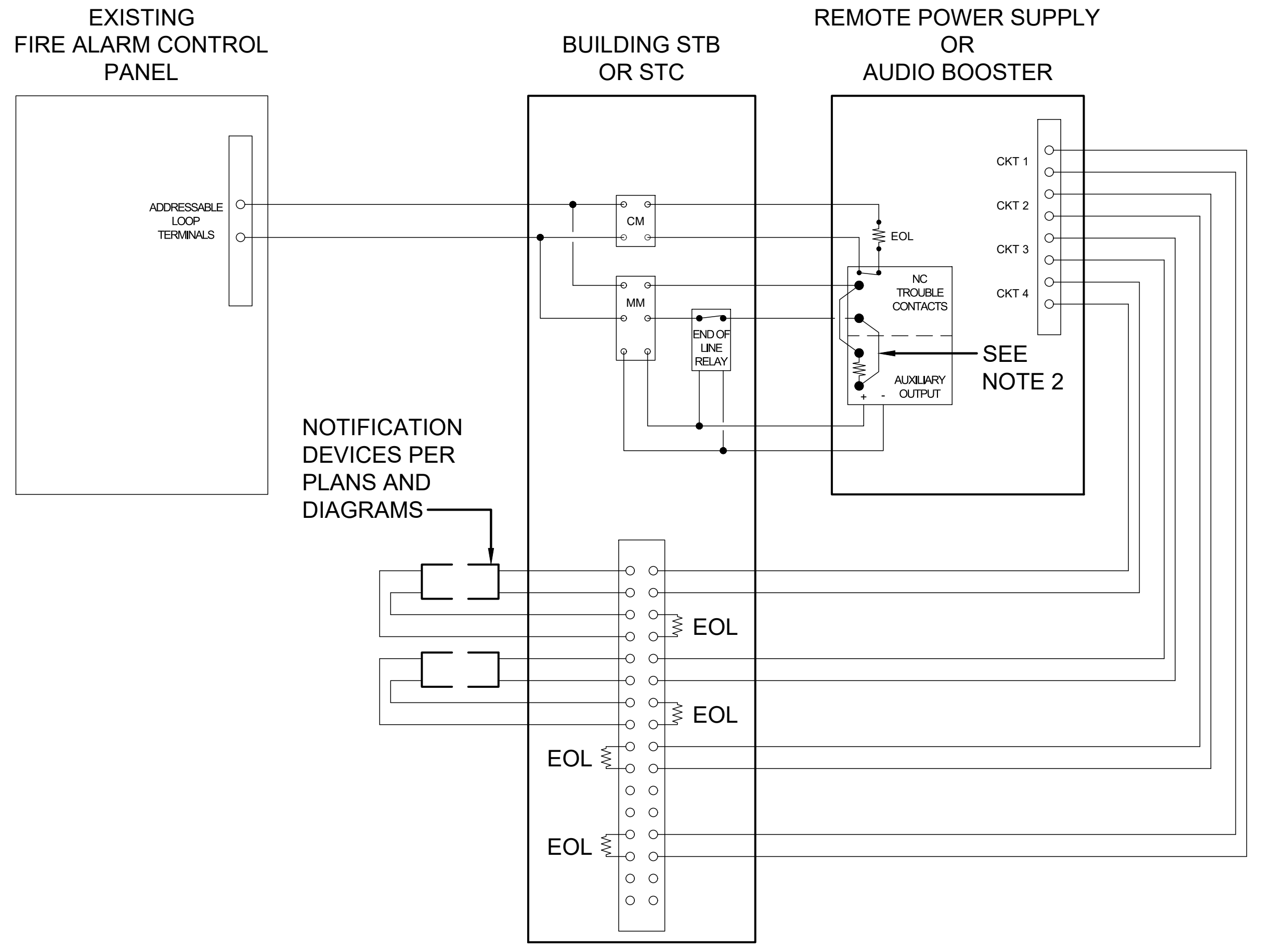
X = REQUIRED ACTION
BLANK MEANS NOT APPLICABLE

| | | ALARM | | | | | | | TROUBLE | | | | SUPERVISORY | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CAUSE / EFFECT | ALARM AT FACP | ALARM AT OFF-SITE REPORTING | ACTIVATE AUDIBLE/VISUAL ALARMS | LOCAL ALARM (TEMPORAL SOUNDER BASE) | | | | TROUBLE AT FACP | TROUBLE AT OFF-SITE REPORTING | | | SUPERVISORY CONDITION AT FACP | SUPERVISORY CONDITION AT OFF-SITE REPORTING | | | REMARKS |
| 1 | SMOKE DETECTOR | X | X | X | | | | | | | | | | | | | |
| 2 | POWER FAILURE | | | | | | | | X | X | | | | | | | |
| 3 | FIRE ALARM TROUBLE (OPEN, SHORTS OR GROUNDS ON INITIATION, NOTIFICATION OR SIGNALING LINE CIRCUITS) | | | | | | | | X | X | | | | | | | |
| 4 | TAMPER SWITCH AT POST INDICATOR VALVE | | | | | | | | | | | | X | X | | | |
| 5 | TAMPER SWITCH AT FIRE SPRINKLER RISER | | | | | | | | | | | | X | X | | | |
| 6 | FLOW SWITCH AT FIRE SPRINKLER RISER | X | X | X | | | | | | | | | | | | | |


3' MIN
A/C SUPPLY DIFFUSER
4"
CEILING
NEVER HERE
4"
12" MAX
WALL MOUNTED SMOKE/HEAT DETECTOR
AUDIBLE ONLY DEVICES: MOUNT AT 90" MINIMUM AND NOT LESS THAN 6" BELOW THE CEILING
AUDIBLE/VISIBLE OR VISIBLE ONLY DEVICES: LOWER OF 80" ABOVE FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
FINISHED WALL
PULL STATION MOUNT AT 48"
FIRE
FIRE ALARM
PULL DOWN
SIMPLEX
90"
5' MAX
48"
80"
SYNCHRONIZE MORE THAN TWO APPLIANCES IN ANY FIELD OF VIEW, SPACED A MINIMUM OF 55' FROM EACH OTHER IN ROOMS 80' x 80' OR GREATER.
STROBE 15' MAX WITHIN END OF CORRIDOR
FLOOR

### 1 FIRE ALARM DEVICE ELEVATIONS

NO SCALE


EXISTING FIRE ALARM CONTROL PANEL
ADDRESSABLE LOOP TERMINALS
BUILDING STB OR STC
CM
MM
END OF LINE RELAY
REMOTE POWER SUPPLY OR AUDIO BOOSTER
EOL
NC TROUBLE CONTACTS
AUXILIARY OUTPUT
+ -
CKT 1
CKT 2
CKT 3
CKT 4
SEE NOTE 2
NOTIFICATION DEVICES PER PLANS AND DIAGRAMS
EOL
EOL
EOL
EOL

NOTES:
1. CONNECTIONS SHOWN ON THIS DIAGRAM ARE GENERAL IN NATURE. CONTRACTOR SHALL MAKE CONNECTIONS AT EACH DEVICE PER MANUFACTURER'S INSTRUCTIONS AND WIRING DIAGRAMS.
2. PROVIDE JUMPERS BETWEEN INPUT 1 AND INPUT 2 PER MANUFACTURER'S DIAGRAMS SUCH THAT ALL FOUR OUTPUTS OPERATE SIMULTANEOUSLY (CONNECT TO DEACTIVATE AUDIBLE SILENCE FEATURE).
3. PROVIDE MONITOR MODULE, CONTROL MODULE AND END OF LINE RELAY AT EACH FA POWER SUPPLY.

### 2 FA POWER SUPPLY/AUDIO BOOSTER WIRING DIAGRAM

NO SCALE

**AGENCY APPROVAL:**

LODI USD

HMC Architects

2101 CAPITOL AVENUE, SUITE 100,
SACRAMENTO, CA, 95816
916 368 7990 / www.hmcarchitects.com

| Δ | **DESCRIPTION** | **DATE** |
|---|---|---|

REGISTERED PROFESSIONAL ENGINEER
YIP SHING DONNY LEE
No. E 017376
ELECTRICAL
STATE OF CALIFORNIA
12/18/2024

EDGE ELECTRICAL CONSULTING
Project Number L454
Contact CHRIS
400 R Street, Ste 333
Sacramento, CA 95811
916.256.2460
Sacramento | Alameda | Irvine

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**ELECTRICAL DETAILS**

DATE: **1/22/2025**
CLIENT PROJ NO:

SHEET:
**E3.02**

PLEASE RECYCLE

THE LINE SHOWN ABOVE IS
EXACTLY ONE INCH LONG AT THIS
SHEETS ORIGINAL PAGE SIZE

| Manufacturer | Model Number | Description | CSFM Listing |
|---|---|---|---|
| | | | |
| FIRE-LITE | FCPS-24FS6 | REMOTE POWER SUPPLY | 7315-0075:0206 |
| | | | |
| EDWARDS | SIGA-OSD | SMOKE DETECTOR | 7272-1657:0511 |
| w/ EDWARDS | SIGA-SB4 | DETECTOR BASE | 7300-1657:0120 |
| | | | |
| EDWARDS | MRM1 | MONITOR MODULE | 7300-1657:0210 |
| EDWARDS | SIGA-CR | CONTROL MODULE | 7300-1657:0121 |
| | | | |
| WHEELOCK | ET1010<br>WBB-R<br>WFP | SPEAKER, EXTERIOR<br>OUTDOOR BACKBOX<br>WP ADAPTER PLATE | 7320-0785:0105<br>7300-0785:0177<br>7300-0785:0177 |
| | | | |
| WHEELOCK | ELSPSTRC | SPEAKER/STROBE, CEILING | 7320-0785:0505 |
| | | | |
| WHEELOCK | DSM-12/24-R | SYNC MODULE | 7320-0785:0132 |
| | | | |
| | | | |
| | | | |

## Control Panel Designation: VAB

**Battery Calculation Standby: 24 hr.**
**and Alarm: 15 min.**

| (E) / (N) | Model # | Description | | | Standby Current | Alarm Current | Qty. | Total Standby Current | Total Alarm Current |
|---|---|---|---|---|---|---|---|---|---|
| Control Panel Modules | | | | | | | | | |
| (e) | EST | 50W AMP | | | 0.100 | 0.580 | 1 | 0.100 | 0.580 |
| | | | | | | | | | |
| | | | | **Control Panel Modules Totals** | | | | **0.100** | **0.580** |
| Notification Appliance Circuits | | | | | | | | | |
| | | | Speaker Circuit | SE | 0.000 | 0.120 | 1 | 0.000 | 0.120 |
| | | | Speaker Circuit | S1 | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | | Speaker Circuit | S2 | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | Spare | Speaker Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | | | | | | | | |
| | | | | **Notification Appliance Circuit Totals** | | | | **0.000** | **0.120** |
| | | | | **Overall Totals** | | | | **0.100** | **0.700** |

Summary:

| | |
|---|---|
| Standby Amps x 24 hrs. = Amp hrs. | 2.400 |
| Alarm Current x 0.25 hrs = Amp hrs. | 0.175 |
| Total Amp Hour Current | 2.575 |
| 25% Safety Factor | 0.644 |
| **TOTAL AMP HOUR BATTERY REQUIRED** | **3.219** |

Wattage Summary:

| | |
|---|---|
| Amplifier Watts: | 50.0 |
| Watts Used: | 2.9 |
| Spare Watts: | 47.1 |

**AH BATTERY PROVIDED** **7.0**

## Control Panel Designation: FAPS-1

**Battery Calculation Standby: 24 hr.**
**and Alarm: 15 min.**

| (E) / (N) | Model # | Description | | | Standby Current | Alarm Current | Qty. | Total Standby Current | Total Alarm Current |
|---|---|---|---|---|---|---|---|---|---|
| Control Panel Modules | | | | | | | | | |
| (N) | FCPS-24FS6 | Remote Power Supply | | | 0.065 | 0.145 | 1 | 0.065 | 0.145 |
| | | | | | | | | | |
| | | | | **Control Panel Modules Totals** | | | | **0.065** | **0.145** |
| Notification Appliance Circuits | | | | | | | | | |
| | | | Notification Circuit | N1 | 0.000 | 0.120 | 1 | 0.000 | 0.120 |
| | | Spare | Notification Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | Spare | Notification Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | Spare | Notification Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | | | | | | | | |
| | | | | **Notification Appliance Circuit Totals** | | | | **0.000** | **0.120** |
| | | | | **Overall Totals** | | | | **0.065** | **0.265** |

Summary:

| | |
|---|---|
| Standby Amps x 24 hrs. = Amp hrs. | 1.560 |
| Alarm Current x 0.25 hrs = Amp hrs. | 0.066 |
| Total Amp Hour Current | 1.626 |
| 25% Safety Factor | 0.407 |
| **TOTAL AMP HOUR BATTERY REQUIRED** | **2.033** |

**AH BATTERY PROVIDED** **7.0**

## Appliance Circuit Voltage Drop: S1

This calculator provided voltage drop calculations in a Point-to-Point format.
Resistance Value: 18=8.08, 16=5.08, 14=3.19, 12=2.01, 10=1.26
18-10 Awg = Solid Conductors — Resistance for copper wire based on NEC Chapter 9, Table 8.
Nominal System Voltage 24 V — Wire Gauge — Ohm's Per 1000
Minimum Device Voltage 16 V
Value is in Amps. eg.: .100 = 100 mA
Distance is measured in feet.

| Model Number | Device Description | Device Number | Device Current | Distance from previous device | Wire Guage | Ohm's Per 1000 | Voltage At Device | Voltage Drop from source | Voltage Percent Drop |
|---|---|---|---|---|---|---|---|---|---|
| ELSPSTRC (1W) | Speaker/Strobe, Ceiling, 1W | S1 -1 | 0.04 | 20 | 12 | 2.01 | 23.98 | 0.019 | 0.08% |
| ELSPSTRC (1W) | Speaker/Strobe, Ceiling, 1W | S1 -2 | 0.04 | 25 | 12 | 2.01 | 23.96 | 0.039 | 0.16% |
| ELSPSTRC (1W) | Speaker/Strobe, Ceiling, 1W | S1 -3 | 0.04 | 100 | 12 | 2.01 | 23.90 | 0.104 | 0.43% |
| ELSPSTRC (1W) | Speaker/Strobe, Ceiling, 1W | S1 -4 | 0.04 | 25 | 12 | 2.01 | 23.88 | 0.116 | 0.48% |
| ET-1010-R (2W) | Speaker, Exterior, 2W | S1 -5 | 0.08 | 20 | 12 | 2.01 | 23.88 | 0.122 | 0.51% |
| | | **Total** | **0.240** | **190** | | | **23.88** | **0.122** | **0.51%** |

Summary:

| | | | | |
|---|---|---|---|---|
| Available Amp on Circuit | 6 A | | End of Line Voltage | 23.88 V |
| Remaining Amp on Circuit | 5.760 A | | Total Voltage Drop | 0.122 V |
| Remaining Amp % on Circuit | 96.00% | | Voltage Drop % | 0.60% |

## Appliance Circuit Voltage Drop: N1

This calculator provided voltage drop calculations in a Point-to-Point format.
Resistance Value: 18=8.08, 16=5.08, 14=3.19, 12=2.01, 10=1.26
18-10 Awg = Solid Conductors — Resistance for copper wire based on NEC Chapter 9, Table 8.
Nominal System Voltage 24 V — Wire Gauge — Ohm's Per 1000
Minimum Device Voltage 16 V
Value is in Amps. eg.: .100 = 100 mA
Distance is measured in feet.

| Model Number | Device Description | Device Number | Device Current | Distance from previous device | Wire Guage | Ohm's Per 1000 | Voltage At Device | Voltage Drop from source | Voltage Percent Drop |
|---|---|---|---|---|---|---|---|---|---|
| ELSPSTRC (30cd) | Speaker/Strobe, Ceiling, 30cd | N1 -1 | 0.03 | 20 | 12 | 2.01 | 23.99 | 0.010 | 0.04% |
| ELSPSTRC (30cd) | Speaker/Strobe, Ceiling, 30cd | N1 -2 | 0.03 | 25 | 12 | 2.01 | 23.98 | 0.019 | 0.08% |
| ELSPSTRC (30cd) | Speaker/Strobe, Ceiling, 30cd | N1 -3 | 0.03 | 100 | 12 | 2.01 | 23.96 | 0.043 | 0.18% |
| ELSPSTRC (30cd) | Speaker/Strobe, Ceiling, 30cd | N1 -4 | 0.03 | 20 | 12 | 2.01 | 23.95 | 0.045 | 0.19% |
| | | **Total** | **0.120** | **165** | | | **23.95** | **0.045** | **0.19%** |

Summary:

| | | | | |
|---|---|---|---|---|
| Available Amp on Circuit | 6 A | | End of Line Voltage | 23.95 V |
| Remaining Amp on Circuit | 5.880 A | | Total Voltage Drop | 0.045 V |
| Remaining Amp % on Circuit | 98.00% | | Voltage Drop % | 0.22% |

## Appliance Circuit Voltage Drop: S2

This calculator provided voltage drop calculations in a Point-to-Point format.
Resistance Value: 18=8.08, 16=5.08, 14=3.19, 12=2.01, 10=1.26
18-10 Awg = Solid Conductors — Resistance for copper wire based on NEC Chapter 9, Table 8.
Nominal System Voltage 24 V — Wire Gauge — Ohm's Per 1000
Minimum Device Voltage 16 V
Value is in Amps. eg.: .100 = 100 mA
Distance is measured in feet.

| Model Number | Device Description | Device Number | Device Current | Distance from previous device | Wire Guage | Ohm's Per 1000 | Voltage At Device | Voltage Drop from source | Voltage Percent Drop |
|---|---|---|---|---|---|---|---|---|---|
| ELSPSTRC (1W) | Speaker/Strobe, Ceiling, 1W | S2 -1 | 0.04 | 20 | 12 | 2.01 | 23.99 | 0.013 | 0.05% |
| ELSPSTRC (1W) | Speaker/Strobe, Ceiling, 1W | S2 -2 | 0.04 | 25 | 12 | 2.01 | 23.98 | 0.025 | 0.10% |
| ET-1010-R (2W) | Speaker, Exterior, 2W | S2 -3 | 0.08 | 20 | 12 | 2.01 | 23.97 | 0.031 | 0.13% |
| | | **Total** | **0.160** | **65** | | | **23.97** | **0.031** | **0.13%** |

Summary:

| | | | | |
|---|---|---|---|---|
| Available Amp on Circuit | 6 A | | End of Line Voltage | 23.97 V |
| Remaining Amp on Circuit | 5.840 A | | Total Voltage Drop | 0.031 V |
| Remaining Amp % on Circuit | 97.33% | | Voltage Drop % | 0.15% |

## Control Panel Designation: FAPS-2

**Battery Calculation Standby: 24 hr.**
**and Alarm: 15 min.**

| (E) / (N) | Model # | Description | | | Standby Current | Alarm Current | Qty. | Total Standby Current | Total Alarm Current |
|---|---|---|---|---|---|---|---|---|---|
| Control Panel Modules | | | | | | | | | |
| (N) | FCPS-24FS6 | Remote Power Supply | | | 0.065 | 0.145 | 1 | 0.065 | 0.145 |
| | | | | | | | | | |
| | | | | **Control Panel Modules Totals** | | | | **0.065** | **0.145** |
| Notification Appliance Circuits | | | | | | | | | |
| | | | Notification Circuit | N2 | 0.000 | 0.060 | 1 | 0.000 | 0.060 |
| | | Spare | Notification Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | Spare | Notification Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | Spare | Notification Circuit | - | 0.000 | 0.000 | 1 | 0.000 | 0.000 |
| | | | | | | | | | |
| | | | | **Notification Appliance Circuit Totals** | | | | **0.000** | **0.060** |
| | | | | **Overall Totals** | | | | **0.065** | **0.205** |

Summary:

| | |
|---|---|
| Standby Amps x 24 hrs. = Amp hrs. | 1.560 |
| Alarm Current x 0.25 hrs = Amp hrs. | 0.051 |
| Total Amp Hour Current | 1.611 |
| 25% Safety Factor | 0.403 |
| **TOTAL AMP HOUR BATTERY REQUIRED** | **2.014** |

**AH BATTERY PROVIDED** **7.0**

## Appliance Circuit Voltage Drop: N2

This calculator provided voltage drop calculations in a Point-to-Point format.
Resistance Value: 18=8.08, 16=5.08, 14=3.19, 12=2.01, 10=1.26
18-10 Awg = Solid Conductors — Resistance for copper wire based on NEC Chapter 9, Table 8.
Nominal System Voltage 24 V — Wire Gauge — Ohm's Per 1000
Minimum Device Voltage 16 V
Value is in Amps. eg.: .100 = 100 mA
Distance is measured in feet.

| Model Number | Device Description | Device Number | Device Current | Distance from previous device | Wire Guage | Ohm's Per 1000 | Voltage At Device | Voltage Drop from source | Voltage Percent Drop |
|---|---|---|---|---|---|---|---|---|---|
| ELSPSTRC (30cd) | Speaker/Strobe, Ceiling, 30cd | N2 -1 | 0.03 | 20 | 12 | 2.01 | 24.00 | 0.005 | 0.02% |
| ELSPSTRC (30cd) | Speaker/Strobe, Ceiling, 30cd | N2 -2 | 0.03 | 25 | 12 | 2.01 | 23.99 | 0.008 | 0.03% |
| | | **Total** | **0.060** | **45** | | | **23.99** | **0.008** | **0.03%** |

Summary:

| | | | | |
|---|---|---|---|---|
| Available Amp on Circuit | 6 A | | End of Line Voltage | 23.99 V |
| Remaining Amp on Circuit | 5.940 A | | Total Voltage Drop | 0.008 V |
| Remaining Amp % on Circuit | 99.00% | | Voltage Drop % | 0.04% |

**AGENCY APPROVAL:**

LODI USD

HMC Architects

2101 CAPITOL AVENUE, SUITE 100,
SACRAMENTO, CA, 95816
916 368 7990 / www.hmcarchitects.com

[redacted]

Δ **DESCRIPTION** **DATE**

YIP SHING DONNY LEE
No. E 017376
12/18/2024

EDGE ELECTRICAL CONSULTING

Project Number L454
Contact CHRIS

400 R Street, Ste 333
Sacramento, CA 95811
916.256.2460

Sacramento | Alameda | Irvine

FACILITY:
**ELLERTH LARSON ELEMENTARY SCHOOL**
**2375 GIANNONI WAY LODI, CA 95242**

PROJECT:
**LARSON ES PORTABLE CLASSROOMS**

SHEET NAME:
**FIRE ALARM CALCULATIONS**

[redacted]

DATE: **1/22/2025** CLIENT PROJ NO:

SHEET:
# E4.01

PLEASE RECYCLE

**STOCKPILE# 347**
**(125) 24X40 CLASSROOMS**

HIGH SEISMIC
DESIGN CRITERIA

FILE #: PC-128
2022 CBC

Class Leasing

# PC # 04-123059
# 24' x 40' EXPANDABLE TO 120' x 40'

LODI U. S. D.
ELLERTH
E. LARSON ES

(3) 24X40 BUILDINGS
LEFT-HAND DOORS
S/N C-23-3033A / B
S/N C-23-3034A / B
S/N C-23-3035A / B

| Sheet Number | Sheet Name |
|---|---|
| Cover | |
| A0.0.1 | PROJECT OPTIONS SCHEDULE |
| A0.1 | TYPICAL KEY PLAN AND SCHEDULES, GEN NOTES, |
| A0.2 | SIGNAGE AND SYMBOLS |
| ~~A0.3~~ | ~~DSA-103 T&I CONCRETE FLOORS~~ |
| ~~A0.4~~ | ~~DSA-103 T&I PLYWOOD FLOORS~~ |
| A0.5 | CALGREEN SPEC'S |
| A0.6 | CAL GREEN CHECKLIST |
| A0.7 | CAL GREEN CHECKLIST |
| A0.8 | CAL GREEN CHECKLIST |
| Architectural | |
| A0.0 | COVER SHEET |
| A1.0 | 24x40 FLOOR PLAN |
| ~~A1.1~~ | ~~36x40 FLOOR PLAN~~ |
| ~~A1.2~~ | ~~48x40 thru 120x40 FLOOR PLAN~~ |
| ~~A2.1(A)~~ | ~~ARCHITECTURAL DETAILS (WOOD FRAMING SHTG FINISH)~~ |
| A2.1(B) | ARCHITECTURAL WUI DETAILS (WOOD FRAMING SHTG FINISH) |
| ~~A2.2~~ | ~~ARCHITECTURAL DETAILS (WOOD FRAMING PLASTER FINISH)~~ |
| ~~A2.5(A)~~ | ~~ARCHITECTURAL DETAILS (1-HR WOOD FRAMING SHTG FINISH)~~ |
| ~~A2.5(B)~~ | ~~ARCHITECTURAL WUI DETAILS (1-HR WOOD FRAMING SHTG FINISH)~~ |
| ~~A2.6~~ | ~~ARCHITECTURAL DETAILS (1-HR WOOD FRAMING PLASTER FINISH)~~ |
| A2.7 | WUI NOTES AND CRITERIA |
| A2.9 | ARCHITECTURAL DETAILS (FLOOR) |
| ~~A2.9.1~~ | ~~DETERIORATION PROT.NON-WOOD FINISH SIDING CONC FLOOR - WD STUDS~~ |
| ~~A2.9.2~~ | ~~DETORIORATION PRO. STUCCO EXTERIOR RINISH CONC FLOOR WD STUDS~~ |
| ~~A2.9.3~~ | ~~DETERIORATION PRO. NON-WOOD FINISH SIDING WOOD FLOOR - WD STUDS~~ |
| ~~A2.9.4~~ | ~~DETERIORATION PRO. STUCCO EXTERIOR FINISH WOOD FLR- WD STUDS~~ |
| ~~A2.9.9~~ | ~~DETERIORATION T-111 EXTERIOR FINISH WOOD FLR -WOOD STUDS~~ |
| ~~A3.0~~ | ~~ADDITIONAL FIRE RATING DETAILS AND NOTES~~ |
| A3.0.1 | FIRE SEPARATION & PENETRATION DETAILS |
| A3.1 | ~~SINGLE OCC. BATHROOM~~ |
| A3.1.1 | ~~SINGLE OCC. BATHROOM AGE GROUP~~ |
| A3.1.2 | ~~SINGLE OCC. BATHROOM COMBINED AGE GROUP~~ |
| A3.2 | RCP |
| A3.2.1 | CEILING NOTES |
| A3.3 | CEILING DETAILS (T-GRID) |
| ~~A3.4~~ | ~~CEILING DETAILS (GYP BOARD)~~ |
| A4.0.1 | ROOF PLAN MONO SLOPE (STANDING SEAM) |
| ~~A4.0.2~~ | ~~ROOF PLAN DUAL SLOPE (STANDING SEAM)~~ |
| A4.1 | ROOF DETAILS (STANDING SEAM) |
| A4.2.1 | ~~ROOF PLAN MONO SLOPE (EPDM)~~ |
| ~~A4.2.2~~ | ~~ROOF PLAN DUAL SLOPE (EPDM)~~ |
| ~~A4.3~~ | ~~ROOF DETAILS (EPDM)~~ |
| ~~A4.4.1~~ | ~~ROOF PLAN w/ PARAPET MONO SLOPE (EPDM)~~ |
| ~~A4.5~~ | ~~ARCHITECTURAL DETAILS (PARAPET)~~ |
| A5.0 | SIDEWALL ELEVATION |
| A5.1 | ENDWALL ELEVATIONS |
| A5.2 | INTERIOR ELEVATIONS |
| A6.0 | SECTION - STANDING SEAM (MONO) |
| ~~A6.0.1~~ | ~~SECTION - STANDING SEAM (DUAL)~~ |
| ~~A6.1~~ | ~~SECTION - EPDM (DUAL)~~ |
| A6.2 | SECTION |
| A6.3 | ~~SECTION - EPDM (MONO)~~ |
| ~~A7.0~~ | ~~ADDITIONAL OPTION DETAILS~~ |
| ~~A7.1~~ | ~~ADDITIONAL OPTION DETAILS~~ |
| A7.2 | ADDITIONAL OPTION DETAILS |
| MEP | |
| E0.1 | ELECTRICAL GENERAL NOTES |
| E1.0 | ELECTRICAL PLAN 24x40 |
| E1.1 | ELECTRICAL SCHEDULES 24x40 |
| ~~E1.2~~ | ~~ELECTRICAL PLAN 36x40~~ |
| ~~E1.3~~ | ~~ELECTRICAL SCHEDULE 36x40~~ |
| ~~E1.4~~ | ~~ELECTRICAL PLAN 48x40 thru 120x40~~ |
| ~~E1.5~~ | ~~ELECTRICAL SCHEDULE 48x40~~ |
| M0.1 | MISCELLANEOUS NOTES & DETAILS |
| M0.2 | MISCELLANEOUS NOTES & DETAILS |
| M2.9 | 24'x40' T24 CZ 14 (WALL AC) |
| M2.10 | 24'x40' T24 CZ 14 (WALL AC) |
| M2.11 | 24'x40' T24 CZ 15 (ROOF AC) |
| M2.12 | 24'x40' T24 CZ 15 (ROOF AC) |
| M2.13 | 24'x40' T24 CZ 16 (WALL AC) |
| M2.14 | 24'x40' T24 CZ 16 (WALL AC) |
| M3.3 | ENVELOPE AND NOTES |
| M5.1 | MECHANICAL CEILING PLAN 24x40 |
| ~~M5.2~~ | ~~MECHANICAL ROOF MOUNT 24x40~~ |
| ~~M6.1~~ | ~~MECHANICAL CEILING PLAN 36x40~~ |
| ~~M6.2~~ | ~~MECHANICAL ROOF MOUNT 36x40~~ |
| ~~M7.1~~ | ~~MECHANICAL CEILING PLAN 48x40 thru 120x40~~ |
| ~~M7.2~~ | ~~MECHANICAL ROOF MOUNT 48x40 thru 120x40~~ |
| ~~P1.0~~ | ~~TYPICAL PLUMBING DETAILS~~ |
| Foundation | |
| F1.10 | WOOD FOUNDATION NOTES SCHED FOR BLDG W/ 50+15 |
| F1.11 | WOOD FOUNDATION PLAN 24x40 BLDG W/ 50+15 |
| ~~F1.12~~ | ~~WOOD FOUNDATION 36x40 BLDG W/ 50+15~~ |
| ~~F1.13~~ | ~~WOOD FOUNDATION PLAN 48x40 BLDG W/ 50+15~~ |
| ~~F1.14~~ | ~~MODLINE "B" W/ EXTERIOR WALLS BACK-TO-BACK 100 PSF~~ |
| ~~F1.20~~ | ~~WOOD FOUNDATION NOTES SCHED FOR BLDG W/ 100PSF~~ |
| ~~F1.21~~ | ~~WOOD FOUNDATION PLAN 24x40 BLDG W/ 100 PSF~~ |
| ~~F1.22~~ | ~~WOOD FOUDATION PLAN 36x40 BLDG W/ 100 PSF~~ |
| ~~F1.23~~ | ~~WOOD FOUNDATION PLAN 48x40 BLDG W/ 100 PSF~~ |
| ~~F1.24~~ | ~~MODLINE "B" W/ EXTERIOR WALLS BACK-TO-BACK 100 PSF~~ |
| ~~F1.30~~ | ~~WOOD FOUNDATION NOTES SCHED FOR BLDG W/ 150 PSF~~ |
| ~~F1.31~~ | ~~WOOD FOUNDATION PLAN 24X40 BLDG W/ 150 PSF~~ |
| ~~F1.32~~ | ~~WOOD FOUNDATION PLAN 36x40 BLDG W/ 150 PSF~~ |
| ~~F1.33~~ | ~~WOOD FOUNDATION PLAN 48x40 BLDG W/ 150 PSF~~ |
| ~~F1.34~~ | ~~MODLINE "B" W/ EXTERIOR WALL BACK-TO-BACK 150 PSF~~ |
| F1.40 | WOOD FOUNDATION DETAILS |
| ~~F2.10~~ | ~~CONCRETE FOUNDATION PLAN~~ |
| ~~F2.20~~ | ~~CONCRETE FOUNDATION DETAILS~~ |
| ~~F2.22~~ | ~~CONCRETE FOUNDATION DETAILS~~ |
| ~~F2.23~~ | ~~CONCRETE FOUNDATION DETAILS~~ |
| Structural | |
| S0.1 | STRUCTURAL GEN NOTES |
| S1.0.4 | WOOD SHTH'G FLR FRM'G PLAN CROSS-STRAP OPT. |
| ~~S1.1.1~~ | ~~CONC FLR FRM'G PLAN (50+15 PSF)~~ |
| ~~S1.1.3~~ | ~~CONC FLR FRM'G PLAN (150 PSF)~~ |
| S1.2 | STRUCTURAL DETAILS (FLOOR) |
| ~~S3.0.1~~ | ~~MONO SLOPE ROOF FRM'G PLAN~~ |
| ~~S3.0.2~~ | ~~DUAL SLOPE ROOF FRM'G PLAN~~ |
| S3.0.3 | MONO SLOPE ROOF FRM'G PLAN CROSS-STRAP OPT. |
| ~~S3.0.4~~ | ~~DUAL SLOPE ROOF FRM'G PLAN CROSS-STRAP OPT.~~ |
| S3.1 | STRUCTURAL DETAILS (ROOF) |
| ~~S3.2~~ | ~~ROOF DETAILS (SOFFIT/PARAPET)~~ |
| S3.3 | ROOF PERIMETER TRUSS |
| S4.1 | WD WALL FRAMING ELEVATIONS |
| S4.2 | WALL DETAILS (WOOD FRAMING) |
| S4.4 | TYP FRAMING |
| S4.5 | FRAMING SCHEDULES |
| S5.0 | LONG. SECTION - (MONO) |
| ~~S5.1~~ | ~~LONG SECTION - (DUAL)~~ |
| ~~S6.0~~ | ~~AWNING FRAMING~~ |

| Sheet Number | Sheet Name |
|---|---|
| SR0 | MODULE PLAN AND NOTES |
| SR1 | RAMP LANDING |
| SR2 | LANDING FRAME |
| SR3 | FOUNDATION PLAN |
| SR4 | RAMP ELEVATION |
| SR5 | RAMP DETAILS |
| SR6 | RAMP DETAILS |
| SR7 | STAIR CONN |

Grand total: ~~124~~ 64

**(125) 24x40 SERIAL NUMBERS#:**

~~C-23-2962 A/B~~ ~~C-23-2966 A/B~~ ~~C-23-2970 A/B~~ ~~C-23-2974 A/B~~ ~~C-23-2978 A/B~~ ~~C-23-2982 A/B~~
~~C-23-2963 A/B~~ ~~C-23-2967 A/B~~ ~~C-23-2971 A/B~~ ~~C-23-2975 A/B~~ ~~C-23-2979 A/B~~ ~~C-23-2983 A/B~~
~~C-23-2964 A/B~~ ~~C-23-2968 A/B~~ ~~C-23-2972 A/B~~ ~~C-23-2976 A/B~~ ~~C-23-2980 A/B~~
~~C-23-2965 A/B~~ ~~C-23-2969 A/B~~ ~~C-23-2973 A/B~~ ~~C-23-2977 A/B~~ ~~C-23-2981 A/B~~

~~C-23-2984 A/B~~ ~~C-23-2988 A/B~~ ~~C-23-2992 A/B~~ ~~C-23-2996 A/B~~ ~~C-23-3000 A/B~~ ~~C-23-3004 A/B~~ ~~C-23-3008 A/B~~
~~C-23-2985 A/B~~ ~~C-23-2989 A/B~~ ~~C-23-2993 A/B~~ ~~C-23-2997 A/B~~ ~~C-23-3001 A/B~~ ~~C-23-3005 A/B~~ ~~C-23-3009 A/B~~
~~C-23-2986 A/B~~ ~~C-23-2990 A/B~~ ~~C-23-2994 A/B~~ ~~C-23-2998 A/B~~ ~~C-23-3002 A/B~~ ~~C-23-3006 A/B~~
~~C-23-2987 A/B~~ ~~C-23-2991 A/B~~ ~~C-23-2995 A/B~~ ~~C-23-2999 A/B~~ ~~C-23-3003 A/B~~ ~~C-23-3007 A/B~~

~~C-23-3010 A/B~~ ~~C-23-3022 A/B~~ C-23-3034 A/B ~~C-23-3046 A/B~~ ~~C-23-3058 A/B~~ ~~C-23-3070 A/B~~ ~~C-23-3082 A/B~~
~~C-23-3011 A/B~~ ~~C-23-3023 A/B~~ C-23-3035 A/B ~~C-23-3047 A/B~~ ~~C-23-3059 A/B~~ ~~C-23-3071 A/B~~ ~~C-23-3083 A/B~~
~~C-23-3012 A/B~~ ~~C-23-3024 A/B~~ ~~C-23-3036 A/B~~ ~~C-23-3048 A/B~~ ~~C-23-3060 A/B~~ ~~C-23-3072 A/B~~ ~~C-23-3084 A/B~~
~~C-23-3013 A/B~~ ~~C-23-3025 A/B~~ ~~C-23-3037 A/B~~ ~~C-23-3049 A/B~~ ~~C-23-3061 A/B~~ ~~C-23-3073 A/B~~ ~~C-23-3085 A/B~~
~~C-23-3014 A/B~~ ~~C-23-3026 A/B~~ ~~C-23-3038 A/B~~ ~~C-23-3050 A/B~~ ~~C-23-3062 A/B NOT USED~~ ~~C-23-3074 A/B~~ ~~C-23-3086 A/B~~
~~C-23-3015 A/B~~ ~~C-23-3027 A/B~~ ~~C-23-3039 A/B~~ ~~C-23-3051 A/B~~ ~~C-23-3063 A/B~~ ~~C-23-3075 A/B~~ ~~C-23-3087 A/B~~
~~C-23-3016 A/B~~ ~~C-23-3028 A/B~~ ~~C-23-3040 A/B~~ ~~C-23-3052 A/B~~ ~~C-23-3064 A/B~~ ~~C-23-3076 A/B~~
~~C-23-3017 A/B~~ ~~C-23-3029 A/B~~ ~~C-23-3041 A/B~~ ~~C-23-3053 A/B~~ ~~C-23-3065 A/B~~ ~~C-23-3077 A/B~~
~~C-23-3018 A/B~~ ~~C-23-3030 A/B~~ ~~C-23-3042 A/B~~ ~~C-23-3054 A/B~~ ~~C-23-3066 A/B~~ ~~C-23-3078 A/B~~
~~C-23-3019 A/B~~ ~~C-23-3031 A/B~~ ~~C-23-3043 A/B~~ ~~C-23-3055 A/B~~ ~~C-23-3067 A/B~~ ~~C-23-3079 A/B~~
~~C-23-3020 A/B~~ ~~C-23-3032 A/B~~ ~~C-23-3044 A/B~~ ~~C-23-3056 A/B~~ ~~C-23-3068 A/B~~ ~~C-23-3080 A/B~~
~~C-23-3021 A/B~~ C-23-3033 A/B ~~C-23-3045 A/B~~ ~~C-23-3057 A/B~~ ~~C-23-3069 A/B~~ ~~C-23-3081 A/B~~

**SEISMIC DESIGN -SITE SPECIFIC PARAMETERS**

Select One

☐ Design based on Site Class $D_{default}$
No geotechnical investigation required
Ss = _____ Fa = 1.2

☐ Design based on site class determined per chapter 20 of ASCE 7-16
Geotechnical investigation provided
Site Class: ☐ C ☐ D ☐ E
Ss = _____ Fa = _____ per ASCE 7-16 Suppl 3, Table 11.4-1

☐ Design based on site specific ground motion hazard analysis per chapter 21 of ASCE 7-16
Short-period design spectral response parameter, $S_{DS}$, shall be as specified in geotechnical investigation
CGS approval required
Not eligible for OTC review
Site Class: ☐ C ☐ D ☐ E

$S_{DS}$ = 2/3 Fa Ss = ____
Site Class C or D: 0.7 x $S_{DS}$* = 0.7 x ____ = ____ ≤ 1.307
Site Class E: $S_{DS}$ = ____ ≤ 1.307
$C_S$ = 0.373 used in design
Seismic Design Category: ☐ D ☐ E
* Site specific $S_{DS}$ value before applying reduction allowed by ASCE 7 section 12.8.1.3

Acceptance tests be completed on newly installed or replacement of lighting controls, mechanical systems, fenestration, and process equipment before project completion per the California Energy Code Section 10-103. Acceptance tests must be performed by a certified Acceptance Test Technician (ATT). The Acceptance Testing procedures must be repeated, and deficiencies corrected until the installation of the specified systems conform and pass the required acceptance criteria. Completed NRCA forms shall be submitted to the project inspector and the district.

A DSA CERTIFIED INSPECTOR EMPLOYED BY THE DISTRICT (OWNER), AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-333 AND 4-342, PART 1, TITLE 24, CCR. CLASS R.B.I.P. FOR IN-PLANT INSPECTIONS.

SITE SPECIFIC:
COMPLY WITH CFC CHAPTERS 5 & 7, CBC CHAPTERS 3,5,7,11B & 14

NOTE: " THIS PC IS NOT APPROVED FOR CHAPTER 7A WILDLAND URBAN AREAS". THIS REVIEW IS PART OF THE SITE SPECIFIC PROJECT. THE APPROVAL OF THE PC DOES NOT INCLUDE THE SITE.

| | |
|---|---|
| @ | AT |
| AB | ANCHOR BOLT |
| ABC | AGGREGATE BASE COURSE |
| ABV | ABOVE |
| AD | AREA DRAIN |
| ADD | ADDENDUM |
| ADH | ADHESIVE |
| ADJ | ADJACENT, ADJUSTABLE |
| ADOH | ALTERNATE DIRECTION OF HOOK |
| AFF | ABOVE FINISHED FLOOR |
| AGG | AGGREGATE |
| ALT | ALTERNATE |
| ALUM | ALUMINUM |
| ANCH | ANCHOR (AGE) |
| ANOD | ANODIZED |
| APPRX | APPROXIMATE |
| ARCH | ARCHITECT (URAL) |
| ASPH | ASPHALT |
| AUTO | AUTOMATIC |
| B | BOTTOM |
| BB | BOND BEAM |
| BC | BOTTOM CHORD |
| BD | BOARD |
| BEG | BEGIN (ING) |
| BEL | BELOW |
| BIT | BITUMINOUS |
| BJT | BED JOINT |
| BLDG | BUILDING |
| BLK | BLOCK ('G, ING) |
| BLW | BELOW |
| BM | BEAM |
| BMK | BENCH MARK |
| BO* | BOTTOM OF ____________ |
| BPL | BEARING PLATE |
| BRD | BOARD |
| BRDG | BRIDGING |
| BRG | BEARING |
| BRK | BRICK |
| BRZ | BRONZE |
| BS | BOTH SIDES |
| BTWN | BETWEEN |
| BVL | BEVELED |
| BW | BOTH WAYS |
| C | CHANNEL, COMPRESSION |
| CAD | CADMIUM |
| CAM | CAMBER |
| C/C | CENTER TO CENTER |
| CEM | CEMENT |
| CF | CUBIC FOOT |
| CHAM | CHAMFER |
| CI | CAST IRON |
| CIP | CAST-IN-PLACE |
| CIR | CIRCLE |
| CIRC | CIRCUMFERENCE |
| CJ | CONSTRUCTION JOINT |
| CJT | CONTROL JOINT |
| CLG | CEILING |
| CLK | CAULK, ('G, ING) |
| CLKG | CAULKING |
| CLR | CLEAR |
| CLS | CLOSURE |
| CM | CENTIMETER |
| CMP | CORRUDATED METAL PIPE |
| CMU | CONCRETE MASONRY UNIT |
| CNTR | CENTER |
| COL | COLUMN |
| COG | CENTER OF GRAVITY |
| COMB | COMBINATION |
| COMP | COMPRESS (ED)(ION)(IBLE) |
| COMPO | COMPOSITE |
| CONN | CONNECT (ION) |
| CONC | CONCRETE |
| CONST | CONSTRUCT (ION) (ED) |
| CONT | CONTINUE, CONTINUOUS |
| CONTR | CONTRACTOR |
| COR | CORRUGATED |
| CP | COMPLETE PENETRATION |
| CPG | COPING |
| CPR | COPPER |
| CRS | COURSE (S) |
| CS | COUNTERSINK |
| CTSK | COUNTERSUNK SCREW |
| CU | CUBIC |
| CX | CONNECTION |
| CY | CUBIC YARD |
| D | DEEP, DEPTH |
| DBL | DOUBLE |
| DEF | DEFLECTION |
| DEG | DEGREE |
| DEM0 | DEMOLISH, DEMOLITION |
| DEP | DEPRESSED |
| DEPT | DEPARTMENT |
| DET | DETAIL |
| DIAG | DIAGONAL |
| DIA | DIAMETER |
| DIM | DIMENSION (ED) |
| DIV | DIVISION |
| DL | DEAD LOAD |
| DN | DOWN |
| DO | DITTO |
| DP | DAMPROOFING |
| DWL | DOWEL (ED) |
| DWG | DRAWING, (S) |
| E | EAST,<br>MODULUS OF ELASTICITY |
| EA | EACH |
| EB | EXPANSION BOLT |
| EF | EACH FACE |
| EJT | EXPANSION JOINT |
| EL | ELEVATION |
| ELEC | ELECTRIC (AL) |
| ENCL | ENCLOSURE, ENCLOSED |
| ENG | ENGINEER |
| EQ | EQUAL, EQUALIBRIUM |
| EQUIP | EQUIPMENT |
| ESTM | ESTIMATE (ED) |
| EV | EXPANSION BOLT |
| EW | EACH WAY |
| EXCA | EXCAVATE (D) (ION) |
| (E), EXIST | EXISTING |
| EXMP | EXPANDED METAL PLATE |
| EXP | EXPOSED |
| EXPN | EXPANSION |
| EXS | EXTRA STRONG |
| EXT | EXTERIOR, EXTERNAL |
| FAS | FASTENER |
| FBO | FURNISHED BY OTHERS |
| FD | FLOOR DRAIN |
| FHMS | FLATHEAD MACHINE SCREW |
| FHS | FIRE HOSE STATION |
| FHWS | FLATHEAD WOOD SCREW |
| FIN | FINISH (ED) |
| FIXT | FIXTURE |
| FJT | FLUSH JOINT |
| FLR | FLOOR |
| FLUR | FLUORESCENT |
| FLEX | FLEXIBLE |
| FND | FOUNDATION |
| FO* | FACE OF ______________ |
| FP | FIREPROOF (ED) |
| FP'G | FIREPROOFING |
| FR | FRAME (D)(ING) |
| FRC | FIRE RESISTANT COATING |
| FRGD | FORGED |
| FRMG | FRAMING |
| FT | FOOT, FEET |
| FTG | FOOTING |
| FURR | FURRED, FURRING |
| FV | FIELD VERIFY |
| GA | GAUGE |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GI | GALVANIZED IRON |
| GKT | GASKET |
| GL | GLASS, GLAZING |
| GLM | GLULAM |
| GP | GALVANIZED PIPE |
| GPM | GALLONS PER MINUTE |
| GPPL | GYPSUM PLASTER |
| GRVL | GRAVEL, GRANULAR |
| GRD | GRADE, GRADING |
| GRN | GRANITE |
| GSS | GALVANIZED SHEET STEEL |
| GT | GROUT |
| GVL | GRAVEL |
| GWB | GYPSUM WALLBOARD |
| GYP | GYPSUM |
| H | HIGH |
| HBD | HARDBOARD |
| HC | HOLLOW CORE |
| HD | HEAVY DUTY |
| HDNR | HARDENER |
| HDR | HEADER |
| HDWR | HARDWARE |
| HDWD | HARDWOOD |
| HES | HIGH EARLY STRENGTH CEMENT |
| HH | HANDHOLE |
| HJT | HEADJOINT |
| HK | HOOK |
| HM | HOLLOW METAL |
| HORIZ | HORIZONTAL |
| HPT | HIGH POINT |
| HR | HOUR |
| HSA | HEADED STUD ANCHOR |
| HSB | HIGH STRENGHT BOLT |
| HT | HEIGHT |
| HWD | HARDWOOD |
| ID | INSIDE DIAMETER |
| IN | INCHE (ES) |
| INCL | INCLUDE (D), INCLUDING |
| INSUL | INSULATE, INSULATION |
| INT | INTERIOR |
| INTM | INTERMEDIATE |
| INV | INVERT |
| JST | JOIST |
| JT | JOINT |
| K | KIP (S) |
| KO | KNOCKOUT |
| KSI | KIPS PER SQUARE INCH |
| L | LONG, LENGTH |
| LAM | LAMINATE (D) |
| LB | POUND, LAG BOLT |
| LBL | LABEL |
| LC | LIGHT CONTROL |
| LD | DEVELOPMENT LENGHT |
| LF | LINEAR FOOT |
| LH | LEFT HAND |
| LL | LIVE LOAD |
| LLH | LONG LEG HORIZONTAL |
| LLV | LONG LEG VERTICAL |
| LPT | LOW POINT |
| LT | LIGHT |
| LTL | LINTEL |
| LVL | LEVEL (ING) |
| LW | LIGHT WEIGHT |
| LWC | LIGHT WEIGHT CONCRETE |
| LWF | LIGHT WEIGHT FILL |
| M | METER (S) MOMENT |
| MATL | MATERIAL |
| MAS | MASONRY |
| MAX | MAXIMUM |
| MB | MACHINE BOLT |
| MBR | MEMBER |
| MCONN | MOMENT CONNECTION |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MET | METAL |
| MEMB | MEMBER |
| MEP | MECHANICAL, ELECTRICAL, & PLUMBING |
| MFD | METAL FLOOR DECKING |
| MFR | MANUFACTURE (R) (ED) |
| MID | MID, MIDDLE |
| MIN | MINIMUM, MINUTE |
| MISC | MISCELLANEOUS |
| MM | MILLIMETER (S) |
| MMB | MEMBRANE |
| MO | MASONRY OPENING |
| MOD | MODEL |
| MODU | MODULAR |
| MOV | MOVABLE |
| MTL | MATERIAL |
| ML | MODULE (MOD)LINE |
| N | NORTH, NEW |
| NAT | NATURAL |
| NL | NAILABLE |
| NMT | NONMETALLIC |
| NO | NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| OA | OVERALL |
| o.c. | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |
| OHMS | OVALHEAD MACHINE SCREW |
| OHWS | OVALHEAD WOOD SCREW |
| OJ | OPEN-WEB JOINT (S) |
| OPH | OPPOSITE HAND |
| OPNG | OPENING |
| OPP | OPPOSITE |
| OFOI | OWNER FURNISHED OWNER INSTALLED |
| PAR | PARALLEL |
| PBD | PARTICLE BOARD |
| PCC | PRECAST CONCRETE |
| PCF | POUNDS PER CUBIC FOOT |
| PCS | PIECES |
| PERF | PERFORATE (D) |
| PERI | PERIMETER |
| PFB | PREFABRICATE (D) |
| PFS | POUNDS PER SQUARE FOOT |
| PL | PLATE |
| PLBG | PLUMBING |
| PLF | POUNDS PER LINEAR FOOT |
| P.L. | PARALLAM |
| PLWD | PLYWOOD |
| PMT | PAVEMENT |
| PNL | PANEL |
| POSTEN | POST TENSION (D) |
| PRETEN | PRETENSIONED |
| POLY | POLYETHYLENE |
| PR | PAIR |
| PRJ | PROJECT |
| PSC | PRESTRESSED CONCRETE |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PT | POINT |
| P.T. | PRESSURE TREATED |
| PTC | POST-TENSIONED CONCRETE |
| PTD | PAINTED |
| PVC | POLYVINYL CHLORIDE |
| PVMT | PAVEMENT |
| QTY | QUANTITY |
| R | RADIUS, RISER |
| RAD | RADIUS |
| RD | ROOF DRAIN |
| RECT | RETANGULAR |
| REF | REFERENCE, REFER TO |
| REINF | REFORCE (D) (ING) |
| REM | REMOVE |
| REQD | REQUIRED |
| REQS | REQUIREMENTS |
| RETG | RETAINING |
| REV | REVISION, REVISED |
| RFG | ROOFING |
| RFH | ROOF HATCH |
| RFL | REFLECT (ED)(IVE)(OR) |
| RM | ROOM |
| RO | ROUGH OPENING |
| RT | FIRE RETARDANT TREATED |
| RT | RUBBER TILE |
| RTG | RATING |
| RVS | REVERSE SIDE |
| RVT | RIVET |
| S | SOUTH |
| SC | SOLID CORE |
| SCHED | SCHEDULE |
| SDL | SUPERIMPOSED DEAD LOAD |
| SDS | SELF DRILL SCREW |
| SE | STRUCTURAL ENGINEER |
| SDST | SELF-DRILL, SELF-TAP'G SCREW |
| SECT | SECTION |
| SF | SQUARE FOOT, SQUARE FEET |
| SHO | SHORE, SHORING |
| SHT | SHEET |
| SHTH | SHEATHING |
| SI | SQUARE INCH |
| SIM | SIMILAR |
| SL | SLOPE |
| SLNT | SEALANT |
| SMS | SHEET METAL SCREW |
| SOG | SLAB ON GRADE |
| SPA | SPACE, (ING) |
| SPC | SPACER |
| SPEC | SPECIFICATION (S) |
| SQ | SQUARE |
| SSTL | STAINLESS STEEL |
| STG | STAGGERED |
| STD | STANDARD |
| STL | STEEL |
| STOR | STORAGE |
| STRUCT | STRUCTURE |
| STR | STRUCTURAL |
| SYM | SYMETRICAL, SYMETRY |
| SYS | SYSTEM |
| T | TOP, TORSION, TREAD |
| T&B | TOP AND BOTTOM |
| T&G | TONGUE AND GROOVE |
| TC | TOP CHORD |
| TEN | TESION, TENSILE |
| TEMP | TEMPORARY, TEMPERATURE |
| THD | THREAD (ED) |
| THK | THICK (NESS) |
| TMPD | TEMPERED |
| TO* | TOP OF ______________ |
| TL | TOTAL LOAD |
| TR | TREAD |
| TS | TUBE STEEL |
| TYP | TYPICAL |
| UC | UNDERCUT |
| UGD | UNDERGROUND |
| UL | UNDEREWRITERS LABORATORY |
| UND | UNDER |
| UNF | UNFINISHED |
| UNO | UNLESS NOTED OTHERWISE |
| V | SHEAR FORCE, VELOCITY |
| VB | VAPOR BARRIER |
| VER | VERIFY |
| VERT | VERTICAL |
| VG | VERTICAL GRAIN |
| VIF | VERIFY IN FIELD |
| VJ | V-JOINTED |
| VNR | VENEER |
| V.T.R. | VENT THROUGH ROOF |
| W | WEST, WIDTH, WIDE,<br>WIDE FLANGE |
| W/ | WITH |
| W/O | WITHOUT |
| WD | WOOD |
| WI | WROUGHT IRON |
| WM | WIRE MESH |
| WP | WATERPROFFING |
| WPR | WATER REPELLENT |
| WPT | WORKING POINT |
| WS | WATER STOP |
| WT | WEIGHT |
| WTW | WALL TO WALL (W/W) |
| WWF | WELDED WIRE FABRIC |
| WWM | WELDED WIRE MESH |

CONSTRUCTION OF CLASSROOM BUILDING (RELOCATABLE)

## SCOPE OF WORK

**BUILDING DESIGN**

**NUMBER OF STORIES:** 1
**OCCUPANCY:** "E" and "B" (Design with Floor Live Load **150 psf** only must be used for occupancy B)
**CONSTRUCTION TYPE:** VB
**FLOOR LIVE LOAD:** ☒ 50+15 PSF PARTITION
☐ 100 PSF ☐ 150 PSF
**FLOOR DEAD LOAD:** ☒ WOOD FLOOR - 11 PSF
☐ CONC. FLOOR - 33 PSF

**ROOF LIVE LOAD:** 20 PSF
**ROOF SNOW LOAD:** 20 PSF
**ROOF DEAD LOAD:** 18.5 PSF (INCLUDES SPRINKLERS & 3PSF SOLAR PANEL)
**RAMPLIVE LOAD:** 100PSF
**FLOOD DESIGN:** This PC has not been designed to accommodate flood loads. If located in a zone other than X, a letter stamped and signed from a soils engineer is needed to validate the allowable soil values assumed in this PC are still applicable. (OWNER SUPPLIED)

**FLOOD DESIGN DATA: PROJECT NOT LOCATED IN A FLOOD ZONE**

| BUILDING AREA | NO OVERHANG | WITH OVERHANG (5' @ EA. END) |
|---|---|---|
| ALLOWABLE AREA | ☐ 24x40 960 sf | ☒ 24x40 1200 sf |
| =9,500 sf | ☐ 36x40 1440 sf | ☐ 36x40 1800 sf |
| ACTUAL AREA | ☐ 48x40 1920 sf | ☐ 48x40 2400 sf |
| =4,800 SF | ☐ 60x40 2400 sf | ☐ 60x40 3000 sf |
| | ☐ 72x40 2880 sf | ☐ 72x40 3600 sf |
| | ☐ 84x40 3360 sf | ☐ 84x40 4200 sf* |
| | ☐ 96x40 3840 sf | ☐ 96x40 4800 sf* |
| | ☐ 108x40 4320 sf* | ☐ 108x40 5400 sf* |
| | ☐ 120x40 4800 sf* | ☐ 120x40 6000 sf* |

*Geo-hazard site specific report must be provided and approved by CGS for building area more than 4000 sf

**ALLOWABLE SOIL PRESSURE:** ☒ WOOD FTG -1000PSF ☒ CONCRETE FTG 1500PSF

**FOUNDATION:** ☒ WOOD (conditional) ☐ CONCRETE ABOVE GRADE
☐ CONCRETE BELOW GRADE <2160sf (conditional)
☐ CONCRETE BELOW GRADE (AMM)
SEE GENERAL NOTE 14 BELOW
PC IS DESIGNED BASED ON A PINNED CONNECTION TO THE FOUNDATION.

**CEC CLIMATE ZONE:** 1-16
☐ CZ 1-2 RIGID R-10 / 2" ☐ CZ 3-15 RIGID R-5 / 1" ☐ CZ 16 RIGID R-15 / 4"

**WIND DESIGN**

**ULTIMATE DESIGN SPEED:** Vult = 110 mph, 3 sec GUST, Kzt = 1.0
**RISK CATEGORY:** II
**EXPOSURE:** C

**EARTHQUAKE DESIGN**

**RISK CATEGORY:** II
**SEISMIC IMPORTANCE FACTOR:** I = 1
**MAPPED SPECTRAL RESPONSE:** ☒ Ss = 2.33, ☐ Ss =2.8**
S1 = 1.99
**DRIFT LIMIT:** 0.02 x $H_{story}$ x 12 = 2.82 PER TABLE 12.12-1
**SITE CLASS:** D-DEFAULT*
**SEISMIC DESIGN CATEGORY:** E
Note: For SDC (E) site specific motion analysis is not required if not in a seismic hazard zone and/or meets other exemptions in DSA IR A-4
**SHORT/LONG PERIOD SITE COEFFICIENT:** ☒ Fa = 1.2, ☐ Fa=1.0**, Fv = 1.7
**DEISIGN SPECTRAL RESPONSE:** Sds = 1.86
Sd1 = 2.26
**SEISMIC RESPONSE COEFFICIENT, Cs:** 0.373 (using reduced Sds as allowed by ASCE 12.8.1.3)

**BASIC SEISMIC FORCE-RESISTING SYS:** OMF, R = 3.5
**ANALYSIS PROCEDURE:** EQUIVALENT LATERAL FORCE
**BASE SHEAR PER 24X40 MODULE:** WOOD FLOOR, LL ≤ 100, BASE SHEAR= 26.44 kip
WOOD FLOOR, LL = 150, BASE SHEAR= 39.87 kip
CONC. FLOOR, LL ≤ 100, BASE SHEAR= 34.68 kip
CONC. FLOOR, LL = 150, BASE SHEAR= 48.1☐☐ kip

NOTE: FOR SDC (E) SITE SPECIFIC MOTION ANALYSIS IS NOT REQUIRED IF NOT IN A SEISMIC HAZARD ZONE AND/OR MEETS OTHER EXEMPTION IN DSA IR A-4
*Site Specific Ground Motion Analysis is not required because the value of SM1 is increased by 50% in accordance with excecption of item #1 of section 11.4.8 per supplement 3 of ASCE 7-16
**Geo-Hazard report with verification of site Class D must be provided and approved by CGS for site specific ARES with Ss>2.33

PARTIAL LIST OF APPLICABLE CODES AS OF January 1, 2023

2022 California Administrative Code (CAC), Part 1, Title 24 CCR

2022 California Building Code (CBC), Part 2, Title 24 CCR

2022 California Electrical Code (CEC), Part 3, Title 24 CCR

2022 California Mechanical Code (CMC), Part 4, Title 24 CCR

2022 California Plumbing Code (CPC), Part 5, Title 24 CCR

2022 California Energy Code, Part 6, Title 24 CCR

2022 California Fire Code (CFC), Part 9, Title 24 CCR

2022 California Existing Building Code (CEBC), Part 10, Title 24 CCR

2022 California Green Building Standards Code (CALGreen), Part 11, Title 24 CCR

2022 California Referenced Standards Code, Part 12, Title 24 CCR

Title 19 CCR, Public Safety, State Fire Marshal Regulations

APPLICABLE STANDARDS

For a list of applicable standards, including California amendments to the NFPA Standards, refer to CBC Chapter 35 and CFC Chapter 80.

REQUIRED PV SYSTEM SIZE (kW)

| CLIMATE ZONE | BUILDING SIZE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 24'x40' | 36'x40' | 48'x40' | 60'x40' | 72'x40' | 84'x40' | 96'x40' | 108'x40' | 120'x40' |
| | APPROXIMATE CONDITIONED FLOOR AREA | | | | | | | | |
| | 960 | 1440 | 1920 | 2400 | 2880 | 3360 | 3840 | 4320 | 4800 |
| 1 | NONE | NONE | NONE | NONE | NONE | 4.3 | 4.9 | 5.5 | 6.1 |
| 2 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 3 | NONE | NONE | NONE | NONE | NONE | 4.3 | 4.9 | 5.5 | 6.1 |
| 4 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 5 | NONE | NONE | NONE | NONE | NONE | 4.3 | 4.9 | 5.5 | 6.1 |
| 6 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 7 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 8 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 9 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 10 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 11 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 12 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 13 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 14 | NONE | NONE | NONE | NONE | 4.7 | 5.5 | 6.3 | 7.0 | 7.8 |
| 15 | NONE | NONE | 4.7 | 5.9 | 7.1 | 8.3 | 9.4 | 10.6 | 11.8 |
| 16 | NONE | NONE | NONE | NONE | NONE | 4.3 | 4.9 | 5.5 | 6.1 |
| ALL ZONES | NONE | NONE | 4.7 | 5.9 | 7.1 | 8.3 | 9.4 | 10.6 | 11.8 |

NOTES:
FOR SITE-SPECIFIC PROJECT, INDICATE BUILDING SIZE AND PV SYSTEM SIZE.
IF PV REQUIRES, SEE NOTE 15 UNDER GENERAL NOTES.

### 2 PV SIZING CHART

| CODE | ADOPTED YEAR | ITEM |
|---|---|---|
| NFPA 13 | 2022 | AUTOMATIC SPRINKLER SYSTEMS |
| NFPA 72 | 2022 | NATIONAL FIRE ALARM CODE w/ CALIFORNIA AMENDMENTS |

NOTE: VISUAL DEVICES PER UL STANDARD 1971

**GENERAL NOTES**

1. ARCHITECT OF RECORD SHALL PROVIDE FIRE ALARM DRAWINGS WITH SITE ADAPTED PROJECTS. FIRE ALARM IS NOT PART OF THIS PC.
2. THIS PC HAS BEEN STRUCTURALLY DESIGNED TO SUPPORT THE WEIGHT OF A FIRE SPRINKLER SYSTEM
3. ALLOWABLE AREA IS BASED ON 10'-0" SETBACK FROM ASSUMED LINE
4. PC DESIGNED AS A SINGLE-STORY MODULAR BUILDING
5. SEE STRUCTURAL FOR SOIL TYPES & BEARING STRENGTHS
6. WORK SHALL CONFORM TO TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS
7. THIS PC IS NOT APPROVED FOR "A" OCCUPANCY USAGE
8. EXTERIOR PROJECTIONS TO BE FIRE PROTECTED WHERE REQUIRED
9. SEE A0.5 AND ENGERY CALC M-SHEETS FOR REQUIRED ENVELOPE ASSEMBLIES & HVAC SYSTEMS
10. ALL SPECIFICATIONS BASED ON PERFORMANCE AND ABLE TO BE SUBSTITUTED BY "EQUAL" PRODUCTS
11. BUILDINGS TO COMPLY WITH WILDLAND URBAN INTERFACE GUIDELINES WHERE APPLICABLE
12. BUILDING AND SITE FEATURES MUST COMPLY WITH CALGREEN CODE FOR ITS SPECIFIC LOCATION WHEN ADAPTED FOR SITE-USE
13. SHOULD THIS P.C. CLASSROOM BE DESIGNED TO CONNECT TO ANOTHER P.C. CLASSROOM, INTERIOR SOUND TRANSMISSION IN THE WALL AND FLOOR-CEILING ASSEMBLY MUST MEET A MINIMUM STC OF 40 PER CALGREEN

*14. THE CONCRETE BELOW GRADE FOUNDATION (AMM) OPTION IN THIS PC USES A DSA-APPROVED ALTERNATE MEANS OF COMPLIANCE FOR FOUNDATION DURABILITY REQUIREMENTS OF CBC SECTIONS 1402.2 AND 1403.2 FOR PROVIDING A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE AND CONTINUOUS WATER-RESISTIVE BARRIER ON WALLS DOWN TO THE FOUNDATION, AND CBC SECTION 2304.12.1.2 FOR PROTECTION AGAINST DECAY AND TERMITES.

15. PC DOESN'T INCLUDE THE DESIGN OF PV RACK SYSTEM ON ROOF- A SEPARATE DESIGN AND DSA APPLICATION WILL BE REQUIRED. PV ON ROOF WILL NOT BE ALLOWED FOR OTC APPLICATION

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W BERNARDO COURT, SUITE 100
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WWW.RSTAVARES.COM

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
02/16/24
RST#22088

**THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©**

CLIENT

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ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
COVER SHEET

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A0.0

SHEET OF

C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

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# ARCHITECTURAL

| ⑥ General Architectural Sheets 1/4" = 1'-0" GENERAL ARCHITECTURAL SHEETS | Sheet |
|---|---|
| COVER SHEET | A0.0 |
| PROJECT OPTIONS SCHEDULE | A0.0.1 |
| TYPICAL KEY PLAN AND SCHEDULE, GEN NOTES | A0.1 |
| SIGNAGE AND SYMBOLS | A0.2 |
| DSA-103 T&I CONCRETE FLOORS | A0.3 |
| DSA-103 T&I PLYWOOD FLOORS | A0.4 |
| CALGREEN SPEC'S | A0.5 |
| CALGREEN SHEET | A0.6 |
| CALGREEN SHEET | A0.7 |
| CALGREEN SHEET | A0.8 |

| ⑤ Floor Plan Details 1/4" = 1'-0" | ARCHITECTURAL FLOOR PLANS | Sheet |
|---|---|---|
| ☒ Floor Plans | ☒ Floor Plan - 24'x40' | A1.0 |
| | ☐ Floor Plan - 36'x40' | A1.1 |
| | ☐ Floor Plan - 48'x40' | A1.2 |

| ① Arch Floor Framing Details 1/4" = 1'-0" ARCHITECTURAL FLOOR FRAMING DETAILS | | | | | | | Sheet |
|---|---|---|---|---|---|---|---|
| ☒ Wood Floor | 1 | 2 | 3 | 4 | 5 | 6 | A2.9 |
| ☐ Concrete Floor | 7 | 8 | 9 | 10 | 11 | 12 | A2.9 |

② Wall Schedule 1/4" = 1'-0" — ARCHITECTURAL WALL DETAILS

| Wood Studs | Detail | | | | | | | | | | | | | | | Sheet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Door | | ML | | | | Window | Corner | HVAC | Top PLT | 6" SEP | 1-HR OPT 1 | 1-HR OPT 2 | EXT HDR | INT HDR | |
| ☒ Sheating | 8 | 9 | 2 | 3 | 4 | 5 | 11 | 1 | 16 | 17 | 5 | x | x | 10A | 10B | A2.1(A) |
| ☐ Sheating | 8 | 9 | 2 | 3 | 4 | 5 | 11 | 1 | 16 | 17 | 5 | x | x | 10A | 10B | A2.1(B) |
| ☐ Plaster | 8 | 9 | 3 | 4 | 5 | | 11 | 1 | 16 | 17 | 5 | x | x | 10A | 10B | A2.2 |
| ☐ 1-HR Sheating | 8 | 9 | 2 | 3 | 4 | 5 | 11 | 1 | 16 | 17 | 5 | - | - | 10A | - | A2.5(A) |
| ☐ 1-HR Sheating | 8 | 9 | 2 | 3 | 4 | 5 | 11 | 1 | 16 | 17 | 5 | - | - | 10A | - | A2.5(B) |
| ☐ 1-HR Plaster | 8 | 9 | 2 | 3 | 4 | 5 | 11 | 1 | 16 | 17 | 4 | - | - | 10A | - | A2.6 |
| ☐ Additional Fire Rating Details and Notes | | | | | | | | | | | | | | | | A3.0 |
| ☐ Single OCC. Bathroom | | | | | | | | | | | | | | | | A3.1 |
| ☐ Single OCC. Bathroom | | | | | | | | | | | | | | | | A3.1.1 |

| ④ Ceiling Plans 1/4" = 1'-0" | | ARCHITECTURAL CEILING PLANS | Sheet |
|---|---|---|---|
| Reflected Ceiling Plans: | ☒ 24' x 40' | ☒ 8 (2'x4') Recessed Light Fixture | A3.2 |
| | | ☐ 12 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | A3.2 |
| | ☐ 36' x 40' | ☐ 12 (2'x4') Recessed Light Fixture | A3.2 |
| | | ☐ 16 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | A3.2 |
| | ☐ 48' x 40' | ☐ 16 (2'x4') Recessed Light Fixture | A3.2 |
| | | ☐ 18 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | A3.2 |
| Celing Notes | | | A3.2.1 |

③ Ceiling Details 1/4" = 1'-0" — ARCHITECTURAL CEILING DETAILS

| Ceiling Framing | Detail | | | | Sheet |
|---|---|---|---|---|---|
| | Wall | Joists | Access | BLK'G | |
| ☒ T-GRID | SEE PLAN | SEE PLAN | SEE PLAN | SEE PLAN | A3.3 |
| ☐ Wood | 1 | 2 | 5 | Typ | A3.4 |

| ⑦ Roof Plans 1/4" = 1'-0" | ARCHITECTURAL ROOF PLANS | Sheet |
|---|---|---|
| ☒ Mono | | |
| | ☐ EPDM | A4.2.1 |
| | ☒ Standing Seam | A4.0.1 |
| | ☐ Parapet | A4.4.1 |
| ☐ Dual | | |
| | ☐ EPDM | A4.2.2 |
| | ☐ Standing Seam | A4.0.2 |

| ㉒ Roof Details 1/4" = 1'-0" | ARCHITECTURAL ROOF DETAILS | Sheet |
|---|---|---|
| ☒ Mono | | |
| | ☐ EPDM | A4.3 |
| | ☒ Standing Seam | A4.1 |
| | ☐ Parapet | A4.5 |
| ☐ Dual | | |
| | ☐ EPDM | A4.3 |
| | ☐ Standing Seam | A4.1 |

| ⑧ Arch Building Section 1/4" = 1'-0" | ARCHITECTURAL BUILDING SECTION | Sheet |
|---|---|---|
| ☒ Mono | | |
| | ☐ EPDM | A6.3 |
| | ☒ Standing Seam | A6.0 |
| ☐ Dual | | |
| | ☐ EPDM | A6.1 |
| | ☐ Standing Seam | A6.0.1 |
| Section | | A6.2 |

# ARCHITECTURAL

⑬ Exterior Elevations 1/4" = 1'-0" — ARCHITECTURAL EXTERIOR ELEVATIONS

| | | Detail | | Sheet | Detail | | Sheet |
|---|---|---|---|---|---|---|---|
| Exterior Elevations: | ☒ 24'x40' | Left | Right | | Front | Rear | |
| | ☒ Mono Slope | 1 | 2 | A5.0 | 1 | 2 | A5.1 |
| | ☐ Parapet Roof - Mono Slope | 3 | 4 | A5.0 | 3 | 4 | A5.1 |
| | ☐ Dual Slope | 5 | 6 | A5.0 | 1 | 2 | A5.1 |
| | ☐ 36'x40' | | | | | | |
| | ☐ Mono Slope | 1 | 2 | A5.0 | 5 | 6 | A5.1 |
| | ☐ Parapet Roof - Mono Slope | 3 | 4 | A5.0 | 7 | 8 | A5.1 |
| | ☐ Dual Slope | 5 | 6 | A5.0 | 5 | 6 | A5.1 |
| | ☐ 48'x40'- 120'X40' | | | | | | |
| | ☐ Mono Slope | 1 | 2 | A5.0 | 9 | 10 | A5.1 |
| | ☐ Parapet Roof - Mono Slope | 3 | 4 | A5.0 | 11 | 12 | A5.1 |
| | ☐ Dual Slope | 5 | 6 | A5.0 | 9 | 10 | A5.1 |

⑭ Interior Elevations 1/4" = 1'-0" — ARCHITECTURAL INTERIOR ELEVATIONS

| | | Detail | | | | Sheet |
|---|---|---|---|---|---|---|
| Interior Elevations: | | Left | Right | Front | Rear | |
| | ☒ 24'x40' | 1 | 2 | 3 | 4 | A5.2 |
| | ☐ 36'x40' | 1 | 2 | 5 | 6 | A5.2 |
| | ☐ 48'x40' - 120'X40' | 1 | 2 | 8 | 7 | A5.2 |

| ㉓ ADDITIONAL OPTIONS DETAILS 1/4" = 1'-0" ADDITIONAL OPTIONS DETAILS | Sheet |
|---|---|
| ADDITIONAL OPTIONS DETAILS | A7.0 |
| ADDITIONAL OPTIONS DETAILS | A7.1 |
| ADDITIONAL OPTIONS DETAILS | A7.2 |

# MEP

| ⑨ Plumbing 1/4" = 1'-0" PLUMBING | Sheet |
|---|---|
| ☐ Plumbing Details and Schedules | P1.0 |

⑩ Mechanical 1/4" = 1'-0" — MECHANICAL

| MISCELLANEOUS NOTES & DETAILS | | | Sheet | |
|---|---|---|---|---|
| | | | M0.1 | |
| | | | Ceiling Plan | Roof Plan |
| Mechanical Plans: | ☒ 24' x 40' | ☒ Wall Mount | M5.1 | M5.2 |
| | | ☐ Roof Mount | M5.1 | M5.2 |
| | ☐ 36' x 40' | ☐ Wall Mount | M6.1 | M6.2 |
| | | ☐ Roof Mount | M6.1 | M6.2 |
| | ☐ 48' x 40' | ☐ Wall Mount | M7.1 | M7.2 |
| | | ☐ Roof Mount | M7.1 | M7.2 |
| | ☐ 60' x 40' | ☐ Wall Mount | A0.1 | |
| | | ☐ Roof Mount | | |
| | ☐ 72' x 40' | ☐ Wall Mount | | |
| | | ☐ Roof Mount | | |
| | ☐ 84' x 40' | ☐ Wall Mount | | |
| | | ☐ Roof Mount | | |
| | ☐ 96' x 40' | ☐ Wall Mount | | |
| | | ☐ Roof Mount | | |
| | ☐ 108' x 40' | ☐ Wall Mount | | |
| | | ☐ Roof Mount | | |
| | ☐ 120' x 40' | ☐ Wall Mount | | |
| | | ☐ Roof Mount | | |

⑪ Electrical 1/4" = 1'-0" — ELECTRICAL

| | | | Sheet | |
|---|---|---|---|---|
| Reflected Ceiling Plans: | ☒ 24' x 40' | ☒ 8 (2'x4') Recessed Light Fixture | E1.0 | E1.1 |
| | | ☐ 12 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 36' x 40' | ☐ 12 (2'x4') Recessed Light Fixture | E1.2 | E1.3 |
| | | ☐ 18 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 48' x 40' | ☐ 16 (2'x4') Recessed Light Fixture | E1.4 | E1.5 |
| | | ☐ 24 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 60' x 40' | ☐ 20 (2'x4') Recessed Light Fixture | | |
| | | ☐ 30 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 72' x 40' | ☐ 24 (2'x4') Recessed Light Fixture | | |
| | | ☐ 36 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 84' x 40' | ☐ 28 (2'x4') Recessed Light Fixture | | |
| | | ☐ 42 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 96' x 40' | ☐ 32 (2'x4') Recessed Light Fixture | | |
| | | ☐ 48 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 108' x 40' | ☐ 36 (2'x4') Recessed Light Fixture | | |
| | | ☐ 54 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |
| | ☐ 120' x 40' | ☐ 40 (2'x4') Recessed Light Fixture | | |
| | | ☐ 60 (1'x8') Pendant Light w/ 4 (1'x16') Recessed Light | | |

# STRUCTURAL

⑮ Foundations Plans 1/4" = 1'-0" — FOUNDATION

| | | Sheet |
|---|---|---|
| ☒ Wood Foundation Plan: | Wood Foundation NOTES SCHED FOR BLDG W/ 50+15 | F1.10 |
| | ☒ 24'x40' (50+15 PSF) | F1.11 |
| | ☐ 24'x40' (100 PSF) | F1.21 |
| | ☐ 24'x40' (150 PSF) | F1.31 |
| | | |
| | ☐ 36'x40' (50+15 PSF) | F1.12 |
| | ☐ 36'x40' (100 PSF) | F1.22 |
| | ☐ 36'x40' (150 PSF) | F1.32 |
| | | |
| | ☐ 48'x40' (50+15 PSF) | F1.13 |
| | ☐ 48'x40' (100 PSF) | F1.23 |
| | ☐ 48'x40' (150 PSF) | F1.33 |
| | Wood Foundation Details | F1.40 |
| ☐ Concrete Foundation Plan | | F2.10 |
| ☐ Concrete Above Grade Foundation Details | | F2.20 |
| ☐ Concrete Below Grade Foundation Details | | F2.22 |
| | | F2.23 |

| ⑯ General Structural Sheets 1/4" = 1'-0" GENERAL STRUCTURAL SHEETS | Sheet |
|---|---|
| STRUCTURAL GEN NOTES | S0.1 |

⑰ Floor Framing Plans 1/4" = 1'-0" — STRUCTURAL FLOOR FRAMING PLANS

| | | Sheet |
|---|---|---|
| ☒ Wood Sheating Floor: | ☒ (50+15 PSF) | S1.01 |
| | ☐ (100 PSF) | S1.02 |
| | ☐ (150 PSF) | S1.03 |
| ☐ Concrete Framing Floor: | | |
| | ☐ (50+15 PSF) | S1.1.1 |
| | ☐ (100 PSF) | S1.1.2 |
| | ☐ (150 PSF) | S1.1.3 |

| ⑲ Floor Framing Details 1/4" = 1'-0" STRUCTURAL FLOOR FRAMING DETAILS | Sheet |
|---|---|
| ☒ Wood Framing | S1.2 |
| ☐ Concrete Framing | S1.2 |

| ⑱ Roof Framing Plans 1/4" = 1'-0" STRUCTURAL ROOF FRAMING PLANS | Sheet |
|---|---|
| ☒ Mono Slope Roof Framing | S3.0.1 |
| ☐ Dual Slope Roof Framing | S3.0.2 |

| STRUCTURAL DETAILS ROOF | Sheet |
|---|---|
| STRUCTURAL DETAILS | S3.1 |
| ROOF DETAILS(SOFFIT/ PARRAPET) | S3.2 |
| ROOF PERIMETER TRUSS | S3.3 |

| ⑳ Wall Framing Details 1/4" = 1'-0" STRUCTURAL WALL FRAMING DETAILS | |
|---|---|
| ☒ Wood: | Sheet |
| ☒ Framing Elevation | S4.1 |
| ☒ Wall Details | S4.2 |
| ☒ Typ Framing: | S4.4 |
| ☒ Framing Schedule: | S4.5 |

| ㉑ Building Section 1/4" = 1'-0" STRUCTURAL BUILDING SECTION | Sheet |
|---|---|
| ☒ Mono | S5.0 |
| ☐ Dual | S5.1 |

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

| Revision Schedule | | |
|---|---|---|
| # | Description | Date |

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
PROJECT OPTIONS SCHEDULE

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE
06/15/2021

SHEET NO.
A0.0.1

SHEET OF

C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

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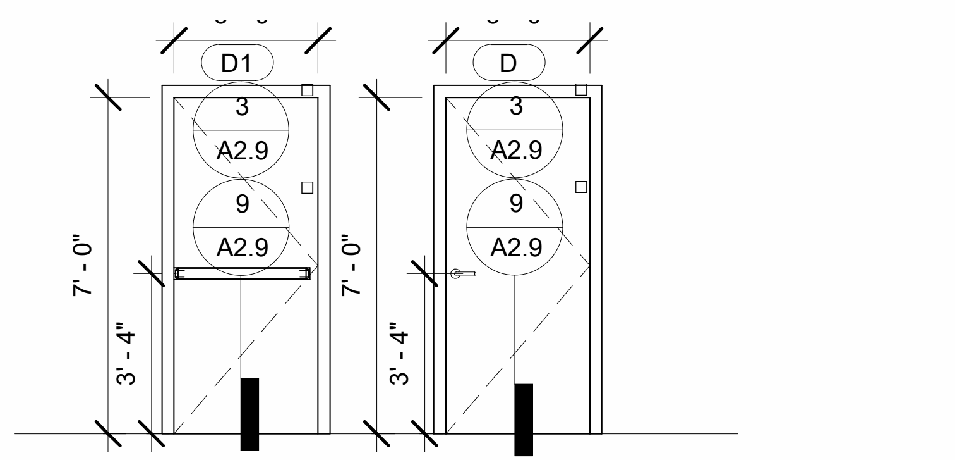
## Door Schedule

| Mark | Type | Width | Height | Door Material | Frame Type | Wall Thickness | Hardware |
|---|---|---|---|---|---|---|---|
| 1 | D1 | 3' - 0" | 7' - 0" | 18GA Hollow Metal | Knock Down | 5 1/4" | HW1 |
| 2 | D | 3' - 0" | 7' - 0" | 18GA Hollow Metal | Knock Down | 5 1/4" | HW2 |
| 3 | D | 3' - 0" | 7' - 0" | Solid Core Wood Legacy | Knock Down | 5 1/2" | HW3 |



1. ALL DOORS SHALL COMPLY WITH CBC SECTION 11B-404 AND BE 1 3/4" THK (UNO)

2. CENTER ALL DOOR LEVERS FOR ACCESS AND LOCKING @ 40" ABOVE FINISH FLOOR. ALL HARDWARE SHALL OPEN FROM THE INTERIOR AND NOT REQUIRE ANY SPECIFIC KNOWLEDGE OF THE HARDWARE OR REQUIRE ANY SPECIAL EFFORT FOR EGRESS. THE LEVER OF LEVER-ACTUATED LEVERS OR LOCKS SHALL BE CURVED WITH A RETURN TO WITHIN 1/2″ OF THE FACE OF THE DOOR TO PREVENT CATCHING ON THE CLOTHING (etc.) OF PERSONS DURING EGRESS. THE LEVER OF LEVER-ACTUATED LEVERS OR LOCKS SHALL EXTEND AT A MINIMUM OF ONE-HALF THE DOOR WIDTH.

3. PER CBC 1010.1.10 FOR ANY ROOM CONFIGURATION WHICH PROVIDES AN OCCUPANT LOAD OF 50 OR GREATER SHALL NOT BE PROVIDED WITH A LATCH OR LOCK UNLESS IT IS PANIC HARDWARE OR FIRE EXIT HARDWARE AND COMPLY WITH ALL REQUIREMENTS OF SECTION 11B-309 OF THE CBC. ALL HARDWARE SHALL COMPLY WITH HARDWARE SCHEDULE THIS SHEET.

4. PER CBC 11B-309.4 THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5 POUNDS (22.2 N) MAX.

5. PER CBC 11B-404.2.8.2 DOOR SPRING HINGES SHALL BE ADJUSTED SO THAT FROM THE OPEN POSITION OF 70 DEGREES, THE DOOR SHALL MOVE TO THE CLOSE POSITION IN 1.5 SECONDS MINIMUM. ALL CLOSER MUST COMPLY WITH CBC 11B-404.2.8.1 - DOOR CLOSER AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS OR LESS.

6. THE MAXIMUM AREA OF EXTERIOR WALL OPENING PER CBC TABLE 705.8 AND THE FIRE PROTECTION FOR EXTERIOR WALL PER CBC TABLE 602. ALL FIRE PROTECTION BASED ON THE FIRE SEPARATION DISTANCE.

7. DOOR LOCATION MAY VARY BASED ON PROJECT REQUIREMENTS.

8. (PH) ON PLANS THE SHEET INDICATES REQUIRED PANIC HARDWARE.

9. PROVIDE EXIT SIGNS AS REQUIRED PER CBC SECTION 1013.4. SEE DETAILS PER A0.2

10. ALL EXIT DOORS SHALL BE OPENABLE FROM INSIDE W/O ANY USE OF SPECIAL TOOLS, KNOWLEDGE OR EFFORT.

### 9 *Doors*

1. PLACE (2) PERMANENT METAL IDENTIFICATION LABELS ON EACH MODULE. CLIMATE ZONE DATA INCLUDED ON LABEL
   - (1) LABEL AT REAR EXTERIOR
   - (1) LABEL ABOVE CEILING LINE AT INTERIOR FRAME.

   LABELS WILL BE MECHANICALLY FASTENED AND SHOW THE DSA APPLICATION NUMBER, MANUFACTURERS NAME AND SERIAL NUMBER, DESIGN LIVE LOAD FOR ROOF AND FLOOR FRAMING, WIND SPEED, EXPOSURE CATEGORY, AND Kzt = 1.0 PER 2022 CBC

2. VINYL TACKBOARD TO HAVE A CLASS 1 FLAME SPREAD RATING AND COMPLY WITH A SMOKE DENSITY OF 175

3. VERIFIED ALL DIMENSIONS PRIOR TO CONSTRUCTION

4. SEE INTERIOR ELEVATIONS FOR ALL REQUIRED EGRESS SIGNAGE AND FIRE ALARM SYSTEM COMPONENTS

5. WHEN RELOCATING OR REMOVING INTERIOR PARTITIONS (2) EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED. EXIT DOORS MUST BE SEPERATED BY A DISTANCE APART EQUAL TO OR NOT LESS THAN ONE-HALF OF THE MAXUMUM OVERALL DIAGONAL DIMENSION FOR ALL NONSPRINKLERED BUILDINGS. EXIT DOORS MUST BE SEPERATED BY A DISTANCE APART EQUAL TO OR NOT LESS THAN ONE-THIRD OF THE MAXUMUM OVERALL DIAGONAL DIMENSION FOR ALL SPRINKLERED BUILDINGS. ALL EXIT AND EXIT ACCESS DOORWAYS MUST COMPLY WITH CBC SECTION 1015 EXIT AND EXIT ACCESS DOORWAYS AND CBC SECTION 1016 EXIT ACCESS TRAVEL DISTANCE.

6. OCCUPANCY LOAD SIGNS SHALL BE POSTING AND COMPLY WITH CBC SECTION 1004.3

7. SEE ADDITIONAL PC FOR ACCESS RAMPS AND STAIRS. WHERE RAMP IS AGAINST THE WALL AT PLASTER EXTERIOR OR ADJACENT TO ANY ABRASIVE SURFACE THEN A SMOOTH TROWEL SURFACE MUST BE PROVIDED AT THESE LOCATIONS OR AN ALTERNATIVE APPLICATION THAT COMPLIES WITH CBC SECTION 11B-505.8

8. ALL SURFACES ADJACENT TO HANDRAILS SHALL NOT HAVE ANY SHARP, ABRASIVE, OR PROTRUDING COMPONENTS

9. HANDRAIL GRIPPING SURFACES AND ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES. PER 11B-505.8

10. FOR PLASTER WALLS PROVIDE CONTROL JOINTS AT ALL MODLINES, ENDWALLS @ 2'-0 FROM EDGE, 10'-0" o/c @ SIDEWALLS, AND ABOVE AND BELOW ALL OPENING. SEE EXTERIOR ELEVATIONS. ALL MATERIALS, MEANS, METHODS, AND PROCEEDURES OF CONSTRUCTION USED TO PROTECT JOINTS SHALL COMPLY WITH FIRE RATED WALL ASSEMPLY PER CBC SECTION 703.2 - FIRE RESISTANCE RATING AND CBC SECTION 705 - EXTERIOR WALLS

11. FOR HVAC UNITS WHICH HEIGHT FROM GRADE TO BOTTOM OF UNIT EXCEEDS 27" AND LOCATED IN PEDESTRIAN PATH OF TRAVEL, A PROTECTION RAIL AROUND THE HVAC UNIT WILL BE PROVIDED. PER MNF INSTALLATION INSTRUCTIONS. SEE 4/A7.2 OR 5/A7.2.

### 2 *A0.1 GENERAL NOTES*

**MOISTURE PROTECTION INSULATION:**

MATERIAL:
INSULATING MATERIAL FOR WALLS, CEILINGS, AND FLOORS SHALL BE FIBERGLASS BATTS (UNFACED) AND SHALL COMPLY WITH CBC 2022.
(CLASS A = 0-25 FLAME SPREAD:) SMOKE DEVELOPMENT DENSITY LESS THAN 450.

INSULATION VALUES
SEE TITLE 24 SHEETS FOR REQUIRED INSULATION VALUES PER CLIMATE ZONE

EXTERIOR WALL INSULATION (MIN.)
☒ R-19 (2x6 STUD) JOHNS MANSVILLE OR EQUAL

INTERIOR WALL INSULATION (MIN.)
☒ R-13

FLOOR INSULATION (MIN.)
☐ CONCRETE SLAB WITH R-19 FIBERGLASS INSULATION
☒ PLYWOOD FLOOR WITH R-19 FIBERGLASS INSULATION

ROOF INSULATION (MIN.)
☐ R-36 (EPDM)
☒ R-36 CONTINUOUS R-X (STANDING SEAM)

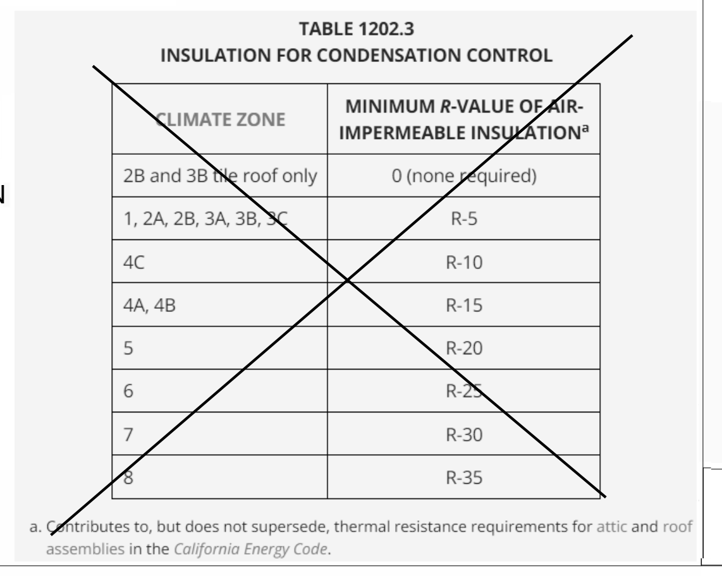


TABLE 1202.3
INSULATION FOR CONDENSATION CONTROL

| CLIMATE ZONE | MINIMUM R-VALUE OF AIR-IMPERMEABLE INSULATION[a] |
|---|---|
| 2B and 3B tile roof only | 0 (none required) |
| 1, 2A, 2B, 3A, 3B, 3C | R-5 |
| 4C | R-10 |
| 4A, 4B | R-15 |
| 5 | R-20 |
| 6 | R-25 |
| 7 | R-30 |
| 8 | R-35 |

a. Contributes to, but does not supersede, thermal resistance requirements for attic and roof assemblies in the *California Energy Code*.

### 3 *Insulation Specs*

## Finish Schedule

| Room Number | Flooring | | Wall Finish | | | | Ceiling | | Notes |
|---|---|---|---|---|---|---|---|---|---|
| | Floor | Base | Front | Left | Rear | Right | Type | Ht. | |
| CLASSROOM | Carp. | 4" TS | Tack | Tack | Tack | Tack | CP | 8'-6" | |
| CLASSROOM w/ PH | Carp. | 4" TS | Tack | Tack | Tack | Tack | CP | 8'-6" | |
| SINGLE OCC. | SV | 6" TS | FRP | FRP | FRP | FRP | CP | 8'-0" | |
| SINGLE OCC. | SV | SC | FRP | FRP | FRP | FRP | GBP | 8'-0" | |

***Abbreviations:***

FLOORING

| | |
|---|---|
| CARP: | COMPLYING WITH GROUP 1; TYPE "A" OR TYPE "B"; CLASS 2; DENSITY 4600; DIRECT GLUE DOWN |
| SV: | SHEET VINYL FLOORING |
| VCT: | VINYL COMPOSITION TILE |

BASE

| | |
|---|---|
| 4" TS: | 4" TOP SET BASE |
| 6" TS: | 6" TOP SET BASE |
| 6" SC: | SELF COVE |

WALLS

| | |
|---|---|
| TACK: | 1/2" VINYL TACKBOARD CLASS 1 OVER 1/2" GYPSUM BOARD BACKING |
| FRP: | 1/8" FIBER REINFORCED PANEL OVER 1/2" WATER RESISTANT GYPSUM BOARD |
| GYP: | 1/2" GYPSUM BOARD; TAPE; TEXTURE; PAINTED FINISH |
| PLY: | 1/2" PLYWOOD FINISH |
| NF: | NO FINISH SC: 6" SELF-COVE BASE |

CEILING

| | |
|---|---|
| CP: | ACOUSTICAL LAY IN GRID CEILING PANELS |
| HC: | 5/8" GYPSUM BOARD; TAPE; TEXTURE; PAINTED FINISH |
| GBP: | 1/2" GYPSUM BOARD WASHABLE PANELS (PAINTED) |

***Finishes Notes***

1. ALL FINISHES SHALL COMPLY WITH CBC, TITLE 19, AND C.F.C

2. PER ASTM D2047 ALL FLOORING WITH A COEFFICIENT OF FRICTION OF A MINIMUM OF 0.6 WILL BE CONSIDERED TO OBTAIN THE INTENT OF A SLIP RESISTANCE SURFACE.

3. FLOORING CONTRACTOR IS RESPONSIBLE FOR SUB-FLOORING PREPARATION. ALL PLYWOOD TO BE APA RATED AND COMPLY WITH PS1-19. PLYWOOD SURFACE TO BE CARPETED IS TO BE PLUGGED AND SANDED BY FLOORING CONTRACTOR. ALL DEFORMITIES OCCURRING DUE TO STANDARD CONSTRUCTION PRACTICES SHALL BE PLUGGED AND SANDED BY FLOOR CONTRACTOR. MATELINE JOINTS TO BE A MAX OF 1/8" AND SHALL BE PLUGGED AND SANDED BY FLOORING CONTRACTORS.

4. ALL CARPET AND FLOOR FINISH MUST COMPLY PER CBC SECTION 11B-302 FLOOR AND GROUND SURFACES. ALL CHANGES IN ELEVATION SHALL COMPLY WITH CBC SECTION 11B-303 CHANGES IN LEVELS

### 5 *Finishes and Materials*

# HARDWARE SCHEDULE

**EXT CLASSROOM DOORS W/ PANIC** — **HW1**

| | | |
|---|---|---|
| LOCKSET | SCHLAGE RIM CYLINDER 20022 C123 626 1-BITTED | Finish Alum or equal |
| EXIT DEVICE | VON DUPRIN AX -PA 99L-2 626 | Finish 26D or equal |
| BUTTS | TAH FB179 4.5 X 4.5 NRP 626 | Finish 689 or equal |
| CLOSER | NORTON 8501DA 689 | Finish Alum or equal |
| WEATHER STRIP | HAGER 891SAV 3684 | Finish Alum or equal |
| THRESHOLD | HAGER 413SA 36 | Finish Alum or equal |
| DOOR BOTTOM | PEMCO 315CN 36 | |

**EXT CLASSROOM DOORS** — **HW2**

| | | |
|---|---|---|
| LOCKSET | TAH LHV 75 SAT 626 | Finish 26D or equal |
| LOCKSET | SCHLAGE 23-065 626 W/ SPECIAL TAIL | Finish 26D or equal |
| BUTTS | TAH FB179 4.5 X 4.5 NRP 626 | Finish 26D or equal |
| CLOSER | NORTON 8501DA 689 | Finish 689 or equal |
| WEATHER STRIP | HAGER 891SAV 3684 | Finish Alum or equal |
| THRESHOLD | HAGER 413SA 36 | Finish Alum or equal |
| DOOR BOTTOM | PEMCO 315CN 36 | Finish Alum or equal |

**INT BOYS & GIRLS RESTROOM DOORS** — **HW3**

| | | |
|---|---|---|
| LOCKSET | TAH LHV 70 SAT 626 | Finish 26D or equal |
| LOCKSET | SCHLAGE 23-065 626 W/ SPECIAL TAIL | Finish 26D or equal |
| BUTTS | TAH FB179 4.5 X 4.5 NRP 626 | Finish 26D or equal |
| CLOSER | NORTON 8501DA 689 | Finish 689 or equal |
| WEATHER STRIP | HAGER 891SAV 3684 | Finish Alum or equal |
| THRESHOLD | HAGER 413SA 36 | Finish Alum or equal |
| DOOR BOTTOM | PEMCO 315CN 36 | Finish Alum or equal |
| DOOR PROTECTION PLATE | HAGER 190S 10 X 34 630 | Finish Alum or equal |

NOTE: ALL CLASSROOM DOORS SHALL BE LOCKABLE FROM INSIDE

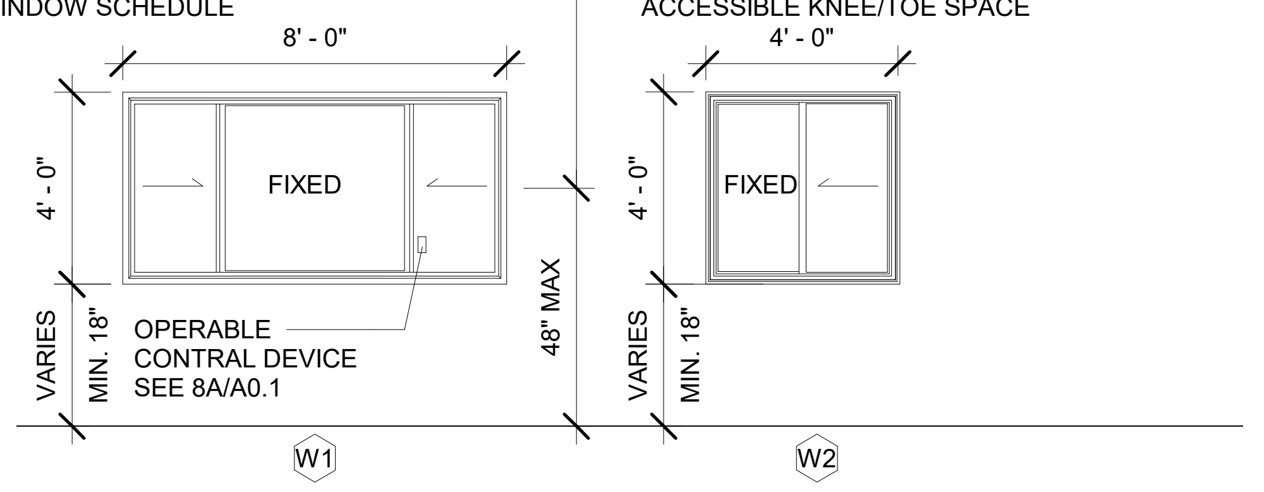
### 7 *Door Hardware*

## Window Schedule

| Mark | Type Mark | Height x Width | Function | Type Comments | Glazing | Source |
|---|---|---|---|---|---|---|
| A | W1 | 4'-0" x 8'-0" | XOX | Clear Anodized Alum. Frame | *DP | Manufacturer |
| B | W2 | 4'-0" x 4'-0" | XO | Clear Anodized Alum. Frame | *DP | Manufacturer |
| C | W3 | 21⌀ | | SOLAR TUBE | | Manufacturer |
| D | W4 | 21⌀ | | SOLAR TUBE | | Manufacturer |

NFRC LABELS SHALL STAY ON THE FENESTRATION PRODUCTS UNTIL THE INSPECTOR HAS VERIFIED THAT THE INSTALLED U-FACTOR, SHGC, AND VT MATCH THE WINDOW SCHEDULE

SEE NOTE 1.
46" MAX w/ OBSTRUCTION FOR SIDE APPROACH
44" MAX w/ OBSTRUCTION FOR FRONT APPROACH
OVER 24" DEEP X 34" MAX HIGH OBSTRUCTION WITH ACCESSIBLE KNEE/TOE SPACE



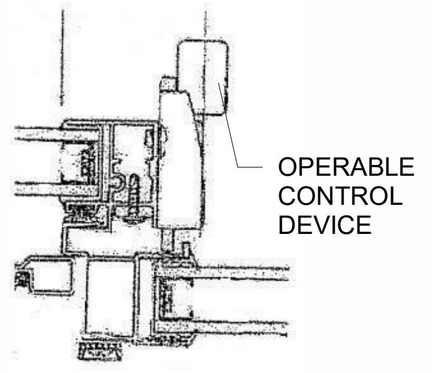
WINDOW LOCATION MAY VARY BASED ON PROJECT REQUIREMENTS.
SAFETY GLAZING MUST BE APPROPRIATELY MARKED AND IDENTIFIED.

WINDOW - 3/4" INSULATING GLASS UNIT PERFORMANCE
U-VALUE : 0.35
SHGC : 0.24
VT : 0.5

ABBREVIATIONS:
DP - DUAL PANE
T - TEMPERED GLASS

NEW BUILDINGS THAT ARE INCLUDED IN PUBLIC SCHOOLS (KINDERGARTEN THROUGH 12TH GRADE) SHALL INCLUDE LOCKS THAT ALLOW DOORS TO CLASSROOMS AND ANY ROOM WITH AN OCCUPANCY OF FIVE OR MORE PERSONS TO BE LOCKED FROM THE INSIDE. THE LOCKS SHALL CONFORM TO THE SPECIFICATION AND REQUIREMENTS FOUND IN SECTION 1010.1.9 Education Code 17075.50,

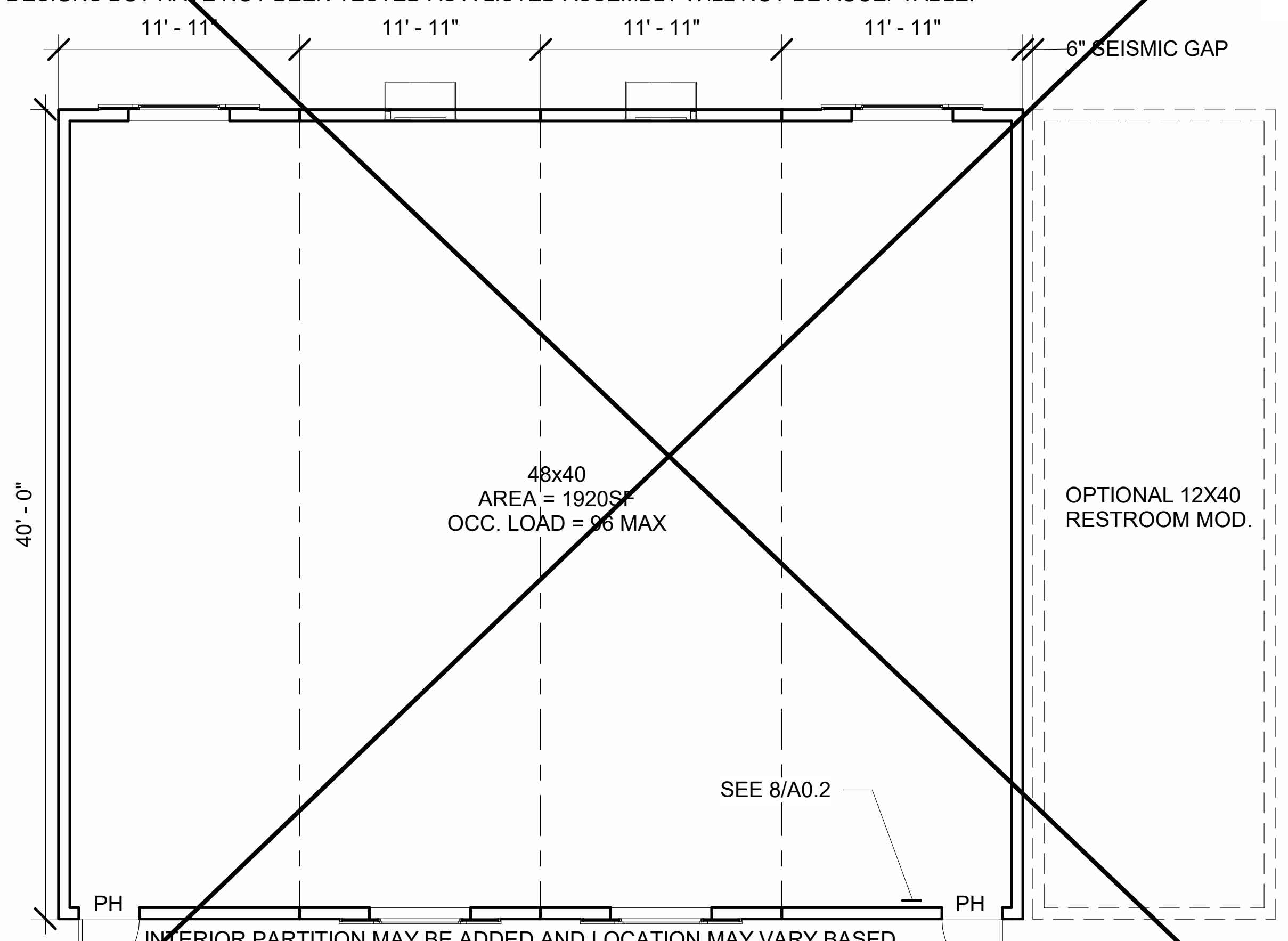
NOTE: ALL FIRE RESISTIVE ASSEMBLIES FOR PROTECTION OF OPENINGS SHALL COMPLY WITH THE PROVISIONS OF SECTION 716 CBC.



8A

### 8 *Windows*

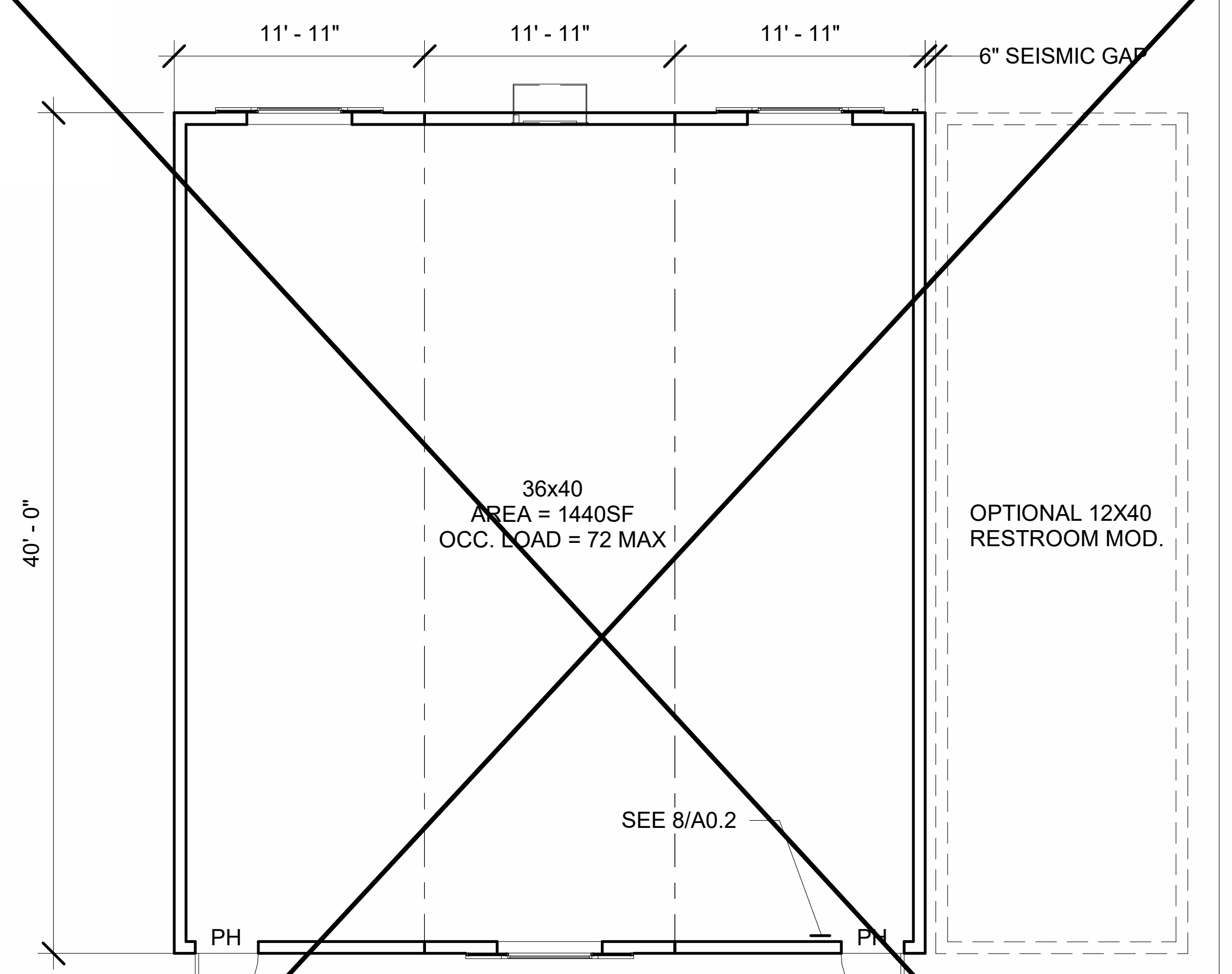
**EMERGENCY EXIT AND PANIC HARDWARE**: **INDICATE ON DRAWINGS AND SPECIFICATIONS COMPLIANCE WITH SFM STANDARD 12-10-3,SECTION 12-10-302**. (a) THE CROSS BAR SHALL EXTEND ACROSS NOT LESS THAN ONE-HALF THE WIDTH OF THE DOOR/GATE. (d) THE ENDS OF THE CROS-BAR SHALL BE CURVED, GUARDED OR OTHERWISE DESIGNED TO PREVENT CATCHING ON THE CLOTHING OF PERSONS DURING EGRESS. **PROVIDE CUT-SHEETS OF PANIC HARDWARE** PROVIDE THE ASSEMBLY DESIGN NUMBER FOR ALL FIRE-RATED CONSTRUCTION COMPONENTS. INSTALLATION DETAILS MUST BE COORDINATED WITH THE DESIGN NUMBERS. CUSTOM DESIGNS WHICH COMBINE COMPONENTS FROM VARIOUS DESIGNS BUT HAVE NOT BEEN TESTED AS A LISTED ASSEMBLY WILL NOT BE ACCEPTABLE.



INTERIOR PARTITION MAY BE ADDED AND LOCATION MAY VARY BASED ON PROJECT REQUIREMENTS. SEE GENERAL NOTES THIS SHEET.
ALL PARTITION ADDED TO BE SUBMITTED FOR APPROVAL WITH SITE SPECIFIC STATE AGENCY APPROVAL.

ABBREVIATIONS:
PH - SEE HARDWARE SCHEDULE ABOVE - NO.2

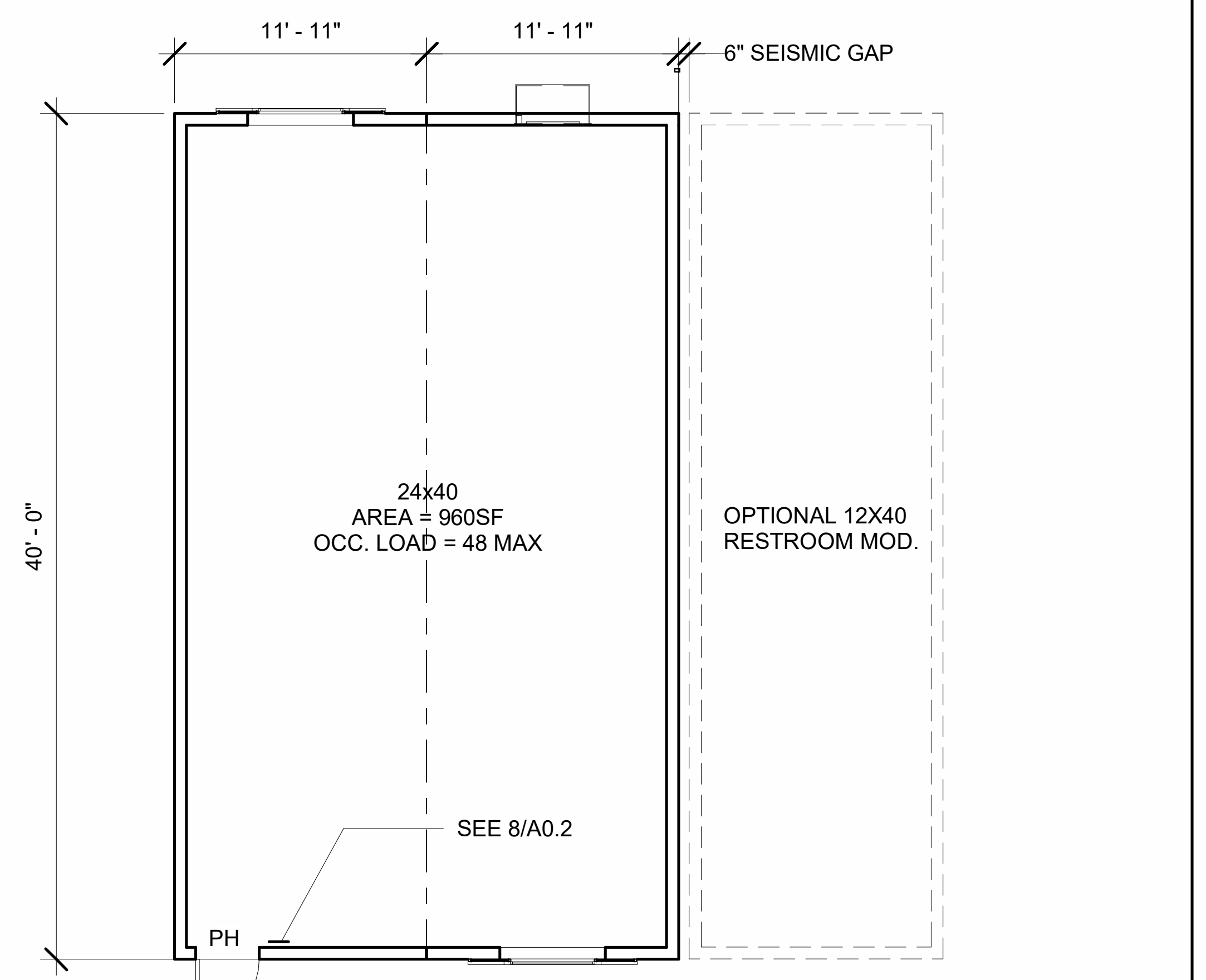
### 6 *48x40 (Total Area 1920sf)*



INTERIOR PARTITION MAY BE ADDED AND LOCATION MAY VARY BASED ON PROJECT REQUIREMENTS. SEE GENERAL NOTES THIS SHEET.
ALL PARTITION ADDED TO BE SUBMITTED FOR APPROVAL WITH SITE SPECIFIC STATE AGENCY APPROVAL.

ABBREVIATIONS:
PH - SEE HARDWARE SCHEDULE ABOVE - NO.2

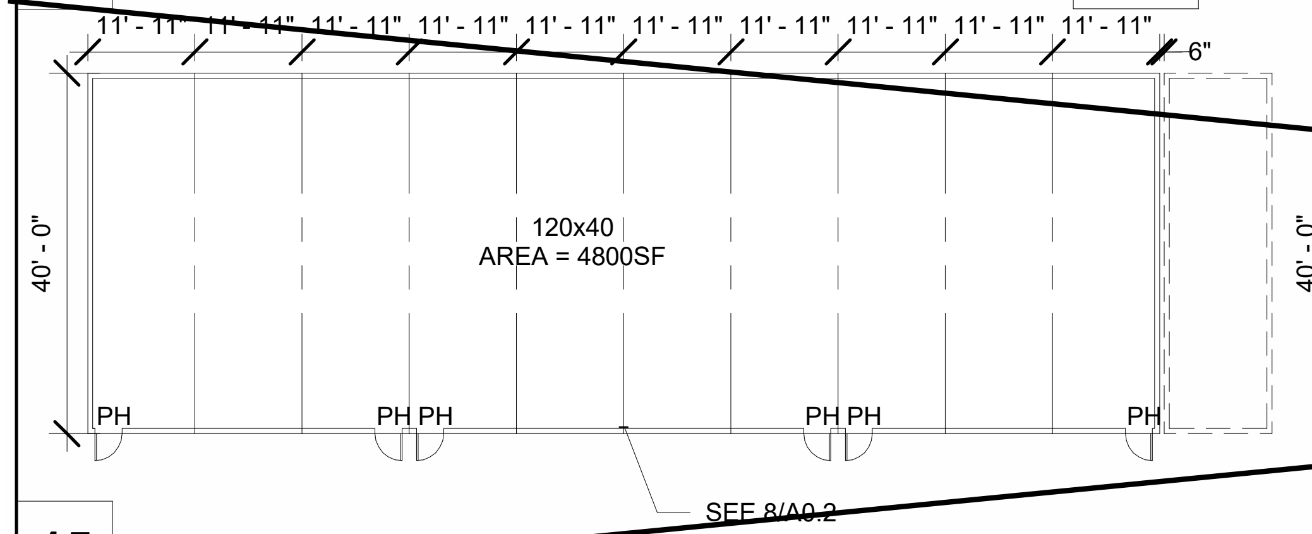
### 4 *36x40 (Total Area 1440sf)*



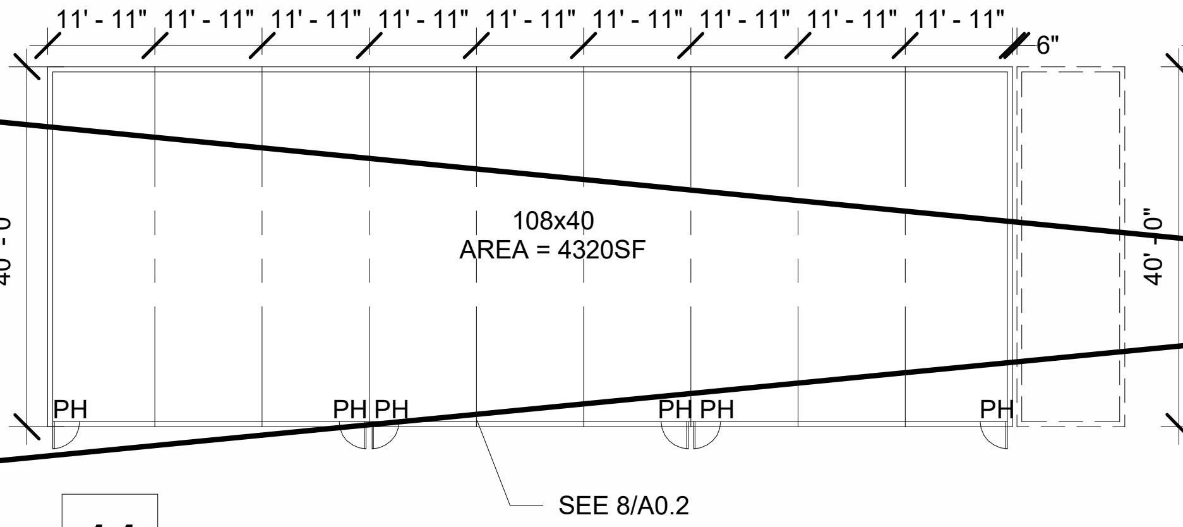
INTERIOR PARTITION MAY BE ADDED AND LOCATION MAY VARY BASED ON PROJECT REQUIREMENTS. SEE GENERAL NOTES THIS SHEET.
ALL PARTITION ADDED TO BE SUBMITTED FOR APPROVAL WITH SITE SPECIFIC STATE AGENCY APPROVAL.

ABBREVIATIONS:
PH - SEE HARDWARE SCHEDULE ABOVE - NO.2

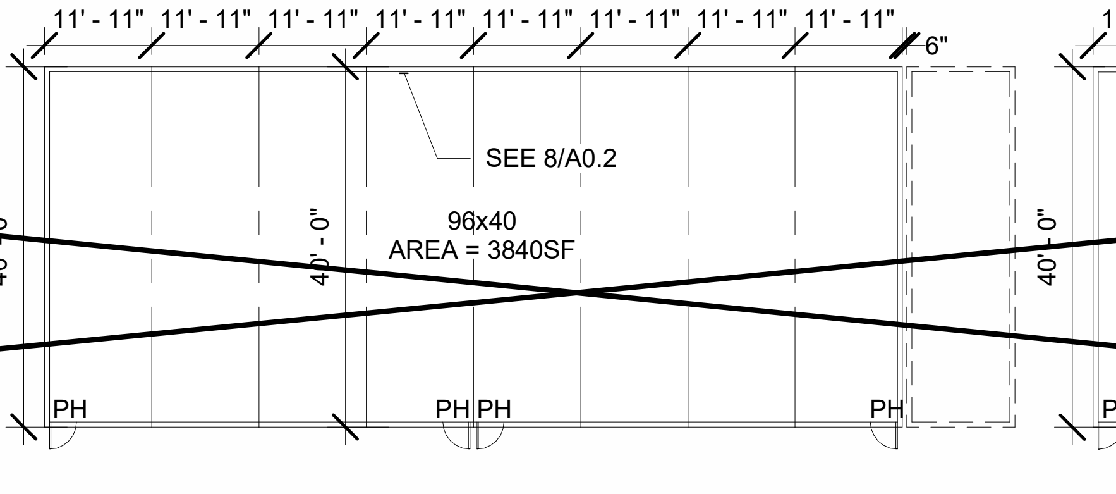
### 1 *24x40 (Total Area 960sf)*



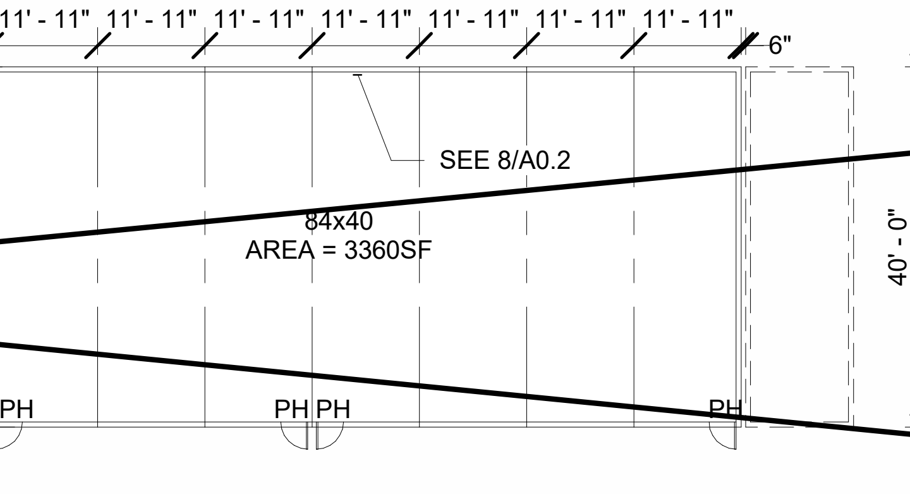
### 15 *120x40 (Total Area 4800sf)*



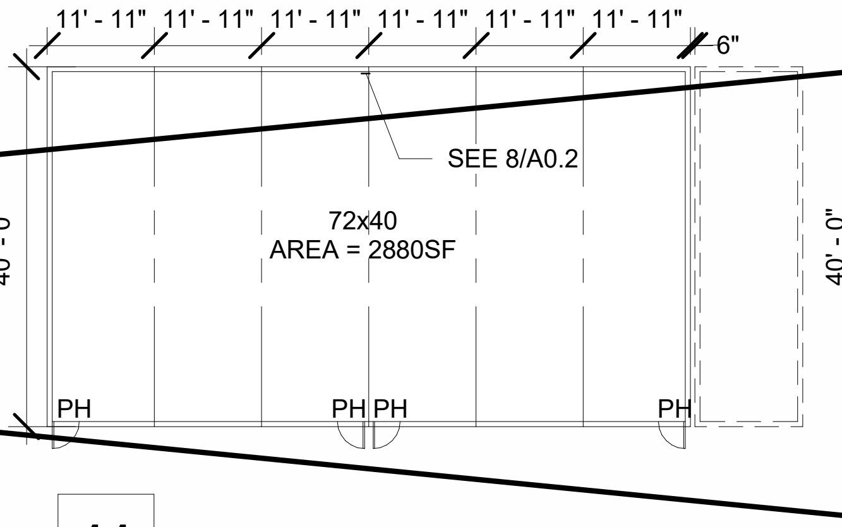
### 14 *108x40 (Total Area 4320sf)*



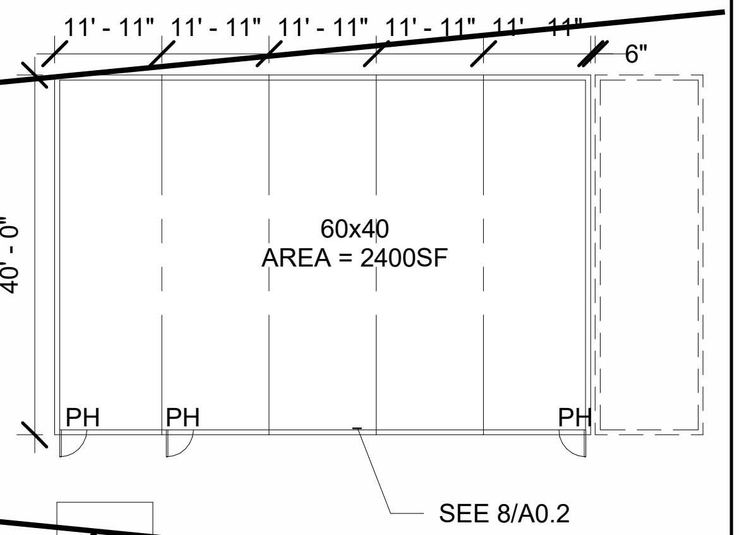
### 13 *96x40 (Total Area 3840sf)*



### 12 *84x40 (Total Area 3360sf)*



### 11 *72x40 (Total Area 2880sf)*



### 10 *60x40 (Total Area 2400sf)*

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
RST#22088
02/16/24

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
TYPICAL KEY PLAN AND SCHEDULES, GEN NOTES,

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A0.1

SHEET OF

C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

6/15/2021 11:49:02 PM

CHAPTER 11:COMMUNICATION ELEMENTS AND FEATURES

11B.702 Fire Alarm Systems

11B.702.1 General. Fire alarm systems shall have permanently installed audible and visible alarms complying with NFPA 72 (2022 edition) except that the maximum allowable sound level of audible notification appliances complying with section 11B.4-3.2.1 of NFPA 72 shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with NFPA 72 (2022 edition)

11B.703 Signs

11B.703.1 General. Signs shall comply with 703. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

11B.703.2 Raised Characters. Raised characters shall comply with 703.2 and shall be duplicated in braille complying with 703.3. Raised characters shall be installed in accordance with 703.4.

11B.703.2.1 Depth. Raised characters shall be 1/32 inch (0.8 mm) minimum above their background.

11B.703.2.2 Case. Characters shall be uppercase.

11B.703.2.3 Style. Characters shall be sans serif. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

11B.703.2.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 60 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

11B.703.2.5 Character Height. Character height measured vertically from the baseline of the character shall be 5/8 inch (15.9 mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "I".

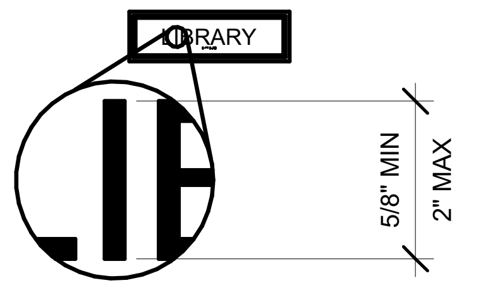


Figure 703.2.5 Height of Raised Characters

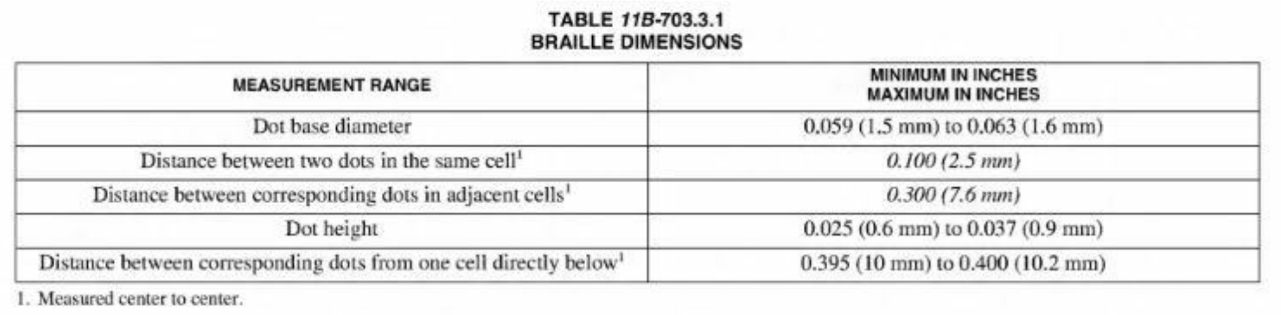


**TABLE *11B*-703.3.1**
**BRAILLE DIMENSIONS**

| MEASUREMENT RANGE | MINIMUM IN INCHES<br>MAXIMUM IN INCHES |
|---|---|
| Dot base diameter | 0.059 (1.5 mm) to 0.063 (1.6 mm) |
| Distance between two dots in the same cell[1] | *0.100 (2.5 mm)* |
| Distance between corresponding dots in adjacent cells[1] | *0.300 (7.6 mm)* |
| Dot height | 0.025 (0.6 mm) to 0.037 (0.9 mm) |
| Distance between corresponding dots from one cell directly below[1] | 0.395 (10 mm) to 0.400 (10.2 mm) |

1. Measured center to center.

**5** ***1/4" = 1'-0"***
***Sign Notes***

11B.703.2.6 Stroke Thickness for raised characters. Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the character.

11B.703.2.7 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Where characters have rectangular cross sections, spacing between individual raised characters shall be 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum. Where characters have other cross sections, spacing between individual raised characters shall be 1/16 inch (1.6 mm) minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum at the top of the cross sections. Characters shall be separated from raised borders and decorative elements 3/8 inch (9.5 mm) minimum.

11B.703.2.8 Line Spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

11B.703.3 Braille. Braille shall be contracted (Grade 2) and shall comply with 703.3 and 703.4.

11B.703.3.1 Dimensions and Capitalization. Braille dots shall have a domed or rounded shape and shall comply with Table 703.3.1. The indication of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

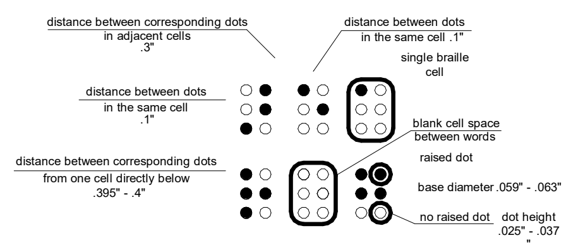

distance between corresponding dots in adjacent cells .3"
distance between dots in the same cell .1"
single braille cell
distance between dots in the same cell .1"
blank cell space between words
raised dot
distance between corresponding dots from one cell directly below .395" - .4"
base diameter .059" - .063"
no raised dot
dot height .025" - .037"

Figure 703.3.1 Braille Measurement

11B.703.3.2 Position. Braille shall be positioned below the corresponding text. If text is multi-lined, braille shall be placed below the entire text. Braille shall be separated 3/8 inch (9.5 mm) minimum from any other tactile characters and 3/8 inch (9.5 mm) minimum from raised borders and decorative elements.

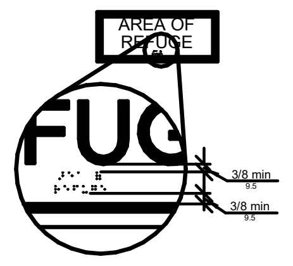


Figure 703.3.2 Position of Braille

11B.703.4 Installation Height and Location. Signs with tactile characters shall comply with 703.4.

11B.703.4.1 Height Above Finish Floor or Ground. Tactile characters on signs shall be located 48 inches (1220 mm) minimum above the finish floor or ground surface, measured from the baseline of the lowest braille character and 60 inches (1525 mm) maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character.

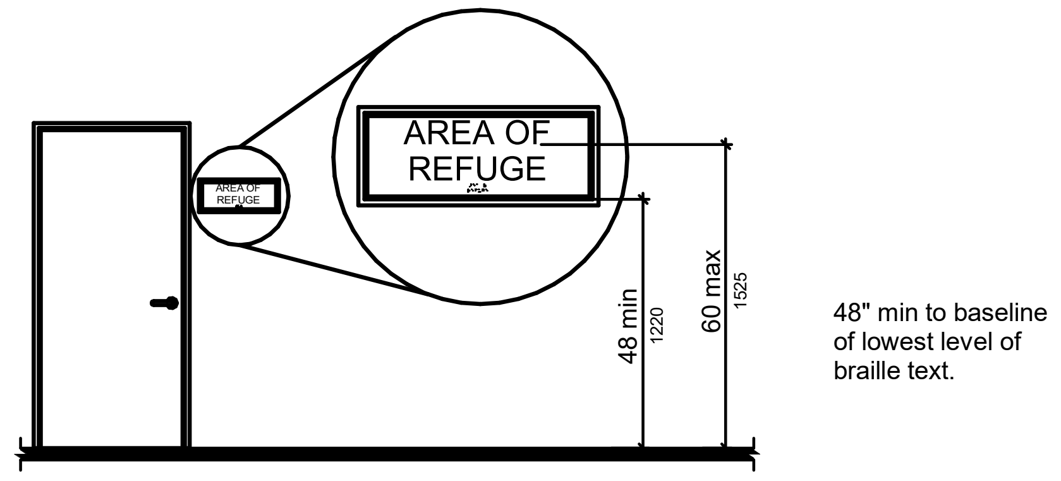


Figure 703.4.1 Height of Tactile Characters Above Finish Floor or Ground

11B.703.4.2 Location. Where a tactile sign is provided at a door, the sign shall be located alongside the door at the latch side. Where a tactile sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a tactile sign is provided at double doors with two active leafs, the sign shall be located to the right of the right hand door. Where there is no wall space at the latch side of a single door or at the right side of double doors, signs shall be located on the nearest adjacent wall. Signs containing tactile characters shall be located so that a clear floor space of 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the tactile characters, is provided beyond the arc of any door swing between the closed position and 45 degree open position.

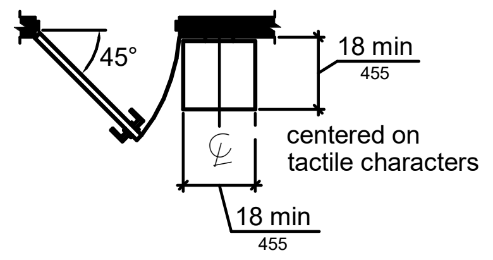


Figure 703.4.2 Location of Tactile Signs at Doors

11B.703.5 Visual Characters. Visual characters shall comply with 703.5.

11B.703.5.1 Finish and Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

11B.703.5.2 Case. Characters shall be uppercase or lowercase or a combination of both.

11B.703.5.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

11B.703.5.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 60 percent minimum and 110 percent maximum of the height of the uppercase letter "I".

11B.703.5.5 Character Height. Minimum character height shall comply with Table 703.5.5. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Character height shall be based on the uppercase letter "I".

11B.703.5.6 Height From Finish Floor or Ground. Visual characters shall be 40 inches (1015 mm) minimum above the finish floor or ground.

11B.703.5.7 Stroke Thickness. Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 20 percent maximum of the height of the character.

11B.703.5.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height.

11B.703.5.9 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

11B.703.6 Pictograms. Pictograms shall comply with 703.6.

11B.703.6.1 Pictogram Field. Pictograms shall have a field height of 6 inches (150 mm) minimum. Characters and braille shall not be located in the pictogram field.

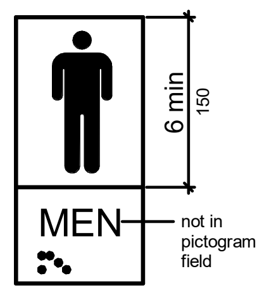
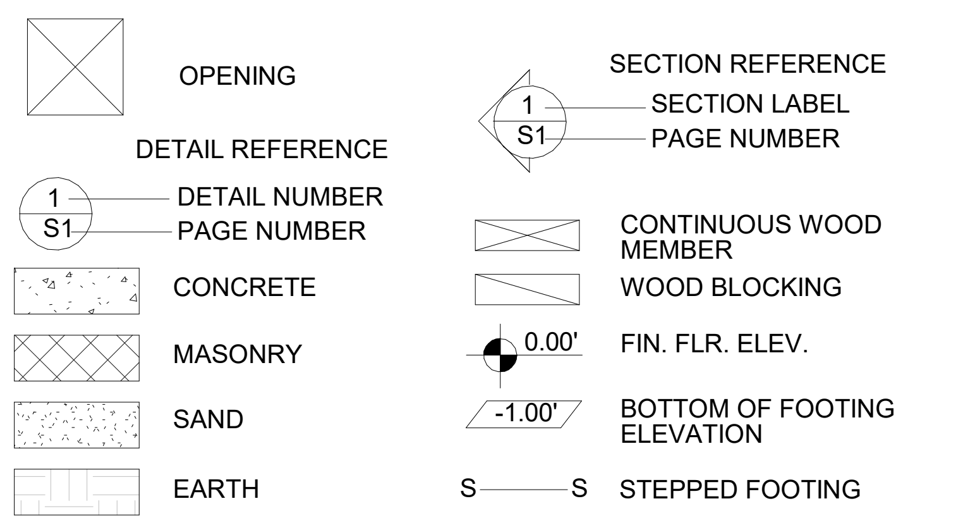
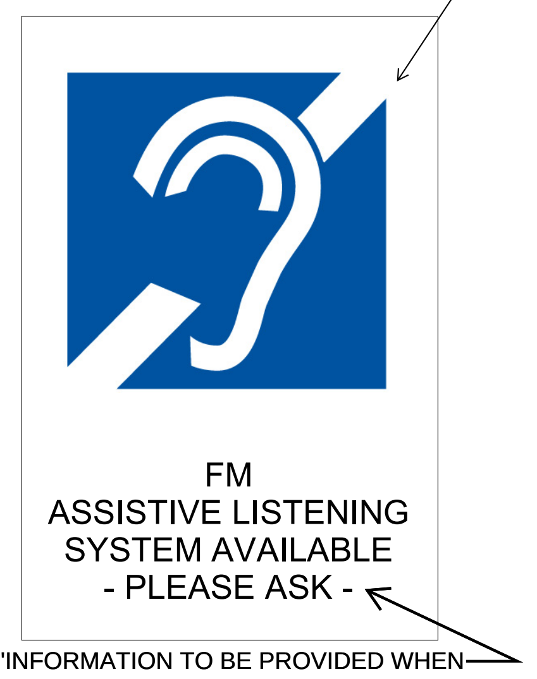


Figure 703.6.1 Pictogram Field
dark-on-light.



THE "INTERNATIONAL SYMBOL FOR ACCESS FOR HEARING LOSS" PROPORTIONS SHALL BE APPROXIMATE CBC FIGURE 11B-703.7.2.4



"INFORMATION TO BE PROVIDED WHEN BUILDINGS ARE SITE LOCATED"

REQUIRED PER 11B-219 & 11B-706
(SEE FLOOR PLANS FOR MORE INFO)

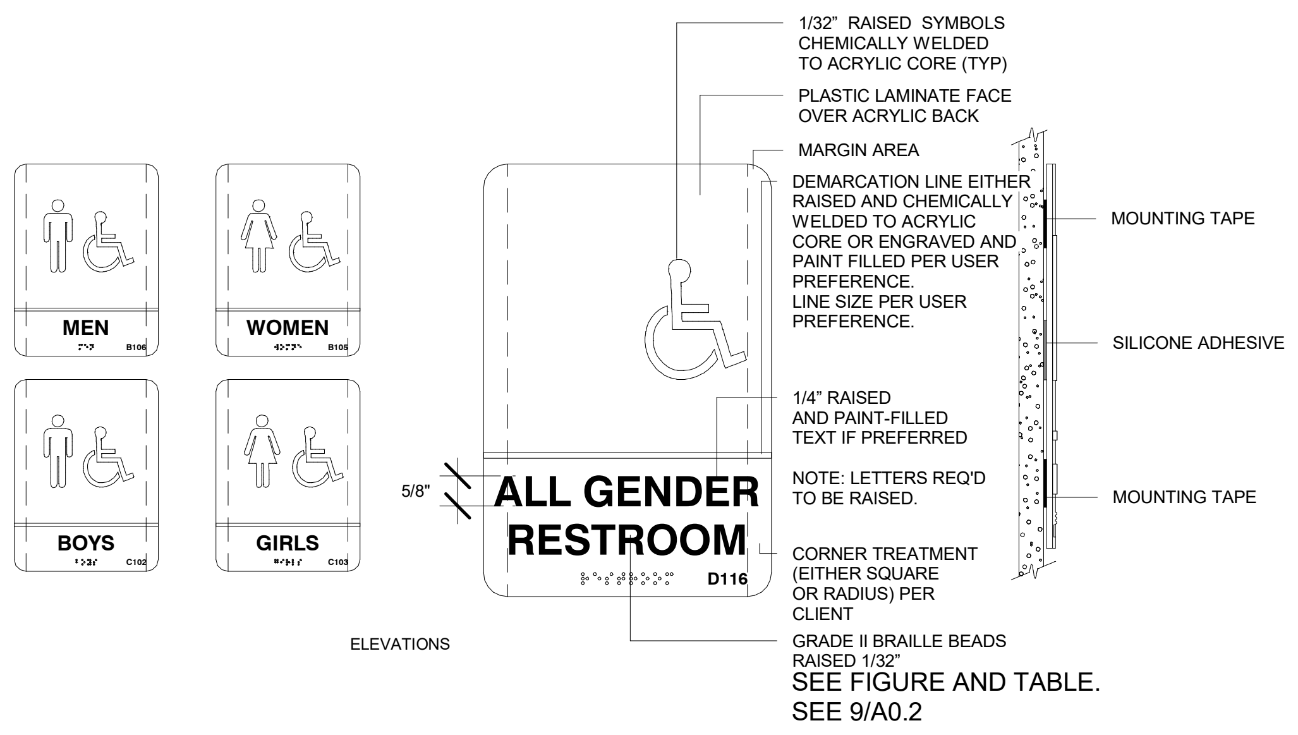
NOTE: TEXT ON THIS SIGN IN VISUAL

**7** ***1" = 1'-0"***
***Assistive Listening System Symbol***

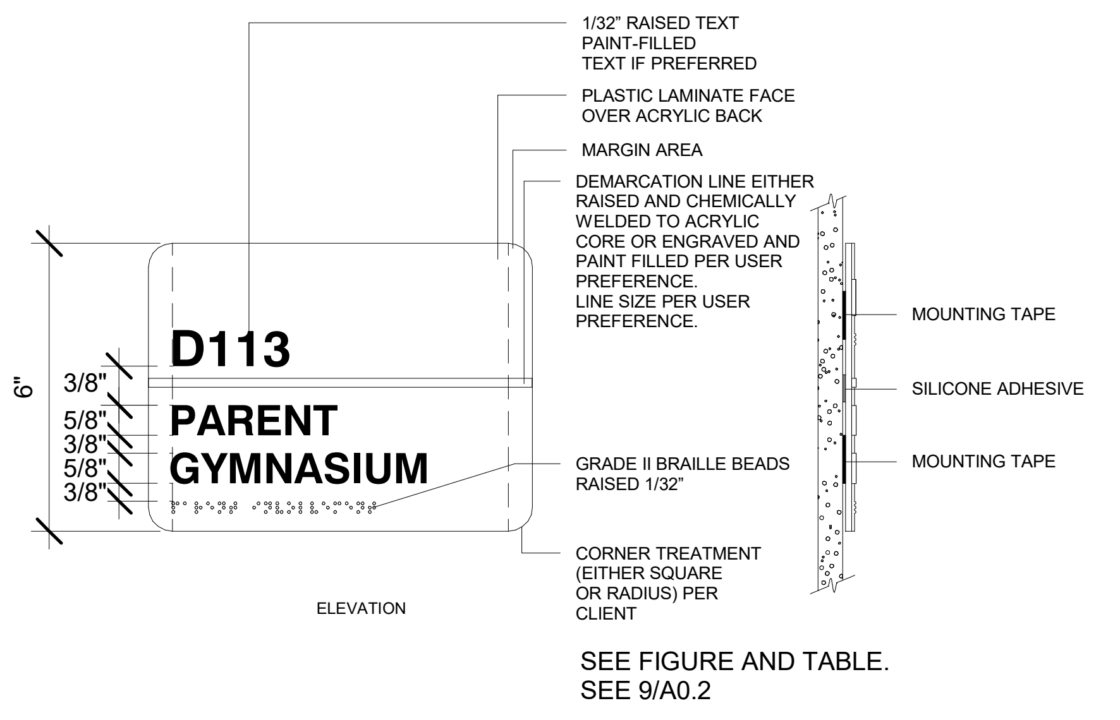
OCCUPANT LOAD SIGN REQUIRED PER DSA BU11-08.

EVERY ROOM OR SPACE WHICH IS USED FOR ASSEMBLY, CLASSROOM, DINING OR SIMILAR PURPOSES HAVING AN OCCUPANT LOAD OF 50 OR MORE SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY

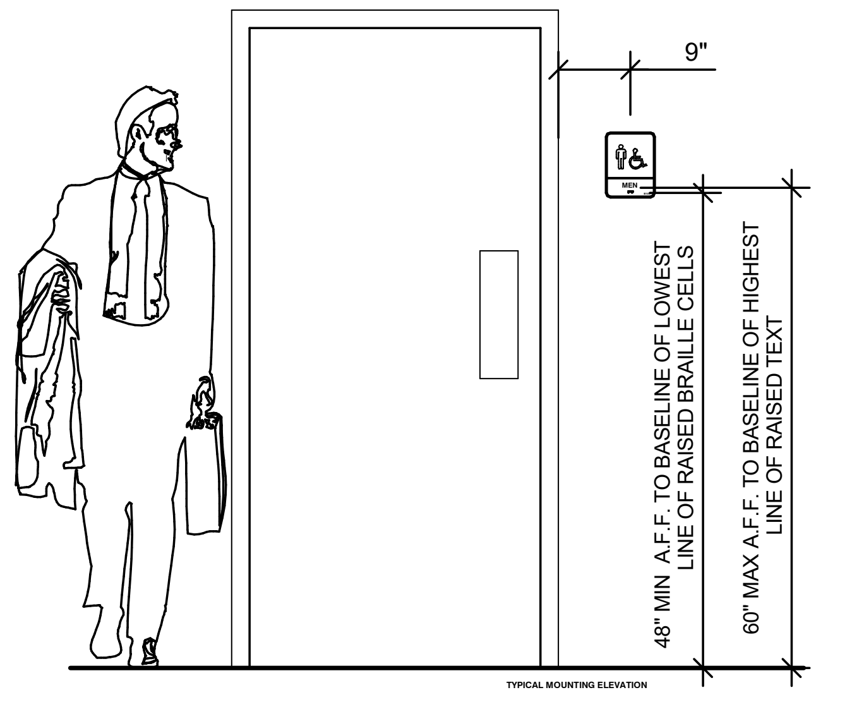
**8** ***1" = 1'-0"***
***EQUIPMENT ANCHORAGE***

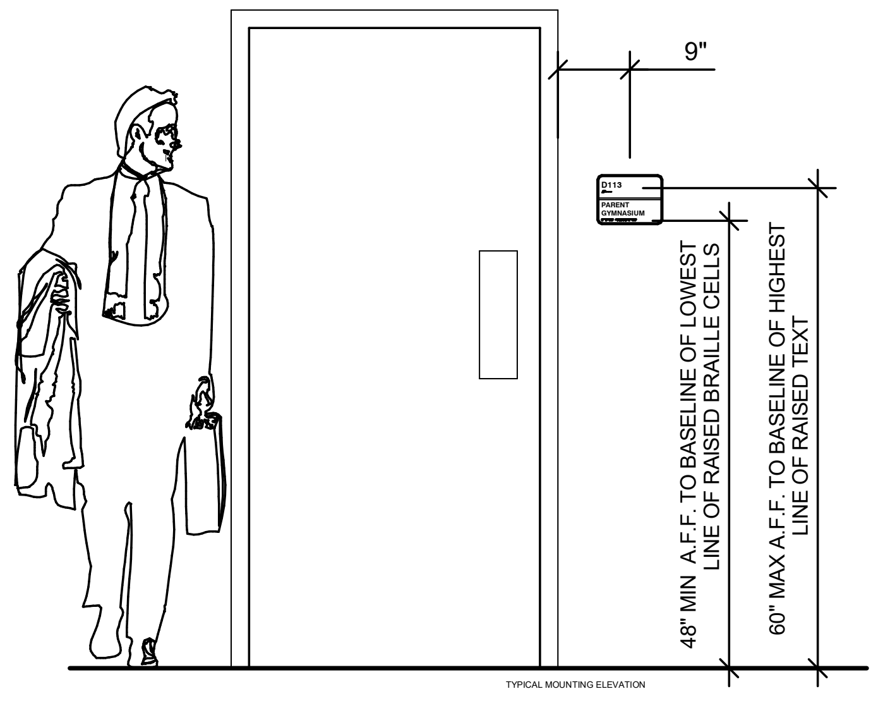

MEN
WOMEN
BOYS
GIRLS
B106
B105
C102
C103
5/8"
ALL GENDER
RESTROOM
D116
ELEVATIONS
1/32" RAISED SYMBOLS CHEMICALLY WELDED TO ACRYLIC CORE (TYP)
PLASTIC LAMINATE FACE OVER ACRYLIC BACK
MARGIN AREA
DEMARCATION LINE EITHER RAISED AND CHEMICALLY WELDED TO ACRYLIC CORE OR ENGRAVED AND PAINT FILLED PER USER PREFERENCE. LINE SIZE PER USER PREFERENCE.
1/4" RAISED AND PAINT-FILLED TEXT IF PREFERRED
NOTE: LETTERS REQ'D TO BE RAISED.
CORNER TREATMENT (EITHER SQUARE OR RADIUS) PER CLIENT
GRADE II BRAILLE BEADS RAISED 1/32"
MOUNTING TAPE
SILICONE ADHESIVE
MOUNTING TAPE

SEE FIGURE AND TABLE.
SEE 9/A0.2

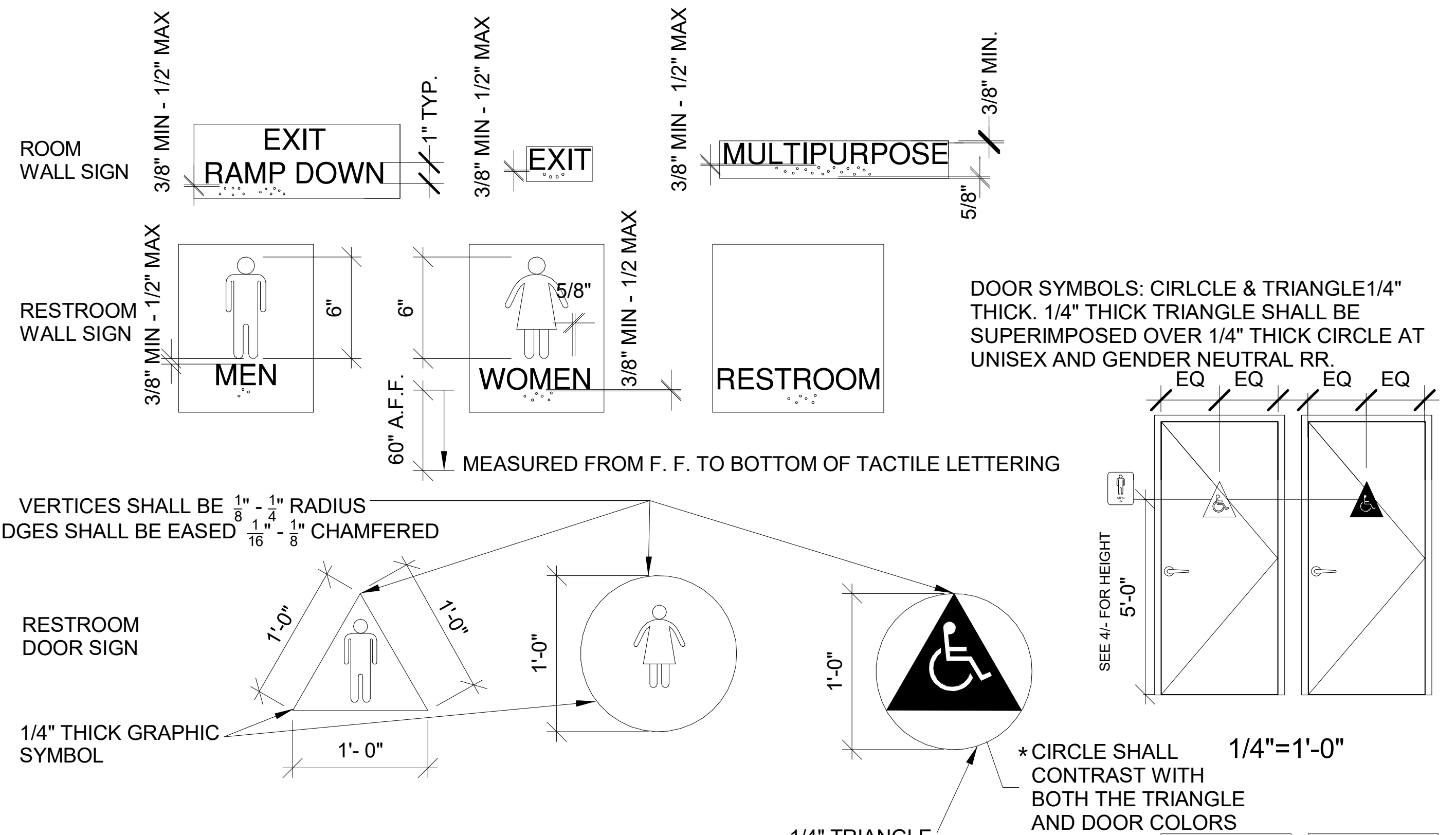

6"
3/8"
5/8"
3/8"
5/8"
3/8"
D113
PARENT
GYMNASIUM
ELEVATION
1/32" RAISED TEXT PAINT-FILLED TEXT IF PREFERRED
PLASTIC LAMINATE FACE OVER ACRYLIC BACK
MARGIN AREA
DEMARCATION LINE EITHER RAISED AND CHEMICALLY WELDED TO ACRYLIC CORE OR ENGRAVED AND PAINT FILLED PER USER PREFERENCE. LINE SIZE PER USER PREFERENCE.
GRADE II BRAILLE BEADS RAISED 1/32"
CORNER TREATMENT (EITHER SQUARE OR RADIUS) PER CLIENT
MOUNTING TAPE
SILICONE ADHESIVE
MOUNTING TAPE

SEE FIGURE AND TABLE.
SEE 9/A0.2

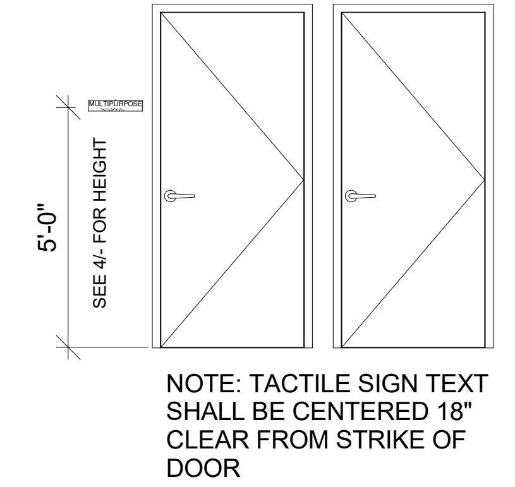

9"
48" MIN A.F.F. TO BASELINE OF LOWEST LINE OF RAISED BRAILLE CELLS
60" MAX A.F.F. TO BASELINE OF HIGHEST LINE OF RAISED TEXT
TYPICAL MOUNTING ELEVATION


9"
48" MIN A.F.F. TO BASELINE OF LOWEST LINE OF RAISED BRAILLE CELLS
60" MAX A.F.F. TO BASELINE OF HIGHEST LINE OF RAISED TEXT
TYPICAL MOUNTING ELEVATION

**4** ***1/2" = 1'-0"***
***Signage** (OFOI - UNO)*



DOOR SYMBOLS: CIRLCLE & TRIANGLE1/4" THICK. 1/4" THICK TRIANGLE SHALL BE SUPERIMPOSED OVER 1/4" THICK CIRCLE AT UNISEX AND GENDER NEUTRAL RR.



NOTE: TACTILE SIGN TEXT SHALL BE CENTERED 18" CLEAR FROM STRIKE OF DOOR

1. CHARACTERS ON SIGNS SHALL BE RAISED 1/32 INCH MIN. AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2.
2. RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH AND A MAXIMUM OF 2 INCHES HIGH.
3. CONTRAST BETWEEN CHARACTERS, SYMBOLS AND THEIR BACKGROUND MUST BE 70% MINIMUM AND HAVE A NON-GLARE FINISH. 11B-703-5.1.

**6. 11B-703.2.6 STROKE THICKNESS. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.**

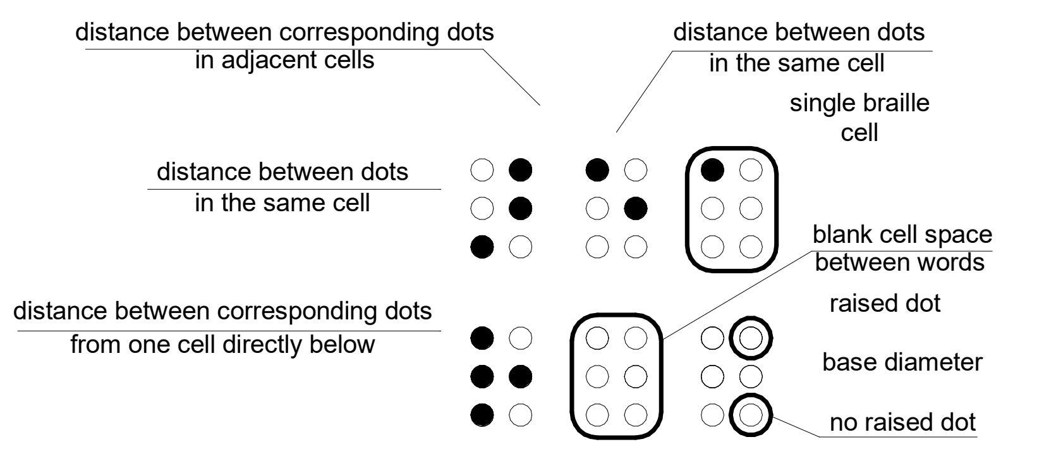
CALIFORNIA CONTRACTED BRAILLE SHALL BE USED WHENEVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS.
DOTS SHALL BE 1/10 INCH ON CENTERS IN EACH CELL WITH 2/10 INCH SPACE BETWEEN CELLS, MEASURED THE SECOND COLUMN OF DOTS IN THE FIRSTCELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL.
DOTS SHALL BE RAISED A MINIMUM OF 1/40 INCHES ABOVE THE BACKGROUND.
SEE FIGURE AND TABLE. SEE 2/A0.2

* **NOTE FOR UNISEX OR SINGLE USER RESTROOM DOOR SYMBOL:**
THE COLOR OF THE TRIANGLE SHALL CONTRAST WITH THE COLOR OF THE CIRCLE SYMBOL, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND. THE COLOR OF THE CIRCLE SYMBOL SHALL CONTRAST WITH THE COLOR OF THE DOOR OR SURFACE ON WHICH THE COMBINED CIRCLE AND TRIANGLE SYMBOL IS MOUNTED, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND.

**3** ***1/4" = 1'-0"***
***Signage and Notes***

**BRAILLE DIMENSIONS**

| MEASUREMENT RANGE | MINIMUM IN INCHES<br>MAXIUMN IN INCHES |
|---|---|
| Dot base diameter | 0.059 (1.5mm) to 0.063 (1.6mm) |
| Distance between two dots in the same cell[1] | 0.100 (2.5 mm) |
| Distance between corresponding dots in adjacent cells[1] | 0.300 (7.6 mm) |
| Dot height | 0.025 (0.6 mm) to 0.037 (0.09mm) |
| Distance between corresponding dots from once cell directly below[1] | 0.395 (10 mm) to 0.400 (10.2 mm) |


distance between corresponding dots in adjacent cells
distance between dots in the same cell
single braille cell
distance between dots in the same cell
blank cell space between words
raised dot
distance between corresponding dots from one cell directly below
base diameter
no raised dot

**9** ***1/2" = 1'-0"***
***BRAILLE DIMENSIONS***

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA
RST#22088
02/16/24

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
SIGNAGE AND SYMBOLS

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

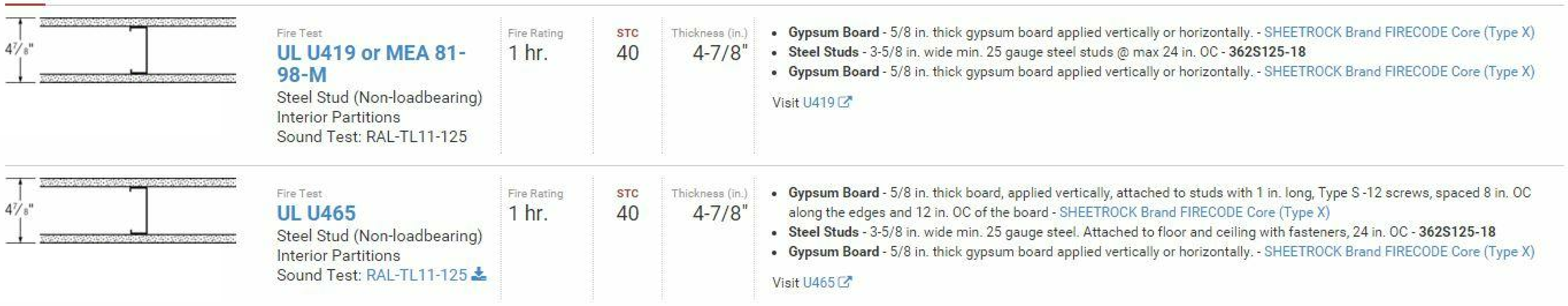
CHECKED BY
RH/RT

DATE

SHEET NO.
A0.2

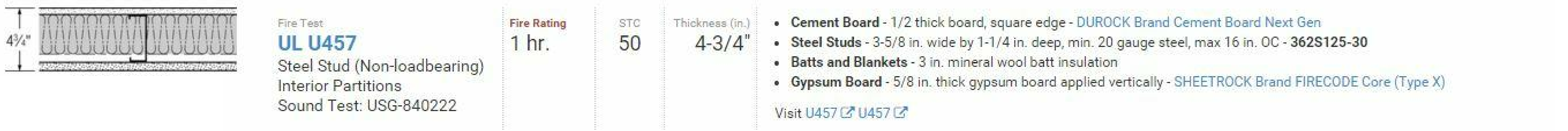
SHEET OF

## UL U419 OR UL U465 (OR EQ) TO BE USED FOR INT. STC RATING. WOOD STUD MAY BE USED ILO OF MTL STUD (WHEN NON-RATED WALLS ARE BEING APPLIED "X" BOARD IS NOT REQUIRED -STC RATINGS STILL APPLY)



| Fire Test | Fire Rating | STC | Thickness (in.) | |
|---|---|---|---|---|
| **UL U419 or MEA 81-98-M**<br>Steel Stud (Non-loadbearing) Interior Partitions<br>Sound Test: RAL-TL11-125 | 1 hr. | 40 | 4-7/8" | - **Gypsum Board** - 5/8 in. thick gypsum board applied vertically or horizontally. - SHEETROCK Brand FIRECODE Core (Type X)<br>- **Steel Studs** - 3-5/8 in. wide min. 25 gauge steel studs @ max 24 in. OC - **362S125-18**<br>- **Gypsum Board** - 5/8 in. thick gypsum board applied vertically or horizontally. - SHEETROCK Brand FIRECODE Core (Type X)<br>Visit U419 |
| **UL U465**<br>Steel Stud (Non-loadbearing) Interior Partitions<br>Sound Test: RAL-TL11-125 | 1 hr. | 40 | 4-7/8" | - **Gypsum Board** - 5/8 in. thick board, applied vertically, attached to studs with 1 in. long, Type S -12 screws, spaced 8 in. OC along the edges and 12 in. OC of the board - SHEETROCK Brand FIRECODE Core (Type X)<br>- **Steel Studs** - 3-5/8 in. wide min. 25 gauge steel. Attached to floor and ceiling with fasteners, 24 in. OC - **362S125-18**<br>- **Gypsum Board** - 5/8 in. thick gypsum board applied vertically or horizontally. - SHEETROCK Brand FIRECODE Core (Type X)<br>Visit U465 |

## UL U457 (OR EQ) TO BE USED FOR EXT. STC RATING . WOOD STUD MAY BE USED ILO OF MTL STUD



| Fire Test | Fire Rating | STC | Thickness (in.) | |
|---|---|---|---|---|
| **UL U457**<br>Steel Stud (Non-loadbearing) Interior Partitions<br>Sound Test: USG-840222 | 1 hr. | 50 | 4-3/4" | - **Cement Board** - 1/2 thick board, square edge - DUROCK Brand Cement Board Next Gen<br>- **Steel Studs** - 3-5/8 in. wide by 1-1/4 in. deep, min. 20 gauge steel, max 16 in. OC - **362S125-30**<br>- **Batts and Blankets** - 3 in. mineral wool batt insulation<br>- **Gypsum Board** - 5/8 in. thick gypsum board applied vertically - SHEETROCK Brand FIRECODE Core (Type X)<br>Visit U457 U457 |

ACOUSTIC CONTROL- When the Pre-check building is site adapted, the building and site features need to comply with the CALGreen Code, Section 5.507.4 for the specific site location, and when PC building is place adjacent to another PC building, the adjoining wall section for interior sound transmission must meet the minimum requirement of a STC rating of 40 (per 2022 CALGreen Code, Section 507.4.3).

PROJECT SPECIFIC STATE AGENCY APPROVAL

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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CALGREEN SPEC'S

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A0.5

SHEET OF

6/15/2021 11:49:09 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

| | | |
|---|---|---|
| Y | = | YES |
| N/A | = | NOT APPLICABLE |
| RESPON. PARTY | = | RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.) |

Y | N/A | RESPON. PARTY

## CHAPTER 3
## GREEN BUILDING
### SECTION 301 GENERAL

**301.1 SCOPE.** Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

**301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG]** The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of $200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and/or alterations [A]. When the code section applies to both, no banner will be used.

**301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:**

**Note:** On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 *et seq.* for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.

**301.3.2 Waste Diversion.** The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC)
301.5 HEALTH FACILITIES. (see GBSC)

### SECTION 302 MIXED OCCUPANCY BUILDINGS

**302.1 MIXED OCCUPANCY BUILDINGS.** In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

### SECTION 303 PHASED PROJECTS

**303.1 PHASED PROJECTS.** For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

**303.1.1 Initial Tenant improvements.** The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations.

### ABBREVIATION DEFINITIONS:

| | |
|---|---|
| HCD | Department of Housing and Community Development |
| BSC | California Building Standards Commission |
| DSA-SS | Division of the State Architect, Structural Safety |
| OSHPD | Office of Statewide Health Planning and Development |
| LR | Low Rise |
| HR | High Rise |
| AA | Additions and Alterations |
| N | New |

## CHAPTER 5
## NONRESIDENTIAL MANDATORY MEASURES
## DIVISION 5.1 PLANNING AND DESIGN

### SECTION 5.101 GENERAL

**5.101.1 SCOPE**
The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

### SECTION 5.102 DEFINITIONS

**5.102.1 DEFINITIONS**
The following terms are defined in Chapter 2 *(and are included here for reference)*

**CUTOFF LUMINAIRES.** Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

**LOW-EMITTING AND FUEL EFFICIENT VEHICLES.**
Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), enhanced advanced technology PZEV (enhanced AT ZEV) or transitional zero emission vehicles (TZEV) regulated under CCR, Title 13, Section 1962.
2. High-efficiency vehicles, regulated by U.S. EPA, bearing a fuel economy and greenhouse gas rating od 9 oe 10 as regulated under 40 CFR Section 600 Subpart D.

**NEIGHBORHOOD ELECTRIC VEHICLE (NEV).** A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

**TENANT-OCCUPANTS.** Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

**VANPOOL VEHICLE.** Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ridesharing.

**Note:** Source: Vehicle Code, Division 1, Section 668

**ZEV.** Any vehicle certified to zero-emission standards.

### SECTION 5.106 SITE DEVELOPMENT

☐ ☐ **5.106.1 STORM WATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND.** Newly constructed projects and additions which disturb less than one acre of land, and are not part of a larger common plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

**5.106.1.1 Local ordinance**. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

**5.106.1.2 Best Management Practices (BMPs).** Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMPs.

1. Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Scheduling construction activity during dry weather, when possible.
   b. Preservation of natural features, vegetation, soil, and buffers around surface waters.
   c. Drainage swales or lined ditches to control stormwater flow.
   d. Mulching or hydroseeding to stabilize disturbed soils.
   e. Erosion control to protect slopes.
   f. Protection of storm drain inlets (gravel bags or catch basin inserts).
   g. Perimeter sediment control (perimeter silt fence, fiber rolls).
   h. Sediment trap or sediment basin to retain sediment on site.
   i. Stabilized construction exits.
   j. Wind erosion control.
   k. Other soil loss BMPs acceptable to the enforcing agency.
2. Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Dewatering activities.
   b. Material handling and waste management.
   c. Building materials stockpile management.
   d. Management of washout areas (concrete, paints, stucco, etc.).
   e. Control of vehicle/equipment fueling to contractor's staging area.
   f. Vehicle and equipment cleaning performed off site.
   g Spill prevention and control.
   h. Other housekeeping BMPs acceptable to the enforcing agency.

Y | N/A | RESPON. PARTY

☐ ☐ **5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND.** Comply with all lawfully enacted stormwater discharge regulations for projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of a larger common plan of development sale.

**Note:** Projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of the larger common plan of development or sale must comply with the post-construction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board or the Lahontan Regional Water Quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).

The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff (pre-project hydrology) with the installation of postconstruction stormwater management measures. The NPDES permits emphasize runoff reduction through on-site stormwater use, interception, evapotranspiration, and infiltration through nonstructural controls, such as Low Impact Development (LID) practices, and conversation design measures. Stormwater volume that cannot be addressed using nonstructural practices is required to be captured in structural practices and be approved by the enforcing agency.

Refer to the current applicable permits on the State Water Resources Control Board website at: www.waterboards.ca.gov/constructionstormwater. Consideration to the stormwater runoff management measures should be given during the initial design process for appropriate integration into site development.

☐ ☐ **5.106.4 BICYCLE PARKING.** For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

**5.106.4.1 Bicycle parking. [BSC-CG]** Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

**5.106.4.1.1 Short-term bicycle parking.** If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
**Exception:** Additions or alterations which add nine or less visitor vehicular parking spaces.

**5.106.4.1.2 Long-term bicycle parking.** For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

**5.106.4.1.3** For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicular parking spaces being added, with a minimum of one bicycle parking facility.

**5.106.4.1.4** For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

**5.106.4.1.5** Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

**Note:** Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

**5.106.4.2 Bicycle parking. [DSA-SS]** For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

**5.106.4.2.1 Student bicycle parking.** Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.
**5.106.4.2.2 Staff bicycle parking.** Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

☐ ☐ **5.106.5.3 Electric vehicle (EV) charging**. [N] Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.

Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcement agency substantiating the local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section

**5.106.5.3.1 EV capable spaces.**
**[N]** EV capable spaces shall be provided in accordance with Table 5.106.5.3.1 and the following requirements:
1. Raceways complying with the California Electrical Code and no less that 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the EV capable and into a suitable listed cabinet, box,enclosure or equivalent. A common raceway may be used to serve multiple EV charging spaces.
2. A service panel or subpanel (s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.
3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective devices space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

Note: A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by an enforcement agency. See vehicle Code Section 22511.2 for further details.

TABLE 5.106.5.3.1

| TOTAL NUMBER OF ACTUAL PARKING SPACES | NUMBER OF REQUIRED EV CAPABLE SPACES | NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)^2 |
|---|---|---|
| 0-9 | 0 | 0 |
| 10-25 | 2 | 0 |
| 26-50 | 8 | 2 |
| 51-75 | 13 | 3 |
| 76-100 | 17 | 4 |
| 101-150 | 25 | 6 |
| 151-200 | 35 | 9 |
| 201 AND OVER | 20% of total[1] | 25% of EV capable spaces[1] |

1. Where there is insufficient electrical supply.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count towards the total number of required EV capable spaces shown in column 2.

**5.106.5.3.2 Electric vehicle charging stations (EVCS)**
EV capable spaces shall be provided with EVSE to create EVCS in the number indicated in Table 5.106.5.3.1. The EVCS required by Table 5.106.5.3.1 may be provided with EVSE in any combination of Level 2 and Direct Current Fast Charging (DCFC), except that at least one Level 2 EVSE shall be provided.

One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required by Section 5.106.5.3.1 for each EV capable space is accumulatively supplied to the EV charger.

The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces without EVSE by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

Y | N/A | RESPON. PARTY

**5.106.5.3.3 Use of automatic load management systems (ALMS).**
ALMS shall be permitted for EVCS. When ALMS is installed, the required electrical load capacity specified in Section
5.106.5.3.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs.

**5.106.5.3.4 Accessible EVCS.**
When EVSE is installed, accessible EVSC shall be provided in accordance with the *California Building Code*, Chapter 11B, Section 11B-228.3.
**Note:** For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

**5.106.5.4 Electric Vehicle (EV) charging: medium-duty and heavy-duty. [N]**
Construction shall comply with section 5.106.5.4.1 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores with planned off-street loading spaces shall also comply with Section 5.106.5.4.1 for future installation of medium- and heavy-duty EVSE.
Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply.
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the *California Electrical Code* and as follows:

**5.106.5.4.1 Electric vehicle charging readiness requirements for warehouse, grocery stores and retail stores with planned off-street loading spaces.**
[N] In order to avoid future demolition when adding EV charging supply and distribution equipment, spare raceways(s) or busway(s) and adequate capacity for transformers(s), service panels(s) or subpanel(s) shall be installed at the time of construction in accordance with the California Electrical Code. Construction plans and specifications shall include but are not limited to, the following:
1. The transformer, main service equipment and subpanel shall meet the minimum power requirement in Table 5.106.5.4.1 to accommodate the dedicated branch circuits for the future installation of EVSE.
2. The construction documents shall indicate on or more location(s) convenient to the planned offstreet loading space(s) reserved for medium-and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s) as shown in Table 5.106.5.4.1
3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium-and heavy-duty EVSE will be located and shall terminate in close proximity to the potential future location of the charging equipments for medium- and heavy-duty vehicles.
4. The raceway(s) or busway(s) shall be sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table 5.106.5.4.1.

TABLE 5.106.5.4.1 RACEWAY CONDUIT AND PANEL POWER REQUIREMENTS FOR MEDIUM- AND HEAVY-DUTY EVSE [N]

| BUILDING TYPE | BUILDING SIZE (SQ. FT.) | NUMBER OF OFF-STREET LOADING SPACES | ADDITIONAL CAPACITY REQUIRED (KVA) FOR RACEWAY & BUSWAY AND TRANSFORMER & PANEL |
|---|---|---|---|
| Grocery | 10,000 to 90,000 | 1 or 2 | 200 |
| | | 3 or Greater | 400 |
| | Greater than 90,000 | 1 or Greater | 400 |
| Retail | 10,000 to 135,000 | 1 or 2 | 200 |
| | | 3 or Greater | 400 |
| | Greater than 135,000 | 1 or Greater | 400 |
| Warehouse | 20,000 to 256,000 | 1 or 2 | 200 |
| | | 3 or Greater | 400 |
| | Greater than 256,000 | 1 or Greater | 400 |

☐ ☐ **5.106.8 LIGHT POLLUTION REDUCTION. [N].** I Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8, [N] or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

**Exceptions: [N]**

1. Luminaires that qualify as exceptions in Sections 130.2 (b) and 140.7 of the California Energy Code.
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.
5. Luminaires with less than 6,200 initial luminaire lumens.

TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS [1,2]

| ALLOWABLE RATING | LIGHTING ZONE LZ0 | LIGHTING ZONE LZ1 | LIGHTING ZONE LZ2 | LIGHTING ZONE LZ3 | LIGHTING ZONE LZ4 |
|---|---|---|---|---|---|
| **MAXIMUM ALLOWABLE BACKLIGHT RATING [3]** | | | | | |
| Luminaire greater than 2 mounting heights (MH) from property line | N/A | No Limit | No Limit | No Limit | No Limit |
| Luminaire back hemisphere is 1-2 MH from property line | N/A | B2 | B3 | B4 | B4 |
| Luminaire back hemisphere is 0.5-1 MH from property line | N/A | B1 | B2 | B3 | B3 |
| Luminaire back hemisphere is less than 0.5 MH from property line | N/A | B0 | B0 | B1 | B2 |
| **MAXIMUM ALLOWABLE UPLIGHT RATING (U)** | | | | | |
| For area lighting [3] | N/A | U0 | U0 | U0 | U0 |
| For all other outdoor lighting,including decorative luminaires | N/A | U1 | U2 | U3 | UR |
| **MAXIMUM ALLOWABLE GLARE RATING [5] (G)** | | | | | |
| **MAXIMUM ALLOWABLE GLARE RATING [5] (G)** | N/A | G1 | G2 | G3 | G4 |
| **MAXIMUM ALLOWABLE GLARE RATING [5] (G)** | N/A | G0 | G1 | G1 | G2 |
| **MAXIMUM ALLOWABLE GLARE RATING [5] (G)** | N/A | G0 | G0 | G1 | G1 |
| **MAXIMUM ALLOWABLE GLARE RATING [5] (G)** | N/A | G0 | G0 | G0 | G1 |

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *Callifornia Administrative Code.*

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

3. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaries located in these areas shall meet *U*-value limits for "all other outdoor lighting"

**5.106.8.1 Facing- Backlight**
Luminaries within 2MH of a property line shall be oriented so that the nearest property line is behind the fixture, and shall comply with the backlight rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point of that property line.
**Exception: Corners.** If two property lines (or two segments of the same property line) have equidistant point to the luminaire, then the luminaire may be oriented so that the intersection of the two lines (the corner) is directly behind the luminaire. The luminaire shall still use the distance to the nearest points(s) on the property lines to determine the required backlight rating.

**5.106.8.2 Facing-Glare.**
For luminaires covered by 5.106.8.1, if a property line also exists within or extends into the front hemisphere within 2MH of the luminaire then the luminaire shall comply with the more stringent glare rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point on the nearest property line within the front hemisphere.

**Note: [N]**
1.See also *California Building Code*, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.
2.Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table A-1, *California Energy Code* Tables 130.2-A and 130.2-B.
3. Refer to the *California Building Code* for requirements for additions and alterations.

☐ ☐ **5.106.10 GRADING AND PAVING.** Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.
   **Exception:** Additions and alterations not altering the drainage path.

☐ ☐ **5.106.12 SHADE TREES [DSA-SS].** Shade Trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.

**5.106.12.1 Surface parking areas.** Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50 percent of the parking area within 15 years.

**Exceptions:** Surface parking area covered by solar photovoltaic shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.

**5.106.12.2 Landscape areas.** Shade tress plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years.

**Exceptions:** Playfields for organized sport activity are not included in the total area calculation.

**5.106.12.3. Hardscape areas.** Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the hardscape area within 15 years.

**Exceptions:**
1. Walks, hardscape areas covered by solar photovoltaic shade structures or shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.
2. Designated and marked play areas of organized sport activity are not included in the total area calculation.

## DIVISION 5.2 ENERGY EFFICIENCY

### SECTION 5.201 GENERAL

**5.201.1 Scope [BSC-CG].** ***California Energy Code [DSA-SS]*.** For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

## DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION

### SECTION 5.301 GENERAL

**5.301.1 Scope.** The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

### SECTION 5.302 DEFINITIONS

**5.302.1 Definitions.** The following terms are defined in Chapter 2 *(and are included here for reference)*

**EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS].** An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which ae two major influences on the amount of water that needs to be applied to the landscape.

**FOOTPRINT AREA [DSA-SS].** The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.

**METERING FAUCET**. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.

**GRAYWATER.** Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

**MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO).** The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

**MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD]** The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

**POTABLE WATER.** Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

**POTABLE WATER. [HCD]** Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

**RECYCLED WATER.** Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

**SUBMETER. [HCD 1]** A secondary device beyond a meter that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civic Code Section 1954.202 (g) and Water code Section 517 for additional details.)

**WATER BUDGET.** Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

***DISCLAIMER:*** *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. 53380
Exp. 03/31/24
02/16/24
RST#22088

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CAL GREEN CHECKLIST

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A0.6

SHEET OF

6/15/2021 11:49:10 PM
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AIA California

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## NONRESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y | N/A | RESPON. PARTY

### SECTION 5.303 INDOOR WATER USE

☐ ☐ **5.303.1 METERS.** Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

**5.303.1.1 Buildings in excess of 50,000 square feet.** Separate submeters shall be installed as follows:

1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
   a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
   b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
   c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

**5.303.1.2 Excess consumption.** A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

☐ ☐ **5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

☐ ☐ **5.303.3.1 Water Closets.** The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.

**Note:** The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

**5.303.3.2 Urinals.**

☐ ☐ **5.303.3.2.1 Wall-mounted Urinals.** The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.

**5.303.3.2.2 Floor-mounted Urinals.** The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.

☐ ☐ **5.303.3.3 Showerheads. [BSC-CG]**

**5.303.3.3.1 Single showerhead.** Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

**5.303.3.3.2 Multiple showerheads serving one shower.** When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
**Note:** A hand-held shower shall be considered a showerhead.

☐ ☐ **5.303.3.4 Faucets and fountains.**

**5.303.3.4.1 Nonresidential Lavatory faucets.** Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

**5.303.3.4.2 Kitchen faucets.** Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

**5.303.3.4.3 Wash fountains.** Wash fountains shall have a maximum flow rate of not more than1.8 gallons per minute/20 [rim space (inches) at 60 psi].

**5.303.3.4.4 Metering faucets.** Metering faucets shall not deliver more than 0.20 gallons per cycle.

**5.303.3.4.5 Metering faucets for wash fountains.** Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].

**Note:** Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

**5.303.3.4.6 Pre-rinse spray value**
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7), and shall be equipped with an integral automatic shutoff.

**FOR REFERENCE ONLY:**The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

| PRODUCT CLASS [spray force in ounce force (ozf)] | MAXIMUM FLOW RATE (gpm) |
|---|---|
| Product Class 1 (≤ 5.0 ozf) | 1.00 |
| Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf) | 1.20 |
| Product Class 3 (> 8.0 ozf) | 1.28 |

☐ ☐ **5.303.4 COMMERCIAL KITCHEN EQUIPMENT.**

**5.303.4.1 Food Waste Disposers.** Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.
**Note:** This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

**5.303.5 AREAS OF ADDITION OR ALTERATION.** For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.

**5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS.** Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code* and in Chapter 6 of this code.

### SECTION 5.304 OUTDOOR WATER USE

☐ ☐ **5.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.** Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

**Notes:**
1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
2. MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/.

☐ ☐ **5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.** For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, *California Code of Regulations*, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.

**Exception**: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWELO.

**5.304.6.1 Newly constructed landscapes.** New construction projects with an aggregate landscape area equal to or greater than 500 square feet.

**5.304.6.2 Rehabilitated landscapes.** Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

## DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

### SECTION 5.401 GENERAL

**5.401.1 SCOPE.** The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

### SECTION 5.402 DEFINITIONS

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

**ADJUST.** To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

**BALANCE.** To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.

**BUILDING COMMISSIONING.** A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

**ORGANIC WASTE.** Food waste, green waste, landscape and pruning wste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.

**TEST.** A procedure to determine quantitative performance of a system or equipment

### SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

**5.407.1 WEATHER PROTECTION.** Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.

☐ ☐ **5.407.2 MOISTURE CONTROL.** Employ moisture control measures by the following methods.

**5.407.2.1 Sprinklers.** Design and maintain landscape irrigation systems to prevent spray on structures.

**5.407.2.2 Entries and openings**. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

**5.407.2.2.1 Exterior door protection.** Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:

1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

**5.407.2.2.2 Flashing.** Install flashings integrated with a drainage plane.

### SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

☐ ☐ **5.408.1 CONSTRUCTION WASTE MANAGEMENT.** Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

**5.408.1.1 Construction waste management plan.** Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:

1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

**5.408.1.2 Waste Management Company.** Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

**Note:** The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

**Exceptions to Sections 5.408.1.1 and 5.408.1.2:**

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

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

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

**Notes:**

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

☐ ☐ **5.408.2 UNIVERSAL WASTE. [A]** Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.

**Note**: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/universalwaste/

**5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS.** 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

**Exception:** Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

**Notes:**

1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
2. For a map of know pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

### SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

☐ ☐ **5.410.1 RECYCLING BY OCCUPANTS.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

**Exception**: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2)(A) et seq. shall also be exempt from the organic waste portion of this section.

**5.410.1.1 Additions.** All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site.

**Exception**: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

**5.410.1.2 Sample ordinance.** Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code*. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

**Note:** A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

☐ ☐ **5.410.2 COMMISSIONING. [N] New buildings 10,000 square feet and over.** For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. For I-occupancies that are not regulated by OSHPD or for I-occupancies and L-occupancies that are not regulated y the California Energy Code Section 100.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.

**Note:** For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements

Commissioning requirements shall include:

1. Owner's or Owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

**Exceptions:**

1. Unconditioned warehouses of any size.
2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
4. Open parking garages of any size, or open parking garage areas, of any size, within a structure.

**Note:** For the purposes of this section, unconditioned shall mean a building, area, or room which does not provide heating and or air conditioning.

**Informational Notes:**

1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for qualifications of commissioning personnel. AC 476 des not certify individuals to conduct functional performance tests or to adjust and balance systems.

2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code*.

**5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N]** The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:
1. Environmental and sustainability goals.
2. Building sustainable goals.
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

**5.410.2.2 Basis of Design (BOD). [N]** A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse system.

**5.410.2.3 Commissioning plan. [N]** Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:
1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
   a. An explanation of the original design intent.
   b. Equipment and systems to be tested, including the extent of tests.
   c. Functions to be tested.
   d. Conditions under which the test shall be performed.
   e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

**5.410.2.4 Functional performance testing. [N]** Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

**5.410.2.5 Documentation and training. [N]** A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

**5.410.2.5.1 Systems manual. [N]** Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:
1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

**5.410.2.5.2 Systems operations training. [N]** A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:
1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

**5.410.2.6 Commissioning report. [N]** A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

☐ ☐ **5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet.** Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

**5.410.4.2 (Reserved)**

**Note:** For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems.

**5.410.4.2 Systems.** Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

**5.410.4.3 Procedures.** Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

**5.410.4.3.1 HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

**5.410.4.4 Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

**5.410.4.5 Operation and maintenance (O & M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

**5.410.4.5.1 Inspections and reports.** Include a copy of all inspection verifications and reports required by the enforcing agency.

## DIVISION 5.5 ENVIRONMENTAL QUALITY

### SECTION 5.501 GENERAL

**5.501.1 SCOPE.** The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

### SECTION 5.502 DEFINITIONS

**5.502.1 DEFINITIONS.** The following terms are defined in Chapter 2 *(and are included here for reference)*

**ARTERIAL HIGHWAY.** A general term denoting a highway primarily for through traffic usually on a continuous route.

**A-WEIGHTED SOUND LEVEL (dBA).** The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made.

**1 BTU/HOUR.** British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at $32^0$ Fahrenheit.

**COMMUNITY NOISE EQUIVALENT LEVEL (CNEL).** A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

**COMPOSITE WOOD PRODUCTS.** Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I–joists or finger–jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

**Note:** See CCR, Title 17, Section 93120.1.

**DAY-NIGHT AVERAGE SOUND LEVEL (Ldn).** The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.m.).

**DECIBEL (db).** A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

**ELECTRIC VEHICLE (EV).** An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the *California Electrical Code*, off-road, self-propoelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

**ELECTRIC VEHICLE CHARGING STATION(S) (EVCSj).** One or more spaces intended for charging electric vehicles.

**ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

**ENERGY EQUIVALENT (NOISE) LEVEL (Leq).** The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest.

**EXPRESSWAY.** An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

**FREEWAY.** A divided arterial highway with full control of access and with grade separations at intersections.

**GLOBAL WARMING POTENTIAL (GWP).** The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

**GLOBAL WARMING POTENTIAL VALUE (GWP VALUE).** A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14.

**HIGH-GWP REFRIGERANT.** A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, a hdrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150, or (B) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

**LONG RADIUS ELBOW.** Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

**LOW-GWP REFRIGERANT.** A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

**MERV.** Filter minimum efficiency reporting value, based on ASHRAE 52.2–1999.

**MAXIMUM INCREMENTAL REACTIVITY (MIR).** The maximum change in weight of ozone formed by adding a compound to the "Base REactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreths of a gram (g $O^3$/g ROC).

**PRODUCT-WEIGHTED MIR (PWMIR).** The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

**PSIG.** Pounds per square inch, guage.

**REACTIVE ORGANIC COMPOUND (ROC).** Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

**SCHRADER ACCESS VALVES.** Access fittings with a valve core installed.

**SHORT RADIUS ELBOW.** Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

**SUPERMARKET.** For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

**VOC.** A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a)
.
**Note:** Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

### SECTION 5.503 FIREPLACES

☐ ☐ **5.503.1 FIREPLACES.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

**5.503.1.1 Woodstoves.** Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

### SECTION 5.504 POLLUTANT CONTROL

☐ ☐ **5.504.1 TEMPORARY VENTILATION.** The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992 Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

☐ ☐ **5.504.3 Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

**DISCLAIMER:** *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA
02/16/24
RST#22088

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CAL GREEN CHECKLIST

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A0.7

SHEET OF

6/15/2021 11:49:12 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

AIA California

# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## NONRESIDENTIAL MANDATORY MEASURES, SHEET 3 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER OWNER, CONTRACTOR, INSPECTOR ETC.)

Y | N/A | RESPON. PARTY

☐ ☐ **5.504.4 FINISH MATERIAL POLLUTANT CONTROL.** Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.

**5.504.4.1 Adhesives, sealants and caulks.** Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

TABLE 5.504.4.1 - ADHESIVE VOC LIMIT[1,2]

Less Water and Less Exempt Compounds in Grams per Liter

| ARCHITECTURAL APPLICATIONS | CURRENT VOC LIMIT |
|---|---|
| INDOOR CARPET ADHESIVES | 50 |
| CARPET PAD ADHESIVES | 50 |
| OUTDOOR CARPET ADHESIVES | 150 |
| WOOD FLOORING ADHESIVES | 100 |
| RUBBER FLOOR ADHESIVES | 60 |
| SUBFLOOR ADHESIVES | 50 |
| CERAMIC TILE ADHESIVES | 65 |
| VCT & ASPHALT TILE ADHESIVES | 50 |
| DRYWALL & PANEL ADHESIVES | 50 |
| COVE BASE ADHESIVES | 50 |
| MULTIPURPOSE CONSTRUCTION ADHESIVES | 70 |
| STRUCTURAL GLAZING ADHESIVES | 100 |
| SINGLE-PLY ROOF MEMBRANE ADHESIVES | 250 |
| OTHER ADHESIVES NOT SPECIFICALLY LISTED | 50 |
| **SPECIALTY APPLICATIONS** | |
| PVC WELDING | 510 |
| CPVC WELDING | 490 |
| ABS WELDING | 325 |
| PLASTIC CEMENT WELDING | 250 |
| ADHESIVE PRIMER FOR PLASTIC | 550 |
| CONTACT ADHESIVE | 80 |
| SPECIAL PURPOSE CONTACT ADHESIVE | 250 |
| STRUCTURAL WOOD MEMBER ADHESIVE | 140 |
| TOP & TRIM ADHESIVE | 250 |
| **SUBSTRATE SPECIFIC APPLICATIONS** | |
| METAL TO METAL | 30 |
| PLASTIC FOAMS | 50 |
| POROUS MATERIAL (EXCEPT WOOD) | 50 |
| WOOD | 30 |
| FIBERGLASS | 80 |

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF

TABLE 5.504.4.2 - SEALANT VOC LIMIT

Less Water and Less Exempt Compounds in Grams per Liter

| SEALANTS | CURRENT VOC LIMIT |
|---|---|
| ARCHITECTURAL | 250 |
| MARINE DECK | 760 |
| NONMEMBRANE ROOF | 300 |
| ROADWAY | 250 |
| SINGLE-PLY ROOF MEMBRANE | 450 |
| OTHER | 420 |
| **SEALANT PRIMERS** | |
| ARCHITECTURAL | |
| NONPOROUS | 250 |
| POROUS | 775 |
| MODIFIED BITUMINOUS | 500 |
| MARINE DECK | 760 |
| OTHER | 750 |

NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

**5.504.4.3 Paints and coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

**5.504.4.3.1 Aerosol Paints and coatings.** Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

TABLE 5.504.4.3 - CONT.

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

| COATING CATEGORY | CURRENT VOC LIMIT |
|---|---|
| **SPECIALTY COATINGS** | |
| ALUMINUM ROOF COATINGS | 400 |
| BASEMENT SPECIALTY COATINGS | 400 |
| BITUMINOUS ROOF COATINGS | 50 |
| BITUMINOUS ROOF PRIMERS | 350 |
| BOND BREAKERS | 350 |
| CONCRETE CURING COMPOUNDS | 350 |
| CONCRETE/MASONRY SEALERS | 100 |
| DRIVEWAY SEALERS | 50 |
| DRY FOG COATINGS | 150 |
| FAUX FINISHING COATINGS | 350 |
| FIRE RESISTIVE COATINGS | 350 |
| FLOOR COATINGS | 100 |
| FORM-RELEASE COMPOUNDS | 250 |
| GRAPHIC ARTS COATINGS (SIGN PAINTS) | 500 |
| HIGH-TEMPERATURE COATINGS | 420 |
| INDUSTRIAL MAINTENANCE COATINGS | 250 |
| LOW SOLIDS COATINGS[1] | 120 |
| MAGNESITE CEMENT COATINGS | 450 |
| MASTIC TEXTURE COATINGS | 100 |
| METALLIC PIGMENTED COATINGS | 500 |
| MULTICOLOR COATINGS | 250 |
| PRETREATMENT WASH PRIMERS | 420 |
| PRIMERS, SEALERS, & UNDERCOATERS | 100 |
| REACTIVE PENETRATING SEALERS | 350 |
| RECYCLED COATINGS | 250 |
| ROOF COATINGS | 50 |
| RUST PREVENTATIVE COATINGS | 250 |
| SHELLACS: | |
| CLEAR | 730 |
| OPAQUE | 550 |
| SPECIALTY PRIMERS, SEALERS & UNDERCOATERS | 100 |
| STAINS | 250 |
| STONE CONSOLIDANTS | 450 |
| SWIMMING POOL COATINGS | 340 |
| TRAFFIC MARKING COATINGS | 100 |
| TUB & TILE REFINISH COATINGS | 420 |
| WATERPROOFING MEMBRANES | 250 |
| WOOD COATINGS | 275 |
| WOOD PRESERVATIVES | 350 |
| ZINC-RICH PRIMERS | 340 |

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

**5.504.4.3.2 Verification.** Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

**5.504.4.4 Carpet Systems.**
All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**5.504.4.4.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**5.504.4.4.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 5.504.4.1.

**5.504.4.5 Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown in Table 5.504.4.5.

**5.504.4.5.3 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

| PRODUCT | CURRENT LIMIT |
|---|---|
| HARDWOOD PLYWOOD VENEER CORE | 0.05 |
| HARDWOOD PLYWOOD COMPOSITE CORE | 0.05 |
| PARTICLE BOARD | 0.09 |
| MEDIUM DENSITY FIBERBOARD | 0.11 |
| THIN MEDIUM DENSITY FIBERBOARD[2] | 0.13 |

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

**5.504.4.6 Resilient flooring systems.** Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications 01350)

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**5.504.4.6.1 Verification of compliance.** Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

**5.504.4.7 Thermal insulation**
Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, "Version 1.2, January 1.2, January 2017 (Emission testing method for California Specification 01350).
See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

**5.504.4.7.1 Verification of compliance.**
Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.

**5.504.4.8 Acoustical ceiling and wall panels.**
Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, " Version 1.2, January 2017 (Emission testing method for California Specification 01350).
See California Department of Public Health's website for certification programs and testing labs.

**5.504.4.8.1 Verification of compliance.** Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.

**5.504.5.3 Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

**Exceptions:** Existing mechanical equipment.

**5.504.5.3.1 Labeling.** Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

☐ ☐ **5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL.** Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

## SECTION 5.505 INDOOR MOISTURE CONTROL

☐ ☐ **5.505.1 INDOOR MOISTURE CONTROL**. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.407.2 of this code.

## SECTION 5.506 INDOOR AIR QUALITY

☐ ☐ **5.506.1 OUTSIDE AIR DELIVERY.** For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the *California Energy Code*, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

☐ ☐ **5.506.2 CARBON DIOXIDE ($CO_2$) MONITORING.** For buildings or additions equipped with demand control ventilation, $CO_2$ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4).

☐ ☐ **5.506.3 Carbon dioxide (CO2) monitoring in classrooms.**
**(DSA-SS)** Each public K-12 school classroom, as listed in Table 120.1-A of the *California Energy Code,* shall be equipped with a carbon dioxide monitor or sensor that meets the following requirements:

1. The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the floor and at least 5 feet (1524 mm) away from door and operable windows.
2. When the monitor or sensor is not integral to an Energy Management Control System (EMCS), the monitor or sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel.
3. A monitor shall provide notification though a visual indicator on the monitor when the carbon dioxide levels in the classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have exceeded 1,100ppm.
4. The monitor or sensor shall measure carbon dioxide levels at minimum 15- minute intervals and shall maintain a record of previous carbon dioxide measurements of not less than 30 days duration.
5. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater.
6. The monitor or sensor shall be certified by the manufacturer to be accurate within 75ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than once every 5 years.

## SECTION 5.507 ENVIRONMENTAL COMFORT

☐ ☐ **5.507.4 ACOUSTICAL CONTROL.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

**Exception:** Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

**Exception: [DSA-SS]** For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

**5.507.4.1 Exterior noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL noise contour of an airport.

   **Exceptions:**

   1. $L_{dn}$ or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
   2. $L_{dn}$ or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

2. Within the 65 CNEL or $L_{dn}$ noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

**5.507.4.1.1. Noise exposure where noise contours are not readily available.** Buildings exposed to a noise level of 65 dB $L_{eq}$ - 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

**5.507.4.2 Performance Method.** For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation.

**5.507.4.2.1 Site Features.** Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

**5.507.4.2.2 Documentation of Compliance.** An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

**5.507.4.3 Interior sound transmission.** Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

**Note:** Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.

## SECTION 5.508 OUTDOOR AIR QUALITY

☐ ☐ **5.508.1 Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

**5.508.1.1 Chlorofluorocarbons (CFCs).** Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

**5.508.1.2 Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

☐ ☐ **5.508.2 Supermarket refrigerant leak reduction.** New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.

**Exception:** Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide ($CO_2$), and potentially other refrigerants.

**5.508.2.1 Refrigerant piping.** Piping compliant with the California Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.

**5.508.2.1.1 Threaded pipe.** Threaded connections are permitted at the compressor rack.

**5.508.2.1.2 Copper pipe.** Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less.

**5.508.2.1.2.1 Anchorage.** One-fouth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils.

**5.508.2.1.3 Flared tubing connections.** Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.

**Exception:** Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations.

**5.508.2.1.4 Elbows.** Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.

**5.508.2.2 Valves.** Valves Valves and fittings shall comply with the *California Mechanical Code* and as follows.

**5.508.2.2.1 Pressure relief valves.** For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.

**5.508.2.2.1.1 Pressure detection.** A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.

**5.508.2.2.2 Access valves.** Only Schrader access valves with a brass or steel body are permitted for use.

**5.508.2.2.2.1 Valve caps.** For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic.

**5.508.2.2.2.2 Seal caps.** If designed for it, the cap shall have a neoprene O-ring in place.

**5.508.2.2.2.2.1 Chain tethers.** Chain tethers to fit ovr the stem are required for valves designed to have seal caps.

**Exception:** Valves with seal caps that are not removed from the valve during stem operation.

**5.508.2.3 Refrigerated service cases.** Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances.

**5.508.2.3.1 Coil coating.** Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.

**5.508.2.4 Refrigerant receivers.** Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device tha indicates the level of refrigerant in the receiver.

**5.508.2.5 Pressure testing.** The system shall be pressure tested during installation prior to evacuation and charging.

**5.508.2.5.1 Minimum pressure.** The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.

**5.508.2.5.2 Leaks.** Check the system for leaks, repair any leaks, and retest for pressure using the same gauge.

**5.508.2.5.3 Allowable pressure change.** The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.

**5.508.2.6 Evacuation.** The system shall be evacuated after pressure testing and prior to charging.

**5.508.2.6.1 First vacuum.** Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes.

**5.508.2.6.2 Second vacuum.** Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes.

**5.508.2.6.3 Third vacuum.** Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.

## CHAPTER 7
## INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

### 702 QUALIFICATIONS

**702.1 INSTALLER TRAINING.** HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

**702.2 SPECIAL INSPECTION [HCD].** When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

**Notes:**

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

**[BSC-CG]** When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

**Note:** Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

### 703 VERIFICATIONS

**703.1 DOCUMENTATION.** Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

***DISCLAIMER:*** *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

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MANNY D. FRISCH
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EXP. 03/31/24
STRUCTURAL
RST#22088
02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CAL GREEN CHECKLIST

PROJECT NUMBER
22088

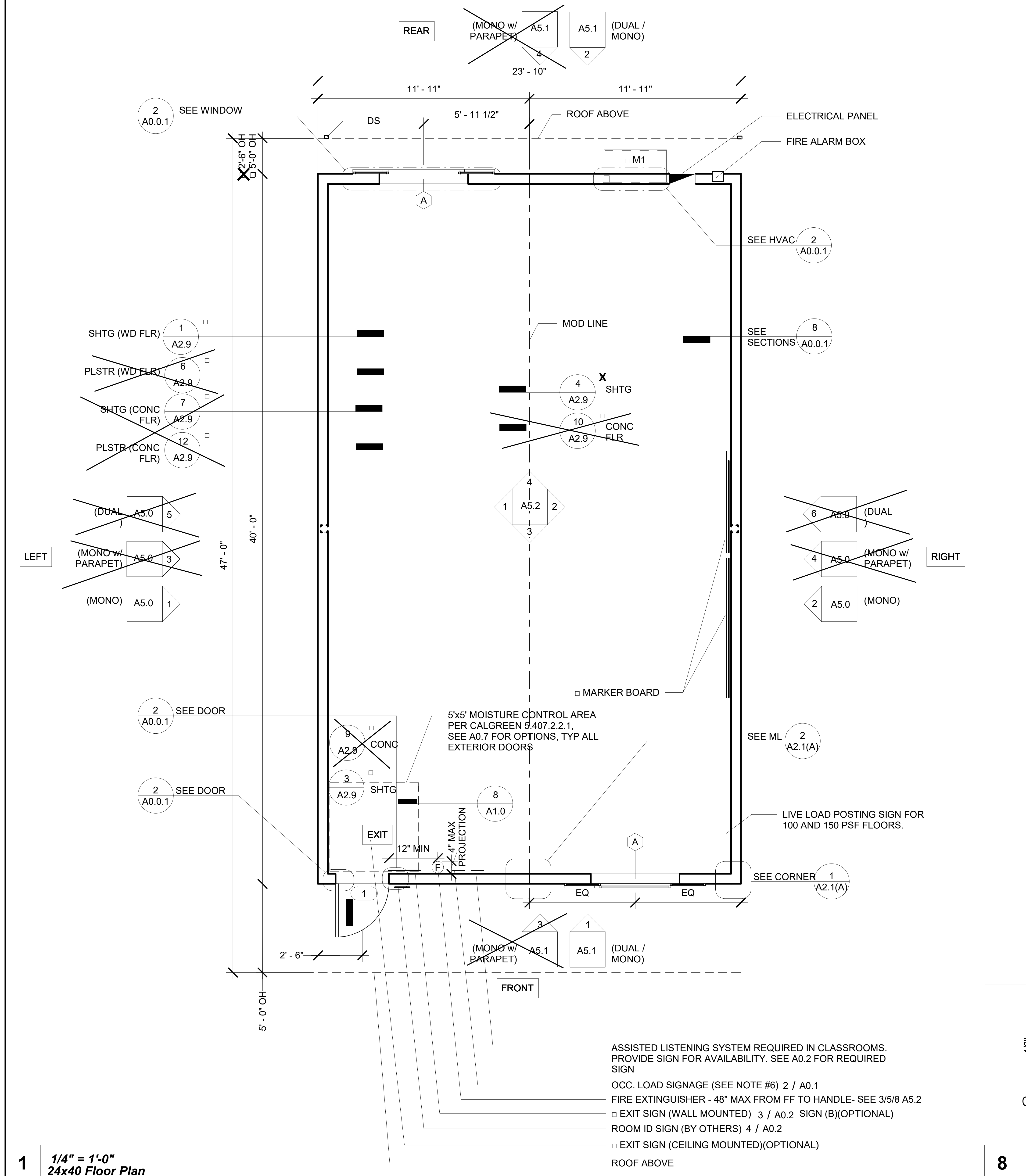
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A0.8

SHEET OF


REAR
~~(MONO w/ PARAPET) A5.1 4~~
A5.1 2 (DUAL / MONO)
23' - 10"
11' - 11"
11' - 11"
2 A0.0.1 SEE WINDOW
DS
5' - 11 1/2"
ROOF ABOVE
ELECTRICAL PANEL
FIRE ALARM BOX
☐ M1
2'-6" OH
☐ 5'-0" OH
A
SEE HVAC 2 A0.0.1
MOD LINE
SEE SECTIONS 8 A0.0.1
1 A2.9 SHTG (WD FLR) ☐
~~6 A2.9 PLSTR (WD FLR)~~ ☐
~~7 A2.9 SHTG (CONC FLR)~~ ☐
~~12 A2.9 PLSTR (CONC FLR)~~ ☐
4 A2.9 X SHTG
~~10 A2.9 CONC FLR~~ ☐
~~(DUAL) A5.0 5~~
~~(MONO w/ PARAPET) A5.0 3~~
(MONO) A5.0 1
LEFT
47' - 0"
40' - 0"
4 1 A5.2 2 3
~~6 A5.0 (DUAL)~~
~~4 A5.0 (MONO w/ PARAPET)~~
2 A5.0 (MONO)
RIGHT
☐ MARKER BOARD
2 A0.0.1 SEE DOOR
5'x5' MOISTURE CONTROL AREA PER CALGREEN 5.407.2.2.1, SEE A0.7 FOR OPTIONS, TYP ALL EXTERIOR DOORS
~~9 A2.9 CONC~~ ☐
3 A2.9 SHTG ☐
SEE ML 2 A2.1(A)
2 A0.0.1 SEE DOOR
8 A1.0
EXIT
12" MIN
4" MAX PROJECTION
F
A
LIVE LOAD POSTING SIGN FOR 100 AND 150 PSF FLOORS.
SEE CORNER 1 A2.1(A)
1
EQ
EQ
~~(MONO w/ PARAPET) 3 A5.1~~
1 A5.1 (DUAL / MONO)
2' - 6"
5' - 0" OH
FRONT
ASSISTED LISTENING SYSTEM REQUIRED IN CLASSROOMS. PROVIDE SIGN FOR AVAILABILITY. SEE A0.2 FOR REQUIRED SIGN
OCC. LOAD SIGNAGE (SEE NOTE #6) 2 / A0.1
FIRE EXTINGUISHER - 48" MAX FROM FF TO HANDLE- SEE 3/5/8 A5.2
☐ EXIT SIGN (WALL MOUNTED) 3 / A0.2 SIGN (B)(OPTIONAL)
ROOM ID SIGN (BY OTHERS) 4 / A0.2
☐ EXIT SIGN (CEILING MOUNTED)(OPTIONAL)
ROOF ABOVE

**1** *1/4" = 1'-0"*
***24x40 Floor Plan***

All rated construction (both vertical and horizontal) must be clearly defined, correctly indentified, detailed, and listed in accordance with CBC Chapters 3,5,7 and 10 (fire partitions, barriers, walls, shaft, egress protection, ceilings, opening protection, penetrations, structural members, etc). Provide and cross-reference installation details, including all components and attachment schedules for the fire-resistive materials to the framing. Shall conform in every particular with the design number specified

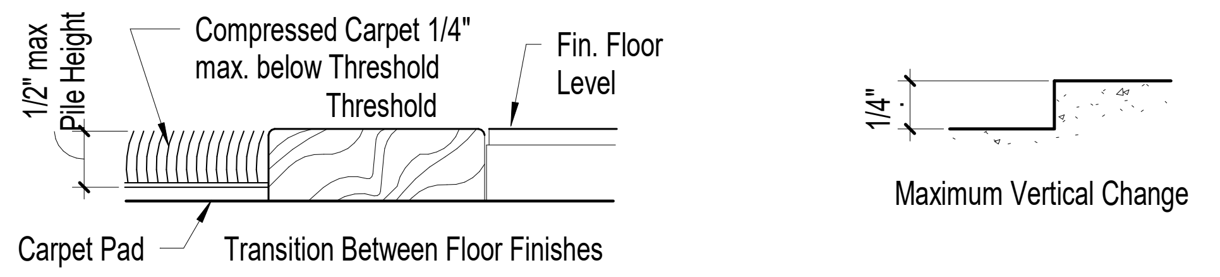
## SECTION 915
## CARBON MONOXIDE DETECTION

915.4 Carbon monoxide alarms. Carbon monoxide alarms shall comply with Sections 915.4.1 through 915.4.4.

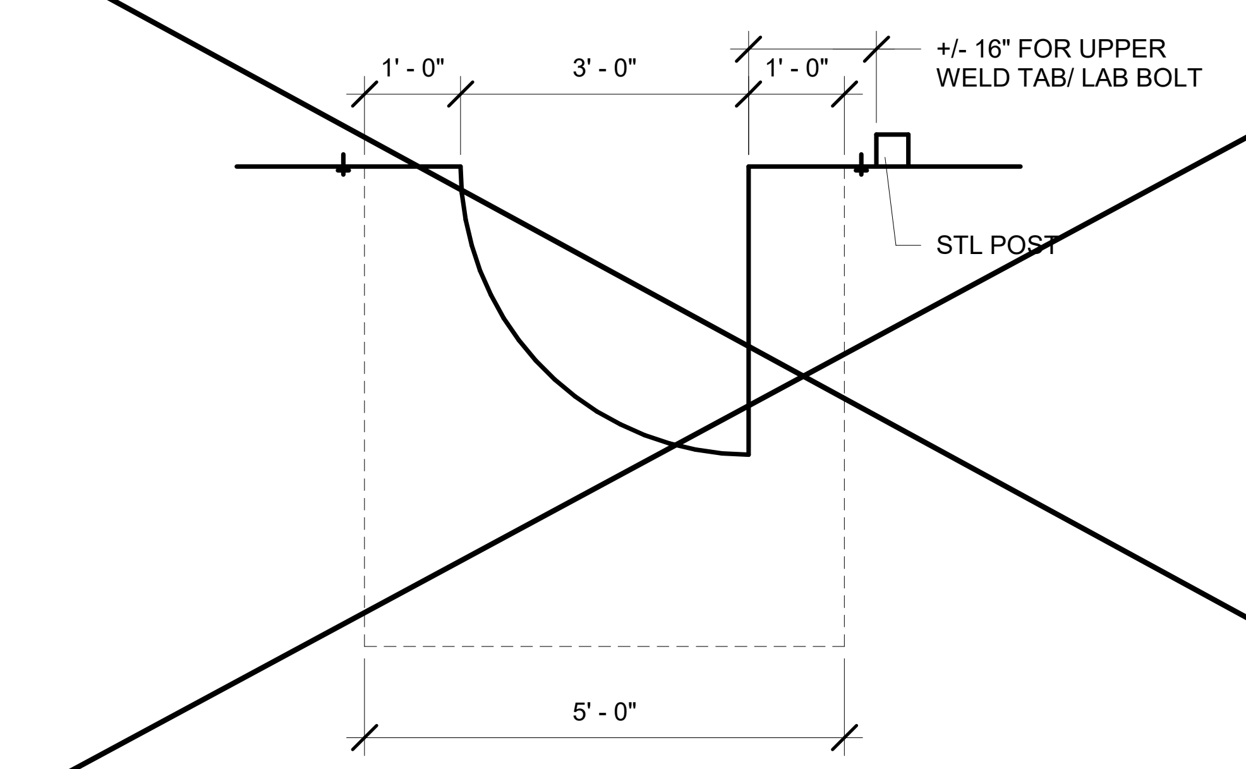
[F] 915.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and with-out a disconnecting switch other than that required forovercurrent protection.

915.2.3 Group E occupancies. Carbon monoxide detection shall be installed in classrooms in Group E occupancies. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed byschool personnel.

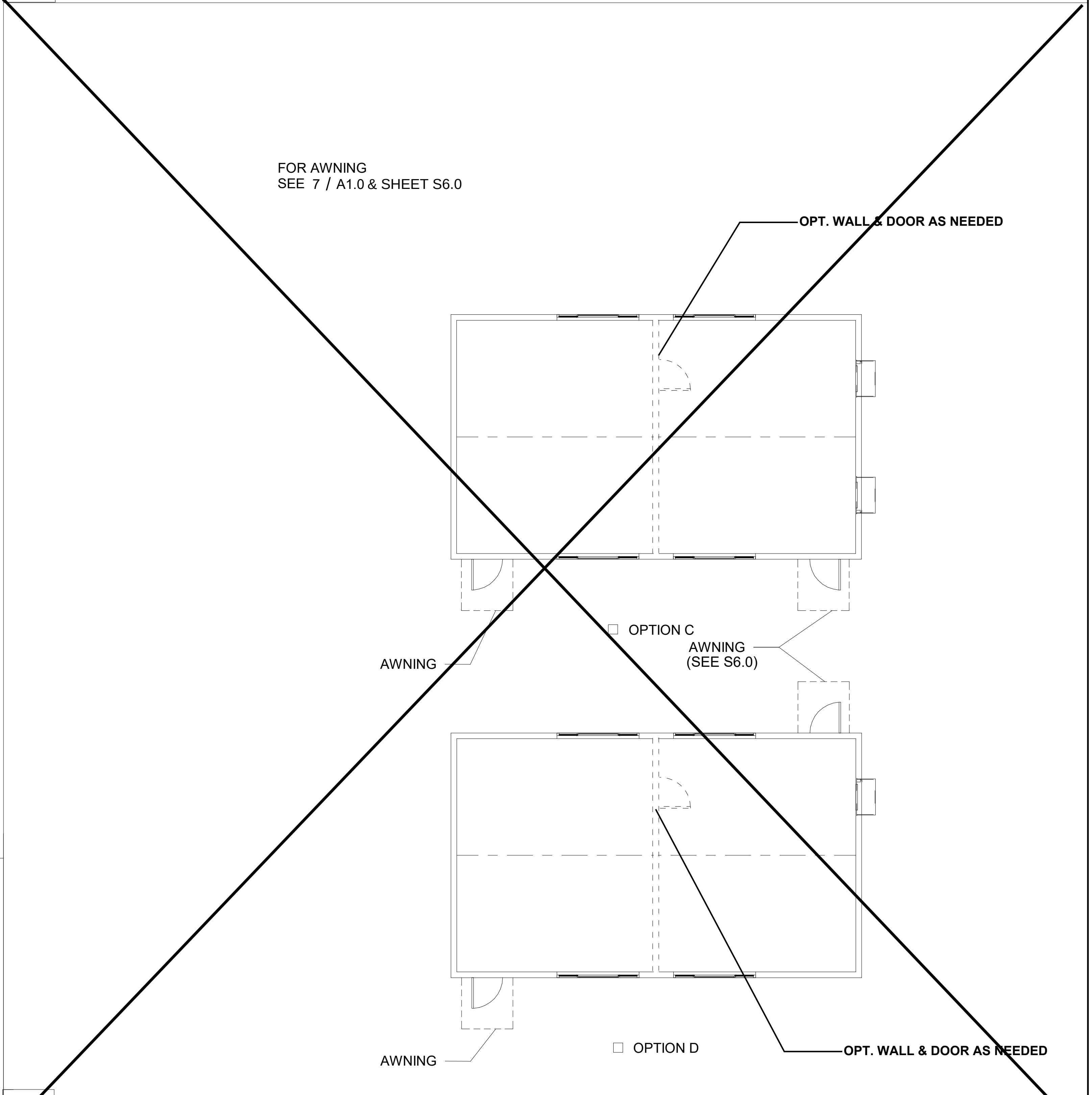
915.3 Detection equipment. Carbon monoxide detection required by Sections 915.1 through 915.2.3 shall be provided by carbon monoxide alarms complying with Section 915.4 or carbon monoxide detection systems complying with Section 915.5.



**8** *1/4" = 1'-0"*
***VCT TO CARPET DETAIL***



**7** *1/2" = 1'-0"*
***AWNING***


FOR AWNING SEE 7 / A1.0 & SHEET S6.0
OPT. WALL & DOOR AS NEEDED
☐ OPTION C
AWNING
AWNING (SEE S6.0)
☐ OPTION D
AWNING
OPT. WALL & DOOR AS NEEDED

**6** *1" = 10'-0"*
***24X60 FLOOR PLAN OPTIONS***

### Wall Schedule

| | Stud Size | Sheet | Notes |
|---|---|---|---|
| ☒ | Wood Wall Stud | S4.5 | |
| | | | |

FOR BURNING CHARACTERISTIC SEE 3 / A0.1

**5** *1/4" = 1'-0"*
***Wall Schedule***

### Fire Rating Schedule

| | Rating | Sheet | Notes |
|---|---|---|---|
| ☒ | 1 HOUR - SIDING OVER WD STUDS | A2.5 | |
| ☐ | 1 HOUR - PLASTER OVER 1/2" OSB OR 1/2" CDX PLY w/ WD STUDS | A2.6 | |
| | | | |
| | | | |
| | | | |

SEE A3.0 FOR ADDITIONAL FIRE ASSEMBLY NOTES AND DETAILS

**4** *1/4" = 1'-0"*
***Fire Rating Schedule***

### Ext. Finish Schedule

| | Finishes | Sheet | Notes |
|---|---|---|---|
| ☒ | SIDING OVER WD STUDS | A2.1 | |
| ☐ | PLASTER OVER 1/2" OSB OR 1/2" CDX PLY w/ WD STUDS | A2.2 | |
| | | | |
| | | | |
| | | | |

**3** *1/4" = 1'-0"*
***Ext. Finish Schedule***

### Roofing Schedule

| "SLOPE" | EDPM | Standing Seam | Parapet | Notes |
|---|---|---|---|---|
| Dual | ☐ A4.2.2 | ☐ A4.0.2 | N/A | |
| Mono | ☒ A4.2.1 | ☐ A4.0.1 | ☐ A4.4.1 | |

### HVAC Unit

| Keynote | Type | Type Comments |
|---|---|---|
| | | |
| ☒ M1 | Wall Mounted HVAC | See (M)-Sheets |
| ☐ M2 | Roof Mounted HVAC | See (M)-Sheets |

PROJECT SPECIFIC STATE AGENCY APPROVAL

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R&S TAVARES ASSOCIATES
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02/16/24
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ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|
| | | |

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
24x40 FLOOR PLAN

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A1.0

SHEET OF

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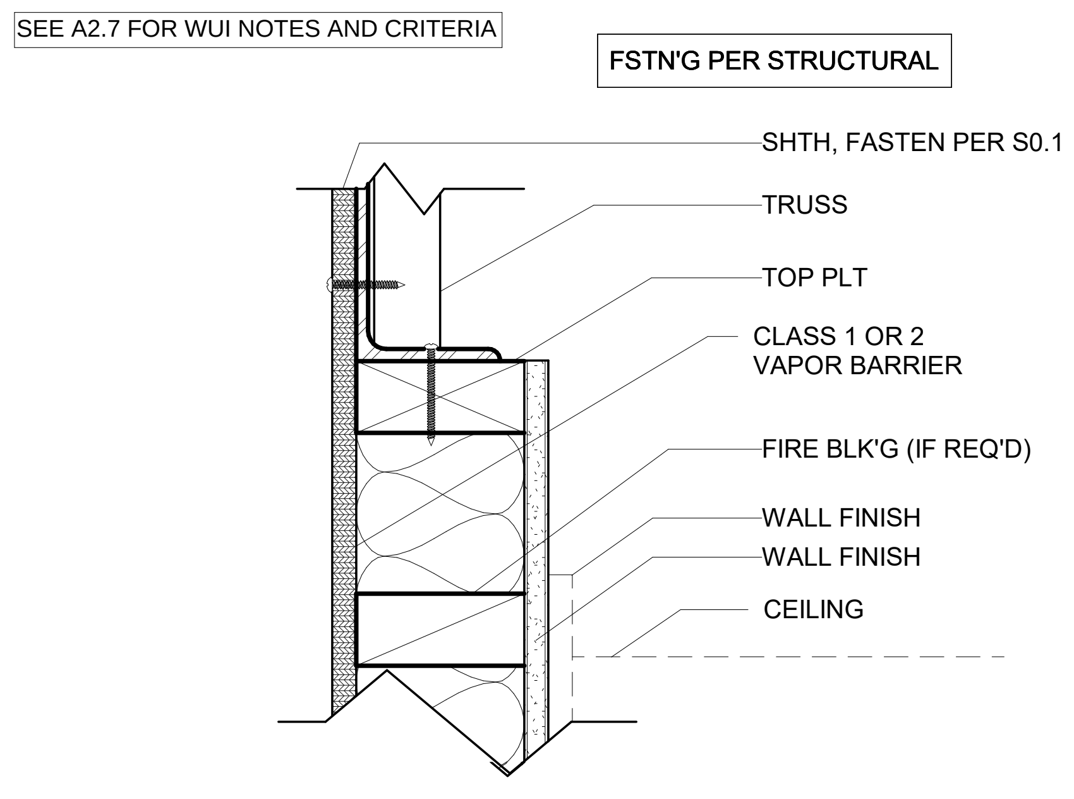
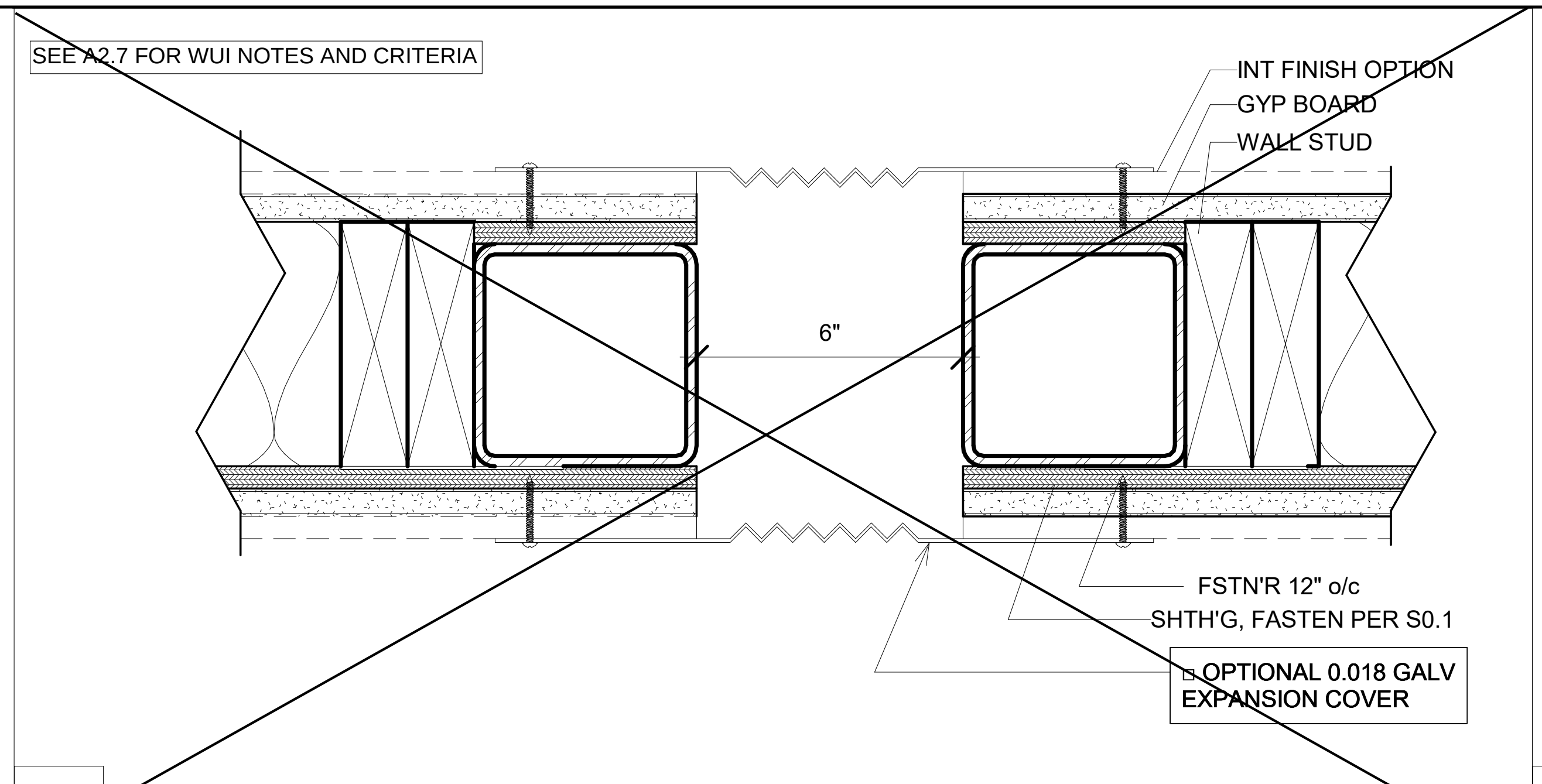
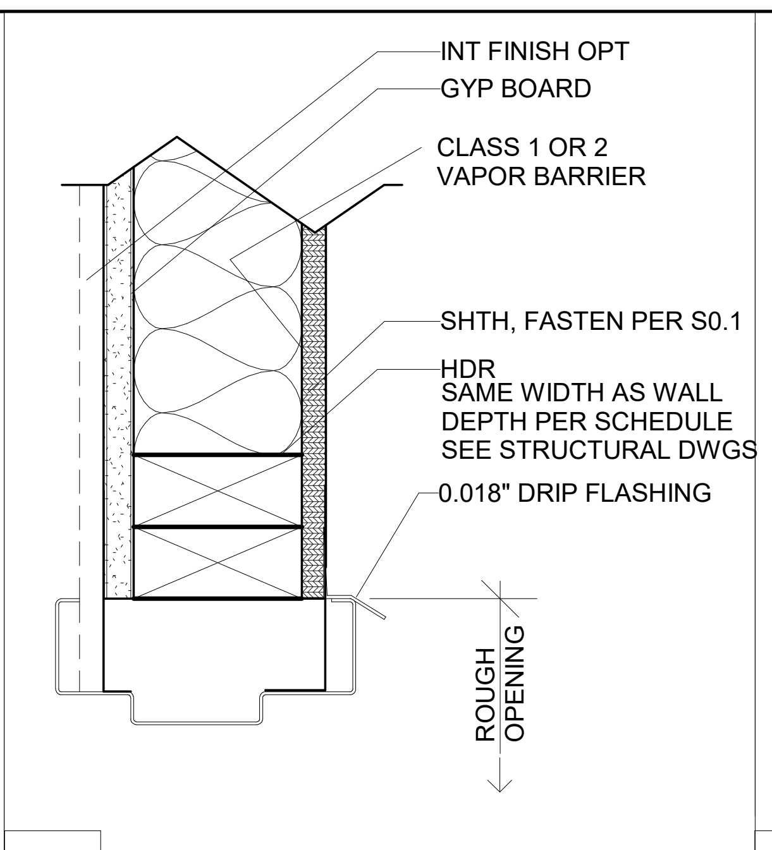


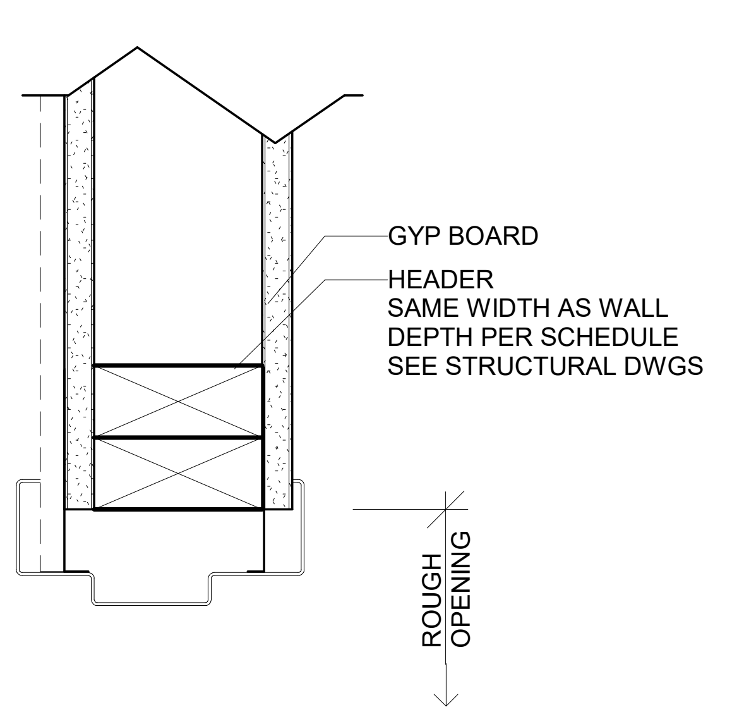
17 3" = 1'-0"
*Section - Top Plate Shtg Finish*



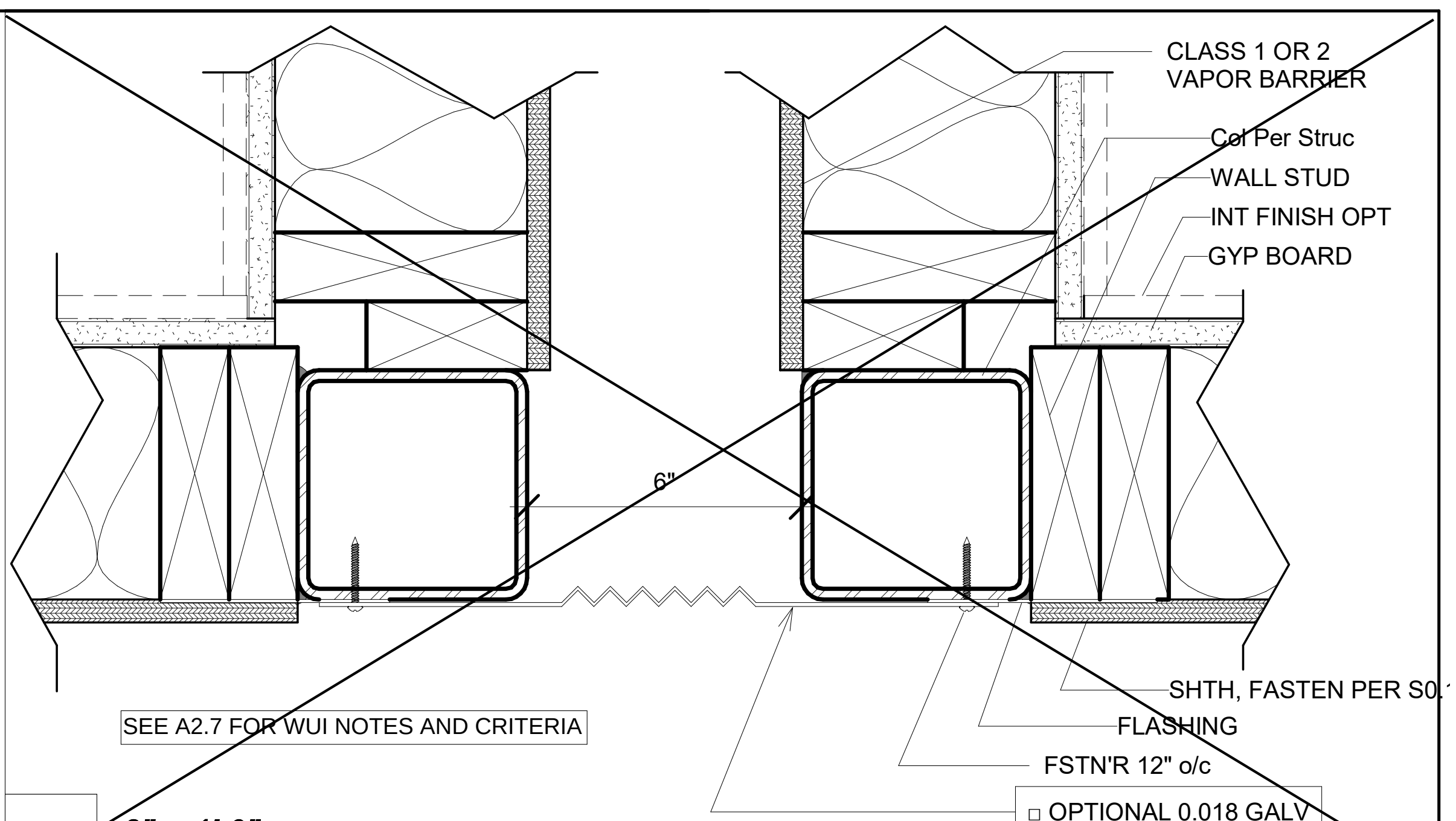
18 3" = 1'-0"
*Plan - Interior Wall "OPEN" (6" Sep.) Shtg Finish*



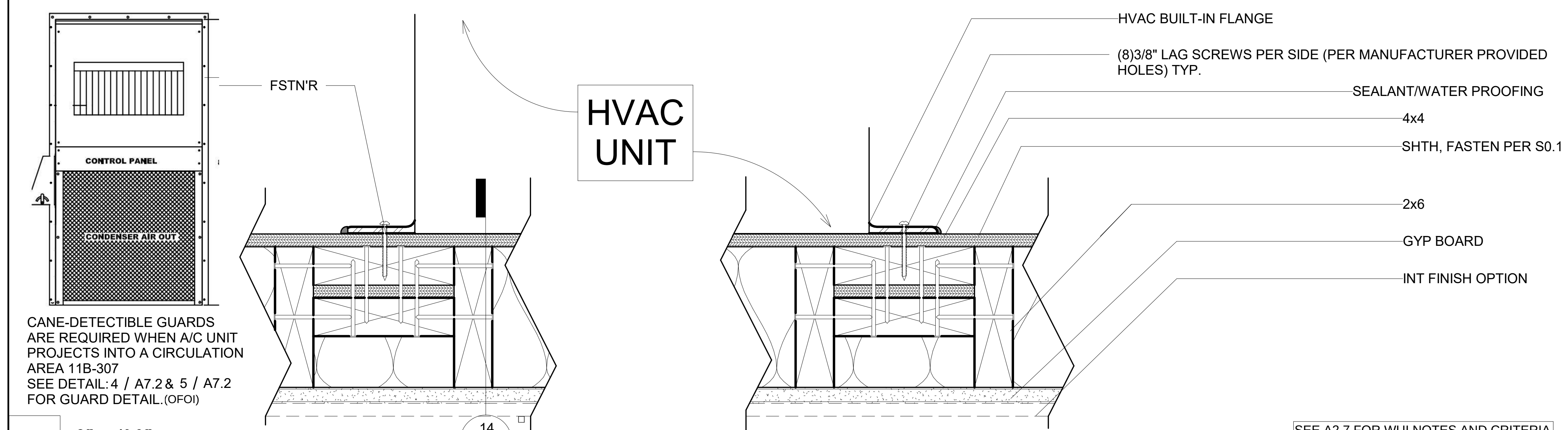
10A 3" = 1'-0"
*Section - Ext Wall Hdr Door Shtg Finish*



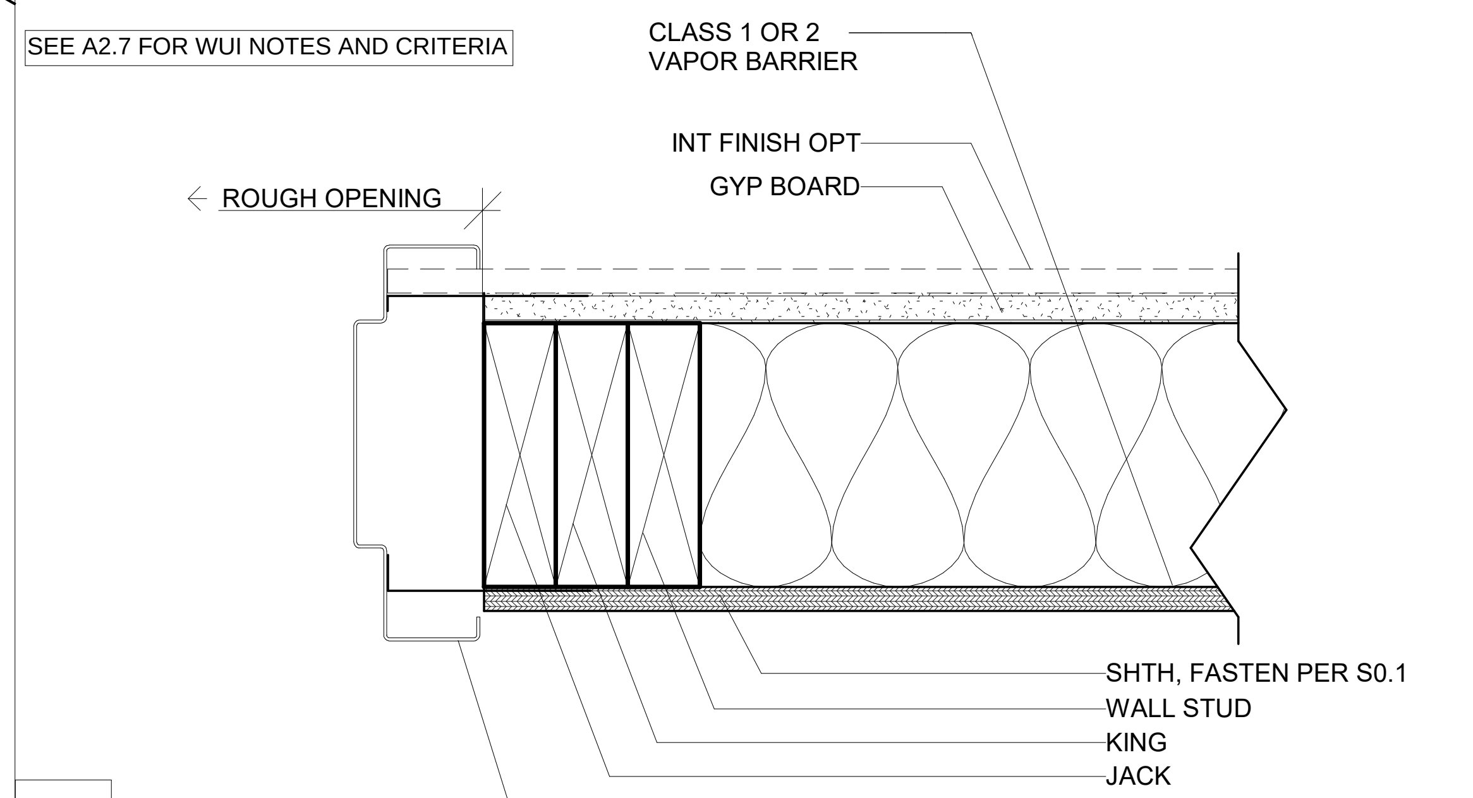
10B 3" = 1'-0"
*Section - Int Wall Hdr Door Shtg Finish*



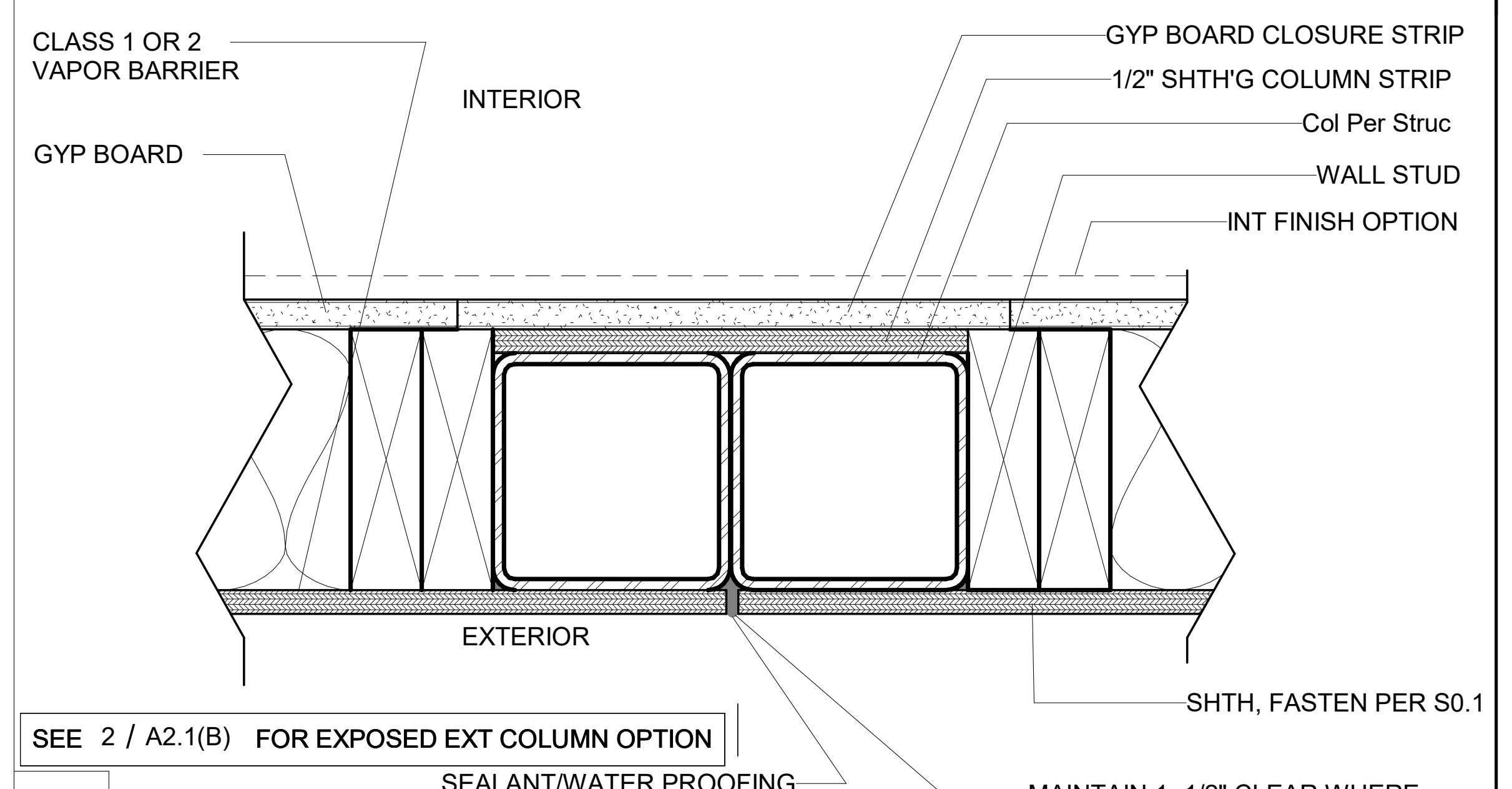
5 3" = 1'-0"
*Plan - Mateline (6" Sep.) Shtg Finish*



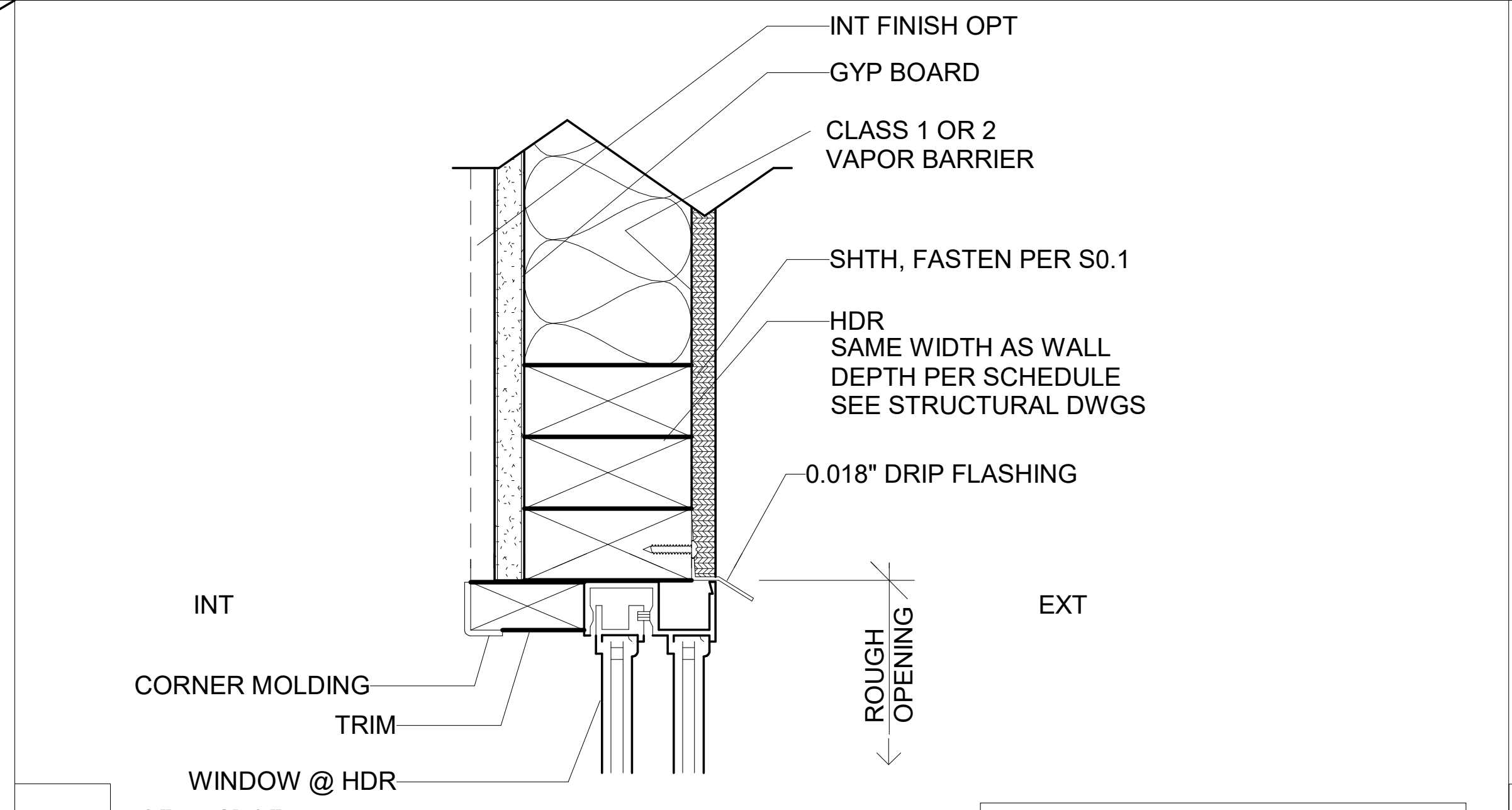
16 3" = 1'-0"
*Plan - HVAC Unit Shtg Finish*



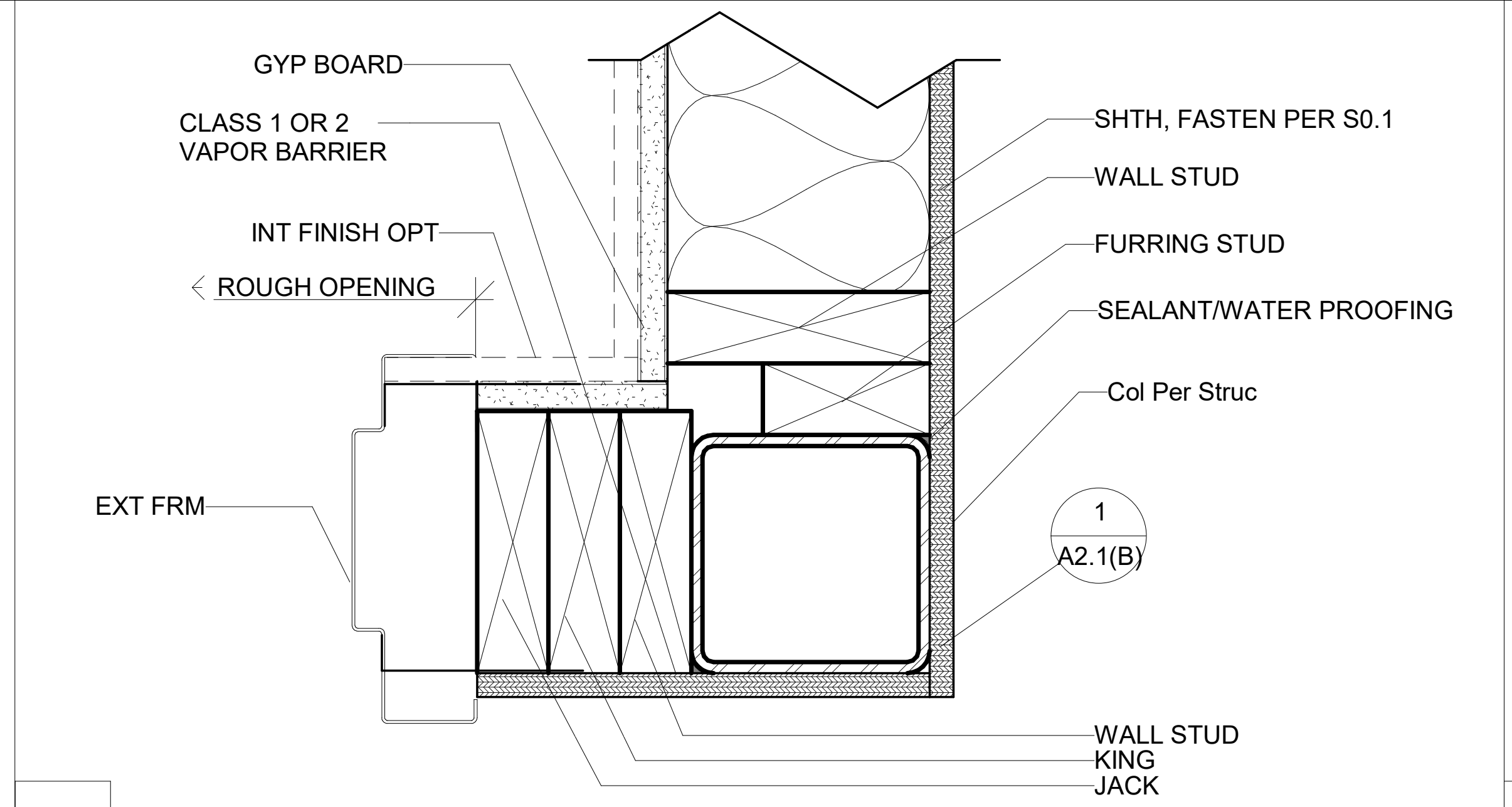
9 3" = 1'-0"
*Plan - Exterior Door Jamb Shtg Finish*



4 3" = 1'-0"
*Plan - Mateline (Matline Closure Option) Shtg Finish*

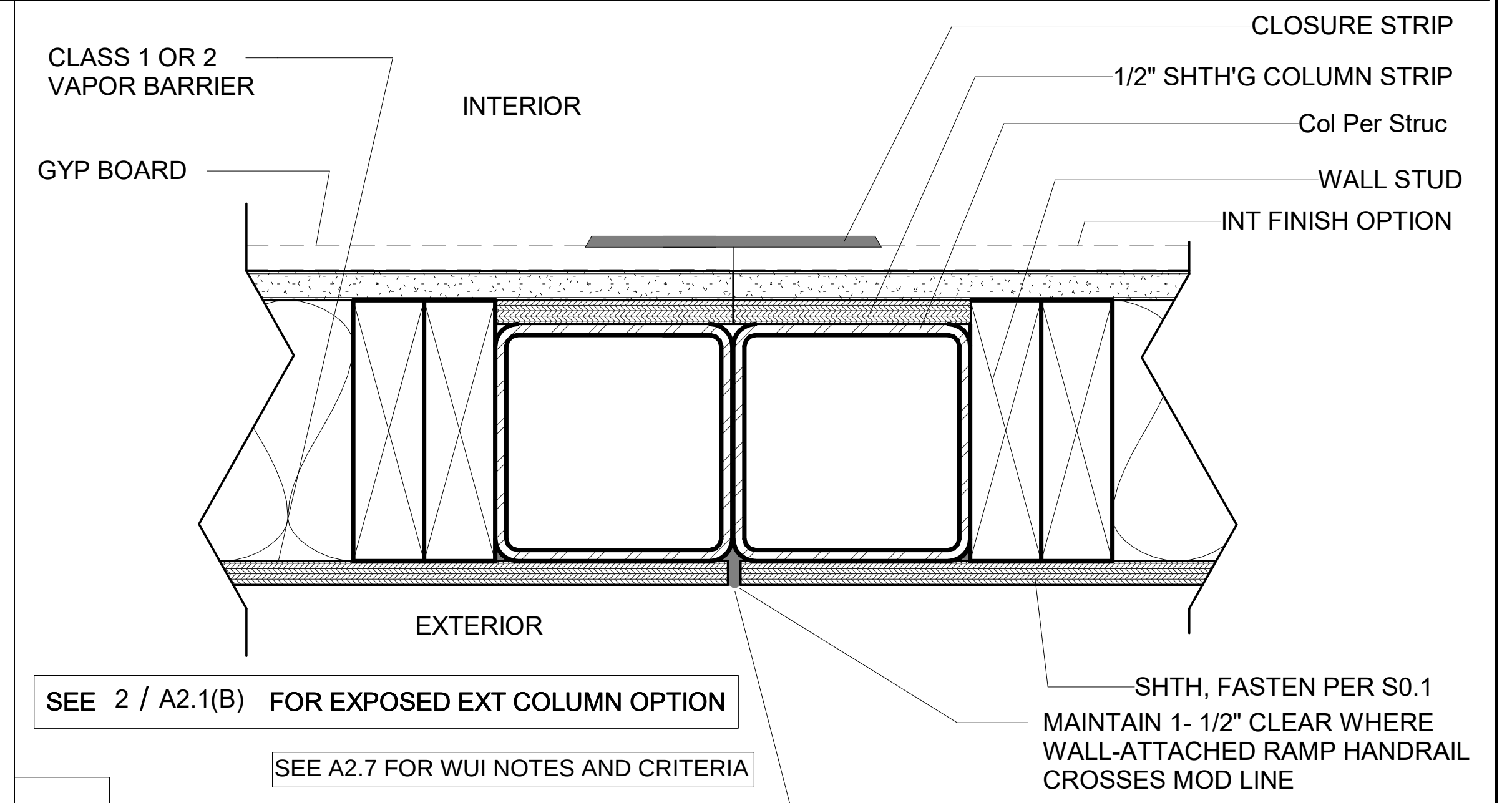


13 3" = 1'-0"
*Section - Ext Wall Header @ Window Shtg Finish*

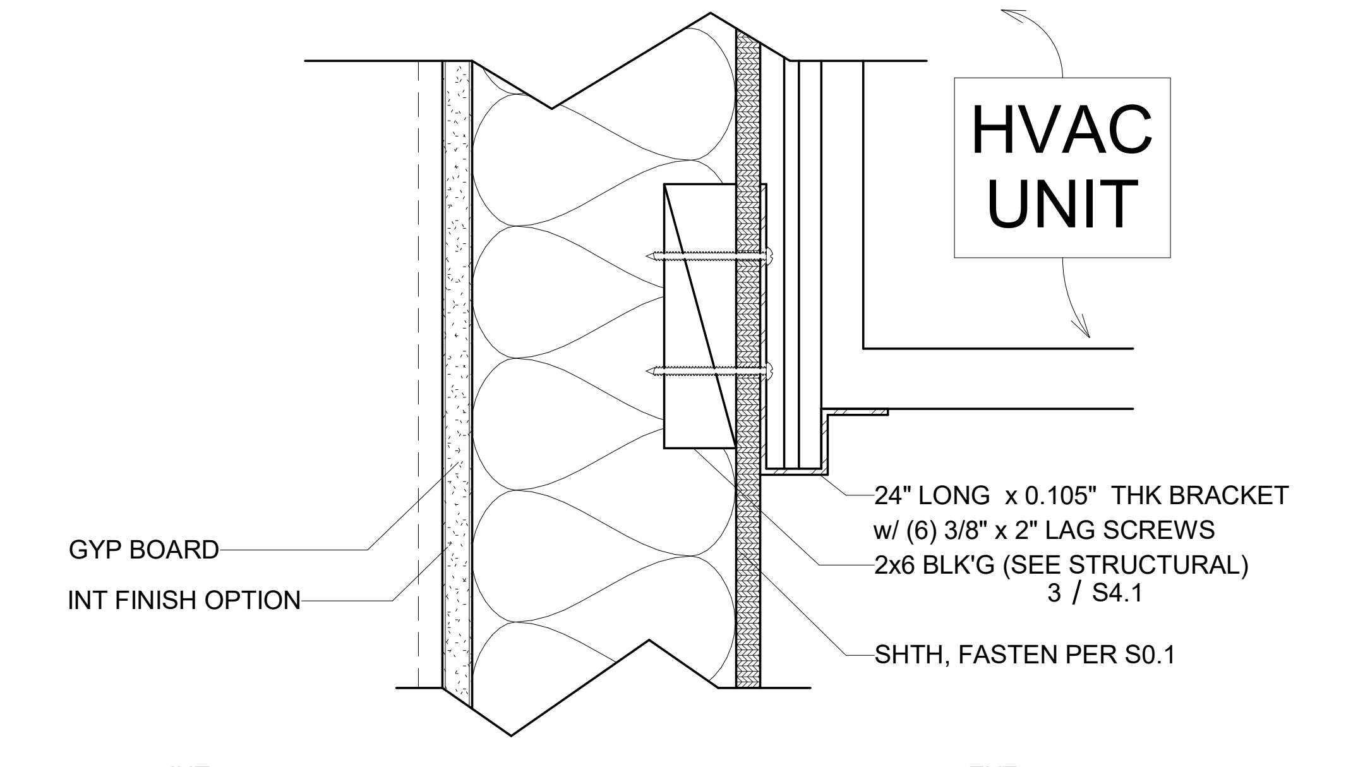


8 3" = 1'-0"
*Plan - Exterior Door Jamb @ Wall Corner Shtg Finish*

SEE A2.7 FOR WUI NOTES AND CRITERIA

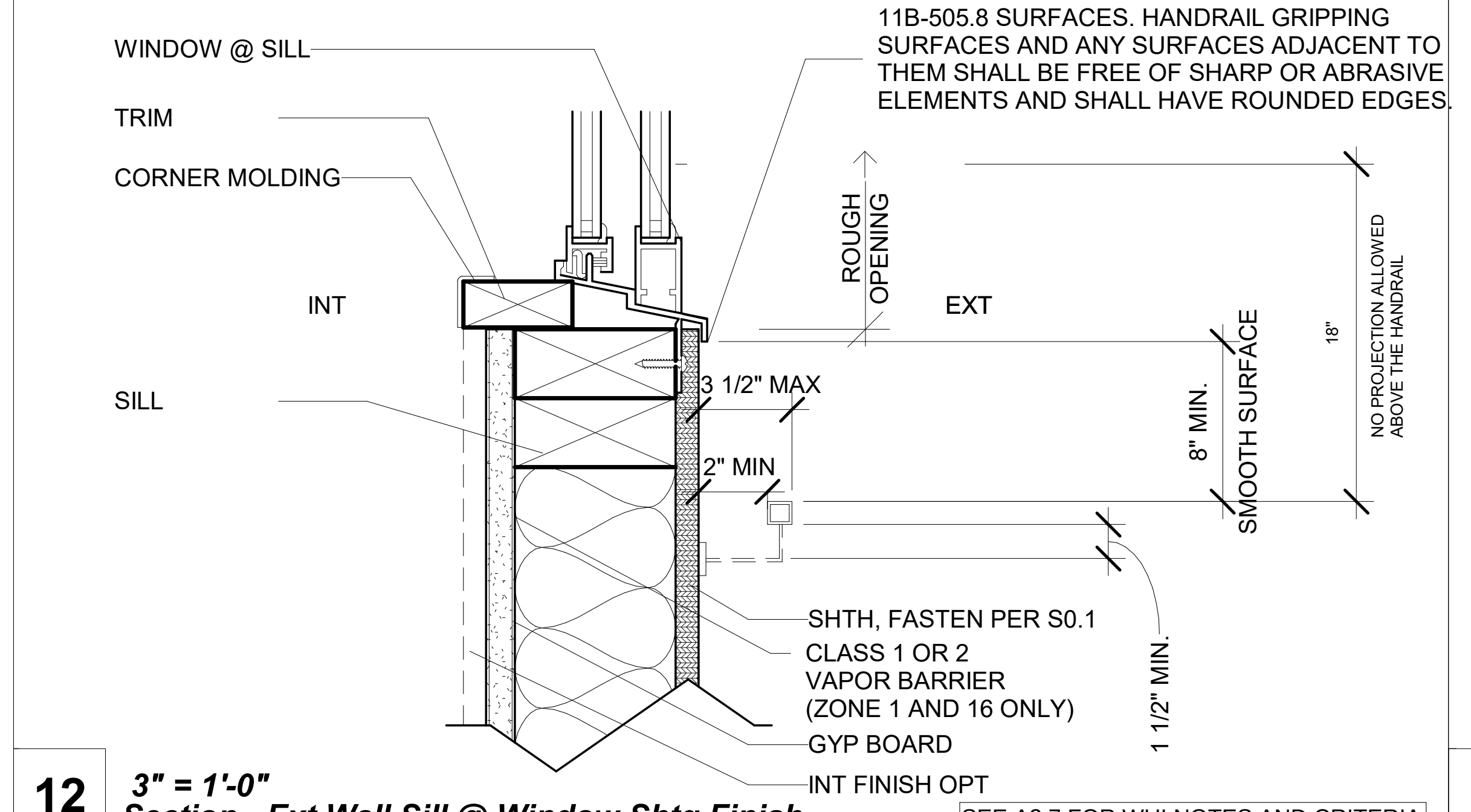


3 3" = 1'-0"
*Plan - Mateline (Int Closure Strip) Shtg Finish*


HVAC
UNIT
24" LONG x 0.105" THK BRACKET
w/ (6) 3/8" x 2" LAG SCREWS
2x6 BLK'G (SEE STRUCTURAL)
3 / S4.1
GYP BOARD
INT FINISH OPTION
SHTH, FASTEN PER S0.1
INT
EXT

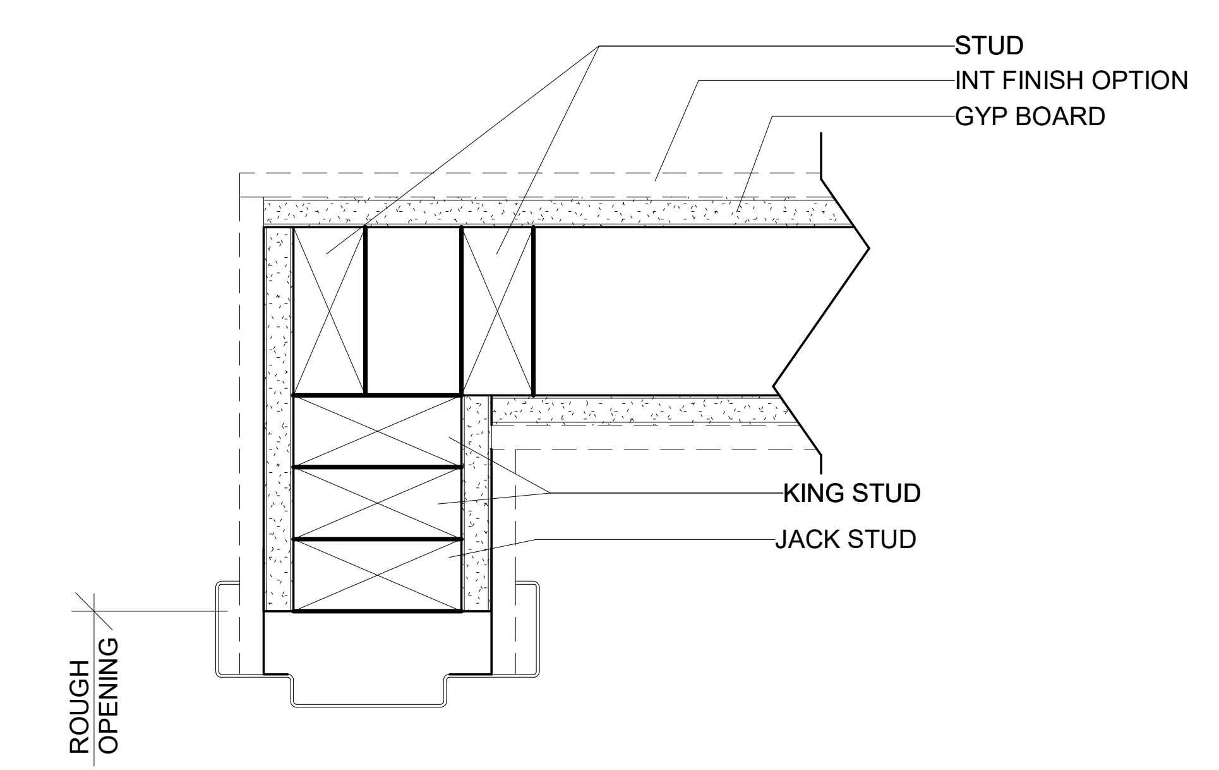
14 3" = 1'-0"
*Section - Ext Wall @ HVAC Shtg Finish*

SEE A2.7 FOR WUI NOTES AND CRITERIA

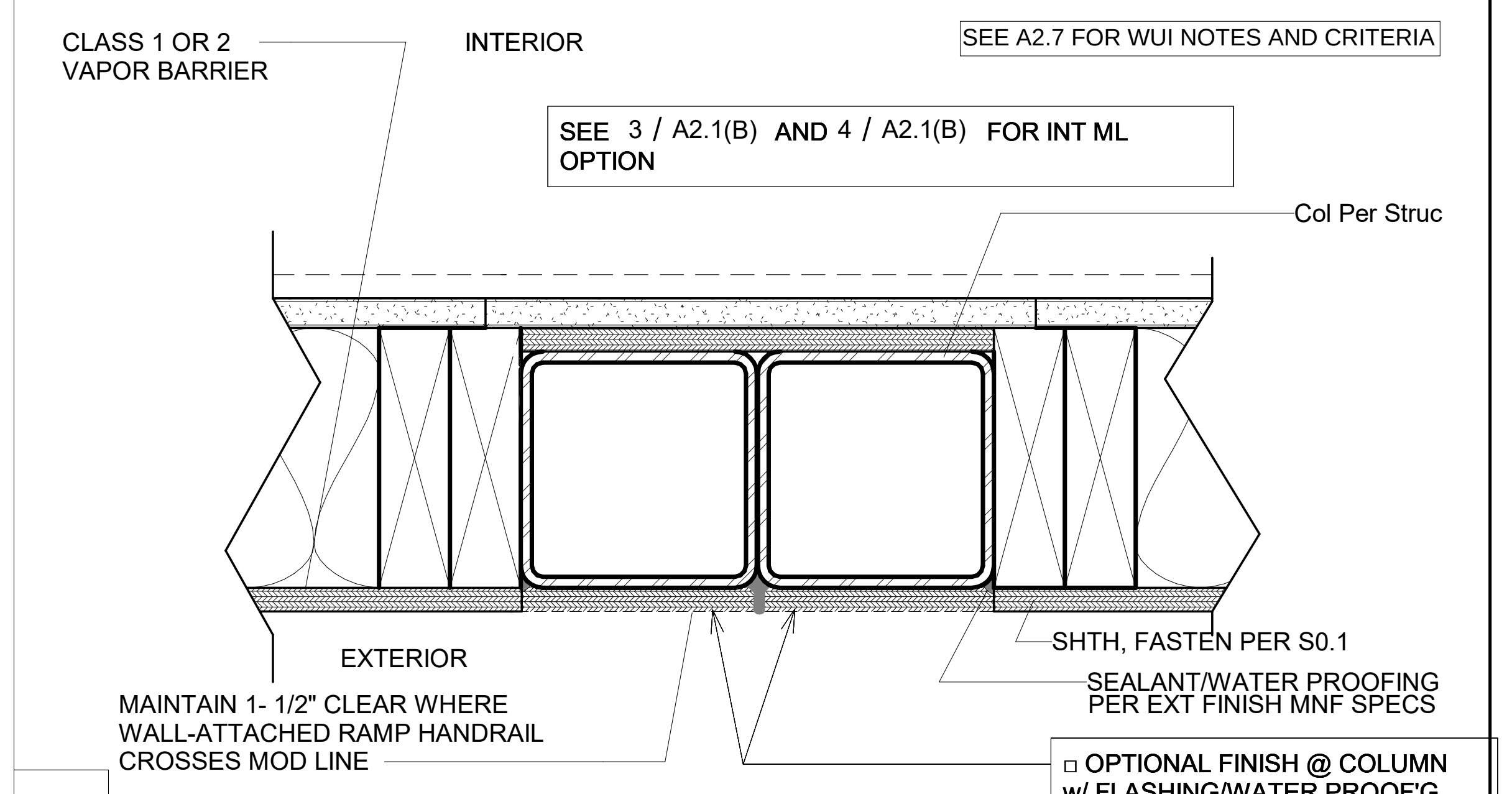


12 3" = 1'-0"
*Section - Ext Wall Sill @ Window Shtg Finish*

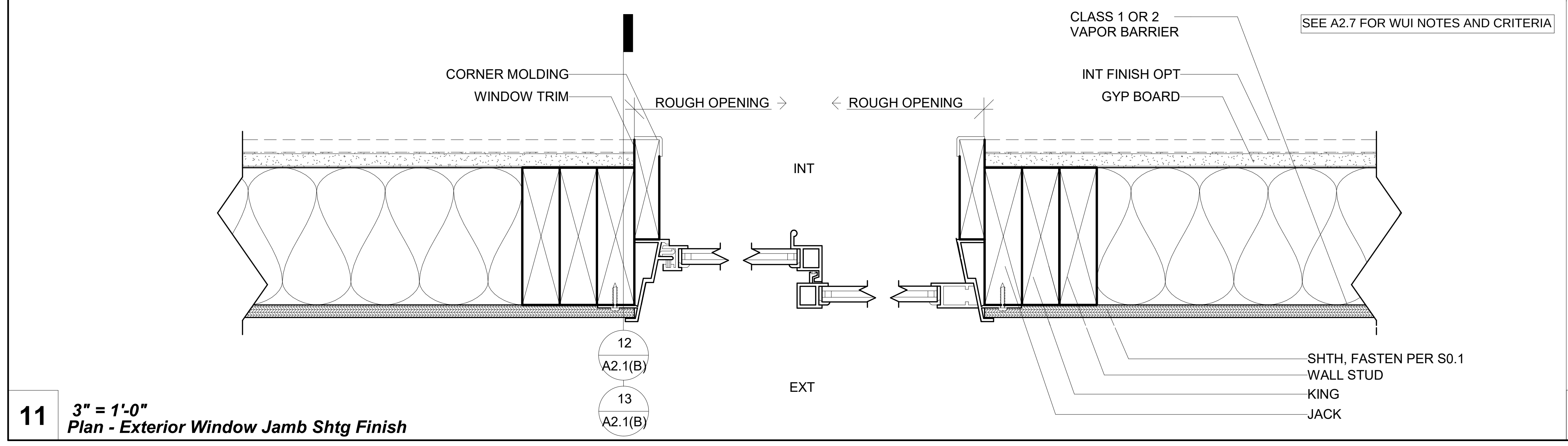
SEE A2.7 FOR WUI NOTES AND CRITERIA



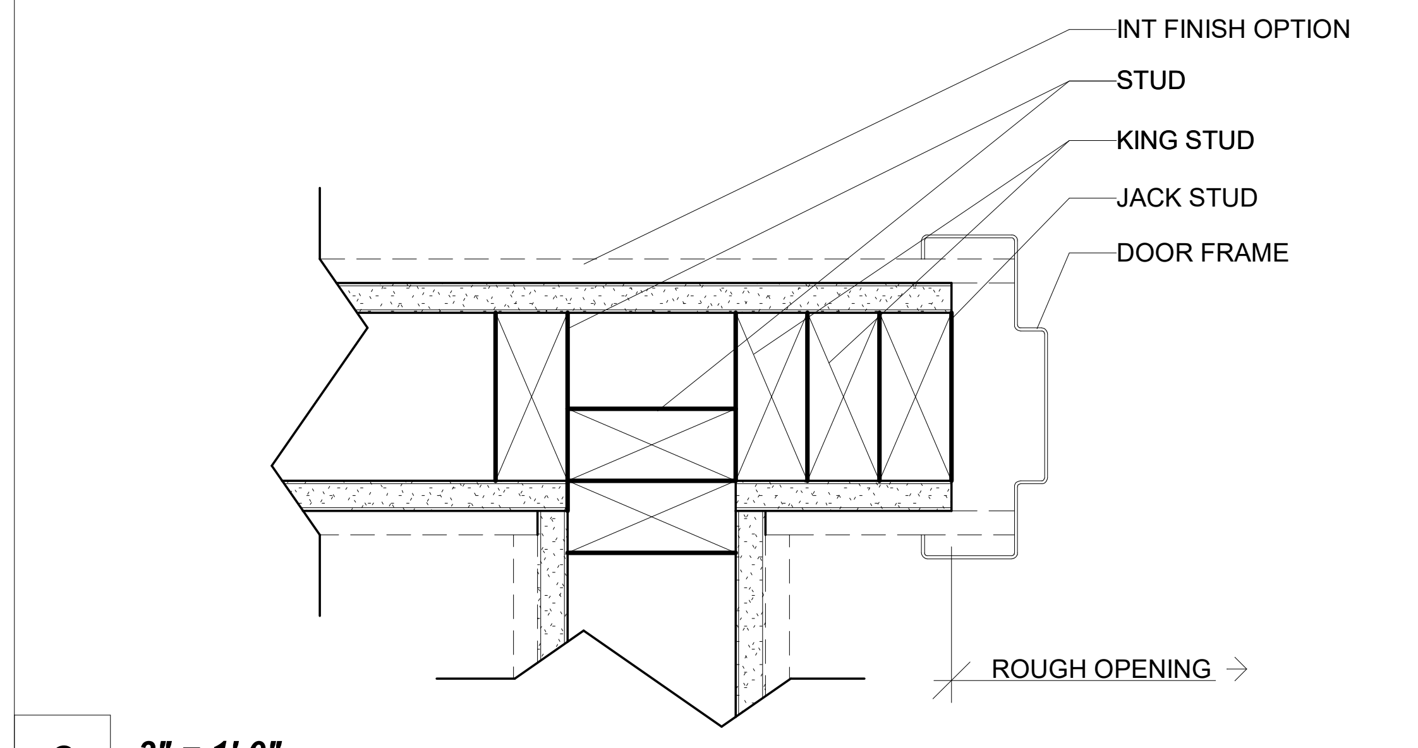
7 3" = 1'-0"
*Plan - Interior Door Jamb @ Wall Corner Shtg Finish*


CLASS 1 OR 2
VAPOR BARRIER
INTERIOR
SEE A2.7 FOR WUI NOTES AND CRITERIA
SEE 3 / A2.1(B) AND 4 / A2.1(B) FOR INT ML
OPTION
Col Per Struc
EXTERIOR
MAINTAIN 1- 1/2" CLEAR WHERE
WALL-ATTACHED RAMP HANDRAIL
CROSSES MOD LINE
SHTH, FASTEN PER S0.1
SEALANT/WATER PROOFING
PER EXT FINISH MNF SPECS
☐ OPTIONAL FINISH @ COLUMN
w/ FLASHING/WATER PROOF'G
@ ML PER EXT FINISH MNF SPECS

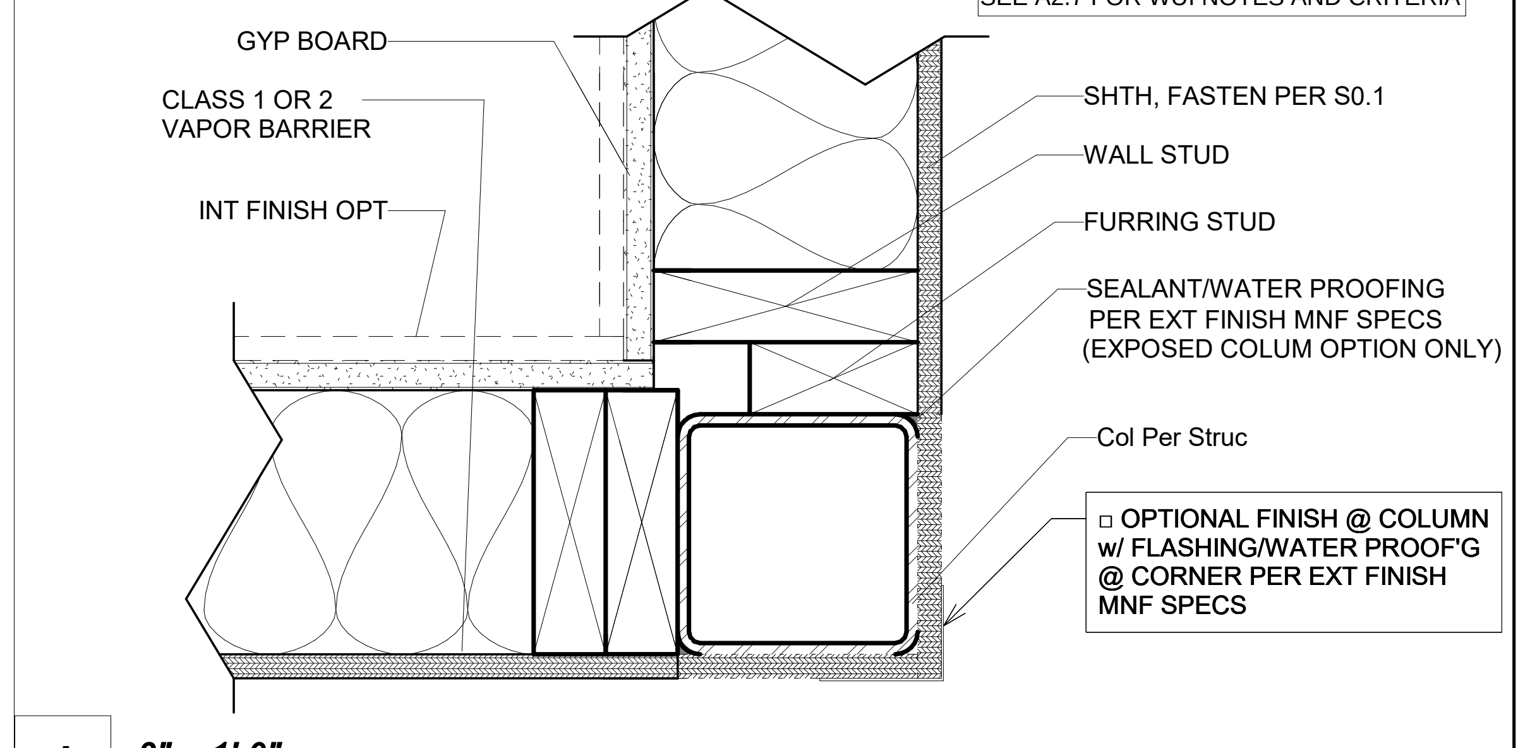
2 3" = 1'-0"
*Plan - Mateline (ext exposed column mateline) Shtg Finish*



11 3" = 1'-0"
*Plan - Exterior Window Jamb Shtg Finish*



6 3" = 1'-0"
*Plan - Interior Door Jamb @ Wall Intersection Shtg Finish*



1 3" = 1'-0"
*Plan - Column @ Corner (ext exposed column option)*

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C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT
11777 Bernardo Plaza Court, Suite 105
San Diego, CA 92128

PROFESSIONAL STAMP

Manny D. Frisch
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
ARCHITECTURAL
WUI DETAILS
(WOOD FRAMING
SHTG FINISH)

PROJECT NUMBER
22088

DRAWN BY
rMc/SM

CHECKED BY
JA/RT

DATE

SHEET NO.
A2.1(B)

SHEET OF

10/30/2023 10:20:14 AM C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

**Roof**
Shall comply with the requirements of Chapter 7A and Chapter 15. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Roof assemblies in the Fire Hazard Severity Zones shall be Class A rating when tested in accordance with ASTM E108 or UL790

**Roof gutters**
Shall be provided with the means to prevent the accumulation of leaves and debris in the gutter.

**Exterior wall**
The exterior wall covering or wall assembly shall comply with one of the following requirements:
Noncombustible material.
Ignition-resistant material.
Sawn lumber or glue laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks splined, tongue-and groove, or set close together and well spiked.
Log wall construction assembly.
Wall assemblies that have been tested in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in ASTM E2707 with the conditions of acceptance shown in Section 707A.3.1.
Wall assemblies that meet the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1.

**Exterior windows**
Exterior windows and exterior glazed door assemblies shall comply with one of the following requirements:
* Be constructed of multi pane glazing with a minimum of one tempered pane meeting the requirements of CBC Section 2406 Safety Glazing, or
* Be constructed of glass block units, or
* Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or Be tested to meet the performance requirements of SFM Standard 12-7A-2.

**Exterior doors**
Exterior doors shall comply with one of the following:
The exterior surface or cladding shall be of noncombustible material.
The exterior surface or cladding shall be of ignition-resistant material.
The exterior door shall be constructed of solid core wood that complies with the following requirements:
Stiles and rails shall not be less than 13/8 inches thick.
Panels shall not be less than 11/4 inches thick, except for the exterior perimeter of the panel that shall be permitted to taper to a tongue not less than 3/8 inch thick.
The exterior door assembly shall have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252.
The exterior surface or cladding shall be tested to meet the performance requirements of Section 707A.3.1 when tested in accordance with ASTM E2707.
The exterior surface or cladding shall be tested to meet the performance requirements of SFM Standard 12-7A-1

WILDFIRE URBAN INTERFACE (WUI) CRITERIA:

**[PROJECT SPECIFIC BUILDING REQUIREMENTS FOR FIRE HAZARD SEVERITY ZONE CBC CHAPTER 1A.**

1) ROOF COVERING: (C.B.C SECTION 705A)
26GA GALV STEEL (NON-COMBUSTIBLE) INTERLOCKED STANDING SEAM ROOF PANEL WITH NO SPACE BETWEEN ROOF PANELS AND ROOF DECKING. STANDING SEAM ROOF OVER ONE LAYER#15 ROOF FELT. (CBC 705A.2)

2) ROOF GUTTERS: (C.B.C SECTION 705A.4)
SHALL BE SCREENED WITH A CORROSION RESISTANT NON COMBUSTIBLE WIRE MESH WITH 1/4" OPENING. (OR EQUAL)

3) SOFFITS: (C.B.C SECTION 707A.5)
ROSEBURG DURATEMP SIDING. (OR EQUAL)

4) EXTERIOR WALL FINISH: (C.B.C SECTION 707A.3)
ROSEBURG DURATEMP SIDING (OR EQUAL) PER CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION OFFICE OF STATE FIRE MARSHALL PRODUCTS HANDBOOK PUBLISHED BY CALFIRE DECEMBER 14, 2021.

5) VERTICAL EXTERIOR WALL VENTS & SOFFIT VENTS: (C.B.C SEC. 706A.2)
SCREENED WITH A CORROSION RESISTANT NON COMBUSTABLE WIRE MESH WITH 1/16" (1.6MM) MIN. OPENINGS AND NOT TO EXCEDD 1/8" (3.2MM)

6) EXTERIOR WINDOWS: (C.B.C SECTION 708A.2.1)
METAL FRAME, TEMPERED GLASS, OR ASSEMBLE OF FIRE RESIST OF NOT LESS THAN 20 MINUTES.

7) EXTERIOR DOORS: (C.B.C SECTION 708.3)
NON COMBUSTIBLE METAL DOORS AND FRAME.
ASSEMBLY OF FIRE RESIST OF NOT LESS THAN 20 MINUTES

**1** *1/4" = 1'-0"*
***WUI NOTES***

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24

CLIENT

Class Leasing
1651 SOUTH JUANITA STREET
SAN JACINTO CA. 92581
VOICE (951) 943-1908 FAX (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
WUI NOTES AND CRITERIA

PROJECT NUMBER
22088

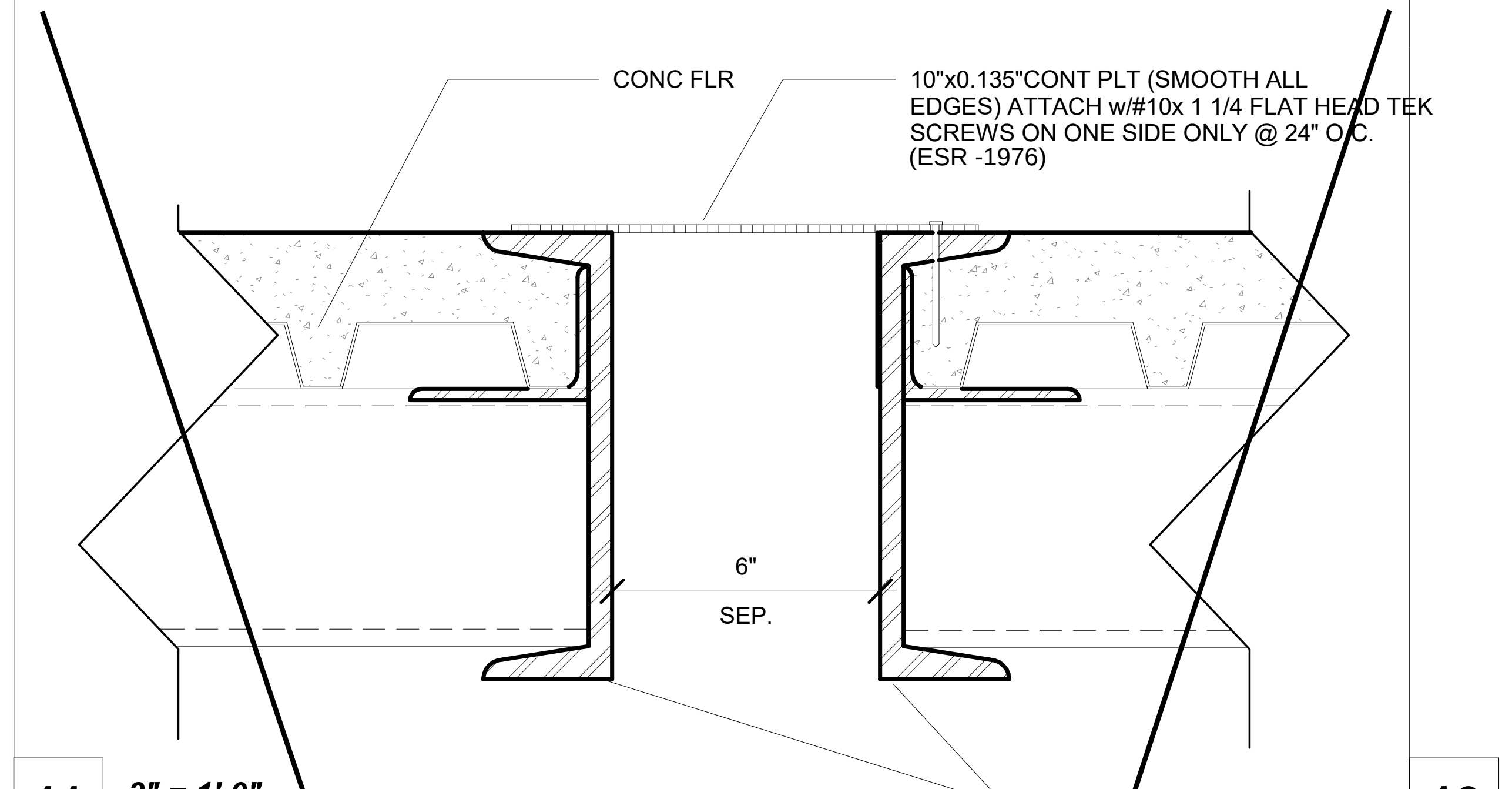
DRAWN BY
Author

CHECKED BY
Checker

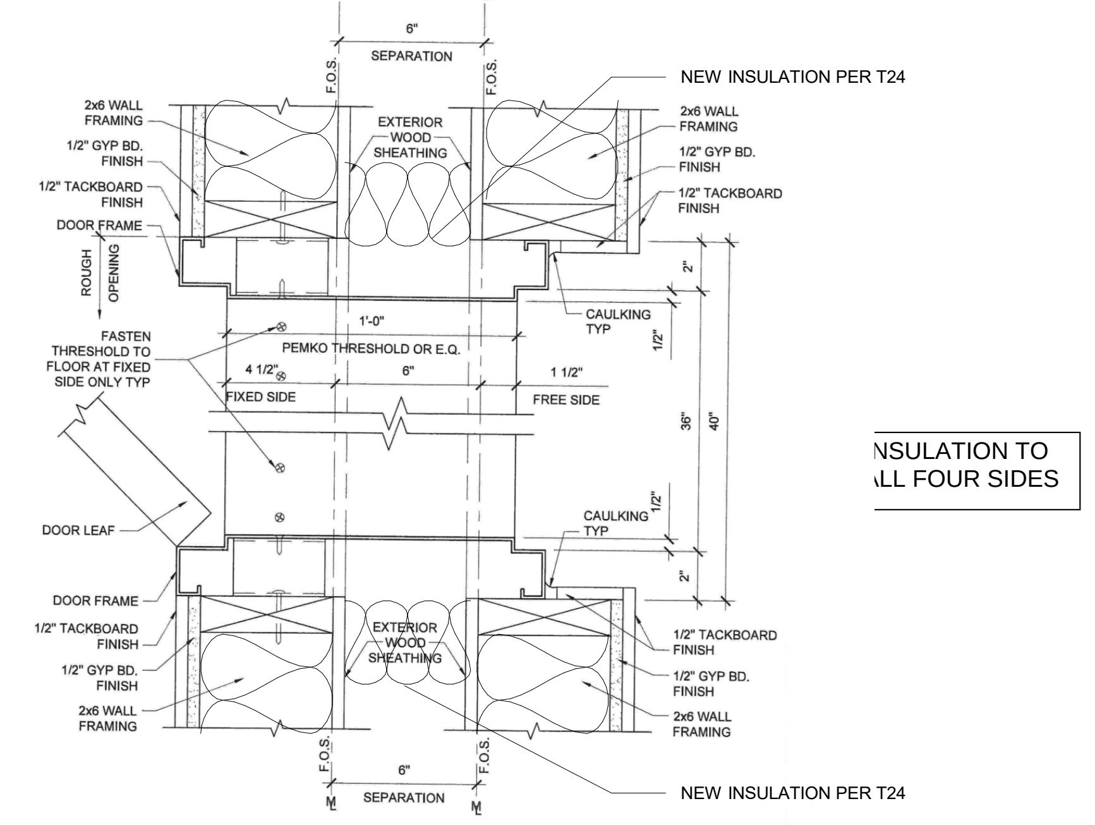
DATE
06/15/2021

SHEET NO.
A2.7

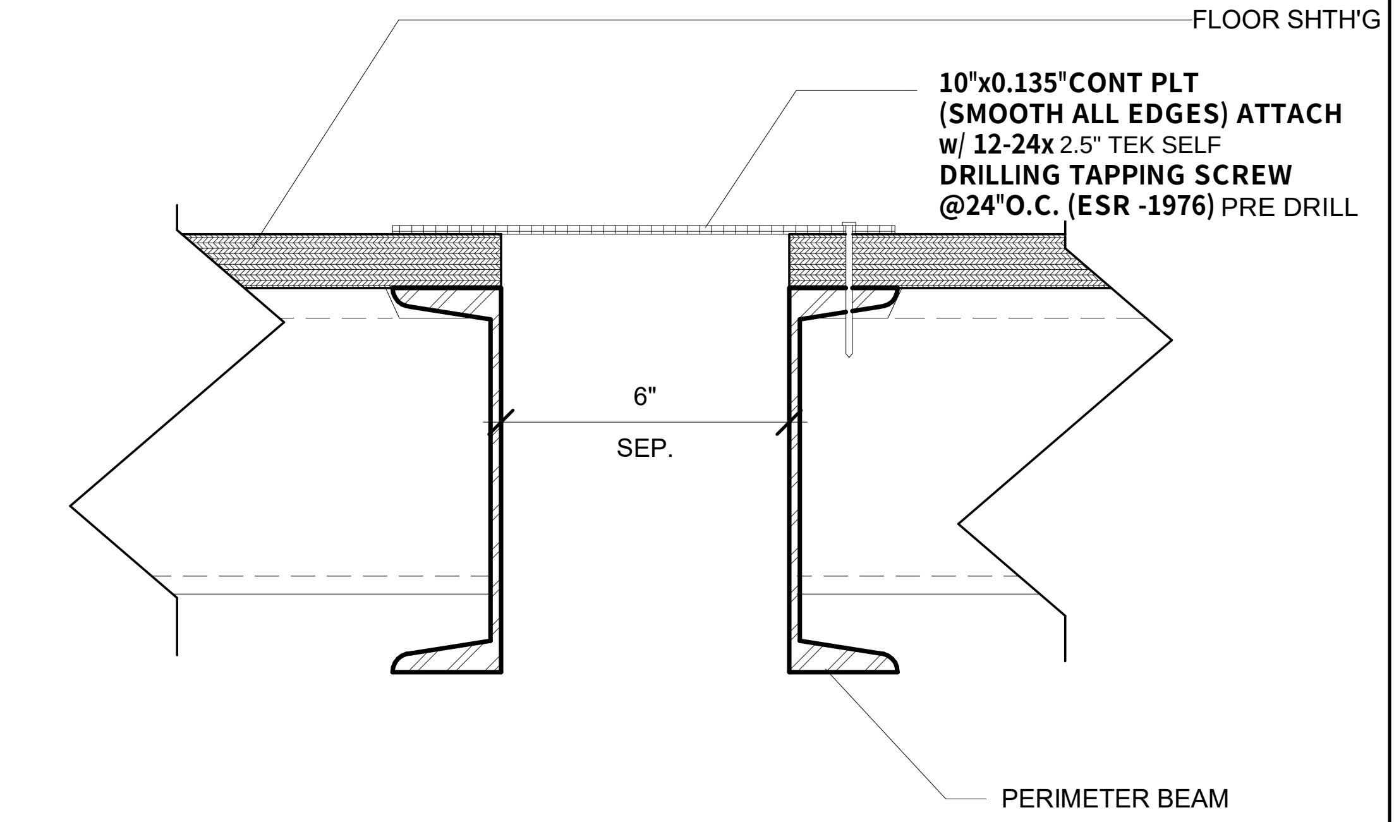
SHEET OF


CONC FLR
10"x0.135"CONT PLT (SMOOTH ALL EDGES) ATTACH w/#10x 1 1/4 FLAT HEAD TEK SCREWS ON ONE SIDE ONLY @ 24" O.C. (ESR -1976)
6"
SEP.
PERIMETER BEAM

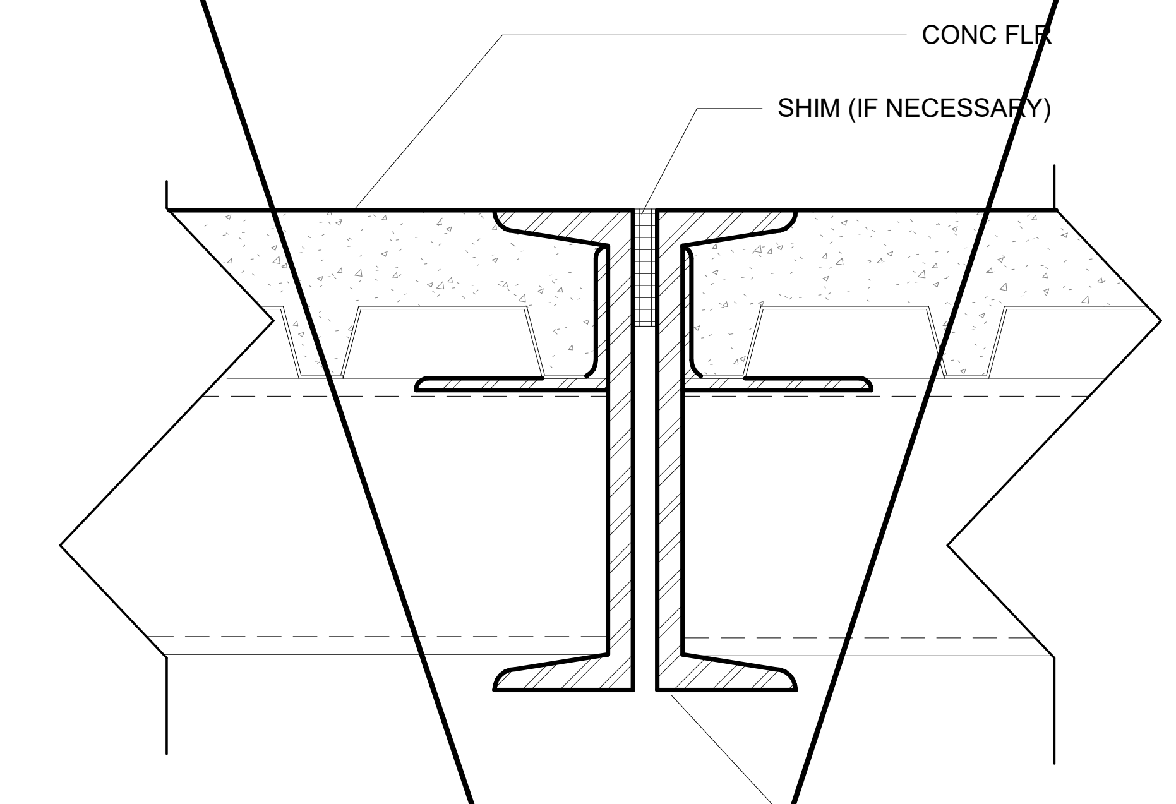
~~11 3" = 1'-0" Flr @ 6" SEP. ML (CONC FLR)~~



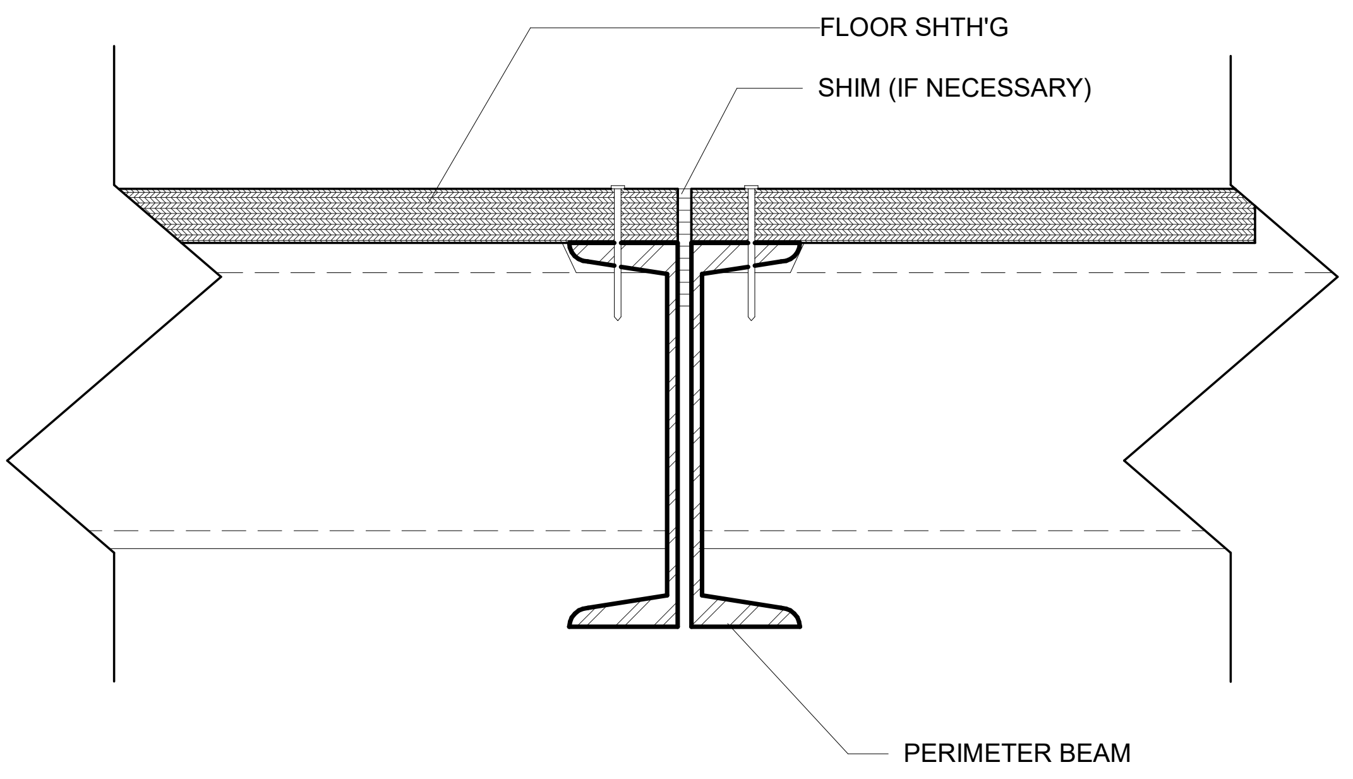
16 PASS THROUGH SEISMIC DOOR OPENING


FLOOR SHTH'G
10"x0.135"CONT PLT (SMOOTH ALL EDGES) ATTACH w/ 12-24x 2.5" TEK SELF DRILLING TAPPING SCREW @24"O.C. (ESR -1976) PRE DRILL
6"
SEP.
PERIMETER BEAM

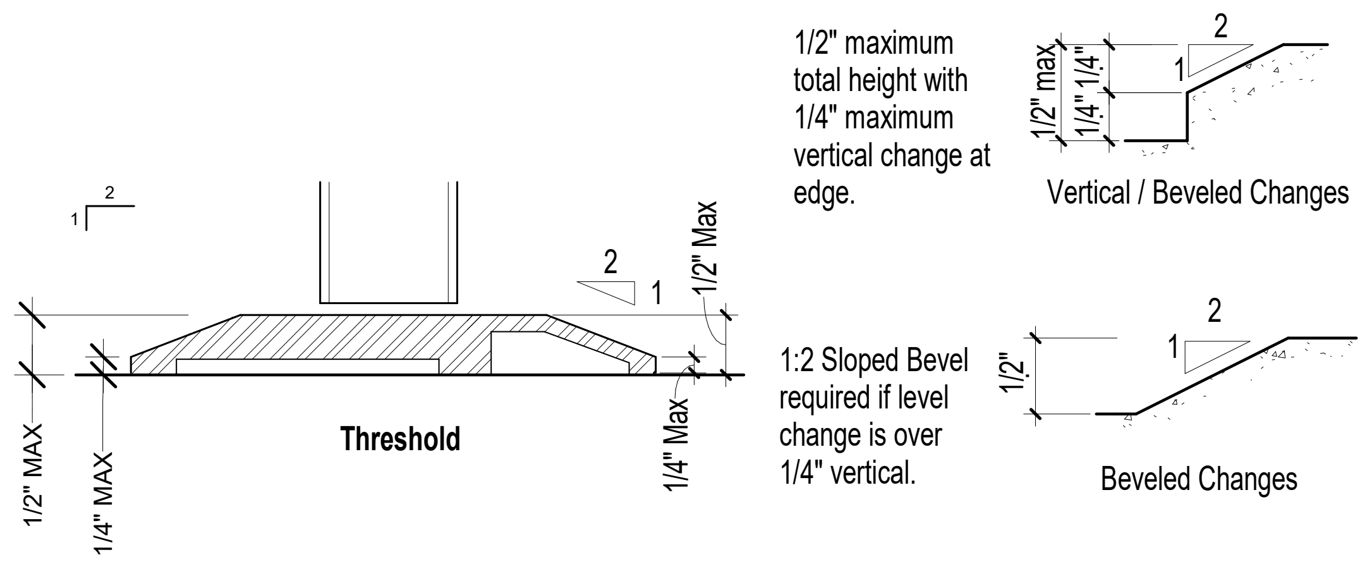
5 3" = 1'-0" Flr @ 6" SEP. ML (WD FLR)



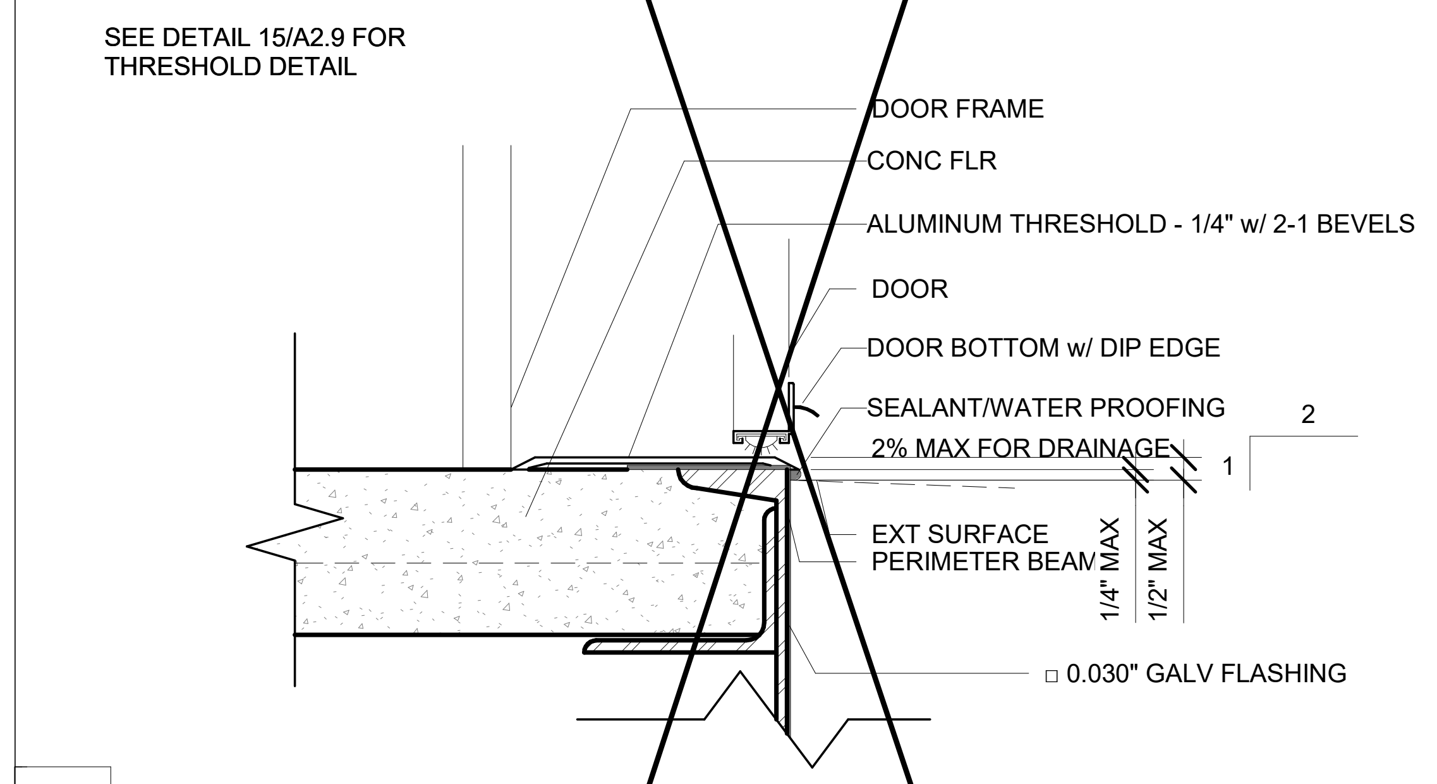
~~10 3" = 1'-0" Flr @ ML (CONC FLR)~~



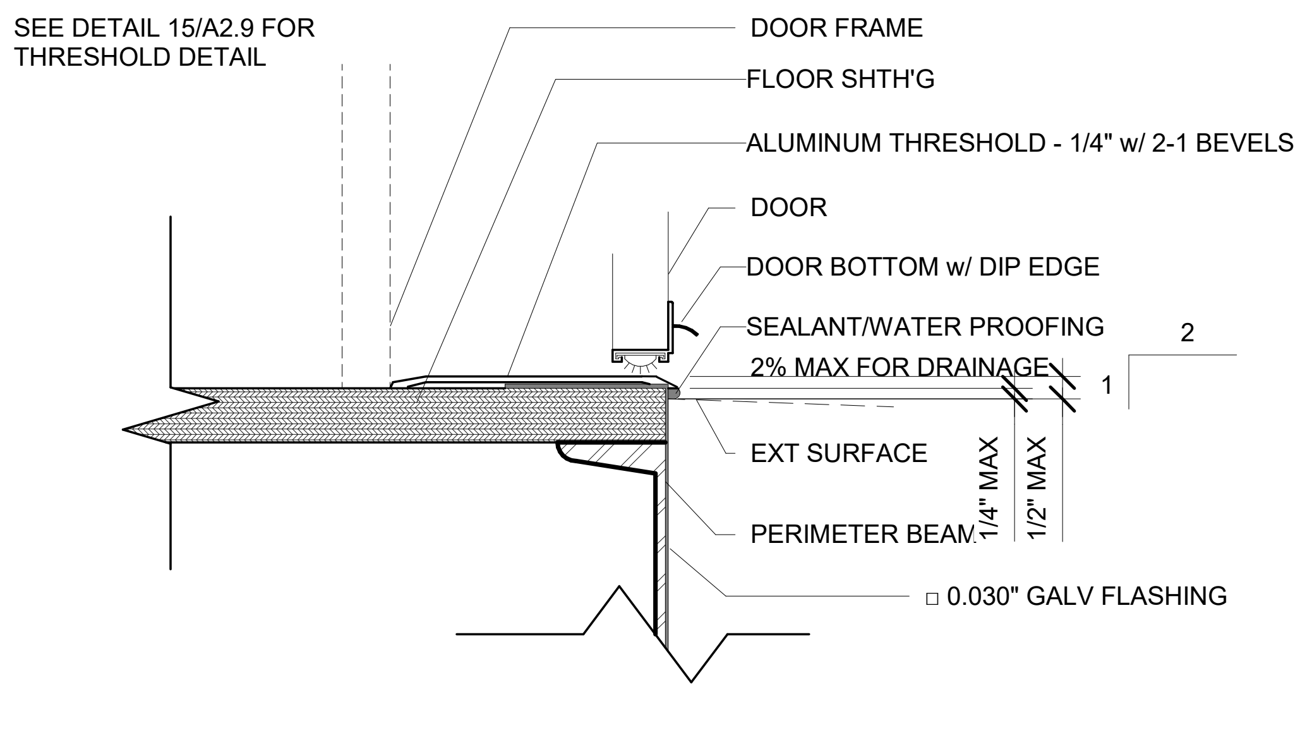
4 3" = 1'-0" Flr @ ML (WD FLR)


1
2
1/2" MAX
1/4" MAX
Threshold
2
1
1/2" Max
1/4" Max
1/2" maximum total height with 1/4" maximum vertical change at edge.
1/2" max
1/4"
1/4"
Vertical / Beveled Changes
1:2 Sloped Bevel required if level change is over 1/4" vertical.
1/2"
Beveled Changes

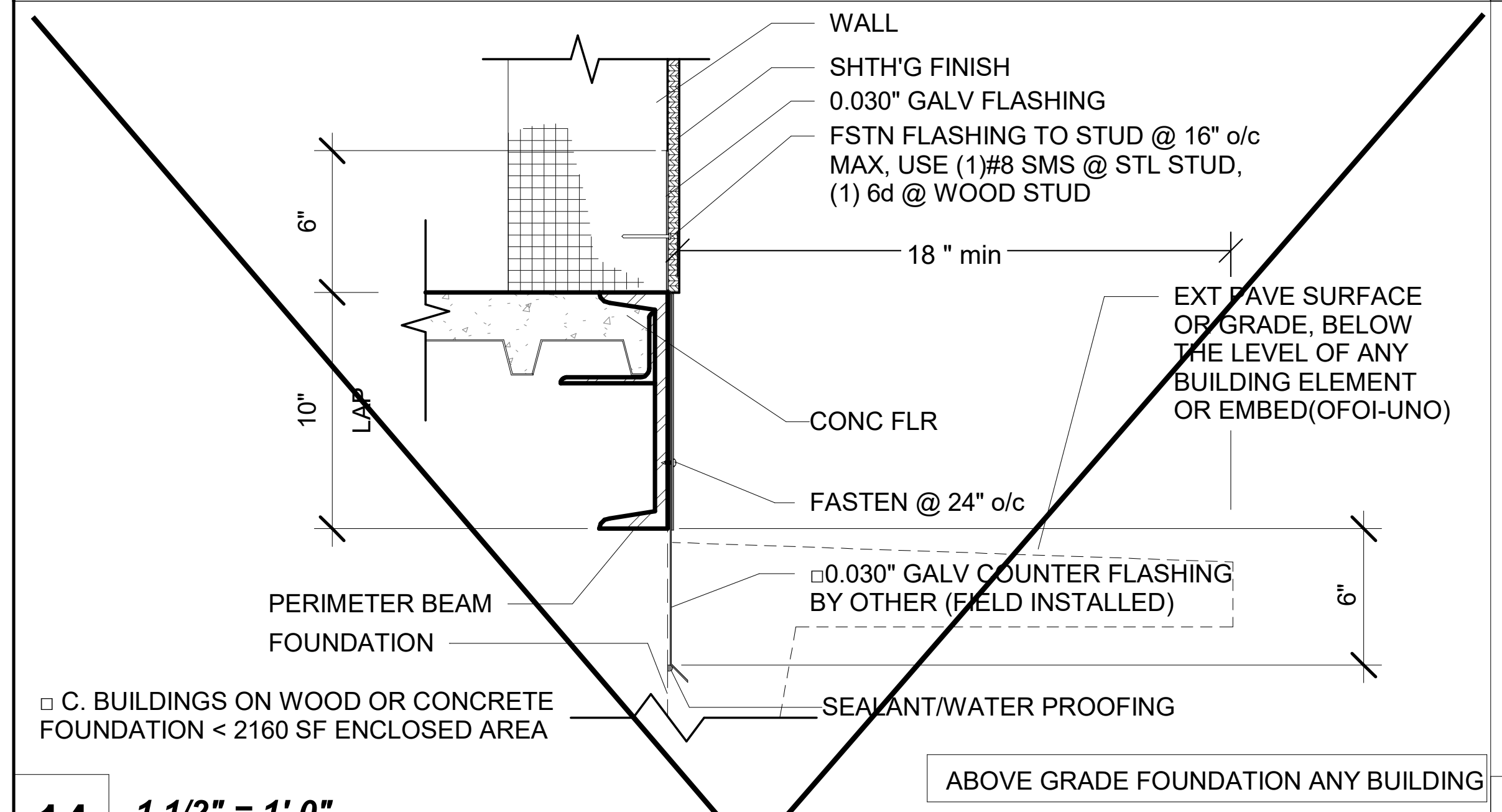
15 1/4" = 1'-0" THRESHOLD DETAIL



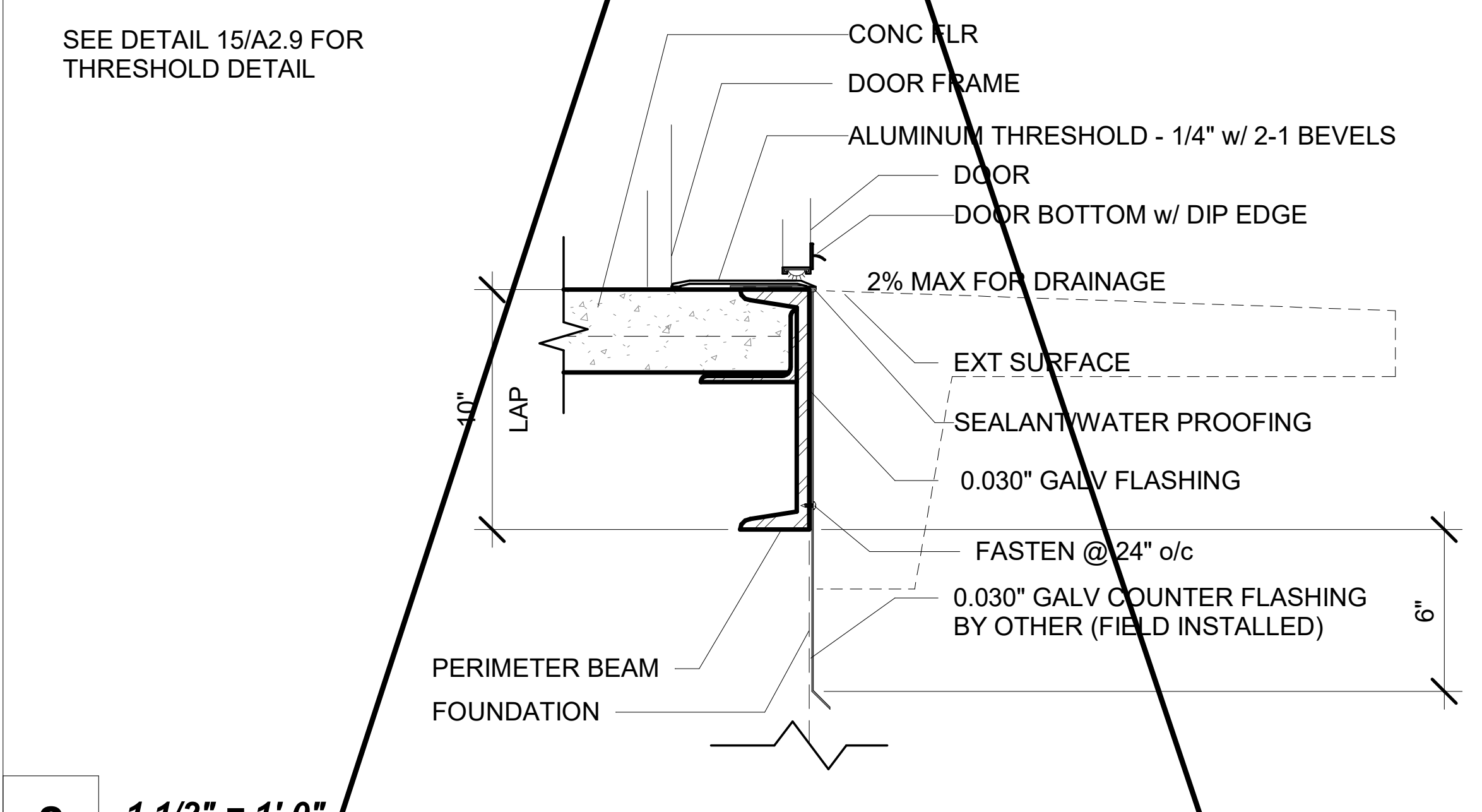
~~9 3" = 1'-0" Typ Sill Plate @ Threshold (CONC FLR)*~~



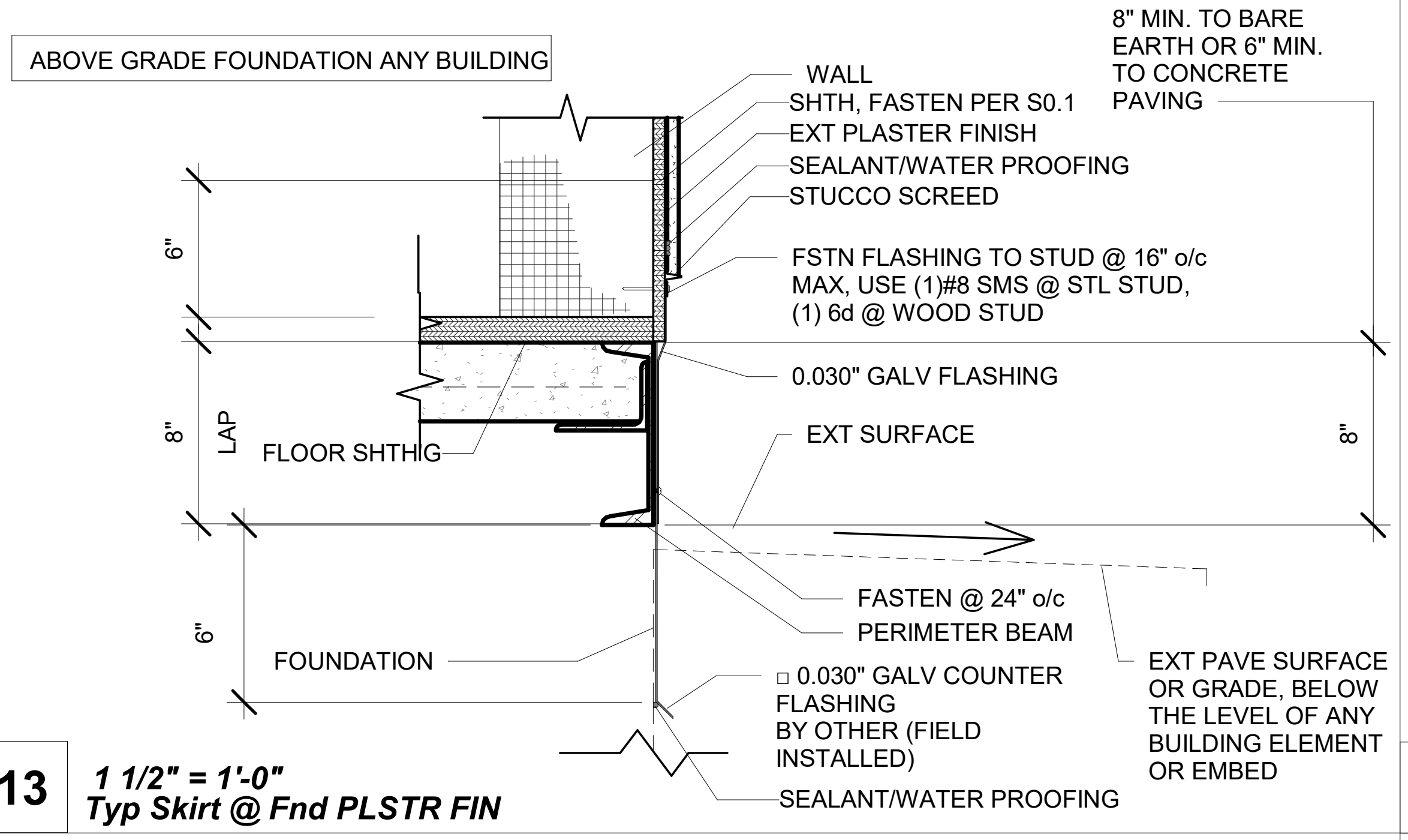
3 3" = 1'-0" Typ Sill Plt @ Threshold (WD FLR)*


WALL
SHTH'G FINISH
0.030" GALV FLASHING
FSTN FLASHING TO STUD @ 16" o/c MAX, USE (1)#8 SMS @ STL STUD, (1) 6d @ WOOD STUD
18 " min
6"
10"
LAP
EXT PAVE SURFACE OR GRADE, BELOW THE LEVEL OF ANY BUILDING ELEMENT OR EMBED(OFOI-UNO)
CONC FLR
FASTEN @ 24" o/c
PERIMETER BEAM
FOUNDATION
□0.030" GALV COUNTER FLASHING BY OTHER (FIELD INSTALLED)
6"
□ C. BUILDINGS ON WOOD OR CONCRETE FOUNDATION < 2160 SF ENCLOSED AREA
SEALANT/WATER PROOFING
ABOVE GRADE FOUNDATION ANY BUILDING

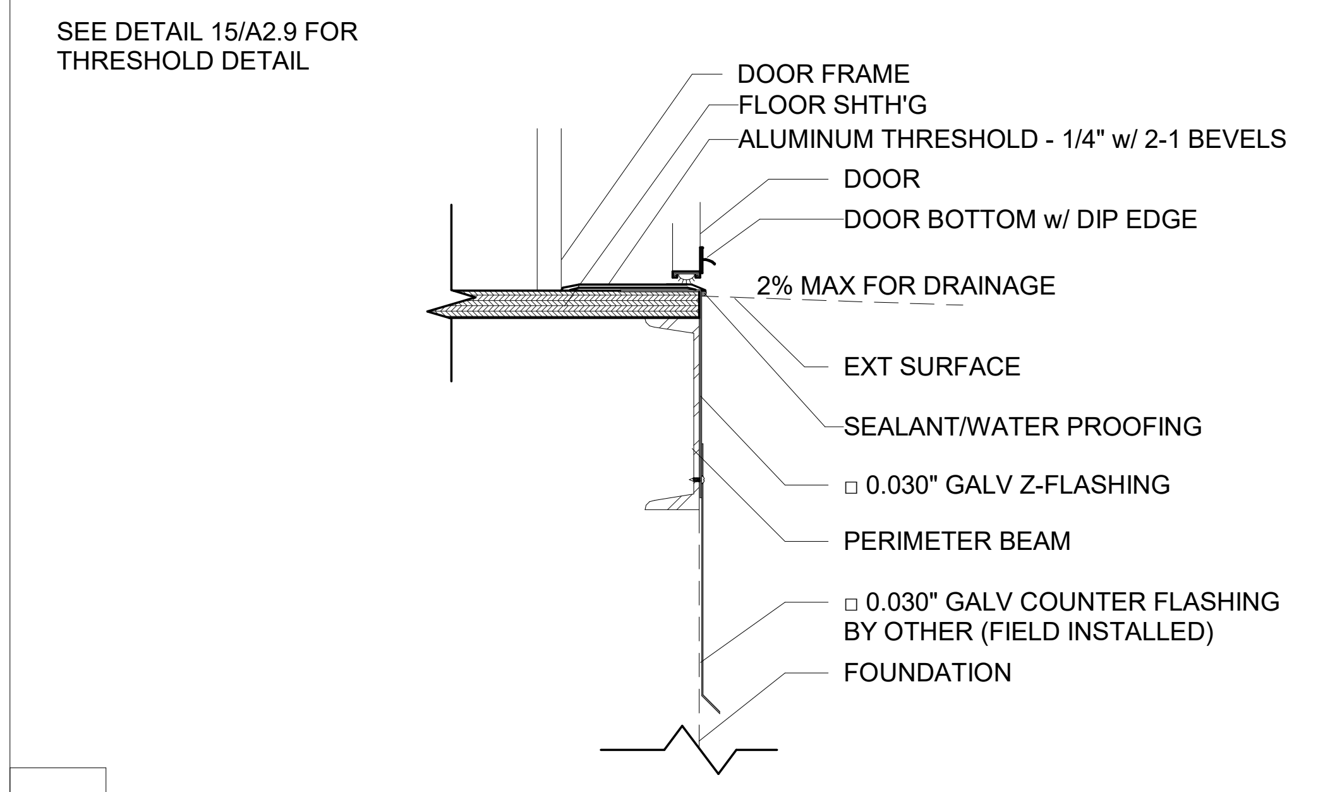
~~14 1 1/2" = 1'-0" Typ Skirt @ Fnd SHTH'G FIN~~



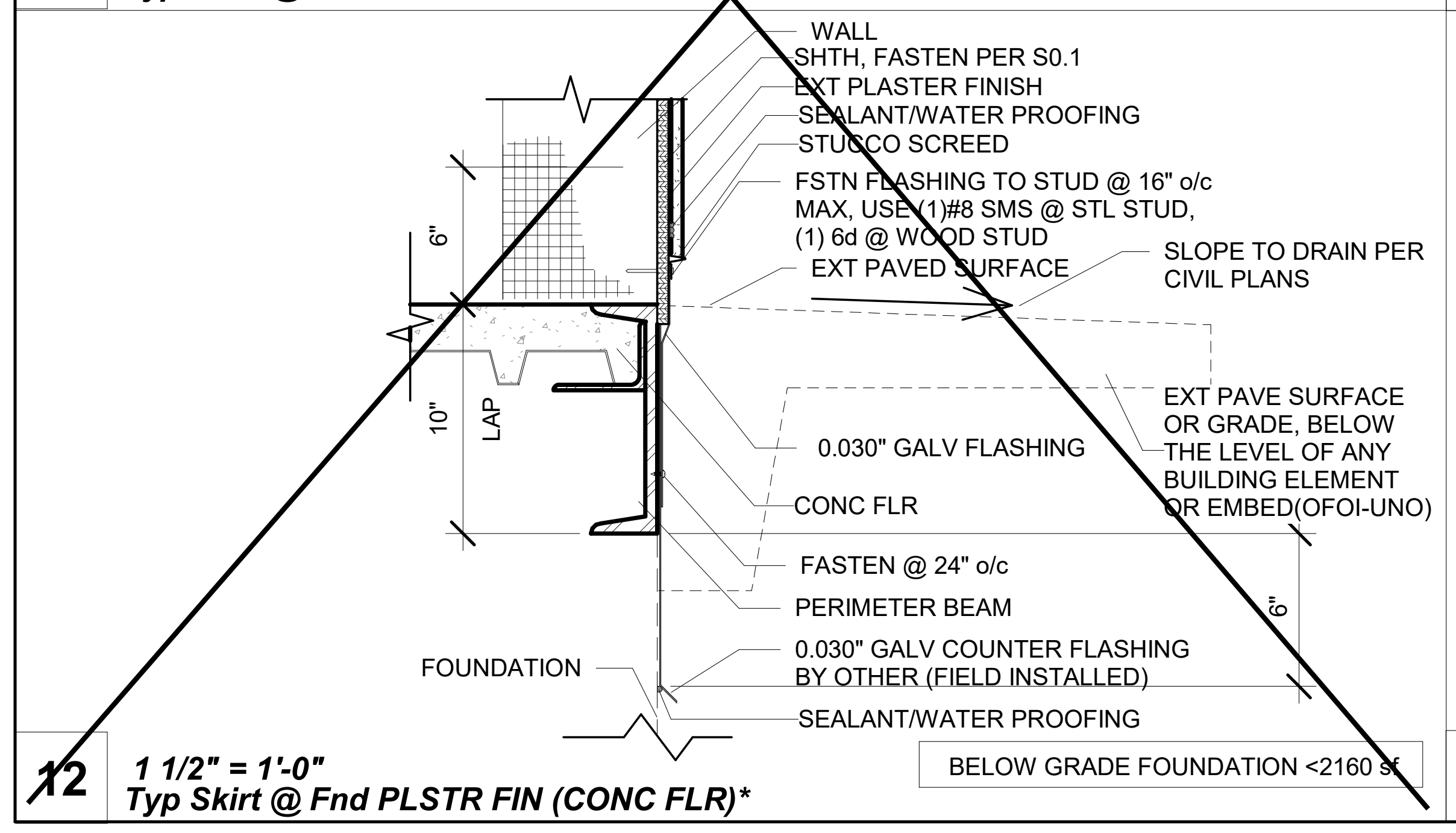
~~8 1 1/2" = 1'-0" Threshold @ Fnd (CONC FLR)*~~


ABOVE GRADE FOUNDATION ANY BUILDING
WALL
SHTH, FASTEN PER S0.1
EXT PLASTER FINISH
SEALANT/WATER PROOFING
STUCCO SCREED
8" MIN. TO BARE EARTH OR 6" MIN. TO CONCRETE PAVING
FSTN FLASHING TO STUD @ 16" o/c MAX, USE (1)#8 SMS @ STL STUD, (1) 6d @ WOOD STUD
6"
0.030" GALV FLASHING
8"
LAP
FLOOR SHTH'G
EXT SURFACE
8"
FASTEN @ 24" o/c
PERIMETER BEAM
6"
FOUNDATION
□ 0.030" GALV COUNTER FLASHING BY OTHER (FIELD INSTALLED)
EXT PAVE SURFACE OR GRADE, BELOW THE LEVEL OF ANY BUILDING ELEMENT OR EMBED
SEALANT/WATER PROOFING

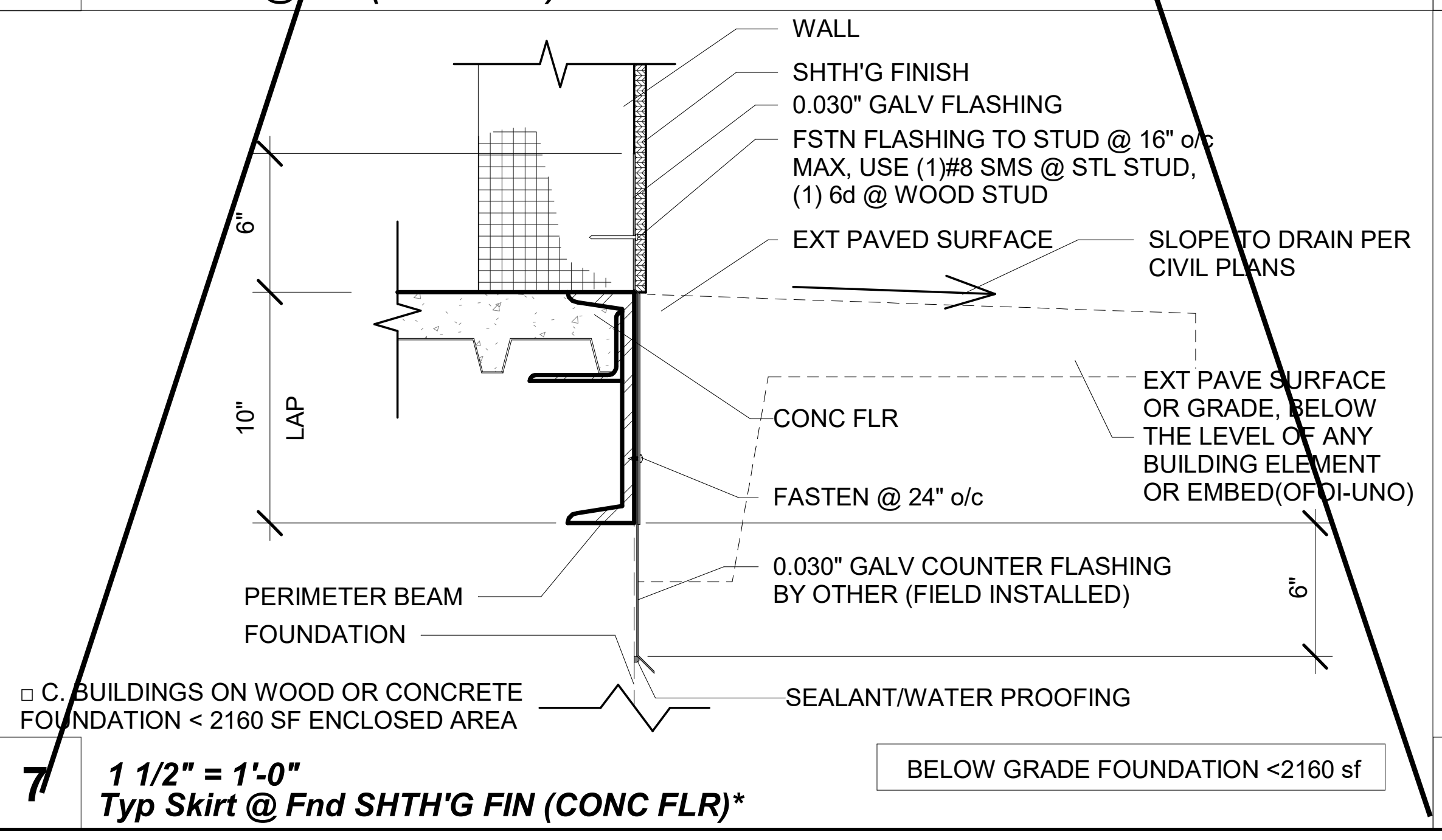
13 1 1/2" = 1'-0" Typ Skirt @ Fnd PLSTR FIN



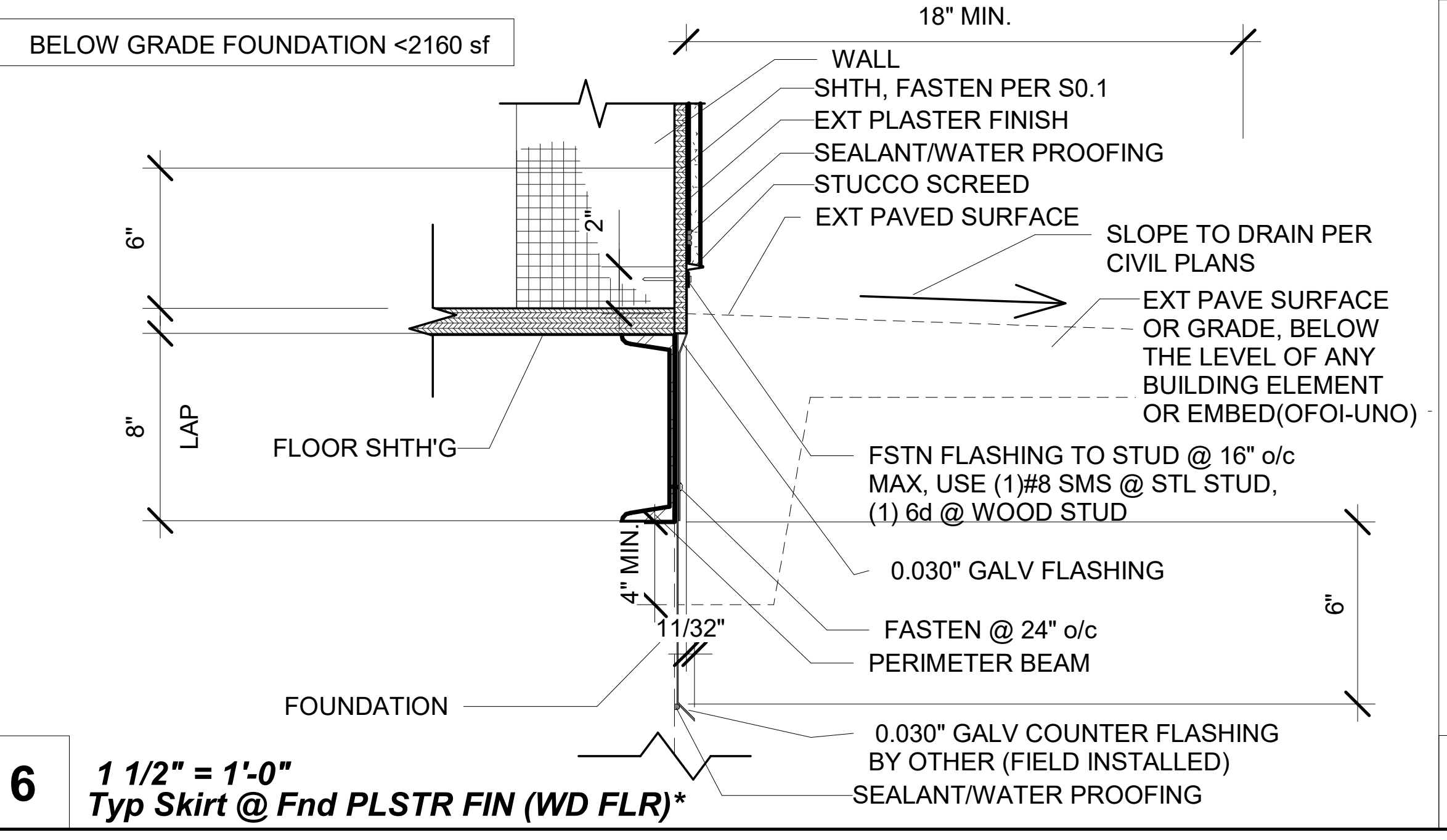
2 1 1/2" = 1'-0" Threshold @ Fnd (WD FLR)*


WALL
SHTH, FASTEN PER S0.1
EXT PLASTER FINISH
SEALANT/WATER PROOFING
STUCCO SCREED
FSTN FLASHING TO STUD @ 16" o/c MAX, USE (1)#8 SMS @ STL STUD, (1) 6d @ WOOD STUD
EXT PAVED SURFACE
SLOPE TO DRAIN PER CIVIL PLANS
6"
10"
LAP
EXT PAVE SURFACE OR GRADE, BELOW THE LEVEL OF ANY BUILDING ELEMENT OR EMBED(OFOI-UNO)
0.030" GALV FLASHING
CONC FLR
FASTEN @ 24" o/c
PERIMETER BEAM
FOUNDATION
0.030" GALV COUNTER FLASHING BY OTHER (FIELD INSTALLED)
6"
SEALANT/WATER PROOFING
BELOW GRADE FOUNDATION <2160 sf

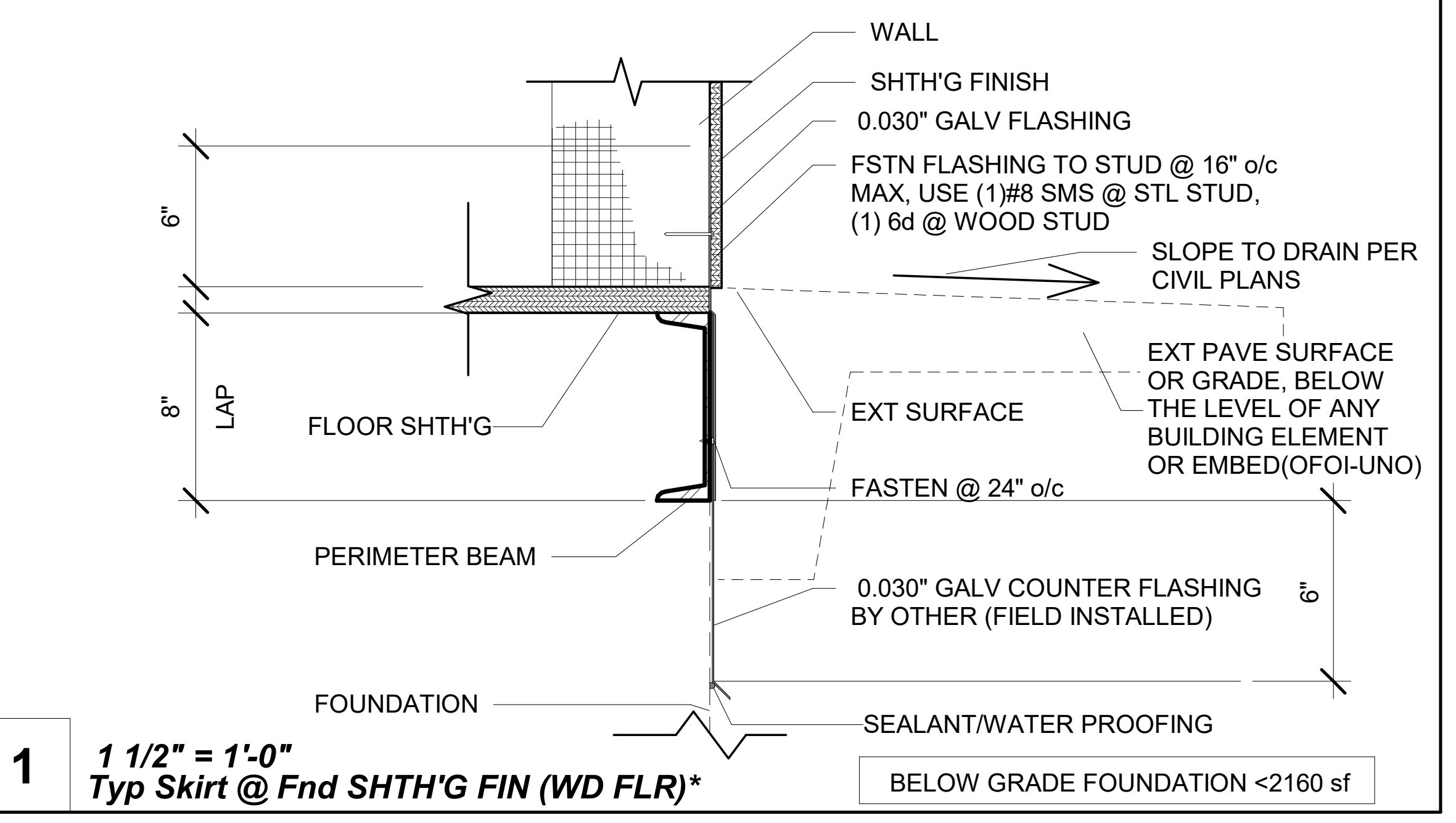
~~12 1 1/2" = 1'-0" Typ Skirt @ Fnd PLSTR FIN (CONC FLR)*~~


WALL
SHTH'G FINISH
0.030" GALV FLASHING
FSTN FLASHING TO STUD @ 16" o/c MAX, USE (1)#8 SMS @ STL STUD, (1) 6d @ WOOD STUD
EXT PAVED SURFACE
SLOPE TO DRAIN PER CIVIL PLANS
6"
10"
LAP
CONC FLR
EXT PAVE SURFACE OR GRADE, BELOW THE LEVEL OF ANY BUILDING ELEMENT OR EMBED(OFOI-UNO)
FASTEN @ 24" o/c
PERIMETER BEAM
FOUNDATION
0.030" GALV COUNTER FLASHING BY OTHER (FIELD INSTALLED)
6"
□ C. BUILDINGS ON WOOD OR CONCRETE FOUNDATION < 2160 SF ENCLOSED AREA
SEALANT/WATER PROOFING
BELOW GRADE FOUNDATION <2160 sf

~~7 1 1/2" = 1'-0" Typ Skirt @ Fnd SHTH'G FIN (CONC FLR)*~~


BELOW GRADE FOUNDATION <2160 sf
18" MIN.
WALL
SHTH, FASTEN PER S0.1
EXT PLASTER FINISH
SEALANT/WATER PROOFING
STUCCO SCREED
EXT PAVED SURFACE
SLOPE TO DRAIN PER CIVIL PLANS
6"
2"
EXT PAVE SURFACE OR GRADE, BELOW THE LEVEL OF ANY BUILDING ELEMENT OR EMBED(OFOI-UNO)
8"
LAP
FLOOR SHTH'G
FSTN FLASHING TO STUD @ 16" o/c MAX, USE (1)#8 SMS @ STL STUD, (1) 6d @ WOOD STUD
0.030" GALV FLASHING
4" MIN.
11/32"
FASTEN @ 24" o/c
PERIMETER BEAM
6"
FOUNDATION
0.030" GALV COUNTER FLASHING BY OTHER (FIELD INSTALLED)
SEALANT/WATER PROOFING

6 1 1/2" = 1'-0" Typ Skirt @ Fnd PLSTR FIN (WD FLR)*


WALL
SHTH'G FINISH
0.030" GALV FLASHING
FSTN FLASHING TO STUD @ 16" o/c MAX, USE (1)#8 SMS @ STL STUD, (1) 6d @ WOOD STUD
SLOPE TO DRAIN PER CIVIL PLANS
6"
8"
LAP
FLOOR SHTH'G
EXT SURFACE
EXT PAVE SURFACE OR GRADE, BELOW THE LEVEL OF ANY BUILDING ELEMENT OR EMBED(OFOI-UNO)
FASTEN @ 24" o/c
PERIMETER BEAM
0.030" GALV COUNTER FLASHING BY OTHER (FIELD INSTALLED)
6"
FOUNDATION
SEALANT/WATER PROOFING
BELOW GRADE FOUNDATION <2160 sf

1 1 1/2" = 1'-0" Typ Skirt @ Fnd SHTH'G FIN (WD FLR)*

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

**THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©**

CLIENT

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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ARCHITECTURAL DETAILS (FLOOR)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

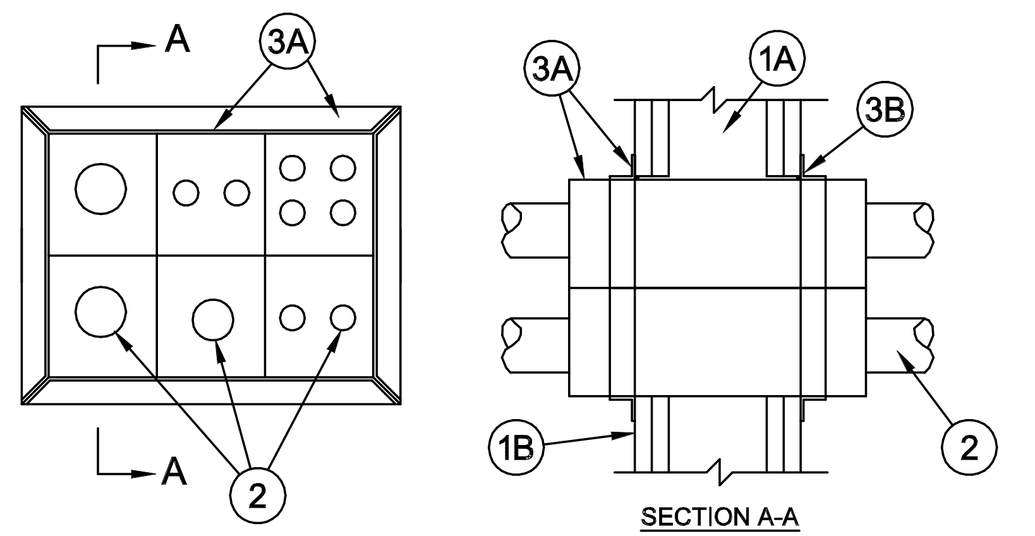
DATE

SHEET NO.
A2.9

SHEET OF

## System No. W-L-2448

February 26, 2008
F Ratings – 1 or 2 Hr (See Item 1)
T Rating – 0 Hr
L Rating At Ambient – 4 CFM/sq ft. (See Item 3B)
L Rating At 400 F – Less Than 1 CFM/sq ft. (See Item 3B)



SECTION A-A

1. **Wall Assembly**– The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs**– Wall framing may consist of either wood or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.
   B. **Gypsum Board*** – The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Max area of opening is 98.5 in.2 (635 cm2) with a max dimension of 12-1/8 in. (308 mm) for square devices. Max diam of opening is 2-1/4 in. (57 mm) for nom 2 in. (51 mm) round devices and 4-1/4 in. (108 mm) for 4 in. (102 mm) round devices.

   **The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.**
2. **Through Penetrants**– One or more nonmetallic pipes, conduits or tubes, as described in a single line item below, may be installed concentrically or eccentrically within each firestop device (Item 3A) without any limitations on annular space. If multiple through penetrations are installed within the firestop device, the through penetrants may be bundled together. Through penetrants to be rigidly supported on both sides of wall assembly. The following types and sizes of through penetrants may be used:
   A. **Polyvinyl Chloride (PVC) Pipe**– One nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. **Rigid Nonmetallic Conduit**+ – One nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 352 of the National Electrical Code (NFPA No. 70).

   See **Rigid Nonmetallic, Schedule 40 and 80 PVC Conduit** (DZYR) category in the Electrical Construction Equipment Directory for names of manufacturers.
   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe**– One nom 2 in. (51 mm) diam (or smaller) SDR11 CPVC pipe for use in closed (process or supply) piping systems.
   D. **Crosslinked Polyethylene (PEX) Tubing**– One nom 2 in. (51 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems.
   E. **Electrical Nonmetallic Tubing (ENT)**+ – Max four nom 1-1/4 in. (32 mm) diam (or smaller) ENT installed in accordance with Article 362 of the National Electrical Code (NFPA No. 70).

   See **Electrical Nonmetallic Tubing** (FKHU) category in the Electrical Construction Equipment Directory for names of manufacturers.
   F. **Optical Fiber/Communications/Signaling/Coaxial Cable Raceways**+ – Max four nom 1-1/4 in. (32 mm) diam (or smaller) plenum rated raceways installed in accordance with the National Electrical Code (NFPA No. 70).

   See **Optical Fiber/Communications/Signaling/Coaxial Cable Raceway** (QAZM) category in the Electrical Construction Equipment Directory for names of manufacturers.
   G. **Acrylonitrile Butadiene Styrene (ABS) Pipe**– Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid or cellular core ABS for use in closed (process or supply) or vented (drain, waste or vent) piping systems
3. **Firestop System**– The firestop system shall consist of the following:
   A. **Firestop Device***– A max of six square firestop devices may be ganged together. As an alternate, one round device may be centered within a round opening. Each device consists of a nom 2-1/2 by 2-1/2 by 10 in. (64 by 64 by 254 mm), a nom 4 by 4 by 10 in. (102 by 102 by 254 mm), a nom 2 in. (51 mm) diam by 10 in. (254 mm) or a nom 4 in. (102 mm) diam by 10 in. (254 mm) powder coated steel transit incorporating internal intumescent material, foam plugs and mounting flanges. Firestop device(s) to be installed within opening with ends projecting an equal distance beyond each surface of wall assembly in accordance with the accompanying installation instructions. The annular space between device(s) and periphery of opening shall be min 0 in. (0 mm, point contact) to max 1/8 in. (3 mm). Firestop device(s) secured in place by means of fill material (Item 3B) and steel split mounting flanges sized to accommodate the firestop device. Steel split mounting flanges installed on both sides of wall after installation of fill material, and secured together with supplied steel set screws. Nom 1 in. (25 mm) thick pre-cut foam plugs sized to accommodate the through penetrant(s) and installed flush with each end of device on both sides of wall assembly.

   **3M COMPANY** – 3M Fire Barrier Pass-Through Device
   B. **Fill, Void or Cavity Materials*– Putty or Caulk**– Min 1/8 in. (3 mm) bead of fill material shall be applied at interface of gypsum board and firestop devices immediately prior to the installation of the mounting flanges. As an option, foam plugs may be recessed into device and the recess filled with fill material flush with the ends of the device. If three or less devices (Item 3A) are ganged together, the fill material may be optional. L Rating applies only when fill material is applied at interface of gypsum board and device(s) prior to mounting flanges and with both ends of firestop device(s) filled with nominal 1/8 in. (3.2 mm) of Moldable Putty+.

   **3M COMPANY** – Moldable Putty+, CP 25WB+, IC 15WB+, 3000 WT

+ Bearing the UL Listing Mark
*Bearing the UL Classification Mark

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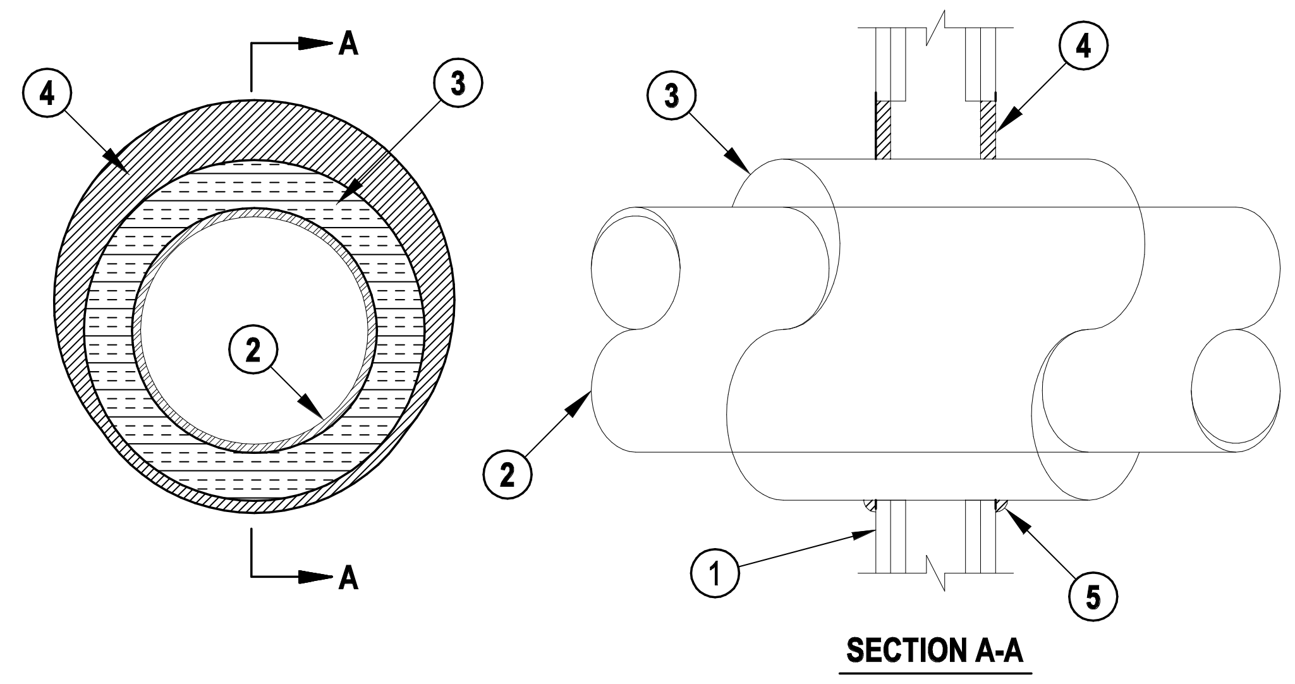
Through-Penetration Firestop Systems

## System No. WL 5029

F-Rating - 1 or 2 Hr (See Item 1)
T-Rating - $\frac{1}{2}$, $\frac{3}{4}$, 1-$\frac{1}{2}$ and 1-$\frac{3}{4}$ Hr (See Item 3)
L Rating at Ambient = 4 CFM/Sq.Ft.
L Rating at 400°F = Less Than 1 CFM/Sq.Ft.

February 8, 2006



SECTION A-A

1. 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 and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 A. 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 2-1/2 in. wide and spaced max 24 in. OC.
 B. Gypsum Board* — 5/8 in. thick, 4 ft wide, with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 18-5/8 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.
2. Through Penetrants — One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 A. Steel Pipe — Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 B. Iron Pipe — Nom 12 in. diam (or smaller) cast or ductile iron pipe.
 C. Copper Tubing — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
 D. Copper Pipe — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
3. Pipe Covering* — Nom 1, 1-1/2 or 2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product.

See Pipe and Equipment Covering — Materials (BRGU) category in the Building Material Directory for the names of manufacturers. Any pipe covering material meeting the above specifications 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.
The hourly T Rating of the firestop system is dependent on the hourly fire rating of the wall assembly in which it is installed, the size and type of through penetrant and the pipe covering thickness, as shown in the table below:

| Wall Assembly Rating Hr | Through Penetrant | | Pipe Covering Thkns In. | Annular Space | | T Rating Hr |
|---|---|---|---|---|---|---|
| | Type + | Max Diam In. | | Min In. | Max In. | |
| 1 | A | 4 | 1 | 0 | 1-1/2 | 1/2 |
| 1 | B or C | 2 | 1 or 1-1/2 | 0 | 1-1/2 | 1/2 |
| 1 | A | 4 | 1-1/2 | 0 | 1-1/2 | 1 |
| 1 | A | 12 | 2 | 0 | 1-7/8 | 3/4 |
| 1 | B or C | 6 | 2 | 0 | 1-7/8 | 1 |
| 2 | A | 4 | 1 | 0 | 1-1/2 | 1 |
| 2 | B or C | 4 | 1 or 1-1/2 | 0 | 1-1/2 | 1 |
| 2 | B or C | 6 | 2 | 0 | 1-7/8 | 1 |
| 2 | A | 4 | 1-1/2 | 0 | 1-1/2 | 1-3/4 |
| 2 | A | 12 | 2 | 0 | 1-7/8 | 1-1/2 |
| 2 | B or C | 6 | 2 | 0 | 1-7/8 | 1 |

+Indicates penetrant type as itemized in Item 2.
3A. Pipe Covering* — (Not Shown) — As an alternate to Item 3, max 2 in. thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 8 AWG stainless steel wire spaced max 12 in. OC. When the alternate pipe covering is used, the T Rating shall be determined from the table above.
 See Pipe and Equipment Covering — Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications 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.
4. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall . At the point contact location between pipe covering and gypsum board, a min 1/2 in. diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant
*Bearing the UL Classification Mark

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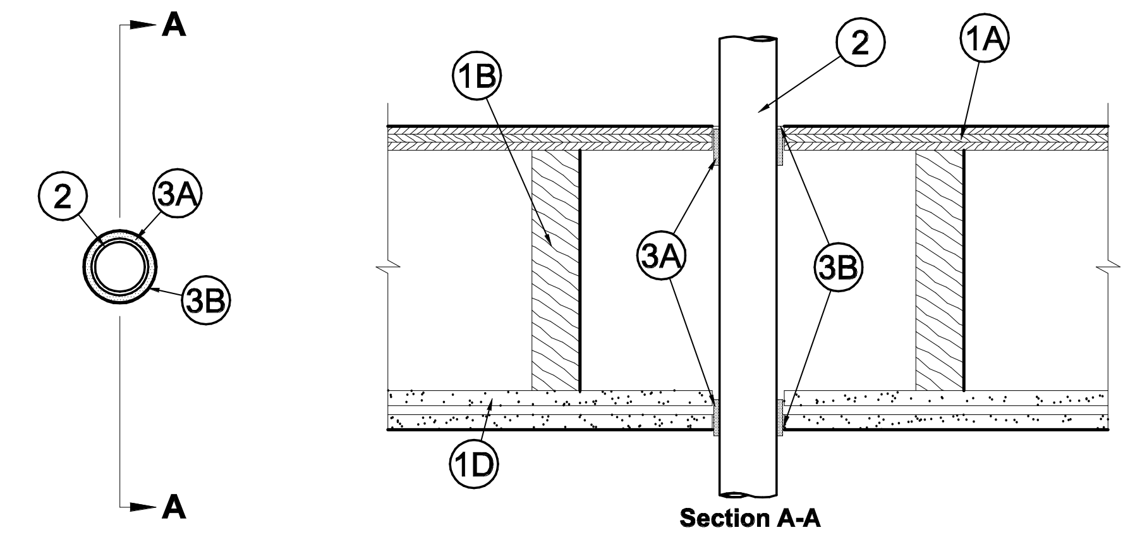
Guide XHEZ
Through-Penetration Firestop Systems

(12/08/08)
F-C-2019 - A Card

## System No. F-C-2019

F-Rating - 1 and 2 Hr (See Item 1); T-Rating - 1 and 2 Hr (See Item 1)
L Rating At Ambient - 1 CFM/sq ft; L Rating At 400 F - Less Than 1 CFM/sq ft



Section A-A

1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. The F and T Ratings of the firestop system are equal to the hourly fire rating of the floor-ceiling assembly. The general construction features of the floor-ceiling assembly are summarized below:
   A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 3 in. (76 mm).
   B. Wood Joists* — For 1 hr fire-rated floor-ceiling assemblies, nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped. For 2 hr fire-rated floor-ceiling assemblies, nom 2 by 10 in. (51 by 102 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.
   C. Furring Channels — (Not Shown) — In 2 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 1D). Furring channels spaced max 24 in. (610 mm) OC. In 1 hr fire-rated assemblies, resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. (610 mm) OC.
   D. Gypsum Board* — Nom 4 ft (1220 mm) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of gypsum board (2 hr fire-rated assembly) screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 3 in. (76 mm).
2. Through Penetrants — One nonmetallic pipe or conduit to be installed approximately midway between wood joists and centered within the system. Diam of openings hole-sawed through flooring system and through gypsum board ceiling to be nom 5/8 in. (16 mm) larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. Rigid Nonmetallic Conduit+ — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).
   C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.
   D. Electrical Nonmetallic Tubing (ENMT)+ — Nom 2 in. (51 mm) diam (or smaller) ENMT formed from PVC and installed in accordance with Article 331 of the National Electrical Code.
3. Firestop System — The firestop system shall consist of the following:
   A. Fill, Void or Cavity Material* — Wrap Strip — Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (51 mm) wide strips. One layer of wrap strip is wrapped around the through-penetrant at its egress from both sides of the floor-ceiling assembly with ends butted and held in place with two layers of 2 in. (51 mm) wide by 3 mil (0.08 mm) thick aluminum foil tape. The bottom edge of the wrap strip shall extend 5/8 in. (16 mm) below the flooring system and 1/4 in. (6 mm) below the ceiling.
   SPECIFIED TECHNOLOGIES INC — SpecSeal BLU Wrap Strip, SpecSeal BLU2 Wrap Strip or SpecSeal RED Wrap Strip
   B. Fill, Void or Cavity Material* — Sealant — Fill material forced into annulus to fill space to max extent possible, flush with top surface of floor and bottom surface of ceiling.
   SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

+Bearing the UL Listing Mark *Bearing the UL Classification Marking

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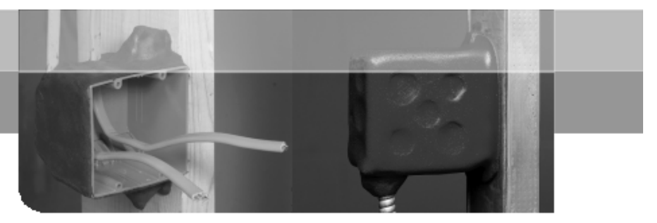


# 3M™ Fire Barrier Moldable Putty Pads MPP+

Product Data Sheet

## 1. Product Description

3M™ Fire Barrier Moldable Putty Pads MPP+ are a one-part, ready-to-use, intumescent wall-opening protective. When properly applied to the back of electrical outlet boxes, 3M™ Fire Barrier Moldable Putty Pads MPP+ help control the spread of fire, smoke and noxious gases through fire-restive walls and partitions. Installed in accordance with the UL wall-opening protective listing (UL Category CLIV), the product helps achieve up to 2-hour ratings in a variety of wall constructions. 3M™ Fire Barrier Moldable Putty Pads MPP+ can effectively provide protection for back-to-back electrical boxes.

3M™ Fire Barrier Moldable Putty Pads MPP+ are also used as a firestop material in through-penetration firestop systems. 3M™ Fire Barrier Moldable Putty Pads MPP+ help to maintain a firestop penetration seal for up to 4 hours. 3M™ Fire Barrier Moldable Putty Pads MPP+ exhibit excellent adhesion to a full range of construction substrates and penetrants. The pads are easily molded by hand (no mixing required). In addition to its fire-resistant properties, the 1/10th in. (2.54mm) thick pads have airborne sound reduction characteristics which helps minimize sound transmission through assemblies requiring an STC rating.

FIRE BARRIER: UP TO 4 HOUR Fire Protection
SMOKE SEAL: L RATED Meets Optional L Requirements
WALL OPENING: UP TO 2 HOUR Fire Protection
SOUND BARRIER: STC 52 In STC 53-Rated Wall Assembly

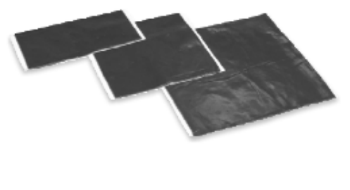
FM APPROVED
SUBJECT TO THE CONDITIONS OF APPROVAL AS A WALL & FLOOR PENETRATION FIRESTOP WHEN INSTALLED AS DESCRIBED IN THE CURRENT EDITION OF THE FMRC APROVAL GUIDE

ULC LISTED
FILL, VOID OR CAVITY MATERIALS
90G9

CLASSIFIED UL
WALL OPENING PROTECTIVE MATERIAL FIRE RESISTANCE CLASSIFICATION SEE UL FIRE RESISTANCE DIRECTORY
90G9

CLASSIFIED UL
FILL, VOID, OR CAVITY FOR USE IN THROUGH-PENETRATION FIRESTOP SYSTEMS
SEE UL FIRE RESISTANCE DIRECTORY
90G9

Color: ■ Dark Red



4 in. x 8 in. (101.6mm x 203.3mm), 7 in. x 7 in. (177.8mm x 177.8mm) and 9.5 in. x 9.5 in. (241.2mm x 241.3mm) pad sizes available.

### Product Features

- Firestop tested up to 4 hours in accordance with ASTM E 814 (UL 1479) & CAN/ULC-S115
- Wall opening protective tested up to 2 hours in accordance with UL 263
- Provides draft and cold smoke seal
- Pliable and conformable—molds easily into required shape
- Helps reduce noise transfer*
- Excellent adhesion
- Re-enterable/repairable
- Halogen-free and solvent-free
- Excellent aging properties
- Low VOC
- Will not dry out or crumble
- Red color widely recognized as a fire protective product

*Meets the intent of LEED® VOC regulations—helps reduce the quantity of indoor air contaminants that may be odorous, irritating and harmful to the comfort and well-being of the installers and occupants.*

**Minimizes noise transfer—STC-Rating of 52 when tested in STC 53-rated wall assembly.*

## 2. Applications

4 in. x 8 in. (101.6mm x 203mm) 3M™ Fire Barrier Moldable Putty Pads MPP+ are typically used as a wall opening protective to meet building requirements, for protection of membrane penetrations made by listed steel or non-metallic electrical boxes. It is also used to seal gaps between cables in multiple penetrations (including fiber optic inner duct) and to firestop cable bundles, insulated pipe, electrical conduit and metal pipe. Larger sized pads, 7 in. x 7 in. and 9.5 in x 9.5 in. (177.8mm x 177.8mm and 241.2mm x 241.2mm) are widely used to firestop metallic and non-metallic electrical outlet boxes up to 14 in. x 4.5 in. by 2-1/2 in. (355.6mm x 114.3mm x 63.5mm) deep. For larger applications, pads can be molded together by hand.

## 3. Specifications

3M™ Fire Barrier Moldable Putty Pads MPP+ shall be a one component, ready-to-use, intumescent elastomer capable of expanding a minimum of 3 times at 1000°F. The material shall be thixotropic and shall be applicable to overhead, vertical and horizontal firestops. Under normal conditions, 3M™ Fire Barrier Moldable Putty Pads MPP+ shall be noncorrosive to metal and compatible with synthetic cable jackets. The putty shall be listed by independent test agencies such as UL, Intertek or FM. 3M™ Fire Barrier Moldable Putty Pads MPP+ shall be tested to and pass the criteria of ASTM E 814 (UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems and CAN/ULC S115 Standard Method of Fire Tests of Firestop Systems. 3M™ Fire Barrier Moldable Putty Pads MPP+ meets the requirements of the IBC, NFPA 5000, NEC (NFPA 70), NFPA 101 and NCB (Canada) Building Codes.

**Typically Specified MasterFormat (2004)**
Section 07 84 00 – Firestopping

**Related Sections**
Section 07 84 16 – Annular Space Protection
Section 07 86 00 – Smoke Seals
Section 07 87 00 – Smoke Containment Barriers
Section 07 27 00 – Thermal and Moisture Protection Firestopping
Section 21 00 00 – Fire Suppression
Section 26 00 00 – Electrical

For technical support relating to 3M™ Fire Protection Products and Systems, call: 1-800-328-1687
For more information on 3M™ Fire Protection Products, visit: www.3M.com/firestop

3M

## 4. Performance & Typical Physical Properties

| | |
|---|---|
| **Color:** | Dark Red |
| **Nominal Density:** | 10–12 lbs./gal. (1.2–1.45kg/L) |
| **Nominal Thickness:** | 1/10 in. (2.54mm) |
| **Surface Burning** (ASTM E 84): | Flame Spread 0, Smoke Development 0 |
| **Heat Expansion:** | Begins at 350°F (177°C)<br>Significant at 400°F (204°C)<br>Free Expansion is Nominal 3 times |
| **STC** (ASTM E 90 and ASTM E 413):<br>**Tested in STC 53 rated wall assembly** | 52 when tested on back-to-back electrical boxes |
| **VOC Less $H_2O$ and Exempt Solvents:** | < 250g/L |

| | |
|---|---|
| **Dimensions:** | 4 in. x 8 in. x 1/10 in. (101.6mm x 203.2mm x 2.5mm) |
| **Unit Volume:** | 2.52 in.$^3$ (41.4cm$^3$) |
| **Unit Weight:** | 2.7 oz (76g) |
| **Dimensions:** | 7 in. x 7 in. x 1/10 in. (177.8mm x 177.8mm x 2.5mm) |
| **Unit Volume:** | 4.63 in.$^3$ (76.0cm$^3$) |
| **Unit Weight:** | 4.1 oz (116g) |
| **Dimensions:** | 9.5 in. x 9.5 in. x 1/10 in. (241.3mm x 241.3mm x 2.5mm) |
| **Unit Volume:** | 6.1 in.$^3$ (139.8cm$^3$) |
| **Unit Weight:** | 7.6 oz (215g) |

## 5. Packaging, Storage, Shelf Life

| | |
|---|---|
| **Packaging:** | Corrugated cardboard box with liner between individual pads. |
| **Storage:** | 3M™ Fire Barrier Moldable Putty Pads MPP+ should be stored indoors in dry conditions. |
| **Shelf Life:** | 3M™ Fire Barrier Moldable Putty Pads MPP+ shelf life is indefinite in original unopened containers. Product will not dry or crumble in opened containers. Normal stock and stock rotation practices are recommended. |

## 6. Installation Techniques

*Consult a 3M Authorized Fire Protection Products Distributor / Dealer or Sales Representative for Applicable UL, Intertek or other third-party drawings and system details.*

| | |
|---|---|
| **Preparatory Work:** | The surface of the electrical box, or opening and any penetrating items should be cleaned (i.e. free of dust, grease, oil, loose materials, rust or other substances) to allow for the proper adhesion of the 3M™ Fire Barrier Moldable Putty+ Pad. Ensure that the surface of the substrates are not wet and are frost-free. |
| **Installation Details:** | Electrical boxes must be firestopped under the following conditions: boxes larger than 16 sq. in. (103 sq. cm), if horizontal spacing between boxes is less than 24 in. (609.6mm), when multiple boxes are located in one stud cavity or if the aggregate of all boxes exceeds 100 sq. in. per 100 sq. ft. (645 sq. cm. per 9.29 sq. m) — refer to listed system details and applicable local building code requirements. For electrical box installations, a minimum of 1/10 in. (2.5mm) thick putty application is required. 3M™ Fire Barrier Moldable Putty Pads MPP+ are to be installed to completely cover the exterior of the outlet box (except for the side against the stud). To firestop penetrations, install the applicable depth of backing material (if required), remove the desired amount of putty from the pad, form (if necessary) and install as detailed within the listed system. Make sure that putty is in complete contact with the substrate and penetrating item(s).<br>**Note: Partial pads can be pieced together and the seams between partial pads should overlap a minimum of 1/8 in. with the seams worked with the fingertips to create adhesion at the seam.** |
| **Limitations:** | Over application (i.e., using excessive amount of material) of product to vertical surfaces may cause sagging, follow system details. Product is not impaired by freezing but should be warmed to 32°F (0°C) before applying. |

## 7. Maintenance

No maintenance is expected when installed in accordance with the applicable UL, Intertek, FM or other third-party listed system. Once installed, if any section of the 3M™ Fire Barrier Moldable Putty Pad MPP+ is damaged, the following procedure will apply: remove damaged putty, clean the affected area and install the proper thickness of putty, ensuring it bonds to the substrate and adjacent putty (product from damaged area can be reused if it is free from contaminants). Putty can be molded together at new/existing putty overlap.

## 8. Availability

3M™ Fire Barrier Moldable Putty Pads MPP+ are available from 3M Authorized Fire Protection Products Distributors and Dealers. 3M™ Fire Barrier Moldable Putty Pads MPP+ are available in the following sizes: (10 pads/pack, 10 packs/case) 4 in. x 8 in. x 1/10 in. (101.6mm x 203.2mm x 2.5mm), (20 pads/case) 7 in. x 7 in. 1/10 in. (177.8mm x 177.8mm x 2.5mm), (20 pads/case) 9.5 in. x 9.5 in. 1/10 in. (241.3mm x 241.3mm x 2.5mm); red-colored firestop material. For additional technical and purchasing information regarding this and other 3M Fire Protection Products, please call: 1-800-328-1687 or visit www.3M.com/firestop.

## 9. Safe Handling Information

*Consult product's Material Safety Data Sheet (MSDS) from country-of-use prior to handling and disposal.*

3M
**Industrial Adhesives and Tapes Division**
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-328-1687
877-369-2923 (Fax)
www.3M.com/firestop

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# USE PUTTY AT ALL BOXES INSTALLED ON FIRE-RATED WALLS

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PROJECT SPECIFIC STATE AGENCY APPROVAL
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT
11590 W. Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

CLIENT
Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL
~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

REVISIONS

| # | Description | BY |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**
**CODE: 2022 CBC**
**A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.**

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

EL DORADO 160# SNOW LOAD

SHEET TITLE
FIRE SEPARATION & PENETRATION DETAILS

PROJECT NUMBER
22073

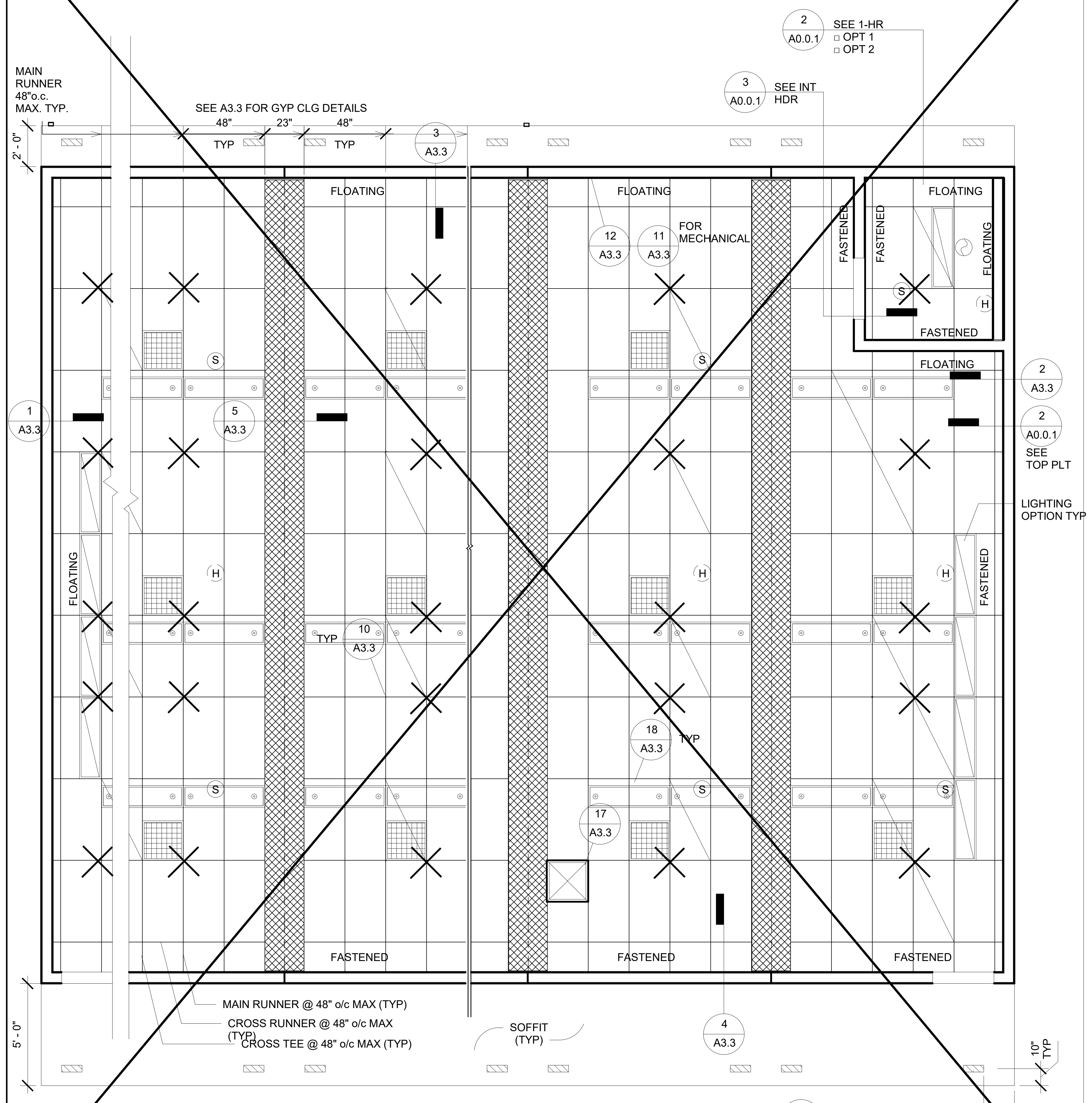
DRAWN BY
rMc

CHECKED BY
RT/AR

DATE
06/07/2021

SHEET NO.
A3.0.1

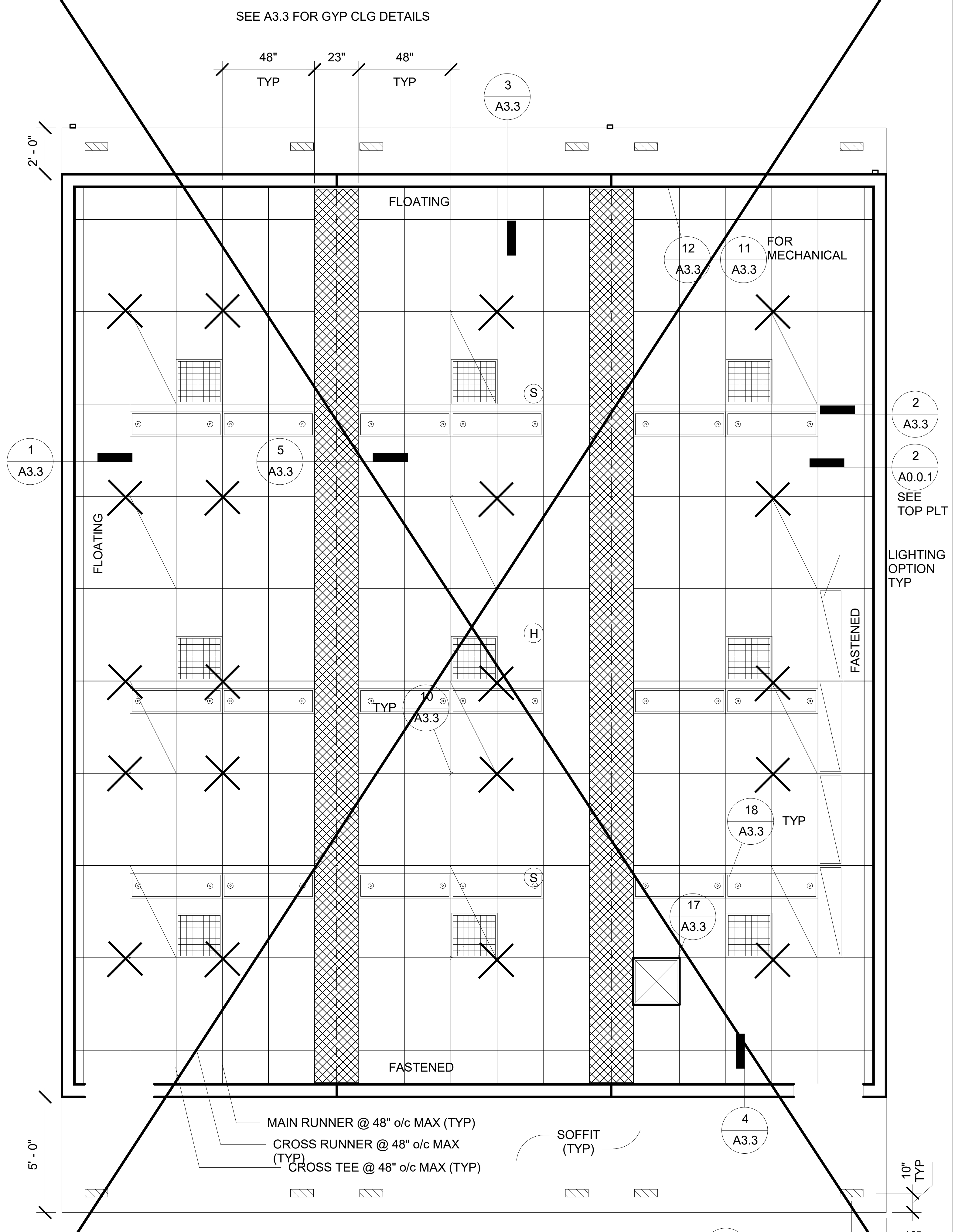
SHEET OF SHEETS



NOTE: SEE 10 /14 / 15 / A3.3
FOR TYP WIRE BRACE CONNECTION
SEE A3.2.1 FOR CLG NOTES

3 / A0.0.1 SEE EXT HDR

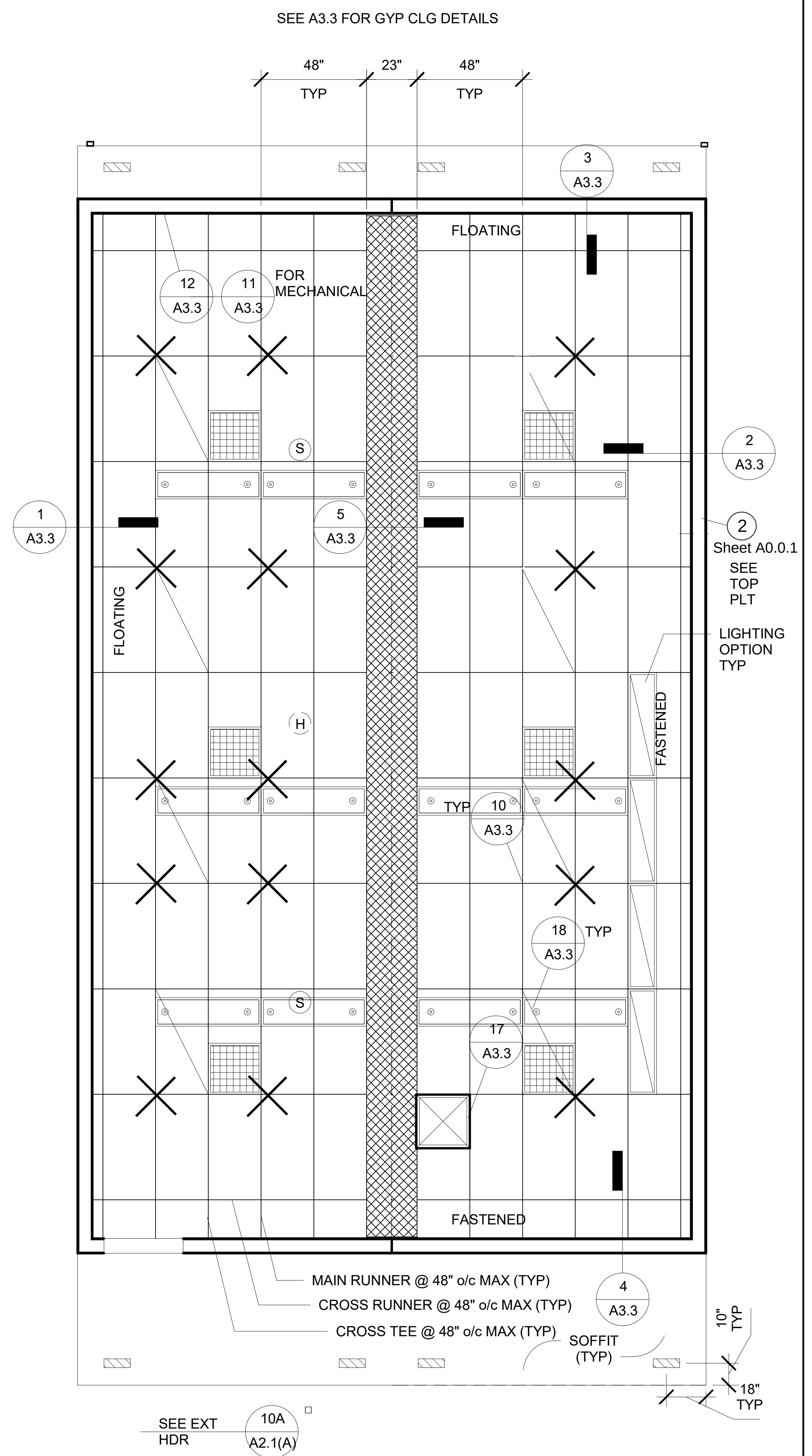
**3** *1/4" = 1'-0"*
***48x40 thru 120x40 RCP(A)***



NOTE: SEE 10 /14 / 15 / A3.3
FOR TYP WIRE BRACE CONNECTION
SEE A3.2.1 FOR CLG NOTES

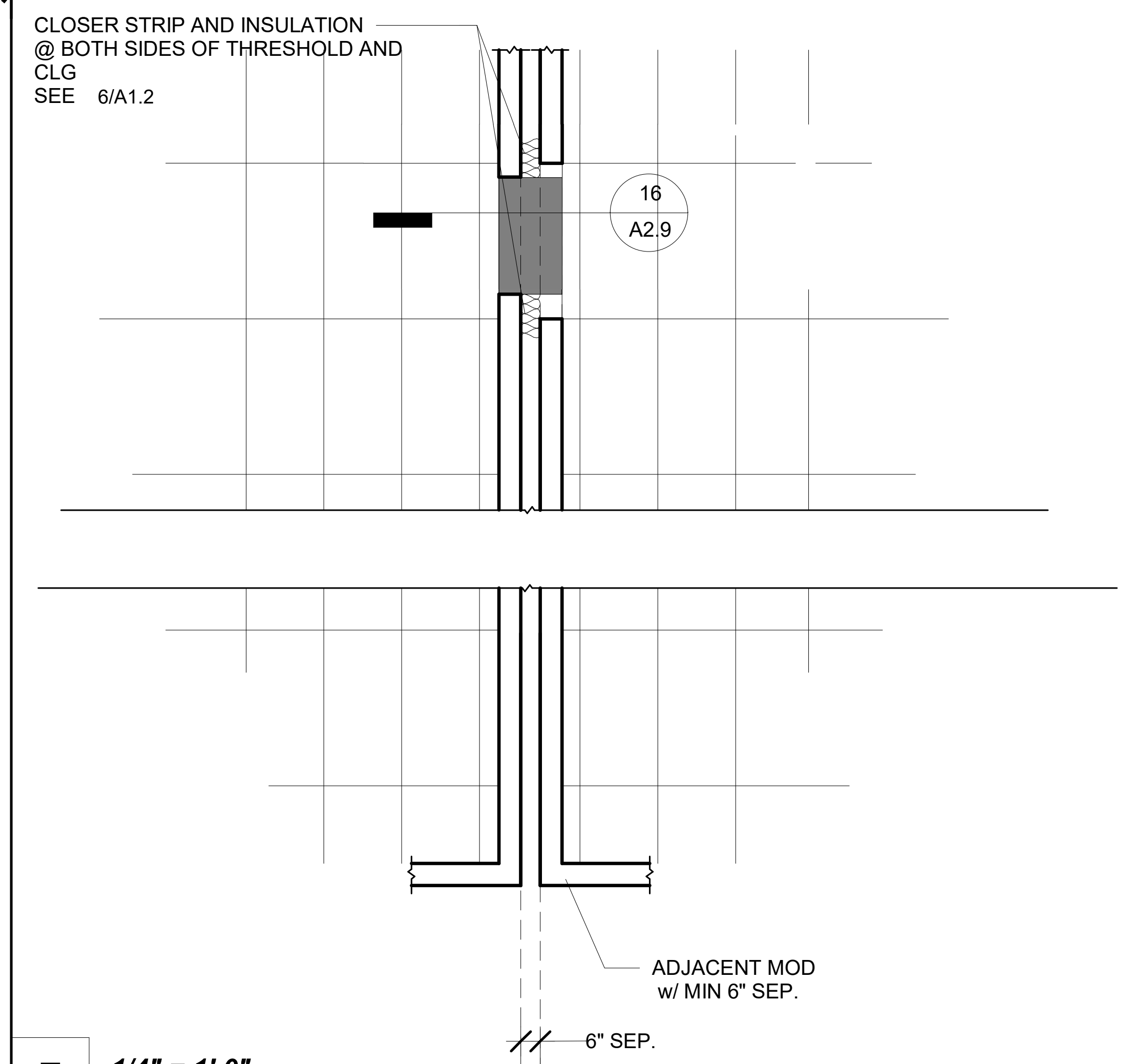
3 / A0.0.1 SEE EXT HDR

**2** *1/4" = 1'-0"*
***36x40 RCP(A)***



Sds > 1.15 = SPLAY WIRE MUST BE ON 8x12 GRID MAX
NOTE: SEE 10 /14 / 15 / A3.3
FOR TYP WIRE BRACE CONNECTION
SEE A3.2.1 FOR CLG NOTES

**1** *1/4" = 1'-0"*
***24x40 RCP(A)***

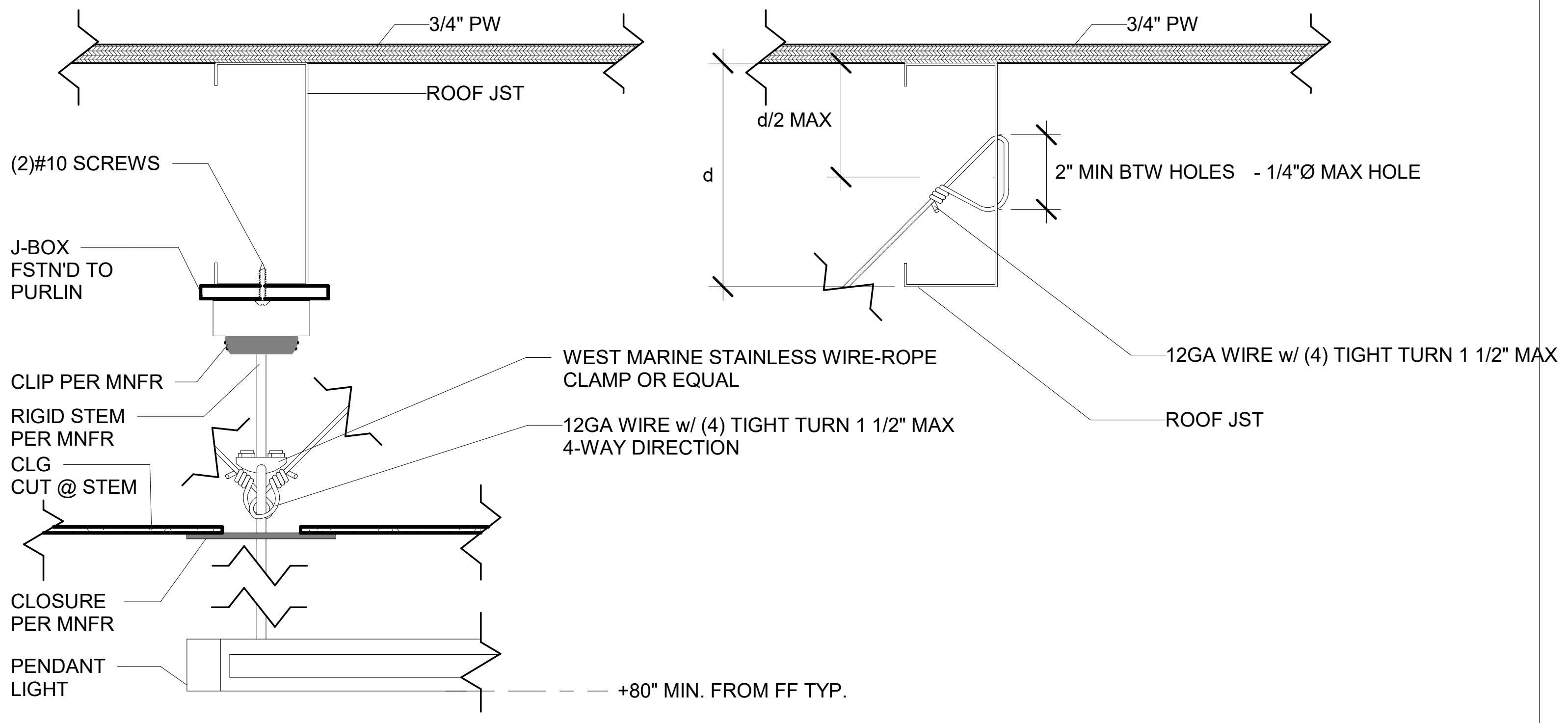


**7** *1/4" = 1'-0"*
***RCP - Optional Opening***

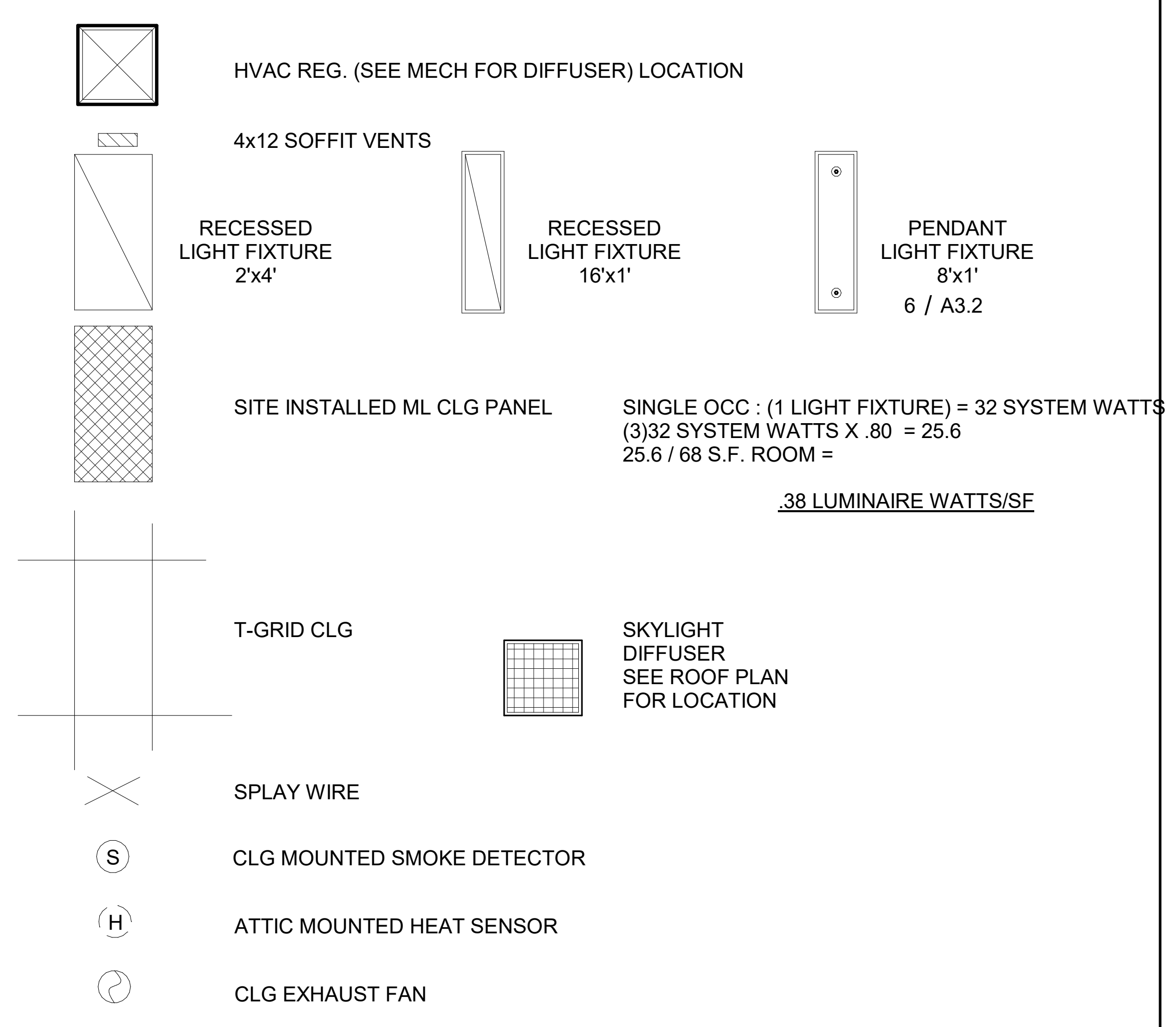
MAIN RUNNER 7301
4' CROSS T #: XL7341
2' CROSS T #: XL7328

STANDARD 7/8" WALL ANGLE CLIP w/ BERC-2 CLIP (ICC #ESR-1308)
2" WALL ANGLE: 7810 (OPTIONAL)

**5** *1/4" = 1'-0"*
***T-Bar Sched***



**6** *3" = 1'-0"*
***Section - Pendant Mounting Detail***



SINGLE OCC : (1 LIGHT FIXTURE) = 32 SYSTEM WATTS
(3)32 SYSTEM WATTS X .80 = 25.6
25.6 / 68 S.F. ROOM =

.38 LUMINAIRE WATTS/SF

**4** *1/4" = 1'-0"*
***RCP Legend***

C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt
6/15/2021 11:50:56 PM

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DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

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REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA
Manny D. Frisch
02/16/24
RST#22088

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CLIENT

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ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
RCP

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A3.2

SHEET OF

## 1. CEILING SYSTEM GENERAL NOTES

1.01 Ceiling system components shall comply with ASTM C635 and Section 5.1 of ASTM E580.

1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635.

1.03 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:

| | |
|---|---|
| Manufacturer: | ARMSTONG (OR EQUAL) |
| Product Name: | PRELUDE XL AND PRELUDE XL HIGH RECYLED CONTENT(HRC) |
| Evaluation Report Type and Number: | ICC ESR#1308 |
| Main Runner Part, Model, or Catalog Number: | 7301 |
| Cross Runner Part, Model, Catalog Number: | 4" CROSS T # XL7341 / 2" CROSS T # XL7328 |
| 1.04 Seismic Wall Clip: | STANDARD 7/8" WALL ANGLE CLIP w/ BERC2 CLIP |
| Manufacturer's Model: | 7810 |

1.05 Ceiling panels shall not support any luminaires, air terminals or devices.

1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide ¾" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide ¾" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip. Clearance between ceiling grid runners/members and walls shall comply with the details on these drawings regardless of ceiling tile material.

## 2. MATERIALS

2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641. Wire shall be #12 gauge (0.106" diameter) with soft temper and minimum ultimate tensile strength = 70 ksi.

2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653, or other equivalent sheet steel listed in Section A3.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members, (AISI S100). Material 43 mil (18 gauge) and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gauge) and heavier shall have a minimum yield strength of 50 ksi. ←

2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength ($F_Y$) of 30 ksi and minimum ultimate strength ($F_U$) of 48 ksi.

## 3. ATTACHMENT OF HANGER AND BRACING WIRES

3.01 Separate all ceiling hanger and bracing wires at least 6 inches from all unbraced ducts, pipes, conduit, etc.

3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to piping, ductwork, conduit and equipment.

NOTE:
BERG2 2" BEAM-END RETAINING CLIP -Allows you to create a code-compliant Seismic D, E, F ceiling installation while eliminating the need to use 2" wall molding or spreader bars.

**TABLE 1: LATERAL FORCE BRACE ASSEMBLY SPACING**

| Design Spectral Acceleration Parameter, ($S_{DS}$) | Brace Assembly Spacing | |
|---|---|---|
| | $z/h \le 0.5^{a}$ | $z/h > 0.5^{a,b}$ |
| $S_{DS} \le 1.15$ | 12'-0" x 12'-0" | 12'-0" x 12'-0" |
| $1.15 < S_{DS} \le 1.73$ | 12'-0" x 12'-0" | 8'-0" x 12'-0" |
| $S_{DS} > 1.73$ | 8'-0" x 12'-0" | 8'-0" x 8'-0" |

Footnotes:
a. Where, as defined in ASCE 7 Section 13.3.1:
z = height in structure of point of attachment of ceiling with respect to the base.
h = average roof height of the structure with respect to the base.
b. It shall be permitted to use the brace assembly spacing for "z/h > 0.5" for the full building height.

SEE ALT SHEET FOR FINAL CONFIGURATION OF CEILING AND $S_{DS}$ VALUE SITE SPECIFIC

3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.

3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.

3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire (e.g., bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.).

## 4. FASTENERS AND WELDING

4.01 Sheet metal screws shall comply with ASTM C1513 and ASME B18.6.3. Penetration of screws through joined material shall not be less than three exposed threads.

4.02 Expansion anchors shall be: NA

4.03 Power-Actuated Fasteners shall be: NA

4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member

4.05 Power-actuated fasteners in concrete or masonry are not permitted for bracing wires.

4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post-installed anchors.

4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

## 5. TESTING

5.01 All field testing must be performed in the presence of the project inspector.

5.02 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power-actuated fasteners in concrete shall be field tested for 200 pounds in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1910A.5.

5.03 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1910A.5.

## 6. LUMINAIRES

6.01 All luminaires shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the luminaire. A minimum of two screws or approved fasteners are required at each luminaire, per ASTM E580 Section 5.3.1.

6.02 Surface-mounted luminaires shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gauge. Rotational spring catches do not comply. A #12 gauge slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when a luminaire is 8 feet or longer or exceeds 56 pounds. Maximum spacing between supports shall not exceed 8 feet.

6.03 Luminaires weighing less than or equal to 10 pounds may be supported directly on the ceiling runners, shall have a minimum of one #12 gauge slack safety wire connected from the fixture housing to the structure above.

6.04 Luminaires weighing greater than 10 pounds but less than or equal to 56 pounds may be supported directly on the ceiling runners, but they shall have a minimum of two #12 gauge slack safety wires connected from the fixture housing at diagonal corners to the structure above.

**Exception:** All luminaires greater than two by four feet weighing less than 56 pounds shall have a #12 gauge slack safety wire at each corner.

6.05 All luminaires weighing greater than 56 pounds shall be independently supported by not less than four taut #12 gauge hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four taut #12 gauge wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four times the weight of the fixture.

## 7. SERVICES WITHIN THE CEILING

7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.

7.02 Ceiling-mounted air terminals or other services weighing less than or equal to 20 pounds shall have one #12 gauge slack safety wire attached from the terminal or service to the structure above.

7.03 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 pounds but less than or equal to 56 pounds shall have two #12 gauge slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.

7.04 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 pounds shall be supported directly from the structure above by not less than four taut #12 gauge hanger wires attached from the terminal or service to the structure above or other approved hangers.

## 8. OTHER DEVICES WITHIN THE CEILING

8.01 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. In addition, devices weighing more than 10 pounds shall have a #12 gauge slack safety wire anchored to the structure above. Devices weighing more than 20 pounds shall be supported independently from the structure above.

NOTE:
1.ITEMS SHOWN WITH A MFR CALLOUT MAY BE SUBSTITUTED WITH AN OR EQUAL OR GREATER PRODUCT WITH DSA APPROVAL

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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SAN DIEGO, CA 92127
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MANNY D. FRISCH
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Exp. 03/31/24
RST#22088
02/16/24

CLIENT

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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CEILING NOTES

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A3.2.1

SHEET OF

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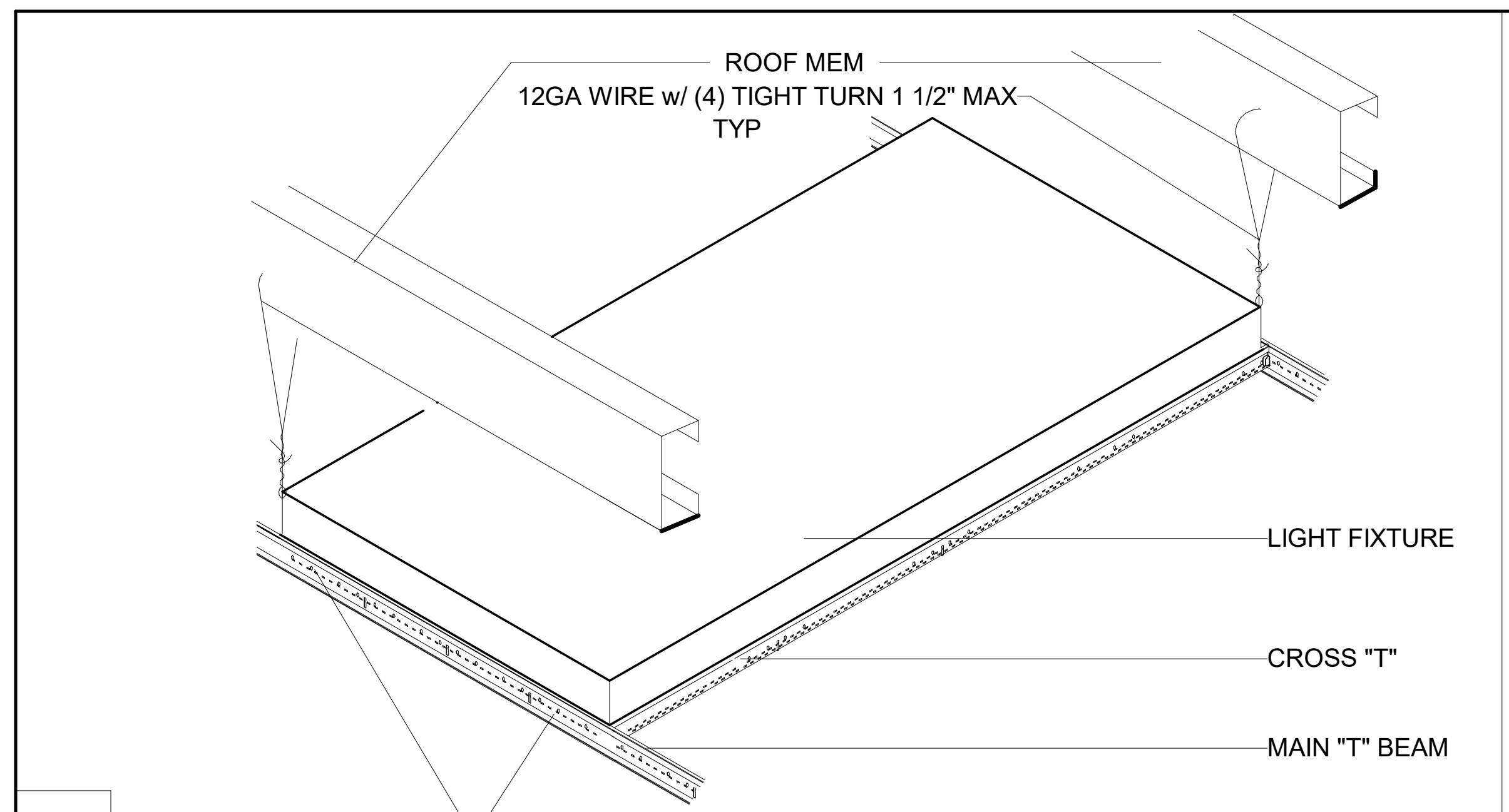
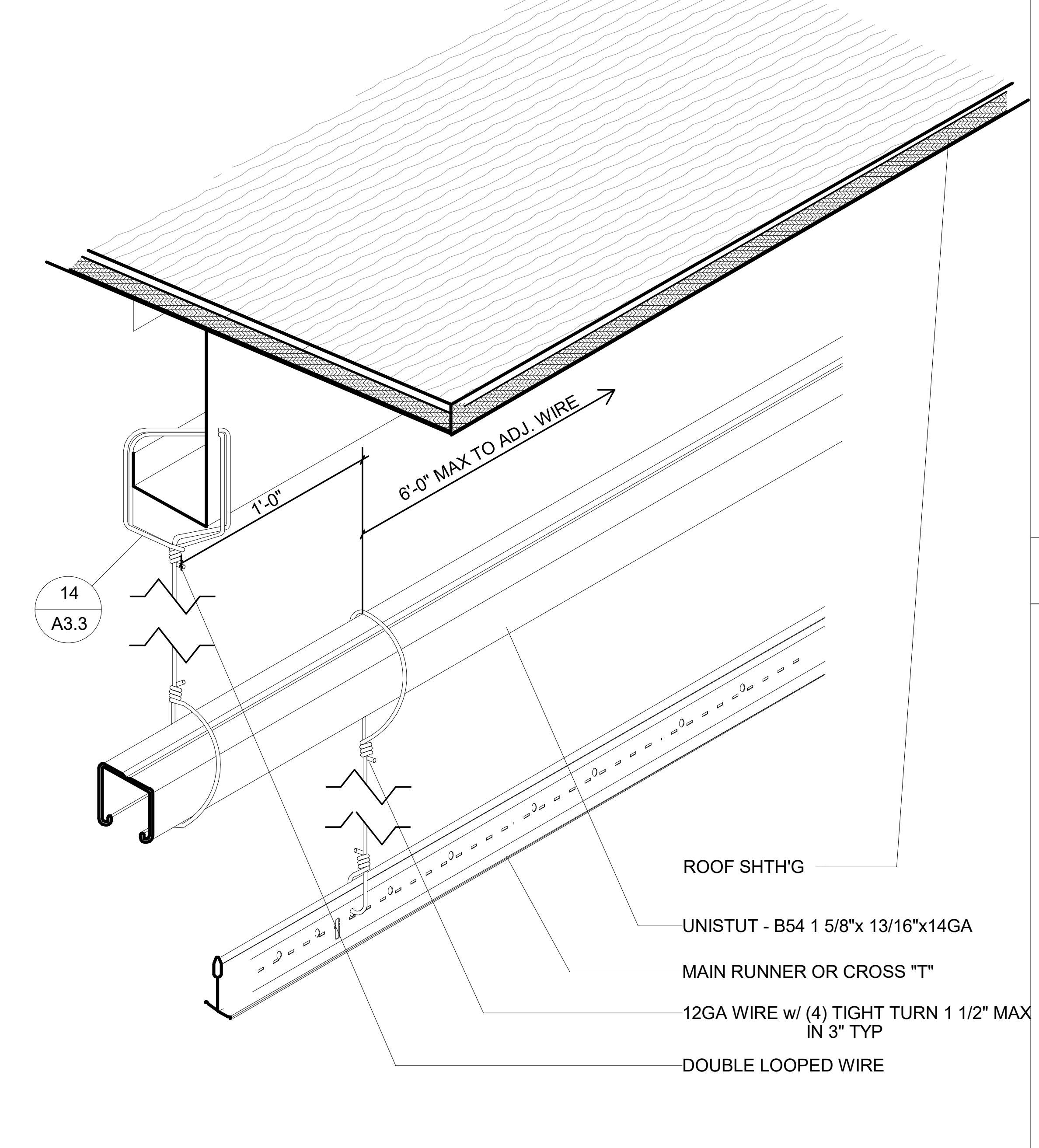
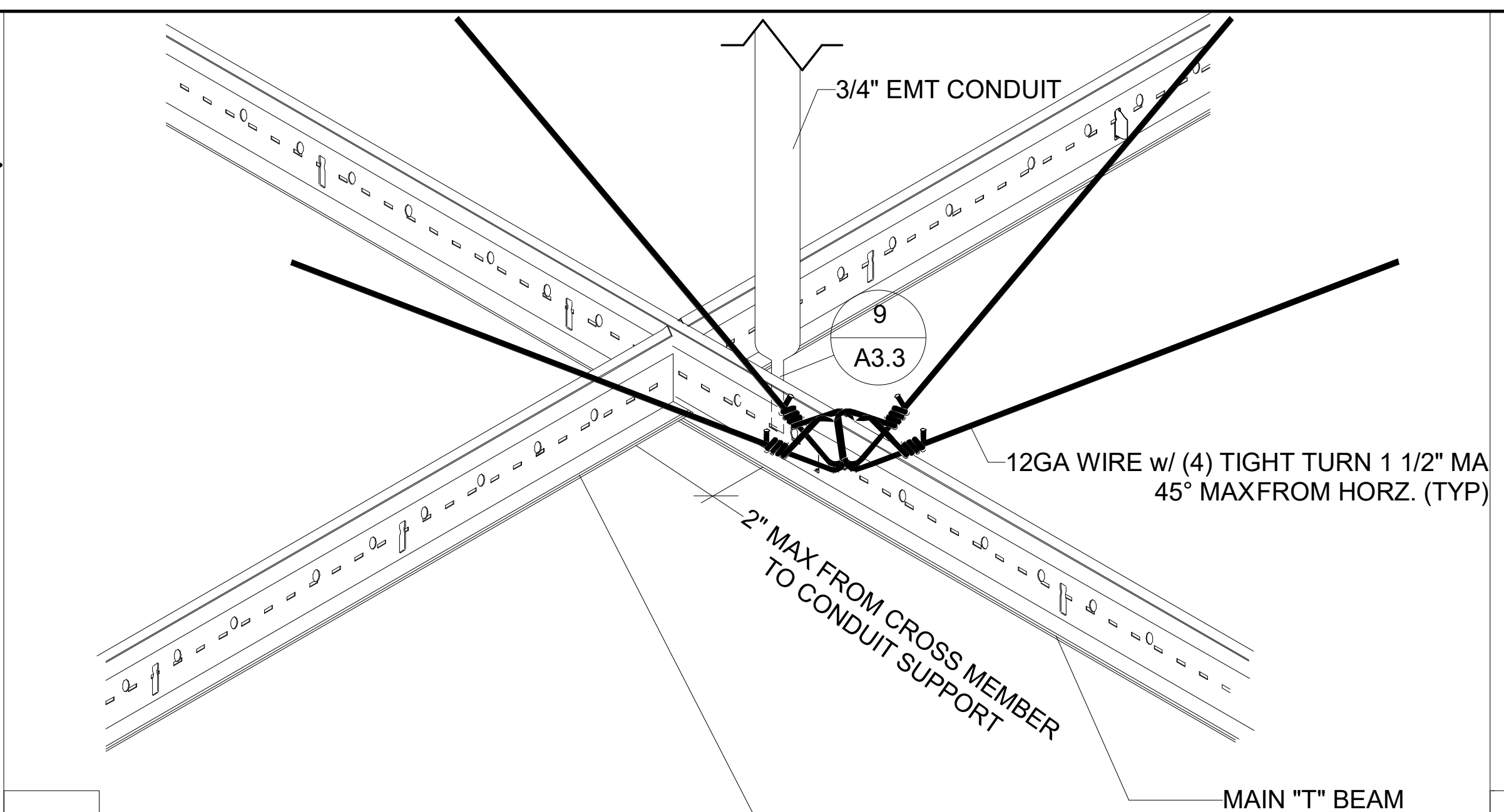


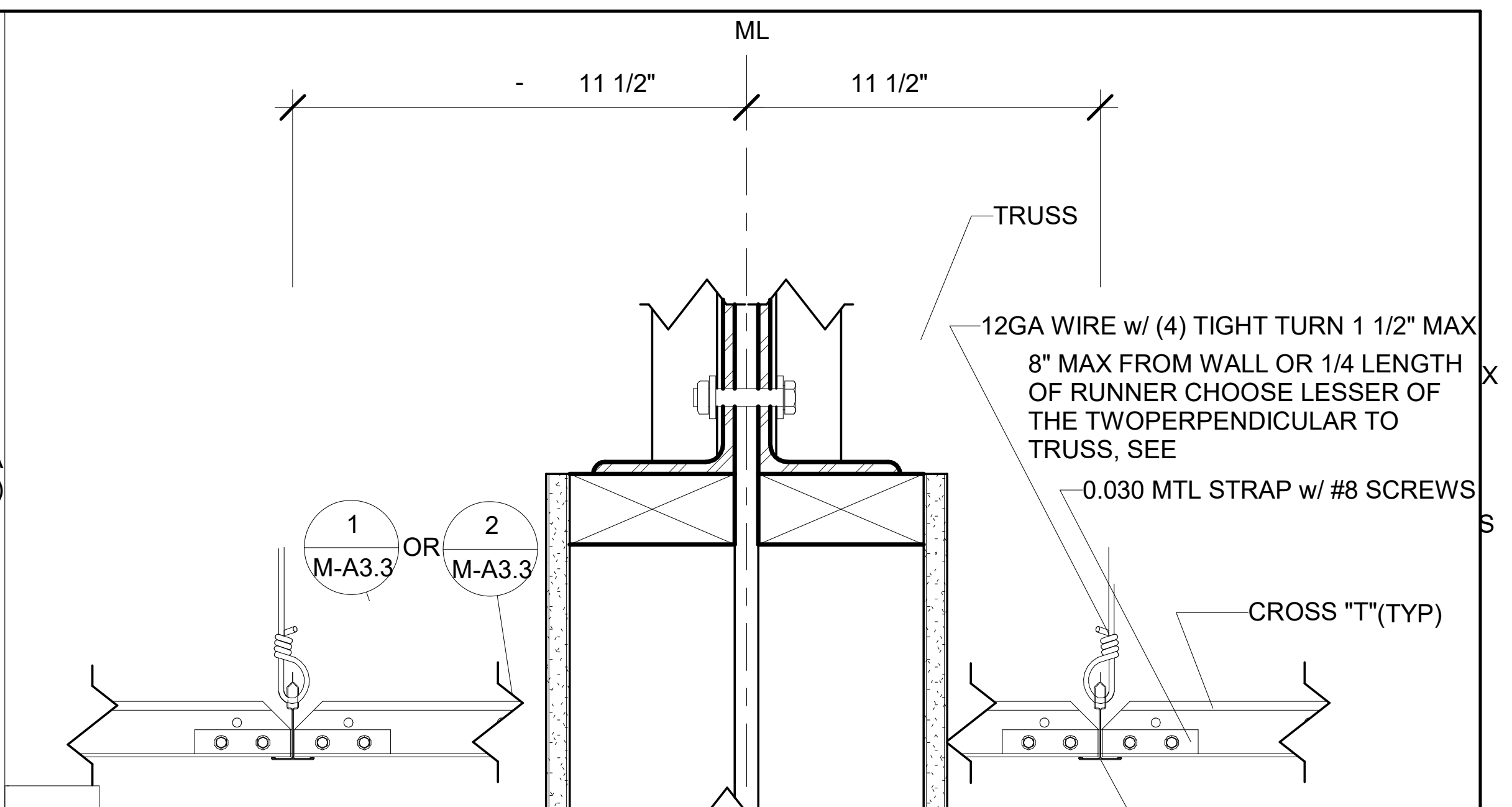
**18** 1" = 1'-0"
**ISO - Light Fixture**



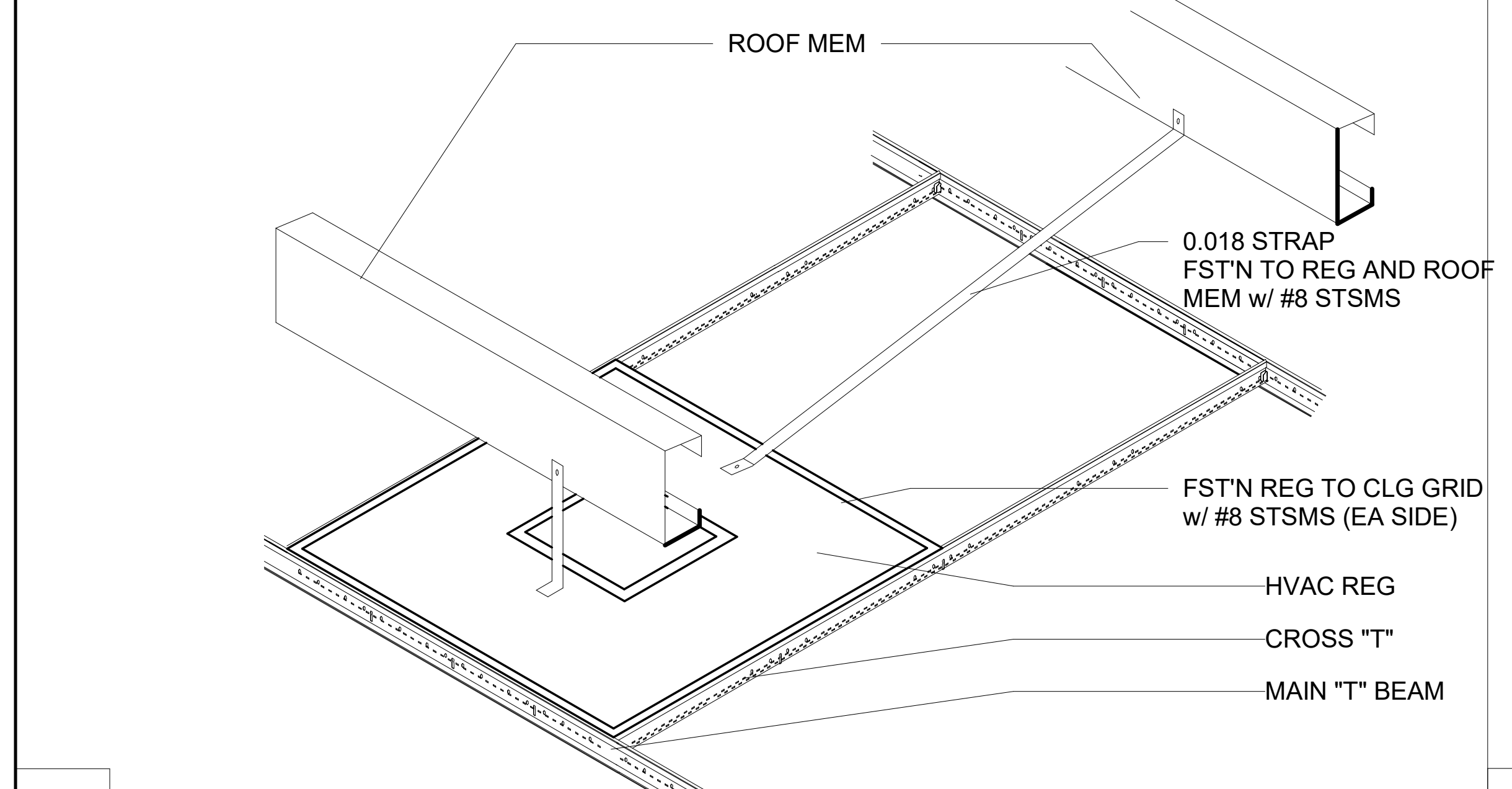
**12** 3" = 1'-0"
**ISO - Trapeze Condition**



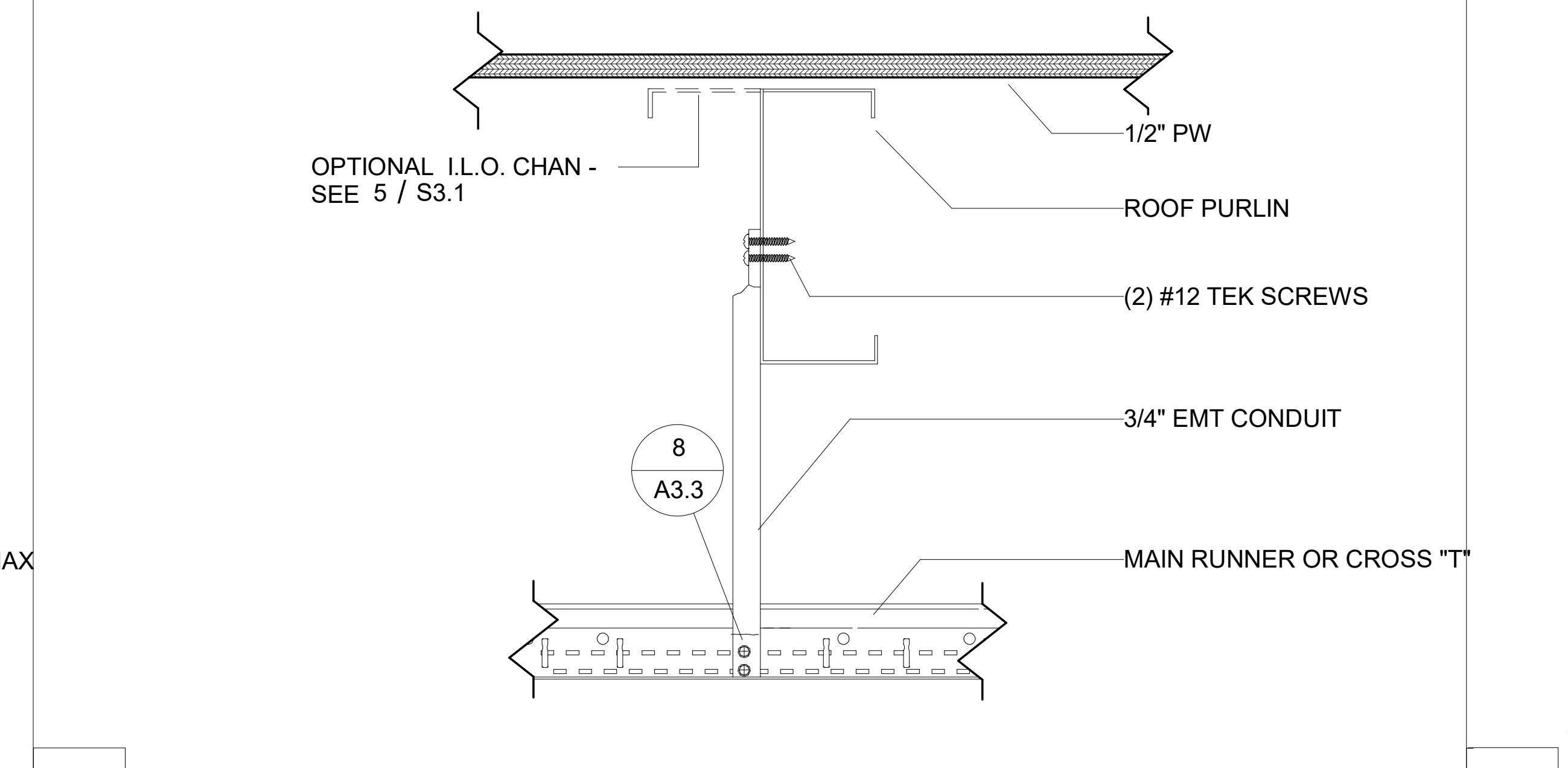
**10** 3" = 1'-0"
**ISO - 4-Way Seismic Splay**


ML
- 11 1/2"
11 1/2"
TRUSS
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
8" MAX FROM WALL OR 1/4 LENGTH
OF RUNNER CHOOSE LESSER OF
THE TWOPERPENDICULAR TO
TRUSS, SEE
0.030 MTL STRAP w/ #8 SCREWS
1
M-A3.3
OR
2
M-A3.3
CROSS "T"(TYP)
MAIN "T" BEAM

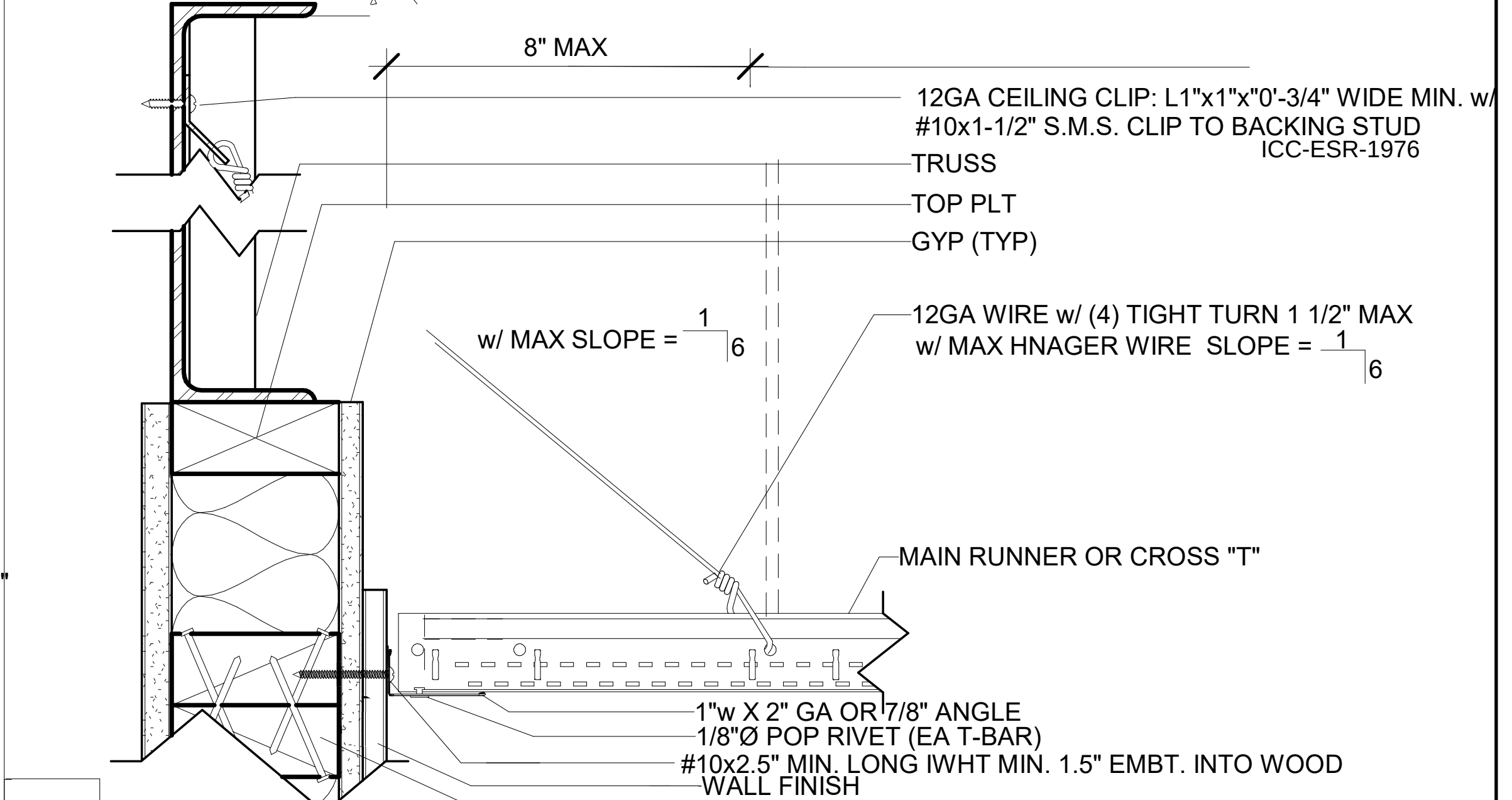
**5** 3" = 1'-0"
**Section - "T" Grid @ Mod Line**



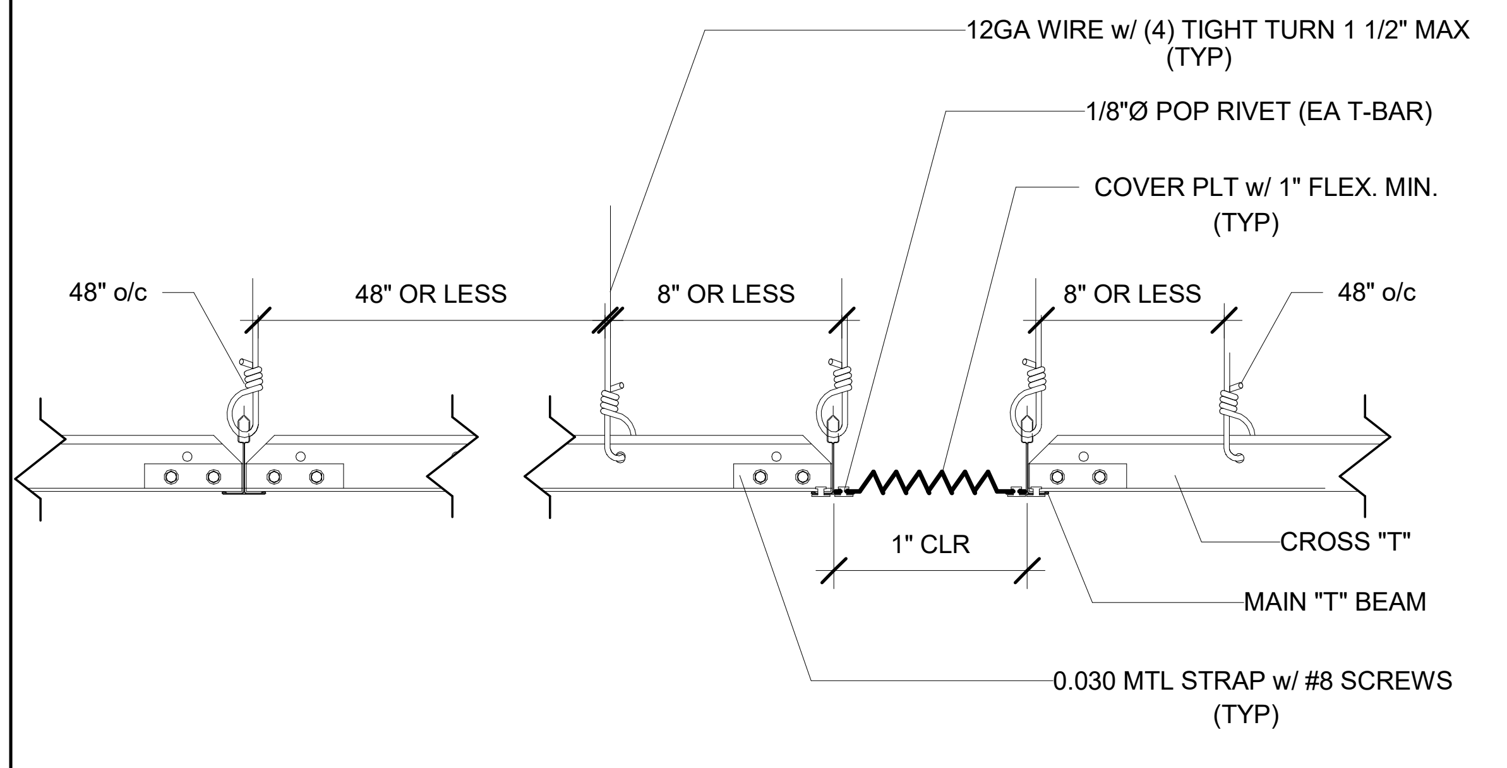
**17** 1" = 1'-0"
**ISO - HVAC Reg Mount**



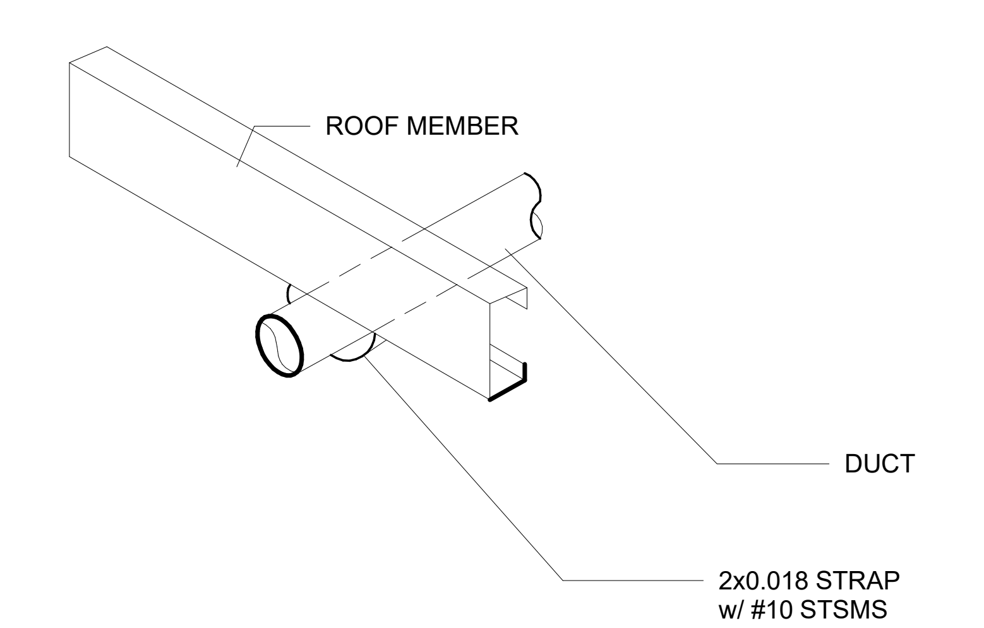
**9** 3" = 1'-0"
**Elevation - Compression Strut**


8" MAX
12GA CEILING CLIP: L1"x1"x"0'-3/4" WIDE MIN. w/
#10x1-1/2" S.M.S. CLIP TO BACKING STUD
ICC-ESR-1976
TRUSS
TOP PLT
GYP (TYP)
w/ MAX SLOPE = 1/6
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
w/ MAX HNAGER WIRE SLOPE = 1/6
MAIN RUNNER OR CROSS "T"
1"w X 2" GA OR 7/8" ANGLE
1/8"Ø POP RIVET (EA T-BAR)
#10x2.5" MIN. LONG IWHT MIN. 1.5" EMBT. INTO WOOD
WALL FINISH
(4) 8d TOE NAILS PER BLOCKING

**4** 3" = 1'-0"
**Section - Fastened Condition @ Endwall**


12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
(TYP)
1/8"Ø POP RIVET (EA T-BAR)
COVER PLT w/ 1" FLEX. MIN.
(TYP)
48" o/c
48" OR LESS
8" OR LESS
8" OR LESS
48" o/c
1" CLR
CROSS "T"
MAIN "T" BEAM
0.030 MTL STRAP w/ #8 SCREWS
(TYP)

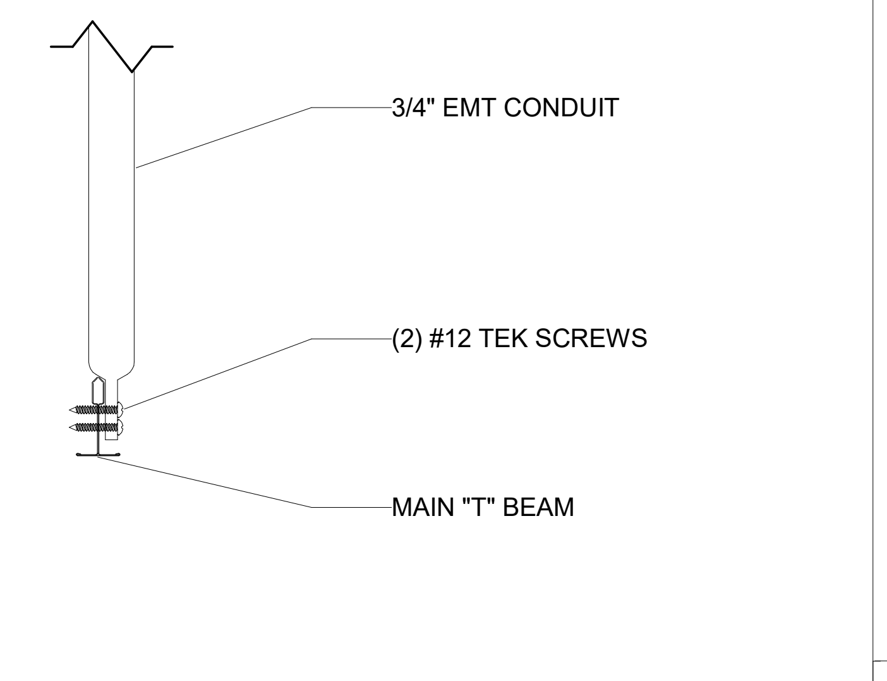
**16** 3" = 1'-0"
**Section - "T" Grid @ Mod Line**



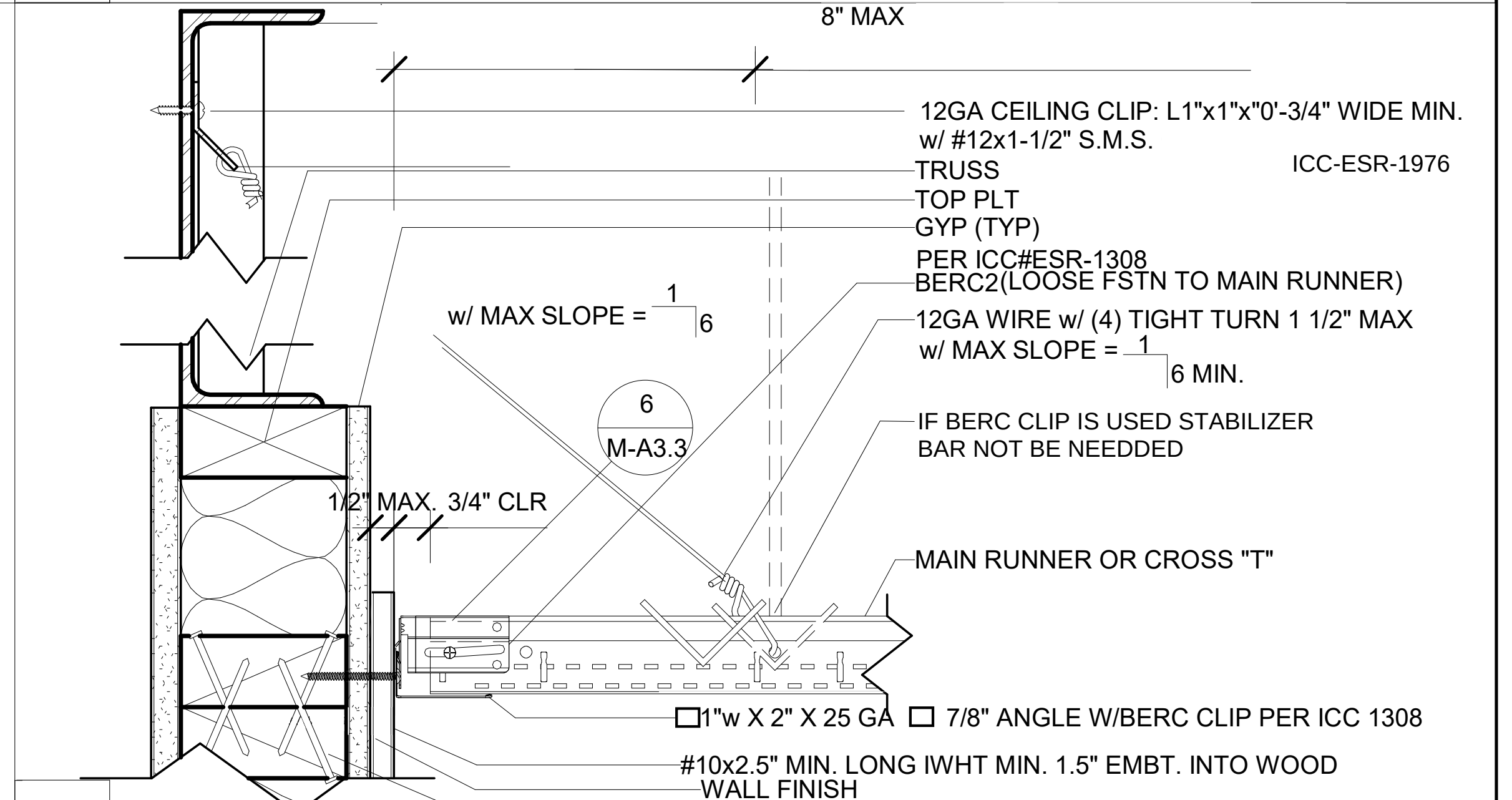
**11** 1" = 1'-0"
**ISO - Duct Connection**

NOTE:
CRIMP CONDUIT AND ATTACH TO MAIN RUNNER WITHIN 2" OF CROSS RUNNER

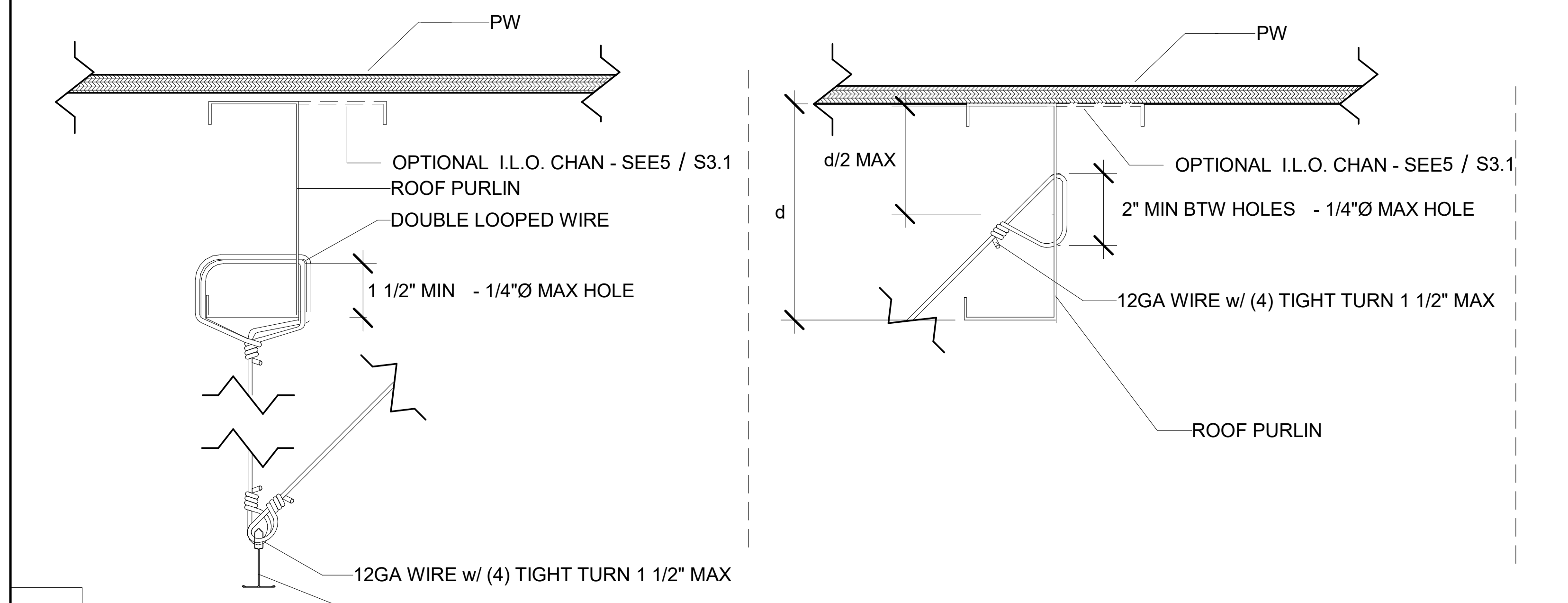
CONDUIT MAY BE CRIMPED AND ATTACHED ON EITHER SIDE OF "T" BAR PER CONDITION AND LOCATION



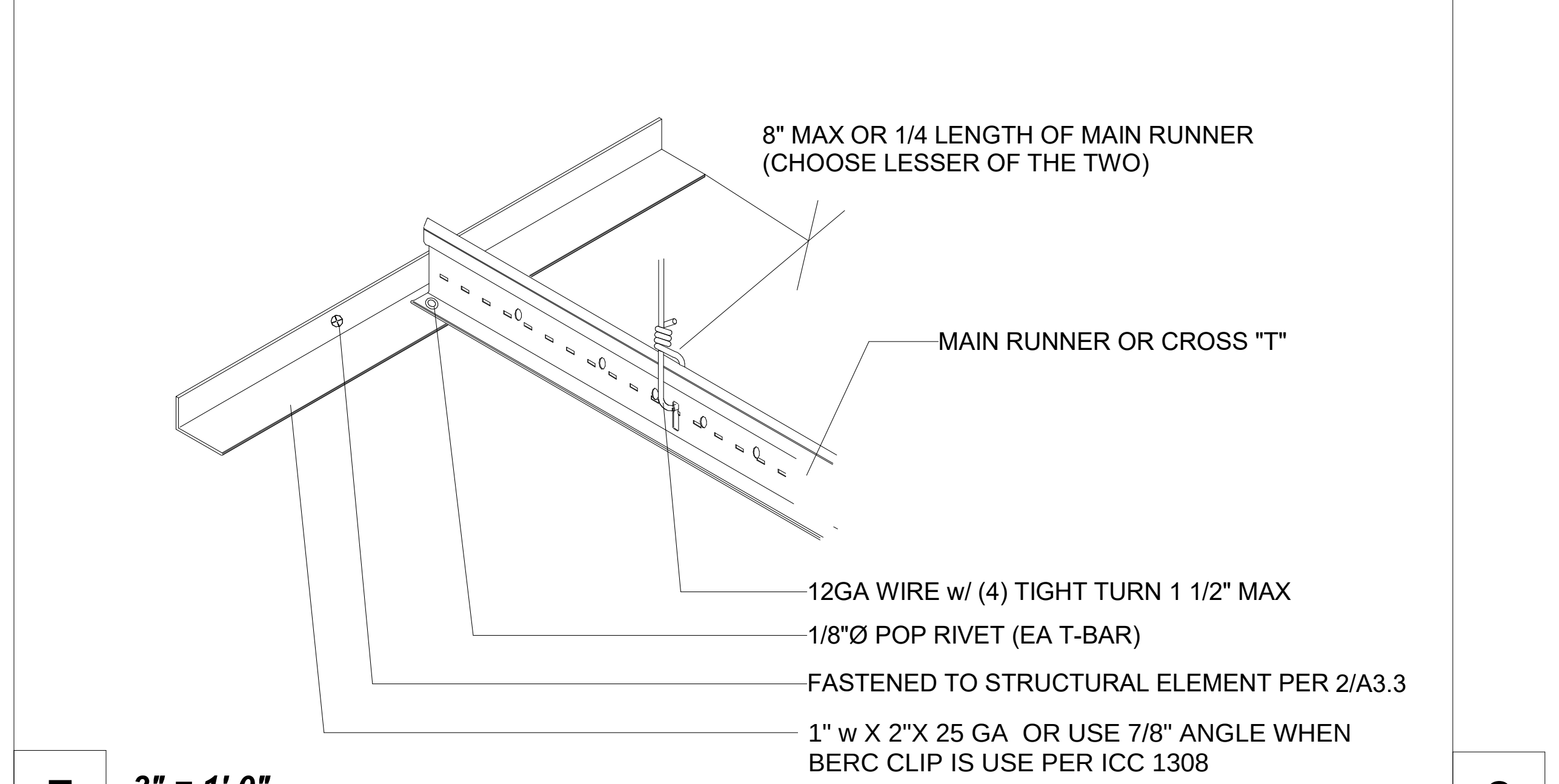
**8** 3" = 1'-0"
**Section - Compression Strut**


8" MAX
12GA CEILING CLIP: L1"x1"x"0'-3/4" WIDE MIN.
w/ #12x1-1/2" S.M.S.
ICC-ESR-1976
TRUSS
TOP PLT
GYP (TYP)
PER ICC#ESR-1308
BERC2(LOOSE FSTN TO MAIN RUNNER)
w/ MAX SLOPE = 1/6
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
w/ MAX SLOPE = 1/6 MIN.
6
M-A3.3
IF BERC CLIP IS USED STABILIZER
BAR NOT BE NEEDDED
1/2" MAX. 3/4" CLR
MAIN RUNNER OR CROSS "T"
☐1"w X 2" X 25 GA ☐ 7/8" ANGLE W/BERC CLIP PER ICC 1308
#10x2.5" MIN. LONG IWHT MIN. 1.5" EMBT. INTO WOOD
WALL FINISH
(4) 8d TOE NAILS PER BLOCKING

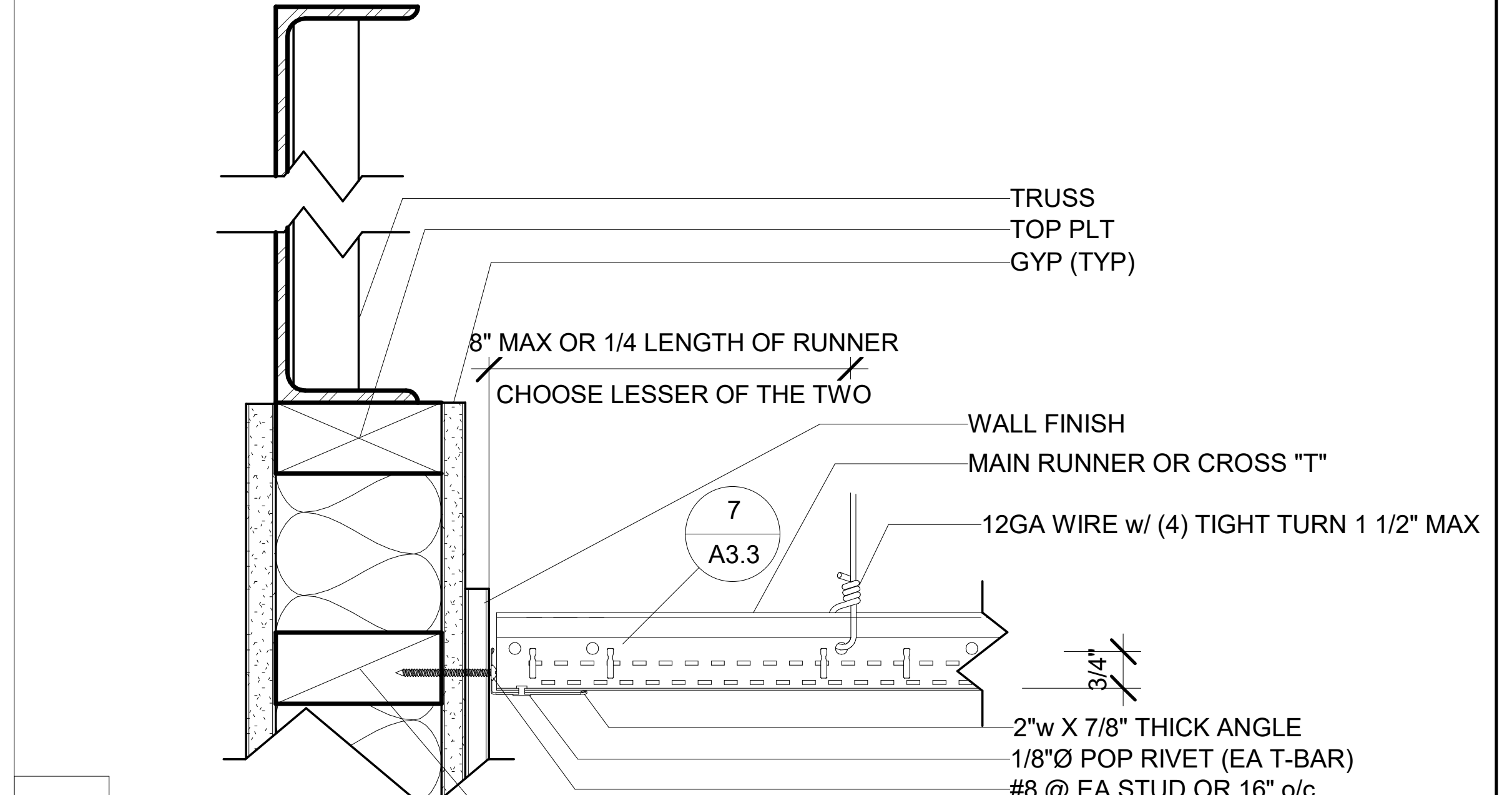
**3** 3" = 1'-0"
**Section - Floating Condition @ Endwall**


PW
OPTIONAL I.L.O. CHAN - SEE5 / S3.1
ROOF PURLIN
DOUBLE LOOPED WIRE
1 1/2" MIN - 1/4"Ø MAX HOLE
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
MAIN "T" BEAM
PW
d/2 MAX
d
OPTIONAL I.L.O. CHAN - SEE5 / S3.1
2" MIN BTW HOLES - 1/4"Ø MAX HOLE
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
ROOF PURLIN

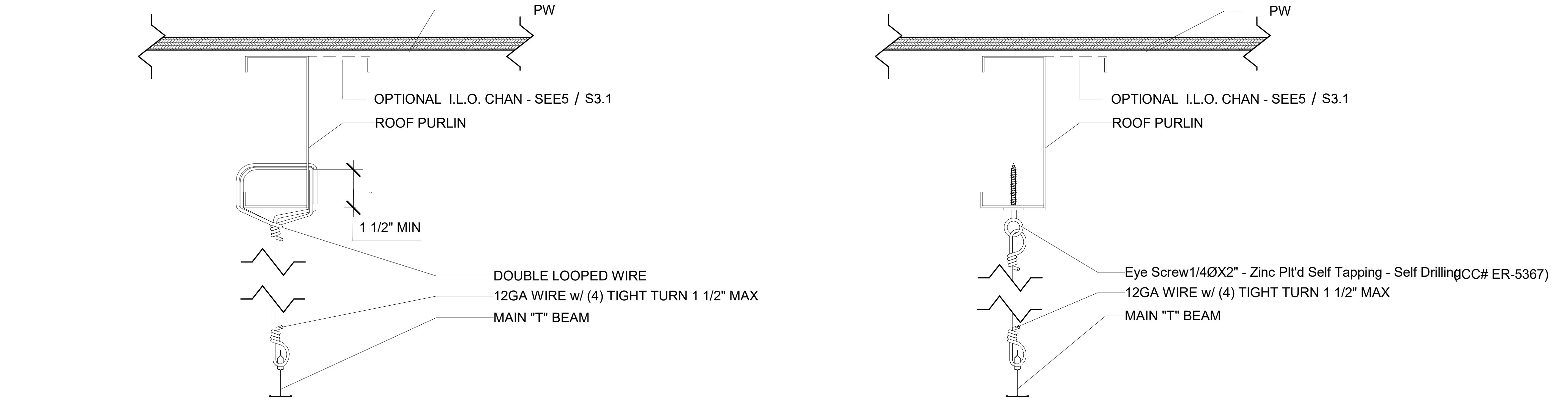
**15** 3" = 1'-0"
**Section - Brace Wire Detail**


8" MAX OR 1/4 LENGTH OF MAIN RUNNER
(CHOOSE LESSER OF THE TWO)
MAIN RUNNER OR CROSS "T"
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
1/8"Ø POP RIVET (EA T-BAR)
FASTENED TO STRUCTURAL ELEMENT PER 2/A3.3
1" w X 2"X 25 GA OR USE 7/8" ANGLE WHEN
BERC CLIP IS USE PER ICC 1308

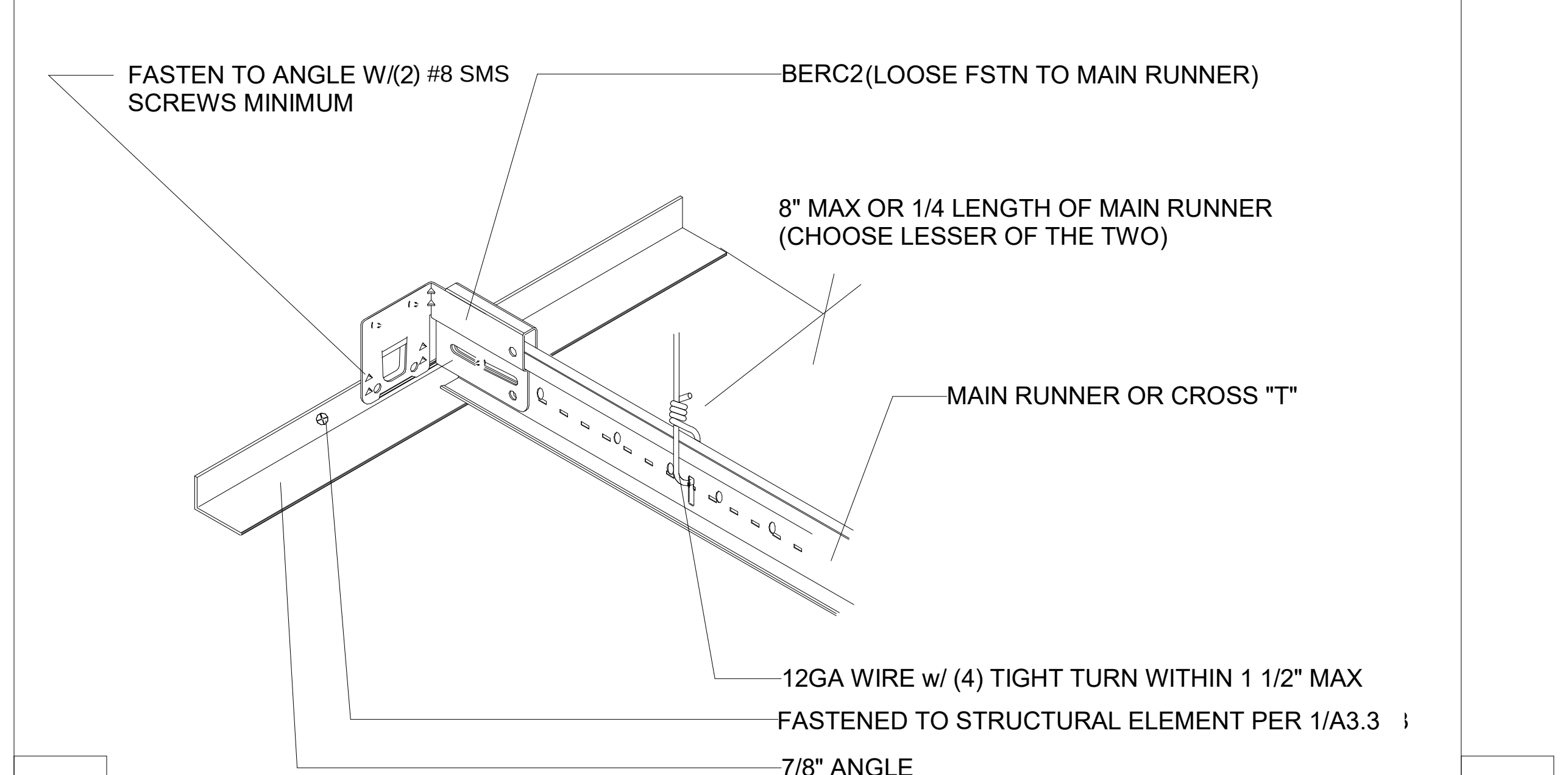
**7** 3" = 1'-0"
**Fixed Condition w/ 7/8" Angle**



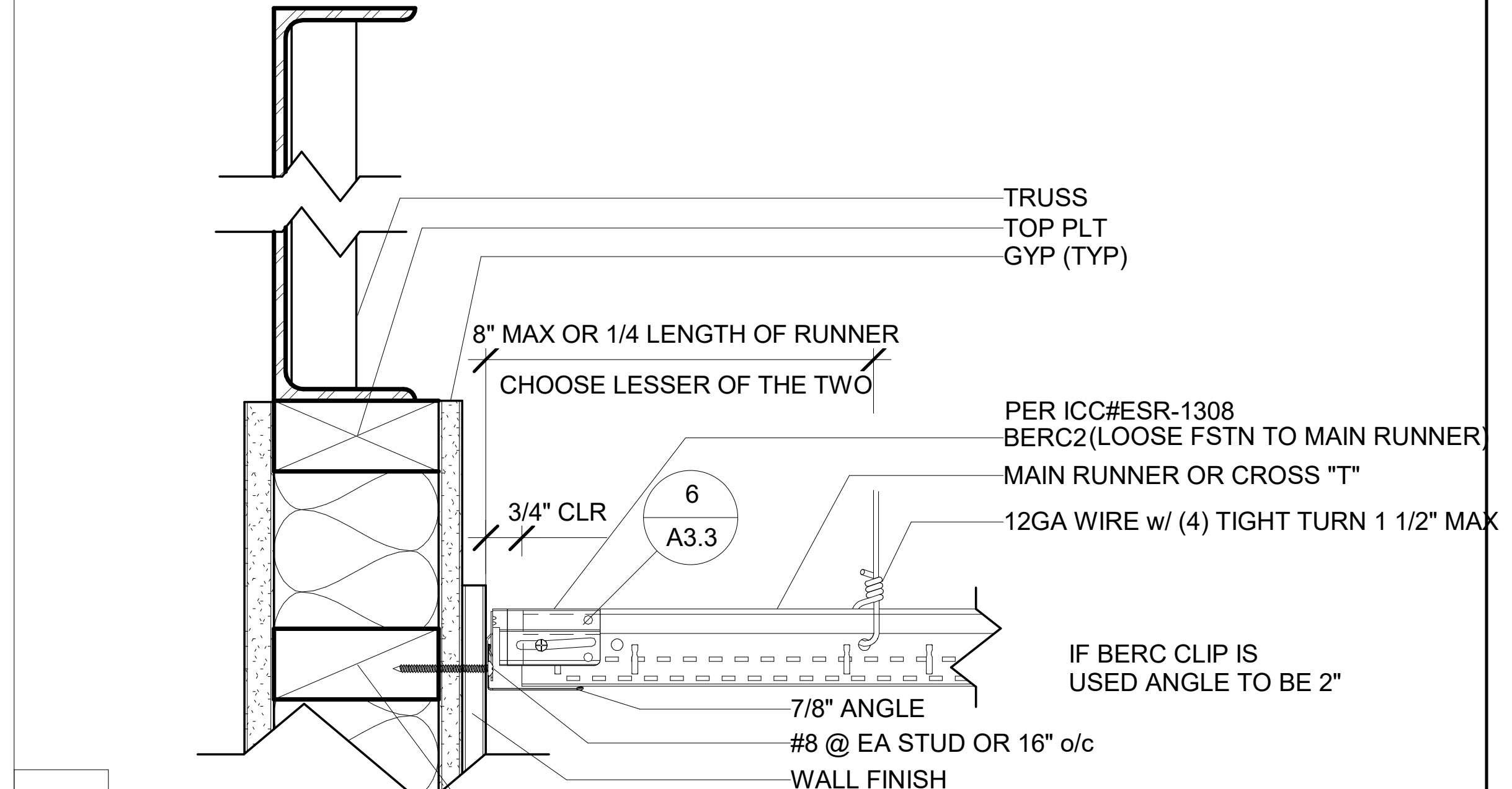
**2** 3" = 1'-0"
**Section - Fastened Condition @ Sidewall**


PW
OPTIONAL I.L.O. CHAN - SEE5 / S3.1
ROOF PURLIN
1 1/2" MIN
DOUBLE LOOPED WIRE
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
MAIN "T" BEAM
PW
OPTIONAL I.L.O. CHAN - SEE5 / S3.1
ROOF PURLIN
Eye Screw1/4ØX2" - Zinc Plt'd Self Tapping - Self Drilling(ICC# ER-5367)
12GA WIRE w/ (4) TIGHT TURN 1 1/2" MAX
MAIN "T" BEAM

**14** 3" = 1'-0"
**Section - Hanger Wire Detail**


FASTEN TO ANGLE W/(2) #8 SMS
SCREWS MINIMUM
BERC2(LOOSE FSTN TO MAIN RUNNER)
8" MAX OR 1/4 LENGTH OF MAIN RUNNER
(CHOOSE LESSER OF THE TWO)
MAIN RUNNER OR CROSS "T"
12GA WIRE w/ (4) TIGHT TURN WITHIN 1 1/2" MAX
FASTENED TO STRUCTURAL ELEMENT PER 1/A3.3
7/8" ANGLE

**6** 3" = 1'-0"
**Floating Condition w/ 7/8" Angle**



**1** 3" = 1'-0"
**Section - Floating Condition @ Sidewall**

C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

6/15/2021 11:51:03 PM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
02/16/24
RST#22088

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
CEILING DETAILS
(T-GRID)

PROJECT NUMBER
22088

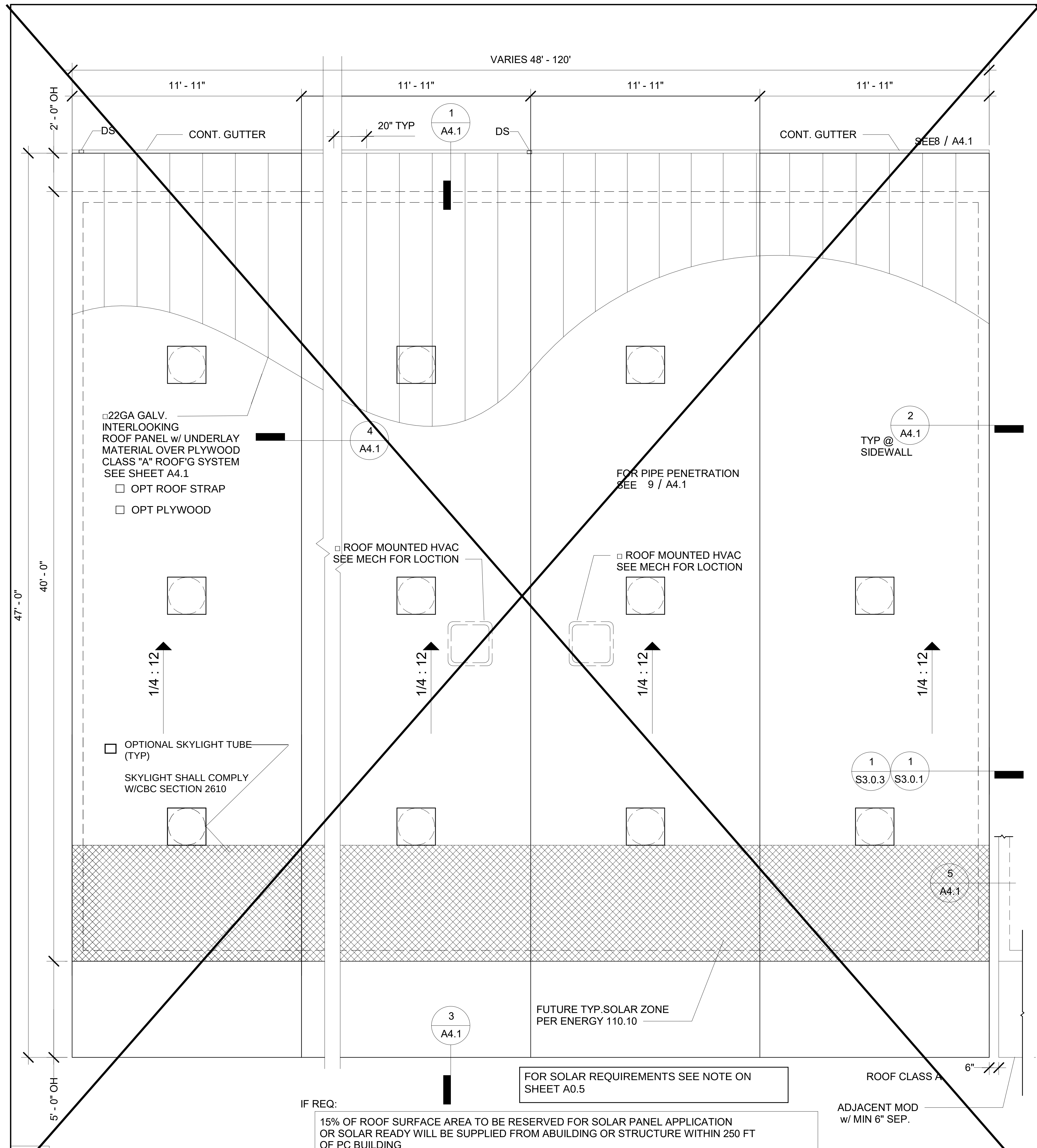
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A3.3

SHEET OF


VARIES 48' - 120'
11' - 11"
11' - 11"
11' - 11"
11' - 11"
2' - 0" OH
DS
CONT. GUTTER
20" TYP
1 / A4.1
DS
CONT. GUTTER
SEE 8 / A4.1
□22GA GALV. INTERLOOKING ROOF PANEL w/ UNDERLAY MATERIAL OVER PLYWOOD CLASS "A" ROOF'G SYSTEM SEE SHEET A4.1
☐ OPT ROOF STRAP
☐ OPT PLYWOOD
4 / A4.1
2 / A4.1
TYP @ SIDEWALL
FOR PIPE PENETRATION SEE 9 / A4.1
□ ROOF MOUNTED HVAC SEE MECH FOR LOCTION
□ ROOF MOUNTED HVAC SEE MECH FOR LOCTION
47' - 0"
40' - 0"
1/4 : 12
1/4 : 12
1/4 : 12
1/4 : 12
☐ OPTIONAL SKYLIGHT TUBE (TYP)
SKYLIGHT SHALL COMPLY W/CBC SECTION 2610
1 / S3.0.3
1 / S3.0.1
5 / A4.1
FUTURE TYP.SOLAR ZONE PER ENERGY 110.10
3 / A4.1
5' - 0" OH
ROOF CLASS A
6"
ADJACENT MOD w/ MIN 6" SEP.

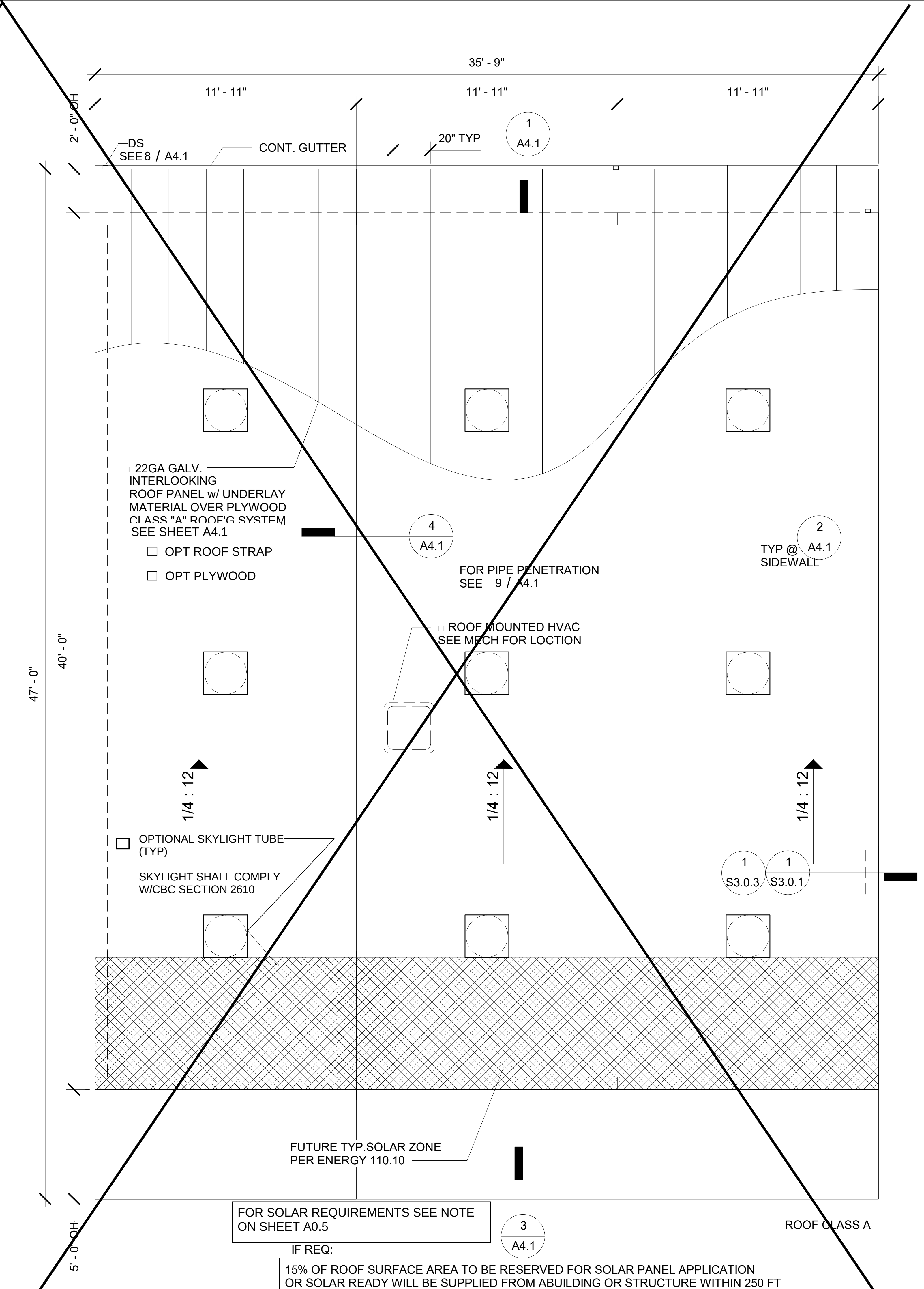
IF REQ:

FOR SOLAR REQUIREMENTS SEE NOTE ON SHEET A0.5

15% OF ROOF SURFACE AREA TO BE RESERVED FOR SOLAR PANEL APPLICATION OR SOLAR READY WILL BE SUPPLIED FROM ABUILDING OR STRUCTURE WITHIN 250 FT OF PC BUILDING

ENTIRE ROOF SURFACE IS DESIGNED STRUCTURALLY TO ACCOMMODATE SOLAR PANELS = 3PSF

**3** *1/4" = 1'-0"*
***48x40 thru 120x40 Roof Plan (Mt Mono)***


35' - 9"
11' - 11"
11' - 11"
11' - 11"
2' - 0" OH
DS SEE 8 / A4.1
CONT. GUTTER
20" TYP
1 / A4.1
□22GA GALV. INTERLOOKING ROOF PANEL w/ UNDERLAY MATERIAL OVER PLYWOOD CLASS "A" ROOF'G SYSTEM SEE SHEET A4.1
☐ OPT ROOF STRAP
☐ OPT PLYWOOD
4 / A4.1
FOR PIPE PENETRATION SEE 9 / A4.1
TYP @ SIDEWALL
2 / A4.1
□ ROOF MOUNTED HVAC SEE MECH FOR LOCTION
47' - 0"
40' - 0"
1/4 : 12
1/4 : 12
1/4 : 12
☐ OPTIONAL SKYLIGHT TUBE (TYP)
SKYLIGHT SHALL COMPLY W/CBC SECTION 2610
1 / S3.0.3
1 / S3.0.1
FUTURE TYP.SOLAR ZONE PER ENERGY 110.10
3 / A4.1
5' - 0" OH
ROOF CLASS A

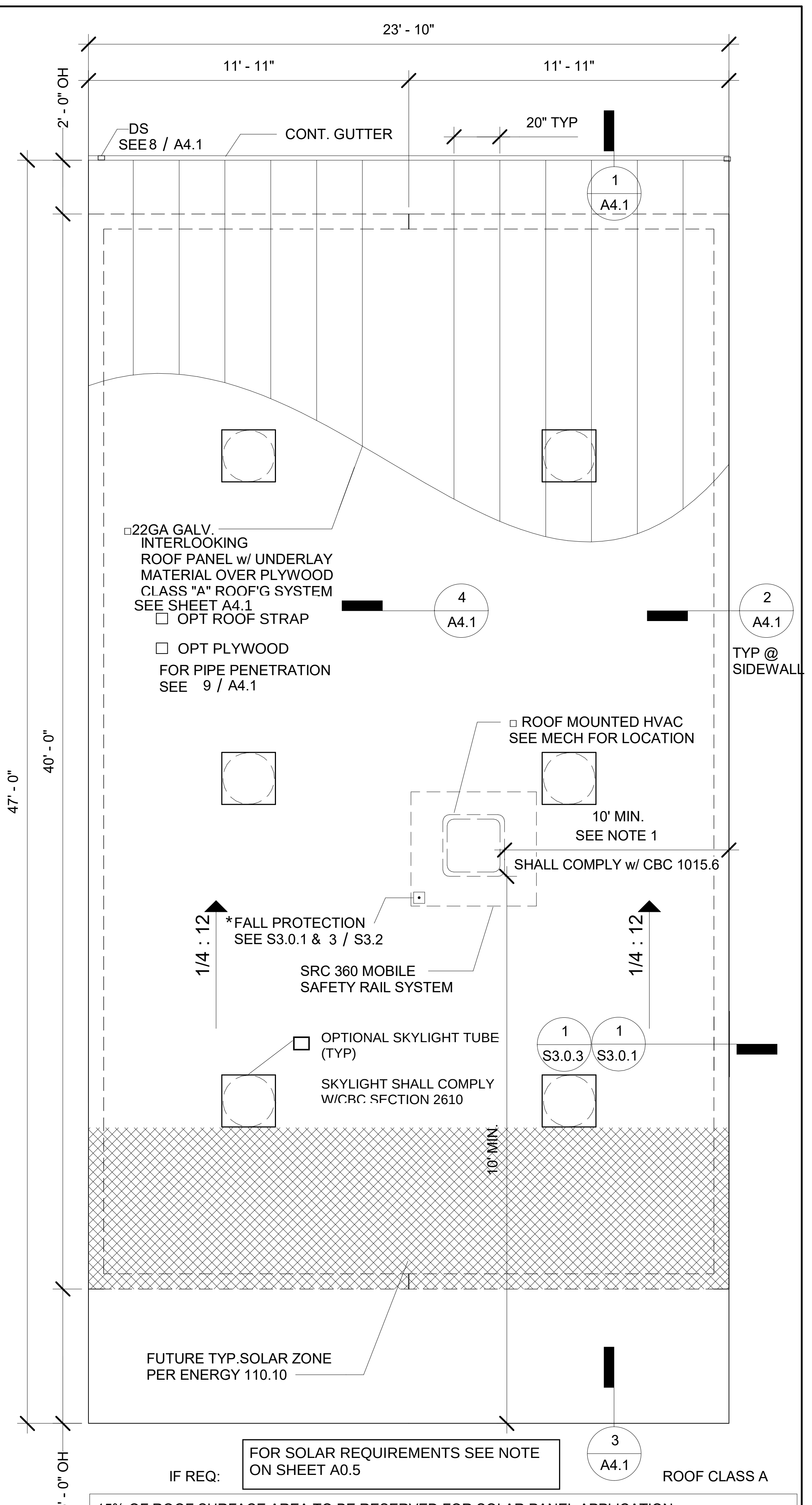
FOR SOLAR REQUIREMENTS SEE NOTE ON SHEET A0.5

IF REQ:

15% OF ROOF SURFACE AREA TO BE RESERVED FOR SOLAR PANEL APPLICATION OR SOLAR READY WILL BE SUPPLIED FROM ABUILDING OR STRUCTURE WITHIN 250 FT OF PC BUILDING

ENTIRE ROOF SURFACE IS DESIGNED STRUCTURALLY TO ACCOMMODATE SOLAR PANELS = 3PSF

**2** *1/4" = 1'-0"*
***36x40 Roof Plan (Mlt Mono)***


23' - 10"
11' - 11"
11' - 11"
2' - 0" OH
DS SEE 8 / A4.1
CONT. GUTTER
20" TYP
1 / A4.1
□22GA GALV. INTERLOOKING ROOF PANEL w/ UNDERLAY MATERIAL OVER PLYWOOD CLASS "A" ROOF'G SYSTEM SEE SHEET A4.1
☐ OPT ROOF STRAP
☐ OPT PLYWOOD
FOR PIPE PENETRATION SEE 9 / A4.1
4 / A4.1
2 / A4.1
TYP @ SIDEWALL
□ ROOF MOUNTED HVAC SEE MECH FOR LOCATION
10' MIN. SEE NOTE 1
SHALL COMPLY w/ CBC 1015.6
47' - 0"
40' - 0"
1/4 : 12
1/4 : 12
*FALL PROTECTION SEE S3.0.1 & 3 / S3.2
SRC 360 MOBILE SAFETY RAIL SYSTEM
☐ OPTIONAL SKYLIGHT TUBE (TYP)
SKYLIGHT SHALL COMPLY W/CBC SECTION 2610
1 / S3.0.3
1 / S3.0.1
10' MIN.
FUTURE TYP.SOLAR ZONE PER ENERGY 110.10
3 / A4.1
5' - 0" OH

IF REQ:

FOR SOLAR REQUIREMENTS SEE NOTE ON SHEET A0.5

ROOF CLASS A

15% OF ROOF SURFACE AREA TO BE RESERVED FOR SOLAR PANEL APPLICATION OR SOLAR READY WILL BE SUPPLIED FROM ABUILDING OR STRUCTURE WITHIN 250 FT OF PC BUILDING

ENTIRE ROOF SURFACE IS DESIGNED STRUCTURALLY TO ACCOMMODATE SOLAR PANELS = 3PSF

**1** *1/4" = 1'-0"*
***24x40 Roof Plan (Mtl Mono)***

Note: For conditioned structures, roofing must be installed IAW 2019 CBC SECTION 1202.3

**1202.3 Unvented Attic and Unvented Enclosed Rafter Assemblies**

Unvented attics and unvented enclosed roof framing assemblies created by ceilings applied directly to the underside of the roof framing members/rafters and the structural roof sheathing at the top of the roof framing members shall be permitted where all of the following conditions are met:

1. The unvented attic space is completely within the building thermal envelope.
2. No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
3. Where wood shingles or shakes are used, not less than a 1/4-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In Climate Zones 14 and 16, any air-impermeable insulation shall be a Class II vapor retarder or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.

   See the California Energy Code, Figure 100.1-A — California Climate Zones.

   4.1. **[HCD 1 & HCD 2]** In Climate Zones 14 and 16, a Class I or Class II vapor retarder shall be installed on the indirectly conditioned space side of all insulation in an unvented attic with air-permeable insulation, for condensation control.

5. Insulation shall be located in accordance with the following:

   5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous underlayment shall be considered to exist if sheathing, roofing

   paper

   or any continuous layer having a perm rate of no more than one perm under the dry cup method is present.

   5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

   5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with

   Item 5.1.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table 1202.3 for condensation control.

   5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing and shall be in accordance with the R-values in Table 1202.3 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

   5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

   5.2. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

**Exceptions:**

1. Section 1202.3 does not apply to special use structures or enclosures such as swimming pool enclosures, data processing centers, hospitals or art galleries.
2. Section 1202.3 does not apply to enclosures in Climate Zones 14 and 16 that are humidified beyond 35 percent during the three coldest months.

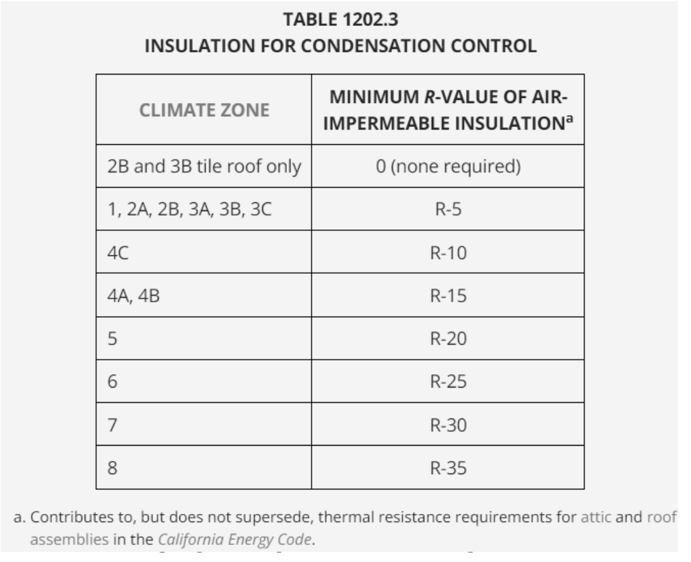


**TABLE 1202.3**
**INSULATION FOR CONDENSATION CONTROL**

| CLIMATE ZONE | MINIMUM *R*-VALUE OF AIR-IMPERMEABLE INSULATION[a] |
|---|---|
| 2B and 3B tile roof only | 0 (none required) |
| 1, 2A, 2B, 3A, 3B, 3C | R-5 |
| 4C | R-10 |
| 4A, 4B | R-15 |
| 5 | R-20 |
| 6 | R-25 |
| 7 | R-30 |
| 8 | R-35 |

a. Contributes to, but does not supersede, thermal resistance requirements for attic and roof assemblies in the *California Energy Code*.

NOTE: PER CBC 1015.6, - EXCEPTION, GUARDRAILS ARE NOT REQUIRED WHERE PERMANENT FALL RESTRAINT ANCHORAGE DEVICES ARE AFFIXED & SHALL BE PLACED NOT MORE THAN 10FT FROM THE ROOF EDGE.

ROOFS SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 7A AND CHAPTER 15. ROOFS SHALL HAVE A ROOFING ASSEMBLY INSTALLED IN ACCORDANCE WITH ITS LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

* IF ROOF MOUNTED UNIT IS APPLIED

**PV AREA FOR FIRE ACCESS REQ'T (PER IR 16-8)**

3.2.1 General Requirements: A PV System shall be typically considered equipment. There is typically not an occupancy group classification, building area limitation, or type of construction assignment to a PV system.
a) PV equipment supported by non-combustible framing installed in locations dedicated for building frontage used for area increases per California Building Code (CBC), Chapter 5, Section 506, shall be limited in size and may be allowed on a case by case basis. Maximum area that may be allowed for such systems shall not exceed 1/3 of the horizontal projected area of each frontage.
b) Open sided PV systems and framing that are non-combustible and without use underneath may be considered equipment and may be placed next to
DSA IR 16-8 Solar Photovoltaic and Thermal
(updated 01-25-17) Systems Review and Approval Requirements Page 11 of 19
property lines. Signs may be required on or near the system prohibiting any use or storage underneath the equipment.
c) Combustible PV systems and framing and those with use underneath such as for assembly or parking, may need to comply with 2022 CBC, Table 602. These structures may include those that do and that do not have a roof underneath the PV system.
d) PV systems (both the frame and the array) shall not be placed in fire department access roads. (Per Title 24 CCR, Division 1, Chapter 1, Section 3.05 and 2022 CFC Chapter 5, Section 503.)
e) Access to a public way or safe dispersal area shall not be obstructed by the system or system framing. (CBC 1027.6 and 442.3)
f) PV systems that cover a lunch area or similar (occupant load less than 50), that are not used for assembly purposes shall be considered equipment. Playgrounds would also fall into this category regardless of total occupant load.
g) Any PV system that is installed above an assembly use (i.e. Group A-3 or A-5 occupancy classification) shall be considered an open sided building structure and all or portions of CBC provisions apply on a case by case basis. Such areas might include an outdoor amphitheater, bleacher or grandstand seating with concentrated occupant loads and heavy use.
h) Fire Department concern for the installation of roof mounted PV systems will be addressed by DSA review to the State Fire Marshal Solar Photovoltaic Installation Guideline available at:
http://osfm.fire.ca.gov/pdf/reports/solarphotovoltaicguideline.pdf
i) When a PV system, without riser framework, is installed directly on a rated roof assembly with a required classification greater than "Class C" found in CBC, Chapter 15, and f

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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www.rstavares.com

PROFESSIONAL STAMP

Manny D. Frisch
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ROOF PLAN MONO SLOPE (STANDING SEAM)

PROJECT NUMBER
22088

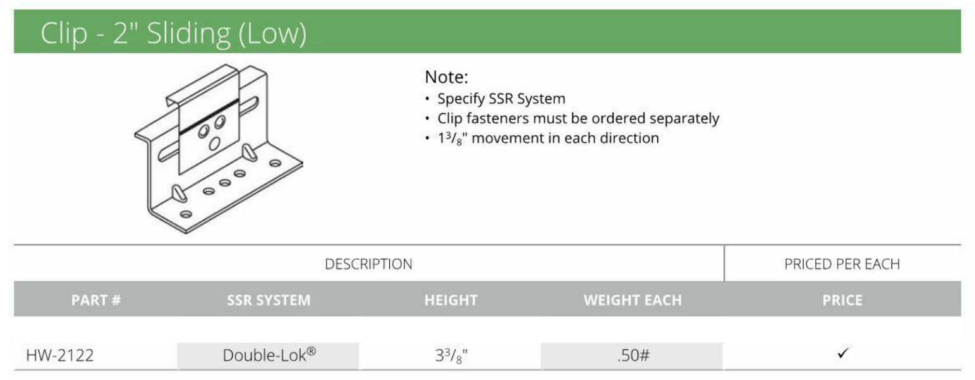
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A4.0.1

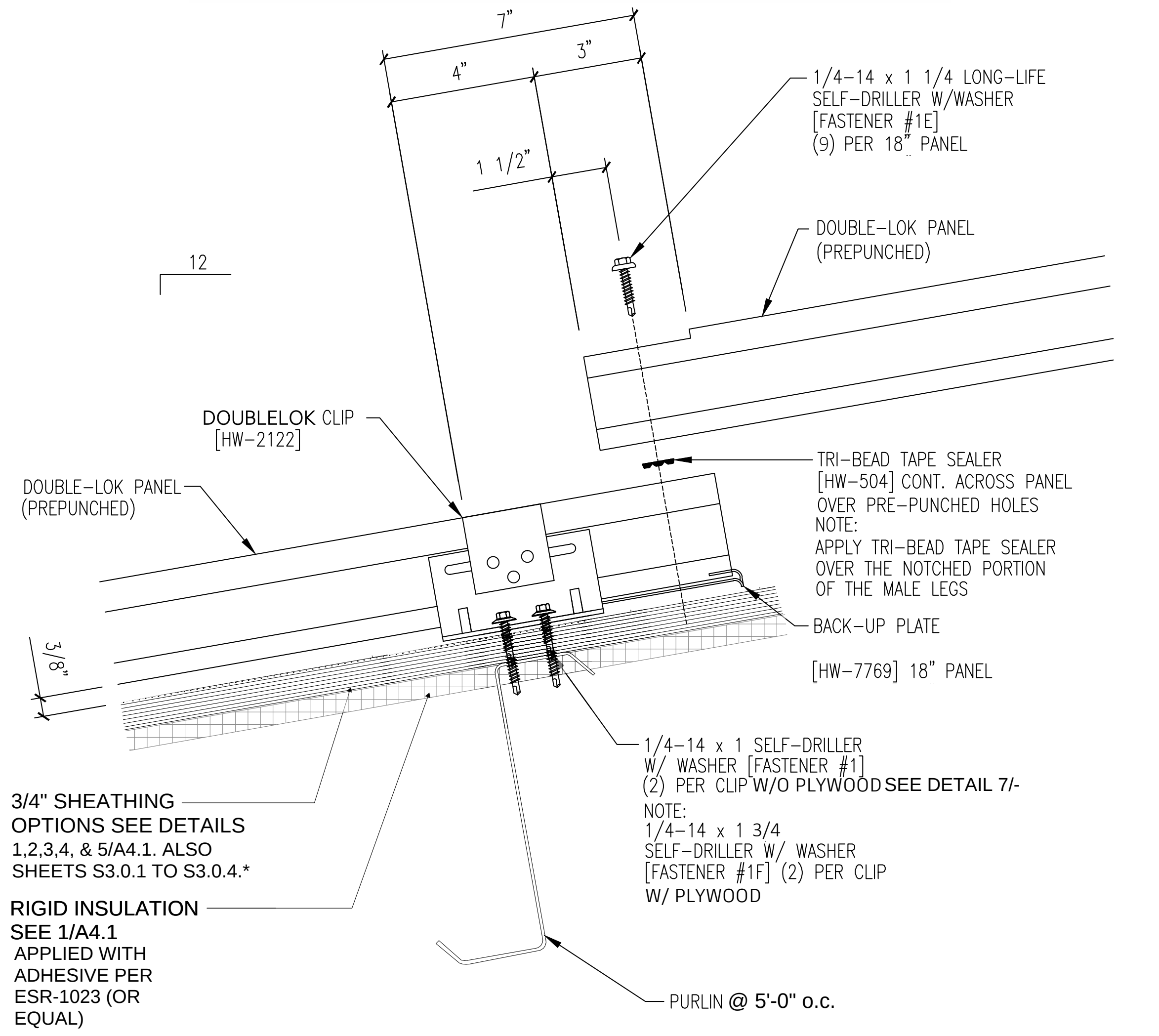
SHEET OF

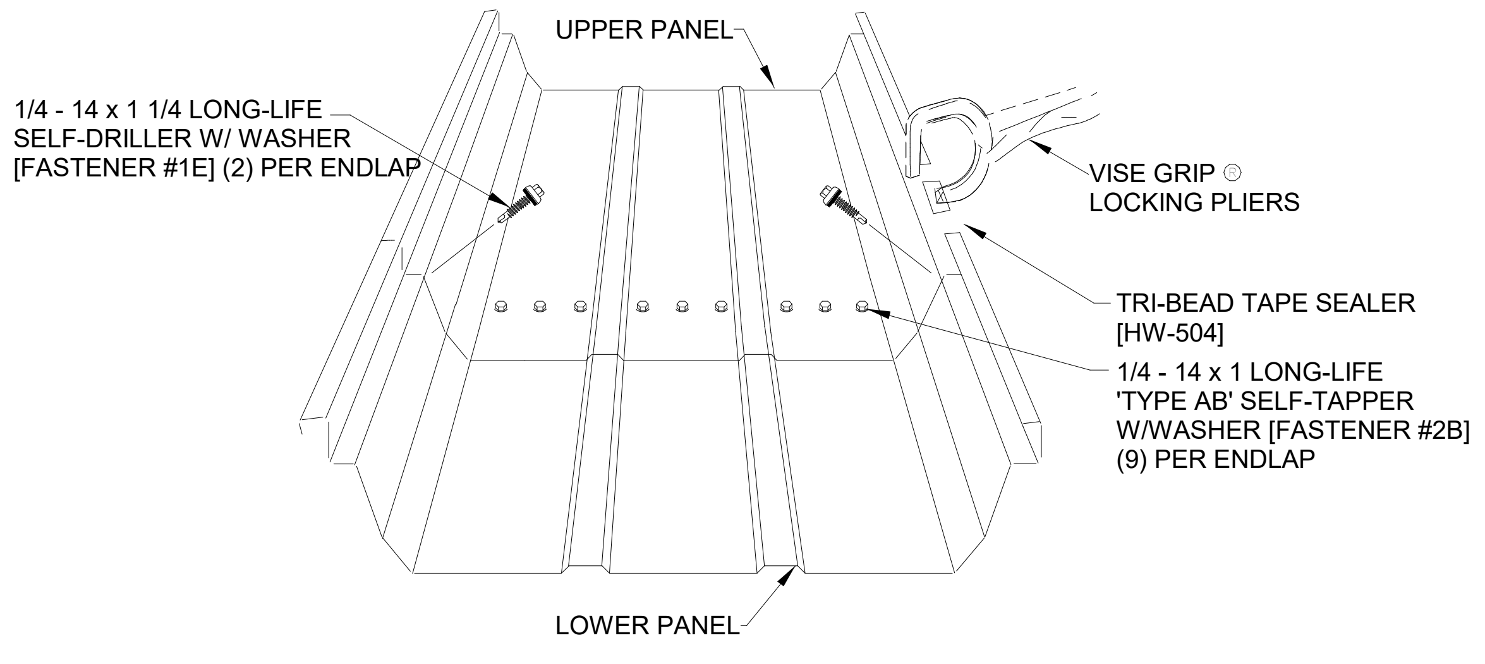


Clip - 2" Sliding (Low)

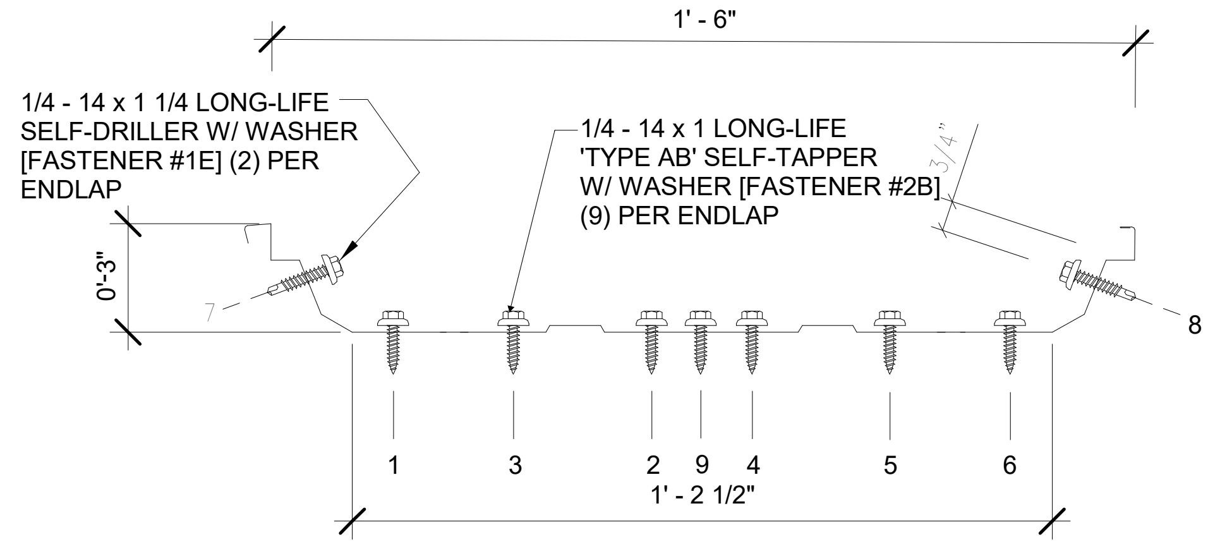
Note:
- Specify SSR System
- Clip fasteners must be ordered separately
- $1^{3}/_{8}$" movement in each direction

| DESCRIPTION | | | | PRICED PER EACH |
|---|---|---|---|---|
| PART # | SSR SYSTEM | HEIGHT | WEIGHT EACH | PRICE |
| HW-2122 | Double-Lok® | $3^{3}/_{8}$" | .50# | ✓ |


7"
4"
3"
1 1/2"
12
1/4–14 x 1 1/4 LONG–LIFE SELF–DRILLER W/WASHER [FASTENER #1E] (9) PER 18" PANEL
DOUBLE–LOK PANEL (PREPUNCHED)
DOUBLELOK CLIP [HW–2122]
DOUBLE–LOK PANEL (PREPUNCHED)
3/8"
TRI–BEAD TAPE SEALER [HW–504] CONT. ACROSS PANEL OVER PRE–PUNCHED HOLES
NOTE: APPLY TRI–BEAD TAPE SEALER OVER THE NOTCHED PORTION OF THE MALE LEGS
BACK–UP PLATE
[HW–7769] 18" PANEL
1/4–14 x 1 SELF–DRILLER W/ WASHER [FASTENER #1] (2) PER CLIP W/O PLYWOOD SEE DETAIL 7/-
NOTE: 1/4–14 x 1 3/4 SELF–DRILLER W/ WASHER [FASTENER #1F] (2) PER CLIP W/ PLYWOOD
3/4" SHEATHING OPTIONS SEE DETAILS 1,2,3,4, & 5/A4.1. ALSO SHEETS S3.0.1 TO S3.0.4.*
RIGID INSULATION SEE 1/A4.1 APPLIED WITH ADHESIVE PER ESR-1023 (OR EQUAL)
PURLIN @ 5'-0" o.c.


UPPER PANEL
1/4 - 14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1E] (2) PER ENDLAP
VISE GRIP ® LOCKING PLIERS
TRI-BEAD TAPE SEALER [HW-504]
1/4 - 14 x 1 LONG-LIFE 'TYPE AB' SELF-TAPPER W/WASHER [FASTENER #2B] (9) PER ENDLAP
LOWER PANEL

PANEL INSTALLATION SEQUENCE


1' - 6"
1/4 - 14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1E] (2) PER ENDLAP
1/4 - 14 x 1 LONG-LIFE 'TYPE AB' SELF-TAPPER W/ WASHER [FASTENER #2B] (9) PER ENDLAP
3/4"
0'-3"
7
8
1
3
2
9
4
5
6
1' - 2 1/2"

FASTENER SEQUENCE @ ENDLAP

**18" DOUBLE-LOK 22GA STANDING SEAM PANEL BY MBCI**

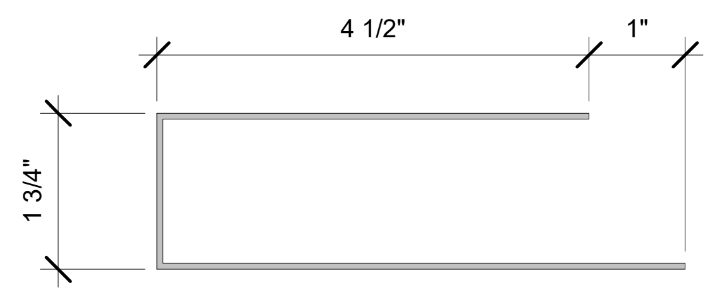
| | NEG | | POS |
|---|---|---|---|
| t | = 0.0299" | t | = 0.0299" |
| $S_x$ | = 0.1846 IN³ | $S_x$ | = 0.2154 IN³ |
| $I_x$ | = 0.2718 IN⁴ | $I_x$ | = 0.4968 IN⁴ |
| $F_Y$ | = 50 KSI | $F_Y$ | = 50 KSI |

FOR ALL METAL
ROOFING SYSTEMS
USE OR EQUAL

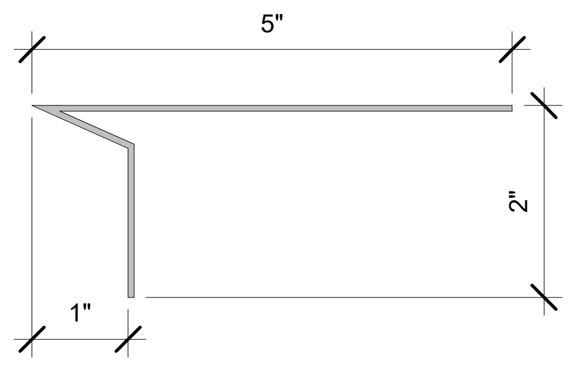
* PLYWOOD UNDERLAY IS USED PER S3.0.1 & S3.0.2 CONDITIONS AND IS OPTIONAL AT THE METAL DECK CONDITIONS PER S3.0.3 & S3.0.4

MIAMI-DADE COUNTY
NOA NO. 21-0615.07

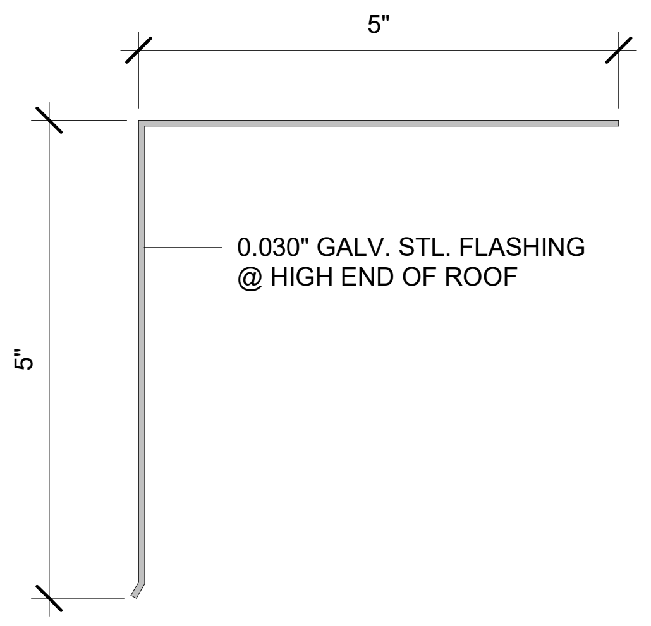
**15**



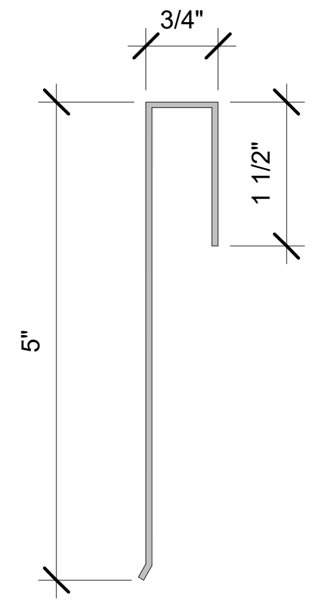
**14** *6" = 1'-0"*
***FLASHING @ ROOF HIGH SIDE***



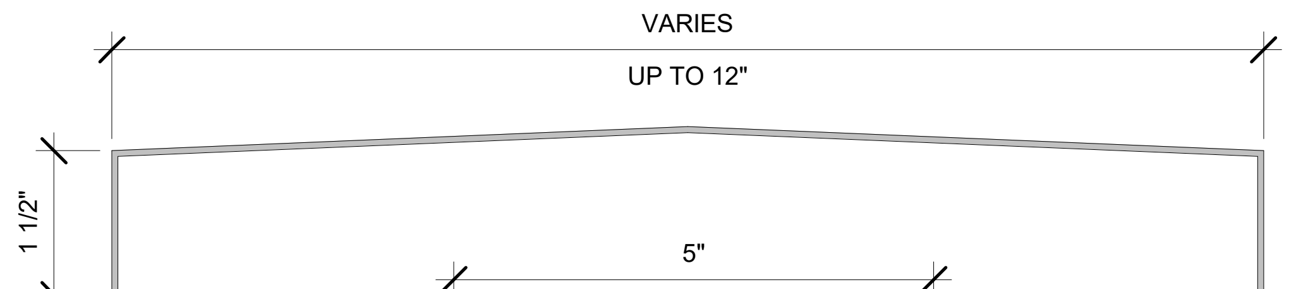
**13** *6" = 1'-0"*
***FLASHING @ ROOF LOW SIDE***

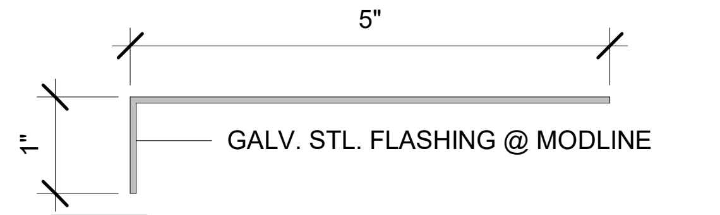


**12** *6" = 1'-0"*
***ROOF FLASHING***



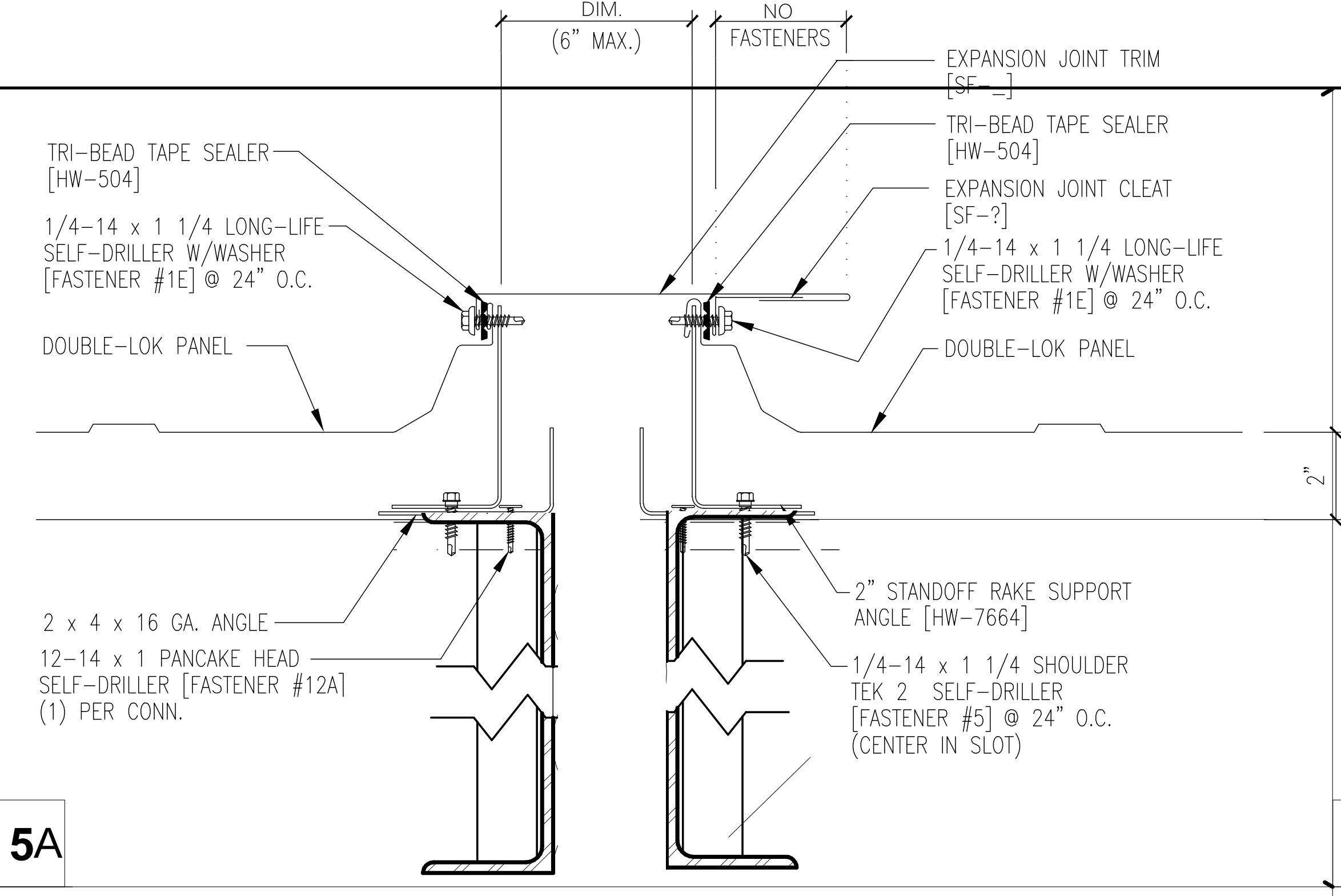
**11** *6" = 1'-0"*
***ROOF FLASHING @ SIDEWALL***



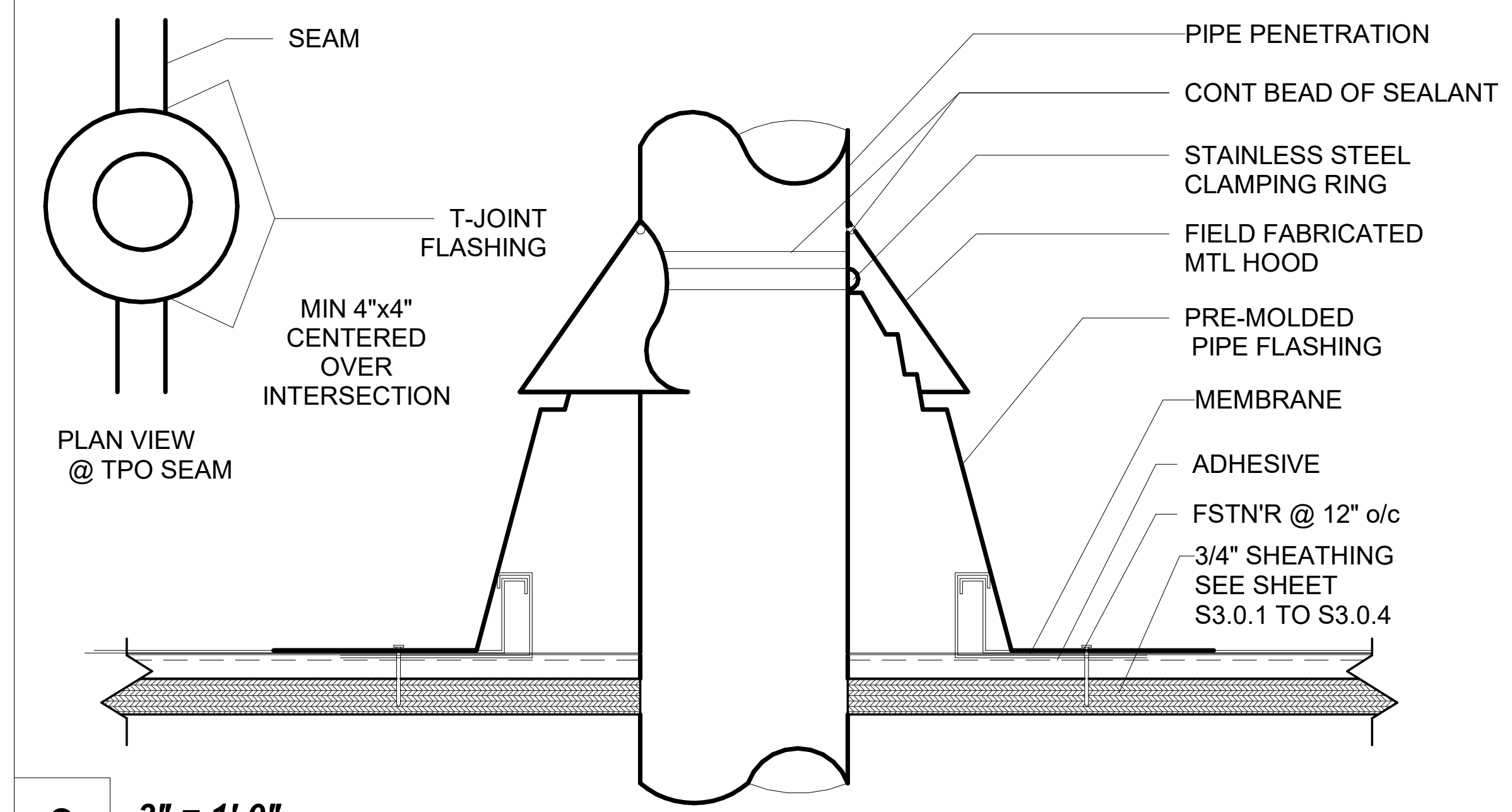


**10A** *6" = 1'-0"*
***FLASHING @ MODLINE WALL***

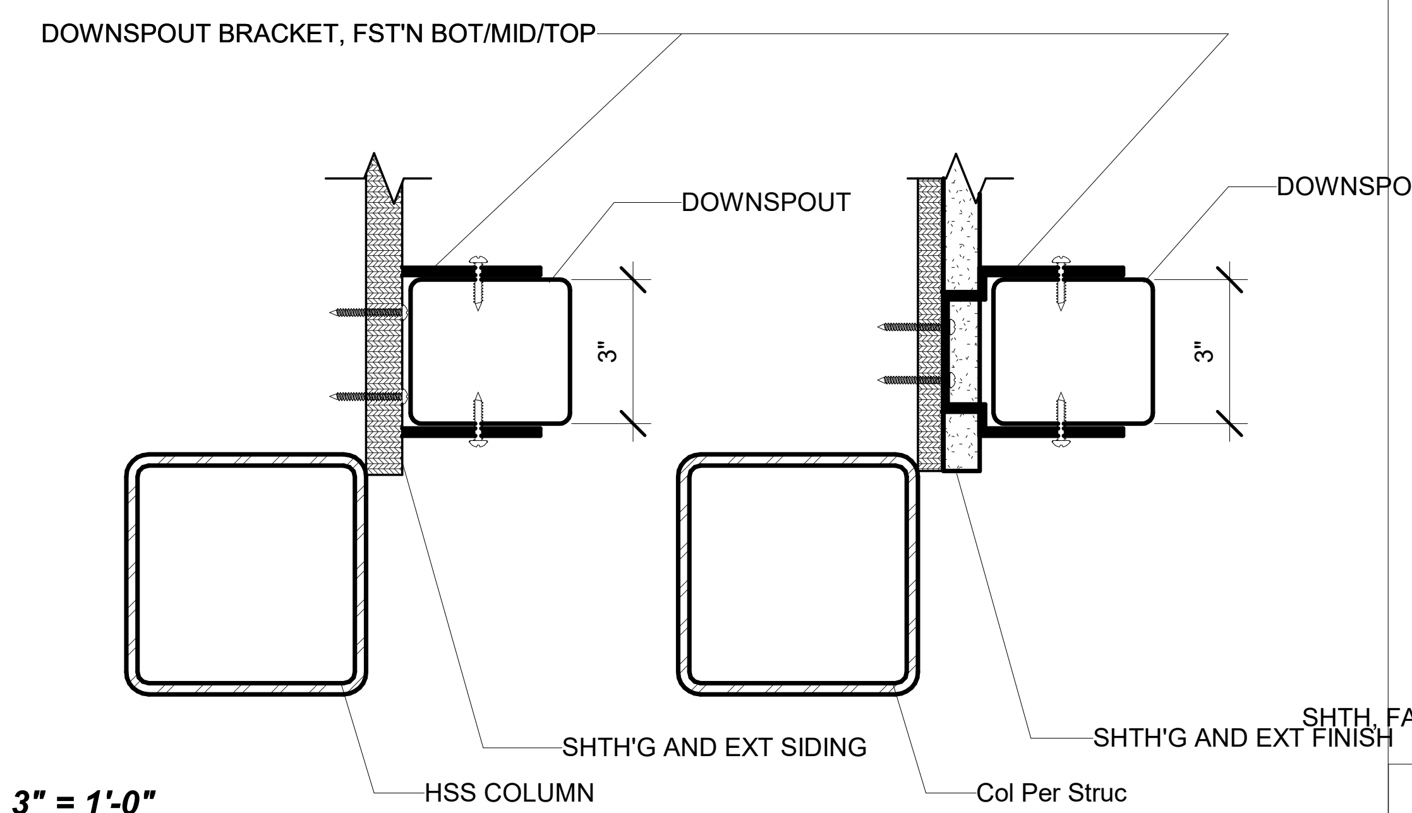
**10** *6" = 1'-0"*
***ROOF CAP @ MODLINE***


DIM. (6" MAX.)
NO FASTENERS
EXPANSION JOINT TRIM [SF–_]
TRI–BEAD TAPE SEALER [HW–504]
TRI–BEAD TAPE SEALER [HW–504]
EXPANSION JOINT CLEAT [SF–?]
1/4–14 x 1 1/4 LONG–LIFE SELF–DRILLER W/WASHER [FASTENER #1E] @ 24" O.C.
1/4–14 x 1 1/4 LONG–LIFE SELF–DRILLER W/WASHER [FASTENER #1E] @ 24" O.C.
DOUBLE–LOK PANEL
DOUBLE–LOK PANEL
2"
2 x 4 x 16 GA. ANGLE
12–14 x 1 PANCAKE HEAD SELF–DRILLER [FASTENER #12A] (1) PER CONN.
2" STANDOFF RAKE SUPPORT ANGLE [HW–7664]
1/4–14 x 1 1/4 SHOULDER TEK 2 SELF–DRILLER [FASTENER #5] @ 24" O.C. (CENTER IN SLOT)

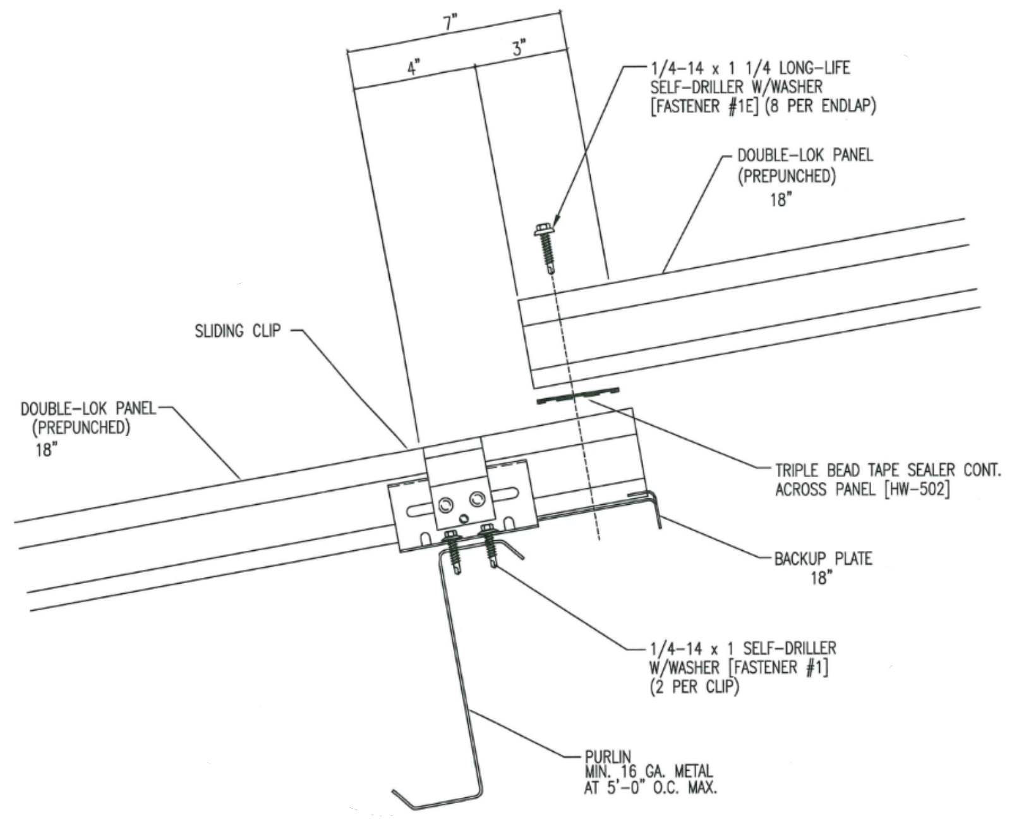
**5A**



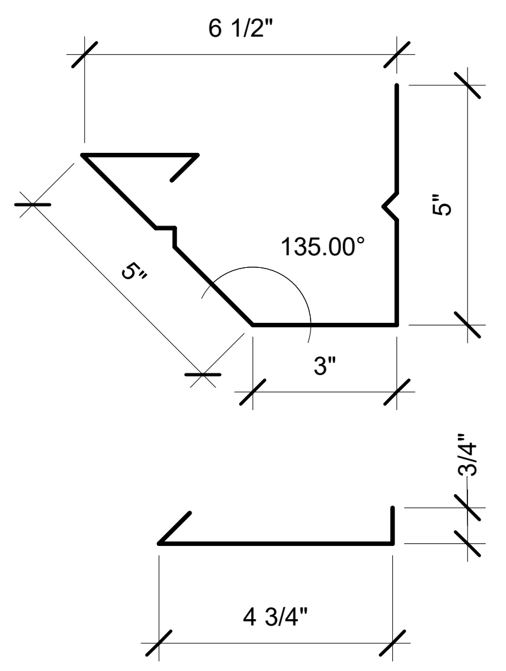
**9** *3" = 1'-0"*
***Pipe Penetration Standing Seam***
ALL FSTN'G & WATER PROOF'G/FLASHING PER MNFR SPECS



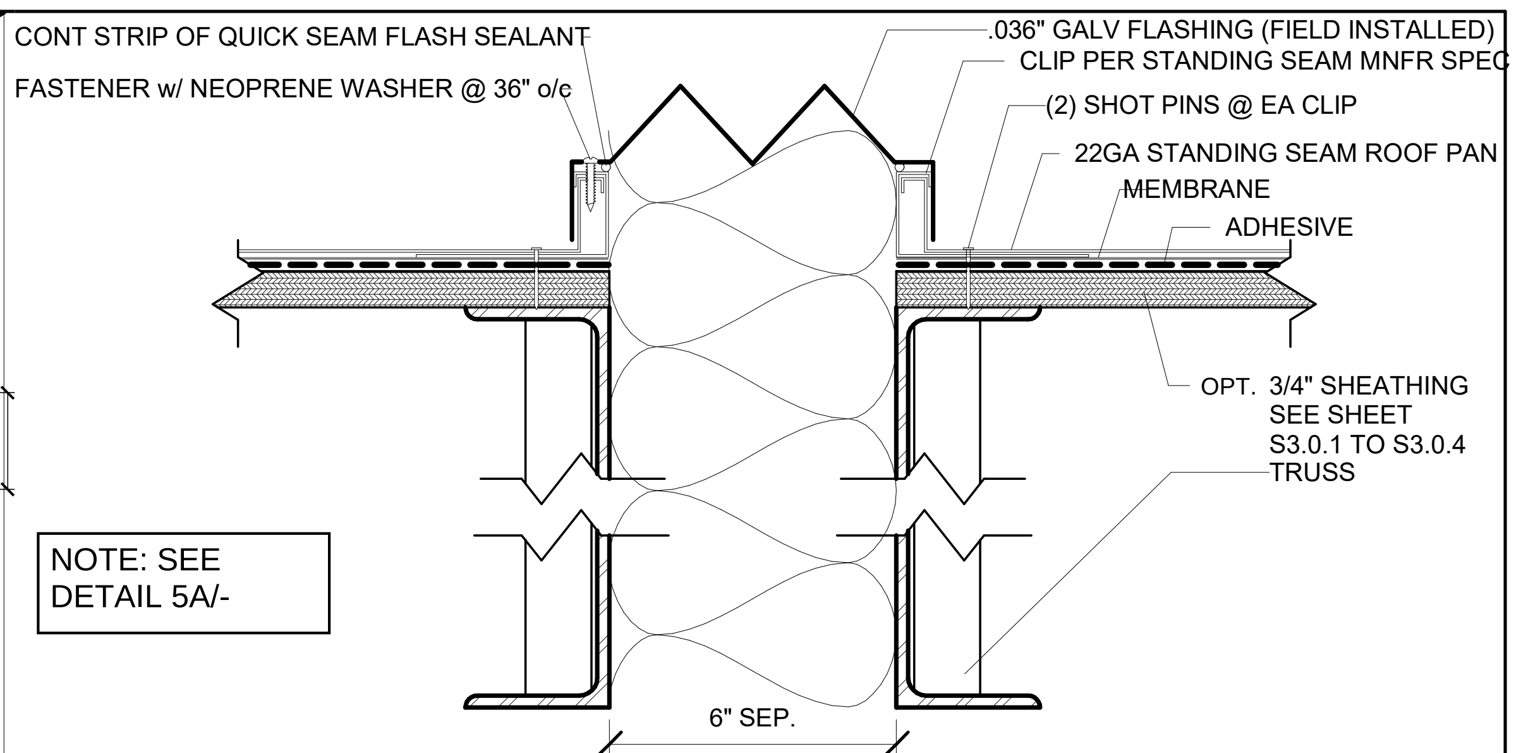
**8** *3" = 1'-0"*
***Downspout Mount1***


7"
4"
3"
1/4–14 x 1 1/4 LONG–LIFE SELF–DRILLER W/WASHER [FASTENER #1E] (8 PER ENDLAP)
DOUBLE–LOK PANEL (PREPUNCHED) 18"
SLIDING CLIP
DOUBLE–LOK PANEL (PREPUNCHED) 18"
TRIPLE BEAD TAPE SEALER CONT. ACROSS PANEL [HW–502]
BACKUP PLATE 18"
1/4–14 x 1 SELF–DRILLER W/WASHER [FASTENER #1] (2 PER CLIP)
PURLIN MIN. 16 GA. METAL AT 5'–0" O.C. MAX.

**7**

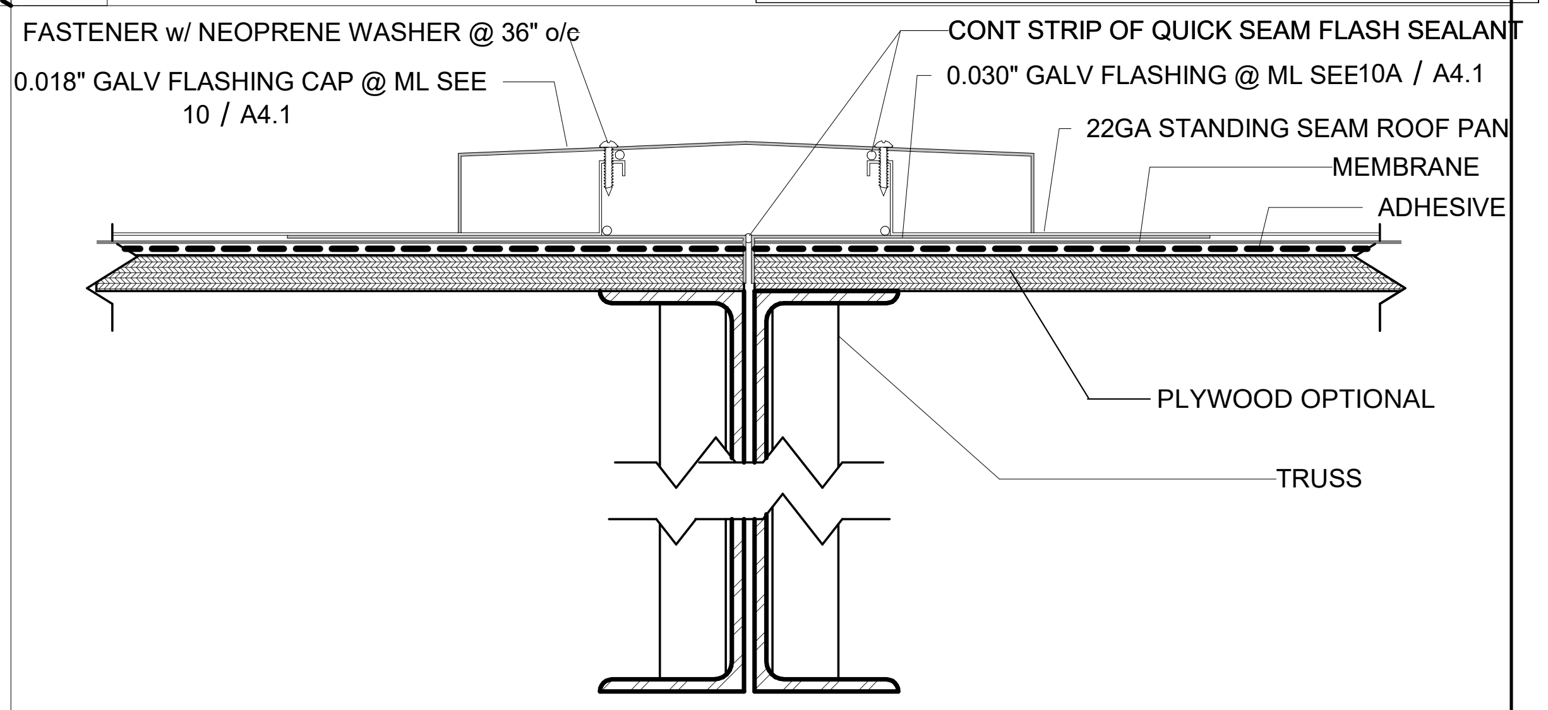


**6** *3" = 1'-0"*
***Gutter and Strap1***

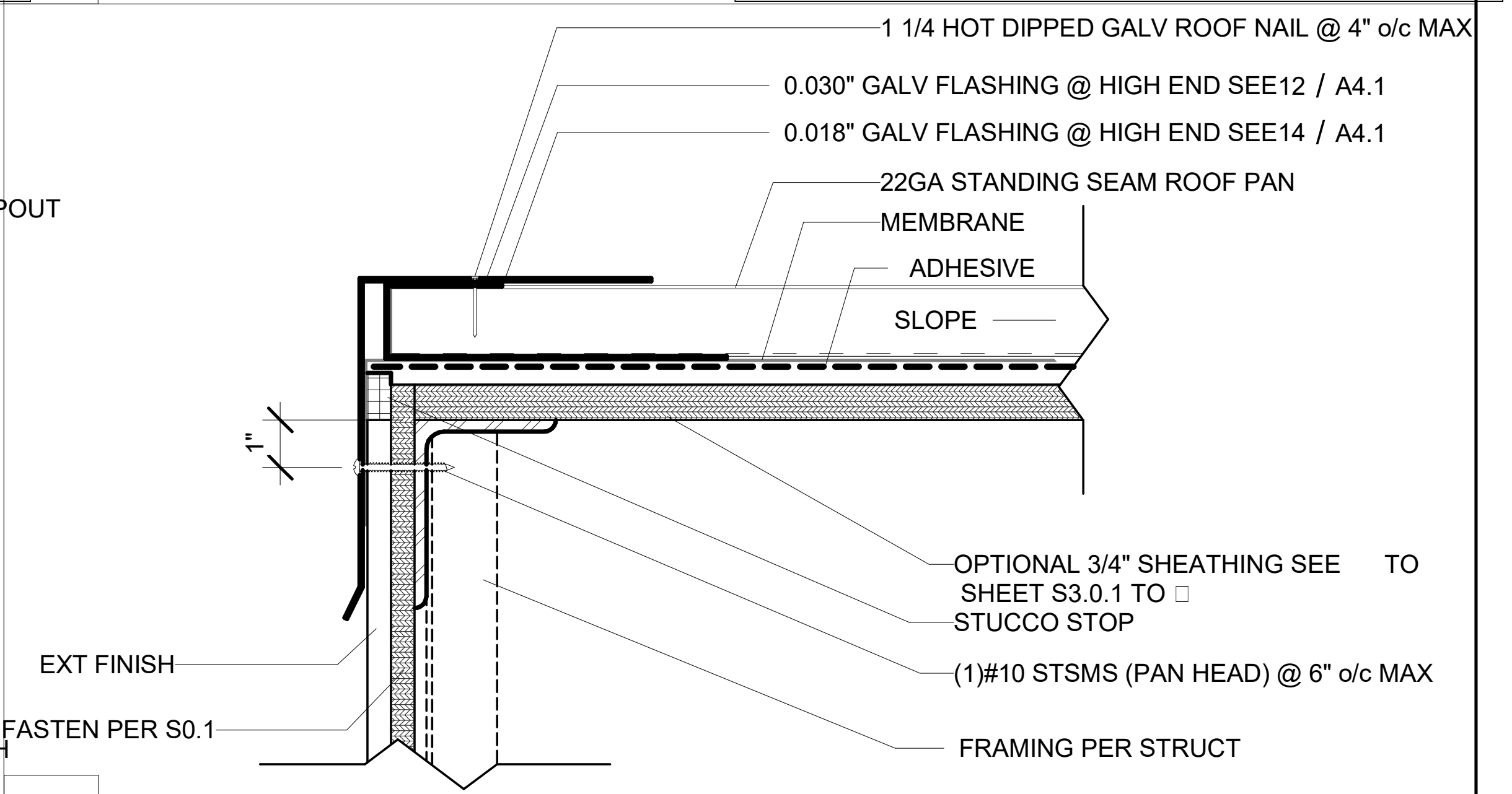

CONT STRIP OF QUICK SEAM FLASH SEALANT
FASTENER w/ NEOPRENE WASHER @ 36" o/c
.036" GALV FLASHING (FIELD INSTALLED)
CLIP PER STANDING SEAM MNFR SPEC
(2) SHOT PINS @ EA CLIP
22GA STANDING SEAM ROOF PAN
MEMBRANE
ADHESIVE
OPT. 3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4
TRUSS
6" SEP.

NOTE: SEE DETAIL 5A/-

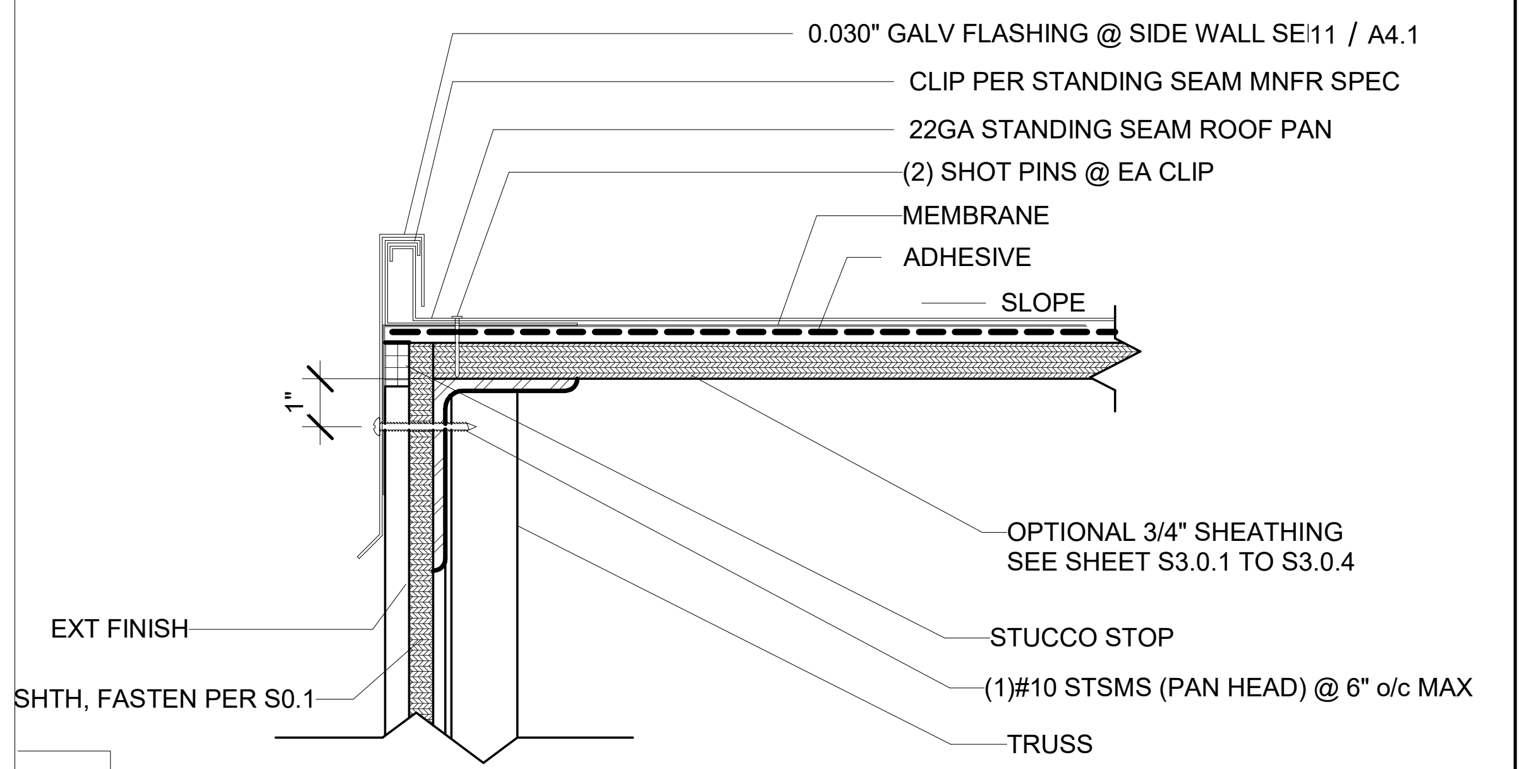
**5** *3" = 1'-0"*
***Roof @ Mateline Std'g Seam w/ 6" Sep***
ALL FSTN'G & WATER PROOF'G/FLASHING PER MNFR SPECS


FASTENER w/ NEOPRENE WASHER @ 36" o/c
0.018" GALV FLASHING CAP @ ML SEE 10 / A4.1
CONT STRIP OF QUICK SEAM FLASH SEALANT
0.030" GALV FLASHING @ ML SEE10A / A4.1
22GA STANDING SEAM ROOF PAN
MEMBRANE
ADHESIVE
PLYWOOD OPTIONAL
TRUSS

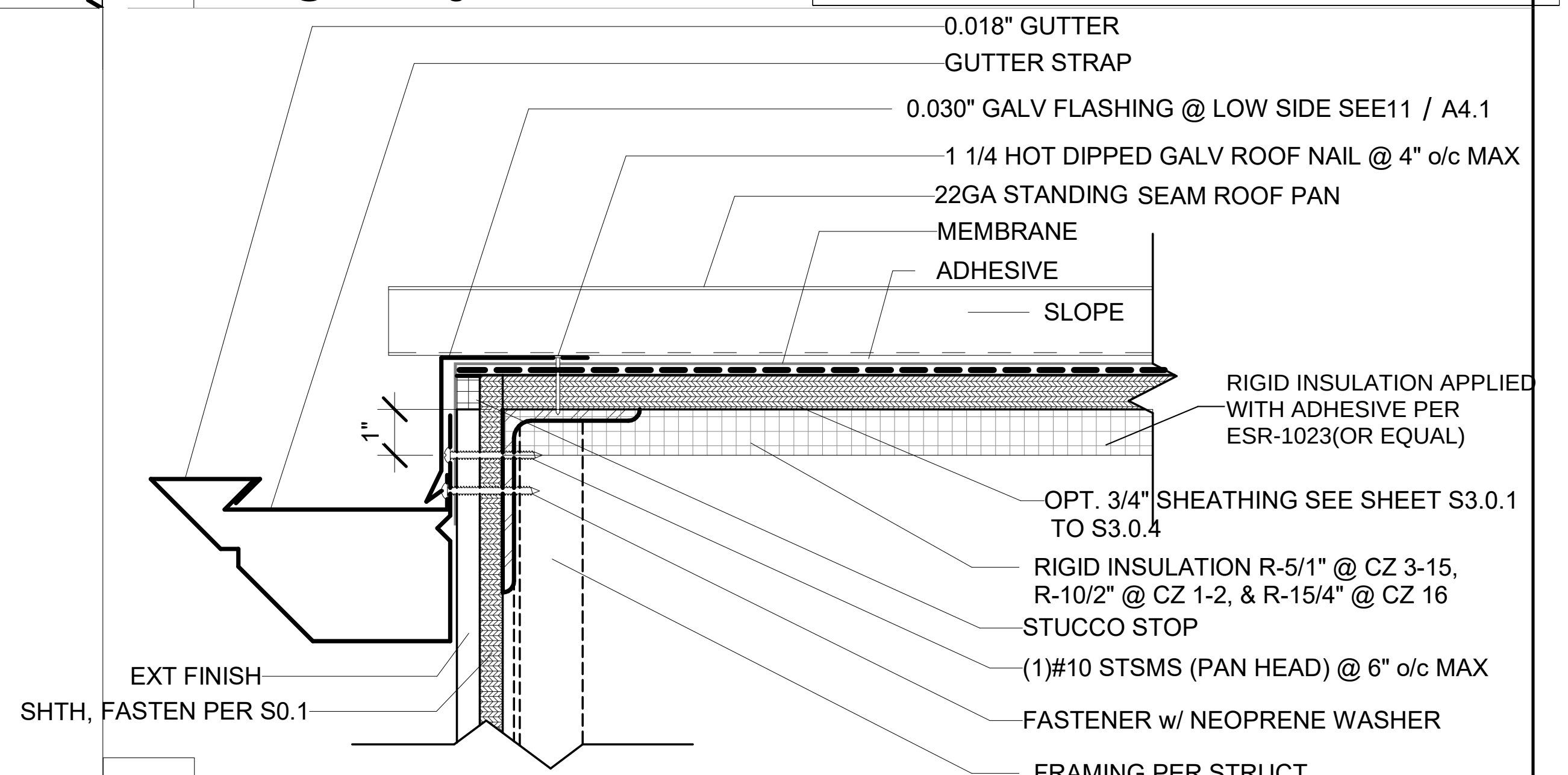
**4** *3" = 1'-0"*
***Roof @ Standing Seam Mateline***
ALL FSTN'G & WATER PROOF'G/FLASHING PER MNFR SPECS


1 1/4 HOT DIPPED GALV ROOF NAIL @ 4" o/c MAX
0.030" GALV FLASHING @ HIGH END SEE12 / A4.1
0.018" GALV FLASHING @ HIGH END SEE14 / A4.1
22GA STANDING SEAM ROOF PAN
MEMBRANE
ADHESIVE
SLOPE
1"
OPTIONAL 3/4" SHEATHING SEE TO SHEET S3.0.1 TO □
STUCCO STOP
(1)#10 STSMS (PAN HEAD) @ 6" o/c MAX
FRAMING PER STRUCT
EXT FINISH
SHTH, FASTEN PER S0.1

**3** *3" = 1'-0"*
***Roof @ Endwall Std'g Seam (High End)***
ALL FSTN'G & WATER PROOF'G/FLASHING PER MNFR SPECS


0.030" GALV FLASHING @ SIDE WALL SE11 / A4.1
CLIP PER STANDING SEAM MNFR SPEC
22GA STANDING SEAM ROOF PAN
(2) SHOT PINS @ EA CLIP
MEMBRANE
ADHESIVE
SLOPE
1"
OPTIONAL 3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4
STUCCO STOP
(1)#10 STSMS (PAN HEAD) @ 6" o/c MAX
TRUSS
EXT FINISH
SHTH, FASTEN PER S0.1

**2** *3" = 1'-0"*
***Roof @ Standing Seam Sidwall***
ALL FSTN'G & WATER PROOF'G/FLASHING PER MNFR SPECS


0.018" GUTTER
GUTTER STRAP
0.030" GALV FLASHING @ LOW SIDE SEE11 / A4.1
1 1/4 HOT DIPPED GALV ROOF NAIL @ 4" o/c MAX
22GA STANDING SEAM ROOF PAN
MEMBRANE
ADHESIVE
SLOPE
1"
RIGID INSULATION APPLIED WITH ADHESIVE PER ESR-1023(OR EQUAL)
OPT. 3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4
RIGID INSULATION R-5/1" @ CZ 3-15, R-10/2" @ CZ 1-2, & R-15/4" @ CZ 16
STUCCO STOP
(1)#10 STSMS (PAN HEAD) @ 6" o/c MAX
FASTENER w/ NEOPRENE WASHER
FRAMING PER STRUCT
EXT FINISH
SHTH, FASTEN PER S0.1

**1** *3" = 1'-0"*
***Roof @ Endwall Std'g Seam (Low End)***
ALL FSTN'G & WATER PROOF'G/FLASHING PER MNFR SPECS

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
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ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ROOF DETAILS (STANDING SEAM)

PROJECT NUMBER
22088

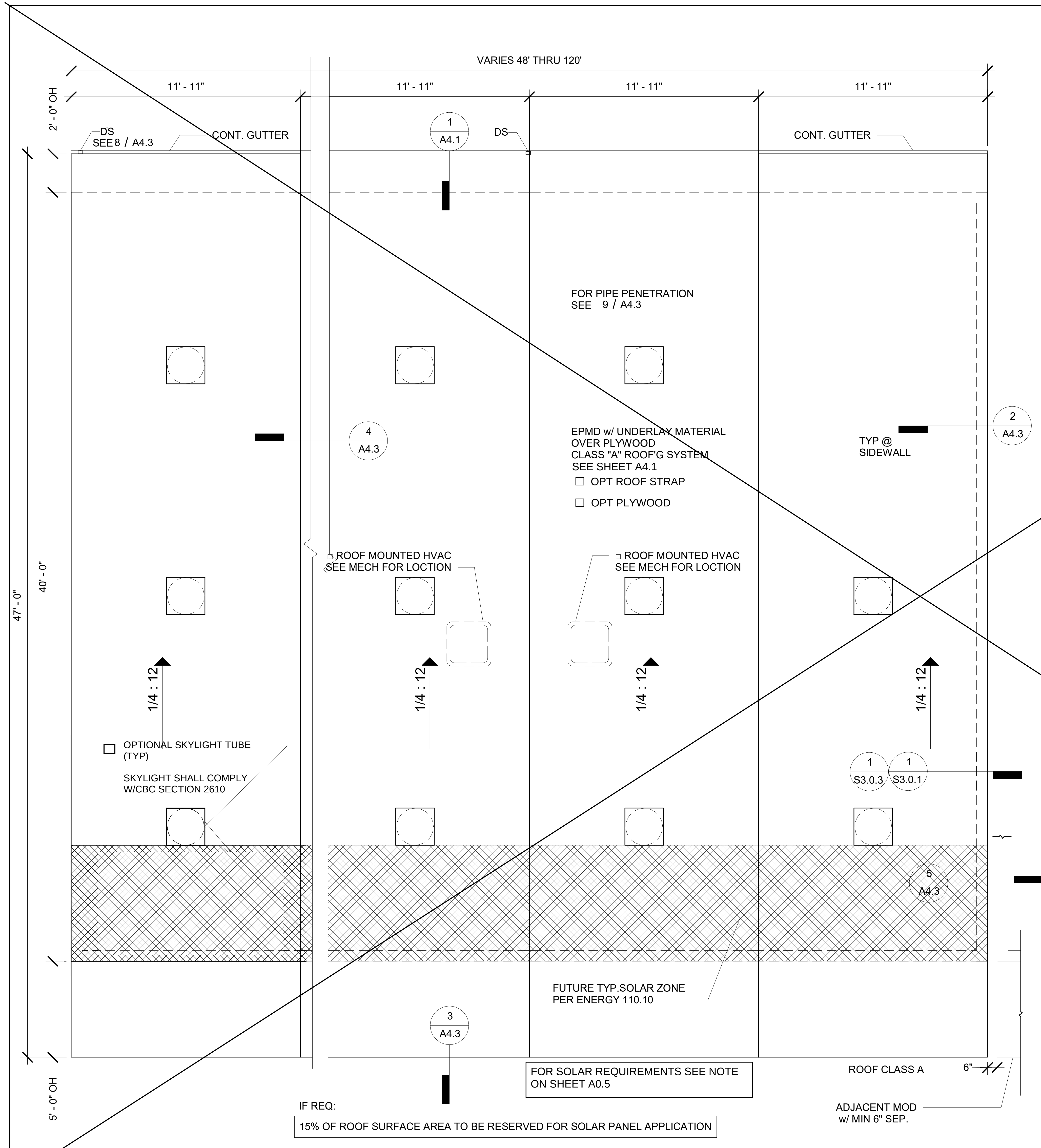
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

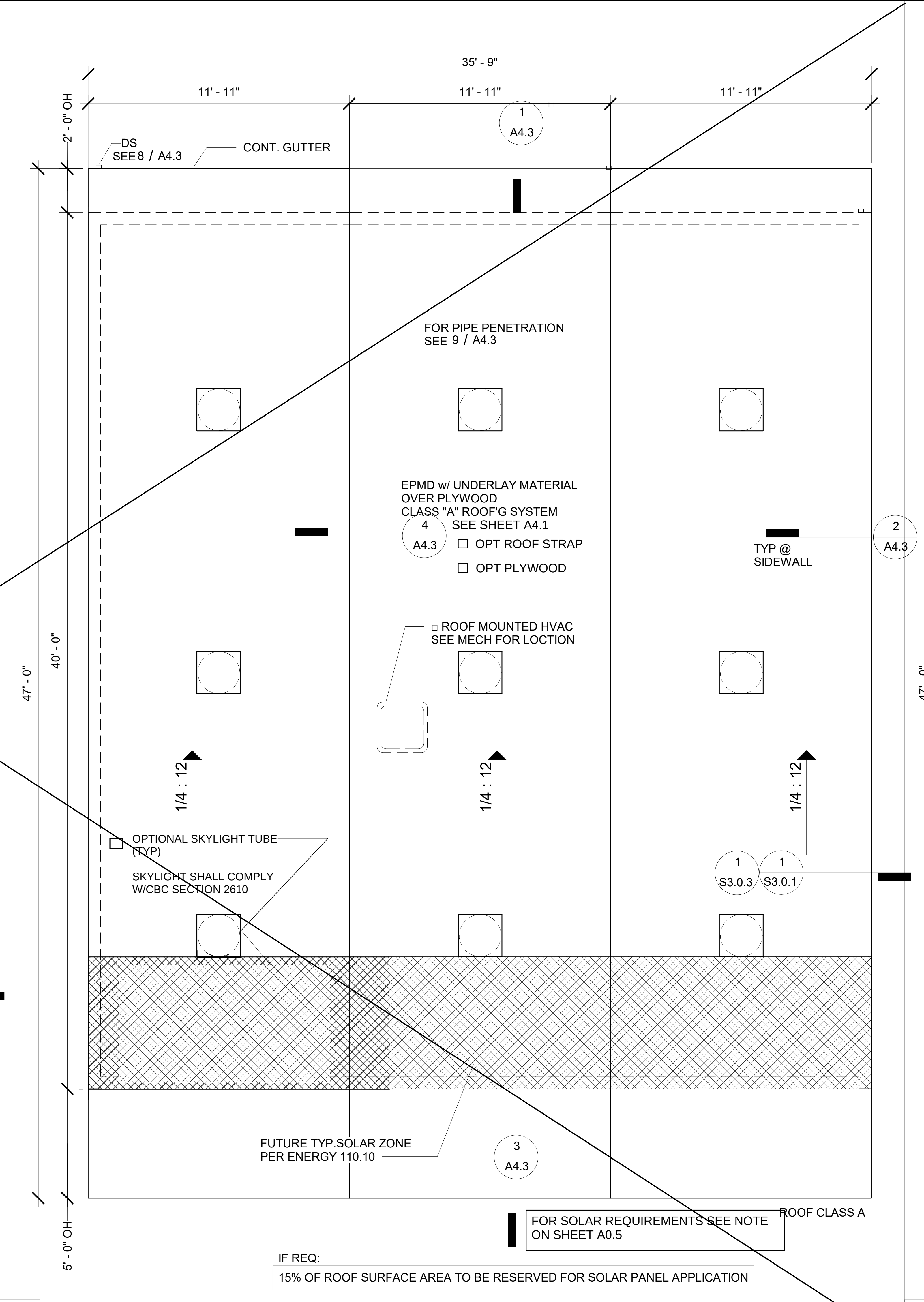
DATE

SHEET NO.
A4.1

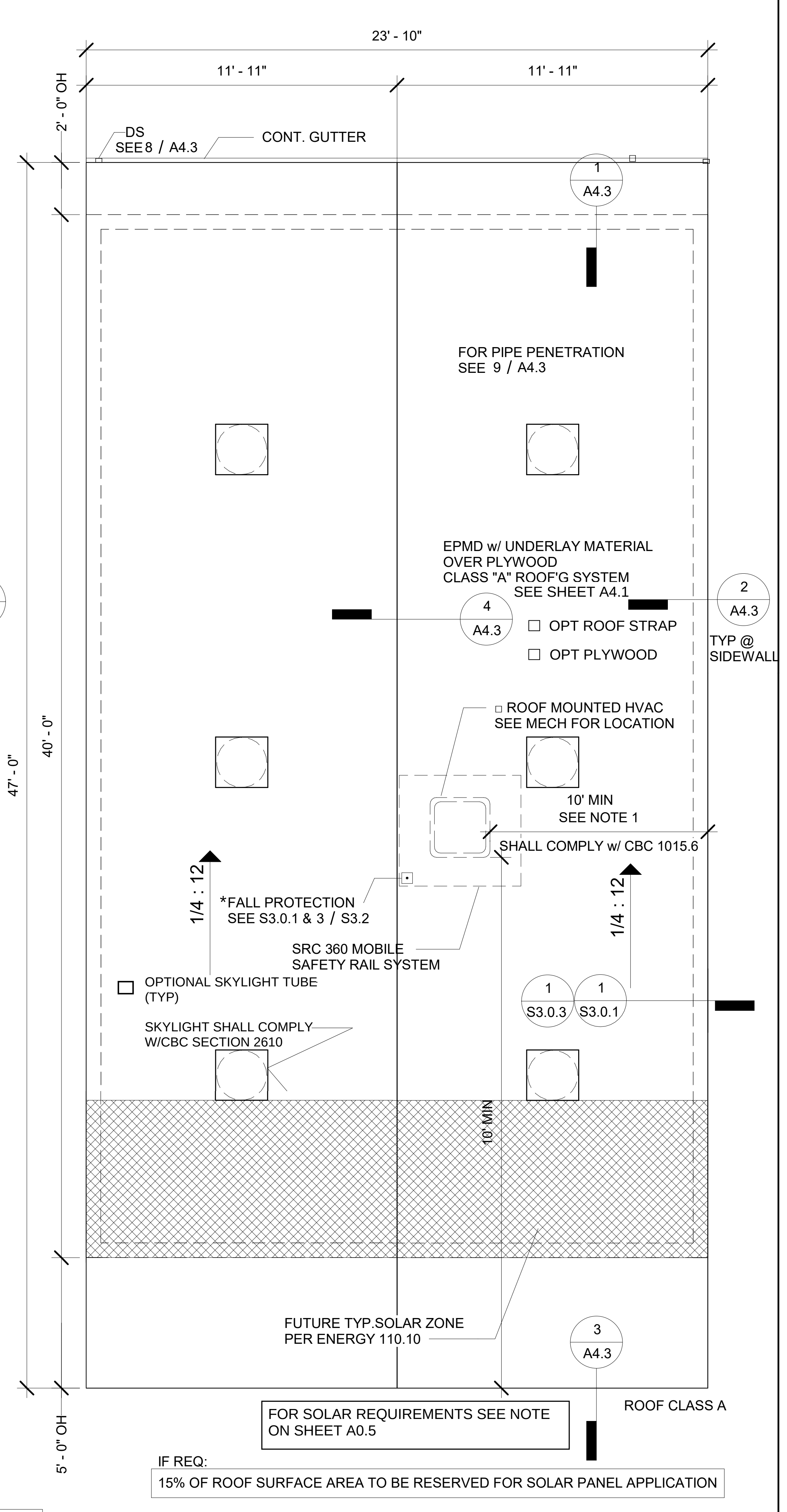
SHEET OF



**3** *1/4" = 1'-0"*
***48x40 thru 120x40 Roof Plan (EPDM Mono)***



**2** *1/4" = 1'-0"*
***36x40 Roof Plan (EPDM Mono)***



**1** *1/4" = 1'-0"*
***24x40 Roof Plan (EPDM Mono)***

Note: For conditioned structures, roofing must be installed IAW 2022 CBC SECTION 1202.3

**1202.3 Unvented Attic and Unvented Enclosed Rafter Assemblies**

Unvented attics and unvented enclosed roof framing assemblies created by ceilings applied directly to the underside of the roof framing members/rafters and the structural roof sheathing at the top of the roof framing members shall be permitted where all of the following conditions are met:

1. The unvented attic space is completely within the building thermal envelope.
2. No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
3. Where wood shingles or shakes are used, not less than a 1/4-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In Climate Zones 14 and 16, any air-impermeable insulation shall be a Class II vapor retarder or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.

   See the California Energy Code, Figure 100.1-A — California Climate Zones.

   4.1. **[HCD 1 & HCD 2]** In Climate Zones 14 and 16, a Class I or Class II vapor retarder shall be installed on the indirectly conditioned space side of all insulation in an unvented attic with air-permeable insulation, for condensation control.
5. Insulation shall be located in accordance with the following:

   5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous underlayment shall be considered to exist if sheathing, roofing paper or any continuous layer having a perm rate of no more than one perm under the dry cup method is present.

   5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

   5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with

   Item 5.1.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table 1202.3 for condensation control.

   5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing and shall be in accordance with the R-values in Table 1202.3 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

   5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

   5.2. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

**Exceptions:**

1. Section 1202.3 does not apply to special use structures or enclosures such as swimming pool enclosures, data processing centers, hospitals or art galleries.
2. Section 1202.3 does not apply to enclosures in Climate Zones 14 and 16 that are humidified beyond 35 percent during the three coldest months.

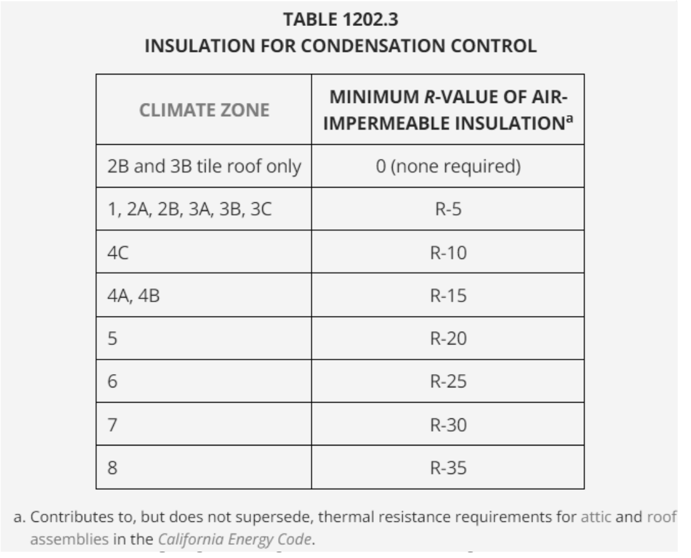


**TABLE 1202.3**
**INSULATION FOR CONDENSATION CONTROL**

| CLIMATE ZONE | MINIMUM *R*-VALUE OF AIR-IMPERMEABLE INSULATION[a] |
|---|---|
| 2B and 3B tile roof only | 0 (none required) |
| 1, 2A, 2B, 3A, 3B, 3C | R-5 |
| 4C | R-10 |
| 4A, 4B | R-15 |
| 5 | R-20 |
| 6 | R-25 |
| 7 | R-30 |
| 8 | R-35 |

a. Contributes to, but does not supersede, thermal resistance requirements for attic and roof assemblies in the *California Energy Code*.

NOTE: PER CBC 1015.6, - EXCEPTION, GUARDRAILS ARE NOT REQUIRED WHERE PERMANENT FALL RESTRAINT ANCHORAGE DEVICES ARE AFFIXED & SHALL BE PLACED NOT MORE THAN 10FT FROM THE ROOF EDGE.

*IF ROOF MOUNTED UNIT IS APPLIED

**PV REQUIREMENTS:**

**1.7 REQUIRED PHOTOVOLTAIC (PV) SYSTEMS**

WHEN A PV SYSTEM IS REQUIRED BY THE CALIFORNIA ENERGY CODE FOR A PC BUILDING CONFIGURATION, THE PV SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH IR 16-8: SOLAR PHOTOVOLTAIC AND THERMAL SYSTEMS REVIEW AND APPROVAL REQUIREMENTS. THE PC DESIGN SHALL SHOW THAT THE STRUCTURE CAN SUPPORT THE REQUIRED SYSTEM LOADS WHEN THE BUILDING IS SUPPORTING THE PV SYSTEM. THE PV SYSTEM DESIGN MAY BE INCLUDED IN THE PC OR MAY BE SUBMITTED WITH THE PC AT THE TIME OF THE SITTING APPLICATION.

**8.3 REQUIRED PHOTOVOLTAIC (PV) SYSTEMS ENERGY REVIEW**

WHEN A PV SYSTEM IS REQUIRED PER THE CALIFORNIA ENERGY CODE FOR A PC CONFIGURATION, THE SYSTEM POWER REQUIREMENTS SHALLL BE CLEARLY DELINEATED ON THE PC PLANS IN THE DESIGN INFORMATION SECTION FOR THE PC. SEE SECTION 1.7 ABOVE FOR DESIGN AND SUBMITTAL REQUIREMENTS OF THE PV SYSTEM.

**PV AREA FOR FIRE ACCESS REQ'T (PER IR 16-8)**

3.2.1 General Requirements: A PV System shall be typically considered equipment. There is typically not an occupancy group classification, building area limitation, or type of construction assignment to a PV system.
a) PV equipment supported by non-combustible framing installed in locations dedicated for building frontage used for area increases per California Building Code (CBC), Chapter 5, Section 506, shall be limited in size and may be allowed on a case by case basis. Maximum area that may be allowed for such systems shall not exceed 1/3 of the horizontal projected area of each frontage.
b) Open sided PV systems and framing that are non-combustible and without use underneath may be considered equipment and may be placed next to
DSA IR 16-8 Solar Photovoltaic and Thermal
(updated 01-25-17) Systems Review and Approval Requirements Page 11 of 19
property lines. Signs may be required on or near the system prohibiting any use or storage underneath the equipment.
c) Combustible PV systems and framing and those with use underneath such as for assembly or parking, may need to comply with 2022 CBC, Table 602. These structures may include those that do and that do not have a roof underneath the PV system.
d) PV systems (both the frame and the array) shall not be placed in fire department access roads. (Per Title 24 CCR, Division 1, Chapter 1, Section 3.05 and 2022 CFC Chapter 5, Section 503.)
e) Access to a public way or safe dispersal area shall not be obstructed by the system or system framing. (CBC 1027.6 and 442.3)
f) PV systems that cover a lunch area or similar (occupant load less than 50), that are not used for assembly purposes shall be considered equipment. Playgrounds would also fall into this category regardless of total occupant load.
g) Any PV system that is installed above an assembly use (i.e. Group A-3 or A-5 occupancy classification) shall be considered an open sided building structure and all or portions of CBC provisions apply on a case by case basis. Such areas might include an outdoor amphitheater, bleacher or grandstand seating with concentrated occupant loads and heavy use.
h) Fire Department concern for the installation of roof mounted PV systems will be addressed by DSA review to the State Fire Marshal Solar Photovoltaic Installation Guideline available at:
http://osfm.fire.ca.gov/pdf/reports/solarphotovoltaicguideline.pdf
i) When a PV system, without riser framework, is installed directly on a rated roof assembly with a required classification greater than “Class C” found in CBC, Chapter 15, and f

PROJECT SPECIFIC STATE AGENCY APPROVAL

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APP. 04-123316 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

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No. S3380
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RST#22088
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ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ROOF PLAN MONO SLOPE (EPDM)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A4.2.1

SHEET OF

C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

6/15/2021 11:51:18 PM

### Ext. Finish Schedule

| | Finishes | Sheet | Notes |
|---|---|---|---|
| ☒ | SIDING OVER WD STUDS | A2.1 | |
| ☐ | PLASTER OVER 1/2" OSB OR 1/2" CDX PLY w/ WD STUDS | A2.2 | |

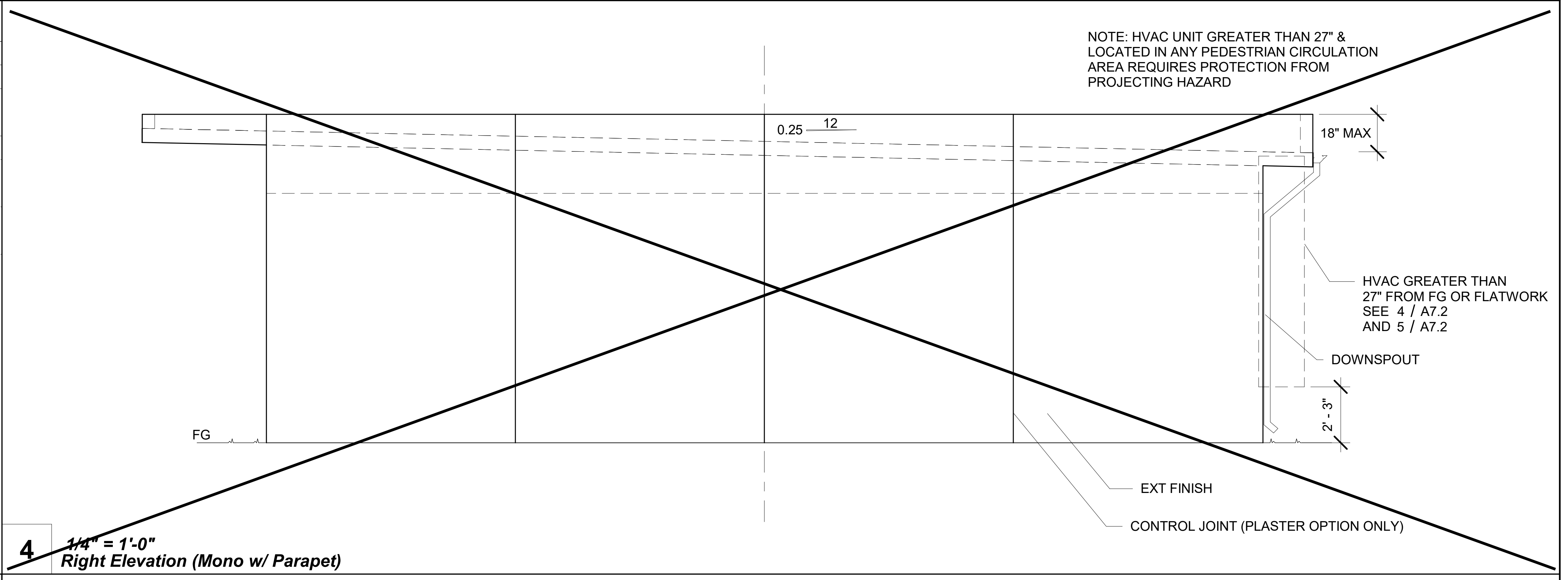
**9** *1/4" = 1'-0"*
***Ext. Finish Scedule***

### Fire Rating Schedule

| | Rating | Sheet | Notes |
|---|---|---|---|
| ☒ | 1 HOUR - SIDING OVER WD STUDS | A2.5 | |
| ☐ | 1 HOUR - PLASTER OVER 1/2" OSB OR 1/2" CDX PLY w/ WD STUDS | A2.6 | |

SEE A3.0 FOR ADDITIONAL FIRE ASSEMBLY NOTES AND DETAILS

**10** *1/4" = 1'-0"*
***Fire Rating Scedule***


NOTE: HVAC UNIT GREATER THAN 27" & LOCATED IN ANY PEDESTRIAN CIRCULATION AREA REQUIRES PROTECTION FROM PROJECTING HAZARD
0.25
12
18" MAX
HVAC GREATER THAN 27" FROM FG OR FLATWORK SEE 4 / A7.2 AND 5 / A7.2
DOWNSPOUT
2' - 3"
FG
EXT FINISH
CONTROL JOINT (PLASTER OPTION ONLY)

**4** *1/4" = 1'-0"*
***Right Elevation (Mono w/ Parapet)***

SEE A0.1 FOR GENERAL NOTES

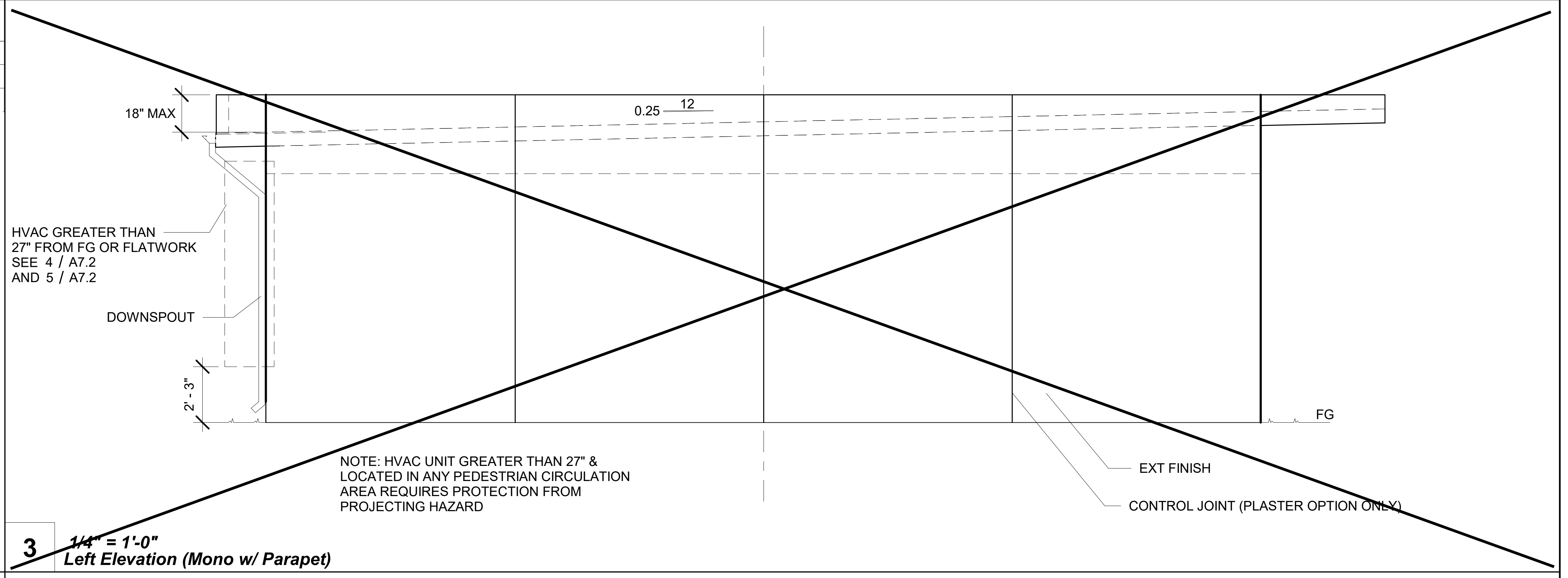
**7** *3" = 1'-0"*
***Notes A5.0***

### Wall Schedule

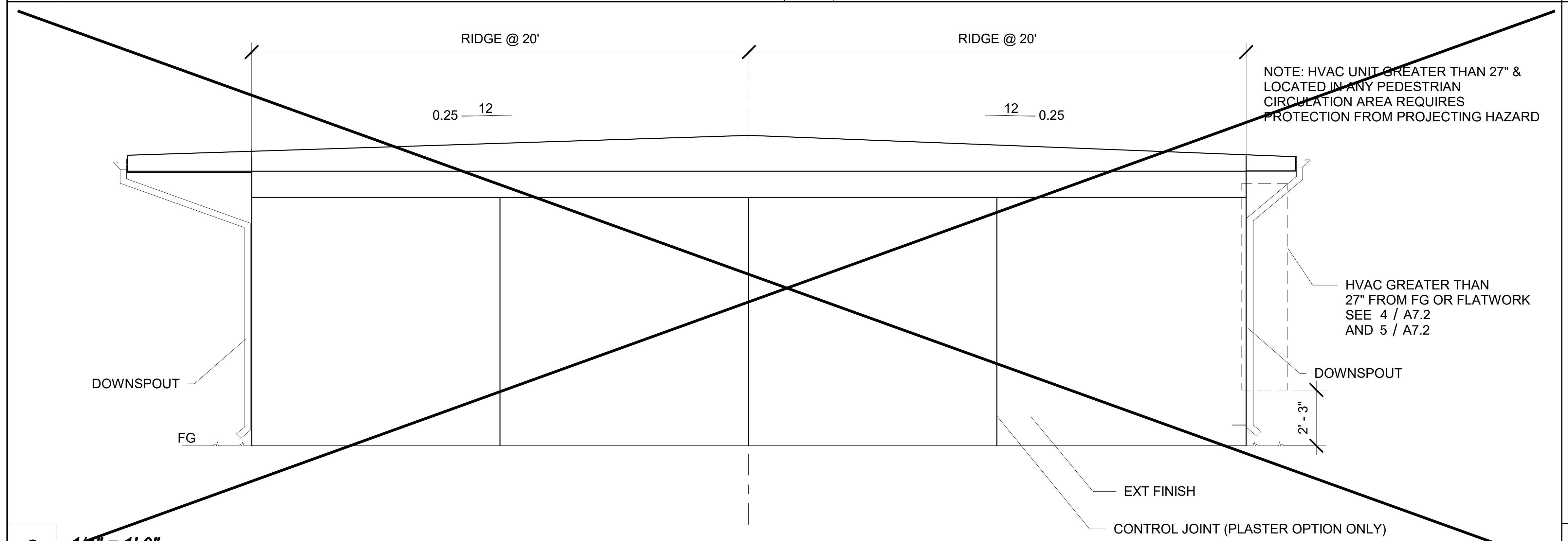
| | Stud Size | Sheet | Notes |
|---|---|---|---|
| ☒ | Wood Wall Stud | S4.5 | |

FOR WUI DETAILS SEE
SHEETS: A2.1(B)
A2.3(B)
A2.5(B)
A2.7(B)

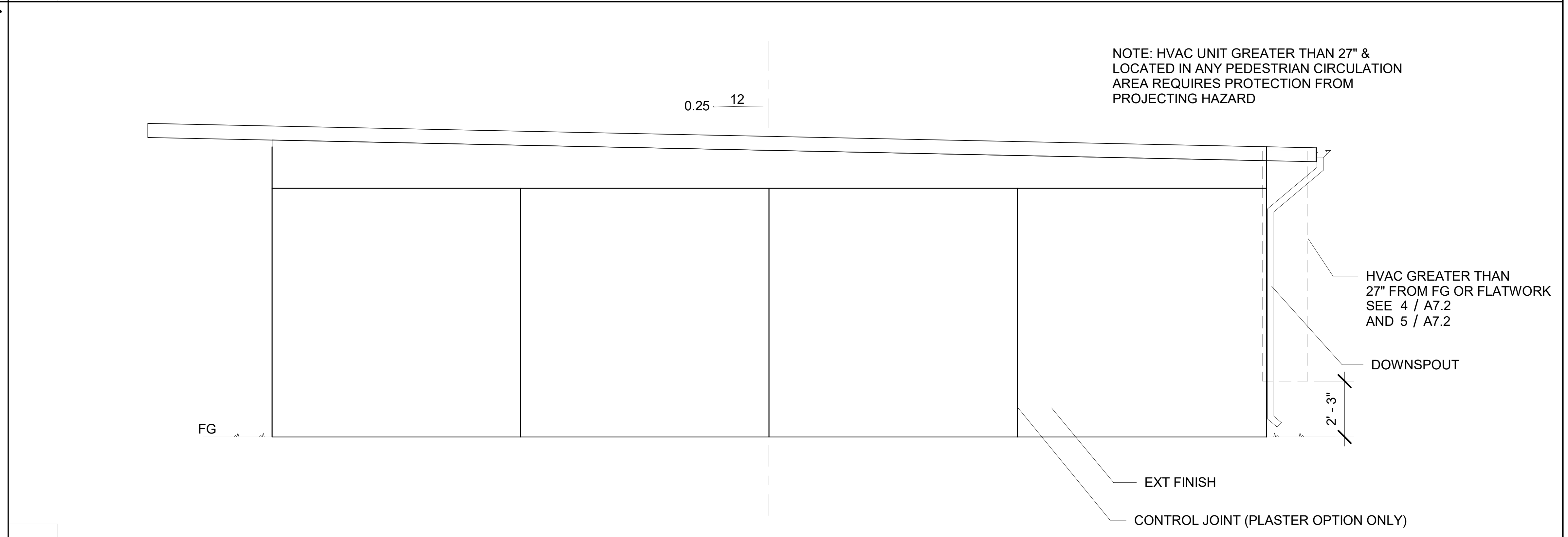
**8** *1/4" = 1'-0"*
***Wall Schedule***


18" MAX
0.25
12
HVAC GREATER THAN 27" FROM FG OR FLATWORK SEE 4 / A7.2 AND 5 / A7.2
DOWNSPOUT
2' - 3"
FG
NOTE: HVAC UNIT GREATER THAN 27" & LOCATED IN ANY PEDESTRIAN CIRCULATION AREA REQUIRES PROTECTION FROM PROJECTING HAZARD
EXT FINISH
CONTROL JOINT (PLASTER OPTION ONLY)

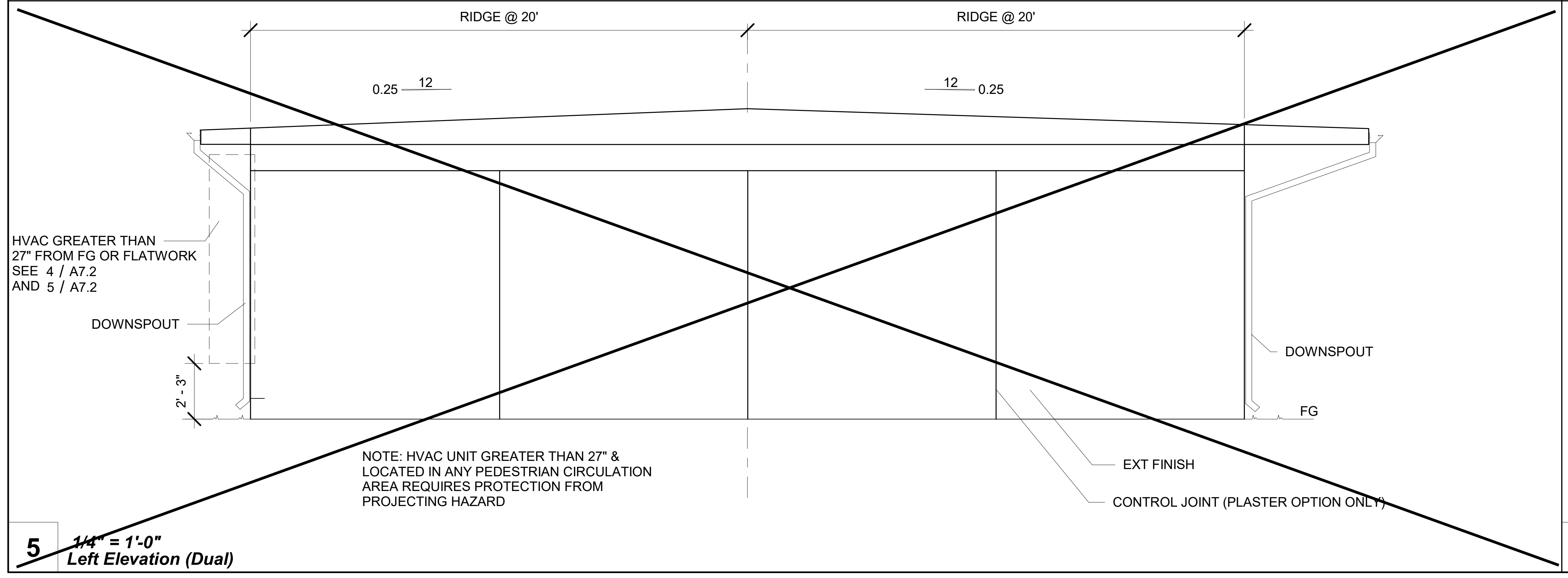
**3** *1/4" = 1'-0"*
***Left Elevation (Mono w/ Parapet)***


RIDGE @ 20'
RIDGE @ 20'
0.25
12
12
0.25
NOTE: HVAC UNIT GREATER THAN 27" & LOCATED IN ANY PEDESTRIAN CIRCULATION AREA REQUIRES PROTECTION FROM PROJECTING HAZARD
HVAC GREATER THAN 27" FROM FG OR FLATWORK SEE 4 / A7.2 AND 5 / A7.2
DOWNSPOUT
DOWNSPOUT
FG
2' - 3"
EXT FINISH
CONTROL JOINT (PLASTER OPTION ONLY)

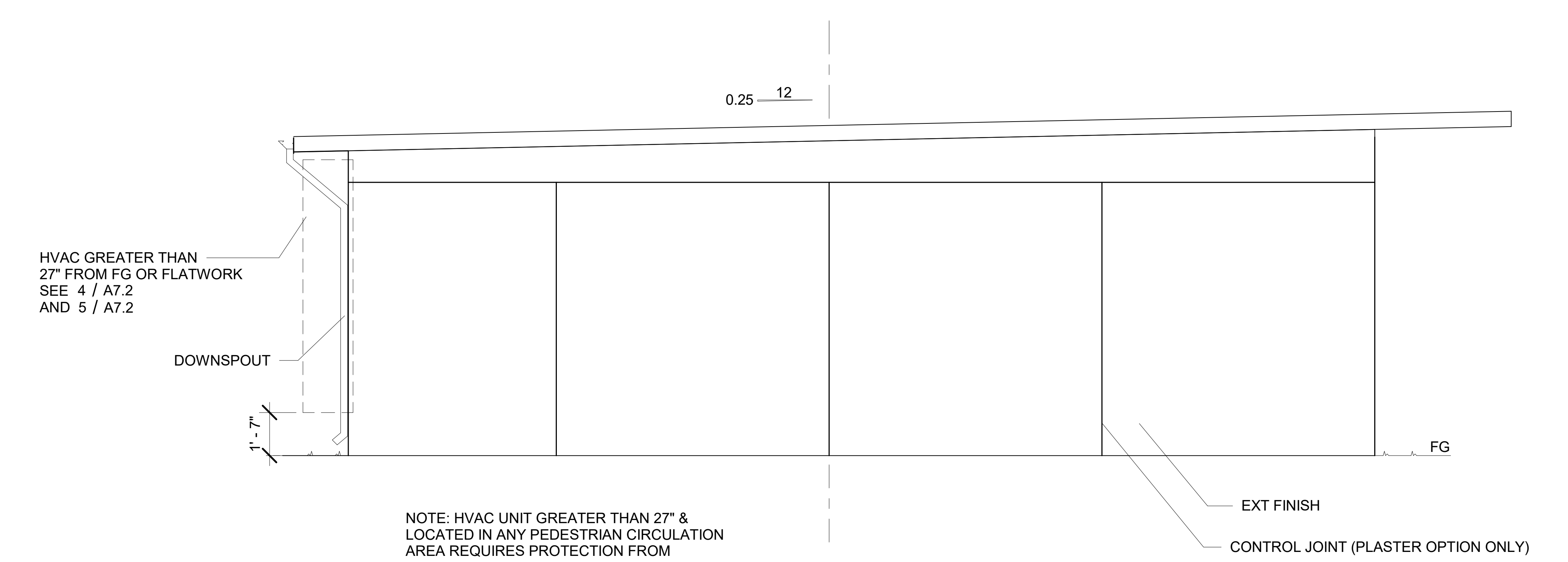
**6** *1/4" = 1'-0"*
***Right Elevation (Dual)***


NOTE: HVAC UNIT GREATER THAN 27" & LOCATED IN ANY PEDESTRIAN CIRCULATION AREA REQUIRES PROTECTION FROM PROJECTING HAZARD
0.25
12
HVAC GREATER THAN 27" FROM FG OR FLATWORK SEE 4 / A7.2 AND 5 / A7.2
DOWNSPOUT
2' - 3"
FG
EXT FINISH
CONTROL JOINT (PLASTER OPTION ONLY)

**2** *1/4" = 1'-0"*
***Right Elevation (Mono)***


RIDGE @ 20'
RIDGE @ 20'
0.25
12
12
0.25
HVAC GREATER THAN 27" FROM FG OR FLATWORK SEE 4 / A7.2 AND 5 / A7.2
DOWNSPOUT
DOWNSPOUT
2' - 3"
FG
NOTE: HVAC UNIT GREATER THAN 27" & LOCATED IN ANY PEDESTRIAN CIRCULATION AREA REQUIRES PROTECTION FROM PROJECTING HAZARD
EXT FINISH
CONTROL JOINT (PLASTER OPTION ONLY)

**5** *1/4" = 1'-0"*
***Left Elevation (Dual)***


0.25
12
HVAC GREATER THAN 27" FROM FG OR FLATWORK SEE 4 / A7.2 AND 5 / A7.2
DOWNSPOUT
1' - 7"
FG
NOTE: HVAC UNIT GREATER THAN 27" & LOCATED IN ANY PEDESTRIAN CIRCULATION AREA REQUIRES PROTECTION FROM PROJECTING HAZARD
EXT FINISH
CONTROL JOINT (PLASTER OPTION ONLY)

**1** *1/4" = 1'-0"*
***Left Elevation (Mono)***

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
EXP. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA

02/16/24

RST#22088

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
SIDEWALL ELEVATION

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

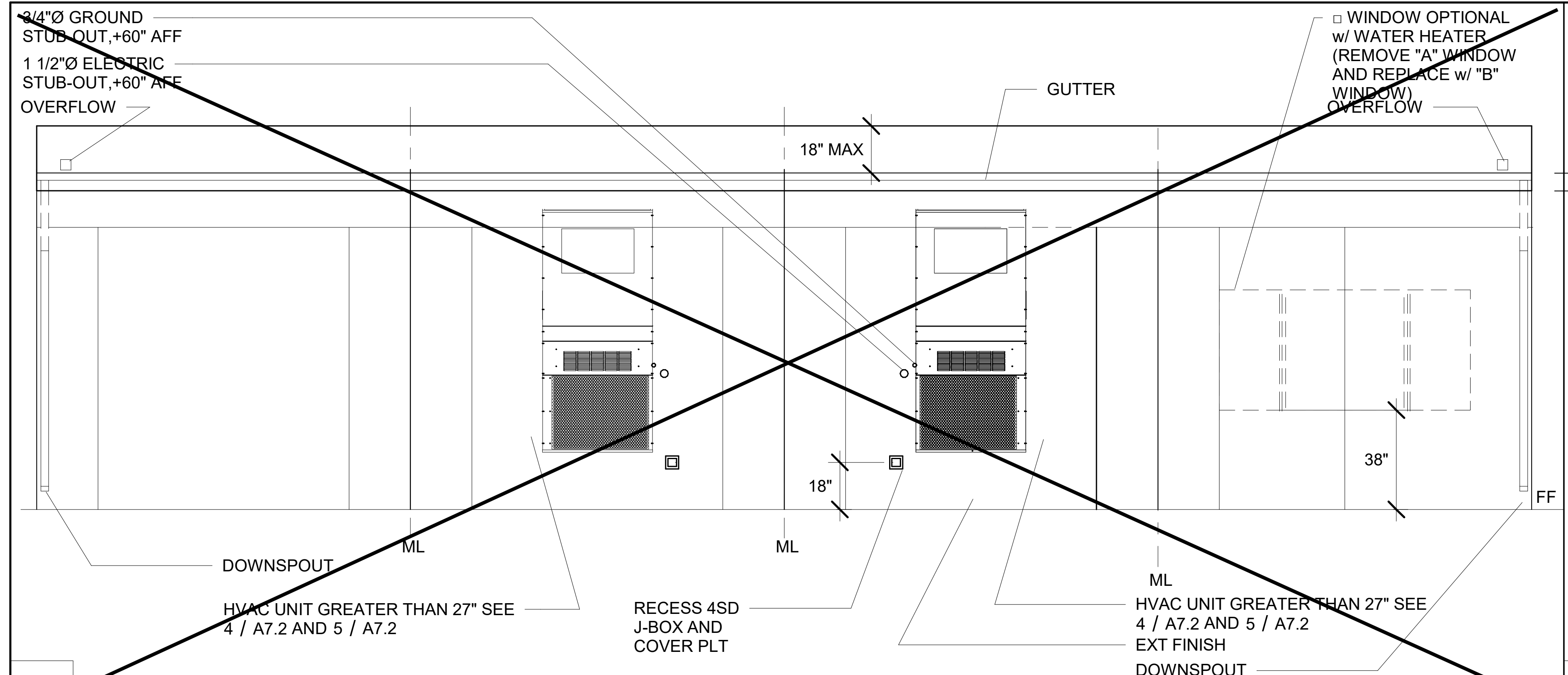
CHECKED BY
RH/RT

DATE

SHEET NO.
A5.0

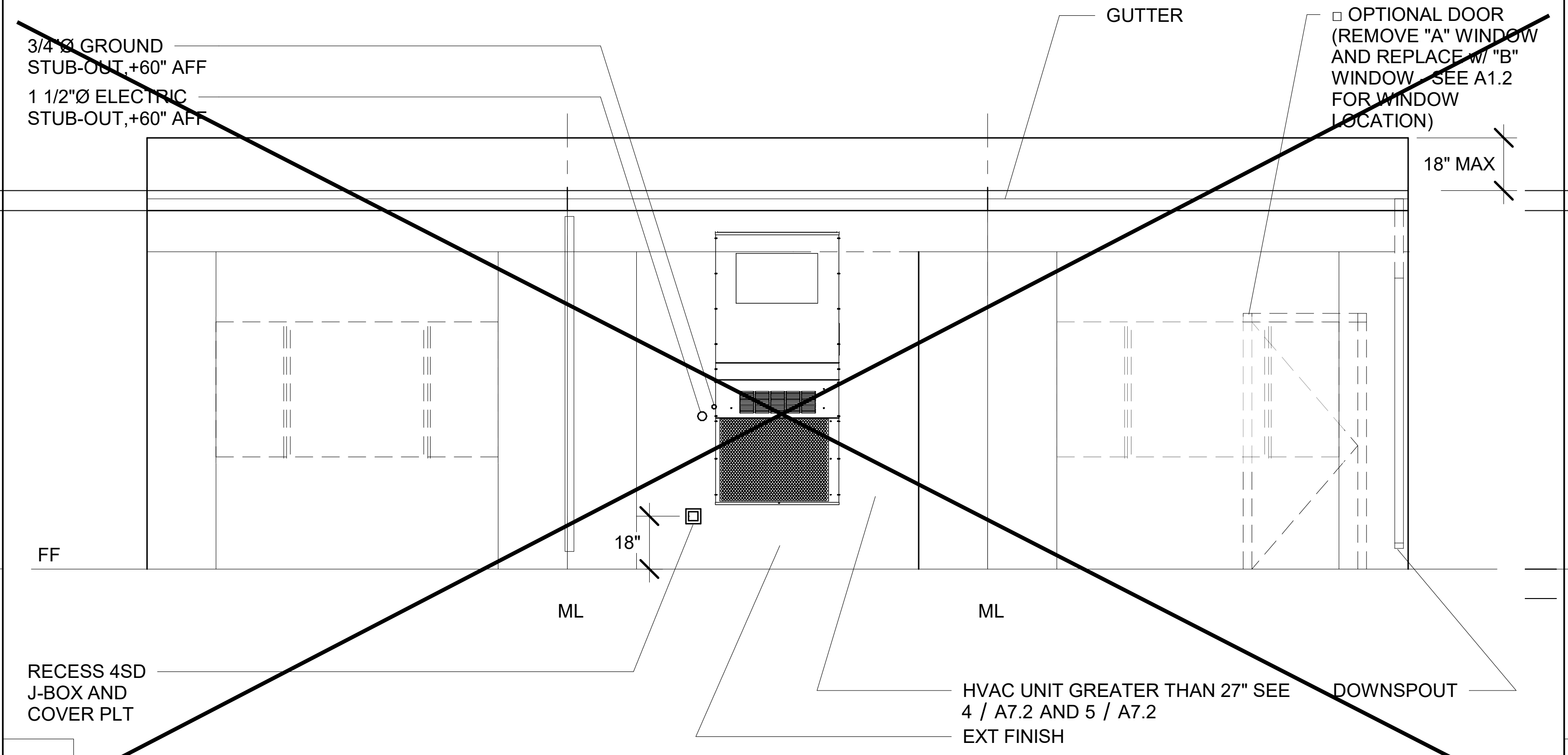
SHEET OF

6/15/2021 11:51:35 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt


3/4"Ø GROUND STUB-OUT,+60" AFF
1 1/2"Ø ELECTRIC STUB-OUT,+60" AFF
OVERFLOW
☐ WINDOW OPTIONAL w/ WATER HEATER (REMOVE "A" WINDOW AND REPLACE w/ "B" WINDOW)
OVERFLOW
GUTTER
18" MAX
38"
18"
FF
ML
ML
ML
DOWNSPOUT
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
RECESS 4SD J-BOX AND COVER PLT
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
EXT FINISH
DOWNSPOUT

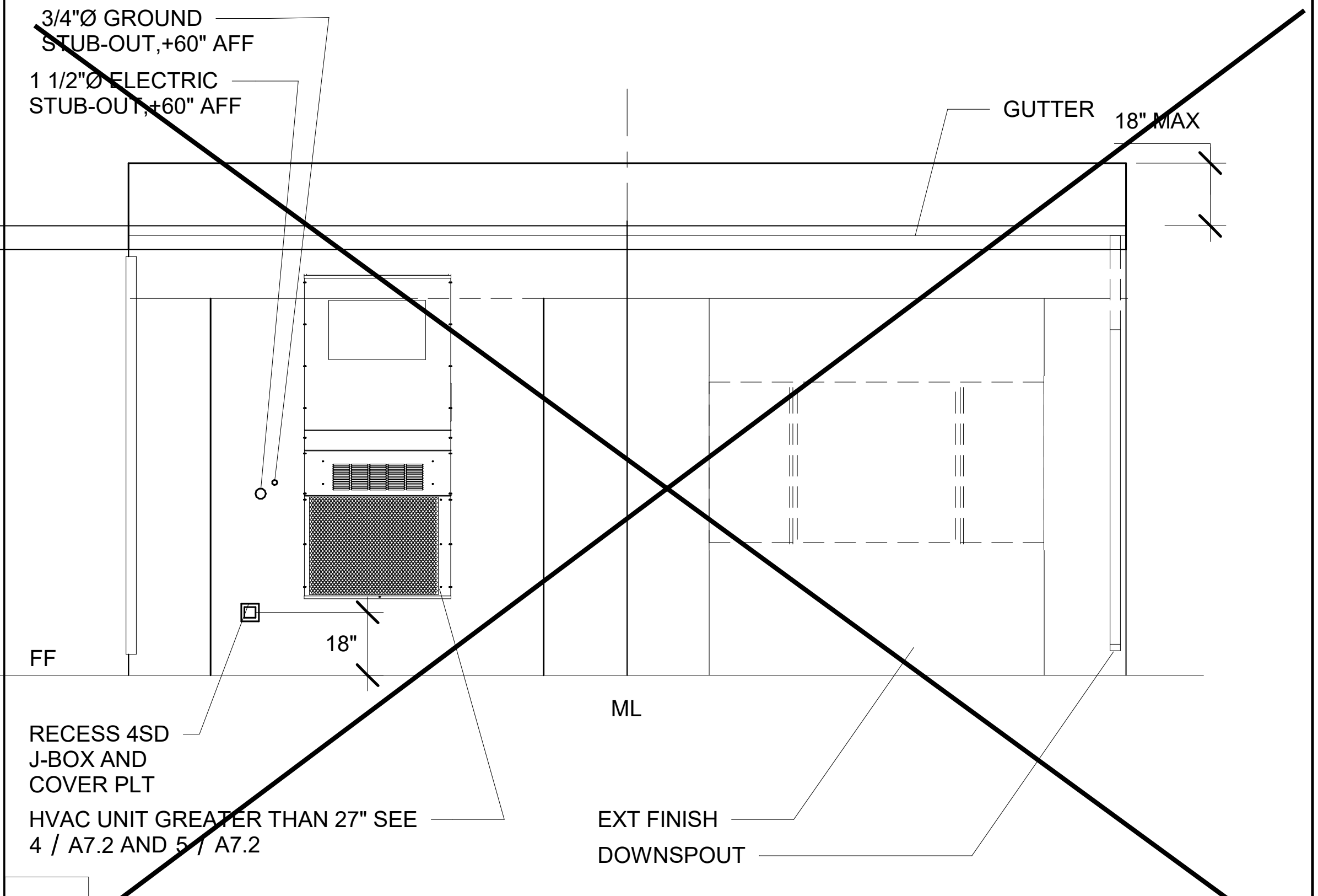
12 *1/4" = 1'-0"*
***48x40 Rear w/ Parapet Elevation (Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


3/4"Ø GROUND STUB-OUT,+60" AFF
1 1/2"Ø ELECTRIC STUB-OUT,+60" AFF
GUTTER
☐ OPTIONAL DOOR (REMOVE "A" WINDOW AND REPLACE w/ "B" WINDOW , SEE A1.2 FOR WINDOW LOCATION)
18" MAX
18"
FF
ML
ML
RECESS 4SD J-BOX AND COVER PLT
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
EXT FINISH
DOWNSPOUT

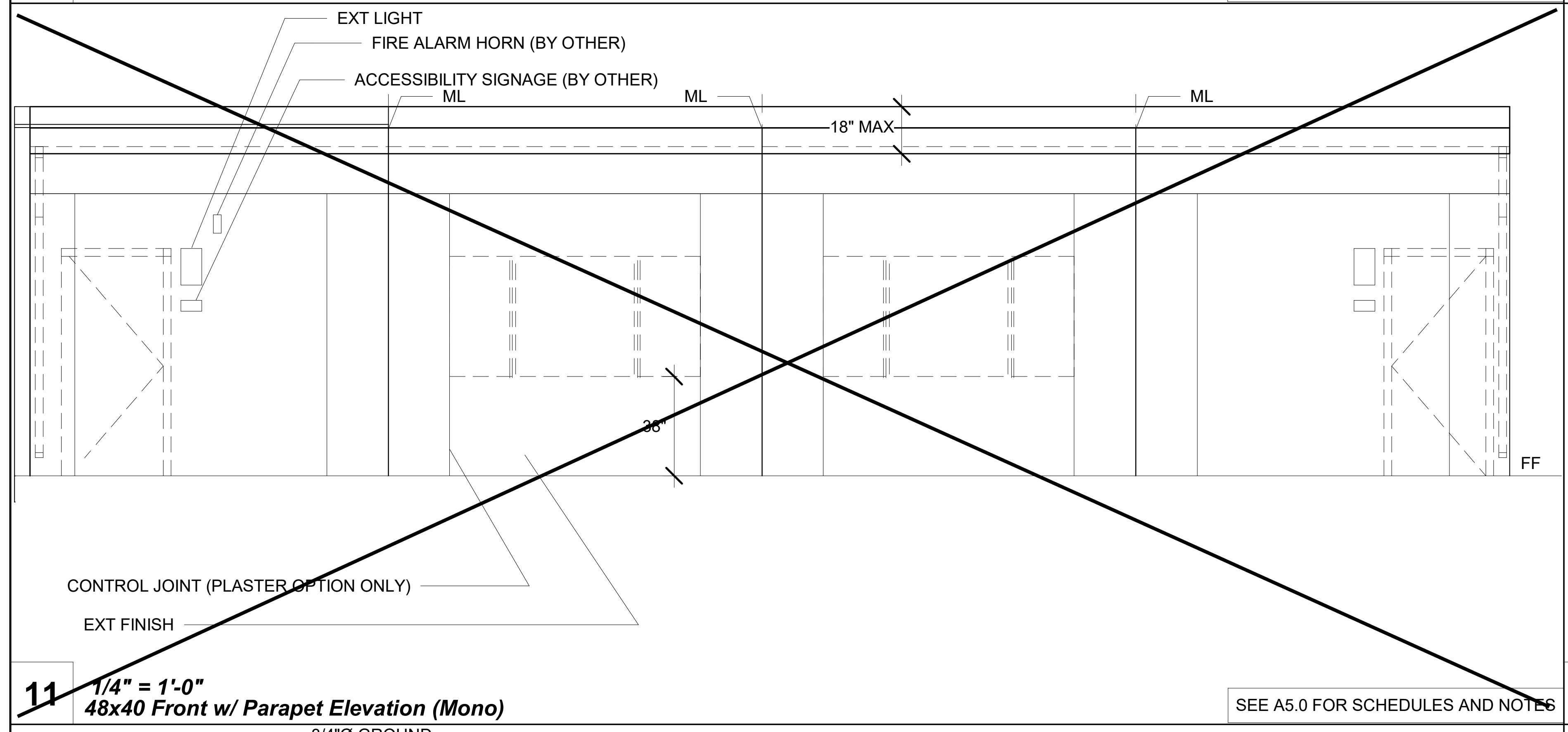
8 *1/4" = 1'-0"*
***36x40 Rear Elevation w/ Parapet (Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


3/4"Ø GROUND STUB-OUT,+60" AFF
1 1/2"Ø ELECTRIC STUB-OUT,+60" AFF
GUTTER
18" MAX
18"
FF
ML
RECESS 4SD J-BOX AND COVER PLT
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
EXT FINISH
DOWNSPOUT

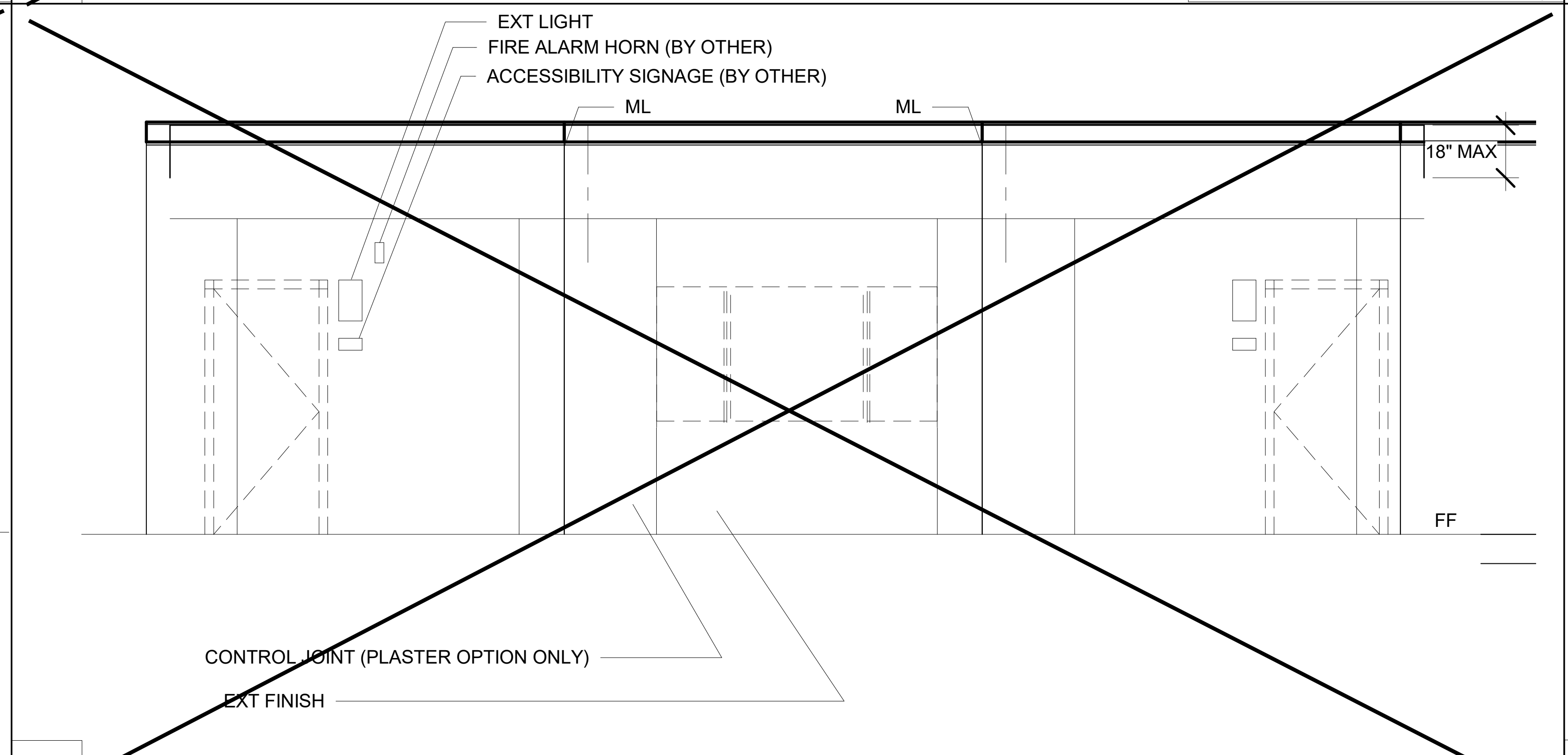
4 *1/4" = 1'-0"*
***24x40 Rear Elevation w/ Parapet (Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


EXT LIGHT
FIRE ALARM HORN (BY OTHER)
ACCESSIBILITY SIGNAGE (BY OTHER)
ML
ML
ML
18" MAX
38"
FF
CONTROL JOINT (PLASTER OPTION ONLY)
EXT FINISH

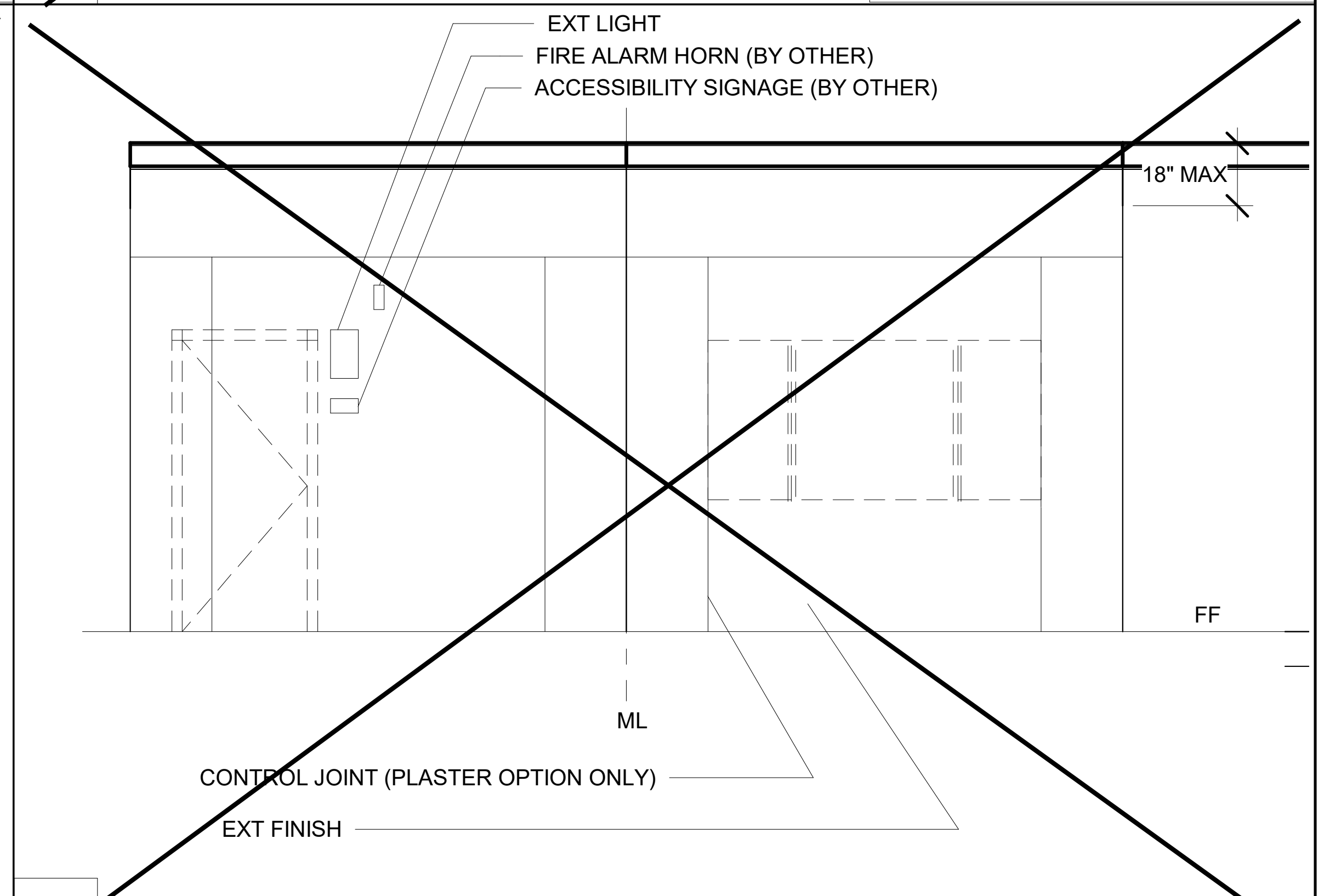
11 *1/4" = 1'-0"*
***48x40 Front w/ Parapet Elevation (Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


EXT LIGHT
FIRE ALARM HORN (BY OTHER)
ACCESSIBILITY SIGNAGE (BY OTHER)
ML
ML
18" MAX
FF
CONTROL JOINT (PLASTER OPTION ONLY)
EXT FINISH

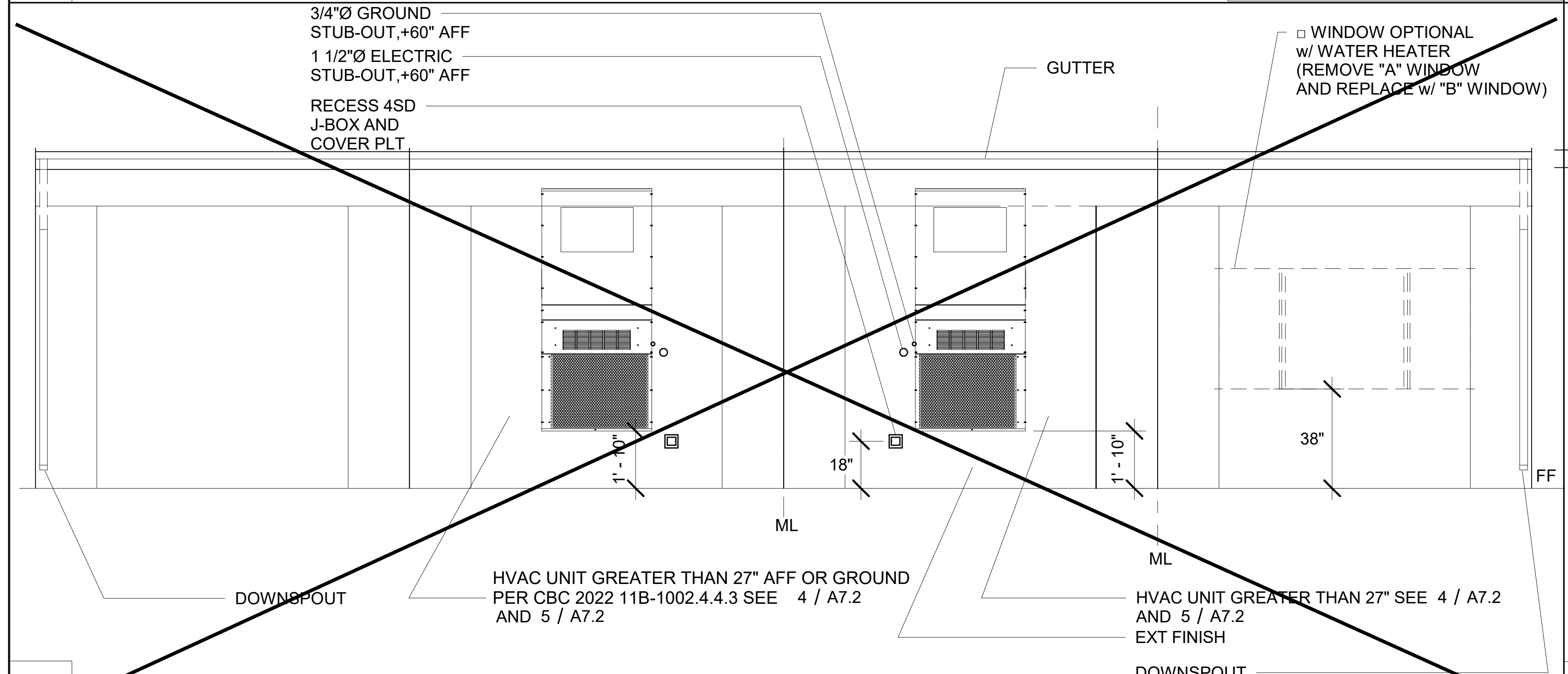
7 *1/4" = 1'-0"*
***36x40 Front Elevation w/ Parapet (Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


EXT LIGHT
FIRE ALARM HORN (BY OTHER)
ACCESSIBILITY SIGNAGE (BY OTHER)
18" MAX
FF
ML
CONTROL JOINT (PLASTER OPTION ONLY)
EXT FINISH

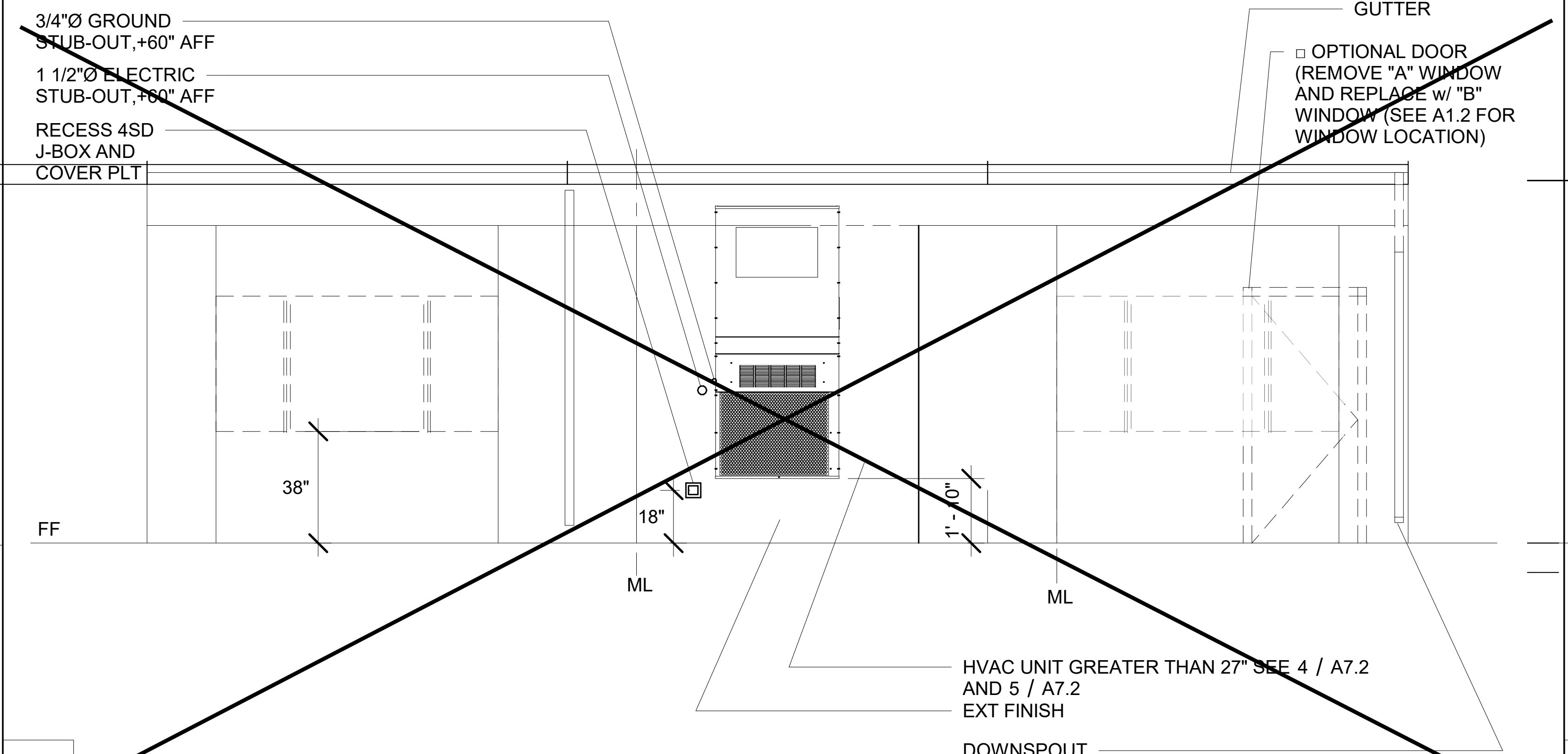
3 *1/4" = 1'-0"*
***24x40 Front Elevation w/ Parapet (Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


3/4"Ø GROUND STUB-OUT,+60" AFF
1 1/2"Ø ELECTRIC STUB-OUT,+60" AFF
RECESS 4SD J-BOX AND COVER PLT
GUTTER
☐ WINDOW OPTIONAL w/ WATER HEATER (REMOVE "A" WINDOW AND REPLACE w/ "B" WINDOW)
1' - 10"
18"
1' - 10"
38"
FF
ML
ML
DOWNSPOUT
HVAC UNIT GREATER THAN 27" AFF OR GROUND PER CBC 2022 11B-1002.4.4.3 SEE 4 / A7.2 AND 5 / A7.2
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
EXT FINISH
DOWNSPOUT

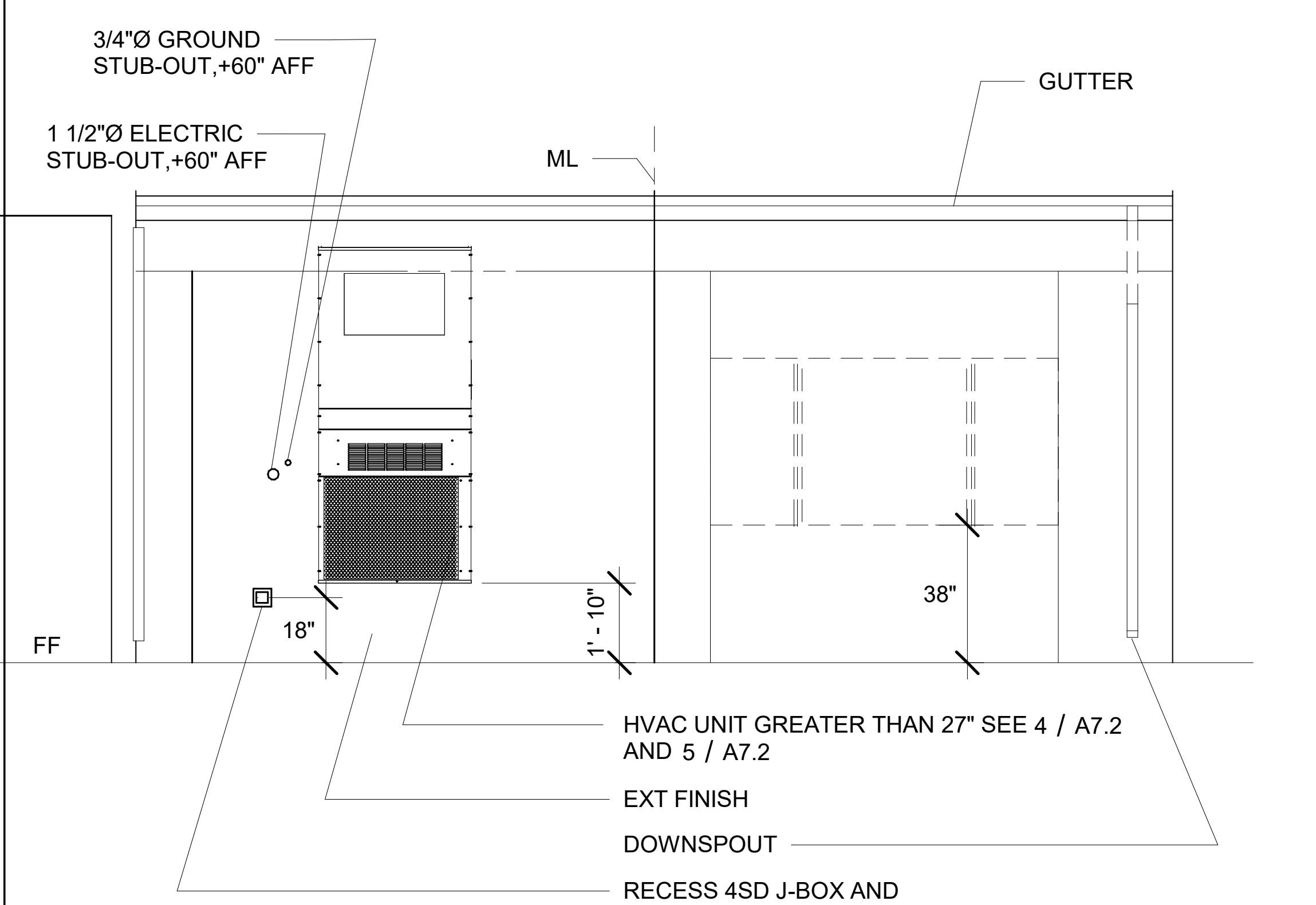
10 *1/4" = 1'-0"*
***48x40 Rear Elevation (Dual/Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


3/4"Ø GROUND STUB-OUT,+60" AFF
1 1/2"Ø ELECTRIC STUB-OUT,+60" AFF
RECESS 4SD J-BOX AND COVER PLT
GUTTER
☐ OPTIONAL DOOR (REMOVE "A" WINDOW AND REPLACE w/ "B" WINDOW (SEE A1.2 FOR WINDOW LOCATION)
38"
18"
1' - 10"
FF
ML
ML
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
EXT FINISH
DOWNSPOUT

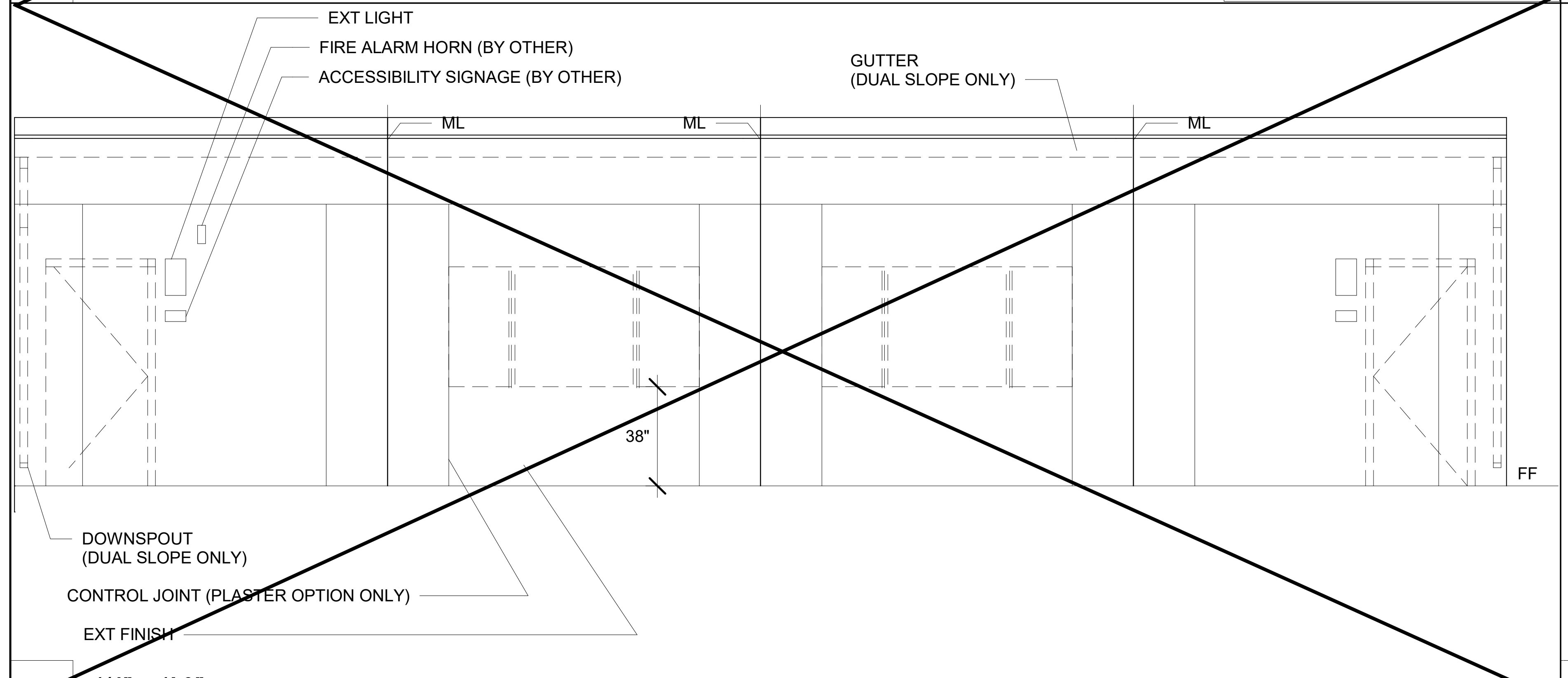
6 *1/4" = 1'-0"*
***36x40 Rear Elevation (Dual/Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


3/4"Ø GROUND STUB-OUT,+60" AFF
1 1/2"Ø ELECTRIC STUB-OUT,+60" AFF
ML
GUTTER
18"
1' - 10"
38"
FF
HVAC UNIT GREATER THAN 27" SEE 4 / A7.2 AND 5 / A7.2
EXT FINISH
DOWNSPOUT
RECESS 4SD J-BOX AND COVER PLT

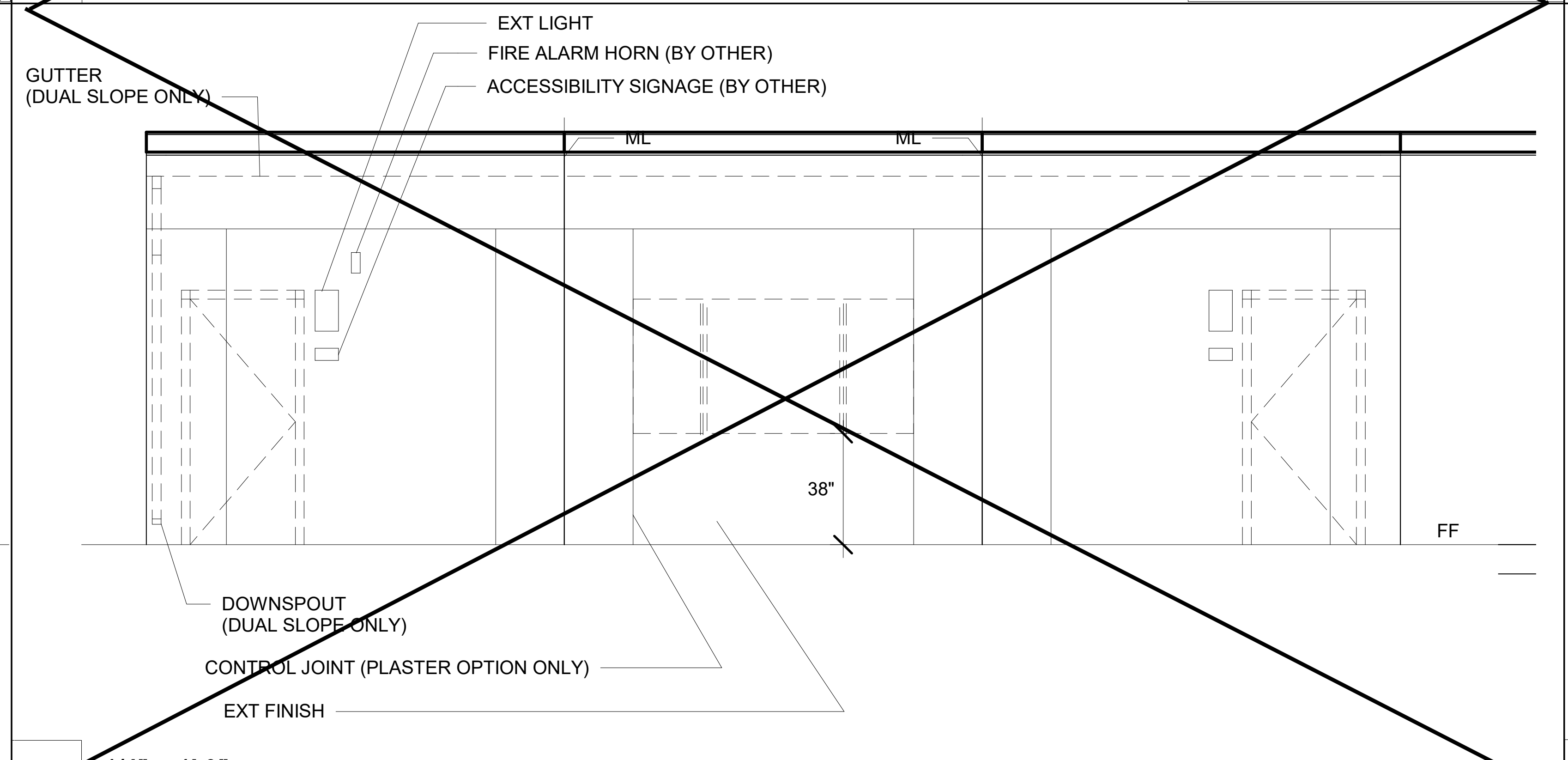
2 *1/4" = 1'-0"*
***24x40 Rear Elevation (Dual/Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


EXT LIGHT
FIRE ALARM HORN (BY OTHER)
ACCESSIBILITY SIGNAGE (BY OTHER)
GUTTER (DUAL SLOPE ONLY)
ML
ML
ML
38"
FF
DOWNSPOUT (DUAL SLOPE ONLY)
CONTROL JOINT (PLASTER OPTION ONLY)
EXT FINISH

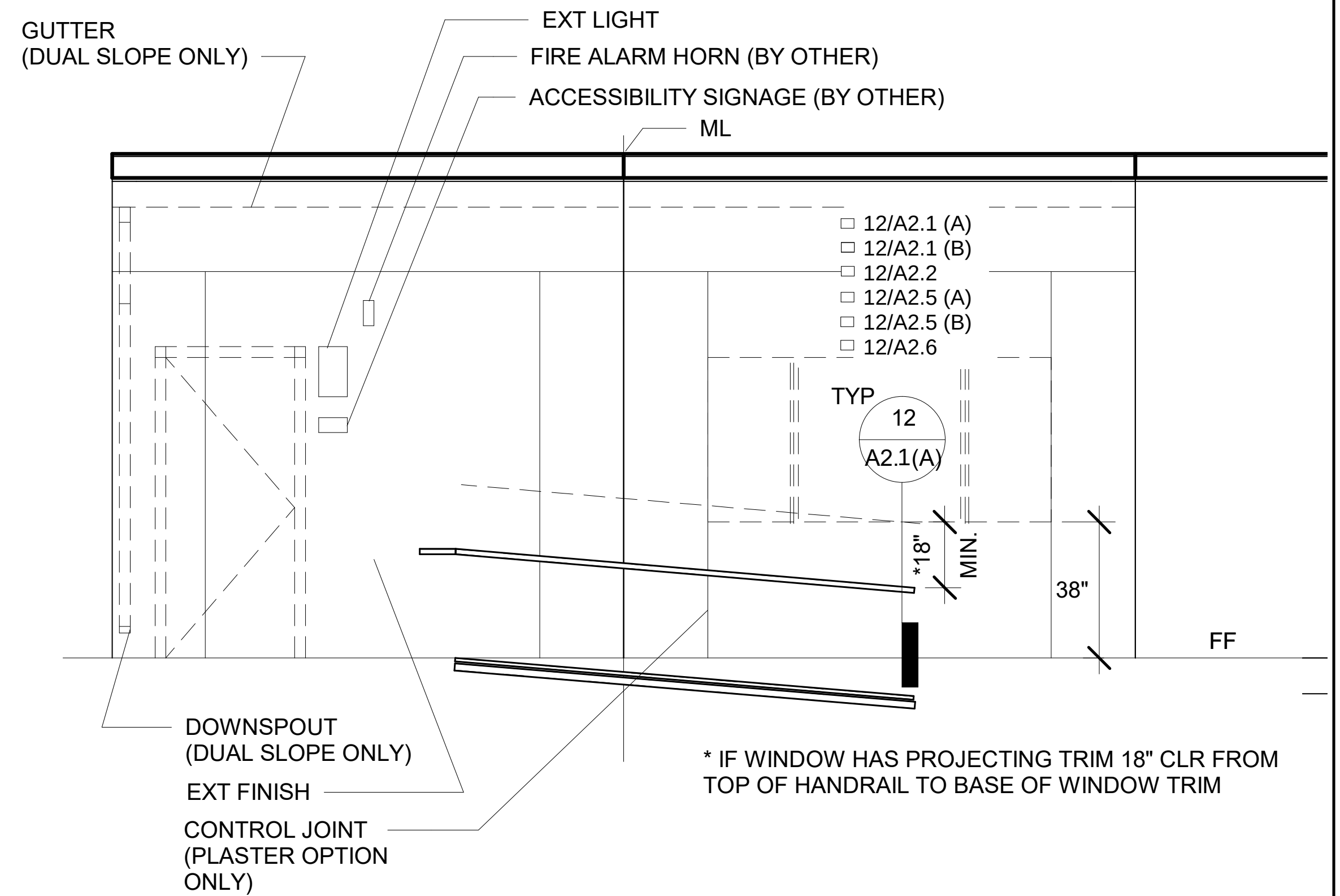
9 *1/4" = 1'-0"*
***48x40 Front Elevation (Dual/Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES


GUTTER (DUAL SLOPE ONLY)
EXT LIGHT
FIRE ALARM HORN (BY OTHER)
ACCESSIBILITY SIGNAGE (BY OTHER)
ML
ML
38"
FF
DOWNSPOUT (DUAL SLOPE ONLY)
CONTROL JOINT (PLASTER OPTION ONLY)
EXT FINISH

5 *1/4" = 1'-0"*
***36x40 Front Elevation (Dual/Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES



* IF WINDOW HAS PROJECTING TRIM 18" CLR FROM TOP OF HANDRAIL TO BASE OF WINDOW TRIM

1 *1/4" = 1'-0"*
***24x40 Front Elevation (Dual/Mono)***

SEE A5.0 FOR SCHEDULES AND NOTES

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
ENDWALL
ELEVATIONS

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A5.1

SHEET OF

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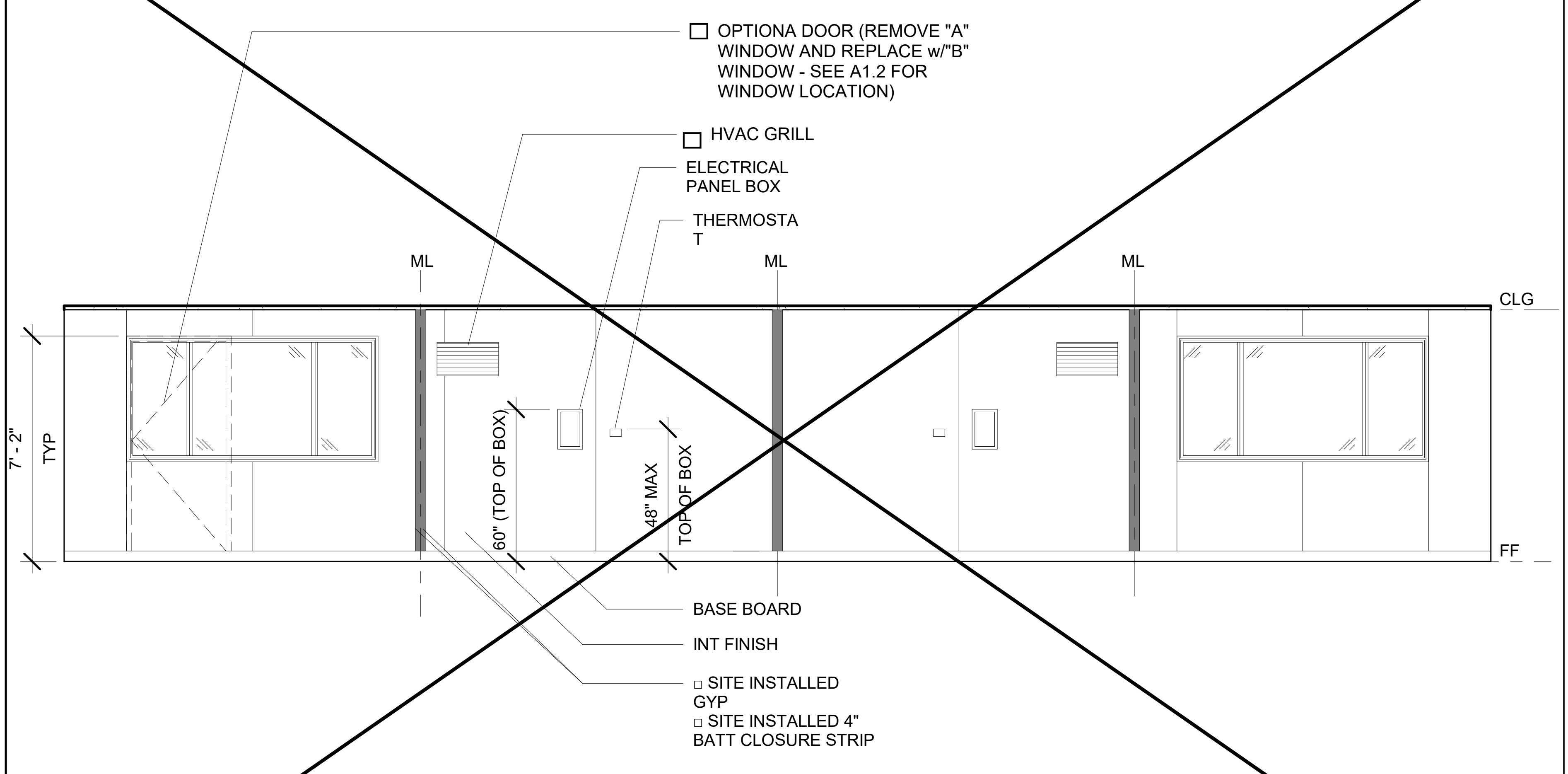
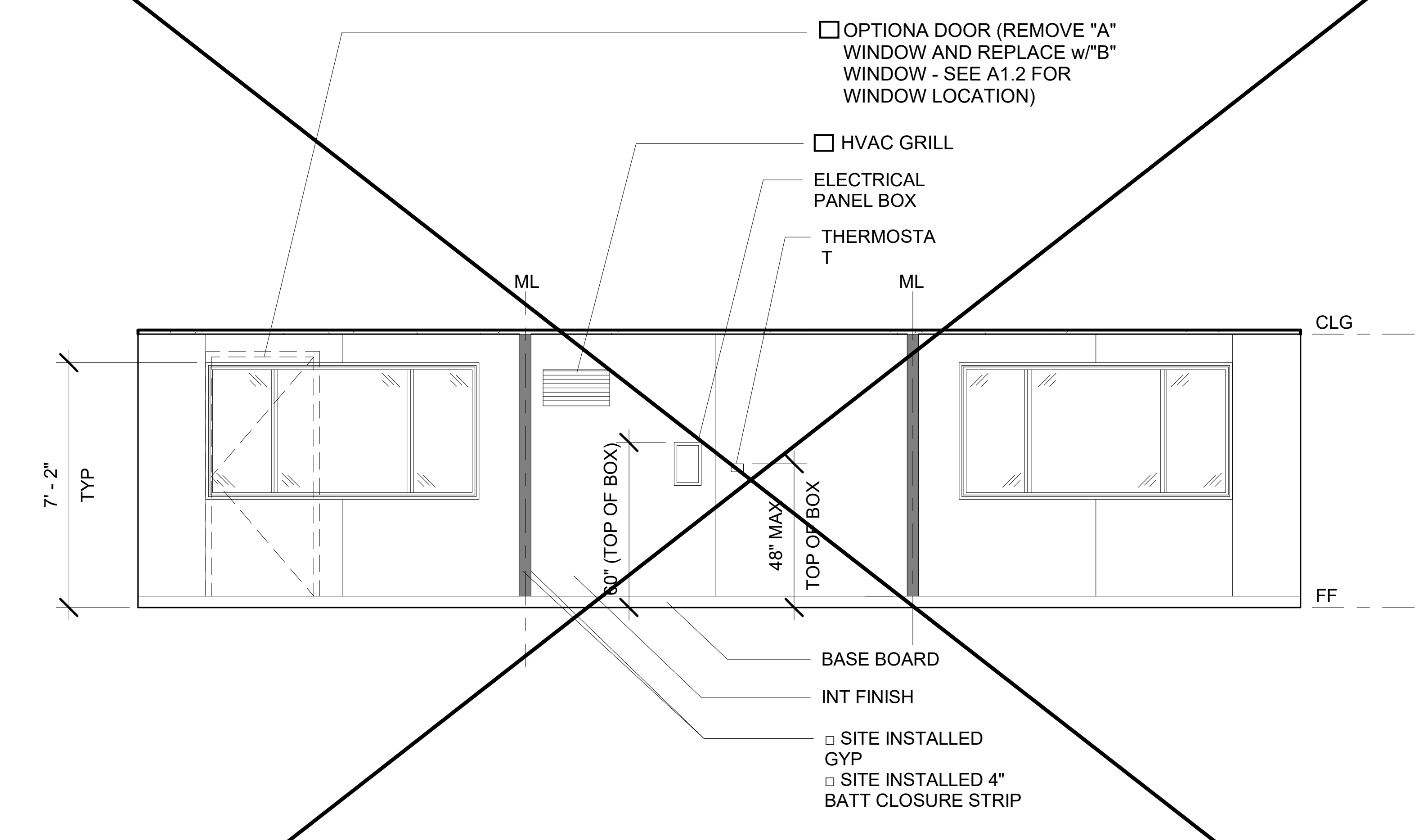
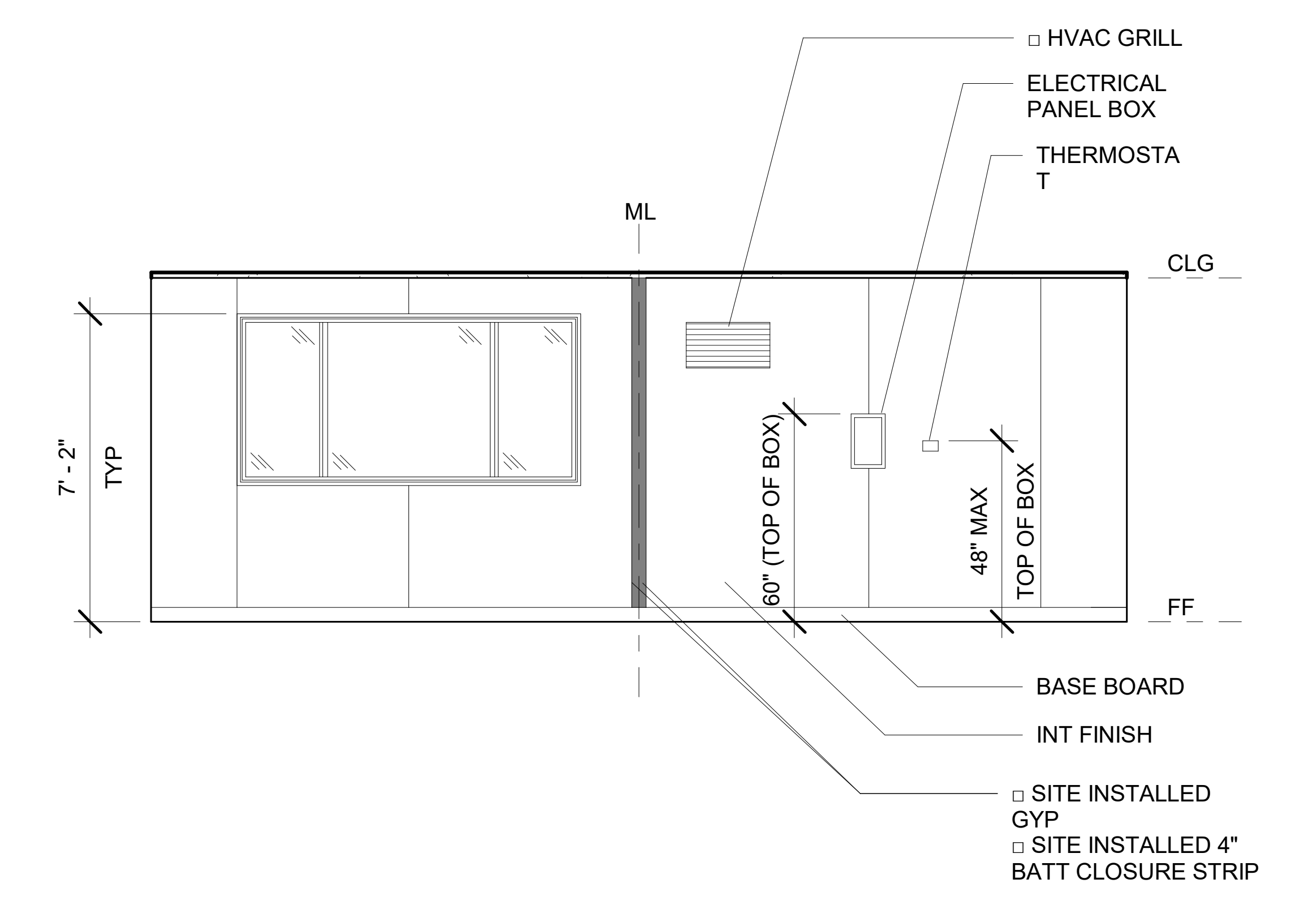


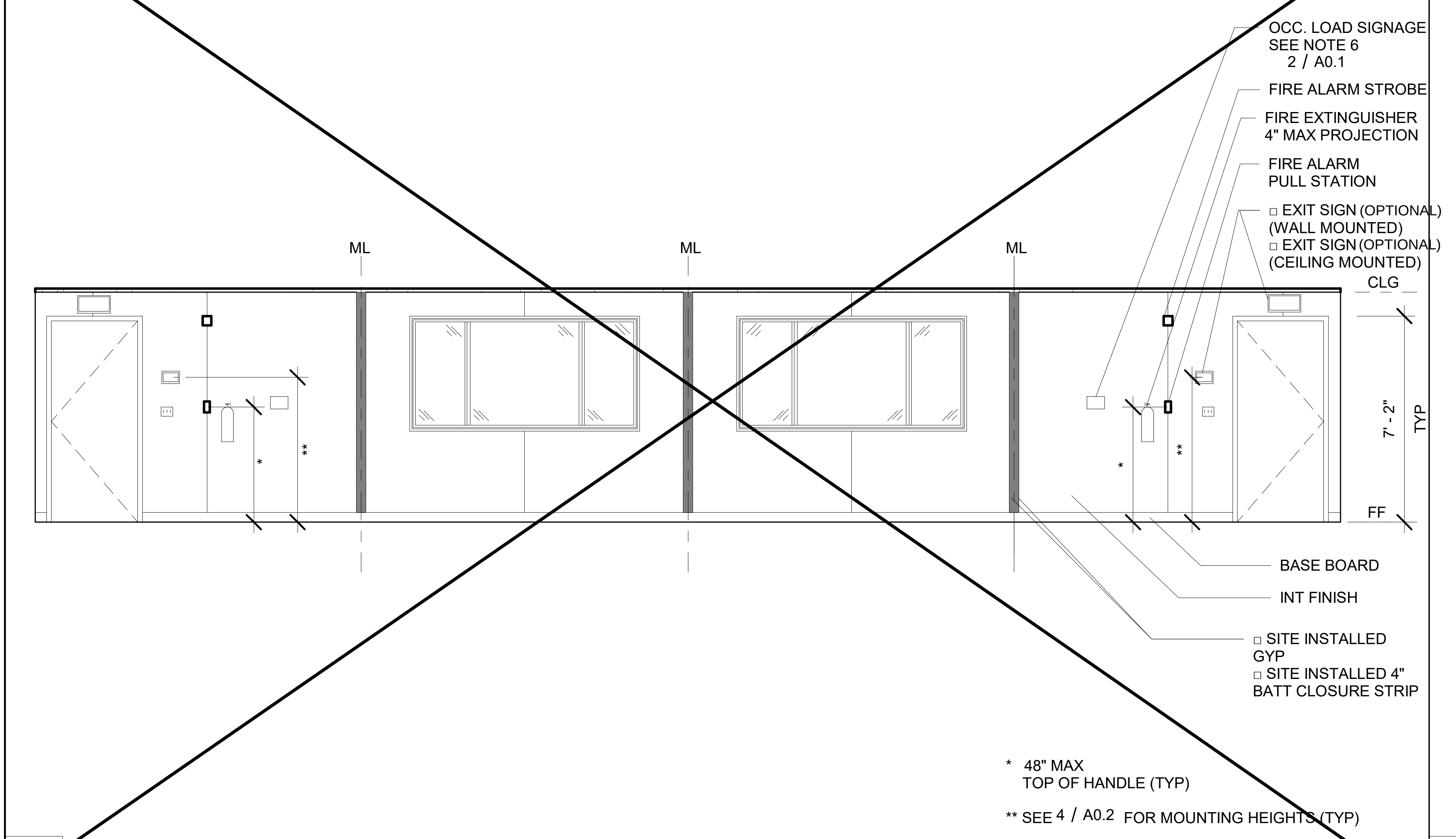
7 1/4" = 1'-0"
48x40 Rear Interior Elevation



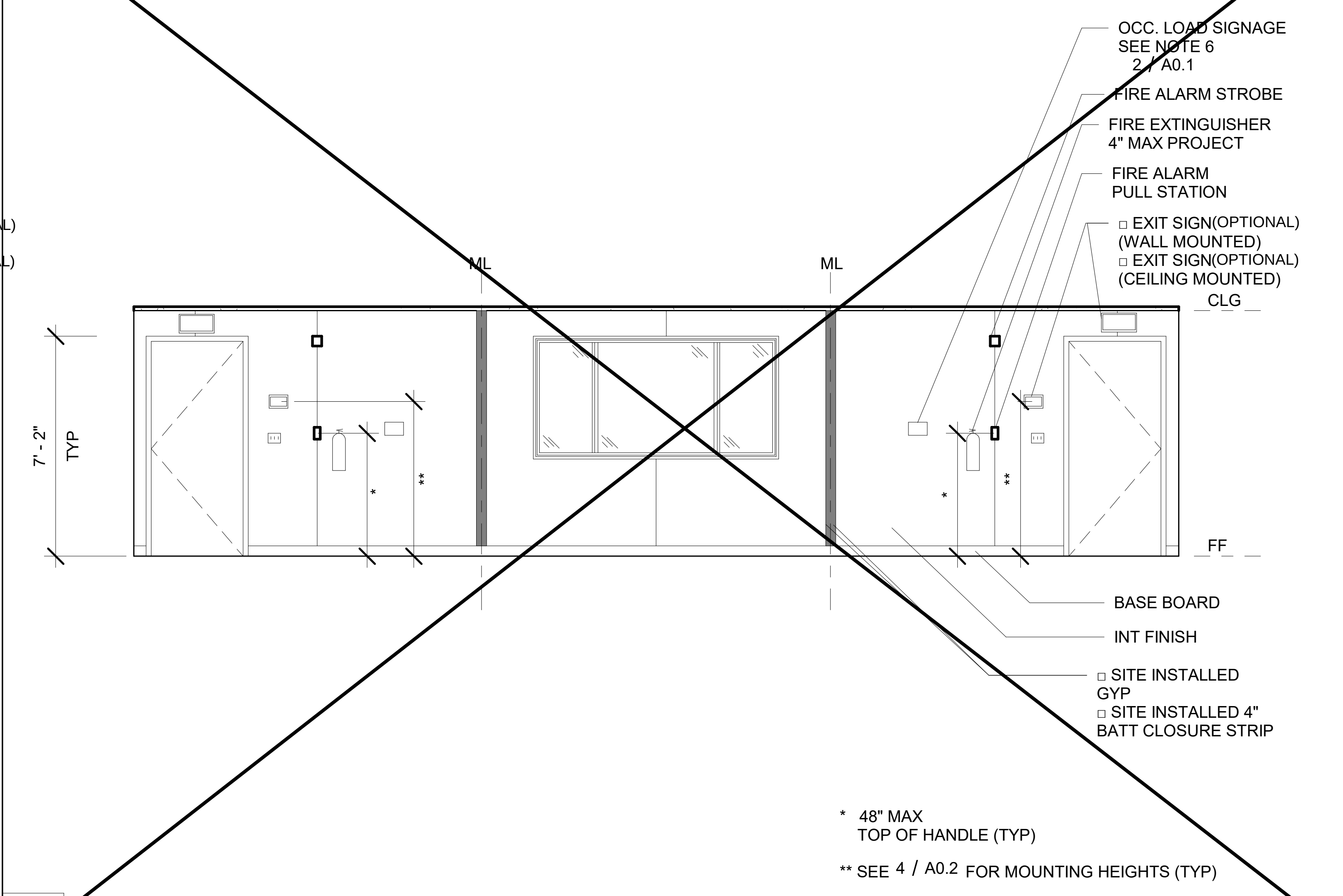
6 1/4" = 1'-0"
36x40 Rear Interior Elevation



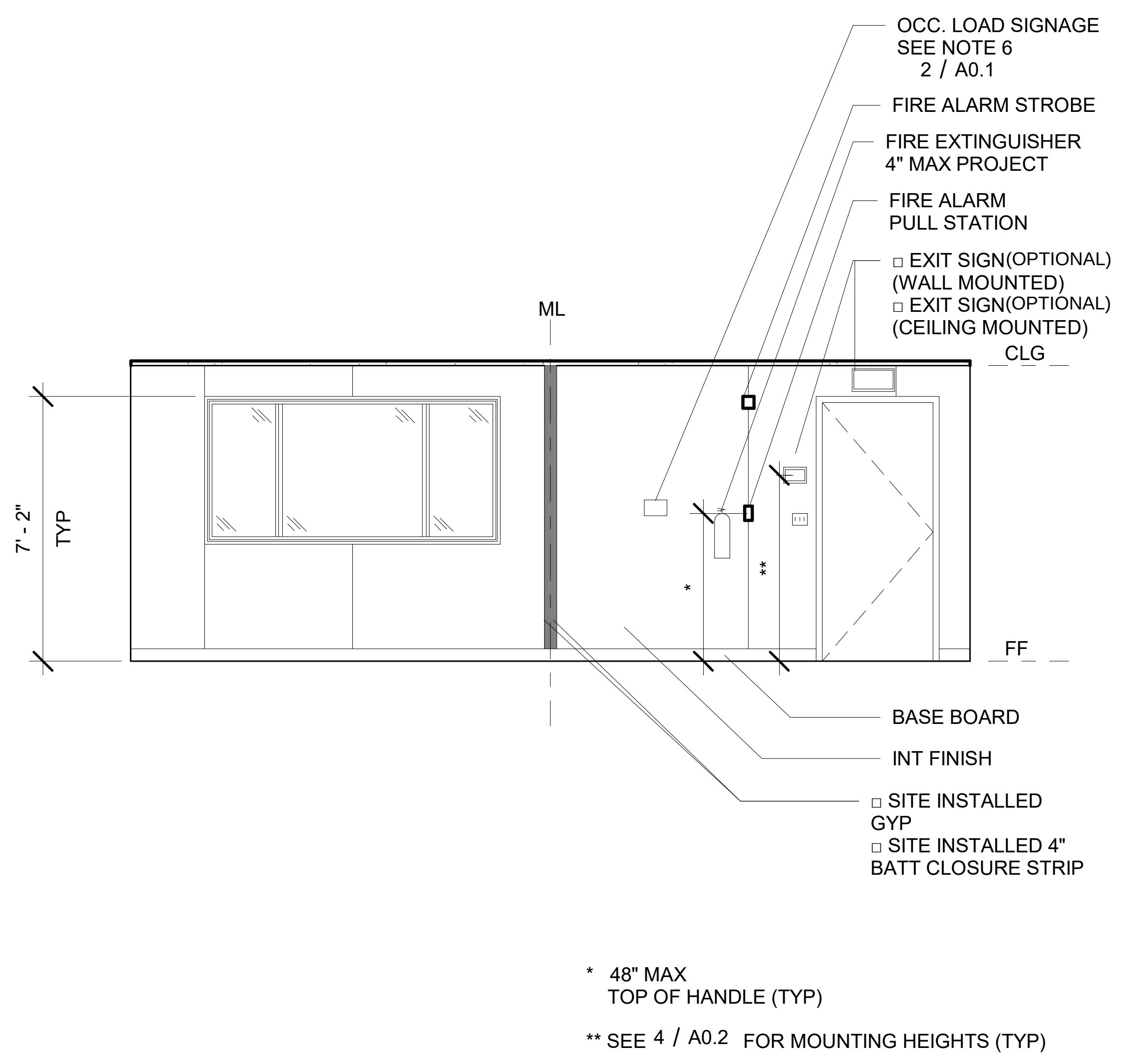
4 1/4" = 1'-0"
24x40 Rear Interior Elevation


OCC. LOAD SIGNAGE SEE NOTE 6 2 / A0.1
FIRE ALARM STROBE
FIRE EXTINGUISHER 4" MAX PROJECTION
FIRE ALARM PULL STATION
☐ EXIT SIGN (OPTIONAL) (WALL MOUNTED)
☐ EXIT SIGN(OPTIONAL) (CEILING MOUNTED)
ML
ML
ML
CLG
FF
7' - 2"
TYP
BASE BOARD
INT FINISH
☐ SITE INSTALLED GYP
☐ SITE INSTALLED 4" BATT CLOSURE STRIP
* 48" MAX TOP OF HANDLE (TYP)
** SEE 4 / A0.2 FOR MOUNTING HEIGHTS (TYP)

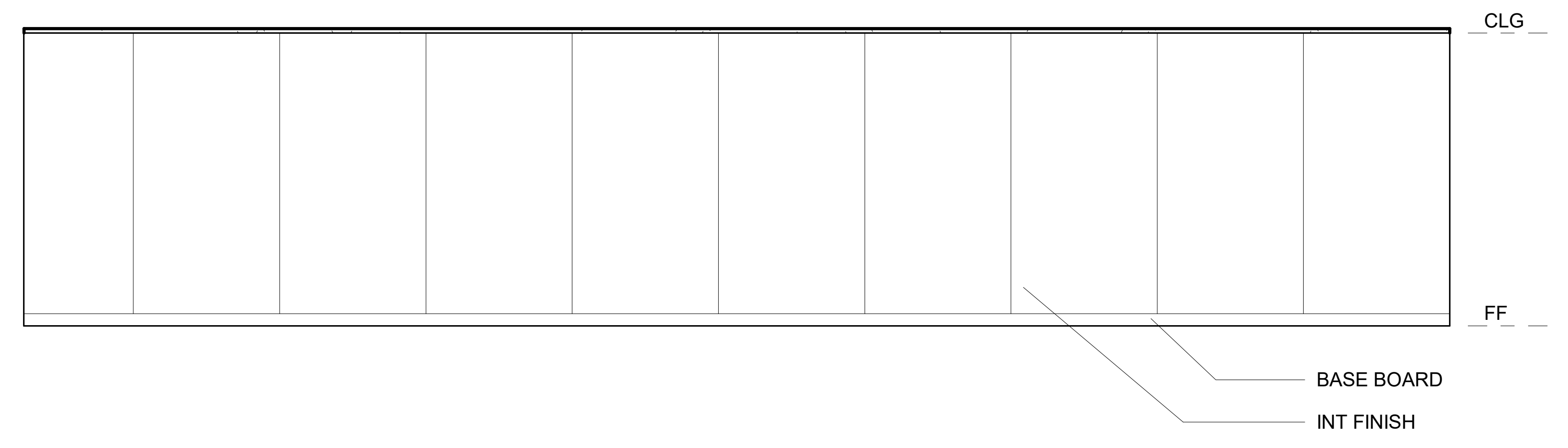
8 1/4" = 1'-0"
48x40 Front Interior Elevation


OCC. LOAD SIGNAGE SEE NOTE 6 2 / A0.1
FIRE ALARM STROBE
FIRE EXTINGUISHER 4" MAX PROJECT
FIRE ALARM PULL STATION
☐ EXIT SIGN(OPTIONAL) (WALL MOUNTED)
☐ EXIT SIGN(OPTIONAL) (CEILING MOUNTED)
ML
ML
CLG
FF
7' - 2"
TYP
BASE BOARD
INT FINISH
☐ SITE INSTALLED GYP
☐ SITE INSTALLED 4" BATT CLOSURE STRIP
* 48" MAX TOP OF HANDLE (TYP)
** SEE 4 / A0.2 FOR MOUNTING HEIGHTS (TYP)

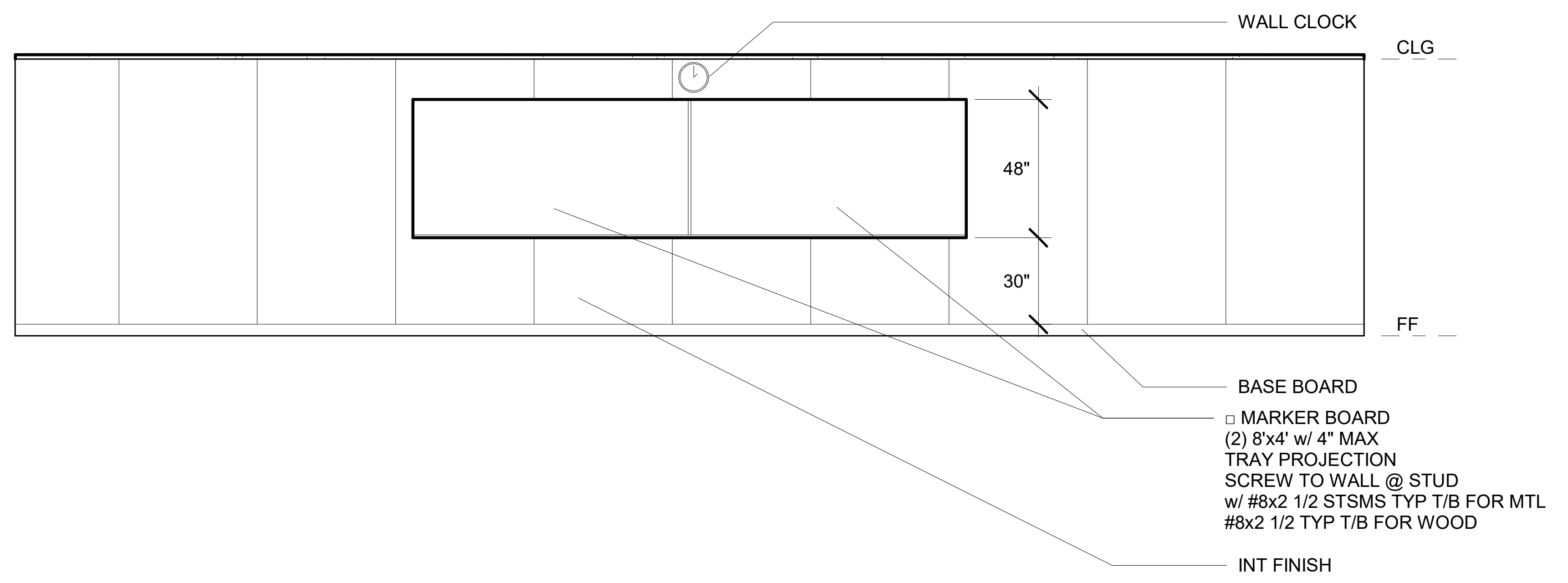
5 1/4" = 1'-0"
36x40 Front Interior Elevation


OCC. LOAD SIGNAGE SEE NOTE 6 2 / A0.1
FIRE ALARM STROBE
FIRE EXTINGUISHER 4" MAX PROJECT
FIRE ALARM PULL STATION
☐ EXIT SIGN(OPTIONAL) (WALL MOUNTED)
☐ EXIT SIGN(OPTIONAL) (CEILING MOUNTED)
ML
CLG
FF
7' - 2"
TYP
BASE BOARD
INT FINISH
☐ SITE INSTALLED GYP
☐ SITE INSTALLED 4" BATT CLOSURE STRIP
* 48" MAX TOP OF HANDLE (TYP)
** SEE 4 / A0.2 FOR MOUNTING HEIGHTS (TYP)

3 1/4" = 1'-0"
24x40 Front Interior Elevation



1 1/4" = 1'-0"
Interior Elevation (Left)


WALL CLOCK
CLG
FF
48"
30"
BASE BOARD
☐ MARKER BOARD (2) 8'x4' w/ 4" MAX TRAY PROJECTION SCREW TO WALL @ STUD w/ #8x2 1/2 STSMS TYP T/B FOR MTL #8x2 1/2 TYP T/B FOR WOOD
INT FINISH

2 1/4" = 1'-0"
Interior Elevation (Right)

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6/15/2021 11:51:46 PM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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CLIENT

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1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE

PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE

INTERIOR
ELEVATIONS

PROJECT NUMBER
22088

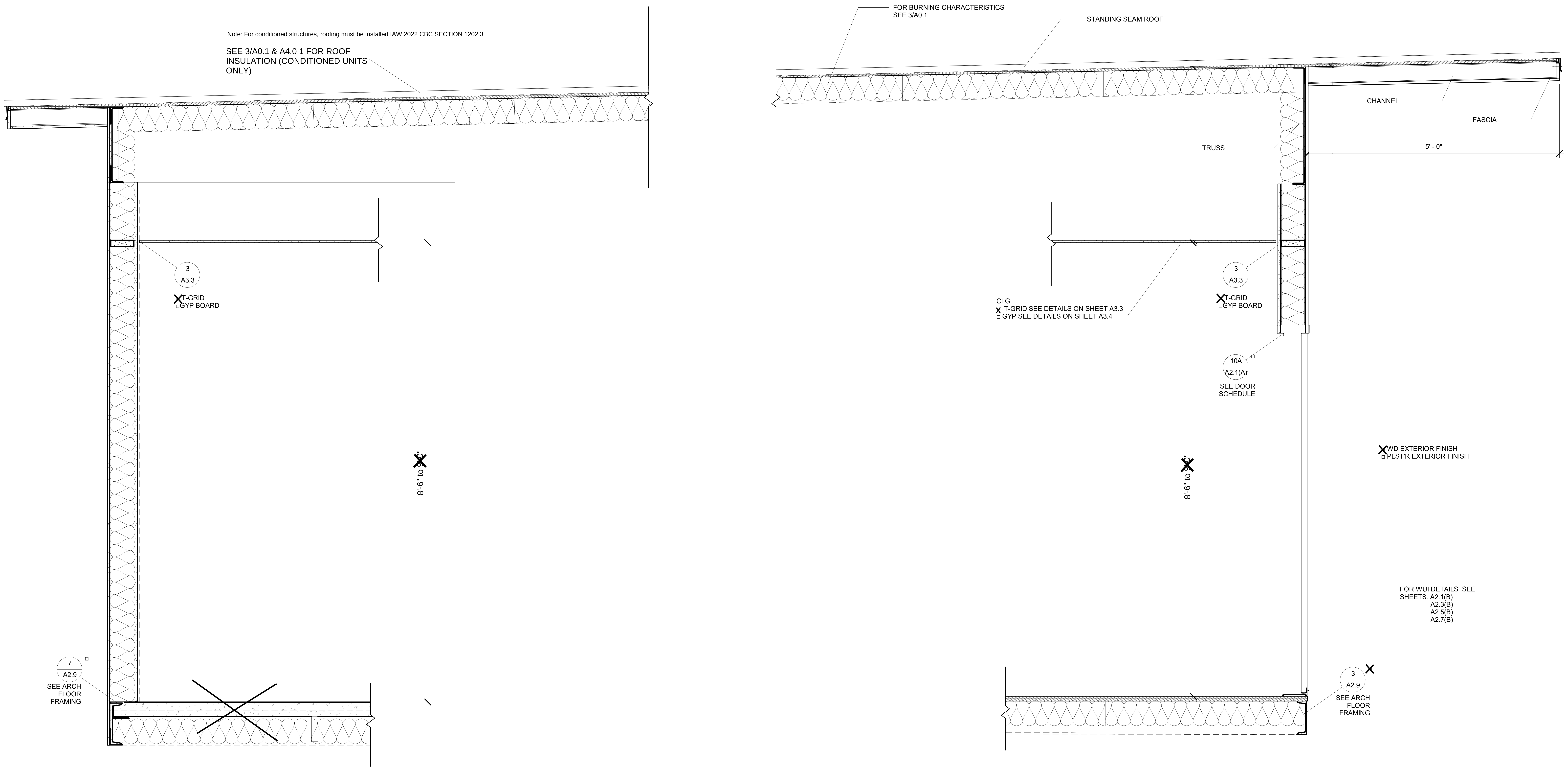
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A5.2

SHEET OF


Note: For conditioned structures, roofing must be installed IAW 2022 CBC SECTION 1202.3
SEE 3/A0.1 & A4.0.1 FOR ROOF INSULATION (CONDITIONED UNITS ONLY)
FOR BURNING CHARACTERISTICS SEE 3/A0.1
STANDING SEAM ROOF
CHANNEL
FASCIA
TRUSS
5' - 0"
3
A3.3
T-GRID
☐GYP BOARD
CLG
T-GRID SEE DETAILS ON SHEET A3.3
☐ GYP SEE DETAILS ON SHEET A3.4
3
A3.3
T-GRID
☐GYP BOARD
10A
A2.1(A)
SEE DOOR SCHEDULE
8'-6" to 9'-0"
8'-6" to 9'-0"
WD EXTERIOR FINISH
☐PLST'R EXTERIOR FINISH
FOR WUI DETAILS SEE SHEETS: A2.1(B) A2.3(B) A2.5(B) A2.7(B)
7
A2.9
SEE ARCH FLOOR FRAMING
3
A2.9
SEE ARCH FLOOR FRAMING

**1** *1" = 1'-0"*
***Section (EPDM)2***

6/15/2021 11:51:47 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

PROJECT SPECIFIC STATE AGENCY APPROVAL

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SS ☑ FLS ☑ ACS ☑
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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA

Manny D. Frisch

RST#22088

02/16/24

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
SECTION -
STANDING SEAM
(MONO)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

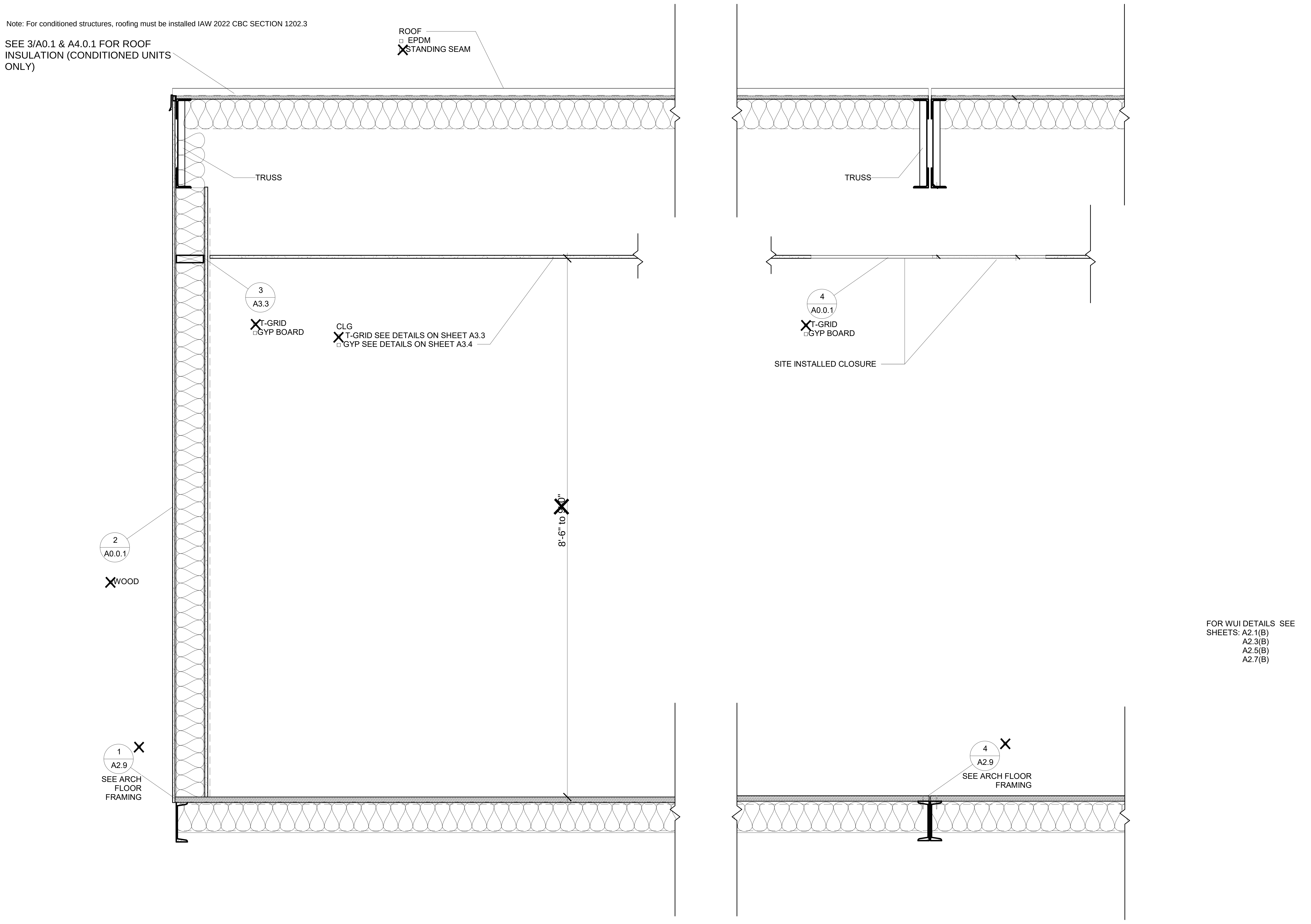
CHECKED BY
RH/RT

DATE

SHEET NO.
A6.0

SHEET OF

Note: For conditioned structures, roofing must be installed IAW 2022 CBC SECTION 1202.3



FOR WUI DETAILS SEE
SHEETS: A2.1(B)
A2.3(B)
A2.5(B)
A2.7(B)

**1** *1" = 1'-0"*
***Latitudinal Section***

6/15/2021 11:51:52 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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PROFESSIONAL STAMP

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02/16/24
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ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
SECTION

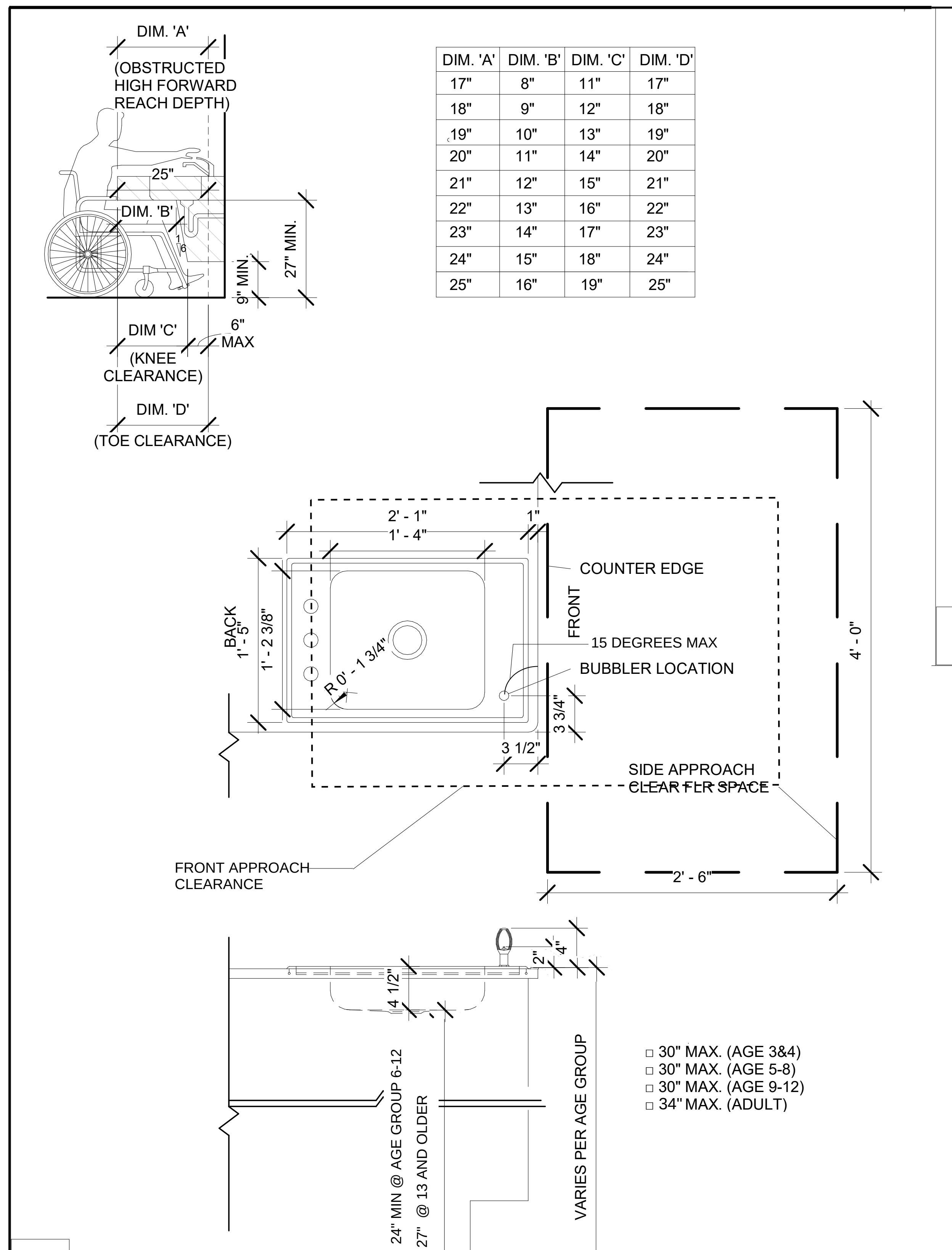
PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

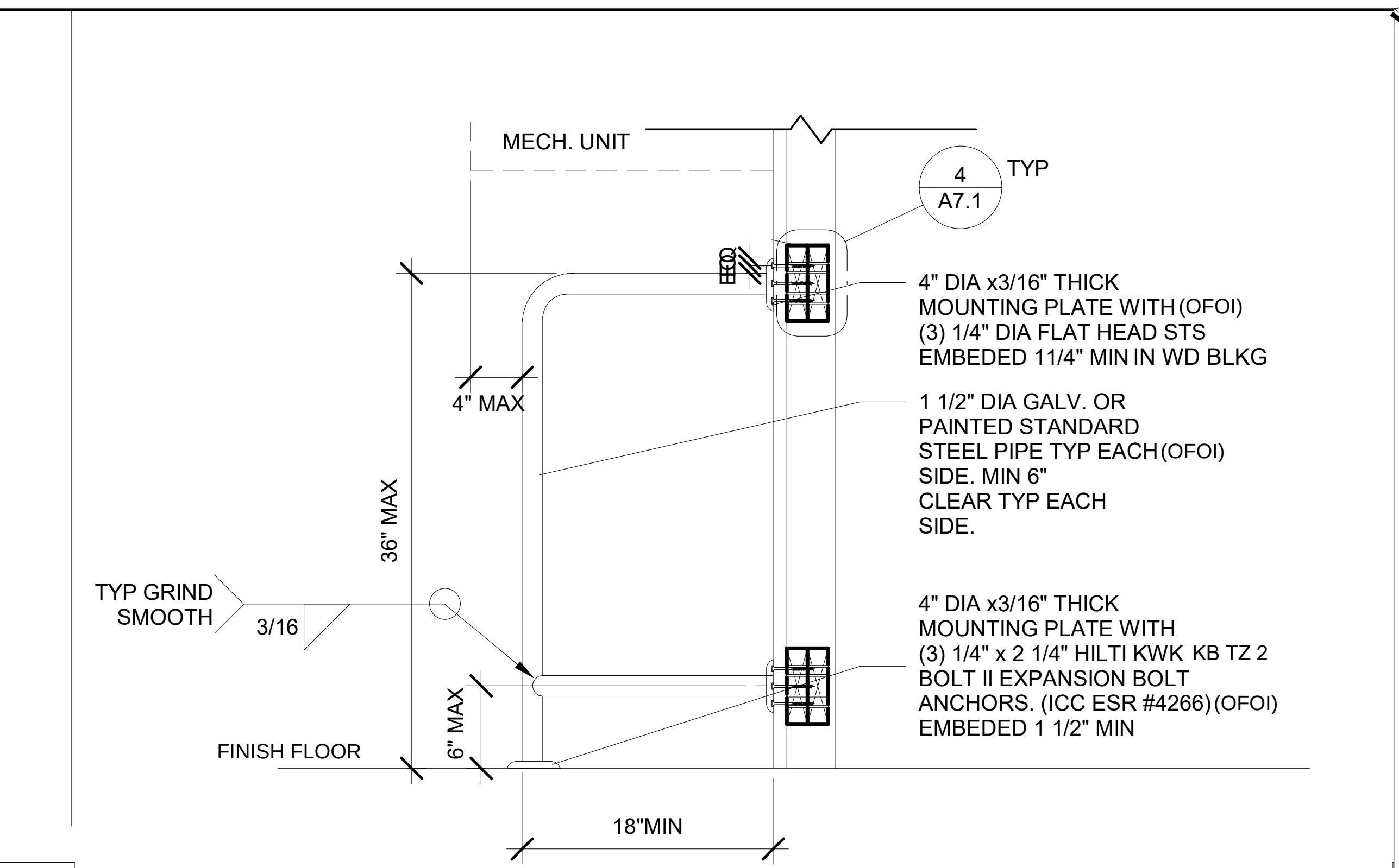
DATE

SHEET NO.
A6.2



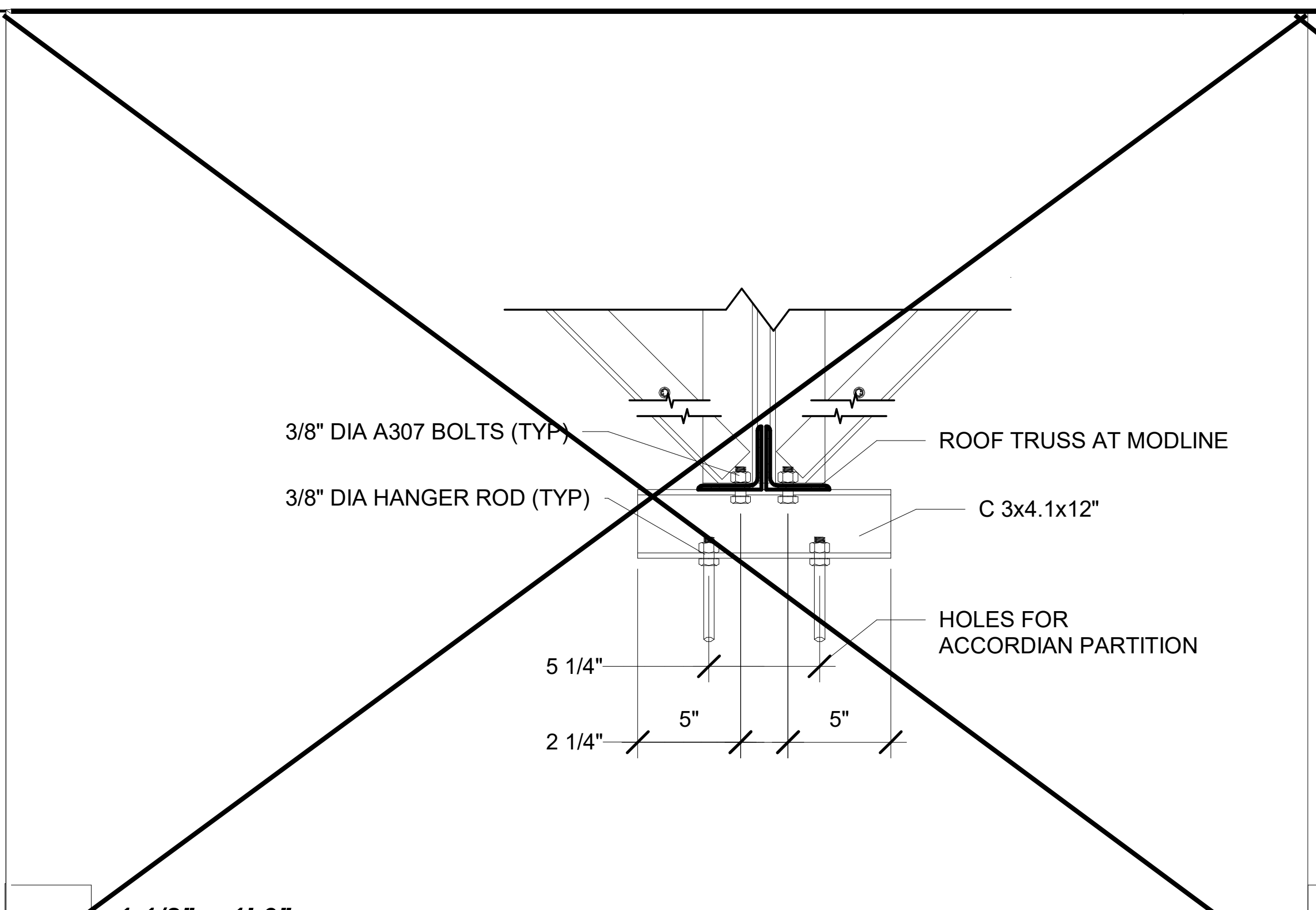
| DIM. 'A' | DIM. 'B' | DIM. 'C' | DIM. 'D' |
|---|---|---|---|
| 17" | 8" | 11" | 17" |
| 18" | 9" | 12" | 18" |
| 19" | 10" | 13" | 19" |
| 20" | 11" | 14" | 20" |
| 21" | 12" | 15" | 21" |
| 22" | 13" | 16" | 22" |
| 23" | 14" | 17" | 23" |
| 24" | 15" | 18" | 24" |
| 25" | 16" | 19" | 25" |

10 1" = 1'-0"
**CLASSROOM SINK W/ BUBBLER**



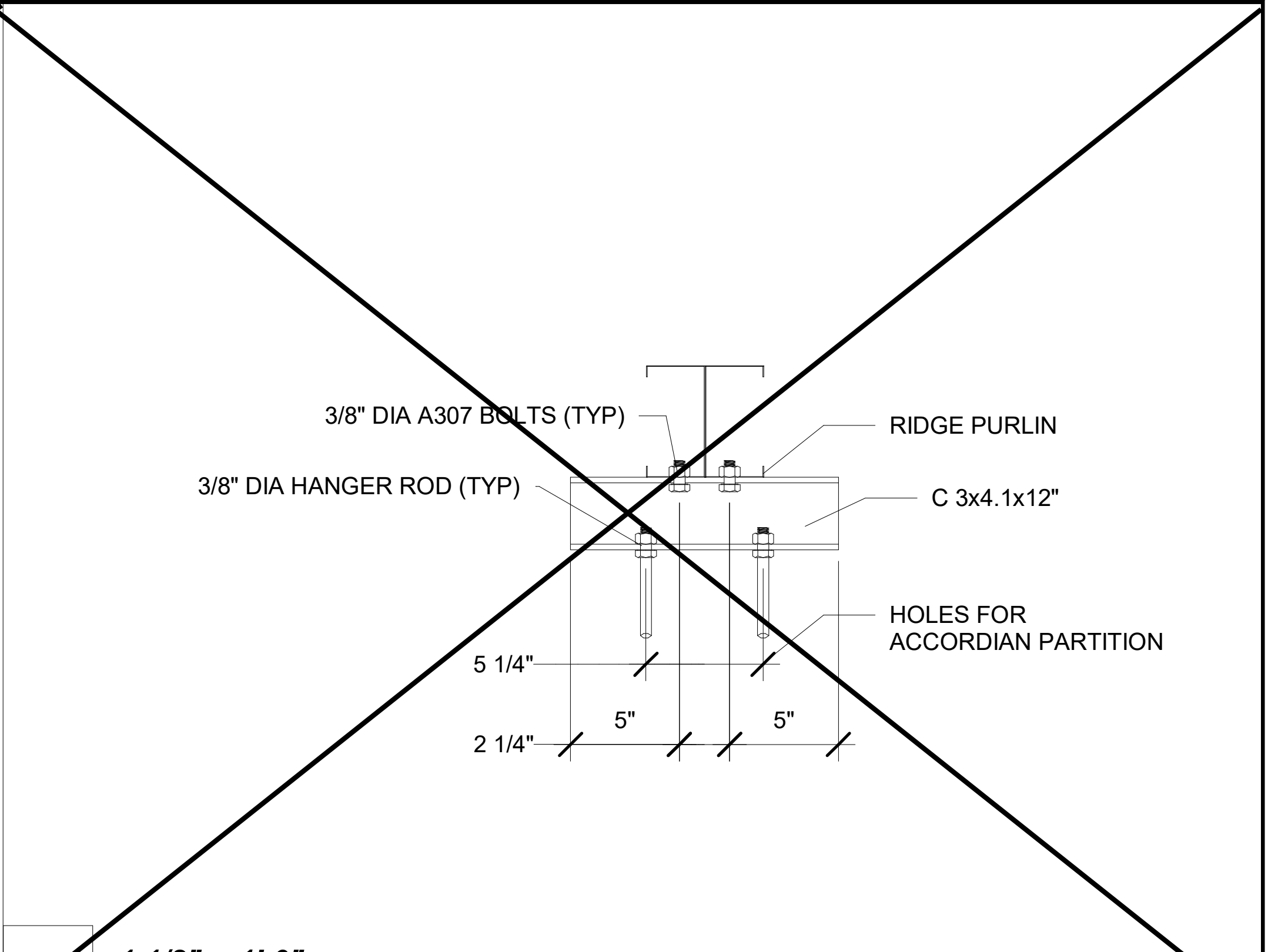
MECH. UNIT
4 A7.1
TYP
4" DIA x3/16" THICK MOUNTING PLATE WITH (OFOI) (3) 1/4" DIA FLAT HEAD STS EMBEDED 11/4" MIN IN WD BLKG
1 1/2" DIA GALV. OR PAINTED STANDARD STEEL PIPE TYP EACH (OFOI) SIDE. MIN 6" CLEAR TYP EACH SIDE.
4" MAX
36" MAX
TYP GRIND SMOOTH
3/16
4" DIA x3/16" THICK MOUNTING PLATE WITH (3) 1/4" x 2 1/4" HILTI KWK KB TZ 2 BOLT II EXPANSION BOLT ANCHORS. (ICC ESR #4266) (OFOI) EMBEDED 1 1/2" MIN
6" MAX
FINISH FLOOR
18"MIN

5 1" = 1'-0"
**HVAC BARRIER at wood stud**



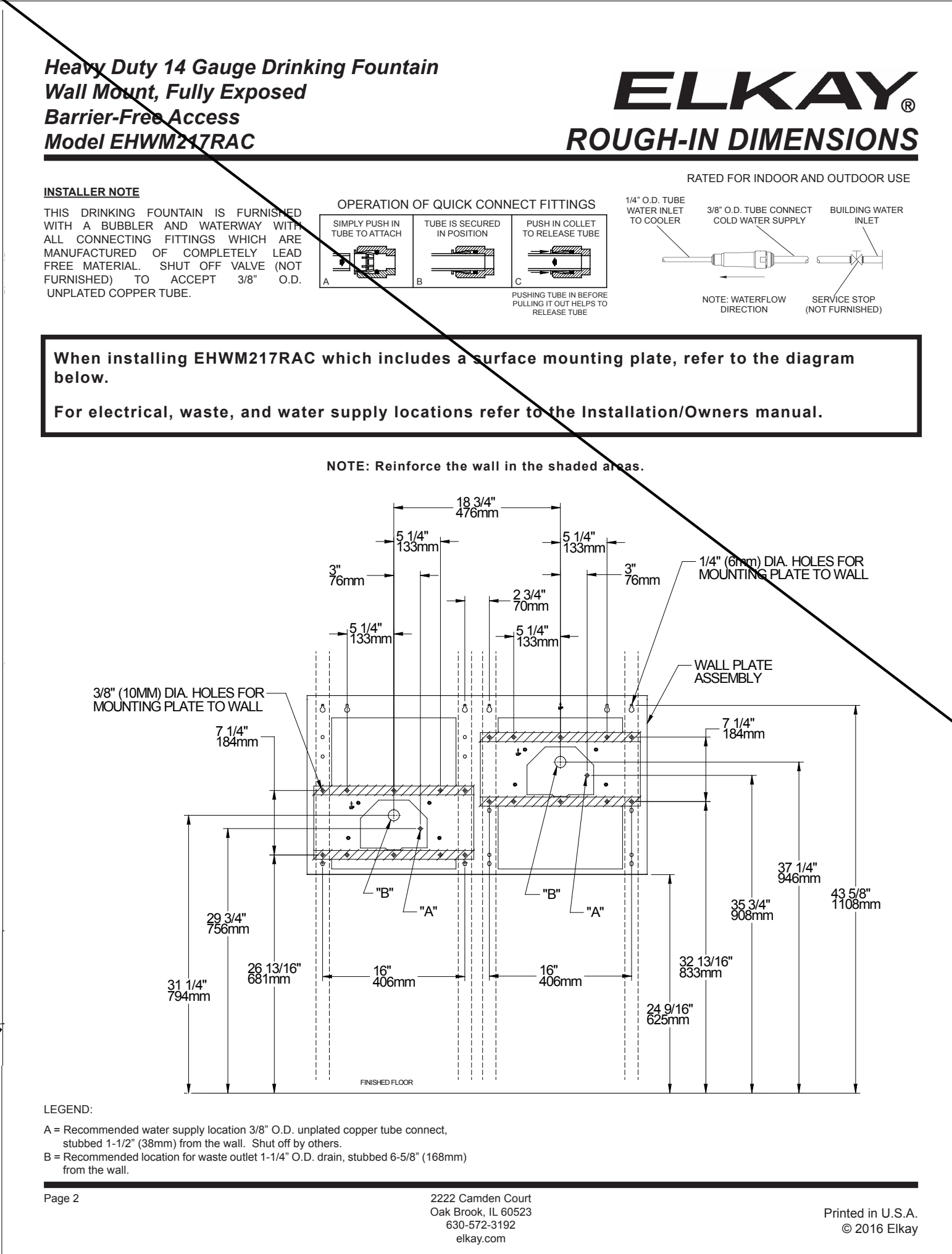
3/8" DIA A307 BOLTS (TYP)
3/8" DIA HANGER ROD (TYP)
ROOF TRUSS AT MODLINE
C 3x4.1x12"
HOLES FOR ACCORDIAN PARTITION
5 1/4"
2 1/4"
5"
5"

2 1 1/2" = 1'-0"
**ACCORDIAN DOOR - TOP CONN AT TRUSS**

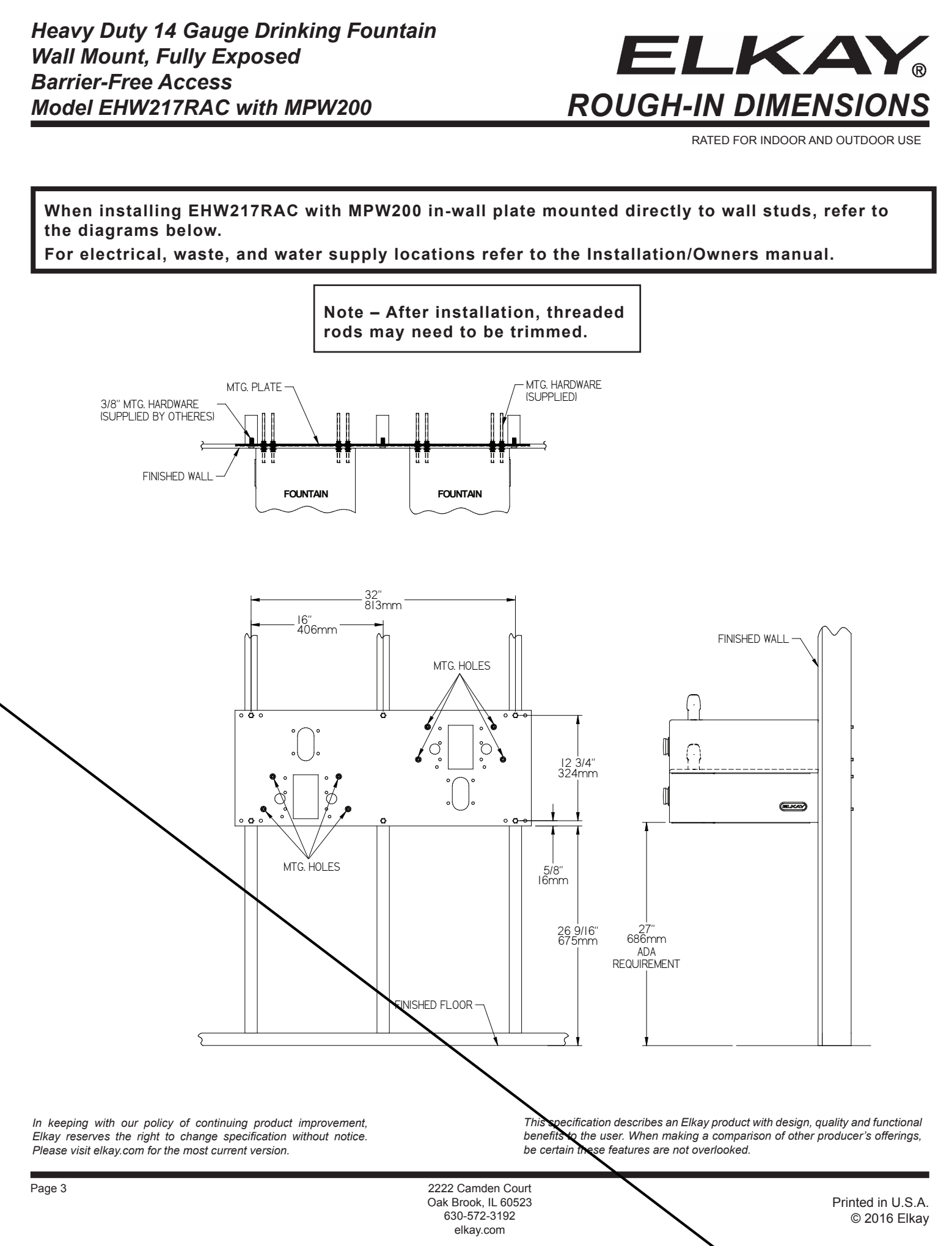


3/8" DIA A307 BOLTS (TYP)
3/8" DIA HANGER ROD (TYP)
RIDGE PURLIN
C 3x4.1x12"
HOLES FOR ACCORDIAN PARTITION
5 1/4"
2 1/4"
5"
5"

1 1 1/2" = 1'-0"
**ACCORDIAN DOOR - TOP CONN AT PURLIN**


Heavy Duty 14 Gauge Drinking Fountain
Wall Mount, Fully Exposed
Barrier-Free Access
Model EHWM217RAC

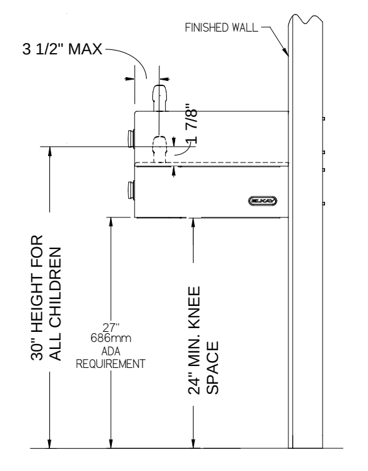
ELKAY
ROUGH-IN DIMENSIONS


Heavy Duty 14 Gauge Drinking Fountain
Wall Mount, Fully Exposed
Barrier-Free Access
Model EHW217RAC with MPW200

ELKAY
ROUGH-IN DIMENSIONS

When installing EHW217RAC with MPW200 in-wall plate mounted directly to wall studs, refer to the diagrams below.
For electrical, waste, and water supply locations refer to the Installation/Owners manual.

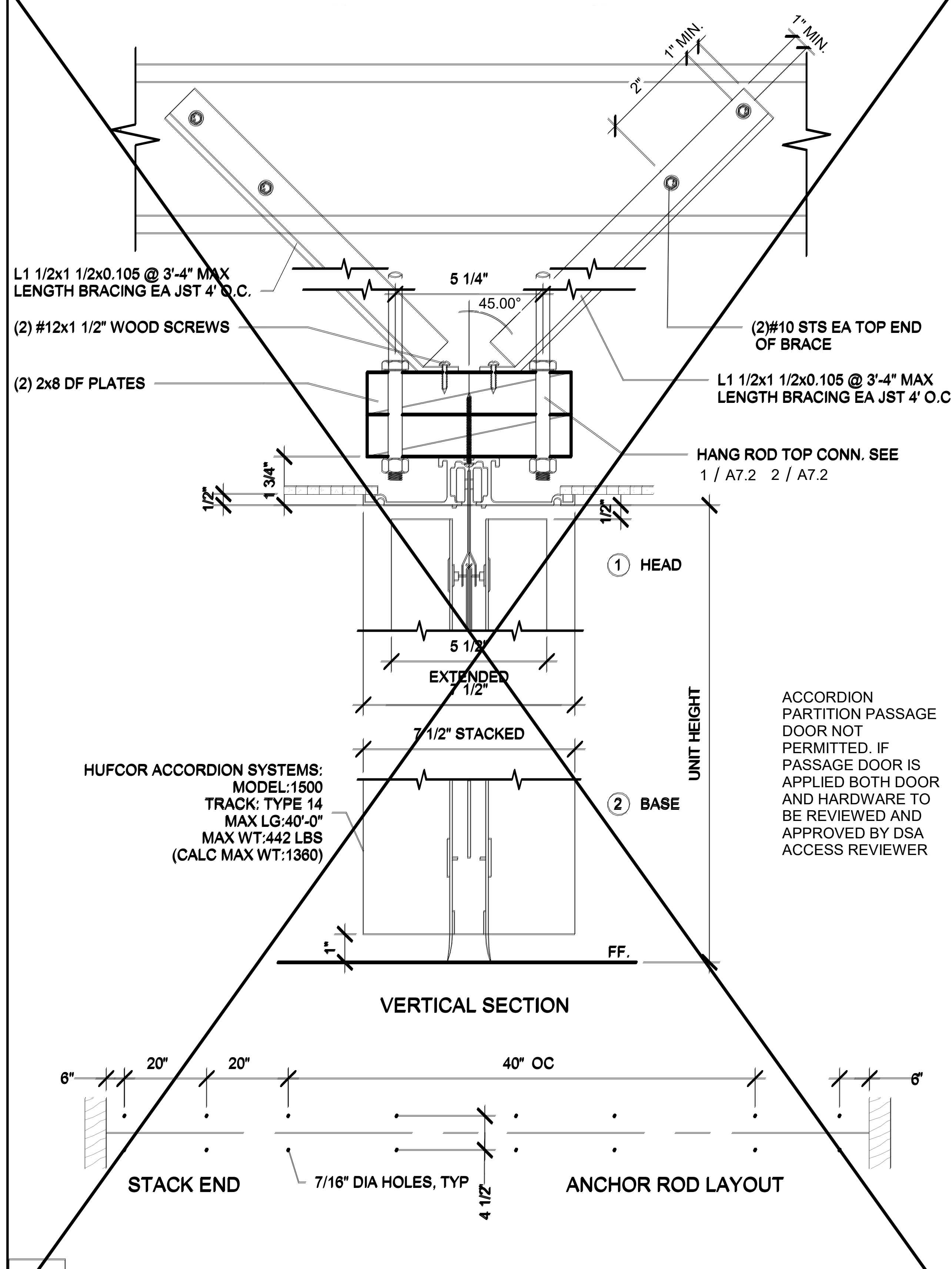
Note – After installation, threaded rods may need to be trimmed.



6 NTS
**ELKAY EXAMPLE OF MOUNTING ELEVATION**

NOTES FOR THIS OWNER FURMINSHED OWNER INSTALLED DRINKING FOUNTAIN:

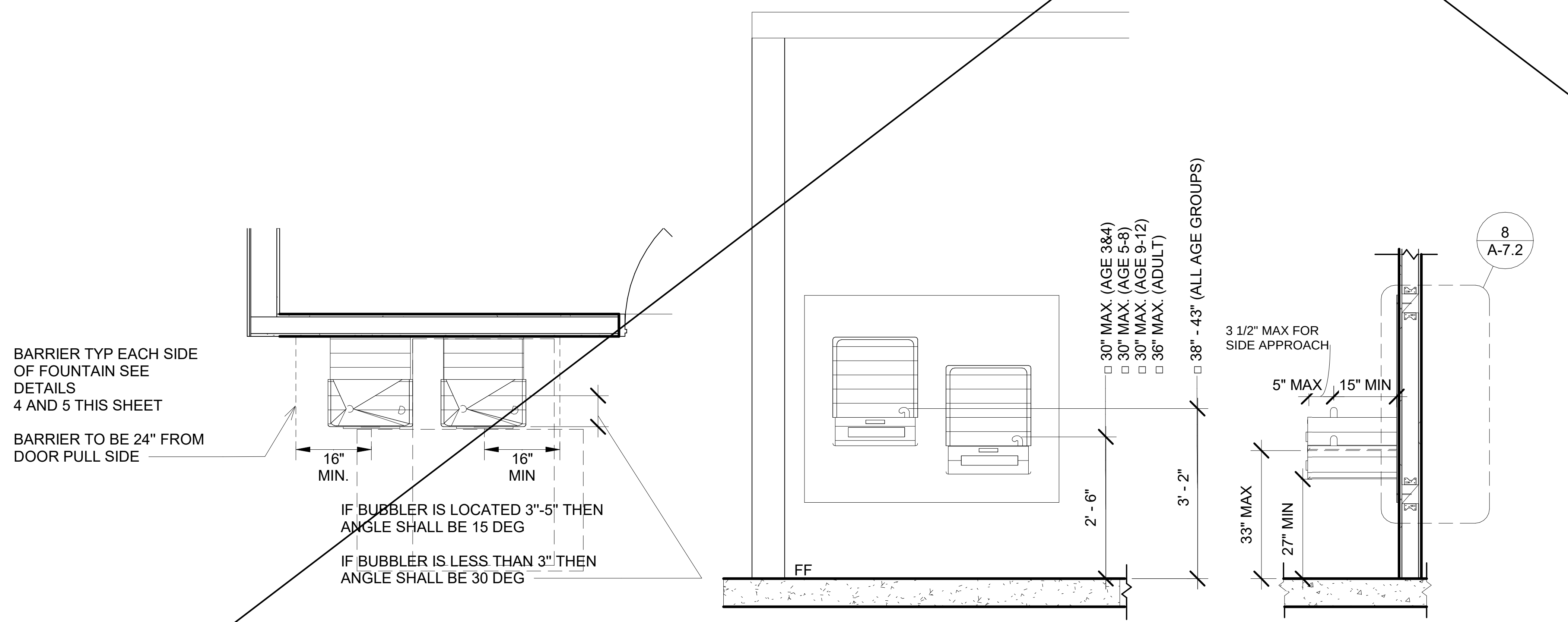
1. FINAL PRODUCT SELECTION IS OWNER RESPONSIBILITY.
2. MOUNTING REQUIREMENTS WILL VARY BY MANUFACTURER'S INSTALLATION INSTRUCTIONS
3. THE ELKAY SHEETS PROVIDED IN THIS SET ARE FOR EXAMPLE PURPOSES ONLY.
4. FINAL PRODUCT SELECTION MUST BE SUBMITTED ALONG WITH SITE SPECIFIC CONSTRUCTION APPLICATION FOR REVIEW
5. MOUNTING HARDWARE SHALL PROVIDE A MINIMUM OF 2" PENETRATION INTO WOOD FRAMING
.



1" MIN.
1" MIN.
2"
L1 1/2x1 1/2x0.105 @ 3'-4" MAX LENGTH BRACING EA JST 4' O.C.
(2) #12x1 1/2" WOOD SCREWS
(2) 2x8 DF PLATES
5 1/4"
45.00°
(2)#10 STS EA TOP END OF BRACE
L1 1/2x1 1/2x0.105 @ 3'-4" MAX LENGTH BRACING EA JST 4' O.C
HANG ROD TOP CONN. SEE 1 / A7.2 2 / A7.2
1/2"
1 3/4"
1/2"
① HEAD
5 1/2"
EXTENDED
1/2"
7 1/2" STACKED
UNIT HEIGHT
② BASE
HUFCOR ACCORDION SYSTEMS: MODEL:1500 TRACK: TYPE 14 MAX LG:40'-0" MAX WT:442 LBS (CALC MAX WT:1360)
ACCORDION PARTITION PASSAGE DOOR NOT PERMITTED. IF PASSAGE DOOR IS APPLIED BOTH DOOR AND HARDWARE TO BE REVIEWED AND APPROVED BY DSA ACCESS REVIEWER
1"
FF.
VERTICAL SECTION
6"
20"
20"
40" OC
6"
STACK END
7/16" DIA HOLES, TYP
ANCHOR ROD LAYOUT
4 1/2

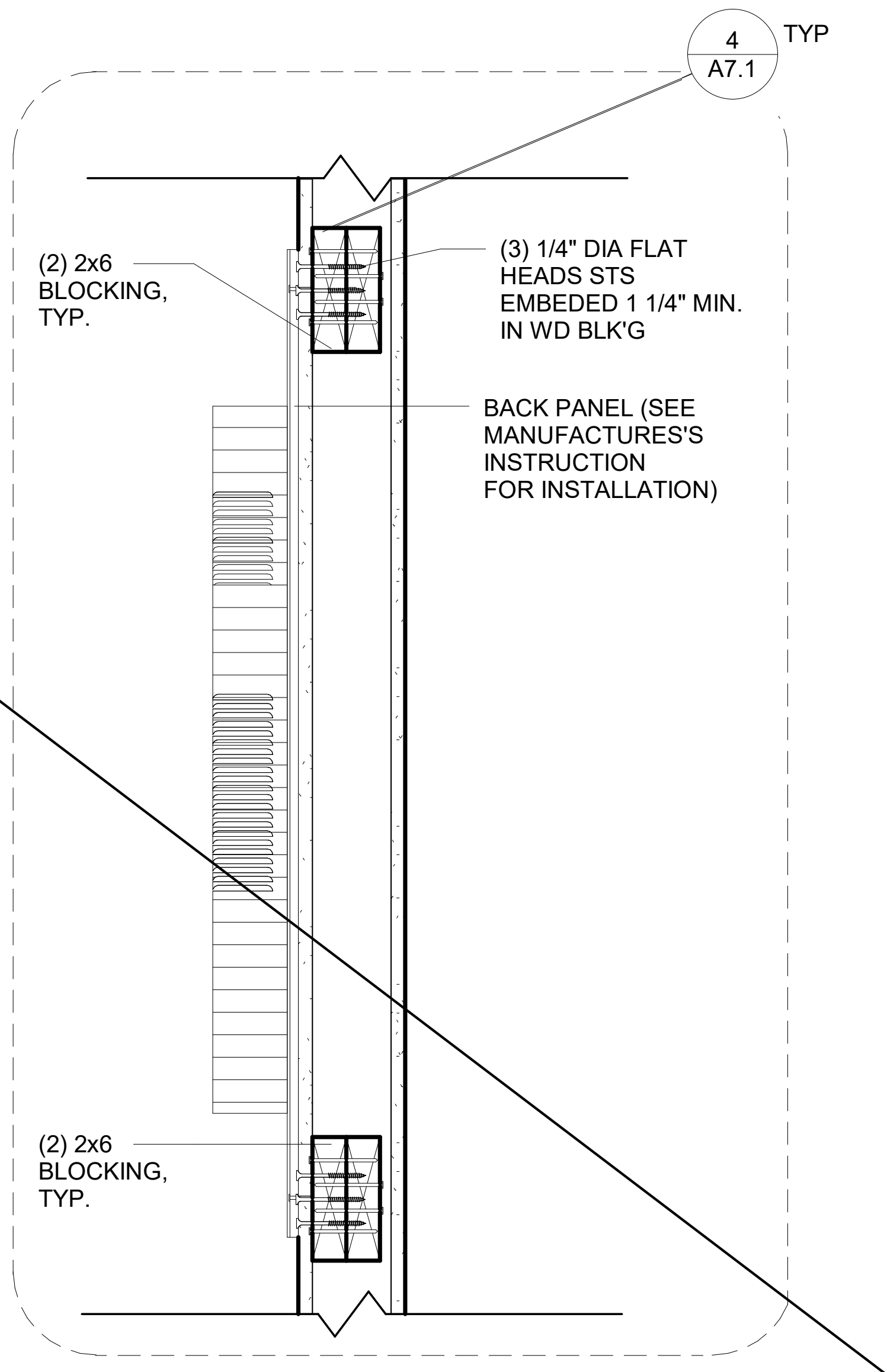
3 3" = 1'-0"
**OPTION FOR ACCORDION PARTITION ATTACHMENT**

11B-602.6 WATER FLOW. THE SPOUT PROVIDE A FLOW OF WATER 4 INCHES (102mm) high minimum and shall be located 5 inches (127 mm) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (76 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches (76 mm) and inches (127 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum



BARRIER TYP EACH SIDE OF FOUNTAIN SEE DETAILS 4 AND 5 THIS SHEET
BARRIER TO BE 24" FROM DOOR PULL SIDE
16" MIN.
16" MIN
IF BUBBLER IS LOCATED 3"-5" THEN ANGLE SHALL BE 15 DEG
IF BUBBLER IS LESS THAN 3" THEN ANGLE SHALL BE 30 DEG
FF
30" MAX. (AGE 3&4)
30" MAX. (AGE 5-8)
30" MAX. (AGE 9-12)
36" MAX. (ADULT)
38" - 43" (ALL AGE GROUPS)
2' - 6"
3' - 2"
33" MAX
27" MIN
8 A-7.2
3 1/2" MAX FOR SIDE APPROACH
5" MAX
15" MIN

7 1/2" = 1'-0"
**Drinking Fountain Blocking Detail wood stud**



4 A7.1
TYP
(2) 2x6 BLOCKING, TYP.
(3) 1/4" DIA FLAT HEADS STS EMBEDED 1 1/4" MIN. IN WD BLK'G
BACK PANEL (SEE MANUFACTURES'S INSTRUCTION FOR INSTALLATION)
(2) 2x6 BLOCKING, TYP.

8 1 1/2" = 1'-0"
**Section Cut 1A/A-5.2**

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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No. S3380
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ORIGINAL PC STATE AGENCY APPROVAL
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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ADDITIONAL OPTION DETAILS

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A7.2

SHEET OF

| WIRE SIZE | CAPACITY | WIRE TYPE | NO. OF CONDUCTOR PERMITTED | | | |
|---|---|---|---|---|---|---|
| | | | 1/2" C | 3/4" C | 1" C | 1 1/4" C |
| #12 | 20A | THHN | 9 | 16 | 25 | 45 |
| #10 | 30A | THHN | 5 | 10 | 16 | 28 |
| #8 | 45A | THHN | 2 | 5 | 8 | 14 |
| #6 | 65A | THHN | 1 | 3 | 5 | 10 |
| #4 | 85A | THHN | 1 | 2 | 4 | 7 |

(ALL CONDUCTORS SHALL BE TYPE THHN/THWN 75 DEG. C. COPPER)

## 1 CONDUIT FILL AND CONDUCTOR CAPACITY TABLE

| BOX | SIZE | CU. IN. | MAX NO. OF CONDUCTORS | | | |
|---|---|---|---|---|---|---|
| | | | #12 | #10 | #8 | #6 |
| 4SS | 1 1/4"x4" SQ | 18.0 | 8 | 7 | 6 | 0 |
| 4S | 1 1/2"x4" SQ | 21.0 | 9 | 8 | 7 | 0 |
| 4SD | 2 1/8"x4" SQ | 30.3 | 13 | 12 | 10 | 6 |
| 4SX | 2 7/8"x4" SQ | 43.5 | 23 | 21 | 17 | 10 |
| 5SD | 2 1/8"x4-11/16" SQ | 42.0 | 18 | 16 | 14 | 6 |
| 5SX | 3 7/8"x4-11/16" SQ | 86.0 | 38 | 34 | 28 | 17 |
| 664 | 4"x6" SQ | 144.0 | 64 | 57 | 48 | 28 |

* DEDUCT ONE CONDUCTOR FOR (1) OR MORE GROUNDING CONDUCTORS ENTERING THE BOX

## 2 JUNCTION BOX SIZE TABLE

915.4 CARBON MONOXIDE ALARMS. CARBON MONOXIDE ALARMS SHALL COMPLY WITH SECTIONS 915.4.1 THROUGH 915.4.4.

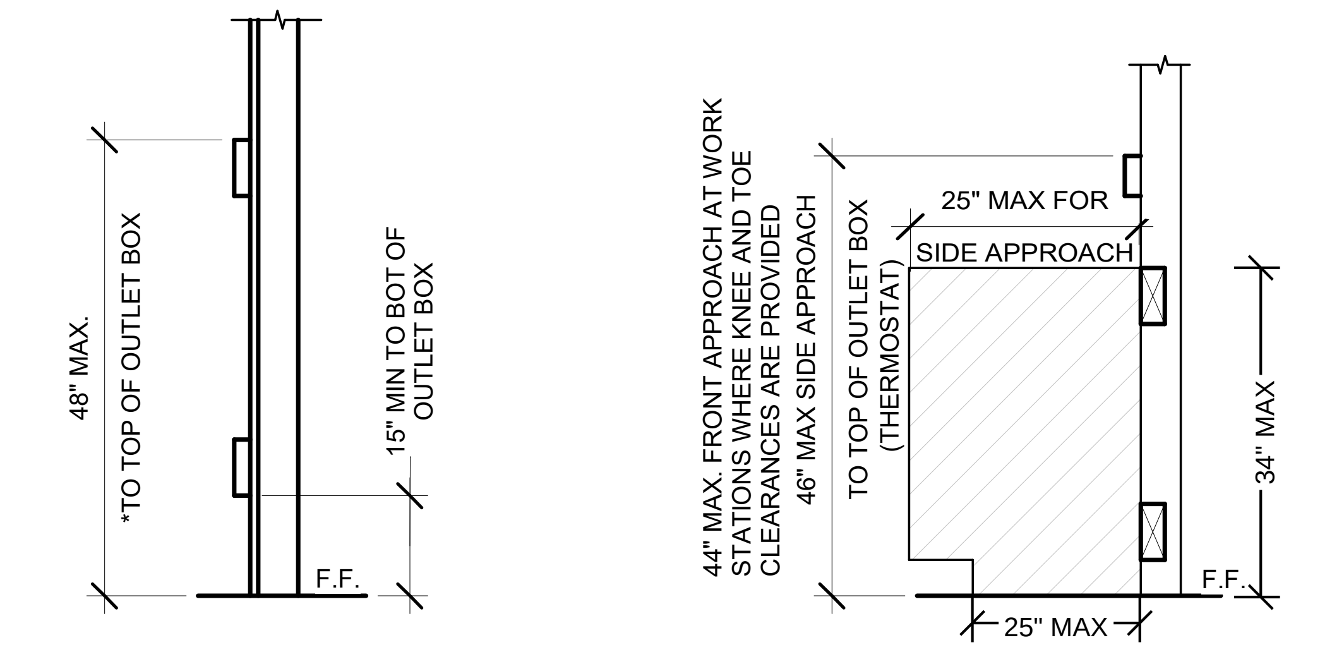
[F] 915.4.1 POWER SOURCE. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE, AND WHEN PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM BATTERY. WIRING SHALL BE PERMANENT AND WITH-OUT A DISCONNECTING SWITCH OTHER THAN REQUIRED FOR OVERCURRENT PROTECTION.

915.2.3 GROUP E OCCUPANCIES. CARBONS MONOXIDE DETECTION SHALL BE INSTALLED IN CLASSROOMS IN GROUP E OCCUPANCIES. CARBON MONOXIDE ALARM SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN ON-SITE LOCATION THAT IS STAFFED BY SCHOOL PERSONNEL.

915.3 DETECTION EQUIPMENT. CARBON MONOXIDE DETECTION REQUIRED BY SECTIONS 915.1 THROUGH 915.2.3 SHALL BE PROVIDED BY CARBON MONOXIDE DETECTION SYSTEMS COMPLYING WITH SECTION 915.5.

## 3 CARBON MONOXIDE DETECTION - SECTION 915

* SEE DETAIL 2/M0.2

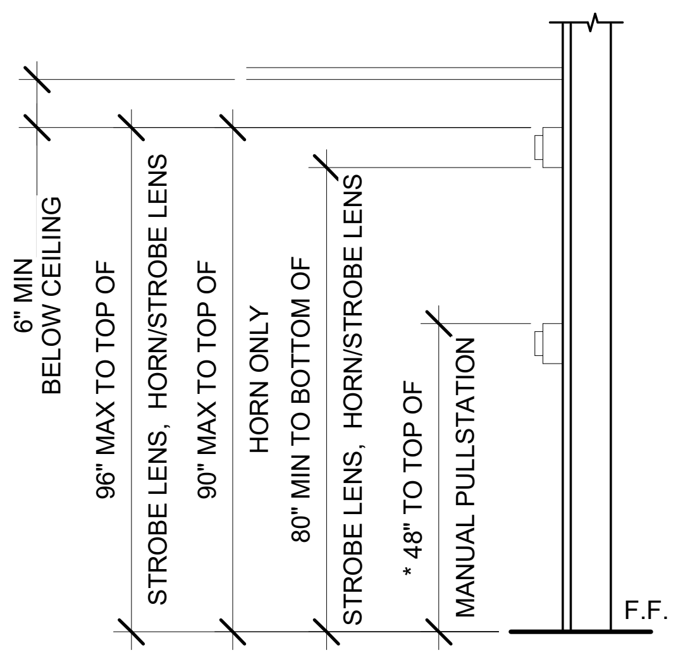

48" MAX.
*TO TOP OF OUTLET BOX
15" MIN TO BOT OF OUTLET BOX
F.F.
44" MAX. FRONT APPROACH AT WORK STATIONS WHERE KNEE AND TOE CLEARANCES ARE PROVIDED
46" MAX SIDE APPROACH
TO TOP OF OUTLET BOX (THERMOSTAT)
25" MAX FOR SIDE APPROACH
34" MAX
25" MAX
F.F.

* 30"x48" MIN CLR FLOOR SPACE AT EACH LOCATION FOR PERPENDICULAR APPROACH

OVER OBSTRUCTION

THE KNEE/TOE SPACE MUST EXTEND TO THE SAME DEPTH AS THE ACCESSIBLE OUTLET/SWITCH LOCATED ABOVE- 25" MAX 11.B308.2.2

## 4 MOUTING ELEV.


6" MIN BELOW CEILING
96" MAX TO TOP OF STROBE LENS, HORN/STROBE LENS
90" MAX TO TOP OF HORN ONLY
80" MIN TO BOTTOM OF STROBE LENS, HORN/STROBE LENS
* 48" TO TOP OF MANUAL PULLSTATION
F.F.

NOTES:

1. PROVIDE MIN 30"x48" CLR FLOOR SPACE FOR PERPENDICULAR APPROACH AT EACH LOCATION.

2. THE SWITCH OR SWITCHES INSTALLED IN EMERGENCY LIGHTING CIRCUITS SHALL BE SO ARRANGED THAT ONLY AUTHORIZED PERSONNEL WILL HAVE CONTROL OF EMERGENCY LIGHTING. (CEC art. 700.20)

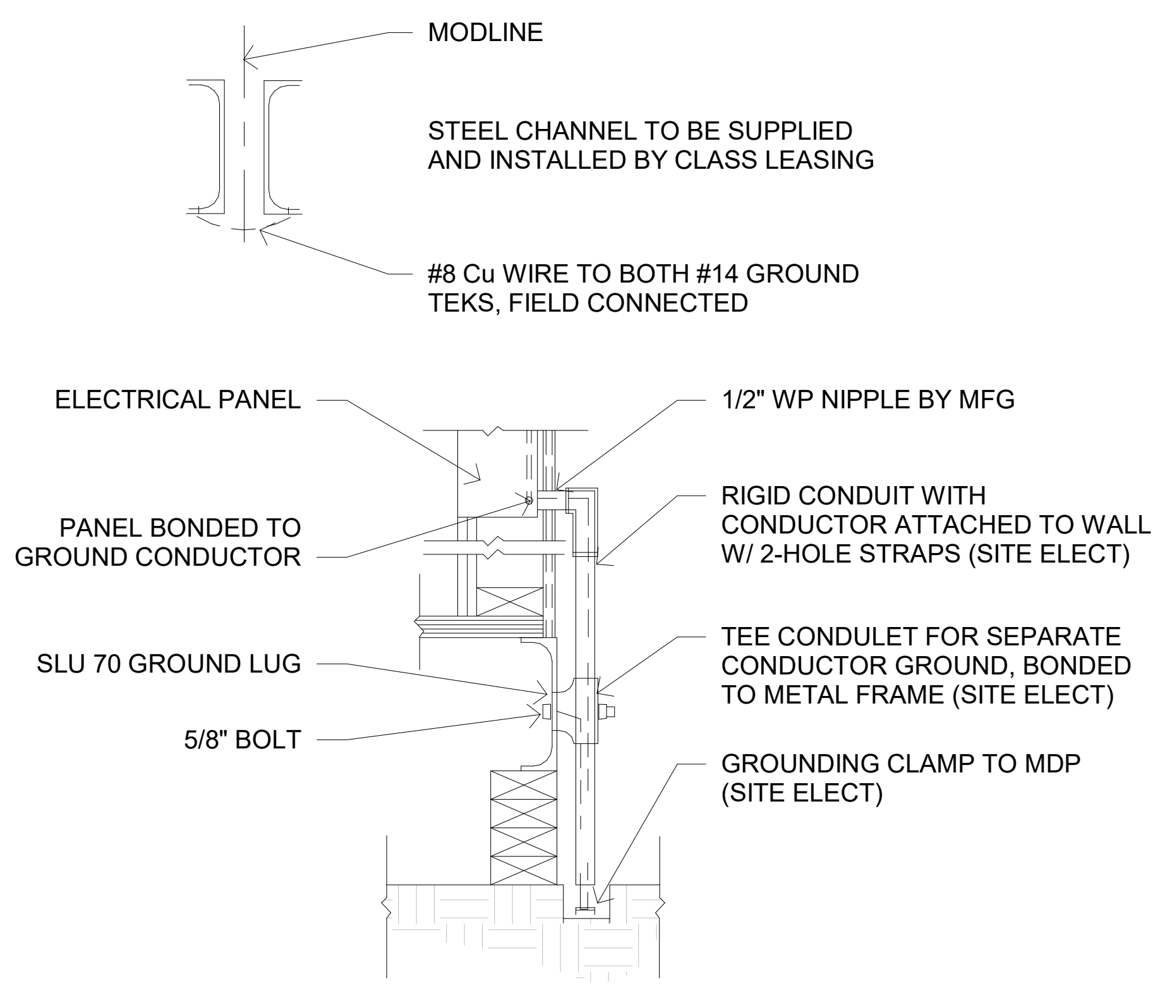
3. PROVIDE SPACE ON ELECTRICAL PANEL FOR LOCK-ON BREAKER, IDENTIFIED WITH RED MARKING, FOR 120 VOLTS FIRE ALARM CIRCUIT, WITH BREAKER LABELED AS FIRE ALARM CIRCUIT, CEC 760.41 (B). BREAKER AND CIRCUIT PROVIDED AND INSTALLED ON SITE BY OTHERS.

4. SMOKE AND HEAT DETECTOR CONDUIT AND DEVICES TO BE PROVIDED AND INTERCONNECTED TO THE FIRE ALARM SYSTEMS ON SITE BY OTHERS.

5. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF THIS FIRE ALARM SYSTEM FOR ALL SITES, THE FIRE ALARM SYSTEM AND COMPONENTS MAYBE REQUIRED TO BE CHANGED DUE TO EXISTING CONDITIONS OR INCOMPATIBLE COMPONENTS.

## 5 FIRE ALARM MOUNTING HEIGHTS

ACCEPTANCE TESTS BE COMPLETED ON NEWLY INSTALLED OR REPLACEMENT OF LIGHTING CONTROLS BEFORE PROJECT COMPLETION PER THE CALIFORNIA ENERGY CODE SECTION 10-103. ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED ACCEPTANCE TEST TECHNICIAN (ATT). THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCES CORRECTED UNTIL THE INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA. COMPLETED NRCA FORMS SHALL BE SUBMITTED TO THE PROJECT INSPECTOR AND THE DISTRICT


MODLINE
STEEL CHANNEL TO BE SUPPLIED AND INSTALLED BY CLASS LEASING
#8 Cu WIRE TO BOTH #14 GROUND TEKS, FIELD CONNECTED
ELECTRICAL PANEL
PANEL BONDED TO GROUND CONDUCTOR
SLU 70 GROUND LUG
5/8" BOLT
1/2" WP NIPPLE BY MFG
RIGID CONDUIT WITH CONDUCTOR ATTACHED TO WALL W/ 2-HOLE STRAPS (SITE ELECT)
TEE CONDULET FOR SEPARATE CONDUCTOR GROUND, BONDED TO METAL FRAME (SITE ELECT)
GROUNDING CLAMP TO MDP (SITE ELECT)

NOTES:

1. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELEC'L. PANEL & TO METAL BUILDING FRAME (CEC 250.52) IN ADDITION TO THE DETAIL SHOWN ABOVE. BOND THE ELECTRICAL GROUND TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10 FT. OR MORE, IF AVAILABLE (CEC 250.52)

2. TESTING FOR RESISTANCE TO GROUND, IF RESISTANCE EXCEEDS 25 OHMS INSTALL ADDITIONAL GROUND RODS SEPARATED AT LEAST 6 FEET, UNTIL RESISTANCE REDUCES TO 25 OHMS OR LESS. GROUND TEST MUST BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND ALL GROUNDING SHALL BE IN ACCORDANCE WITH CEC ARTICLE 250.56

3. ELEC. TRADE SHALL CHECK AREA FOR EXISTING CONDUITS, SEWER, GAS & WATER PIPING BEFORE DRIVING GROUND RODS.

4. ALL MODULES OF STEEL FRAME BLDGS. SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING). BONDING SHALL INCLUDE METAL RAMP & STAIRS.

5. SIZE OF CONDUCTORS SHALL COMPLY WITH CEC TABLE 250.66

6. EACH BUILDING SHALL BE GROUNDED SEPARARELY WITH A ¾" ROUND X 8 FEET COPPERCLAD STEEL GROUND ROD. WHERE ROCK BOTOOM IS FOUND, DRIVE ROD AT 45 DEGREES MAXIMUM FROM THE VERTICAL OR HAVE IT BURIED IN A TRENCH 30" DEEP MINIMUM.

ACCEPTANCE TESTS BE COMPLETED ON NEWLY INSTALLED OR REPLACEMENT OF LIGHTING CONTROLS BEFORE PROJECT COMPLETION PER THE CALIFORNAI ENERGY CODE SECTION 10-103. ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED ACCEPTANCE TEST TECHNICIAN (ATT). THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES CORRECTED UNTIL THE INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA. COMPLETED NRCA FORMS SHALL BE SUBMITTED TO THE PROJECT INSPECTOR AND THE DISTRICT.

## 6 TYPICAL GROUNDING DETAILS

REFER TO DSA IR 16-8 & STATE FIRE MARSHAL SOLAR PHOTOVOLTAIC INSTALLATION GUIDELINE

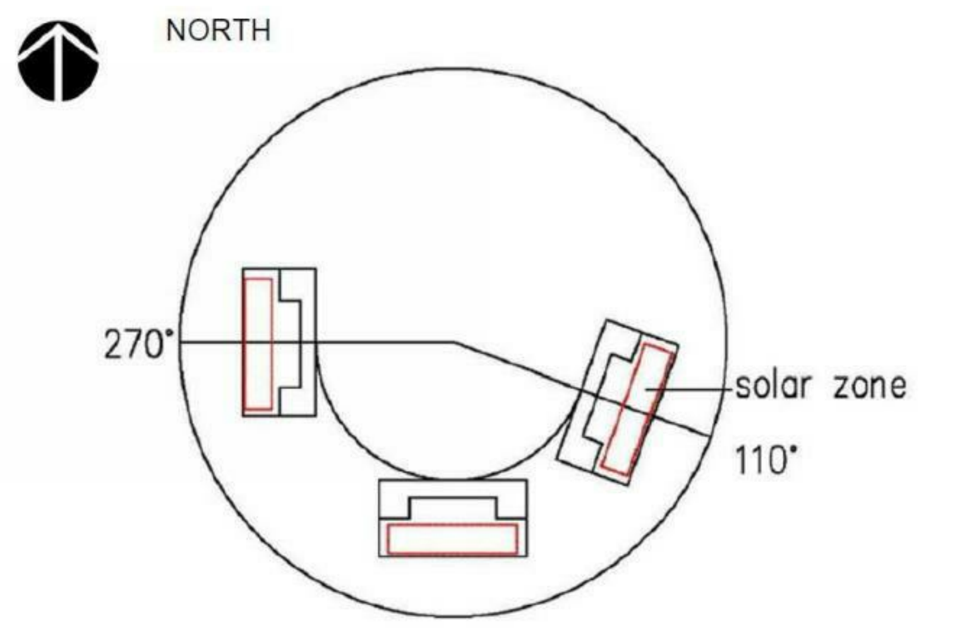
REFER TO **SECTION 110.10 - MANDATORY REQUIREMENTS FOR SOLAR READY BUILDINGS**
SOLAR ZONE AREAS WILL VARY DEPENDING ON PC BUILDING LOCATION.

**MINIMUM AREA:**

15% OF ROOF AREA (EXCLUDING ANY SKYLIGHT AREA) TO BE RESERVED FOR SOLAR PANEL APPLICATION OR SOLAR READY WILL BE SUPPLIED FROM A BUILDING OR STRUCTURE WITHIN 250 FT OF PC BUILDING.

**ORIENTATION:**

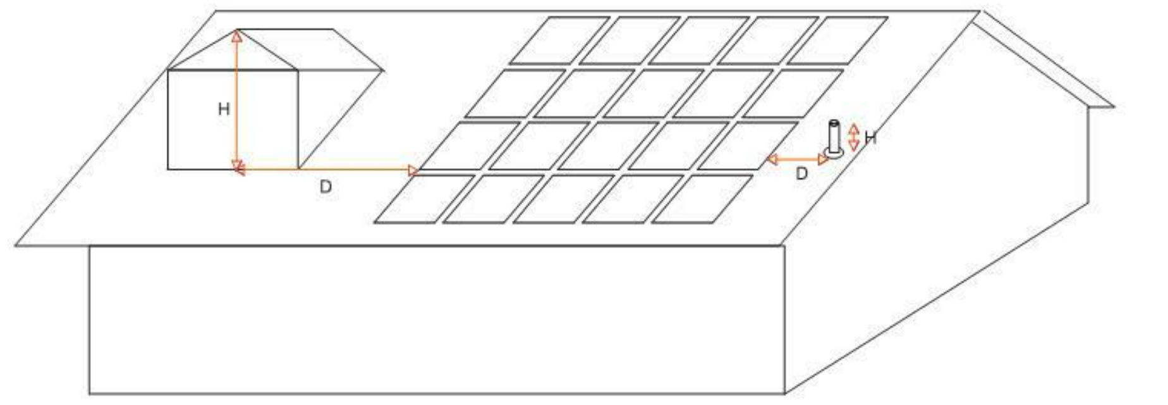
ALL SECTIONS OF THE SOLAR ZONE LOCATED ON STEEP-SLOPED ROOFS GREATER THAN 2:12 SHALL BE ORIENTED BETWEEN 110 DEGREES AND 270 DEGREES OF TRUE NORTH.



**SHADING:**

ANY OBSTRUCTION, LOCATED ON THE ROOF OR ANY OTHER PART OF THE BUILDING THAT PROJECTS ABOVE THE SOLAR ZONE SHALL BE LOCATED AT A SUFFICIENT HORIZONTAL DISTANCE AWAY FROM THE SOLAR ZONE, IN ORDER TO REDUCE THE RESULTING SHADING OF THE SOLAR ZONE. FOR EACH OBSTRUCTION, THE HORIZONTAL DISTANCE ("D") FROM THE OBSTRUCTION TO THE SOLAR ZONE SHALL BE AT LEAST TWO TIMES THE HEIGHT DIFFERENCE ("H") BETWEEN THE HIGHEST POINT OF THE OBSTRUCTION AND THE HORIZONTAL PROJECTION OF THE NEAREST POINT OF THE SOLAR ZONE.

D ≥ 2 x H



SOURCE: CALIFORNIA ENERGY COMMISSION

**STRUCTURAL DESIGN LOADS:**

ENTIRE ROOF SURFACE IS DESIGNED STRUCTURALLY TO ACCOMMODATE SOLAR PANELS = 3 PSF

**INTERCONNECTION PATHWAYS:**

THE LOCATION FOR INVERTERS AND METERING EQUIPMENT AND A PATHWAY FOR ROUTING OF CONDUIT FROM THE SOLAR ZONE TO THE POINT OF INTERCONNECTION WITH THE ELECTRICAL SERVICE WILL VARY DEPENDING ON PC BUILDING LOCATION.

## 7 SOLAR ZONE AREA

## LEGEND

| | |
|---|---|
| ▬ | ELECTRICAL PANEL AT +60" AFF TO TOP OF ELECTRICAL PANEL WITH 1 1/2" DIA POWER STUB OUT |
| ⬚ | ROOF MOUNTED HVAC UNIT-SEE MECHANICAL DWGS |
| ▭ | WALL MOUNTED HVAC UNIT, SEE MECHANICAL DWGS |
| ⊠ | 100 CFM CEILING MOUNTED EXHAUST FAN.<br>INTERLOCKED WITH LIGHT SWITCH |
| HW | 4SD J-BOX FOR WATER HEATER LOCATE ABOVE CEILING W/ COVER PLATE, HARD WIRE TO UNIT |
| H | 4SD J-BOX IN ATTIC FOR ATTIC MOUNTED HEAT DETECTOR (DEVICE BY OTHERS). MAXIMUM 35'-0" FROM ANY POINT IN ATTIC BUT NOT MORE THAN 25'-0" FROM TWO PERPENDICULAR WALL AND 50'-0" BETWEEN THEM. PROVIDE A 6'-0" CONDUIT FROM EACH J-BOX TO HEAT DETECTOR LOCATION. CONDUIT & CONNECTION TO CEILING DEVICE & DEVICE BY OTHERS (ALARM NOTE #1) |
| S | 4SD J-BOX IN ATTIC FOR CEILING MOUNTED SMOKE DETECTOR (DEVICE BY OTHERS). MAXIMUM 21'-0" FROM ANY POINT IN ROOM BUT NOT MORE THAN 15'-0" TO A PERPENDICULAR WALL AND 30'-0" BETWEEN THEM. PROVIDE A 6'-O" CONDUIT FROM EACH J-BOX TO SMOKE DETECTOR LOCATION. CONDUIT & CONNECTION TO CEILING DEVICE & DEVICE BY OTHERS (ALARM NOTE #1) |
| ▭ | RECESSED 4SD J-BOX W/ COVER PLATE FOR FUTURE FIRE ALARM SYSTEM BY OTHERS. MOUNT AT +18" AFF U.O.N. TO CENTERLINE OF BOX AND PROVIDE 1" CO STUB TO ATTIC SPACE WITH PULLSTRING |
| H | 4SD J-BOX FOR EXTERIOR FIRE ALARM HORN (DEVICE BY OTHERS). MOUNT AT +90" AFF TO TOP OF DEVICE WITH 3/4" CONDUIT STUBBED TO ATTIC WITH PULLSTRING |
| ○ | 4SD J-BOX/SINGLE GANG MUD RING FOR FIRE ALARM STROBE (DEVICE BY OTHERS).<br>BOTTOM OF LENS 80" MIN TOP OF LENS 96" MAX AFF WITH 3/4"CONDUIT TO EXTERIOR FIRE ALARM HORN WITH PULLSTRING |
| ◪ | 4SD J-BOX/ SINGLE GANG MUD RING FOR FIRE ALARM PULL STATION (DEVICE BY OTHERS). MOUNT AT +48" AFF TO TOP OF CONTROL BOX WITH 3/4" CONDUIT TO FIRE ALARM STROBE WITH PULLSTRING |
| EXIT | EXIT SIGN WITH BATTERY BACK UP. EXIT SIGN REQUIRED FOR CLASSROOMS WITH TWO OR MORE EXTERIOR DOORS.<br>FLS 90' BACK UP. CLASSROOMS WITH ONE EXTERIOR DOOR-OPTIONAL. |
| ◷ | CLOCK OUTLET AT +90" AFF TO CENTERLINE OF DEVICE |
| ⊓ | EXTERIOR LED LIGHT FIXTURE. 30w MAX WITH PHOTOCELL MOUNT AT +93" AFF |
| ◐ ROOF | ROOF MOUNTED WEATHER PROOF GFI RECEPTACLE |
| ◐ GFI | GROUND FAULT CIRCUIT INTERRUPT RECEPTACLE WITHIN 6'-0" OF ALL SINKS |
| ◐ WP | EXTERIOR WEATHER PROOF GFI RECEPTACLE AT +24" AFF FOR A/C SERVICES (MAX 25'-0" FROM UNITS) |
| ⦶ | DUPLEX (WALL MOUNTED) RECEPTACLE 15A-125V-3 WIRE. MOUNT AT +15" AFF U.O.N. TO BOTTOM OF OUTLET BOX |
| $ 3 | 3-WAY LIGHT SWITCH. MOUNT AT+48" AFF TO TOP OF SWITCH BOX |
| $ | LIGHT SWITCH. MOUNT AT+48" AFF TO TOP OF SWTICH BOX |
| $ D | SINGLE BUTTON DIMMER SWITCH, AT +48" AFF, TO TOP OF SWITCH BOX, WATTSTOPPER #LMDM-101 OR EQUAL |
| WS-1 | SINGLE SWITCH WALL OCCUPANCY SENSOR.<br>WATTSTOPPER PW-100 OR EQUAL. SENSOR TO BE MOUNTED AT +44" AFF AND USE FOR OPEN ROOM (OR RESTROOM) LESS THAN 100 SQ FT W/ (1) CIRCUIT. AS NEEDED |
| US | ULTRASONIC CEILING OCCUPANCY SENSOR.<br>WATTSTOPPER W-500A OR EQUAL. SENSOR TO BE CONNECTED TO KEYED LIGHT SWITCHES FOR MANUAL OVERRIDE AND USE FOR RESTROOM W/ PARTITIONS. AS NEEDED |
| PC | CEILING MOUNTED PHOTOCELL, WATTSTOPPER #LMLS-500 OR EQUAL AS NEEDED |
| OS | CEILING MOUNTED OCCUPANCY SENSOR.<br>WATTSTOPPER #LMPC-100 OR EQUAL. AS NEEDED |
| ◫ | 2x4 CEILING LIGHT WITH (3) LED PANELIGHT, LAY-IN LIGHT FIXTURE WITH DIMMABLE BALLAST<br>DIMI LIGHTING-MODEL DM-P72448W-40K-ZZ<br>WATTAGE: 48W (48" LG) OR EQUAL |
| ◩ | 2x4 CEILING LIGHT WITH (3) LED PANELIGHT, LAY-IN LIGHT FIXTURE WITH DIMMABLE BALLAST<br>DIMI LIGHTING-MODEL DM-P72448W-40K-ZZ<br>WATTAGE: 48W (48" LG) OR EQUAL<br>EACH LIGHT FIXTURE WHICH IS INDICATED AS BEING AN EMERGENCY LIGHT SHALL HAVE A BALLAST BATTERY PACK INSTALLED ON THE FIXTURE. THE BATTERY PACK SHALL PROVIDE POWER TO A SINGLE LAMP WITHIN THE FIXTURE FOR NO LESS THAN 90 MINUTES. ANY LIGHT FIXTURE Equipped WITH A BATTERY PACK SHALL BE WIRED IN SUCH A MANNER THAT THE BATTERY WILL BE ACTIVATED IMMEDIATELY UPON LOSS OF POWER TO THE FIXTURE. ADDITIONALLY THE BATTERY PACK SHALL BE OPERATED USING BATTERY POWER LIGHTING CONTROL SWITCHES AND SENSORS SHALL NOT BE ABLE TO SHUT THE FIXTURE OFF. |

MIN. + 15" TO BOTTOM OF BOX

NOTE: SEE 4/A3.2 FOR PHOTOMETRIC DATA

## 8 1" = 1'-0" ELECTRICAL LEGEND

1. INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) - 2020 EDITION AND NATIONAL FIRE PROTECTION ASSOCIATION FIRE CODES (NFPA). AND 2022 CBC ELECTRICAL CODE.
2. ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE VERIFIED AND ADJUSTED FOR FIELD CONDITIONS.
3. RECEPTACLES AND TELEPHONE/DATA OUTLETS SHALL BE INSTALLED 18" AFF TO THE CENTER OF THE DEVICE, UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL FIELD TEST AND PROVIDE TEST REPORT VERIFYING THAT RECEPTACLES ARE WIRED AND FUCTION PROPERLY.
5. CONTRACTOR SHALL LABEL EACH RECEPTACLE, LIGHT FIXTURE, TOGGLE SWITCH, SAFETY SWITCH AND OCCUPANCY SENSOR WITH PANEL NAME AND BRANCH CIRCUIT ID.
6. WEATHERPROOF RECEPTACLES SHALL BE TYPE TO PROTECT RECEPTACLE FROM WEATHER WHEN PLUG INSERTED.
7. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR SHALL ASSUME NOTES LISTING MATERIAL AND/OR EQUIPMENT BEGIN WITH THE WORDS "SUPPLY AND INSTALL" U.O.N.".
8. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE SUBMITTING MATERIAL AND BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE SITE. BY THE ACT OF SUBMITTING PROPOSED MATERIALS FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS RESENT AT THE SITE. NO REQUEST FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS, WHICH MAY EXIST.
9. CONTRACTOR'S SCOPE SHALL INCLUDE ALL WORK SHOWN ON THE PLANS AND SPECIFICATIONS. SUBSTITUTION REQUESTS FOR EQUIPMENT SPECIFIED SHALL BE SUBMITTED FOR CONSIDERATION TO THE OWNER AND ENGINEER IN WRITING. ALL SUBSTITUTIONS MUST BE REVIEWED BY THE ENGINEER. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK, THE OWNER, ENGINEER OF RECORD, OR THE WORK OF OTHER CONTRACTORS.
10. COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
11. UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY POWER AREAS OF THE SITE DURING CONSTRUCTION. PROVIDE ANY TEMPORARY SERVICES AS MAY BE REQUIRED. IDENTIFY AT BID TIME.
12. ALL PENETRATIONS IN RATED WALLS (INDICATED IN ARCHITECTURAL LIFE SAFETY PLANS), ARE TO BE INSTALLED USING THE APPROPRIATE UL RATED PENETRATION ASSEMBLIES.
13. EQUIPMENT SHALL BE LISTED, LABELED OR CERTIFIED FOR ITS USE BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) AS RECOGNIZED BY THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AN HEALTH ADMINISTRATION.
14. ALL ELECTRICAL EQUIPMENT CONNECTORS SHALL BE 75° RATED.
15. ALL ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

    A. ALL PERMANENT EQUIPMENT AND COMPONENTS.
    B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
    C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.
16. THE ATTACHMENT OF THE FOLLOWING ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

    A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
    B. COMPONENTS WEIGHING LESS THAN 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.
17. FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT I NSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.
18. 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 2022 CBC SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26
19. THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.
20. COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AN BRACING OF THE PIPE, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS.
21. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.
22. ELEC. TRADE SHALL CHECK AREA FOR EXISTING CONDUITS, SEWER, GAS & WATER PIPING BEFORE DRIVING GROUND RODS.
23. NON-CURRENT CARRYING METAL PARTS OF THE SYSTEM SHALL BE PROPERLY GROUNDED TO COMPLY WITH NEC REQUIREMENTS.
24. EACH BUILDING SHALL BE GROUNDED SEPARARELY WITH A ¾" ROUND X 8 FEET COPPERCLAD STEEL GROUND ROD. WHERE ROCK BOTOOM IS FOUND, DRIVE ROD AT 45 DEGREES MAXIMUM FROM THE VERTICAL OR HAVE IT BURIED IN A TRENCH 30" DEEP MINIMUM.
25. TESTING FOR RESISTANCE TO GROUND, IF RESISTANCE EXCEEDS 25 OHMS INSTALL ADDITIONAL GROUND RODS SEPARATED AT LEAST 6 FEET, UNTIL RESISTANCE REDUCES TO 25 OHMS OR LESS. GROUND TEST MUST BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND ALL GROUNDING SHALL BE IN ACCORDANCE WITH CEC ARTICLE 250
26. PROVIDE A GREEN WIRE GROUND CONDUCTOR IN ALL CONDUITS WITH POWER OR LIGHTING CONDUCTORS.
27. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELEC'L. PANEL & TO METAL BUILDING FRAME (CEC 250.52) IN ADDITION TO THE DETAIL SHOWN ABOVE. BOND THE ELECTRICAL GROUND TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10 FT. OR MORE, IF AVAILABLE (CEC 250.52)
28. CHECK RESISTANT TO GROUND ROD. IF RESISTANCE EXCEEDS 25 OHMS. INSTALL ADDITIONAL GROUND RODS WITH CONDUCTORS AS SHOWN SEPARATED AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (CEC 250.56).
29. ALL MODULES OF STEEL FRAME BLDGS. SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING). BONDING SHALL INCLUDE METAL RAMP & STAIRS.
30. SIZE OF CONDUCTORS SHALL COMPLY WITH CEC TABLE 250.66
31. PER CEC210.8(B) ALL RECEPTACLES AT THE FOLLOWING LOCATIONS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) - (1) BATHROOMS, (2) KITCHENS, (3) SINKS (WITHIN 6 FT), (4) INDOOR WET AREAS, (5) LOCKER ROOMS, (6) GARAGE, SERVICE BAYS OR SIMILAR, (7) ROOFTOPS, (8) OUTDOORS.
32. IF CLOSED BY GWB INSTALL ONE ATTIC HEAT DETECTOR PER MODULE: WHEN STANDARD OPEN WEB TRUSS SYSTEM IS USED ADDITIONAL ATTIC HEAT DETECTORS ARE NOT REQUIRED.

## 9 ELECTRICAL GENERAL NOTES

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W. BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
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PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

**THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©**

CLIENT

1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

| Revision Schedule | | |
|---|---|---|
| # | Description | Date |

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ELECTRICAL GENERAL NOTES

PROJECT NUMBER
22088

DRAWN BY
AM

CHECKED BY
RT

DATE

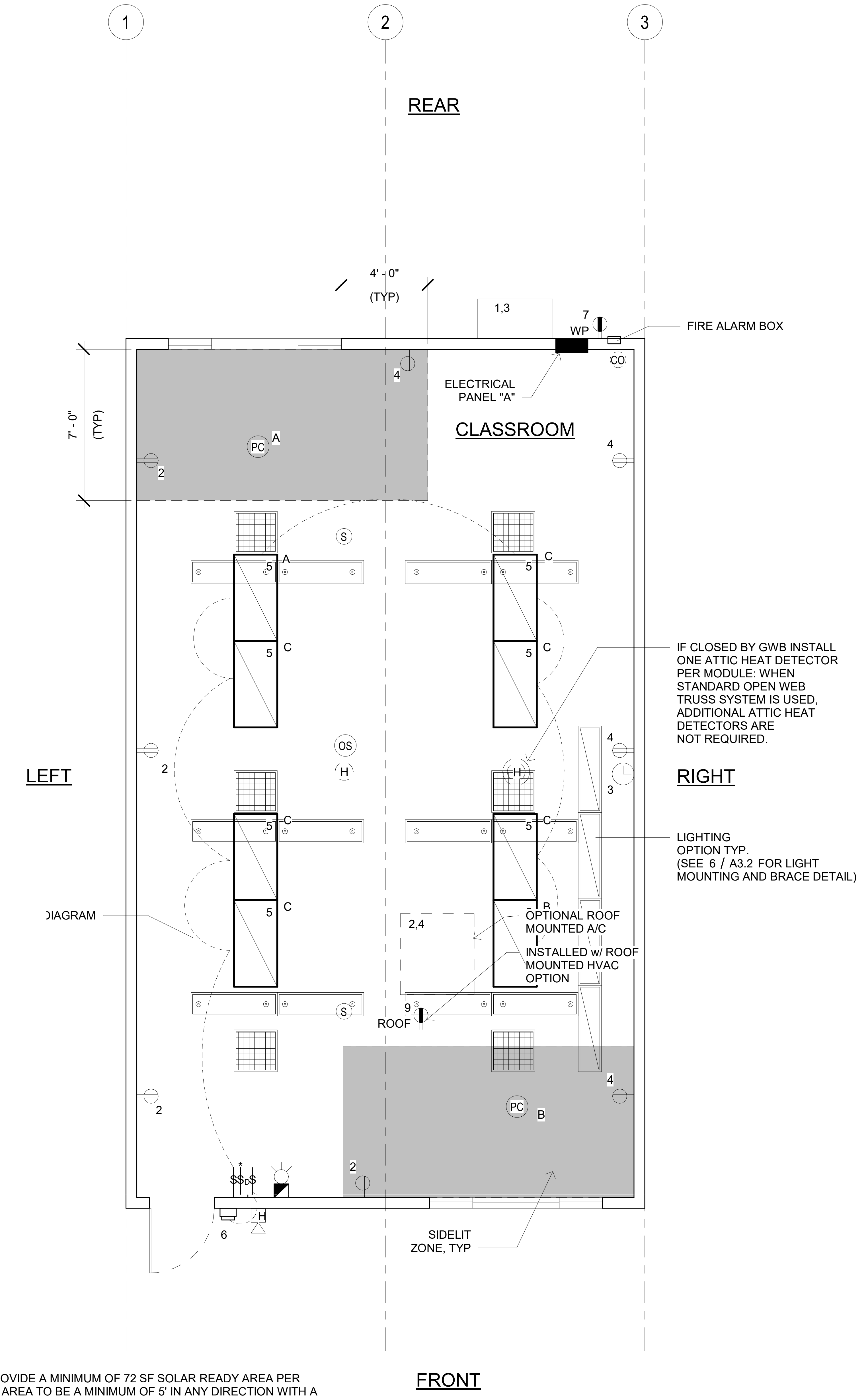
SHEET NO.
E0.1

SHEET OF

SYMBOL

▦ SOLAR TUBE DIFFUSER

TUBE SIZE=21"(530mm)
LIGHT COVERAGE AREA=250-300ft² (23-28m)


1
2
3
REAR
4' - 0"
(TYP)
1,3
7
WP
FIRE ALARM BOX
CO
ELECTRICAL PANEL "A"
CLASSROOM
7' - 0"
(TYP)
PC A
PC B
S
OS
H
A
B
C
2
3
4
5
2,4
9
ROOF
IF CLOSED BY GWB INSTALL ONE ATTIC HEAT DETECTOR PER MODULE: WHEN STANDARD OPEN WEB TRUSS SYSTEM IS USED, ADDITIONAL ATTIC HEAT DETECTORS ARE NOT REQUIRED.
LEFT
RIGHT
LIGHTING OPTION TYP. (SEE 6 / A3.2 FOR LIGHT MOUNTING AND BRACE DETAIL)
DIAGRAM
OPTIONAL ROOF MOUNTED A/C
INSTALLED w/ ROOF MOUNTED HVAC OPTION
6
H
SIDELIT ZONE, TYP
FRONT

NOTE: PROVIDE A MINIMUM OF 72 SF SOLAR READY AREA PER MODULE. AREA TO BE A MINIMUM OF 5' IN ANY DIRECTION WITH A MINIMUM SPACE OF 80 SF PER BUILDING.

**1** *1/4" = 1'-0"*
***ELECTRICAL PLAN***

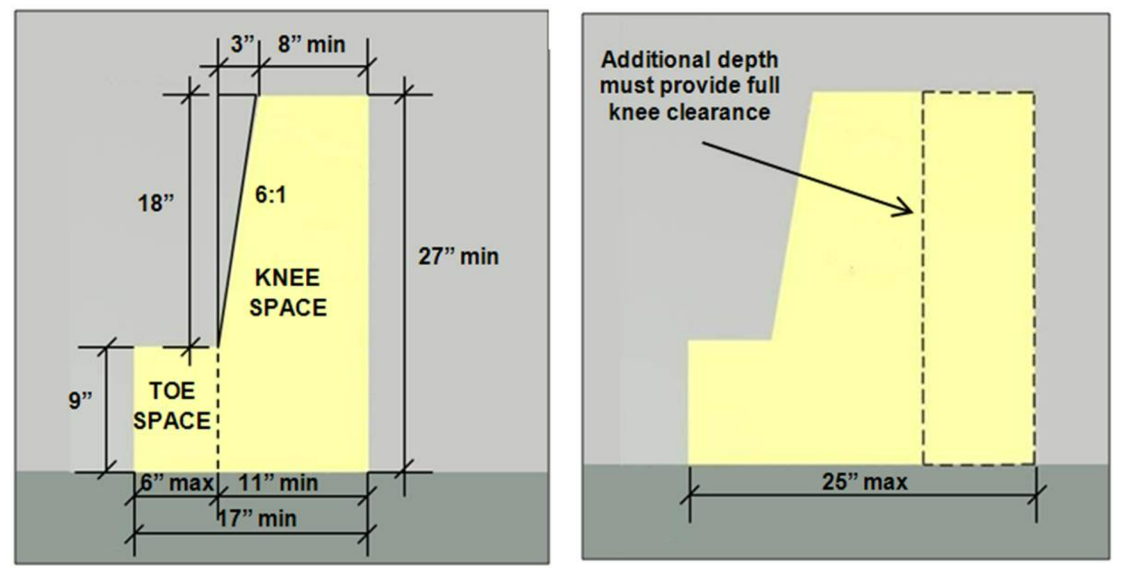
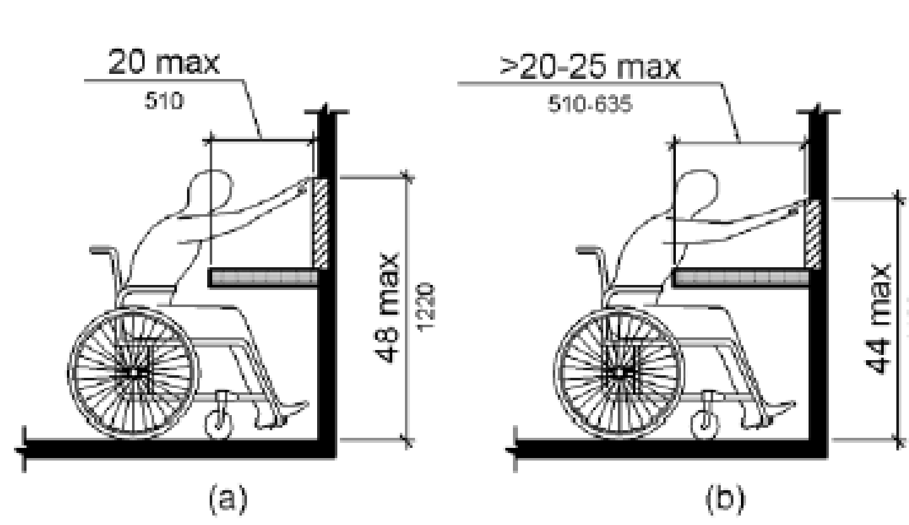
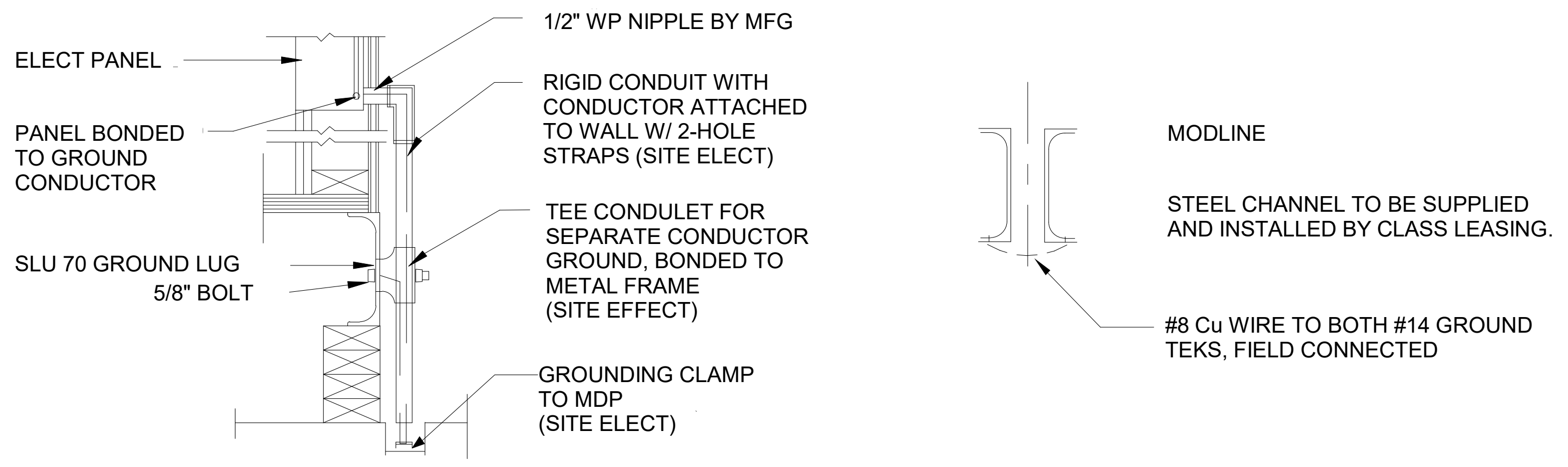


**Figure 308.2.2 Obstructed High Forward Reach**



(a) (b)

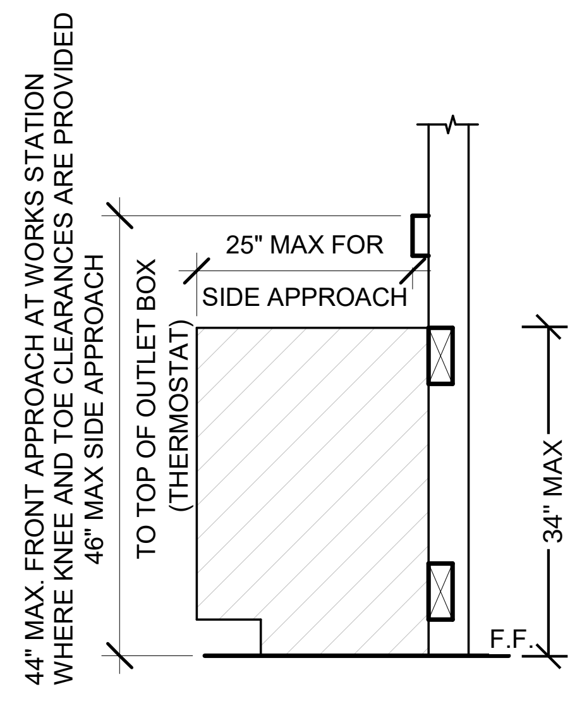
**6** **TOE SPACE CLEARANCE**


ELECT PANEL
PANEL BONDED TO GROUND CONDUCTOR
SLU 70 GROUND LUG
5/8" BOLT
1/2" WP NIPPLE BY MFG
RIGID CONDUIT WITH CONDUCTOR ATTACHED TO WALL W/ 2-HOLE STRAPS (SITE ELECT)
TEE CONDULET FOR SEPARATE CONDUCTOR GROUND, BONDED TO METAL FRAME (SITE EFFECT)
GROUNDING CLAMP TO MDP (SITE ELECT)
MODLINE
STEEL CHANNEL TO BE SUPPLIED AND INSTALLED BY CLASS LEASING.
#8 Cu WIRE TO BOTH #14 GROUND TEKS, FIELD CONNECTED

NOTES:

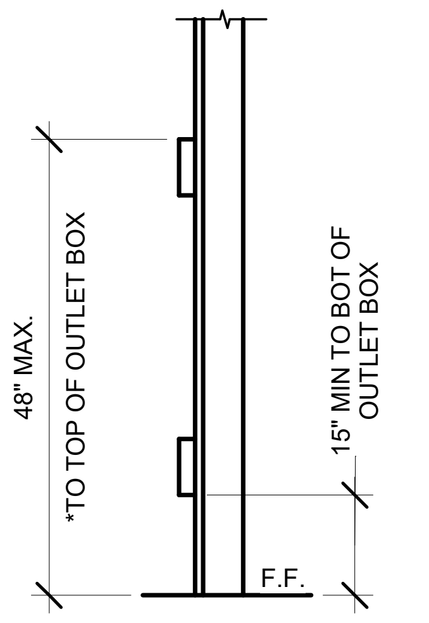
1. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELEC'L. PANEL & TO METAL BUILDING FRAME (CEC 250.52) IN ADDITION TO THE DETAIL SHOWN ABOVE. BOND THE ELECTRICAL GROUND TO METAL UNDERGROUND WATER PIPE IN DIRECT CONTACT WITH THE EARTH FOR 10 FT. OR MORE, IF AVAILABLE (CEC 250.52)
2. CHECK RESISTANT TO GROUND ROD. IF RESISTANCE EXCEEDS 25 OHMS. INSTALL ADDITIONAL GROUND RODS WITH CONDUCTORS AS SHOWN SEPARATED AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (CEC 250.56).
3. ELEC. TRADE SHALL CHECK AREA FOR EXISTING CONDUITS, SEWER, GAS & WATER PIPING BEFORE DRIVING GROUND RODS.
4. ALL MODULES OF STEEL FRAME BLDGS. SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING). BONDING SHALL INCLUDE METAL RAMP & STAIRS.
5. SIZE OF CONDUCTORS SHALL COMPLY WITH CEC TABLE 250.66

**2** *1 1/2" = 1'-0"*
***TYPICAL GROUNDING DETAIL***


44" MAX. FRONT APPROACH AT WORKS STATION WHERE KNEE AND TOE CLEARANCES ARE PROVIDED 46" MAX SIDE APPROACH
TO TOP OF OUTLET BOX (THERMOSTAT)
25" MAX FOR SIDE APPROACH
34" MAX
F.F.

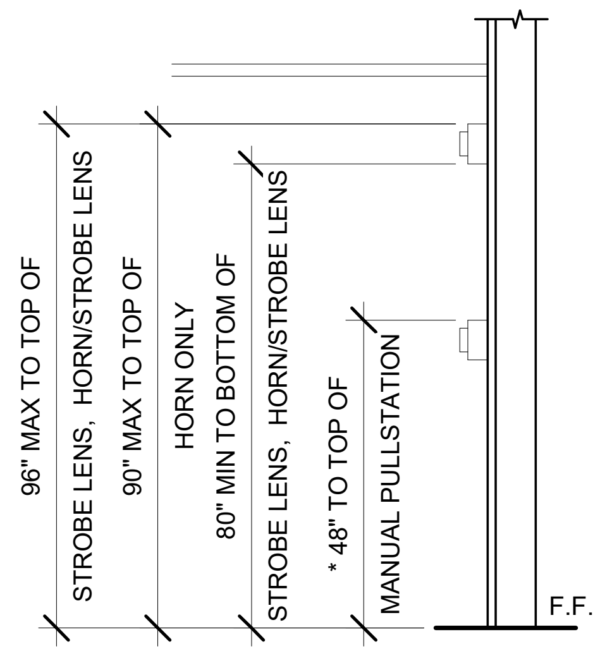
* SEE DETAIL 6/E1.0

**3** *1" = 1'-0"*
***ELEV. @ WORKSTATION***



* 30"x48" MIN CLR FLOOR SPACE AT EACH LOCATION FOR PERPENDICULAR APPROACH

**4** *1" = 1'-0"*
***MOUTING ELEV.***


96" MAX TO TOP OF STROBE LENS, HORN/STROBE LENS
90" MAX TO TOP OF HORN ONLY
80" MIN TO BOTTOM OF STROBE LENS, HORN/STROBE LENS
* 48" TO TOP OF MANUAL PULLSTATION
F.F.

* PROVIDE MIN 30"x48" CLR FLOOR SPACE FOR PERPENDICULAR APPROACH AT EACH LOCATION

THE SWITCH OR SWITCHES INSTALLED IN EMERGENCY LIGHTING CIRCUITS SHALL BE SO ARRANGED THAT ONLY AUTHORIZED PERSONNEL WILL HAVE CONTROL OF EMERGENCY LIGHTING. (CEC art. 700.20)

**5** *1" = 1'-0"*
***FIRE ALARM MOUNTING HEIGHTS***

## GENERAL GROUNDING NOTES

EACH BUILDING SHALL BE GROUNDED SEPARARELY WITH A ¾" ROUND X 8 FEET COPPERCLAD STEEL GROUND ROD. WHERE ROCK BOTOOM IS FOUND, DRIVE ROD AT 45 DEGREES MAXIMUM FROM THE VERTICAL OR HAVE IT BURIED IN A TRENCH 30" DEEP MINIMUM.

TESTING FOR RESISTANCE TO GROUND, IF RESISTANCE EXCEEDS 25 OHMS INSTALL ADDITIONAL GROUND RODS SEPARATED AT LEAST 6 FEET, UNTIL RESISTANCE REDUCES TO 25 OHMS OR LESS. GROUND TEST MUST BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND ALL GROUNDING SHALL BE IN ACCORDANCE WITH CEC ARTICLE 250

## 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 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE 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 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. 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.

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. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING 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 ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE 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 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI 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 SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP☐ MD☐ PP☐ E☒ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH HCAI PREAPPROVAL (OPM #) #________________.

## FIRE ALARM NOTES

PROVIDE SPACE ON ELECTRICAL PANEL FOR LOCK-ON BREAKER, IDENTIFIED WITH RED MARKING, FOR 120 VOLTS FIRE ALARM CIRCUIT, WITH BREAKER LABELED AS FIRE ALARM CIRCUIT, CEC 760.41 (B).
BREAKER AND CIRCUIT PROVIDED AND INSTALLED ON SITE BY OTHERS.

SMOKE AND HEAT DETECTOR CONDUIT AND DEVICES TO BE PROVIDED AND INTERCONNECTED TO THE FIRE ALARM SYSTEMS ON SITE BY OTHERS

APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF THIS FIRE ALARM SYSTEM FOR ALL SITES, THE FIRE ALARM SYSTEM AND COMPONENTS MAYBE REQUIRED TO BE CHANGED DUE TO EXISTING CONDITIONS OR INCOMPATIBLE COMPONENTS.

## CONDUIT FILL AND CONDUCTOR CAPACITY TABLE

(ALL CONDUCTORS SHALL BE TYPE THHN/THWN 75 DEG. C. COPPER)

| WIRE | CAPACITY | WIRE | NO. OF CONDUCTOR PERMITTED | | | |
|---|---|---|---|---|---|---|
| SIZE | | TYPE | 1/2" C | 3/4" C | 1" C | 1 1/4" C |
| #12 | 20A | THHN | 9 | 16 | 25 | 45 |
| #10 | 30A | THHN | 5 | 10 | 16 | 28 |
| #8 | 45A | THHN | 2 | 5 | 8 | 14 |
| #6 | 65A | THHN | 1 | 3 | 5 | 10 |
| #4 | 85A | THHN | 1 | 2 | 4 | 7 |

## JUNCTION BOX SIZE TABLE

| BOX | SIZE | CU. IN. | MAX NO. OF CONDUCTORS | | | |
|---|---|---|---|---|---|---|
| | | | #12 | #10 | #8 | #6 |
| 4SS | 1 1/4"x4" SQ | 18.0 | 8 | 7 | 6 | 0 |
| 4S | 1 1/2"x4" SQ | 21.0 | 9 | 8 | 7 | 0 |
| 4SD | 2 1/8"x4" SQ | 30.3 | 13 | 12 | 10 | 6 |
| 4SX | 2 7/8"x4" SQ | 43.5 | 23 | 21 | 17 | 10 |
| 5SD | 2 1/8"x4-11/16" SQ | 42.0 | 18 | 16 | 14 | 6 |
| 5SX | 3 7/8"x4-11/16" SQ | 86.0 | 38 | 34 | 28 | 17 |
| 664 | 4"x6" SQ | 144.0 | 64 | 57 | 48 | 28 |

* DEDUCT ONE CONDUCTOR FOR (1) OR MORE GROUNDING CONDUCTORS ENTERING THE BOX

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
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MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
ELECTRICAL PLAN
24x40

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
E1.0

SHEET OF

6/15/2021 11:52:06 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

| PANEL A 24" x40" | 120/208 VOLTS, 1ϕ, 3 WIRE | | | | | MAIN LUGS ONLY | | PANEL BOX= 100A | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LOADCENTER | RECESSED | | | | | GRD & NEUTRAL BARS | | AMP BUS | |
| | VOLTAMPS | | 10000 AIC | | | | | VOLTAMPS | | |
| DESCRIPTION | ϕ A | ϕ B | C/B | CKT | ϕ | CKT | C/B | ϕA | ϕ B | DESCRIPTION |
| AC WALL MOUNTED | 6670 | | 30 | 1 | A | 2 | 20 | 720 | | OUTLETS |
| | | 6670 | 30 | 3 | B | 4 | 20 | | 720 | OUTLETS |
| GENERAL LIGHTING | 720 | | 20 | 5 | A | 6 | 20 | 40 | | EXTERIOR LIGHT |
| EXTERIOR GFI/WP | | 180 | 20 | 7 | B | 8 | 20 | | | |
| | | | 20 | 9 | A | 10 | 20 | 40 | | FIRE ALARM |
| DED SOLAR READY | | | | | | | | | | |
| DED SOLAR READY | | | | | | | | | | |
| SUBTOTAL | ϕ A<br>7390 | ϕ B<br>6850 | | | | | | ϕA<br>800 | ϕ B<br>720 | SUBTOTAL |
| TOTAL | 8190 | 7570 | 8190 /120 VOLTS= 68.25<br>76.25 AMPS + .94= 77.19 AMPS | | | | | | | |

1 1" = 1'-0"
**ELECTRICAL PANEL_WALL MOUNTED**

| PANEL A 24" x40" | 120/208 VOLTS, 1 ϕ, 3 WIRE | | | | | MAIN LUGS ONLY | | PANEL BOX= 100A | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | LOADCENTER | RECESSED | | | | | GRD & NEUTRAL BARS | | AMP BUS | |
| | VOLTAMPS | | 10000 AIC | | | | | VOLTAMPS | | |
| DESCRIPTION | ϕ A | ϕ B | C/B | CKT | ϕ | CKT | C/B | ϕA | ϕ B | DESCRIPTION |
| AC Roof Mounted | 7360 | | 30 | 1 | A | 2 | 20 | 720 | | OUTLETS |
| | | 7360 | 30 | 3 | B | 4 | 20 | | 720 | OUTLETS |
| GENERAL LIGHTING | 720 | | 20 | 5 | A | 6 | 20 | 40 | | EXTERIOR LIGHT |
| EXTERIOR GFI/WP | | 180 | 20 | 7 | B | 8 | 20 | | | |
| | | | 20 | 9 | A | 10 | 20 | 40 | | FIRE ALARM |
| DED SOLAR READY | | | | | | | | | | |
| DED SOLAR READY | | | | | | | | | | |
| SUBTOTAL | ϕ A<br>8080 | ϕ B<br>7540 | | | | | | ϕA<br>800 | ϕ B<br>720 | SUBTOTAL |
| TOTAL | 8880 | 8260 | 8880 /120 VOLTS= 74<br>74 AMPS + 18.5= 92.5 AMPS | | | | | | | |

2 1" = 1'-0"
**ELECTRICAL PANEL_ROOF MOUNTED**

## LEGEND

| | | |
|---|---|---|
| ▬ | ELECTRICAL PANEL AT +60" AFF TO TOP OF ELECTRICAL PANEL WITH 1 1/2" DIA POWER STUB OUT | |
| ⬚ | ROOF MOUNTED HVAC UNIT-SEE MECHANICAL DWGS | |
| ▭ | WALL MOUNTED HVAC UNIT, SEE MECHANICAL DWGS | |
| ⧅ | 100 CFM CEILING MOUNTED EXHAUST FAN.<br>INTERLOCKED WITH LIGHT SWITCH | |
| WH | 4SD J-BOX FOR WATER HEATER LOCATE ABOVE CEILING W/ COVER PLATE, HARD WIRE TO UNIT | |
| H | 4SD J-BOX IN ATTIC FOR ATTIC MOUNTED HEAT DETECTOR (DEVICE BY OTHERS). MAXIMUM 35'-0" FROM ANY POINT IN ATTIC BUT NOT MORE THAN 25'-0" FROM TWO PERPENDICULAR WALL AND 50'-0" BETWEEN THEM. PROVIDE A 6'-0" CONDUIT FROM EACH J-BOX TO HEAT DETECTOR LOCATION. CONDUIT & CONNECTION TO CEILING DEVICE & DEVICE BY OTHERS (ALARM NOTE #1) | |
| S | 4SD J-BOX IN ATTIC FOR CEILING MOUNTED SMOKE DETECTOR (DEVICE BY OTHERS). MAXIMUM 21'-0" FROM ANY POINT IN ROOM BUT NOT MORE THAN 15'-0" TO A PERPENDICULAR WALL AND 30'-0" BETWEEN THEM. PROVIDE A 6'-O" CONDUIT FROM EACH J-BOX TO SMOKE DETECTOR LOCATION. CONDUIT & CONNECTION TO CEILING DEVICE & DEVICE BY OTHERS (ALARM NOTE #1) | |
| ▭ | RECESSED 4SD J-BOX W/ COVER PLATE FOR FUTURE FIRE ALARM SYSTEM BY OTHERS. MOUNT AT +18" AFF U.O.N. TO CENTERLINE OF BOX AND PROVIDE 1" CO STUB TO ATTIC SPACE WITH PULLSTRING | |
| H | 4SD J-BOX FOR EXTERIOR FIRE ALARM HORN (DEVICE BY OTHERS). MOUNT AT +90" AFF TO TOP OF DEVICE WITH 3/4" CONDUIT STUBBED TO ATTIC WITH PULLSTRING | |
| ○ | 4SD J-BOX/SINGLE GANG MUD RING FOR FIRE ALARM STROBE (DEVICE BY OTHERS).<br>BOTTOM OF LENS 80" MIN TOP OF LENS 96" MAX AFF WITH 3/4"CONDUIT TO EXTERIOR FIRE ALARM HORN WITH PULLSTRING | |
| ◪ | 4SD J-BOX/ SINGLE GANG MUD RING FOR FIRE ALARM PULL STATION (DEVICE BY OTHERS). MOUNT AT +48" AFF TO TOP OF CONTROL BOX WITH 3/4" CONDUIT TO FIRE ALARM STROBE WITH PULLSTRING | |
| EXIT | EXIT SIGN WITH BATTERY BACK UP. EXIT SIGN REQUIRED FOR CLASSROOMS WITH TWO OR MORE EXTERIOR DOORS.<br>FLS 90' BACK UP. CLASSROOMS WITH ONE EXTERIOR DOOR-OPTIONAL. | |
| ◷ | CLOCK OUTLET AT +90" AFF TO CENTERLINE OF DEVICE | |
| ⊤ | EXTERIOR LED LIGHT FIXTURE. 30w MAX WITH PHOTOCELL MOUNT AT +93" AFF | |
| ◑ ROOF | ROOF MOUNTED WEATHER PROOF GFI RECEPTACLE | MIN. + 15" TO BOTTOM OF BOX |
| ◑ GFI | GROUND FAULT CIRCUIT INTERRUPT RECEPTACLE WITHIN 6'-0" OF ALL SINKS | |
| ◑ WP | EXTERIOR WEATHER PROOF GFI RECEPTACLE AT +24" AFF FOR A/C SERVICES (MAX 25'-0" FROM UNITS) | |
| ⦶ | DUPLEX (WALL MOUNTED) RECEPTACLE 15A-125V-3 WIRE. MOUNT AT +15" AFF U.O.N. TO BOTTOM OF OUTLET BOX | |
| $ 3 | 3-WAY LIGHT SWITCH. MOUNT AT+48" AFF TO TOP OF SWITCH BOX | |
| $ | LIGHT SWITCH. MOUNT AT+48" AFF TO TOP OF SWTICH BOX | |
| $ D | SINGLE BUTTON DIMMER SWITCH, AT +48" AFF, TO TOP OF SWITCH BOX, WATTSTOPPER #LMDM-101 OR EQUAL | |
| WS-1 | SINGLE SWITCH WALL OCCUPANCY SENSOR.<br>WATTSTOPPER PW-100 OR EQUAL. SENSOR TO BE MOUNTED AT +44" AFF AND USE FOR OPEN ROOM (OR RESTROOM) LESS THAN 100 SQ FT W/ (1) CIRCUIT. | |
| US | ULTRASONIC CEILING OCCUPANCY SENSOR.<br>WATTSTOPPER W-500A OR EQUAL. SENSOR TO BE CONNECTED TO KEYED LIGHT SWITCHES FOR MANUAL OVERRIDE AND USE FOR RESTROOM W/ PARTITIONS. | |
| PC | CEILING MOUNTED PHOTOCELL, WATTSTOPPER #LMLS-500 OR EQUAL | |
| OS | CEILING MOUNTED OCCUPANCY SENSOR.<br>WATTSTOPPER #LMPC-100 OR EQUAL. | |
| ▯ | 2x4 CEILING LIGHT WITH (3) LED PANELIGHT, LAY-IN LIGHT FIXTURE WITH DIMMABLE BALLAST<br>DIMI LIGHTING-MODEL DM-P72448W-40K-ZZ<br>WATTAGE: 48W (48" LG) OR EQUAL | |
| ◩ | 2x4 CEILING LIGHT WITH (3) LED PANELIGHT, LAY-IN LIGHT FIXTURE WITH DIMMABLE BALLAST<br>DIMI LIGHTING-MODEL DM-P72448W-40K-ZZ<br>WATTAGE: 48W (48" LG) OR EQUAL<br>EACH LIGHT FIXTURE WHICH IS INDICATED AS BEING AN EMERGENCY LIGHT SHALL HAVE A BALLAST BATTERY PACK INSTALLED ON THE FIXTURE. THE BATTERY PACK SHALL PROVIDE POWER TO A SINGLE LAMP WITHIN THE FIXTURE FOR NO LESS THAN 90 MINUTES. ANY LIGHT FIXTURE Equipped WITH A BATTERY PACK SHALL BE WIRED IN SUCH A MANNER THAT THE BATTERY WILL BE ACTIVATED IMMEDIATELY UPON LOSS OF POWER TO THE FIXTURE. ADDITIONALLY THE BATTERY PACK SHALL BE OPERATED USING BATTERY POWER LIGHTING CONTROL SWITCHES AND SENSORS SHALL NOT BE ABLE TO SHUT THE FIXTURE OFF. | |

NOTE: SEE 4/A3.2 FOR PHOTOMETRIC DATA

3 1" = 1'-0"
**LEGEND**

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

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ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
ELECTRICAL
SCHEDULES 24x40

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
E1.1

SHEET OF

| ABB. | DESCRIPTION | SYMBOL |
|---|---|---|
| WM | WALL MOUNTED UNIT<br>(SEE SCHEDULE THIS SHEET) | WM-1 |
| RM | ROOF MOUNTED UNIT<br>(SEE SCHEDULE THIS SHEET) | RM-1 |
| P.O.C | POINT OF CONNECTION | P.O.C |
| CO | CARBON MONOXIDE SENSOR | CO |
| BT | BYPASS TIMER | BT |
| STAT | THERMOSTAT | T |
| UC | UNDERCUT DOOR | UC |
| MVD | MANUAL VOLUME DAMPER | |
| FD | FIRE DAMPER | ● |
| VTR | VENT THRU ROOF | |
| ER | EXHAUST CEILING REGISTER | ⊠ |
| CR | RETURN CEILING REGISTER | ⧄ |
| CD | SUPPLY CEILING DIFFUSER | ⊠ |
| (L) | LINED DUCTWORK | |
| EAD | EXHAUST AIR DUCT | |
| RAD | RETURN AIR DUCT | |
| SAD | SUPPLY AIR DUCT | |
| EF | EXHAUST FAN | EF - |
| CO2 | CARBON DIOXIDE SENSOR | CO2 |

1 *1" = 1'-0"*
***LEGEND***

## CEILING MOUNTED EXHAUST FAN

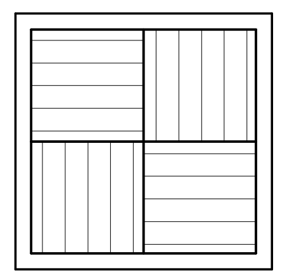
| SYM. | USE | MFR/MODEL | CFM | SOUND LEVEL | SP | VOLTS | Ø | POWER | WGT# | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| EF A | BATHROOM EXHAUST | *BROAN L100 | 109 | 1.0 SONES | 0.25 | 120 | 1 | 87 WATTS | 22.80# | WITH BROAN ROOF CAP #634. PROVIDE 6" DIA. EXHAUST DUCT UP TO ROOF. INTERLOCK WITH LIGHT SWITCH. |
| EF B | BATHROOM EXHAUST | *BROAN L200 | 210 | 2.0 SONES | 0.25 | 120 | 1 | 127 WATTS | 23# | WITH BROAN ROOF CAP #634. PROVIDE 8" DIA. EXHAUST DUCT UP TO ROOF. INTERLOCK WITH LIGHT SWITCH. |
| EF C | BATHROOM EXHAUST | *BROAN L300 | 308 | 2.8 SONES | 0.25 | 120 | 1 | 212 WATTS | 23.1O# | WITH BROAN ROOF CAP #634. PROVIDE 8" DIA. EXHAUST DUCT UP TO ROOF. INTERLOCK WITH LIGHT SWITCH. |
| EF D | BATHROOM EXHAUST | *BROAN 676 | 100 | 4.0 SONES | 0.25 | 120 | 1 | 156 WATTS | 7# | WITH BROAN ROOF CAP #636. PROVIDE 4" DIA. EXHAUST DUCT UP TO ROOF. INTERLOCK WITH LIGHT SWITCH. |

*OR APPROVED EQUAL.

2 *1" = 1'-0"*
***CEILING MOUNTED EXHAUST FAN SCHEDULE***

## PERFORATED FACE GRILLE SCHEDULE (SUPPLY)

16x16-4W



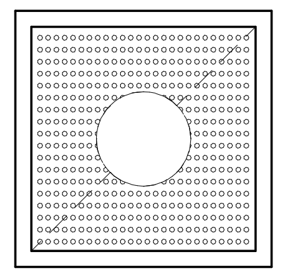
T-BAR SUPPLY

Fixed Curve Blade, 4-way throw
(WITH INTEGRAL DAMPER)

| NECK SIZE | CFM ( RANGE) | NOTES |
|---|---|---|
| 6"Ø | 0-150 | SEE DETAIL FOR MAKE AND MODEL |
| 8"Ø | 150-230 | SEE DETAIL FOR MAKE AND MODEL |
| 10"Ø | 230-350 | SEE DETAIL FOR MAKE AND MODEL |
| 12"Ø | 350-460 | SEE DETAIL FOR MAKE AND MODEL |
| 14"Ø | 460-640 | SEE DETAIL FOR MAKE AND MODEL |

3 *1" = 1'-0"*
***PFG SCHED (SUPPLY)***

## PERFORATED FACE GRILLE SCHEDULE (RETURN)



T-BAR RETURN

Perforated Face

Shoemaker 105P with 24 ga. 45 deg.

| NECK SIZE | CFM ( RANGE) | NOTES |
|---|---|---|
| 6"Ø | 0-230 | SEE MECH CLG PLAN FOR SIZE |
| 10"Ø | 230-460 | SEE MECH CLG PLAN FOR SIZE |
| 12"Ø | 350-460 | SEE MECH CLG PLAN FOR SIZE |
| 14"Ø | 460-710 | SEE MECH CLG PLAN FOR SIZE |
| 16"Ø | 277-1664 | SEE MECH CLG PLAN FOR SIZE |

TESTS TO BE COMPLETED ON NEWLY INSTALLED OR REPLACEMENT OF MECHANICAL SYSTEMS BEFORE PROJECT COMPLETION PER THE CALIFORNIA ENERGY CODE SECTION 10-103. ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTITIED ACCEPTANCE TEST TECHNICIAN(ATT). THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED, AND DEFICIENCIES CORRECTED UNTIL THE INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA. COMPLETED NRCA FORMS SHALL BE SUBMITTED TO THE PROJECT INSPECTOR AND THE DISTRICT.

4 *1" = 1'-0"*
***PFG SCHED (RETURN)***

**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 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE 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 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. 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.

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. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING 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 ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE 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 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

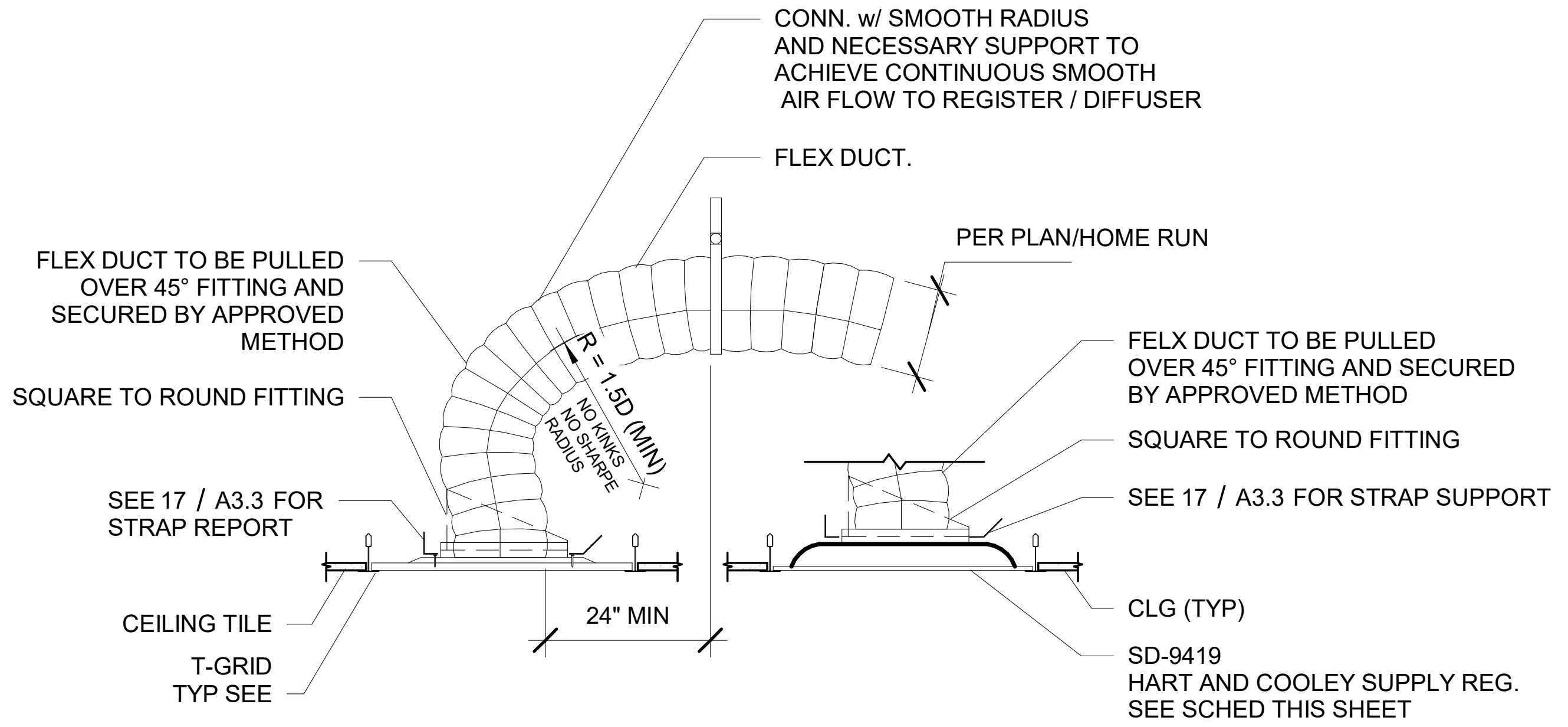
THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

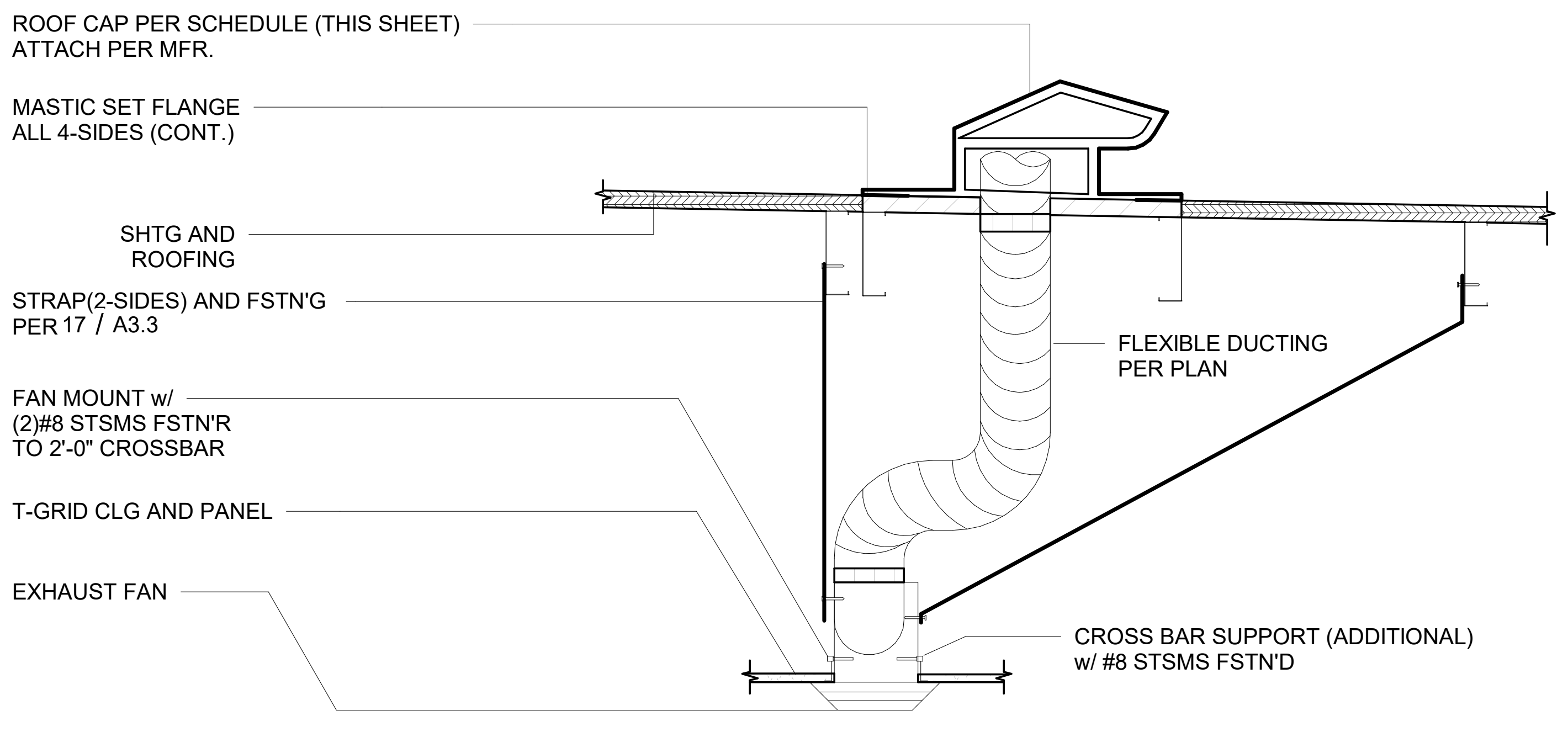
MP☒ MD☒ PP☐ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH HCAI PREAPPROVAL (OPM #) #__________________.

5 *1" = 1'-0"*
***EQUIPMENT ANCHORAGE***

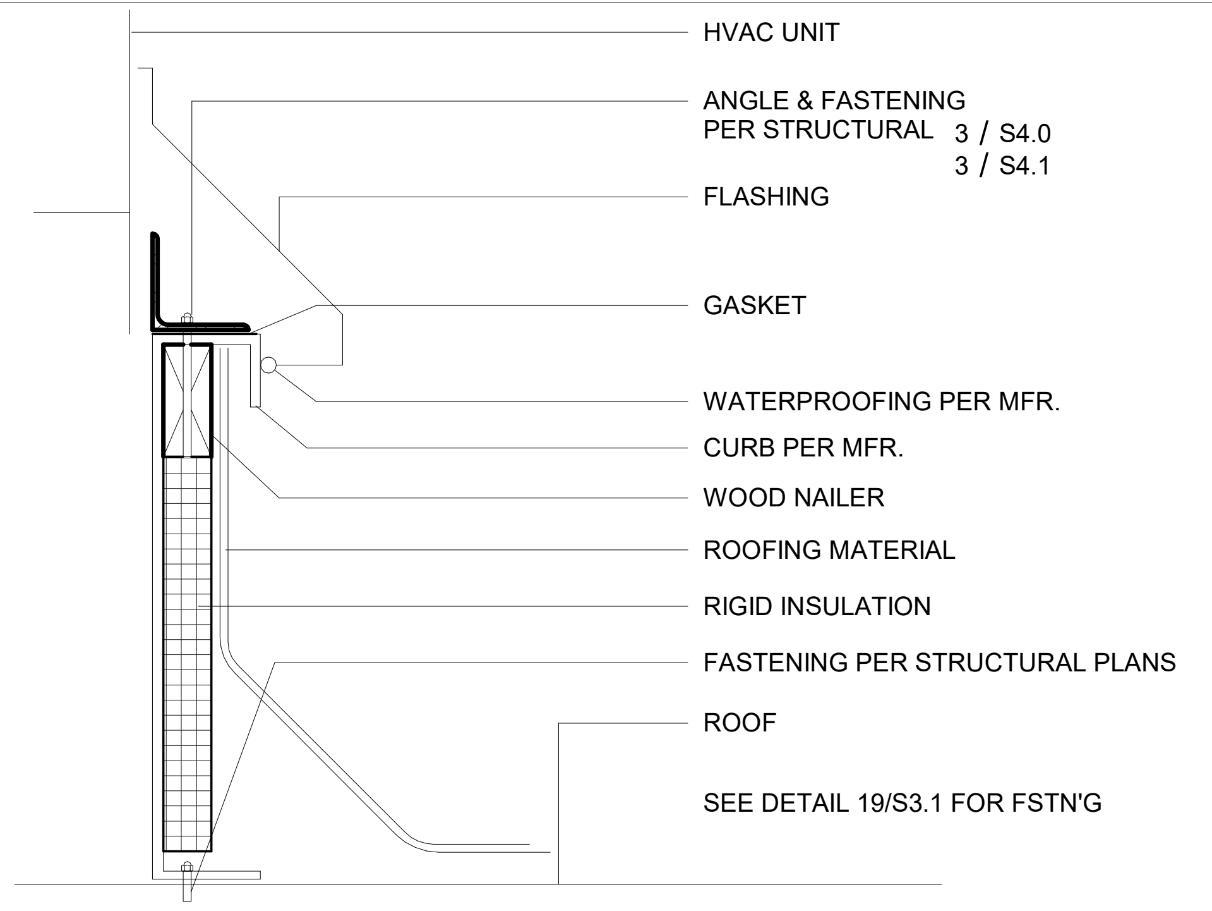


CONN. w/ SMOOTH RADIUS AND NECESSARY SUPPORT TO ACHIEVE CONTINUOUS SMOOTH AIR FLOW TO REGISTER / DIFFUSER
FLEX DUCT.
PER PLAN/HOME RUN
FLEX DUCT TO BE PULLED OVER 45° FITTING AND SECURED BY APPROVED METHOD
SQUARE TO ROUND FITTING
R = 1.5D (MIN)
NO KINKS NO SHARPE RADIUS
SEE 17 / A3.3 FOR STRAP REPORT
FELX DUCT TO BE PULLED OVER 45° FITTING AND SECURED BY APPROVED METHOD
SQUARE TO ROUND FITTING
SEE 17 / A3.3 FOR STRAP SUPPORT
CEILING TILE
T-GRID TYP SEE
24" MIN
CLG (TYP)
SD-9419 HART AND COOLEY SUPPLY REG. SEE SCHED THIS SHEET

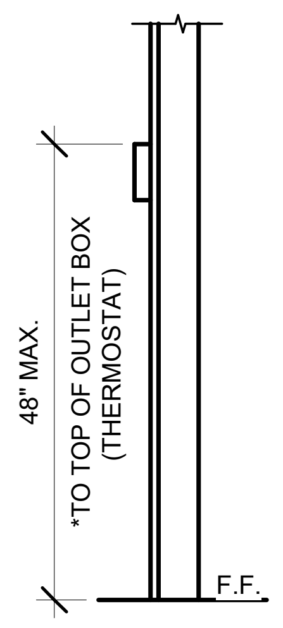


ROOF CAP PER SCHEDULE (THIS SHEET) ATTACH PER MFR.
MASTIC SET FLANGE ALL 4-SIDES (CONT.)
SHTG AND ROOFING
STRAP(2-SIDES) AND FSTN'G PER 17 / A3.3
FAN MOUNT w/ (2)#8 STSMS FSTN'R TO 2'-0" CROSSBAR
T-GRID CLG AND PANEL
EXHAUST FAN
FLEXIBLE DUCTING PER PLAN
CROSS BAR SUPPORT (ADDITIONAL) w/ #8 STSMS FSTN'D

SEE ISOMETRIC DETAIL 17/A3.3 FOR STRAPS

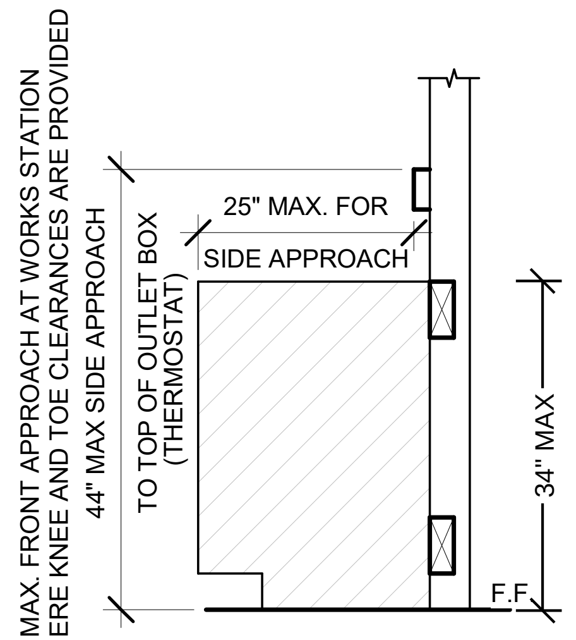


HVAC UNIT
ANGLE & FASTENING PER STRUCTURAL 3 / S4.0 3 / S4.1
FLASHING
GASKET
WATERPROOFING PER MFR.
CURB PER MFR.
WOOD NAILER
ROOFING MATERIAL
RIGID INSULATION
FASTENING PER STRUCTURAL PLANS
ROOF
SEE DETAIL 19/S3.1 FOR FSTN'G



* 30"x48" MIN CLR FLOOR SPACE AT EACH LOCATION FOR PERPENDICULAR APPROACH

9 *1" = 1'-0"*
***MOUNTING ELEV.***



44" MAX. FRONT APPROACH AT WORKS STATION WHERE KNEE AND TOE CLEARANCES ARE PROVIDED
44" MAX SIDE APPROACH
TO TOP OF OUTLET BOX (THERMOSTAT)
25" MAX. FOR SIDE APPROACH
34" MAX
F.F.

* SEE DETAIL 2/M0.2

10 *1" = 1'-0"*
***ELEV. @ WORKSTATION***

## 10.6 EER and 11 EER

SINGLE PACKAGE VERTICAL HEAT PUMP SCHEDULE

| | STANDARD | OPTION #I |
|---|---|---|
| TAG | WM-1 | WM-1 |
| NOMINAL TONNAGE | 3.0 TONS | 4.0 TONS |
| MANUFACTURER | **BARD | **BARD |
| MODEL# | W36HB-A | W48HC-A |
| CFM | 1150 | 1500 |
| STATIC PRESSURE | 0.15 | 0.2 |
| MIN OSA | 365 | 548 |
| DRIVE | DIRECT | DIRECT |
| MCA | 20.4 | 58 |
| MOCP | 30 | 60 |
| VOLTAGE | 208/230-1 | 208/230-1 |
| WIRE SIZE (PWR/GRND) | #6/#10 | #6/#10 |
| DESIGN RETURN AIR (DB/WB) | 80/67 | 80/67 |
| SENSIBLE COOLING @ 95º F (PART/FULL) | 24.00/28.00 | 25.900/36.00 |
| TOTAL COOLING @ 95º F (PART/FULL) | 32.00/36.00 | 34.000/45.500 |
| HEATING CAP. BTUH @ 47º F (PART/FULL) | 29.200/32.200 | 29.200/41.500 |
| HEATING CAP. BTUH @ 17º F | 20.000 | 26.000 |
| OPERATING WEIGHT | 380# | 550# |
| EER | 11.10 | 11.00 |
| COP @ 47º F | 3.30 | 3.00 |
| COP @ 17º F | - | 2.00 |

## ~~14 SEER~~

~~SINGLE PACKAGE ROOF TOP HEAT PUMP SCHEDULE~~

| | ~~STANDARD~~ | ~~OPTION #I~~ |
|---|---|---|
| ~~TAG~~ | ~~RM-1~~ | ~~RM-1~~ |
| ~~NOMINAL TONNAGE~~ | ~~3.0 TONS~~ | ~~4 TONS~~ |
| ~~MANUFACTURER~~ | ~~**CARRIER~~ | ~~**CARRIER~~ |
| ~~MODEL#~~ | ~~50VTC48~~ | ~~50VTC48~~ |
| ~~CFM~~ | ~~1200~~ | ~~1500~~ |
| ~~STATIC PRESSURE~~ | ~~0.15~~ | ~~0.4~~ |
| ~~MIN OSA~~ | ~~365~~ | ~~548~~ |
| ~~DRIVE~~ | ~~BELT~~ | ~~BELT~~ |
| ~~MCA~~ | ~~59~~ | ~~64~~ |
| ~~MOCP~~ | ~~60~~ | ~~74~~ |
| ~~VOLTAGE~~ | ~~208/230-1~~ | ~~208/230-1~~ |
| ~~WIRE SIZE (PWR/GRND)~~ | ~~#6/#10~~ | ~~#4/#8~~ |
| ~~DESIGN RETURN AIR (DB/WB)~~ | ~~80/67~~ | ~~80/67~~ |
| ~~SENSIBLE COOLING @ 95º F~~ | ~~30.500~~ | ~~35.260~~ |
| ~~TOTAL COOLING @ 95º F~~ | ~~35.600~~ | ~~49.600~~ |
| ~~HEATING CAP. BTUH @ 47º F~~ | ~~35.500~~ | ~~45.5000~~ |
| ~~HEATING CAP. BTUH @ 17º F~~ | ~~18.400~~ | ~~28.600~~ |
| ~~OPERATING WEIGHT~~ | ~~572#~~ | ~~560#~~ |
| ~~SEER~~ | ~~14.00~~ | ~~14.00~~ |
| ~~HSPF~~ | ~~8.1~~ | ~~8.0~~ |
| ~~COP @ 47º F~~ | ~~3.4~~ | ~~3.4~~ |
| ~~COP @ 17º F~~ | ~~2.3~~ | ~~2.4~~ |

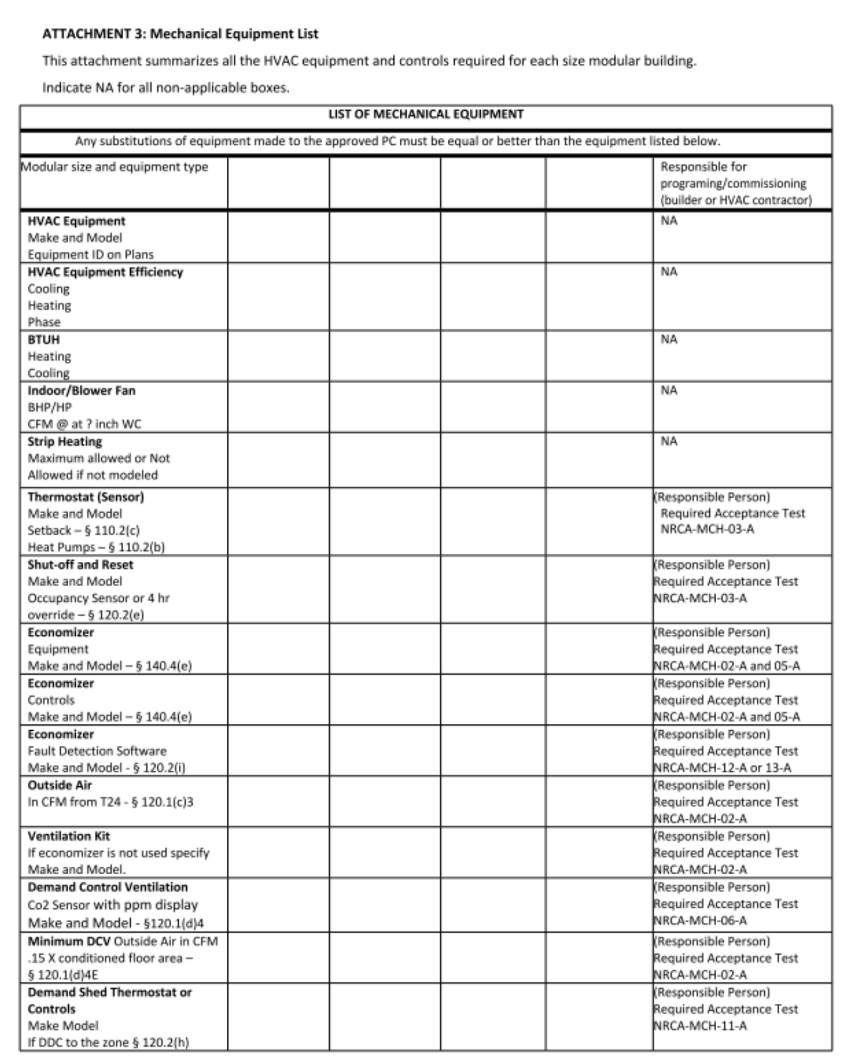
HVAC NOTES
1. SET BACK THERMOSTAT SHALL BE PROVIDED
2. MINIMUM OUTSIDE AIR 15 CFM PER OCCUPANT AND THE UNIT SHALL UTILIZE DEMAND CONTROL VENTILATION
3. MODEL NUMBERS FOR HEAT PUMP UNITS WITH OPTIONAL 5.0 AUXILIARY HEAT STRIPS, WHEN THE HEAT STRIP IS NOT USED, THE MCA AND MOCP MUST BE VERIFIED AND HEAT STRIPS LARGER THAN THE SIZES SHOWN MAY NOT BE USED.

120.1(D)
THERMOSTAT SHALL BE PROGRAMED WITH EXPECTED OCCUPIED TIMES.AIR HANDLER FAN WILL BE PROGRAMED TO RUN DURING ALL OCCUPIED TIMES.PRE-OCCUPANCY PURGE SHALL BE PROGRAMED ONE HOUR PRIOR TO THE MODULAR BUILDING BEING NORMALLY OCCUPIED.

FOR ROOF MOUNTED HVAC UNITS A GASKET SHALL BE PLACED BETWEEN THE CURB AND THE HVAC UNIT.MASTIC SEALANT SHALL BE USED TO SEAL ALL SEAMS BETWEEN THE HVAC UNIT AND THE CURB. THE SUPPLY AND RETURN DUCTS SHALL BE ATTACHED TO THE CURB AND MASTIC SHALL BE USED TO SEAL THE DUCTS TO THE CURB. THE SUPPLY AND RETURN DUCTS SHALL BE THE SAME SIZE AND ALIGN WITH THE HVAC UNIT.

FLEXIBLE AIR DUCTS AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE PER ENERGY CODE 120.4.

DUCT INSTALLATION AND PLENUMS SHALL MEET THE REQUIREMENTS OF ENERGY CODE SECTION 120.4 AND THE MANUFACTURERS INSTALLATION INSTRUCTIONS.
HORIZONTAL FLEX DUCT SHALL BE SUPPORTED AT A MAXIMUM 4 FT INTERVALS, WITH HANGING STRAPS A MINIMUM 1 1/2 IN. WIDE.
DUCTS MUST BE PULLED TIGHT WITH A MAXIMUM SAG OF ½" PER FOOT OF HORIZONTAL RUN.
DUCT SHALL NOT BE KINKED OR CRUSHED.
BEND/RADIUS EQUAL TO THE DUCT DIAMETER OR GREATER.



**ATTACHMENT 3: Mechanical Equipment List**

This attachment summarizes all the HVAC equipment and controls required for each size modular building.

Indicate NA for all non-applicable boxes.

**LIST OF MECHANICAL EQUIPMENT**

Any substitutions of equipment made to the approved PC must be equal or better than the equipment listed below.

| Modular size and equipment type | | | | | Responsible for programing/commissioning (builder or HVAC contractor) |
|---|---|---|---|---|---|
| **HVAC Equipment**<br>Make and Model<br>Equipment ID on Plans | | | | | NA |
| **HVAC Equipment Efficiency**<br>Cooling<br>Heating<br>Phase | | | | | NA |
| **BTUH**<br>Heating<br>Cooling | | | | | NA |
| **Indoor/Blower Fan**<br>BHP/HP<br>CFM @ at ? inch WC | | | | | NA |
| **Strip Heating**<br>Maximum allowed or Not Allowed if not modeled | | | | | NA |
| **Thermostat (Sensor)**<br>Make and Model<br>Setback – § 110.2(c)<br>Heat Pumps – § 110.2(b) | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-03-A |
| **Shut-off and Reset**<br>Make and Model<br>Occupancy Sensor or 4 hr override – § 120.2(e) | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-03-A |
| **Economizer**<br>Equipment<br>Make and Model – § 140.4(e) | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A and 05-A |
| **Economizer**<br>Controls<br>Make and Model – § 140.4(e) | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A and 05-A |
| **Economizer**<br>Fault Detection Software<br>Make and Model - § 120.2(i) | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-12-A or 13-A |
| **Outside Air**<br>In CFM from T24 - § 120.1(c)3 | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A |
| **Ventilation Kit**<br>If economizer is not used specify Make and Model. | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A |
| **Demand Control Ventilation**<br>Co2 Sensor with ppm display<br>Make and Model - §120.1(d)4 | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-06-A |
| **Minimum DCV** Outside Air in CFM .15 X conditioned floor area – § 120.1(d)4E | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A |
| **Demand Shed Thermostat or Controls**<br>Make Model<br>If DDC to the zone § 120.2(h) | | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-11-A |

## HVAC SCHEDULE

| BUILDING SIZE | # OF HVAC | |
|---|---|---|
| | 3 1/2 TON HVAC | 4 TON HVAC |
| ☒ 24' x 40' | 1 | |
| ☐ 36' x 40' | | 1 |
| ☐ 48' x 40' | 2 | |
| ☐ 60' x 40' | | 2 |
| ☐ 72' x 40' | 3 | |
| ☐ 84' x 40' | | 3 |
| ☐ 96' x 40' | 4 | |
| ☐ 108' x 40' | | 4 |
| ☐ 120' x 40' | 5 | |

MERV 13 AND 2-INCH DEPTH PER ENERGY CODE 120.1(C)1. FILTERS REQ'D FOR ALL UNITS

SECTION 915
CARBON MONOXIDE DETECTION

915.2.3 Group E occupancies. Carbon monoxide detection shall be installed in classrooms in Group E occupancies. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed byschool personnel.

915.3 Detection equipment. Carbon monoxide detection required by Sections 915.1 through 915.2.3 shall be provided by carbon monoxide alarms complying with Section 915.4 or carbon monoxide detection systems complying with Section 915.5.

CFC 915.1 - Classrooms which contain a fuel-burning appliance or a fuel-burning fireplace or are supplied by a forced-air furnace shall be provided with a carbon monoxide detexction system. Provide a carbon monoxide detection system

GENERAL NOTE:
UTLILITIES THAT SPAN BETWEEN UNITS OR ACROSS SEISMIC SEPARATION JOINTS MUST BE DESIGNED WITH A FLEXIBLE CONNECTION THAT CAN ACCOMMODATE DIFFERENTIAL MOVEMENTS

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

**THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©**

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
MISCELLANEOUS
NOTES & DETAILS

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

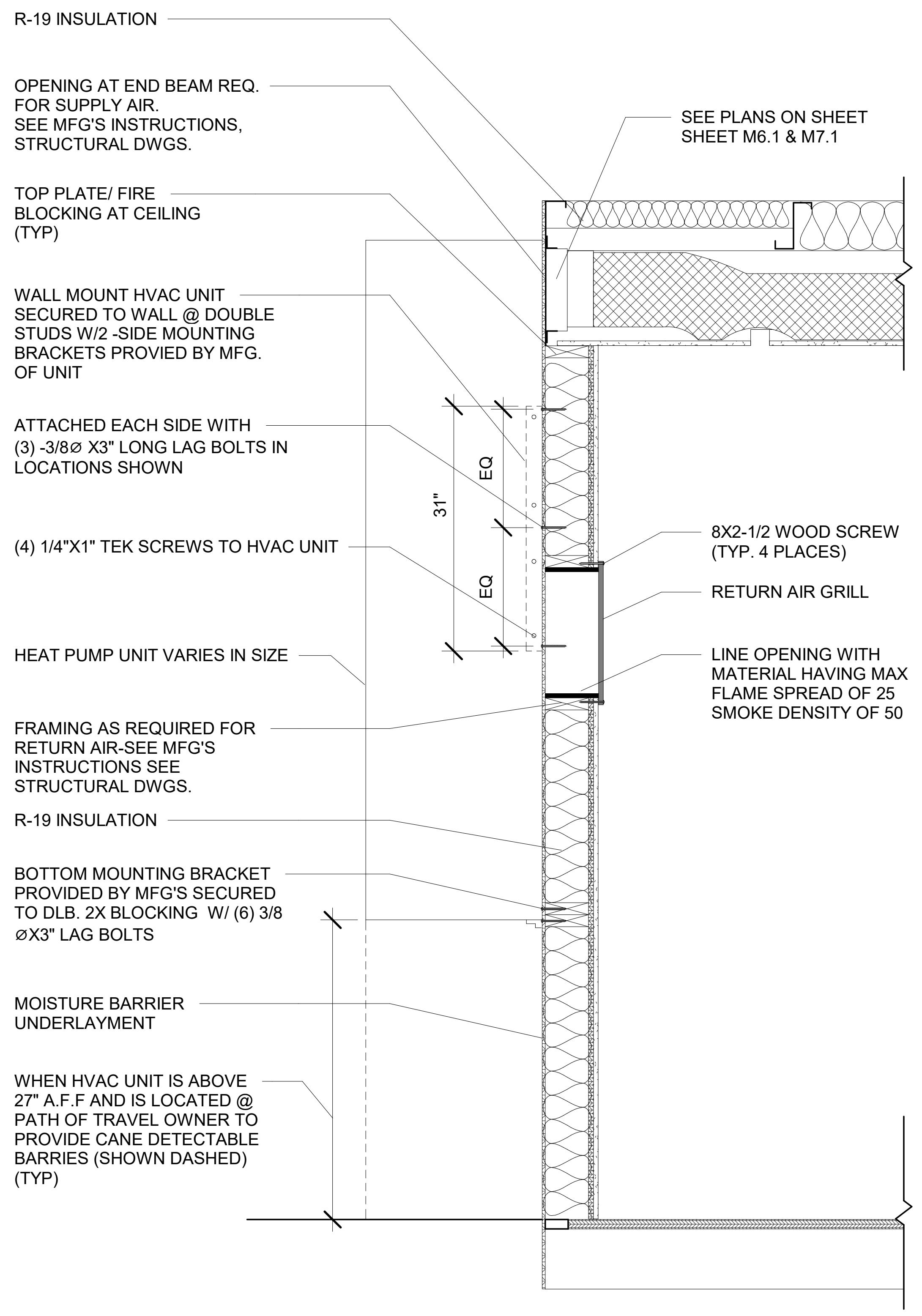
CHECKED BY
RH/RT

DATE

SHEET NO.
M0.1

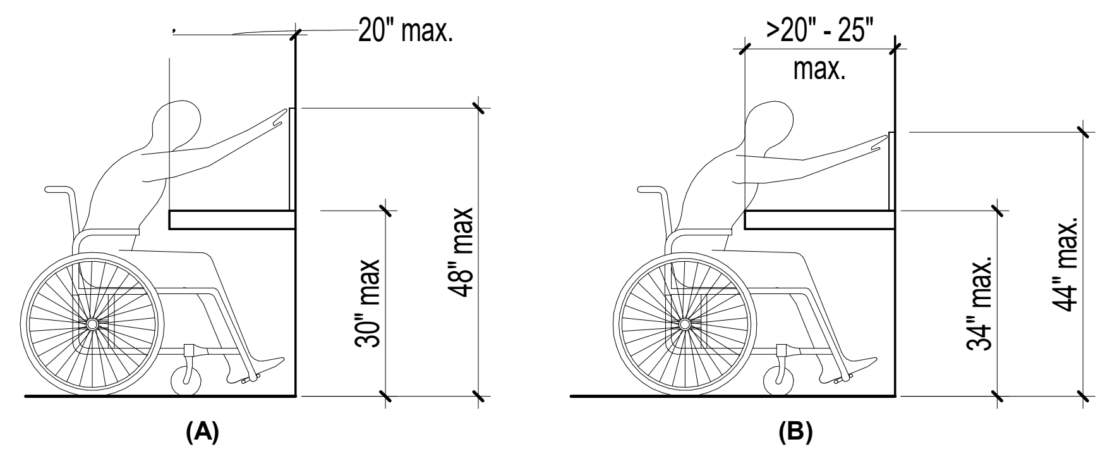
SHEET OF

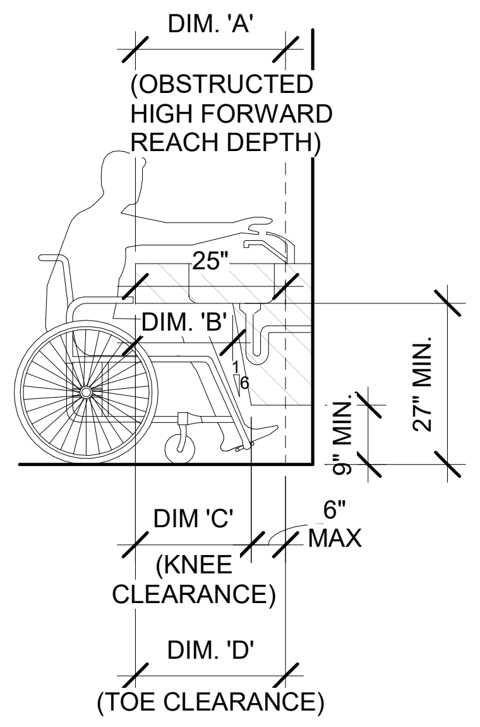
6/15/2021 11:53:12 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt


R-19 INSULATION
OPENING AT END BEAM REQ. FOR SUPPLY AIR. SEE MFG'S INSTRUCTIONS, STRUCTURAL DWGS.
SEE PLANS ON SHEET SHEET M6.1 & M7.1
TOP PLATE/ FIRE BLOCKING AT CEILING (TYP)
WALL MOUNT HVAC UNIT SECURED TO WALL @ DOUBLE STUDS W/2 -SIDE MOUNTING BRACKETS PROVIDED BY MFG. OF UNIT
ATTACHED EACH SIDE WITH (3) -3/8Ø X3" LONG LAG BOLTS IN LOCATIONS SHOWN
31"
EQ
EQ
(4) 1/4"X1" TEK SCREWS TO HVAC UNIT
8X2-1/2 WOOD SCREW (TYP. 4 PLACES)
RETURN AIR GRILL
HEAT PUMP UNIT VARIES IN SIZE
LINE OPENING WITH MATERIAL HAVING MAX FLAME SPREAD OF 25 SMOKE DENSITY OF 50
FRAMING AS REQUIRED FOR RETURN AIR-SEE MFG'S INSTRUCTIONS SEE STRUCTURAL DWGS.
R-19 INSULATION
BOTTOM MOUNTING BRACKET PROVIDED BY MFG'S SECURED TO DLB. 2X BLOCKING W/ (6) 3/8 ØX3" LAG BOLTS
MOISTURE BARRIER UNDERLAYMENT
WHEN HVAC UNIT IS ABOVE 27" A.F.F AND IS LOCATED @ PATH OF TRAVEL OWNER TO PROVIDE CANE DETECTABLE BARRIES (SHOWN DASHED) (TYP)

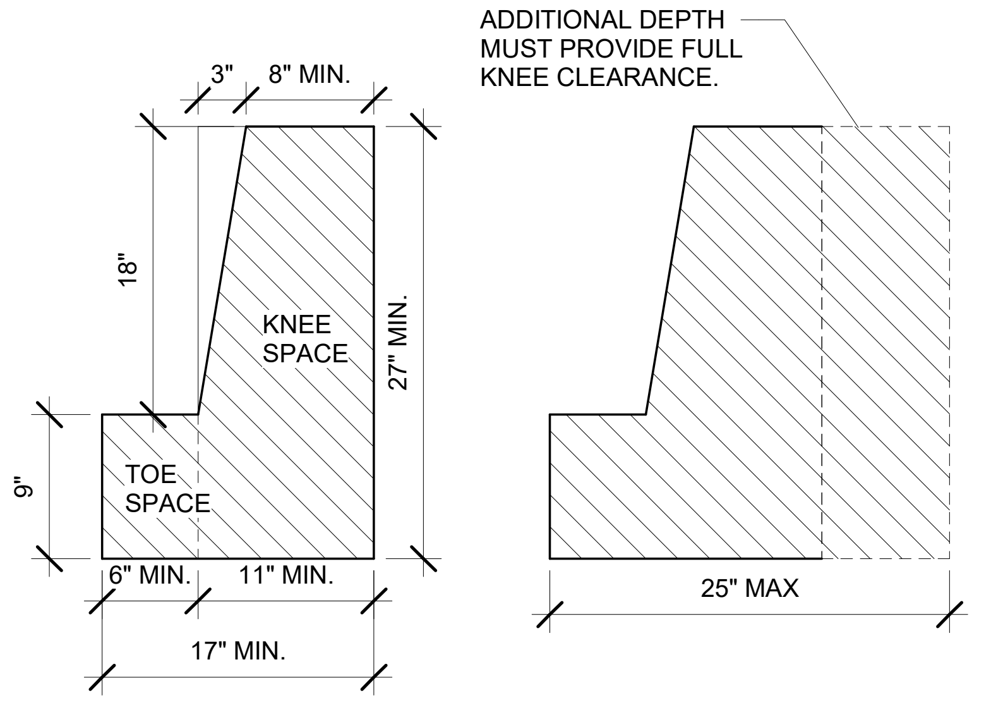
**1** *3/4" = 1'-0"*
***HVAC @ WALL SECTION***

FIGURE 308.2.2. OBSTRUCTED HIGH FORWARD REACH





| DIM. 'A' | DIM. 'B' | DIM. 'C' | DIM. 'D' |
|---|---|---|---|
| 17" | 8" | 11" | 17" |
| 18" | 9" | 12" | 18" |
| 19" | 10" | 13" | 19" |
| 20" | 11" | 14" | 20" |
| 21" | 12" | 15" | 21" |
| 22" | 13" | 16" | 22" |
| 23" | 14" | 17" | 23" |
| 24" | 15" | 18" | 24" |
| 25" | 16" | 19" | 25" |



**2** ***TOE SPACE CLEARANCE***

120.1(D)
THERMOSTAT SHALL BE PROGRAMED WITH EXPECTED OCCUPIED TIMES.AIR HANDLER FAN WILL BE PROGRAMED TO RUN DURING ALL OCCUPIED TIMES.PRE-OCCUPANCY PURGE SHALL BE PROGRAMED ONE HOUR PRIOR TO THE MODULAR BUILDING BEING NORMALLY OCCUPIED.

FOR ROOF MOUNTED HVAC UNITS A GASKET SHALL BE PLACED BETWEEN THE CURB AND THE HVAC UNIT.MASTIC SEALANT SHALL BE USED TO SEAL ALL SEAMS BETWEEN THE HVAC UNIT AND THE CURB. THE SUPPLY AND RETURN DUCTS SHALL BE ATTACHED TO THE CURB AND MASTIC SHALL BE USED TO SEAL THE DUCTS TO THE CURB.
THE SUPPLY AND RETURN DUCTS SHALL BE THE SAME SIZE AND ALIGN WITH THE HVAC UNIT.

FLEXIBLE AIR DUCTS AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE PER ENERGY CODE 120.4.

DUCT INSTALLATION AND PLENUMS SHALL MEET THE REQUIREMENTS OF ENERGY CODE SECTION 120.4 AND THE MANUFACTURERS INSTALLATION INSTRUCTIONS.
HORIZONTAL FLEX DUCT SHALL BE SUPPORTED AT A MAXIMUM 4 FT INTERVALS, WITH HANGING STRAPS A MINIMUM 1 1/2 IN. WIDE.
DUCTS MUST BE PULLED TIGHT WITH A MAXIMUM SAG OF ½" PER FOOT OF HORIZONTAL RUN.
DUCT SHALL NOT BE KINKED OR CRUSHED.
BEND/RADIUS EQUAL TO THE DUCT DIAMETER OR GREATER.

UPON SITE PLACEMENT OR SITE CONSTRUCTION, THE OPERATION AND MAINTENANCE DOCUMENTATION FOR ALL MECHANICAL AND LIGHTING SYSTEMS AND CONTROLS SHALL BE PROVIDED BY THE MODULAR BUILDING MANUFACTURER, OR THE GENERAL CONTRACTOR FOR THE PERMANENT MODULAR RELOCATABLE BUILDING AND DELIVERED TO THE OWNER.

AT THE TIME OF ROUGH INSTALLATION, DURING IN THE FACTORY OR ON THE CONSTRUCTION SITE, DURING SHIPMENT (IF APPLICABLE) AND UNTIL FINAL STARTUP OF THE HEATING COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED DISTRIBUTION COMPONENT OPENINGS SHALL BE PROCTED TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM

**3** *1/4" = 1'-0"*
***MECHANICAL NOTES***

**ATTACHMENT 3: Mechanical Equipment List**

This attachment summarizes all the HVAC equipment and controls required for each size modular building.

Indicate NA for all non-applicable boxes.

**LIST OF MECHANICAL EQUIPMENT**

Any substitutions of equipment made to the approved PC must be equal or better than the equipment listed below.

| Modular size and equipment type | 4.0 TON WM HVAC | 5.0 TON WM HVAC | 3 TON WM HVAC | Responsible for programing/commissioning (builder or HVAC contractor) |
|---|---|---|---|---|
| **HVAC Equipment**<br>Make and Model | BARD W46HC-A | BARD W60H1 | BARD W36 HB | NA |
| **BTUH**<br>Heating<br>Cooling | 41,500<br>45,500 | 51,000<br>55,500 | 38,500<br>40,000 | NA |
| **Indoor/Blower Fan**<br>BHP/HP<br>CFM<br>@ at ? inch WC | 1/3-825-2<br>2.5<br>24"-2900 | 1/3-825-2<br>4.1<br>24"-3700 | 1/3-825-2<br>2.5<br>24"-2900 | NA |
| **Strip Heating**<br>Maximum allowed or Not Allowed if not modeled | PER TITLE 24 | PER TITLE 24 | PER TITLE 24 | NA |
| Minimum allowed SEER, EER, HSPF and/or COP, and Phase | 14, 11, 3.40, 3 | 14, 11, 3.30 ,3 | 14, 11, 3.40, 3 | NA |
| **Thermostat**<br>Make and Model<br>Setback – § 110.2(c)<br>Heat Pumps – § 110.2(b) | BARD #8403-061<br>C48H1 | BARD #8403-061<br>C60H1 | BARD #8403-061<br>C42H1 | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-03-A |
| **Shut-off and Reset**<br>Make and Model<br>Occupancy Sensor or 4 hr override – § 120.2(e) | STANDARD BUILT-IN | STANDARD BUILT-IN | STANDARD BUILT-IN | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-03-A |
| **Economizer**<br>Equipment<br>Make and Model – § 140.4(e) | ECON-NC5 | ECON-NC5 | ECON-NC5 | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A and 05-A |
| **Economizer**<br>Controls<br>Make and Model – § 140.4(e) | ECON-WD5 | ECON-WD5 | ECON-WD5 | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A and 05-A |
| **Economizer**<br>Fault Detection Software<br>Make and Model - § 120.2(i) | ECON-DB5 | ECON-DB5 | ECON-DB5 | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-12-A or 13-A |
| **Outside Air**<br>In CFM - § 120.1(c)3 | PER TITLE 24 | PER TITLE 24 | PER TITLE 24 | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A |
| **Ventilation Kit**<br>If economizer is not installed specify Make and Model. | N/A | N/A | N/A | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A |
| **Demand Control Ventilation**<br>Co2 Sensor with ppm display<br>Make and Model - §120.1(d)4 | PER BARD SPECIFICAIONS | PER BARD SPECIFICAIONS | PER BARD SPECIFICAIONS | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-06-A |
| **Minimum Designed** Outside Air in CFM - § 120.1(c)3 | PER TITLE 24 | PER TITLE 24 | PER TITLE 24 | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-02-A |
| **Demand Shed Thermostat**<br>Make Model<br>If DDC to the zone § 120.2(h) | | | | (Responsible Person)<br>Required Acceptance Test<br>NRCA-MCH-11-A |

NOTE: SEE M0.1 AND CUT SHEETS FOR ADDITIONAL EQUIPMENT OPTIONS

# SEQUENCE OF OPERATIONS

## BARD W48HC-A

### Sequence of Operation

**Cooling**

Circuit R-Y1 makes at thermostat pulling in compressor contactor, starting the compressor and outdoor motor. (See ***NOTE*** under **Condenser Fan Operation** concerning models equipped with low ambient control.) The G (indoor motor) circuit is automatically completed by the thermostat on any call for cooling operation or can be energized by manual fan switch on subbase for constant air circulation. On a call for 2nd stage heating, circuit R-W2 makes at the thermostat pulling in heat contactor for the strip heat and blower operation. On a call for third stage heat, R-W3 makes bringing on second heat contactor, if so equipped.

**Heating**

A 24V solenoid coil on reversing valve controls heating cycle operation. Two thermostat options, one allowing "Auto" changeover from cycle to cycle and the other constantly energizing solenoid coil during heating season—thus eliminating pressure equalization noise except during defrost, are to be used.

On "Auto" option, a circuit is completed from R-B/W1 and R-Y1 on each heating "on" cycle, energizing reversing valve solenoid and pulling in compressor contactor, starting compressor and outdoor motor. R-G also make starting indoor blower motor. Heat pump heating cycle now in operation.

The second option has no "Auto" changeover position, but instead energizes the reversing valve solenoid constantly whenever the system switch on subbase is placed in "Heat" position, the "B" terminal being constantly energized from R. A thermostat demand for heat completes R-Y1 circuit, pulling in compressor contactor starting compressor and outdoor motor. R-G also make starting indoor blower motor.

On a call for 2nd stage heating, circuit R-W2 makes at the thermostat pulling in the heat contactor for the strip heat and blower operation. On a call for third stage heat, R-B/W1 breaks, dropping out heat pump, and R-W3 makes, bringing on second heat contactor, if so equipped.

**Balanced Climate™ Mode**

Balanced Climate™ is a great comfort feature that can easily be applied under any normal circumstances. If the Bard air conditioning system is being set up in a typical environment where 72°F is the lowest cooling setpoint, remove the Y1/Y2 jumper and install a 2-stage cooling thermostat. This will increase the humidity removal up to 35% and provide a much more comfortable environment. This mode will also increase the supply temperature when in heating mode. When Balanced Climate mode is activated, it is employed in both heating and cooling modes.

***NOTE:*** *Units with mechanical dehumidification require an additional connection to be made when enabling Balanced Climate. Refer to dehumidification supplemental instructions for this step.*

**If the application is likely to require air conditioning operation below 60°F outdoor conditions, a low ambient control (LAC) kit must be installed.** The LAC kit is equipped with an outdoor temperature switch that disables Balanced Climate mode when the outdoor temperature drops below 50°F. This prevents potential evaporator coil freeze up issues. The LAC kit also comes with an evaporator freeze protection thermostat that cuts out the compressor if the evaporator begins to freeze up.

**If the unit is being installed with any ventilation package, a Bard LAC kit must be installed.** Failure to utilize an LAC with any air conditioner can cause coil freeze up.

Balanced Climate can readily be applied to duct-free (supply and return air grille) applications. It may also be applied to ducted applications with **limited static of 0.20" ESP (total including both supply and return statics)**. Consult Bard Application Engineering for details prior to implementation.

***CAUTION:*** *Balanced Climate is not a replacement for a dehumidification (hot gas reheat) unit for extreme applications, but rather an enhancement feature for limited climates and applications.*

## BARD C60HC1 & C42HC1

### Sequence of Operation

**Cooling Stage 1** – Circuit R-Y makes at thermostat pulling in compressor contactor, starting the compressor and outdoor motor. The G (indoor motor) circuit is automatically completed on any call for cooling operation or can be energized by manual fan switch on subbase for constant air circulation.

**Cooling Stage 2** – Circuit R-Y1 makes at the thermostat, energizing the 2nd stage solenoid in the compressor. Default position is not energized. Compressor will run at low capacity until this solenoid is energized.

**Heating Stage 1** – A 24V solenoid coil on reversing valve controls heating cycle operation. Two thermostat options, one allowing "Auto" changeover from cycle to cycle and the other constantly energizing solenoid coil during heating season and thus eliminating pressure equalization noise except during defrost, are to be used. On "Auto" option, a circuit is completed from R-B and R-Y on each heating "on" cycle, energizing reversing valve solenoid and pulling in compressor contactor starting compressor and outdoor motor. R-G also make, starting indoor blower motor. Heat pump heating cycle now in operation. The second option has no "Auto" changeover position, but instead energizes the reversing valve solenoid constantly whenever the system switch on subbase is placed in "Heat" position, the "B" terminal being constantly energized from R. A thermostat demand for Stage 1 heat completes R-Y circuit, pulling in compressor contactor and starting compressor and outdoor motor. R-G also make, starting indoor blower motor.

**Heating Stage 2** – Circuit R-Y2 makes at the thermostat, energizing the 2nd stage solenoid in the compressor.

### Pressure Service Ports

High and low pressure service ports are installed on all units so that the system operating pressures can be observed. Pressure tables 6A and 6B cover all models. It is imperative to match the correct pressure table to the unit by model number.

This unit employs high-flow Coremax valves instead of the typical Shrader type valves.

***WARNING! Do NOT use a Schrader valve core removal tool with these valves. Use of such a tool could result in eye injuries or refrigerant burns!***

To change a Coremax valve without first removing the refrigerant, a special tool is required which can be obtained at www.fastestinc.com/en/SCCA07H. See the replacement parts manual for replacement core part numbers.

## CARRIER 50VTC48L

### OPERATION

**Sequence of Operation—**When free cooling is not available, the compressor will be controlled by the thermostat. When free cooling is available, the outdoor-air damper is modulated by the Economizer control to provide a 50° to 55°F (10° to 12.8°C) supply-air temperature into the zone. As the supply-air temperature fluctuates above 55° (12.8°C) or below 50°F (10°C), the dampers will be modulated (open or close) to bring the supply-air temperature back within the set points. For Economizer operation, there must be a thermostat call for the fan (G). This will move the damper to its minimum position during the occupied mode.

**NOTE**: The DCV Max potentiometer must be closed (CCW) when not using $CO_2$ sensor.

Above 50°F (10°C) supply-air temperature, the dampers will modulate from 100% open to the minimum open position. From 50°F to 45°F (10° to 7.2°C) supply-air temperature, the dampers will maintain at the minimum open position. Below 45°F (7.2°C), the dampers will be completely shut. As the supply-air temperature rises, the dampers will come back open to the minimum open position once the supply-air temperature rises to 48°F (8.9°C). If power exhaust is installed, as the outdoor-air damper opens and closes, the power exhaust fans will be energized and deenergized. If field-installed accessory $CO_2$ sensors are connected to the Economizer control, a demand controlled ventilation strategy will begin to operate. As the $CO_2$ level in the zone increases above the $CO_2$ set point, the minimum position of the damper will be increased proportionally. As the $CO_2$ level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed. Damper position will follow the higher demand condition from DCV mode or free cooling mode. Damper movement from full closed to full open (or vice versa) will take between 1 1/2 and 2 1/2 minutes. If free cooling can be used as determined from the appropriate changeover command (dry bulb, enthalpy curve, or differential enthalpy), a call for cooling (Y1 closes at the thermostat) will cause the control to modulate the dampers open to maintain the supply air temperature set point at 50° to 55°F (10° to 12.8°C). As the supply air temperature drops below the set point range of 50° to 55°F (10° to 12.8°C), the control will modulate the outdoor-air dampers closed to maintain the proper supply-air temperature.

**TABLE 140.4-E AIR ECONOMIZER HIGH LIMIT SHUT OFF CONTROL REQUIREMENTS**

| Device Type[a] | Climate Zones | Required High Limit (Economizer Off When): | |
|---|---|---|---|
| | | Equation[b] | Description |
| Fixed Dry Bulb | 1, 3, 5, 11-16 | $T_{OA} > 75°F$ | Outdoor air temperature exceeds 75°F |
| | 2, 4, 10 | $T_{OA} > 73°F$ | Outdoor air temperature exceeds 73°F |
| | 6, 8, 9 | $T_{OA} > 71°F$ | Outdoor air temperature exceeds 71°F |
| | 7 | $T_{OA} > 69°F$ | Outdoor air temperature exceeds 69°F |
| Differential Dry Bulb | 1, 3, 5, 11-16 | $T_{OA} > T_{RA}°F$ | Outdoor air temperature exceeds return air temperature |
| | 2, 4, 10 | $T_{OA} > T_{RA}-2°F$ | Outdoor air temperature exceeds return air temperature minus 2°F |
| | 6, 8, 9 | $T_{OA} > T_{RA}-4°F$ | Outdoor air temperature exceeds return air temperature minus 4°F |
| | 7 | $T_{OA} > T_{RA}-6°F$ | Outdoor air temperature exceeds return air temperature minus 6°F |
| Fixed Enthalpy[c] + Fixed Drybulb | All | $h_{OA} > 28$ Btu/lb[c] or $T_{OA} > 75°F$ | Outdoor air enthalpy exceeds 28 Btu/lb of dry air[c] or Outdoor air temperature exceeds 75°F |

[a] Only the high limit control devices listed are allowed to be used and at the setpoints listed. Others such as Dew Point, Fixed Enthalpy, Electronic Enthalpy, and Differential Enthalpy Controls, may not be used in any Climate Zone for compliance with Section 140.4(e)1 unless approval for use is provided by the Energy Commission Executive Director.

[b] Devices with selectable (rather than adjustable) setpoints shall be capable of being set to within 2°F and 2 Btu/lb of the setpoint listed.

[c] At altitudes substantially different than sea level, the Fixed Enthalpy limit value shall be set to the enthalpy value at 75°F and 50% relative humidity. As an example, at approximately 6,000 foot elevation, the fixed enthalpy limit is approximately 30.7 Btu/lb.

ALL ECONOMIZERS MUST BE PROGRAMMED IN THE FIELD BY THE HVAC CONTRACTOR TO THE TEMPERATURE IN TABLE 140.4-E

**PC DESIGN REVIEW INFORMATION**
**TItle 24, Part 6, Energy Code**
DSA Application #: 04-121369
Calculation Date/Time of Energy Report: 2023-07-26 XX
Model Name and Option: 24'x40' PC (Wood Frame Walls)
Total Floor Area: 960 $ft^2$
HVAC System Type: Wall Mounted A/C

**Climate Zone 14 (Palmdale)**

| Azimuth (Front Orientation) | | Standard Design | Proposed Design | Margin | Margin % | Worst Case |
|---|---|---|---|---|---|---|
| 30° | TDV-E | 366.40 | 297.14 | 69.26 | 18.9028% | |
| | TDV-T | 366.40 | 297.14 | 69.26 | 18.9028% | |
| | SOURCE | 36.24 | 30.65 | 5.59 | 15.4249% | |
| 75° | TDV-E | 358.72 | 295.30 | 63.42 | 17.6795% | ** |
| | TDV-T | 358.72 | 295.30 | 63.42 | 17.6795% | ** |
| | SOURCE | 35.63 | 30.56 | 5.07 | 14.2296% | ** |
| 120° | TDV-E | 363.47 | 296.43 | 67.04 | 18.4444% | |
| | TDV-T | 363.47 | 296.43 | 67.04 | 18.4444% | |
| | SOURCE | 36.01 | 30.64 | 5.37 | 14.9125% | |
| 165° | TDV-E | 366.46 | 297.42 | 69.04 | 18.8397% | |
| | TDV-T | 366.46 | 297.42 | 69.04 | 18.8397% | |
| | SOURCE | 36.22 | 30.64 | 5.58 | 15.4059% | |
| 210° | TDV-E | 366.40 | 297.14 | 69.26 | 18.9028% | |
| | TDV-T | 366.40 | 297.14 | 69.26 | 18.9028% | |
| | SOURCE | 36.24 | 30.65 | 5.59 | 15.4249% | |
| 255° | TDV-E | 358.72 | 295.30 | 63.42 | 17.6795% | ** |
| | TDV-T | 358.72 | 295.30 | 63.42 | 17.6795% | ** |
| | SOURCE | 35.63 | 30.56 | 5.07 | 14.2296% | ** |
| 300° | TDV-E | 363.47 | 296.44 | 67.03 | 18.4417% | |
| | TDV-T | 363.47 | 296.44 | 67.03 | 18.4417% | |
| | SOURCE | 36.01 | 30.64 | 5.37 | 14.9125% | |
| 345° | TDV-E | 366.46 | 297.42 | 69.04 | 18.8397% | |
| | TDV-T | 366.46 | 297.42 | 69.04 | 18.8397% | |
| | SOURCE | 36.22 | 30.64 | 5.58 | 15.4059% | |

**Climate Zone 15 (Palm Springs)**

| Azimuth (Front Orientation) | | Standard Design | Proposed Design | Margin | Margin % | Worst Case |
|---|---|---|---|---|---|---|
| 30° | TDV-E | 378.51 | 303.65 | 74.86 | 19.7775% | |
| | TDV-T | 378.51 | 303.65 | 74.86 | 19.7775% | |
| | SOURCE | 33.26 | 26.66 | 6.60 | 19.8437% | |
| 75° | TDV-E | 369.92 | 301.77 | 68.15 | 18.4229% | ** |
| | TDV-T | 369.92 | 301.77 | 68.15 | 18.4229% | ** |
| | SOURCE | 32.57 | 26.55 | 6.02 | 18.4833% | ** |
| 120° | TDV-E | 370.43 | 302.74 | 67.69 | 18.2734% | |
| | TDV-T | 370.43 | 302.74 | 67.69 | 18.2734% | |
| | SOURCE | 32.71 | 26.64 | 6.07 | 18.5570% | |
| 165° | TDV-E | 378.42 | 303.43 | 74.99 | 19.8166% | |
| | TDV-T | 378.42 | 303.43 | 74.99 | 19.8166% | |
| | SOURCE | 33.23 | 26.65 | 6.58 | 19.8014% | |
| 210° | TDV-E | 378.51 | 303.65 | 74.86 | 19.7775% | |
| | TDV-T | 378.51 | 303.65 | 74.86 | 19.7775% | |
| | SOURCE | 33.26 | 26.66 | 6.60 | 19.8437% | |
| 255° | TDV-E | 369.92 | 301.77 | 68.15 | 18.4229% | ** |
| | TDV-T | 369.92 | 301.77 | 68.15 | 18.4229% | ** |
| | SOURCE | 32.57 | 26.55 | 6.02 | 18.4833% | ** |
| 300° | TDV-E | 370.43 | 302.74 | 67.69 | 18.2734% | |
| | TDV-T | 370.43 | 302.74 | 67.69 | 18.2734% | |
| | SOURCE | 32.71 | 26.64 | 6.07 | 18.5570% | |
| 345° | TDV-E | 378.42 | 303.43 | 74.99 | 19.8166% | |
| | TDV-T | 378.42 | 303.43 | 74.99 | 19.8166% | |
| | SOURCE | 33.23 | 26.65 | 6.58 | 19.8014% | |

**Climate Zone 16 (Blue Canyon)**

| Azimuth (Front Orientation) | | Standard Design | Proposed Design | Margin | Margin % | Worst Case |
|---|---|---|---|---|---|---|
| 30° | TDV-E | 307.24 | 278.52 | 28.72 | 9.3477% | ** |
| | TDV-T | 307.24 | 278.52 | 28.72 | 9.3477% | ** |
| | SOURCE | 54.83 | 41.05 | 13.78 | 25.1322% | ** |
| 75° | TDV-E | 341.77 | 272.69 | 69.08 | 20.2124% | |
| | TDV-T | 341.77 | 272.69 | 69.08 | 20.2124% | |
| | SOURCE | 65.39 | 40.97 | 24.42 | 37.3452% | |
| 120° | TDV-E | 307.35 | 273.40 | 33.95 | 11.0460% | |
| | TDV-T | 307.35 | 273.40 | 33.95 | 11.0460% | |
| | SOURCE | 54.88 | 41.01 | 13.87 | 25.2733% | |
| 165° | TDV-E | 309.02 | 273.26 | 35.76 | 11.5721% | |
| | TDV-T | 309.02 | 273.26 | 35.76 | 11.5721% | |
| | SOURCE | 54.91 | 41.02 | 13.89 | 25.2959% | |
| 210° | TDV-E | 307.24 | 273.52 | 33.72 | 10.9751% | |
| | TDV-T | 307.24 | 273.52 | 33.72 | 10.9751% | |
| | SOURCE | 54.83 | 41.05 | 13.78 | 25.1322% | |
| 255° | TDV-E | 341.77 | 272.69 | 69.08 | 20.2124% | |
| | TDV-T | 341.77 | 272.69 | 69.08 | 20.2124% | |
| | SOURCE | 65.39 | 40.97 | 24.42 | 37.3452% | |
| 300° | TDV-E | 307.35 | 273.40 | 33.95 | 11.0460% | |
| | TDV-T | 307.35 | 273.40 | 33.95 | 11.0460% | |
| | SOURCE | 54.88 | 41.01 | 13.87 | 25.2733% | |
| 345° | TDV-E | 309.02 | 273.26 | 35.76 | 11.5721% | |
| | TDV-T | 309.02 | 273.26 | 35.76 | 11.5721% | |
| | SOURCE | 54.91 | 41.02 | 13.89 | 25.2959% | |

**Reference:** Energy Code, Appendix NA4, Table NA4-3
***** In the event that there are identical percentages, select one.
******This table is not currently generated by the energy software.
Least Compliance Margin Orientation

Notes:
<

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
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11590 W. Bernardo Court, Suite 100
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PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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CLIENT

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ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
MISCELLANEOUS NOTES & DETAILS

PROJECT NUMBER
22088

DRAWN BY
Author

CHECKED BY
Checker

DATE

SHEET NO.
M0.2

SHEET OF

C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

6/15/2021 11:53:14 PM

# BUILDING ENERGY ANALYSIS REPORT

**PROJECT:**
24X40 (PC 04-121369) - Wall AC
Climate Zone 14
Palmdale, CA

**Project Designer:**
R & S Tavares Associates
11590 W. Bernardo Court, Suite 100
San Diego, Ca. 92127

**Report Prepared by:**
LAL B. SAHGAL
LSA CONSULTING ENGINEERS
83, WINDSWEPT WAY
MISSION VIEJO, CA 92692
(949) 830-4746

**Job Number:**

**Date:**
7/26/2023

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2022 Building Energy Efficiency Standards.

This program developed by EnergySoft, LLC – www.energysoft.com.

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HVAC System Heating and Cooling Loads Summary 20

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 1 of 17)

**Project Name:** 24X40 (PC 04-121369) - Wall AC **Date Prepared:** 2023-07-25

**A. General Information**

| | | | | | |
|---|---|---|---|---|---|
| **1** | Project Name | 24X40 (PC 04-121369) - Wall AC | | | |
| **2** | Run Title | Title 24 Analysis | | | |
| **3** | Project Location | Climate Zone 14 | | | |
| **4** | City | Palmdale | **5** | Standards Version | Compliance 2022 |
| **6** | Zip code | 99999 | **7** | Compliance Software (version) | EnergyPro 9.1 |
| **8** | Climate Zone | 14 | **9** | Building Orientation (deg) | 75 |
| **10** | Building Type(s) | • Nonresidential | **11** | Weather File | PALMDALE_STYP20.epw |
| **12** | Project Scope | • New complete scope | **13** | Number of Dwelling Units | 0 |
| **14** | Total Conditioned Floor Area in Scope (ft²) | 960 | **15** | Total # of hotel/motel rooms | 0 |
| **16** | Total Unconditioned Floor Area (ft²) | 0 | **17** | Fuel Type | Natural gas |
| **18** | Nonresidential Conditioned Floor Area | 960 | **19** | Total # of Stories (Habitable Above Grade) | 1 |
| **20** | Residential Conditioned Floor Area | 0 | | | |

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 2 of 17)

**B. PROJECT SUMMARY**

*Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.*

| **Building Components Complying via Performance** | | | | | | **Building Components Complying Prescriptively** | |
|---|---|---|---|---|---|---|---|
| Envelope (See Table G) | Nonres | Performance | Solar Thermal Water Heating (See Table I3) | ☐ | Performance | The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E). | |
| | MultiFam | Not Included | | ☒ | Not Included | | |
| Mechanical (See Table H) | Nonres | Performance | Covered Process: Commercial Kitchens (see Table J) | ☐ | Performance | Indoor Lighting (Unconditioned) 140.6 & 170.2(e) | NRCC-LTI-E is required |
| | MultiFam | Not Included | | ☒ | Not Included | Outdoor Lighting 140.7 & 170.2(e) | NRCC-LTO-E is required |
| Domestic Hot Water (See Table I) | Nonres | Not Included | Covered Process: Laboratory Exhaust (see Table J) | ☐ | Performance | Sign Lighting 140.8 & 170.2(e) | NRCC-LTS-E is required |
| | MultiFam | Not Included | | ☒ | Not Included | **Building Components Complying with Mandatory Measures** | |
| Lighting (Indoor Conditioned, see Table K) | Nonres | Performance | Photovoltaics (see Table F) | ☐ | Performance | Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.) | |
| | MultiFam | Not Included | | ☒ | Not Included | Electrical Power Distribution 110.11 | NRCC-ELC-E is required |
| | | | Battery (see Table F) | ☐ | Performance | Commissioning 120.8 | NRCC-CXR-E is required |
| | | | | ☒ | Not Included | Solar and Battery 110.10 | NRCC-SAB-E is required |

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 3 of 17)

**C1. COMPLIANCE SUMMARY**

**COMPLIES**[3]

| | **Time Dependent Valuaton (TDV)** | | **Source Energy Use** |
|---|---|---|---|
| | **Efficiency[1] (kBtu/ft² - yr)** | **Total[2] (kBtu/ft² - yr)** | **Total[2] (kBtu/ft² - yr)** |
| Standard Design | 358.72 | 358.72 | 30.7 |
| Proposed Design | 295.31 | 295.31 | 25.64 |
| **Compliance Margins** | **63.41** | **63.41** | **5.06** |
| | **Pass** | **Pass** | **Pass** |

[1] *Efficiency measures include improvements like a better building envelope and more efficient equipment*
[2] *Compliance Totals include efficiency, photovoltaics and batteries*
[3] *Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 4 of 17)

**C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² - yr)**

**COMPLIES**[2]

| **Energy Component** | **Standard Design (TDV)** | **Proposed Design (TDV)** | **Compliance Margin (TDV)[1]** |
|---|---|---|---|
| Space Heating | 25.61 | 42 | -16.39 |
| Space Cooling | 93.22 | 95.25 | -2.03 |
| Indoor Fans | 152.65 | 81.72 | 70.93 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 54.63 | 54.6 | 0.03 |
| Indoor Lighting | 32.61 | 21.74 | 10.87 |
| Flexibility | --- | --- | --- |
| **EFFICIENCY COMPLIANCE TOTAL** | **358.72** | **295.31** | **63.41 (17.7%)** |
| Photovoltaics | --- | --- | --- |
| Batteries | --- | --- | --- |
| **TOTAL COMPLIANCE** | **358.72** | **295.31** | **63.41 (17.7%)** |

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 5 of 17)

**C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]**

| **Non-Regulated Energy Component** | **Standard Design (TDV)** | **Proposed Design (TDV)** | **Compliance Margin (TDV)[1]** |
|---|---|---|---|
| Receptacle | 67.93 | 67.93 | --- |
| Process | --- | --- | --- |
| Other Ltg | --- | --- | --- |
| Process Motors | --- | --- | --- |
| **TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)** | **426.65** | **363.24** | **63.41 (14.9%)** |

[1] *Notes: This table is not used for Energy Code Compliance.*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 6 of 17)

**C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft² /yr)**

**COMPLIES**[2]

| **Energy Component** | **Standard Design (SOURCE)** | **Proposed Design (SOURCE)** | **Compliance Margin (SOURCE)[1]** |
|---|---|---|---|
| Space Heating | 3.73 | 6.14 | -2.41 |
| Space Cooling | 3.47 | 3.65 | -0.18 |
| Indoor Fans | 14.94 | 8.15 | 6.79 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 5.99 | 5.99 | 0 |
| Indoor Lighting | 2.57 | 1.71 | 0.86 |
| Flexibility | --- | --- | --- |
| **EFFICIENCY COMPLIANCE TOTAL** | **30.7** | **25.64** | **5.06 (16.5%)** |
| Photovoltaics | --- | --- | --- |
| Batteries | --- | --- | --- |
| **TOTAL COMPLIANCE** | **30.7** | **25.64** | **5.06 (16.5%)** |

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 7 of 17)

**C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]**

| **Non-Regulated Energy Component** | **Standard Design (SOURCE)** | **Proposed Design (SOURCE)** | **Compliance Margin (SOURCE)[1]** |
|---|---|---|---|
| Receptacle | 4.92 | 4.92 | --- |
| Process | --- | --- | --- |
| Other Ltg | --- | --- | --- |
| Process Motors | --- | --- | --- |
| **TOTAL ( TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)** | **35.62** | **30.56** | **5.06 (14.2%)** |

[1] *Notes: This table is not used for Energy Code Compliance.*

**C6. 'ABOVE CODE' QUALIFICATIONS**

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

---

**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E

**Nonresidential Performance Compliance Method** (Page 8 of 17)

**C7. ENERGY USE SUMMARY**

| **Energy Component** | **Standard Design Site (MWh)** | **Proposed Design Site (MWh)** | **Margin (MWh)** | **Standard Design Site (MBtu)** | **Proposed Design Site (MBtu)** | **Margin (MBtu)** |
|---|---|---|---|---|---|---|
| Space Heating | 0.8 | 1.3 | -0.5 | --- | --- | --- |
| Space Cooling | 2.3 | 2.3 | 0 | --- | --- | --- |
| Indoor Fans | 5.2 | 2.8 | 2.4 | --- | --- | --- |
| Heat Rejection | --- | --- | --- | --- | --- | --- |
| Pumps & Misc. | --- | --- | --- | --- | --- | --- |
| Domestic Hot Water | 2 | 2 | 0 | --- | --- | --- |
| Indoor Lighting | 1.2 | 0.8 | 0.4 | --- | --- | --- |
| Flexibility | --- | --- | --- | --- | --- | --- |
| **EFFICIENCY TOTAL** | **11.5** | **9.2** | **2.3** | **0** | **0** | **0** |
| Photovoltaics | --- | --- | --- | --- | --- | --- |
| Batteries | --- | --- | --- | --- | --- | --- |
| **ENERGY USE SUBTOTAL** | **11.5** | **9.2** | **2.3** | **0** | **0** | **0** |
| Receptacle | 2.5 | 2.5 | 0 | --- | --- | --- |
| Process | --- | --- | --- | --- | --- | --- |
| Other Ltg | --- | --- | --- | --- | --- | --- |
| Process Motors | --- | --- | --- | --- | --- | --- |
| **ENERGY USE TOTAL** | **14** | **11.7** | **2.3** | **0** | **0** | **0** |

---

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
24'x40' T24 CZ 14 (WALL AC)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE
06/15/2021

SHEET NO.
M2.9

SHEET OF

C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

9/7/2023 11:16:14 AM

### C8. ENERGY USE INTENSITY (EUI)

| | Standard Design (kBtu/ft$^2$ / yr) | Proposed Design (kBtu/ft$^2$ / yr) | Margin (kBtu/ft$^2$ / yr) | Margin Percentage |
|---|---|---|---|---|
| GROSS EUI[1] | 49.76 | 41.58 | 8.18 | 16.44 |
| NET EUI[1] | 49.76 | 41.58 | 8.18 | 16.44 |

[1] Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.

### D1. EXCEPTIONAL CONDITIONS

- The 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 building does not include service water heating. Verify that service water heating is not required and is not included in the design.
- Project is claiming Exception 2 to Section 140.10(a): No PV system is required where the required PV system size is less than 4 kWdc.

### G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| **Opaque Surfaces & Orientation** | **Total Gross Surface Area (ft$^2$)** | **Total Fenestration Area (ft$^2$)** | **Window to Wall Ratio (%)** |
| North-Facing[1] | 240 | 32 | 13.33 |
| East-Facing[2] | 400 | 0 | 0 |
| South-Facing[3] | 240 | 32 | 13.33 |
| West-Facing[4] | 400 | 0 | 0 |
| **Total** | **1280** | **64** | **5** |
| Roof | 960 | 14 | 1.46 |

*Notes*

[1] *North-Facing is oriented to within 45 degrees of true north, including 45 00'00" east of north (NE), but excluding 45 00'00" west of north (NW),*

[2] *East-Facing is oriented to within 45 degrees of true east, including 45 00'00" south of east (SE), but excluding 45 00'00" north of east (NE),*

[3] *South-Facing is oriented to within 45 degrees of true south, including 45 00'00" west of south (SW), but excluding 45 00'00" east of south (SE),*

[4] *West-Facing is oriented to within 45 degrees of true west, including 45 00'00" north of west (NW), but excluding 45 00'00" south of west (SW),*

### G4. NONRESIDENTIAL AIR BARRIER

| 01 | 02 |
|---|---|
| **Building Story Name** | **Air Barrier** |
| Com-Floor 1 | No air barrier |

### G5. OPAQUE SURFACE ASSEMBLY SUMMARY

| 01 | 02 | 03 | 04 | 05 | 06 | | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Surface Name** | **Construction Type** | **Area (ft$^2$)** | **Framing Type** | **Cavity R-Value** | **Continuous R-Value** | | **Units** | **Value** | **Description of Assembly Layers** | **Status[1]** |
| | | | | | **Interior** | **Exterior** | | | | |
| R-19 Wood Framed Wall7 | Exterior Wall | 1,280 | Wood | 19 | N/A | N/A | U-factor | 0.0605 | Wood siding - 1/2 in.<br>Vapor permeable felt - 1/8 in.<br>Composite-1<br>Gypsum Board - 1/2 in.<br>Softwood - 1.5 in. | N |
| R-19 Metal Floor Crawlspa14 | Exterior Floor | 960 | Metal | 19 | N/A | N/A | U-factor | 0.0588 | Vented Crawl Space<br>Composite-2<br>Plywood - 1/2 in.<br>Carpet - 3/4 in. | N |
| Standing Seam R-38 Metal16 | Roof | 960 | N/A | 36 | N/A | N/A | U-factor | 0.06 | Metal Standing Seam - 1/16 in.<br>Composite-3 | N |

[1] *Status: N - New, A - Altered, E - Existing*

### G7A. FENESTRATION ASSEMBLY SUMMARY (NONRESIDENTIAL)

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| **Fenestration Assembly Name** | **Fenestration Type/ Product Type / Frame Type** | **Certification Method[1]** | **Assembly Method** | **Area (ft$^2$)** | **Overall U-factor** | **Overall SHGC** | **Overall VT** | **Status[2]** |
| Sierra Pacific Windows | Vertical fenestration<br>Operable window<br>N/A | NFRC | Manufactured | 64 | 0.35 | 0.24 | 0.5 | N |
| Sola tube | Skylight<br>Fixed window<br>N/A | NFRC | Manufactured | 14 | 0.39 | 0.37 | 0.65 | N |

[1] *Notes: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*

[2] *Status: N - New, A - Altered, E - Existing*

### H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Equipment Name** | **Equipment Type** | **Qty** | **Heating** | | | | **Cooling** | | | **Economizer Type (if present)** | **Status[1]** |
| | | | **Total Heating Output (kBtu/h)** | **Supp Heat Output (kBtu/h)** | **Efficiency Unit** | **Efficiency** | **Total Cooling Output (kBtu/h)** | **Efficiency Unit** | **Efficiency** | | |
| AC-1 | Single Package VHP Air System | 1 | 34.37 | 13.65 | COP | 3.3 | 34.56 | EER | 11 | Fixed DB | N |

[1] *Status: N - New, A - Altered, E - Existing*

### H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name or Item Tag** | **Qty** | **Design OA CFM** | **Supply Fan** | | | | **Return / Relief Fan** | | | | | **Status[1]** |
| | | | **CFM** | **Power** | **Power Units** | **Control** | **Fan Type** | **CFM** | **Power** | **Power Units** | **Control** | |
| AC-1 | 1 | 364.8 | 1,100 | 0.5 | BHP | Constant Vol | N/A | N/A | N/A | N/A | N/A | N |

[1] *Status: N - New, A - Altered, E - Existing*

### H8. SYSTEM SPECIAL FEATURES

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| **System Name** | **Equipment Type** | **Interlocks per 140.4(n)[1]** | **Other Special Features and Controls** |
| AC-1 | Single Package VHP Air System | No | Zone(s) With CO2 Sensor Vent. Control<br>Fixed DB |

*Notes: 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.*

[1] *Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

### H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| **Zone Name** | **Mechanical Ventilation** | | | | **Conditioned Area (sf)** | **DCV or Occupant Sensor Controls, or Both** |
| | **Ventilation Function** | **# of People** | **Supply OA CFM** | **Exhaust CFM** | | |
| 1-First Floor | Education - Classrooms (ages 9-18) | 24 | 364.8 | 0 | 960 | DCV |

### H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **System ID** | **System Type** | **Qty** | **Rated Capacity (kBtuh)** | | **Airflow (cfm)** | | | **Fan** | | | **VSD** |
| | | | **Heating** | **Cooling** | **Design** | **MIn.** | **Min. Ratio** | **Power** | **Power Units** | **Cycles** | |
| 1-First Floor-Trm | Uncontrolled | 1 | N/A | N/A | 1,100 | N/A | 0 | N/A | N/A | N/A | ☐ |

### K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

| 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|
| **Occupancy Type[1]** | **Conditioned Floor Area[2] (ft$^2$)** | **Installed Lighting Power (Watts)** | **Lighting Control Credits (Watts)** | **Additional (Custom) Allowance** | |
| | | | | **Area Category Footnotes (Watts)** | **Area Category Footnotes (Watts)** |
| Classroom, Lecture, or Training Vocational | 960 | 384 | 0 | 0 | 0 |
| **Building Totals:** | **960** | **384** | **0** | **0** | **0** |

[1] *See Table 140.6-C*

[2] *See NRCC-LTI--E for unconditioned spaces*

[3] *Lighting information for existing spaces modeled is not included in this table*

### K2. INDOOR CONDITIONED LIGHTING SCHEDULE

**Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft$^2$ in offices)**

| 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|
| **Name or Item Tag** | **Complete Luminaire Description (i.e. 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)** | **Installed Watts (Conditioned)** | | | |
| | | **Watts per luminaire** | **How is Wattage determined** | **Total Number of Luminaires** | **Installed Watts** |
| L-1 | 2x4 LED Panel | 48 | According to | 8 | 384 |

[1] *If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.*

### K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

**Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per 140.6(a)2 and Table 140.6-A)**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| **Area Description** | **Primary Function Area (must meet requirements of Table 140.6-A and 170.2-L)** | **Type of Lighting Control** | **Power Adjustment Factor (PAF)** | **Luminaire Item Tag** | **Watts per Luminaire** | **# of Luminaires** | **Lighting Controlled (Watts)** | **Control Credit (Watts)** |
| S-1-First Floor | Classroom, Lecture, or Training Vocational | N/A | N/A | L-1 | 48 | 8 | 384 | 0 |
| | | | | | | | **Lighting Control Credits (Conditioned) Total (Watts)** | **0** |

### K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROL

**Building Level Controls**

| 01 | 02 |
|---|---|
| **Mandatory Demand Response 110.12(c)** | **Shut-Off Controls 130.1(c) & 160.5(b)4C** |
| **Required** | **Required** |

**See NRCC-LTI-E for mandatory controls**

### L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

**Selections made by Documentation Author indicate which Certificates of Installation 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**

| Building Component | Form/Title |
|---|---|
| Envelope | NRCI-ENV-01-E - Must be submitted for all buildings |
| Envelope | NRCI-ENV-E - Envelope (for all buildings) |
| Mechanical | NRCI-MCH-01-E - Must be submitted for all buildings |
| Mechanical | NRCI-MCH-E - For all buildings with Mechanical Systems |
| Indoor Lighting | NRCI-LTI-01-E - Must be submitted for all buildings |
| Indoor Lighting | NRCI-LTI-E - Indoor Lighting (for all buildings) |

### M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

**Selections made by Documentation Author 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).**

| Building Component | Form/Title |
|---|---|
| Envelope | NRCA-ENV-02-F - NRFC label verification for fenestration |
| Indoor Lighting | NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls. |
| Mechanical | NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap |
| Mechanical | NRCA-MCH-05-A - Air Economizer Controls |
| Mechanical | NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to ) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints. |

### N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

**Selections made by Documentation Author 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**

**There are no Certificates of Verification applicable to this project**

### Documentation Author's Declaration Statement

**1. I certify that this Certificate of Compliance documentation is accurate and complete.**

| | |
|---|---|
| Documentation Author Name: LAL B. SAHGAL | Documentation Author Signature: |
| Company: LSA CONSULTING ENGINEERS | Signature Date: |
| Address: 83, WINDSWEPT WAY | CEA/HERS Certification Identification (if applicable): M26885 |
| City/State/Zip: MISSION VIEJO, CA 92692 | Phone: (949) 830-4746 |

### 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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

| | | |
|---|---|---|
| Responsible Designer Name: | Responsible Designer Signature: | |
| Company: R & S Tavares Associates | | |
| Address: 11590 W. Bernardo Court, Suite 100 | Date Signed: | |
| City/State/Zip: San Diego, Ca. 92127 | License #: | |
| Phone: | Title: | Scope: |
| Responsible Designer Name: | Responsible Designer Signature: | |
| Company: R & S Tavares Associates | | |
| Address: 11590 W. Bernardo Court, Suite 100 | Date Signed: | |
| City/State/Zip: San Diego, Ca. 92127 | License #: | |
| Phone: | Title: | Scope: |

| | | |
|---|---|---|
| Responsible Designer Name: Lal Sahgal | Responsible Designer Signature: | |
| Company: LSA Consulting Engineers | | |
| Address: 83, Windswept Way | Date Signed: | |
| City/State/Zip: Mission Viejo, Ca. 92692 | License #: M26885 | |
| Phone: | Title: | Scope: |

## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| | |
|---|---|
| Project Name<br>24X40 (PC 04-121369) - Wall AC | Date<br>7/26/2023 |
| System Name<br>AC-1 | Floor Area<br>960 |

### ENGINEERING CHECKS

| | |
|---|---|
| **Number of Systems** | 1 |
| **Heating System** | |
| **Output per System** | 33,000 |
| **Total Output (Btuh)** | 33,000 |
| **Output (Btuh/sqft)** | 34.4 |
| **Cooling System** | |
| **Output per System** | 36,000 |
| **Total Output (Btuh)** | 36,000 |
| **Total Output (Tons)** | 3.0 |
| **Total Output (Btuh/sqft)** | 37.5 |
| **Total Output (sqft/Ton)** | 320.0 |
| **Air System** | |
| **CFM per System** | 1,100 |
| **Airflow (cfm)** | 1,100 |
| **Airflow (cfm/sqft)** | 1.15 |
| **Airflow (cfm/Ton)** | 366.7 |
| **Outside Air (%)** | 33.2% |
| **Outside Air (cfm/sqft)** | 0.38 |

**Note: values above given at ARI conditions**

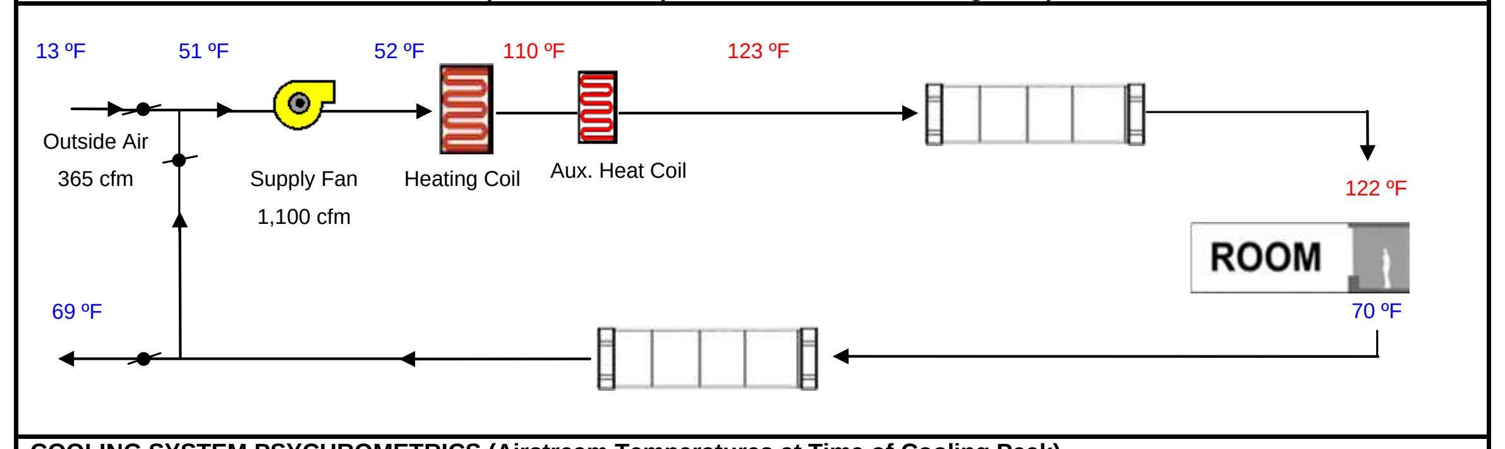
### SYSTEM LOAD

| | COIL COOLING PEAK | | | COIL HTG. PEAK | |
|---|---|---|---|---|---|
| | **CFM** | **Sensible** | **Latent** | **CFM** | **Sensible** |
| **Total Room Loads** | 2,054 | 28,927 | 9,600 | 230 | 11,785 |
| **Return Vented Lighting** | | 0 | | | |
| **Return Air Ducts** | | 1,446 | | | 589 |
| **Return Fan** | | 0 | | | 0 |
| **Ventilation** | 365 | 9,547 | -5,338 | 365 | 20,216 |
| **Supply Fan** | | 1,535 | | | -1,535 |
| **Supply Air Ducts** | | 1,446 | | | 589 |
| **TOTAL SYSTEM LOAD** | | 42,901 | 4,262 | | 31,644 |

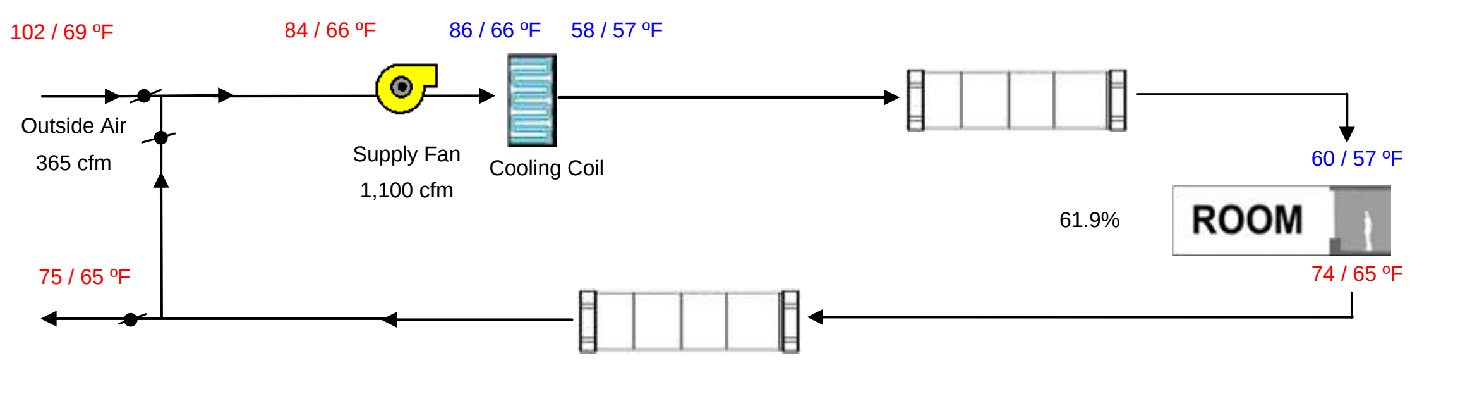
### HVAC EQUIPMENT SELECTION

| | Sensible | Latent | | Sensible |
|---|---|---|---|---|
| Bard W36HB | 29,467 | 4,973 | | 13,777 |
| HP Supplemental Coil | | | | 13,648 |
| | | | | |
| **Total Adjusted System Output** (Adjusted for Peak Design conditions) | 29,467 | 4,973 | | 27,425 |
| **TIME OF SYSTEM PEAK** | | Jul 3 PM | | Jan 1 AM |

### HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



### COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
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APP. 04-123316 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

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DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
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02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
24'x40' T24 CZ 14 (WALL AC)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE
06/15/2021

SHEET NO.
M2.10

SHEET OF

C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

9/7/2023 11:16:14 AM

# BUILDING ENERGY ANALYSIS REPORT

**PROJECT:**
24X40 (PC 04-121369) - Wall AC
Climate Zone 15
Palm Springs, CA

**Project Designer:**
R & S Tavares Associates
11590 W. Bernardo Court, Suite 100
San Diego, Ca. 92127

**Report Prepared by:**
LAL B. SAHGAL
LSA CONSULTING ENGINEERS
83, WINDSWEPT WAY
MISSION VIEJO, CA 92692
(949) 830-4746

**Job Number:**

**Date:**
7/26/2023

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2022 Building Energy Efficiency Standards.

This program developed by EnergySoft, LLC – www.energysoft.com.

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 1 of 17)

**Project Name:** 24X40 (PC 04-121369) - Wall AC **Date Prepared:** 2023-07-25

**A. General Information**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Project Name | 24X40 (PC 04-121369) - Wall AC | | | |
| 2 | Run Title | Title 24 Analysis | | | |
| 3 | Project Location | Climate Zone 15 | | | |
| 4 | City | Palm Springs | 5 | Standards Version | Compliance 2022 |
| 6 | Zip code | 99999 | 7 | Compliance Software (version) | EnergyPro 9.1 |
| 8 | Climate Zone | 15 | 9 | Building Orientation (deg) | 75 |
| 10 | Building Type(s) | • Nonresidential | 11 | Weather File | PALM-SPRINGS_STYP20.epw |
| 12 | Project Scope | • New complete scope | 13 | Number of Dwelling Units | 0 |
| 14 | Total Conditioned Floor Area in Scope ($ft^2$) | 960 | 15 | Total # of hotel/motel rooms | 0 |
| 16 | Total Unconditioned Floor Area ($ft^2$) | 0 | 17 | Fuel Type | Natural gas |
| 18 | Nonresidential Conditioned Floor Area | 960 | 19 | Total # of Stories (Habitable Above Grade) | 1 |
| 20 | Residential Conditioned Floor Area | 0 | | | |

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 2 of 17)

**B. PROJECT SUMMARY**

*Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.*

| Building Components Complying via Performance | | | | | | Building Components Complying Prescriptively | |
|---|---|---|---|---|---|---|---|
| Envelope (See Table G) | Nonres | Performance | Solar Thermal Water Heating (See Table I3) | ☐ | Performance | The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E). | |
| | MultiFam | Not Included | | ☒ | Not Included | | |
| Mechanical (See Table H) | Nonres | Performance | Covered Process: Commercial Kitchens (see Table J) | ☐ | Performance | Indoor Lighting (Unconditioned) 140.6 & 170.2(e) | NRCC-LTI-E is required |
| | MultiFam | Not Included | | ☒ | Not Included | Outdoor Lighting 140.7 & 170.2(e) | NRCC-LTO-E is required |
| Domestic Hot Water (See Table I) | Nonres | Not Included | Covered Process: Laboratory Exhaust (see Table J) | ☐ | Performance | Sign Lighting 140.8 & 170.2(e) | NRCC-LTS-E is required |
| | MultiFam | Not Included | | ☒ | Not Included | **Building Components Complying with Mandatory Measures** | |
| Lighting (Indoor Conditioned, see Table K) | Nonres | Performance | Photovoltaics (see Table F) | ☐ | Performance | Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.) | |
| | MultiFam | Not Included | | ☒ | Not Included | Electrical Power Distribution 110.11 | NRCC-ELC-E is required |
| | | | Battery (see Table F) | ☐ | Performance | Commissioning 120.8 | NRCC-CXR-E is required |
| | | | | ☒ | Not Included | Solar and Battery 110.10 | NRCC-SAB-E is required |

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 3 of 17)

**C1. COMPLIANCE SUMMARY**

**COMPLIES[3]**

| | Time Dependent Valuaton (TDV) | | Source Energy Use |
|---|---|---|---|
| | Efficiency[1] (kBtu/$ft^2$ - yr) | Total[2] (kBtu/$ft^2$ - yr) | Total[2] (kBtu/$ft^2$ - yr) |
| Standard Design | 369.92 | 369.92 | 27.65 |
| Proposed Design | 301.78 | 301.78 | 21.62 |
| **Compliance Margins** | **68.14** | **68.14** | **6.03** |
| | **Pass** | **Pass** | **Pass** |

[1] *Efficiency measures include improvements like a better building envelope and more efficient equipment*
[2] *Compliance Totals include efficiency, photovoltaics and batteries*
[3] *Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded*

---

**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 4 of 17)

**C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/$ft^2$ - yr)**

**COMPLIES[2]**

| Energy Component | Standard Design (TDV) | Proposed Design (TDV) | Compliance Margin (TDV)[1] |
|---|---|---|---|
| Space Heating | 5.43 | 9.65 | -4.22 |
| Space Cooling | 152.4 | 156.74 | -4.34 |
| Indoor Fans | 140.88 | 74.91 | 65.97 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 38.99 | 39 | -0.01 |
| Indoor Lighting | 32.22 | 21.48 | 10.74 |
| Flexibility | --- | --- | --- |
| **EFFICIENCY COMPLIANCE TOTAL** | **369.92** | **301.78** | **68.14 (18.4%)** |
| Photovoltaics | --- | --- | --- |
| Batteries | --- | --- | --- |
| **TOTAL COMPLIANCE** | **369.92** | **301.78** | **68.14 (18.4%)** |

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 5 of 17)

**C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]**

| Non-Regulated Energy Component | Standard Design (TDV) | Proposed Design (TDV) | Compliance Margin (TDV)[1] |
|---|---|---|---|
| Receptacle | 66.69 | 66.69 | --- |
| Process | --- | --- | --- |
| Other Ltg | --- | --- | --- |
| Process Motors | --- | --- | --- |
| **TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)** | **436.61** | **368.47** | **68.14 (15.6%)** |

[1] *Notes: This table is not used for Energy Code Compliance.*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 6 of 17)

**C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/$ft^2$ /yr)**

**COMPLIES[2]**

| Energy Component | Standard Design (SOURCE) | Proposed Design (SOURCE) | Compliance Margin (SOURCE)[1] |
|---|---|---|---|
| Space Heating | 0.73 | 1.33 | -0.6 |
| Space Cooling | 7.45 | 7.45 | 0 |
| Indoor Fans | 12.67 | 6.9 | 5.77 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 4.23 | 4.23 | 0 |
| Indoor Lighting | 2.57 | 1.71 | 0.86 |
| Flexibility | --- | --- | --- |
| **EFFICIENCY COMPLIANCE TOTAL** | **27.65** | **21.62** | **6.03 (21.8%)** |
| Photovoltaics | --- | --- | --- |
| Batteries | --- | --- | --- |
| **TOTAL COMPLIANCE** | **27.65** | **21.62** | **6.03 (21.8%)** |

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 7 of 17)

**C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]**

| Non-Regulated Energy Component | Standard Design (SOURCE) | Proposed Design (SOURCE) | Compliance Margin (SOURCE)[1] |
|---|---|---|---|
| Receptacle | 4.92 | 4.92 | --- |
| Process | --- | --- | --- |
| Other Ltg | --- | --- | --- |
| Process Motors | --- | --- | --- |
| **TOTAL ( TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)** | **32.57** | **26.54** | **6.03 (18.5%)** |

[1] *Notes: This table is not used for Energy Code Compliance.*

**C6. 'ABOVE CODE' QUALIFICATIONS**

☐ This project is pursuing CalGreen Tier 1
☐ This project is pursuing CalGreen Tier 2

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** NRCC-PRF-E
**Nonresidential Performance Compliance Method** (Page 8 of 17)

**C7. ENERGY USE SUMMARY**

| Energy Component | Standard Design Site (MWh) | Proposed Design Site (MWh) | Margin (MWh) | Standard Design Site (MBtu) | Proposed Design Site (MBtu) | Margin (MBtu) |
|---|---|---|---|---|---|---|
| Space Heating | 0.1 | 0.3 | -0.2 | --- | --- | --- |
| Space Cooling | 4.5 | 4.5 | 0 | --- | --- | --- |
| Indoor Fans | 4.8 | 2.5 | 2.3 | --- | --- | --- |
| Heat Rejection | --- | --- | --- | --- | --- | --- |
| Pumps & Misc. | --- | --- | --- | --- | --- | --- |
| Domestic Hot Water | 1.5 | 1.5 | 0 | --- | --- | --- |
| Indoor Lighting | 1.2 | 0.8 | 0.4 | --- | --- | --- |
| Flexibility | --- | --- | --- | --- | --- | --- |
| **EFFICIENCY TOTAL** | **12.1** | **9.6** | **2.5** | **0** | **0** | **0** |
| Photovoltaics | --- | --- | --- | --- | --- | --- |
| Batteries | --- | --- | --- | --- | --- | --- |
| **ENERGY USE SUBTOTAL** | **12.1** | **9.6** | **2.5** | **0** | **0** | **0** |
| Receptacle | 2.5 | 2.5 | 0 | --- | --- | --- |
| Process | --- | --- | --- | --- | --- | --- |
| Other Ltg | --- | --- | --- | --- | --- | --- |
| Process Motors | --- | --- | --- | --- | --- | --- |
| **ENERGY USE TOTAL** | **14.6** | **12.1** | **2.5** | **0** | **0** | **0** |

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
24'x40' T24 CZ 15 (WALL AC)

PROJECT NUMBER
22088

DRAWN BY
rMc/CG

CHECKED BY
RH/RT

DATE
06/15/2021

SHEET NO.
M2.11

SHEET OF

C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

9/7/2023 11:16:15 AM

**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 9 of 17)**

**C8. ENERGY USE INTENSITY (EUI)**

| | Standard Design (kBtu/ft² / yr) | Proposed Design (kBtu/ft² / yr) | Margin (kBtu/ft² / yr) | Margin Percentage |
|---|---|---|---|---|
| GROSS EUI[1] | 51.89 | 43.01 | 8.88 | 17.11 |
| NET EUI[1] | 51.89 | 43.01 | 8.88 | 17.11 |

*[1] Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.*

**D1. EXCEPTIONAL CONDITIONS**

- The 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 building does not include service water heating. Verify that service water heating is not required and is not included in the design.
- Project is claiming Exception 2 to Section 140.10(a): No PV system is required where the required PV system size is less than 4 kWdc.

**G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)**

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| **Opaque Surfaces & Orientation** | **Total Gross Surface Area (ft²)** | **Total Fenestration Area (ft²)** | **Window to Wall Ratio (%)** |
| North-Facing[1] | 240 | 32 | 13.33 |
| East-Facing[2] | 400 | 0 | 0 |
| South-Facing[3] | 240 | 32 | 13.33 |
| West-Facing[4] | 400 | 0 | 0 |
| **Total** | **1280** | **64** | **5** |
| Roof | 960 | 14 | 1.46 |

*Notes*
*[1] North-Facing is oriented to within 45 degrees of true north, including 45 00'00" east of north (NE), but excluding 45 00'00" west of north (NW),*
*[2] East-Facing is oriented to within 45 degrees of true east, including 45 00'00" south of east (SE), but excluding 45 00'00" north of east (NE),*
*[3] South-Facing is oriented to within 45 degrees of true south, including 45 00'00" west of south (SW), but excluding 45 00'00" east of south (SE),*
*[4] West-Facing is oriented to within 45 degrees of true west, including 45 00'00" north of west (NW), but excluding 45 00'00" south of west (SW),*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 10 of 17)**

**G4. NONRESIDENTIAL AIR BARRIER**

| 01 | 02 |
|---|---|
| **Building Story Name** | **Air Barrier** |
| Com-Floor 1 | No air barrier |

**G5. OPAQUE SURFACE ASSEMBLY SUMMARY**

| 01 | 02 | 03 | 04 | 05 | 06 | | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Surface Name** | **Construction Type** | **Area (ft²)** | **Framing Type** | **Cavity R-Value** | **Continuous R-Value** | | **Units** | **Value** | **Description of Assembly Layers** | **Status[1]** |
| | | | | | **Interior** | **Exterior** | | | | |
| R-19 Wood Framed Wall7 | Exterior Wall | 1,280 | Wood | 19 | N/A | N/A | U-factor | 0.0605 | Wood siding - 1/2 in.<br>Vapor permeable felt - 1/8 in.<br>Composite-1<br>Gypsum Board - 1/2 in.<br>Softwood - 1.5 in. | N |
| R-19 Metal Floor Crawlspa14 | Exterior Floor | 960 | Metal | 19 | N/A | N/A | U-factor | 0.0588 | Vented Crawl Space<br>Composite-2<br>Plywood - 1/2 in.<br>Carpet - 3/4 in. | N |
| Standing Seam R-38 Metal16 | Roof | 960 | N/A | 36 | N/A | N/A | U-factor | 0.06 | Metal Standing Seam - 1/16 in.<br>Composite-3 | N |

*[1] Status: N - New, A - Altered, E - Existing*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 11 of 17)**

**G7A. FENESTRATION ASSEMBLY SUMMARY (NONRESIDENTIAL)**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| **Fenestration Assembly Name** | **Fenestration Type/ Product Type / Frame Type** | **Certification Method[1]** | **Assembly Method** | **Area (ft²)** | **Overall U-factor** | **Overall SHGC** | **Overall VT** | **Status[2]** |
| Sierra Pacific Windows | Vertical fenestration<br>Operable window<br>N/A | NFRC | Manufactured | 64 | 0.35 | 0.24 | 0.5 | N |
| Sola tube | Skylight<br>Fixed window<br>N/A | NFRC | Manufactured | 14 | 0.39 | 0.37 | 0.65 | N |

*[1] Notes: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
*[2] Status: N - New, A - Altered, E - Existing*

**H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Heating** | | | | **Cooling** | | | | |
| **Equipment Name** | **Equipment Type** | **Qty** | **Total Heating Output (kBtu/h)** | **Supp Heat Output (kBtu/h)** | **Efficiency Unit** | **Efficiency** | **Total Cooling Output (kBtu/h)** | **Efficiency Unit** | **Efficiency** | **Economizer Type (if present)** | **Status[1]** |
| AC-1 | Single Package VHP Air System | 1 | 34.37 | 13.65 | COP | 3.3 | 34.56 | EER | 11 | Fixed DB | N |

*[1] Status: N - New, A - Altered, E - Existing*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 12 of 17)**

**H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Supply Fan** | | | | **Return / Relief Fan** | | | | | |
| **Name or Item Tag** | **Qty** | **Design OA CFM** | **CFM** | **Power** | **Power Units** | **Control** | **Fan Type** | **CFM** | **Power** | **Power Units** | **Control** | **Status[1]** |
| AC-1 | 1 | 364.8 | 1,100 | 0.5 | BHP | Constant Vol | N/A | N/A | N/A | N/A | N/A | N |

*[1] Status: N - New, A - Altered, E - Existing*

**H8. SYSTEM SPECIAL FEATURES**

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| **System Name** | **Equipment Type** | **Interlocks per 140.4(n)[1]** | **Other Special Features and Controls** |
| AC-1 | Single Package VHP Air System | No | Zone(s) With CO2 Sensor Vent. Control<br>Fixed DB |

*Notes: 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.*

*[1] Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

**H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| | **Mechanical Ventilation** | | | | | |
| **Zone Name** | **Ventilation Function** | **# of People** | **Supply OA CFM** | **Exhaust CFM** | **Conditioned Area (sf)** | **DCV or Occupant Sensor Controls, or Both** |
| 1-First Floor | Education - Classrooms (ages 9-18) | 24 | 364.8 | 0 | 960 | DCV |

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 13 of 17)**

**H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Rated Capacity (kBtuh)** | | **Airflow (cfm)** | | | **Fan** | | | |
| **System ID** | **System Type** | **Qty** | **Heating** | **Cooling** | **Design** | **MIn.** | **Min. Ratio** | **Power** | **Power Units** | **Cycles** | **VSD** |
| 1-First Floor-Trm | Uncontrolled | 1 | N/A | N/A | 1,100 | N/A | 0 | N/A | N/A | N/A | ☐ |

**K1. INDOOR CONDITIONED LIGHTING GENERAL INFO**

| 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|
| | | | | **Additional (Custom) Allowance** | |
| **Occupancy Type[1]** | **Conditioned Floor Area[2] (ft²)** | **Installed Lighting Power (Watts)** | **Lighting Control Credits (Watts)** | **Area Category Footnotes (Watts)** | **Area Category Footnotes (Watts)** |
| Classroom, Lecture, or Training Vocational | 960 | 384 | 0 | 0 | 0 |
| **Building Totals:** | **960** | **384** | **0** | **0** | **0** |

*[1] See Table 140.6-C*
*[2] See NRCC-LTI--E for unconditioned spaces*
*[3] Lighting information for existing spaces modeled is not included in this table*

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 14 of 17)**

**K2. INDOOR CONDITIONED LIGHTING SCHEDULE**

**Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)**

| 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|
| | | **Installed Watts (Conditioned)** | | | |
| **Name or Item Tag** | **Complete Luminaire Description (i.e. 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)** | **Watts per luminaire** | **How is Wattage determined** | **Total Number of Luminaires** | **Installed Watts** |
| L-1 | 2x4 LED Panel | 48 | According to | 8 | 384 |

*[1] If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.*

**K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS**

**Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per 140.6(a)2 and Table 140.6-A)**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| **Area Description** | **Primary Function Area (must meet requirements of Table 140.6-A and 170.2-L)** | **Type of Lighting Control** | **Power Adjustment Factor (PAF)** | **Luminaire Item Tag** | **Watts per Luminaire** | **# of Luminaires** | **Lighting Controlled (Watts)** | **Control Credit (Watts)** |
| S-1-First Floor | Classroom, Lecture, or Training Vocational | N/A | N/A | L-1 | 48 | 8 | 384 | 0 |
| | | | | | | | **Lighting Control Credits (Conditioned) Total (Watts)** | **0** |

**K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROL**

**Building Level Controls**

| 01 | 02 |
|---|---|
| **Mandatory Demand Response 110.12(c)** | **Shut-Off Controls 130.1(c) & 160.5(b)4C** |
| **Required** | **Required** |

**See NRCC-LTI-E for mandatory controls**

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 15 of 17)**

**L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**

**Selections made by Documentation Author indicate which Certificates of Installation 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**

| Building Component | Form/Title |
|---|---|
| Envelope | NRCI-ENV-01-E - Must be submitted for all buildings |
| Envelope | NRCI-ENV-E - Envelope (for all buildings) |
| Mechanical | NRCI-MCH-01-E - Must be submitted for all buildings |
| Mechanical | NRCI-MCH-E - For all buildings with Mechanical Systems |
| Indoor Lighting | NRCI-LTI-01-E - Must be submitted for all buildings |
| Indoor Lighting | NRCI-LTI-E - Indoor Lighting (for all buildings) |

**M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

**Selections made by Documentation Author 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).**

| Building Component | Form/Title |
|---|---|
| Envelope | NRCA-ENV-02-F - NRFC label verification for fenestration |
| Indoor Lighting | NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls. |
| Mechanical | NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap |
| Mechanical | NRCA-MCH-05-A - Air Economizer Controls |
| Mechanical | NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to ) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints. |

**N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION**

**Selections made by Documentation Author 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**

**There are no Certificates of Verification applicable to this project**

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**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 16 of 17)**

**Documentation Author's Declaration Statement**

**1. I certify that this Certificate of Compliance documentation is accurate and complete.**

| | |
|---|---|
| Documentation Author Name: LAL B. SAHGAL | Documentation Author Signature: |
| Company: LSA CONSULTING ENGINEERS | Signature Date: |
| Address: 83, WINDSWEPT WAY | CEA/HERS Certification Identification (if applicable): M26885 |
| City/State/Zip: MISSION VIEJO, CA 92692 | Phone: (949) 830-4746 |

**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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

| | | |
|---|---|---|
| Responsible Designer Name: | Responsible Designer Signature: | |
| Company: R & S Tavares Associates | | |
| Address: 11590 W. Bernardo Court, Suite 100 | Date Signed: | |
| City/State/Zip: San Diego, Ca. 92127 | License #: | |
| Phone: | Title: | Scope: |
| Responsible Designer Name: | Responsible Designer Signature: | |
| Company: R & S Tavares Associates | | |
| Address: 11590 W. Bernardo Court, Suite 100 | Date Signed: | |
| City/State/Zip: San Diego, Ca. 92127 | License #: | |
| Phone: | Title: | Scope: |

---

**CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** **NRCC-PRF-E**

**Nonresidential Performance Compliance Method** **(Page 17 of 17)**

| | | |
|---|---|---|
| Responsible Designer Name: Lal Sahgal | Responsible Designer Signature: | |
| Company: LSA Consulting Engineers | | |
| Address: 83, Windswept Way | Date Signed: | |
| City/State/Zip: Mission Viejo, Ca. 92692 | License #: M26885 | |
| Phone: | Title: | Scope: |

---

# HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| | |
|---|---|
| Project Name<br>24X40 (PC 04-121369) - Wall AC | Date<br>7/26/2023 |
| System Name<br>AC-1 | Floor Area<br>960 |

**ENGINEERING CHECKS**

| | |
|---|---|
| **Number of Systems** | 1 |
| **Heating System** | |
| **Output per System** | 33,000 |
| **Total Output (Btuh)** | 33,000 |
| **Output (Btuh/sqft)** | 34.4 |
| **Cooling System** | |
| **Output per System** | 36,000 |
| **Total Output (Btuh)** | 36,000 |
| **Total Output (Tons)** | 3.0 |
| **Total Output (Btuh/sqft)** | 37.5 |
| **Total Output (sqft/Ton)** | 320.0 |
| **Air System** | |
| **CFM per System** | 1,100 |
| **Airflow (cfm)** | 1,100 |
| **Airflow (cfm/sqft)** | 1.15 |
| **Airflow (cfm/Ton)** | 366.7 |
| **Outside Air (%)** | 33.2% |
| **Outside Air (cfm/sqft)** | 0.38 |

**Note: values above given at ARI conditions**

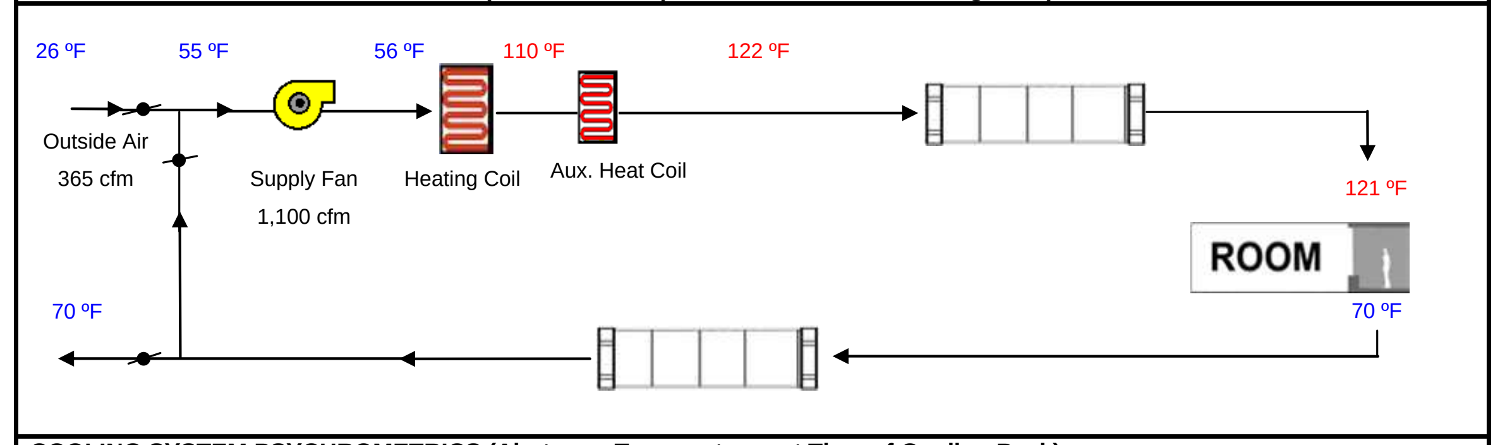
**SYSTEM LOAD**

| | **COIL COOLING PEAK** | | | **COIL HTG. PEAK** | |
|---|---|---|---|---|---|
| | **CFM** | **Sensible** | **Latent** | **CFM** | **Sensible** |
| **Total Room Loads** | 1,653 | 31,075 | 9,600 | 167 | 9,097 |
| **Return Vented Lighting** | | 0 | | | |
| **Return Air Ducts** | | 1,554 | | | 455 |
| **Return Fan** | | 0 | | | 0 |
| **Ventilation** | 365 | 14,619 | -1,514 | 365 | 16,924 |
| **Supply Fan** | | 1,535 | | | -1,535 |
| **Supply Air Ducts** | | 1,554 | | | 455 |
| **TOTAL SYSTEM LOAD** | | 50,337 | 8,086 | | 25,396 |

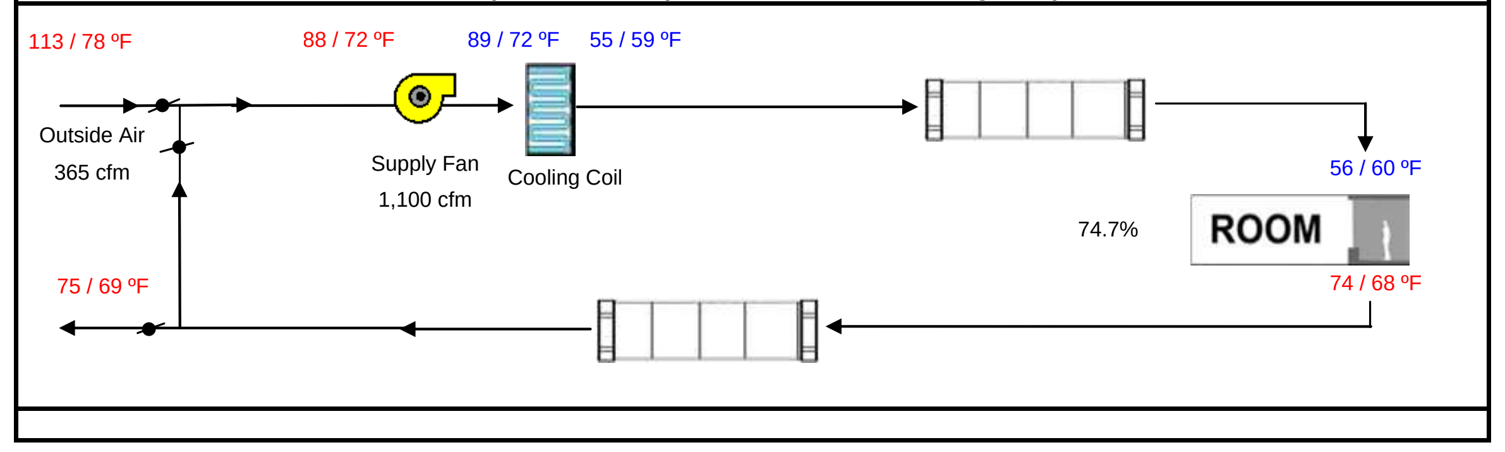
**HVAC EQUIPMENT SELECTION**

| | | | |
|---|---|---|---|
| Bard W36HB | 26,824 | 9,056 | 20,611 |
| HP Supplemental Coil | | | 13,648 |
| | | | |
| **Total Adjusted System Output** (Adjusted for Peak Design conditions) | 26,824 | 9,056 | 34,259 |
| **TIME OF SYSTEM PEAK** | Jul 3 PM | | Jan 1 AM |

**HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)**



**COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)**



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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W. Bernardo Court, Suite 100
San Diego, CA 92127
Phone: (858) 444-3344
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
24'x40' T24 CZ 15 (WALL AC)

PROJECT NUMBER
22088

DRAWN BY
rMc/CG

CHECKED BY
RH/RT

DATE
06/15/2021

SHEET NO.
M2.12

SHEET OF

C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

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# BUILDING ENERGY ANALYSIS REPORT

**PROJECT:**
24X40 (PC 04-121369) - Wall AC
Climate Zone 16
Blue Canyon, CA

**Project Designer:**
R & S Tavares Associates
11590 W. Bernardo Court, Suite 100
San Diego, Ca. 92127

**Report Prepared by:**
LAL B. SAHGAL
LSA CONSULTING ENGINEERS
83, WINDSWEPT WAY
MISSION VIEJO, CA 92692
(949) 830-4746

**Job Number:**

**Date:**
7/26/2023

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2022 Building Energy Efficiency Standards.

This program developed by EnergySoft, LLC – www.energysoft.com.

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Cover Page 1
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HVAC System Heating and Cooling Loads Summary 20

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| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 1 of 17)** |
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Date Prepared:** 2023-07-26 |

**A. General Information**

| | | | | | |
|---|---|---|---|---|---|
| 1 | Project Name | 24X40 (PC 04-121369) - Wall AC | | | |
| 2 | Run Title | Title 24 Analysis | | | |
| 3 | Project Location | Climate Zone 16 | | | |
| 4 | City | Blue Canyon | 5 | Standards Version | Compliance 2022 |
| 6 | Zip code | 99999 | 7 | Compliance Software (version) | EnergyPro 9.1 |
| 8 | Climate Zone | 16 | 9 | Building Orientation (deg) | 30 |
| 10 | Building Type(s) | • Nonresidential | 11 | Weather File | BLUE-CANYON_STYP20.epw |
| 12 | Project Scope | • New complete scope | 13 | Number of Dwelling Units | 0 |
| 14 | Total Conditioned Floor Area in Scope (ft$^2$) | 960 | 15 | Total # of hotel/motel rooms | 0 |
| 16 | Total Unconditioned Floor Area (ft$^2$) | 0 | 17 | Fuel Type | Natural gas |
| 18 | Nonresidential Conditioned Floor Area | 960 | 19 | Total # of Stories (Habitable Above Grade) | 1 |
| 20 | Residential Conditioned Floor Area | 0 | | | |

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 2 of 17)** |

**B. PROJECT SUMMARY**

*Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.*

| **Building Components Complying via Performance** | | | | | | **Building Components Complying Prescriptively** | |
|---|---|---|---|---|---|---|---|
| Envelope (See Table G) | Nonres | Performance | Solar Thermal Water Heating (See Table I3) | ☐ | Performance | The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E). | |
| | MultiFam | Not Included | | ☒ | Not Included | | |
| Mechanical (See Table H) | Nonres | Performance | Covered Process: Commercial Kitchens (see Table J) | ☐ | Performance | Indoor Lighting (Unconditioned) 140.6 & 170.2(e) | NRCC-LTI-E is required |
| | MultiFam | Not Included | | ☒ | Not Included | Outdoor Lighting 140.7 & 170.2(e) | NRCC-LTO-E is required |
| Domestic Hot Water (See Table I) | Nonres | Not Included | Covered Process: Laboratory Exhaust (see Table J) | ☐ | Performance | Sign Lighting 140.8 & 170.2(e) | NRCC-LTS-E is required |
| | MultiFam | Not Included | | ☒ | Not Included | **Building Components Complying with Mandatory Measures** | |
| Lighting (Indoor Conditioned, see Table K) | Nonres | Performance | Photovoltaics (see Table F) | ☐ | Performance | Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.) | |
| | MultiFam | Not Included | | ☒ | Not Included | Electrical Power Distribution 110.11 | NRCC-ELC-E is required |
| | | | Battery (see Table F) | ☐ | Performance | Commissioning 120.8 | NRCC-CXR-E is required |
| | | | | ☒ | Not Included | Solar and Battery 110.10 | NRCC-SAB-E is required |

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 3 of 17)** |

**C1. COMPLIANCE SUMMARY**

**COMPLIES[3]**

| | **Time Dependent Valuaton (TDV)** | | **Source Energy Use** |
|---|---|---|---|
| | **Efficiency[1] (kBtu/ft$^2$ - yr)** | **Total[2] (kBtu/ft$^2$ - yr)** | **Total[2] (kBtu/ft$^2$ - yr)** |
| Standard Design | 307.23 | 307.23 | 49.92 |
| Proposed Design | 273.51 | 273.51 | 36.13 |
| **Compliance Margins** | **33.72** | **33.72** | **13.79** |
| | **Pass** | **Pass** | **Pass** |

[1] *Efficiency measures include improvements like a better building envelope and more efficient equipment*
[2] *Compliance Totals include efficiency, photovoltaics and batteries*
[3] *Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded*

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 4 of 17)** |

**C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft$^2$ - yr)**

**COMPLIES[2]**

| **Energy Component** | **Standard Design (TDV)** | **Proposed Design (TDV)** | **Compliance Margin (TDV)[1]** |
|---|---|---|---|
| Space Heating | 51.5 | 114.86 | -63.36 |
| Space Cooling | 19.06 | 18.57 | 0.49 |
| Indoor Fans | 169.42 | 83.19 | 86.23 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 36.19 | 36.19 | 0 |
| Indoor Lighting | 31.06 | 20.7 | 10.36 |
| Flexibility | --- | --- | --- |
| **EFFICIENCY COMPLIANCE TOTAL** | **307.23** | **273.51** | **33.72 (11%)** |
| Photovoltaics | --- | --- | --- |
| Batteries | --- | --- | --- |
| **TOTAL COMPLIANCE** | **307.23** | **273.51** | **33.72 (11%)** |

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 5 of 17)** |

**C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]**

| **Non-Regulated Energy Component** | **Standard Design (TDV)** | **Proposed Design (TDV)** | **Compliance Margin (TDV)[1]** |
|---|---|---|---|
| Receptacle | 63.66 | 63.66 | --- |
| Process | --- | --- | --- |
| Other Ltg | --- | --- | --- |
| Process Motors | --- | --- | --- |
| **TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)** | **370.89** | **337.17** | **33.72 (9.1%)** |

[1] *Notes: This table is not used for Energy Code Compliance.*

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 6 of 17)** |

**C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft$^2$ /yr)**

**COMPLIES[2]**

| **Energy Component** | **Standard Design (SOURCE)** | **Proposed Design (SOURCE)** | **Compliance Margin (SOURCE)[1]** |
|---|---|---|---|
| Space Heating | 16.26 | 11.75 | 4.51 |
| Space Cooling | 1.3 | 1.31 | -0.01 |
| Indoor Fans | 16.75 | 8.32 | 8.43 |
| Heat Rejection | 0 | 0 | 0 |
| Pumps & Misc. | 0 | 0 | 0 |
| Domestic Hot Water | 13.04 | 13.04 | 0 |
| Indoor Lighting | 2.57 | 1.71 | 0.86 |
| Flexibility | --- | --- | --- |
| **EFFICIENCY COMPLIANCE TOTAL** | **49.92** | **36.13** | **13.79 (27.6%)** |
| Photovoltaics | --- | --- | --- |
| Batteries | --- | --- | --- |
| **TOTAL COMPLIANCE** | **49.92** | **36.13** | **13.79 (27.6%)** |

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 7 of 17)** |

**C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]**

| **Non-Regulated Energy Component** | **Standard Design (SOURCE)** | **Proposed Design (SOURCE)** | **Compliance Margin (SOURCE)[1]** |
|---|---|---|---|
| Receptacle | 4.92 | 4.92 | --- |
| Process | --- | --- | --- |
| Other Ltg | --- | --- | --- |
| Process Motors | --- | --- | --- |
| **TOTAL ( TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)** | **54.84** | **41.05** | **13.79 (25.1%)** |

[1] *Notes: This table is not used for Energy Code Compliance.*

**C6. 'ABOVE CODE' QUALIFICATIONS**

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

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| | |
|---|---|
| **CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD** | **NRCC-PRF-E** |
| **Nonresidential Performance Compliance Method** | **(Page 8 of 17)** |

**C7. ENERGY USE SUMMARY**

| **Energy Component** | **Standard Design Site (MWh)** | **Proposed Design Site (MWh)** | **Margin (MWh)** | **Standard Design Site (MBtu)** | **Proposed Design Site (MBtu)** | **Margin (MBtu)** |
|---|---|---|---|---|---|---|
| Space Heating | 0.1 | 3 | -2.9 | 16.4 | --- | --- |
| Space Cooling | 0.8 | 0.7 | 0.1 | --- | --- | --- |
| Indoor Fans | 5.6 | 2.8 | 2.8 | --- | --- | --- |
| Heat Rejection | --- | --- | --- | --- | --- | --- |
| Pumps & Misc. | --- | --- | --- | --- | --- | --- |
| Domestic Hot Water | --- | --- | --- | 13.6 | 13.6 | 0 |
| Indoor Lighting | 1.2 | 0.8 | 0.4 | --- | --- | --- |
| Flexibility | --- | --- | --- | --- | --- | --- |
| **EFFICIENCY TOTAL** | **7.7** | **7.3** | **0.4** | **30** | **13.6** | **16.4** |
| Photovoltaics | --- | --- | --- | --- | --- | --- |
| Batteries | --- | --- | --- | --- | --- | --- |
| **ENERGY USE SUBTOTAL** | **7.7** | **7.3** | **0.4** | **30** | **13.6** | **16.4** |
| Receptacle | 2.5 | 2.5 | 0 | --- | --- | --- |
| Process | --- | --- | --- | --- | --- | --- |
| Other Ltg | --- | --- | --- | --- | --- | --- |
| Process Motors | --- | --- | --- | --- | --- | --- |
| **ENERGY USE TOTAL** | **10.2** | **9.8** | **0.4** | **30** | **13.6** | **16.4** |

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
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RST#22088
02/16/24

CLIENT

Class Leasing
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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
24'x40' T24 CZ 16 (WALL AC)

PROJECT NUMBER
22088

DRAWN BY
Author

CHECKED BY
Checker

DATE
06/15/2021

SHEET NO.
M2.13

SHEET OF

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### C8. ENERGY USE INTENSITY (EUI)

| | Standard Design (kBtu/ft² / yr) | Proposed Design (kBtu/ft² / yr) | Margin (kBtu/ft² / yr) | Margin Percentage |
|---|---|---|---|---|
| GROSS EUI[1] | 67.5 | 49 | 18.5 | 27.41 |
| NET EUI[1] | 67.5 | 49 | 18.5 | 27.41 |

[1] *Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.*

### D1. EXCEPTIONAL CONDITIONS

- The 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 building does not include service water heating. Verify that service water heating is not required and is not included in the design.
- Project is claiming Exception 2 to Section 140.10(a): No PV system is required where the required PV system size is less than 4 kWdc.

### G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| **Opaque Surfaces & Orientation** | **Total Gross Surface Area (ft²)** | **Total Fenestration Area (ft²)** | **Window to Wall Ratio (%)** |
| North-Facing[1] | 400 | 0 | 0 |
| East-Facing[2] | 240 | 32 | 13.33 |
| South-Facing[3] | 400 | 0 | 0 |
| West-Facing[4] | 240 | 32 | 13.33 |
| **Total** | **1280** | **64** | **5** |
| Roof | 960 | 14 | 1.46 |

*Notes*
[1] *North-Facing is oriented to within 45 degrees of true north, including 45 00'00" east of north (NE), but excluding 45 00'00" west of north (NW),*
[2] *East-Facing is oriented to within 45 degrees of true east, including 45 00'00" south of east (SE), but excluding 45 00'00" north of east (NE),*
[3] *South-Facing is oriented to within 45 degrees of true south, including 45 00'00" west of south (SW), but excluding 45 00'00" east of south (SE),*
[4] *West-Facing is oriented to within 45 degrees of true west, including 45 00'00" north of west (NW), but excluding 45 00'00" south of west (SW),*

### G4. NONRESIDENTIAL AIR BARRIER

| 01 | 02 |
|---|---|
| **Building Story Name** | **Air Barrier** |
| Com-Floor 1 | No air barrier |

### G5. OPAQUE SURFACE ASSEMBLY SUMMARY

| 01 | 02 | 03 | 04 | 05 | 06 | | 07 | 08 | 09 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Surface Name** | **Construction Type** | **Area (ft²)** | **Framing Type** | **Cavity R-Value** | **Continuous R-Value** | | **Units** | **Value** | **Description of Assembly Layers** | **Status[1]** |
| | | | | | **Interior** | **Exterior** | | | | |
| R-19 Wood Framed Wall7 | Exterior Wall | 1,280 | Wood | 19 | N/A | N/A | U-factor | 0.0605 | Wood siding - 1/2 in.<br>Vapor permeable felt - 1/8 in.<br>Composite-1<br>Gypsum Board - 1/2 in.<br>Softwood - 1.5 in. | N |
| R-19 Metal Floor Crawlspa14 | Exterior Floor | 960 | Metal | 19 | N/A | N/A | U-factor | 0.0588 | Vented Crawl Space<br>Composite-2<br>Plywood - 1/2 in.<br>Carpet - 3/4 in. | N |
| Standing Seam R-38 Metal16 | Roof | 960 | N/A | 36 | N/A | N/A | U-factor | 0.06 | Metal Standing Seam - 1/16 in.<br>Composite-3 | N |

[1] *Status: N - New, A - Altered, E - Existing*

### G7A. FENESTRATION ASSEMBLY SUMMARY (NONRESIDENTIAL)

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| **Fenestration Assembly Name** | **Fenestration Type/ Product Type / Frame Type** | **Certification Method[1]** | **Assembly Method** | **Area (ft²)** | **Overall U-factor** | **Overall SHGC** | **Overall VT** | **Status[2]** |
| Sierra Pacific Windows | Vertical fenestration<br>Operable window<br>N/A | NFRC | Manufactured | 64 | 0.35 | 0.24 | 0.5 | N |
| Sola tube | Skylight<br>Fixed window<br>N/A | NFRC | Manufactured | 14 | 0.39 | 0.37 | 0.65 | N |

[1] *Notes: Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.*
[2] *Status: N - New, A - Altered, E - Existing*

### H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Equipment Name** | **Equipment Type** | **Qty** | **Heating** | | | | **Cooling** | | | **Economizer Type (if present)** | **Status[1]** |
| | | | **Total Heating Output (kBtu/h)** | **Supp Heat Output (kBtu/h)** | **Efficiency Unit** | **Efficiency** | **Total Cooling Output (kBtu/h)** | **Efficiency Unit** | **Efficiency** | | |
| AC-1 | Single Package VHP Air System | 1 | 34.37 | 13.65 | COP | 3.3 | 34.56 | EER | 11 | Fixed DB | N |

[1] *Status: N - New, A - Altered, E - Existing*

### H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Name or Item Tag** | **Qty** | **Design OA CFM** | **Supply Fan** | | | | **Return / Relief Fan** | | | | | **Status[1]** |
| | | | **CFM** | **Power** | **Power Units** | **Control** | **Fan Type** | **CFM** | **Power** | **Power Units** | **Control** | |
| AC-1 | 1 | 364.8 | 1,100 | 0.5 | BHP | Constant Vol | N/A | N/A | N/A | N/A | N/A | N |

[1] *Status: N - New, A - Altered, E - Existing*

### H8. SYSTEM SPECIAL FEATURES

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| **System Name** | **Equipment Type** | **Interlocks per 140.4(n)[1]** | **Other Special Features and Controls** |
| AC-1 | Single Package VHP Air System | No | Zone(s) With CO2 Sensor Vent. Control<br>Fixed DB |

*Notes: 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.*

[1] *Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

### H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| **Zone Name** | **Mechanical Ventilation** | | | | **Conditioned Area (sf)** | **DCV or Occupant Sensor Controls, or Both** |
| | **Ventilation Function** | **# of People** | **Supply OA CFM** | **Exhaust CFM** | | |
| 1-First Floor | Education - Classrooms (ages 9-18) | 24 | 364.8 | 0 | 960 | DCV |

### H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **System ID** | **System Type** | **Qty** | **Rated Capacity (kBtuh)** | | **Airflow (cfm)** | | | **Fan** | | | **VSD** |
| | | | **Heating** | **Cooling** | **Design** | **MIn.** | **Min. Ratio** | **Power** | **Power Units** | **Cycles** | |
| 1-First Floor-Trm | Uncontrolled | 1 | N/A | N/A | 1,100 | N/A | 0 | N/A | N/A | N/A | ☐ |

### K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

| 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|
| **Occupancy Type[1]** | **Conditioned Floor Area[2] (ft²)** | **Installed Lighting Power (Watts)** | **Lighting Control Credits (Watts)** | **Additional (Custom) Allowance** | |
| | | | | **Area Category Footnotes (Watts)** | **Area Category Footnotes (Watts)** |
| Classroom, Lecture, or Training Vocational | 960 | 384 | 0 | 0 | 0 |
| **Building Totals:** | **960** | **384** | **0** | **0** | **0** |

[1] *See Table 140.6-C*
[2] *See NRCC-LTI--E for unconditioned spaces*
[3] *Lighting information for existing spaces modeled is not included in this table*

### K2. INDOOR CONDITIONED LIGHTING SCHEDULE

**Luminaire Schedule (includes all permanent installed lighting in conditioned space, and portable lighting over 0.3 w/ft² in offices)**

| 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|
| **Name or Item Tag** | **Complete Luminaire Description (i.e. 3-lamp fluorescent troffer, F32T8, one dimmable electronic ballast)** | **Installed Watts (Conditioned)** | | | |
| | | **Watts per luminaire** | **How is Wattage determined** | **Total Number of Luminaires** | **Installed Watts** |
| L-1 | 2x4 LED Panel | 48 | According to | 8 | 384 |

[1] *If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.*

### K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

**Lighting Control Credits Schedule (includes all lighting controls installed in conditioned space for compliance credit per 140.6(a)2 and Table 140.6-A)**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|
| **Area Description** | **Primary Function Area (must meet requirements of Table 140.6-A and 170.2-L)** | **Type of Lighting Control** | **Power Adjustment Factor (PAF)** | **Luminaire Item Tag** | **Watts per Luminaire** | **# of Luminaires** | **Lighting Controlled (Watts)** | **Control Credit (Watts)** |
| S-1-First Floor | Classroom, Lecture, or Training Vocational | N/A | N/A | L-1 | 48 | 8 | 384 | 0 |
| | | | | | | | **Lighting Control Credits (Conditioned) Total (Watts)** | **0** |

### K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROL

**Building Level Controls**

| 01 | 02 |
|---|---|
| **Mandatory Demand Response 110.12(c)** | **Shut-Off Controls 130.1(c) & 160.5(b)4C** |
| **Required** | **Required** |

**See NRCC-LTI-E for mandatory controls**

### L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

**Selections made by Documentation Author indicate which Certificates of Installation 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**

| Building Component | Form/Title |
|---|---|
| Envelope | NRCI-ENV-01-E - Must be submitted for all buildings |
| Envelope | NRCI-ENV-E - Envelope (for all buildings) |
| Mechanical | NRCI-MCH-01-E - Must be submitted for all buildings |
| Mechanical | NRCI-MCH-E - For all buildings with Mechanical Systems |
| Indoor Lighting | NRCI-LTI-01-E - Must be submitted for all buildings |
| Indoor Lighting | NRCI-LTI-E - Indoor Lighting (for all buildings) |

### M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

**Selections made by Documentation Author 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).**

| Building Component | Form/Title |
|---|---|
| Envelope | NRCA-ENV-02-F - NRFC label verification for fenestration |
| Indoor Lighting | NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls. |
| Mechanical | NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap |
| Mechanical | NRCA-MCH-05-A - Air Economizer Controls |
| Mechanical | NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to ) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints. |

### N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

**Selections made by Documentation Author 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**

**There are no Certificates of Verification applicable to this project**

**Documentation Author's Declaration Statement**

**1. I certify that this Certificate of Compliance documentation is accurate and complete.**

| | |
|---|---|
| Documentation Author Name: LAL B. SAHGAL | Documentation Author Signature: |
| Company: LSA CONSULTING ENGINEERS | Signature Date: |
| Address: 83, WINDSWEPT WAY | CEA/HERS Certification Identification (if applicable): M26885 |
| City/State/Zip: MISSION VIEJO, CA 92692 | Phone: (949) 830-4746 |

**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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

| | | |
|---|---|---|
| Responsible Designer Name: | Responsible Designer Signature: | |
| Company: R & S Tavares Associates | | |
| Address: 11590 W. Bernardo Court, Suite 100 | Date Signed: | |
| City/State/Zip: San Diego, Ca. 92127 | License #: | |
| Phone: | Title: | Scope: |
| Responsible Designer Name: | Responsible Designer Signature: | |
| Company: R & S Tavares Associates | | |
| Address: 11590 W. Bernardo Court, Suite 100 | Date Signed: | |
| City/State/Zip: San Diego, Ca. 92127 | License #: | |
| Phone: | Title: | Scope: |

| | | |
|---|---|---|
| Responsible Designer Name: Lal Sahgal | Responsible Designer Signature: | |
| Company: LSA Consulting Engineers | | |
| Address: 83, Windswept Way | Date Signed: | |
| City/State/Zip: Mission Viejo, Ca. 92692 | License #: M26885 | |
| Phone: | Title: | Scope: |

## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: 24X40 (PC 04-121369) - Wall AC
Date: 7/26/2023
System Name: AC-1
Floor Area: 960

### ENGINEERING CHECKS

| | |
|---|---|
| **Number of Systems** | 1 |
| **Heating System** | |
| **Output per System** | 33,000 |
| **Total Output (Btuh)** | 33,000 |
| **Output (Btuh/sqft)** | 34.4 |
| **Cooling System** | |
| **Output per System** | 36,000 |
| **Total Output (Btuh)** | 36,000 |
| **Total Output (Tons)** | 3.0 |
| **Total Output (Btuh/sqft)** | 37.5 |
| **Total Output (sqft/Ton)** | 320.0 |
| **Air System** | |
| **CFM per System** | 1,100 |
| **Airflow (cfm)** | 1,100 |
| **Airflow (cfm/sqft)** | 1.15 |
| **Airflow (cfm/Ton)** | 366.7 |
| **Outside Air (%)** | 33.2% |
| **Outside Air (cfm/sqft)** | 0.38 |

**Note: values above given at ARI conditions**

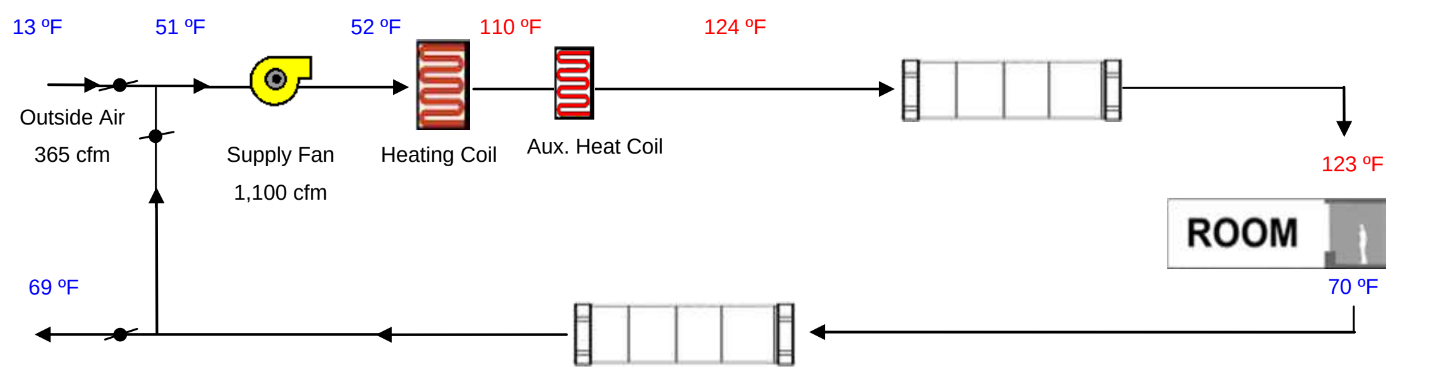
### SYSTEM LOAD

| | COIL COOLING PEAK | | | COIL HTG. PEAK | |
|---|---|---|---|---|---|
| | **CFM** | **Sensible** | **Latent** | **CFM** | **Sensible** |
| **Total Room Loads** | 1,209 | 26,482 | 9,600 | 248 | 11,785 |
| **Return Vented Lighting** | | 0 | | | |
| **Return Air Ducts** | | 1,324 | | | 589 |
| **Return Fan** | | 0 | | | 0 |
| **Ventilation** | 365 | 3,129 | -1,167 | 365 | 18,296 |
| **Supply Fan** | | 1,535 | | | -1,535 |
| **Supply Air Ducts** | | 1,324 | | | 589 |
| **TOTAL SYSTEM LOAD** | | 33,795 | 8,433 | | 29,724 |

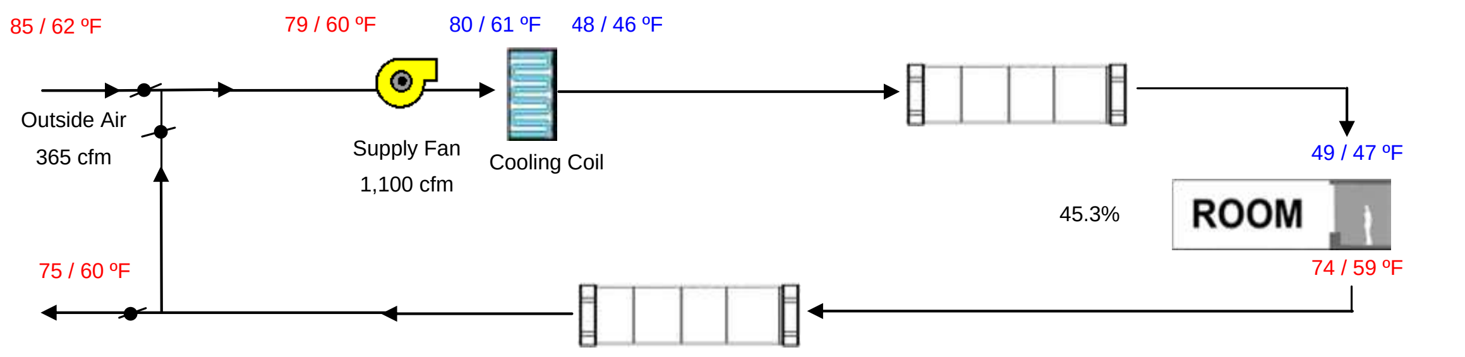
### HVAC EQUIPMENT SELECTION

| | | | |
|---|---|---|---|
| Bard W36HB | 31,415 | 2,901 | 13,777 |
| HP Supplemental Coil | | | 13,648 |
| | | | |
| **Total Adjusted System Output** (Adjusted for Peak Design conditions) | 31,415 | 2,901 | 27,425 |
| **TIME OF SYSTEM PEAK** | | Jul 3 PM | Jan 1 AM |

### HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



### COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
RST#22088
02/16/24

**THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©**

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
24'x40' T24 CZ 16 (WALL AC)

PROJECT NUMBER: 22088
DRAWN BY: Author
CHECKED BY: Checker
DATE: 06/15/2021
SHEET NO.: M2.14
SHEET OF

C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt
9/7/2023 11:16:17 AM

| ENVELOPE MANDATORY MEASURES: NONRESIDENTIAL | ENV-MM |
|---|---|
| Project Name<br>*120X40 (PC 04-116504) - Wall AC* | Date<br>*6/23/2018* |

## DESCRIPTION

**Building Envelope Measures:**

| | |
|---|---|
| §110.8(a): | Installed insulating material shall have been certified by the manufacturer to comply with the California Quality Standards for insulating material, Title 20 Chapter 4, Article 3. |
| §110.8(c): | All Insulating Materials shall be installed in compliance with the flame spread rating and smoke density requirements of Sections 2602 and 707 of Title 24, Part 2. |
| §110.8(g): | Heated slab floors shall be insulated according to the requirements in Table 110.8-A. |
| §110.7(a): | All Exterior Joints and openings in the building that are observable sources of air leakage shall be caulked, gasketed, weatherstripped or otherwise sealed. |
| §110.6(a): | Manufactured fenestration products and exterior doors shall have air infiltration rates not exceeding 0.3 cfm/ft.² of window area, 0.3 cfm/ft.² of door area for residential doors, 0.3 cfm/ft.² of door area for nonresidential single doors (swinging and sliding), and 1.0 cfm/ft.² for nonresidential double doors (swinging). |
| §110.6(a): | Fenestration U-factor shall be rated in accordance with NFRC 100, or the applicable default U-factor. |
| §110.6(a) : | Fenestration SHGC shall be rated in accordance with NFRC 200, or NFRC 100 for site-built fenestration, or the applicable default SHGC. |
| §110.6(b): | Site Constructed Doors, Windows and Skylights shall be caulked between the unit and the building, and shall be weatherstripped (except for unframed glass doors and fire doors). |
| §120.7(a): | The opaque portions of the roof/ceiling that separates conditioned spaces from unconditioned spaces or ambient air shall meet the applicable U-Factor requirements as follows:<br>**Metal Building-** The weighted average U-factor of the roof assembly shall not exceed 0.098.<br>**Wood Framed and Others-** The weighted average U-factor of the roof assembly shall not exceed 0.075. |
| §120.7(b): | The opaque portions of walls that separate conditioned spaces from unconditioned spaces or ambient air shall meet the applicable U-factor as follows:<br>**Metal Building-** The weighted average U-factor of the wall assembly shall not exceed 0.113.<br>**Metal Framed-** The weighted average U-factor of the wall assembly shall not exceed 0.151.<br>**Light Mass Walls-** A 6 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor not to exceed 0.440.<br>**Heavy Mass Walls-** An 8 inch or greater Hollow Core Concrete Masonry Unit shall have a U-factor not to exceed 0.690.<br>**Wood Framed and Others-** The weighted average U-factor of the wall assembly shall not exceed 0.110.<br>**Spandrel Panels and Opaque Curtain Wall-** The weighted average U-factor of the spandrel panels and opaque curtain wall assembly shall not exceed 0.280.<br>**Demising Walls-**. The opaque portions of framed demising walls shall meet the requirements of Item A or B below:<br>A. Wood framed walls shall be insulated to meet a U-factor not greater than 0.099.<br>B. Metal Framed walls shall be insulated to meet a U-factor not greater than 0.151. |
| §120.7(c): | The opaque portions of floors and soffits that separate conditioned spaces from unconditioned spaces or ambient air shall meet the applicable U-Factor requirements as follows:<br>**Raised Mass Floors-** Shall have a minimum of 3 inches of lightweight concrete over a metal deck or the weighted average U-factor of the floor assembly shall not exceed 0.269.<br>**Other Floors-**The weighted average U-factor of the floor assembly shall not exceed 0.071. |

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STATE OF CALIFORNIA

## Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | NRCC-PLB-E |
|---|---|---|
| *This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.* | | |
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Report Page:** | **(Page 1 of 6)** |
| **Project Address:** Climate Zone 14 | **Date Prepared:** | 9/7/2023 |

**A. GENERAL INFORMATION**

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Location (city) | Palmdale | 02 | Climate Zone | 14 |
| 03 | Occupancy Types Within Project (select all that apply): | | | | |

- Classroom

**B. PROJECT SCOPE**

*This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./ 170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.*

| 01 | 02 | 03 | | |
|---|---|---|---|---|
| My project consists of (check all that apply): | System Type$^{1,2}$ | System Components | | |
| ☒ New system (DHW system being installed for the first time) | Individual System (serving nonresidential spaces) | ☒ Equipment | ☒ Distribution | ☒ Controls |
| ☐ System Alteration (equipment, distribution or controls) | | ☐ Equipment | ☐ Distribution | ☐ Controls |

*[1]FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
*[2] Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.*
*[3] DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies*

**C. COMPLIANCE RESULTS**

*Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.*

| 01 | 02 | 03 | 04 |
|---|---|---|---|
| Domestic Hot Water Equipment | Distribution Systems | Controls | **Compliance Results** |
| Table F | Table G | Table H | |
| Yes | Yes | Yes | COMPLIES |

**D. EXCEPTIONAL CONDITIONS**

*This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.*

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220101
Compliance ID: EnergyPro-4958-0923-0242
Report Generated: 2023-09-07 12:06:05

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STATE OF CALIFORNIA

## Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | NRCC-PLB-E |
|---|---|---|
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Report Page:** | **(Page 2 of 6)** |
| | **Date Prepared:** | 9/7/2023 |

**E. ADDITIONAL REMARKS**

*This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.*

**F. DOMESTIC HOT WATER EQUIPMENT**

*This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.*

**Equipment Schedule: Water Heating Efficiency and Standby Loss**

| 03 | | 04 | | 05 | | 06 | |
|---|---|---|---|---|---|---|---|
| System Name | A O Smith DEL-10 | Exception to 140.5(c)/ 170.2(d)3 | | ☐ | Gas Service Water Heating System >= 1MMBtu/h$^{1}$ | Capacity-weighted Average Efficiency % | |

| 07 | 08 | 09 | 10 | | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|
| Name or Item Tag | Equipment Type | Volume (gal) | Rated Input Capacity (Btu/h) | Max GPM/ First Hour Rating (FHR) | Rated Efficiency | Minimum Efficiency Required | Efficiency Unit | Designed Standby Loss | Maximum Standby Loss |
| A O Smith DEL-10 | Consumer Rated Electric Storage | 10 | 5,120 | FHR >=75 | 0.95 | 0.93 | UEF | | |

*[1]FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*

**Water Heating Equipment All Occupancies**

| | Yes | No | Not Applicable | Requirement |
|---|---|---|---|---|
| 18 | ☐ | ☐ | ☒ | Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3 |
| 19 | ☐ | ☐ | ☒ | New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5 |
| 20 | ☐ | ☐ | ☒ | Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6 |
| 21 | ☐ | ☐ | ☒ | School buildings < 25,000 ft² and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater. |

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220101
Compliance ID: EnergyPro-4958-0923-0242
Report Generated: 2023-09-07 12:06:05

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STATE OF CALIFORNIA

## Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | NRCC-PLB-E |
|---|---|---|
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Report Page:** | **(Page 3 of 6)** |
| | **Date Prepared:** | 9/7/2023 |

**G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM**

*This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).*

**Mandatory Pipe Insulation All Occupancies**

| | | |
|---|---|---|
| 13 | ☐ | For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except:<br>• Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members<br>• Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5.<br>• Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation. |
| 14 | ☒ | For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3:<br>• Recirculating system piping, including supply and return piping of the water heater<br>• The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system<br>• Pipes that are externally heated |
| 15 | ☐ | Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve. |

**TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS**

| Fluid Temperature Range ( °F) | Conductivity Range (Btu-in per hour per ft² per °F) | Insulation Mean Rating Temp ( °F) | Nominal Pipe Diameter (in) | | | |
|---|---|---|---|---|---|---|
| | | | < 1 | 1 to < 1.5 | 1.5 to < 4 | 1.5 to < 4 Multifamily & Hotel/Motel |
| | | | Minimum Insulation Required | | | |
| 105-140 | 0.22 - 0.28 | 100 | 1.0 in or R-7.7 | 1.5 in or R-12.5 | 1.5 in or R-11 | 2.0 in or R-16 |

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220101
Compliance ID: EnergyPro-4958-0923-0242
Report Generated: 2023-09-07 12:06:05

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STATE OF CALIFORNIA

## Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | NRCC-PLB-E |
|---|---|---|
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Report Page:** | **(Page 4 of 6)** |
| | **Date Prepared:** | 9/7/2023 |

**H. DOMESTIC HOT WATER CONTROLS**

*This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).*

| | Yes | No | Not Applicable | Requirement |
|---|---|---|---|---|
| 01 | ☒ | ☐ | ☐ | Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a). |
| 02 | ☐ | ☐ | ☒ | Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code 613.0. |
| 03 | ☐ | ☐ | ☒ | Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility. |
| 04 | ☐ | ☐ | ☒ | For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions. |
| 05 | ☐ | ☐ | ☒ | For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d). |
| 06 | ☐ | ☐ | ☒ | Combustion air positive shut-off shall be provided per 160.4(3).on all newly installed commercial boilers as follows:<br>• Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure<br>• Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h. |
| 07 | ☐ | ☐ | ☒ | Boiler combustion air fans with motor >= 10 hp shall meet one of the following<br>• The fan motor shall be driven by a variable speed drive OR<br>• The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume. |
| 08 | ☐ | ☐ | ☒ | Newly installed boilers with an input capacity {d:gte/] 5MMBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited. |

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
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Schema Version: rev 20220101
Compliance ID: EnergyPro-4958-0923-0242
Report Generated: 2023-09-07 12:06:05

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STATE OF CALIFORNIA

## Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | NRCC-PLB-E |
|---|---|---|
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Report Page:** | **(Page 5 of 6)** |
| | **Date Prepared:** | 9/7/2023 |

**I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**

*Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online*

| Form/Title |
|---|
| NRCI-PLB-E - Must be submitted for all buildings |

**J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

*There are no forms required for this project.*

**K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION**

*There are no forms required for this project.*

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CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220101
Compliance ID: EnergyPro-4958-0923-0242
Report Generated: 2023-09-07 12:06:05

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STATE OF CALIFORNIA

## Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | NRCC-PLB-E |
|---|---|---|
| **Project Name:** 24X40 (PC 04-121369) - Wall AC | **Report Page:** | **(Page 6 of 6)** |
| **Project Address:** Climate Zone 14 | **Date Prepared:** | 9/7/2023 |

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

**I certify that this Certificate of Compliance documentation is accurate and complete.**

| | |
|---|---|
| Documentation Author Name:<br>LAL B. SAHGAL | Documentation Author Signature: Lal Sahgal |
| Company:<br>LSA CONSULTING ENGINEERS | Signature Date: |
| Address:<br>83, WINDSWEPT WAY | CEA/ HERS Certification Identification (if applicable):<br>M26885 |
| City/State/Zip:<br>MISSION VIEJO CA 92692 | Phone:<br>(949) 830-4746 |

**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 Designer Name:<br>Lal Sahgal | Responsible Designer Signature: Lal Sahgal |
| Company:<br>LSA Consulting Engineers | Date Signed:<br>2023-09-07 |
| Address:<br>83, Windswept Way | License:<br>M26885 |
| City/State/Zip:<br>Mission Viejo Ca. 92692 | Phone: |

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000
Schema Version: rev 20220101
Compliance ID: EnergyPro-4958-0923-0242
Report Generated: 2023-09-07 12:06:05

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**Mandatory Measures:** The following notes (items) represent the Mandatory Measures for all buildings.

Heat pumps with supplementary electric resistance heaters shall have controls:

1) That prevent supplementary heater operation when the heating load can be met by the heat pump alone; and
2) In which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.

Sec. 110.2 (b)

The minimum rate of outdoor air required per Section 120.1 (b) 2 shall be supplied to each space at all time the space is usually occupied.

Sec. 120.1 (c) 3

The Lesser of the minimum rate of outdoor air required by Sec. 120.1 (b) 2, or three complete air changes shall be supplied to the entire building during the one-hour period immediately before the building is normally occupied.

Sec. 120.1 (c) 2

Hotel/Motel Guest Room Thermostats shall have numeric temperature set points in degrees F; and set point stops accessible only to authorized personnel, to restrict over-heating and over-cooling.

Sec. 120.2 (c)

All air distribution system ducts and plenums, including, but not limited to, building cavities, mechanical closets, air-handler boxes and support platforms used as ducts or plenums, shall be installed, sealed and insulated to meet the requirements of chapter 6 of the 2001 CMC. Supply-air and return-air ducts conveying heated or cooled air shall be insulated to a minimum installed level of R-8, unless ducts are in conditioned space.

Sec. 120.4 (a)

The thermostatic controls for HVAC systems shall meet the following requirements as applicable:

a) Each space conditioning zone shall be controlled by an individual thermostatic control that responds to temperature within the zone and meets the applicable requirements of Subsection (b).
b) Each Thermostatic control required by Subsection (a) shall be capable of being set locally or remotely by adjustment or selection of sensors to control:
    1) Comfort heating down to 55°F or lower.
    2) Comfort Cooling up to 85°F or higher.
    3) Both heating and cooling, the thermostatic controls shall be capable of providing a temperature range or dead band of at least 5°F within which the supply of heating and cooling energy to the zone is shut off or reduced to a minimum.

Sec. 120.2 (a) & (b)

1) Outdoor air supply and exhaust equipment shall be installed with dampers that automatically close upon fan shutdown.

Sec. 120.2 (f)

2) Demand Control Ventilation Devices (CO2 sensors) shall be installed in accordance with Sec. 120.1 (c) 4.

Sec. 120.1 (c) 4

3) Each space-conditioning system shall be installed with controls that comply with Items 1 and 2 below:
    1) Are capable of automatically shutting off the system during periods of non-use and shall have:
        a) An automatic time switch control device complying with Sec. 119(c), with an accessible manual override that allows operation of the system for up to 4 hours; or
        b) An occupancy sensor; or
        c) A four-hour timer that can be manually operated.
        d) EXCEPTION: Mechanical systems serving retail stores and associated malls, restaurants, grocery stores, churches, and theaters equipped with 7-day programmable timers.
    2) Automatically restart and temporarily operate the system as required to maintain:
        a) A setback heating thermostat set point, if the system provides mechanical heating; and
        EXCEPTION: Area with the design winter outdoor temperature of greater than 32°F.
        b) A setup cooling thermostat set point, if the system provides mechanical cooling.

        EXCEPTION: Area with the design summer outdoor temperature of less than 100°F.
        EXCEPTION: Systems serving hotel/motel guest rooms, if they have a readily accessible manual shut-off switch.

Sec. 120.2 (e)

4) The piping for all space conditioning and service water heating systems shall be insulated in accordance with TABLE 123-A.

Sec. 120.3

5) Service water heating systems and equipment shall meet the applicable requirements of the Appliance Efficiency Regulations as required by Sec. 110.1.

Sec. 110.3 (b)

6) Service hot water systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system.

Sec. 110.3 (c) 2

7) Lavatories in public restrooms shall have controls that limit the water supply temperature to 110°F.

Sec. 110.3 (c) 3

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
02/16/24
RST#22088

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~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ENVELOPE AND NOTES

PROJECT NUMBER
22088

DRAWN BY
rMc/CG

CHECKED BY
RH/RT

DATE

SHEET NO.
M3.3

SHEET OF

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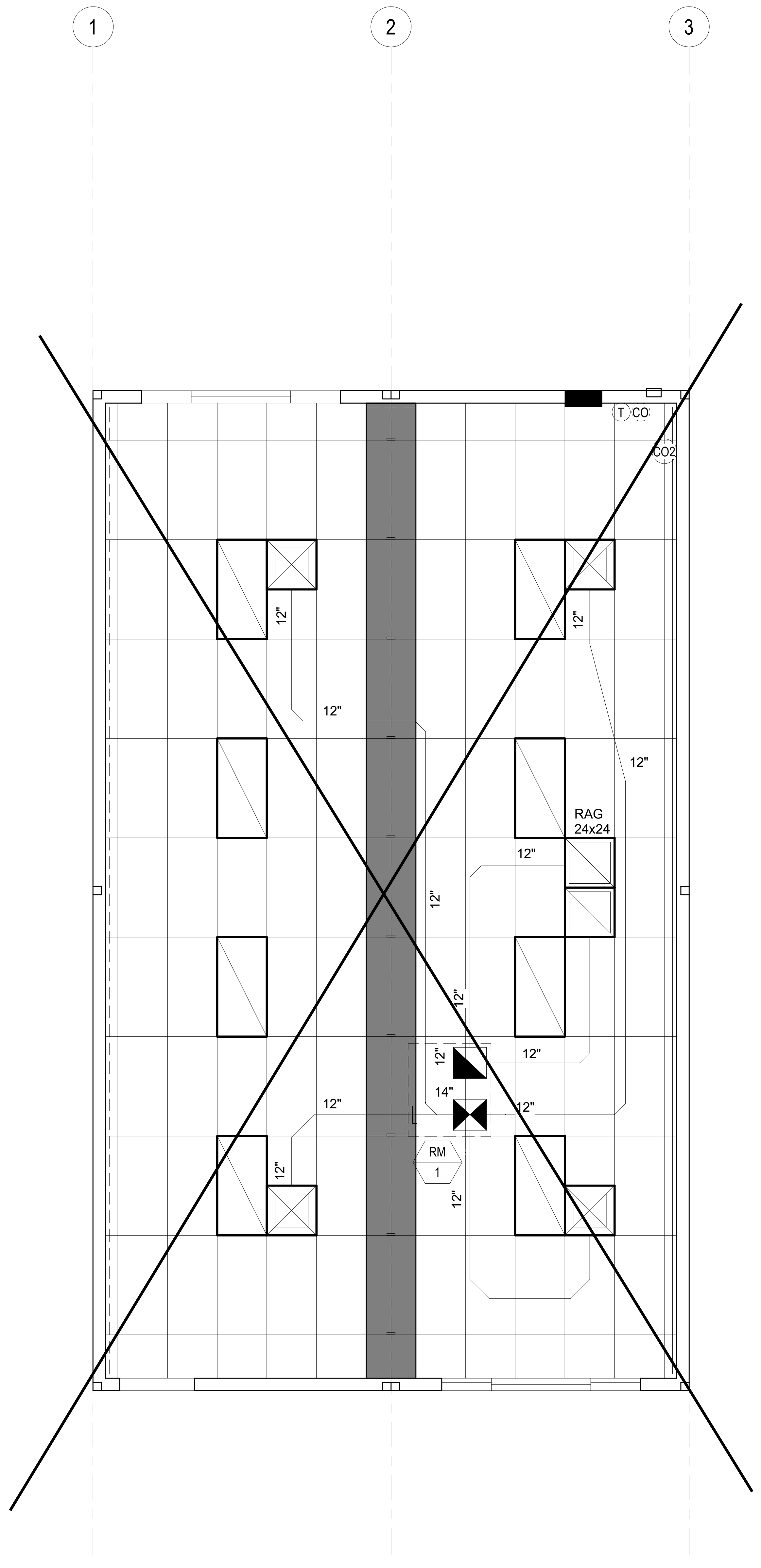
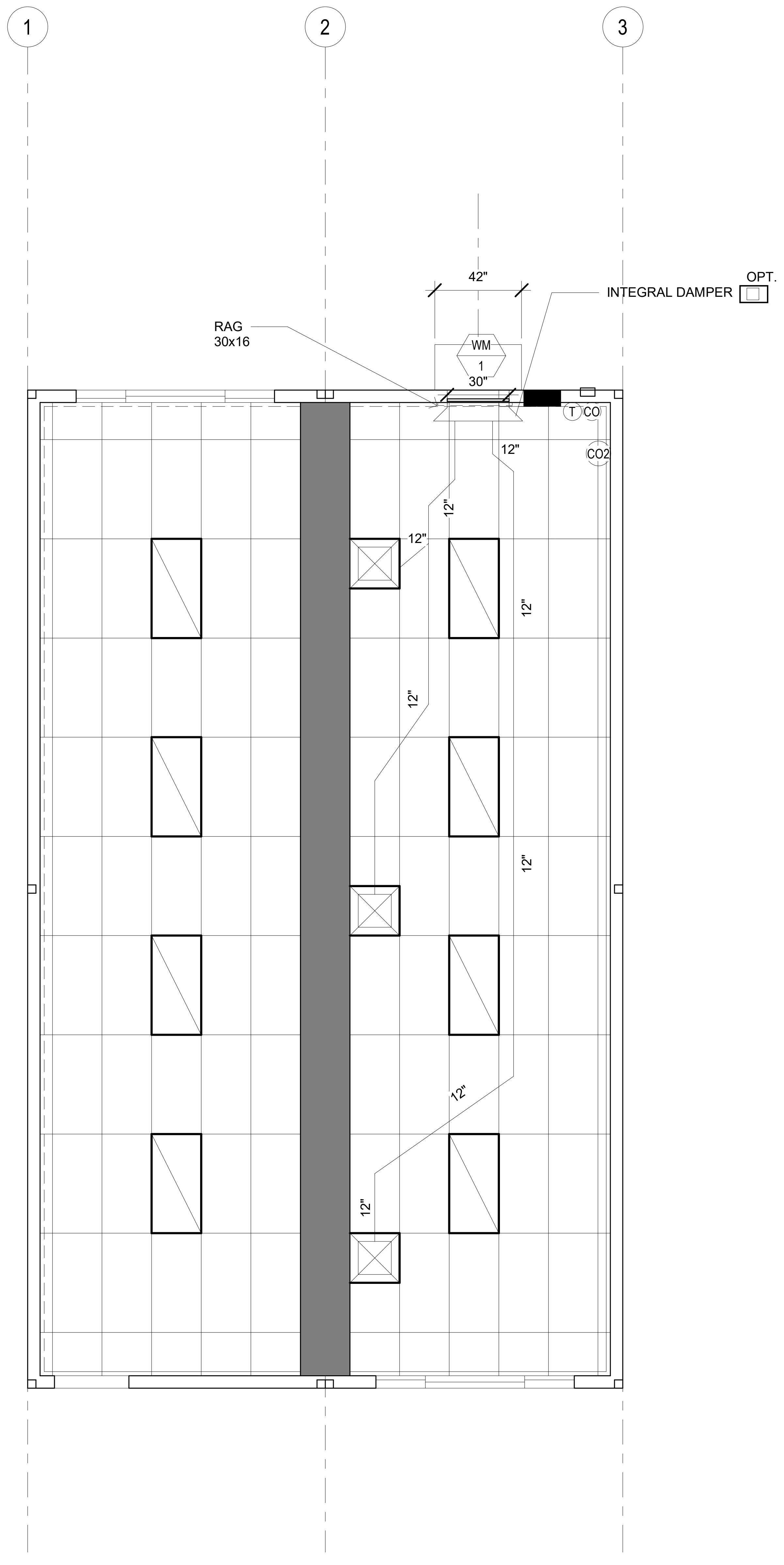


☐ OPT. ROOF MOUNTED



☐ OPT. WALL MOUNTED

1 *1/4" = 1'-0"*
***24x40 RM-1 MECH PLANS***

6/15/2021 11:53:32 PM C:\Users\User\Documents\20093 - Aries, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

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DATE: 03/13/2024

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~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
MECHANICAL
CEILING PLAN
24x40

PROJECT NUMBER
22088

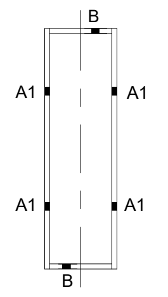
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
M5.1

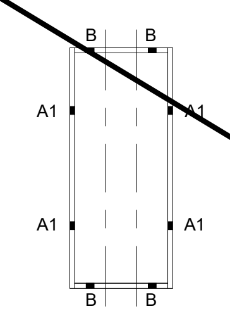
SHEET OF



VENT AREA REQ = 960 SF / 150 = 6.4 SF

VENT AREA AVAIL = (4)2.175 + (2)*1.875 = 12.5 SF

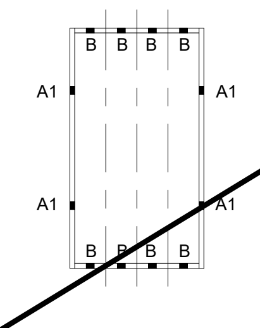
NET AREA AVAIL = 0.6 * 12.5 = 7.5 SF



~~VENT AREA REQ = 1440 SF / 150 = 9.6 SF~~

~~VENT AREA AVAIL (4)2.175 + (4)*1.875 = 16.25 SF~~

~~NET AREA = 0.6 * 16.25 = 9.75 SF~~



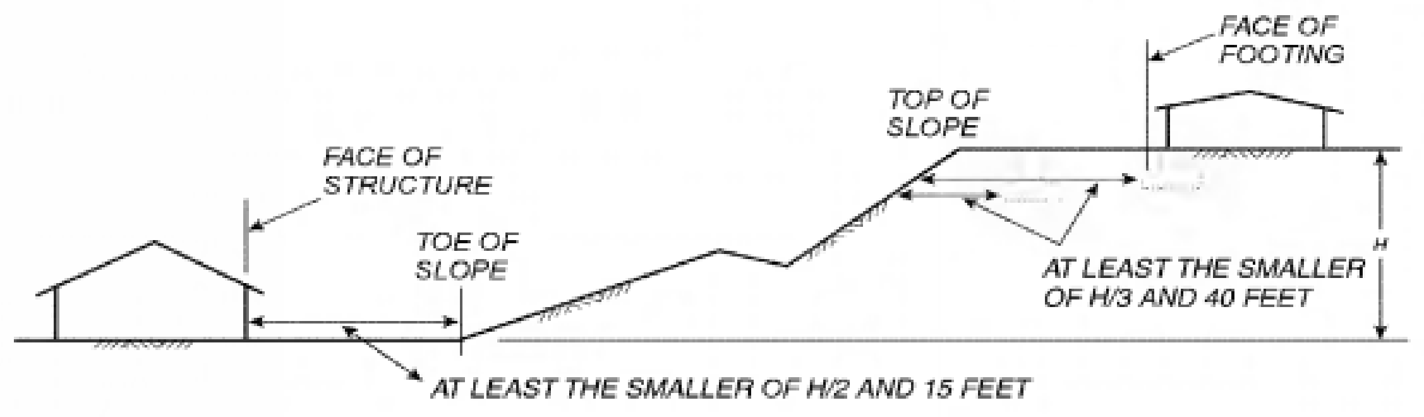
~~VENT AREA REQ = 1920 SF / 150 = 12.8 SF~~

~~VENT AREA AVAIL (4)2.175 + (8)*1.875 = 23.75 SF~~

~~NET AREA = 0.6 * 23.75 = 14.25 SF~~

NOTE: WOOD FOUNDATION EXPANDABLE TO 48x40

**1** *50+15 VENTING LAYOUT*


FACE OF STRUCTURE
TOE OF SLOPE
TOP OF SLOPE
FACE OF FOOTING
H
AT LEAST THE SMALLER OF H/3 AND 40 FEET
AT LEAST THE SMALLER OF H/2 AND 15 FEET

For SI: 1 foot = 304.8 mm.

FIGURE 1808.7.1
FOUNDATION CLEARANCES FROM SLOPES

**3** *1/4" = 1'-0"*
*FOUNDATION SETBACKS*

### KEY PLAN VENTING SCHEDULE

VENT "A1" (SIDEWALL): 3'-6" x 7.5" = **2.188 SF VENTILATION AVAILABLE**

VENT "B" (ENDWALL): 3'-0" x 7.5" = **1.875 SF VENTILATION AVAILABLE**

SEE 2/F1.40 FOR REFERENCE

**9** *1/4" = 1'-0"*
*KEY PLAN VENTING SCHEDULE FOR 50+15 PSF*

### WOOD FOUNDATION PLATE SCHEDULE

50 + 15 PSF

| PLATES | END WALL | SIDE WALL | MODLINE ENDS | MODLINE INTERIOR | ML "B" ENDS | ML "B" INTERIOR | SEPERATION ENDS | SEPERATION INTERIOR |
|---|---|---|---|---|---|---|---|---|
| BOOSTER | 2x4 | 2x4 | 2x6 | 2x6 | 2x8 | 2x8 | 2x4 | 2x4 |
| TOP | 2x6 | 2x6 | 2x8 | 2x8 | 2x10 | 2x10 | 2x6 | 2x6 |
| BASE | 2x8 | 2x8 | 2x10 | 2x10 | 2x12 | 2x12 | 2x8 | 2x8 |
| SILL | 2x12 | 2x12 | (6) 2x12, 24" LONG | (6) 2x12, 24" LONG | (8) 2x12, 24" LONG | (8) 2x12, 24" LONG | 2x12 | 2x12 |

* MODLINE "B" - MODLINE W/ EXT. WALLS BACK-TO-BACK SEE F1.14

**8** *1/4" = 1'-0"*
*WOOD FOUNDATION PLATE SCHEDULE FOR 50+15*

1. WOOD FOUNDATION CONSTRUCTION IS ALLOWED FOR BUILDINGS WITH 2160 SF AND UNDER.

2. SILL PLATES SHALL BE OF FOUNDATION GRADE REDWOOD OR PRESERVATIVE PRESURE TREATED MATERIAL AND IS ALLOWED TO REST DIRECTLY ON SOIL OR PAVEMENT. MATERIALS ABOVE THE SILL PLATES ARE NOT CONTROLLED BY THIS REQUIREMENT.

3. VENTS THAT OCCUR INSIDE RAMP BOUNDARIES SHALL REQUIRE A VENT OF EQUAL SIZE AT RAMP SKIRTING.

4. TO PREVENT SLIDING; A 1 INCH G.S. SCHEDULE 40 PIPE (1.315" ACTUAL O.D.) SHALL BE ATTACHED TO SILL PLATE AND ANCHORED INTO THE EARTH W/ 12" MIN EMBEDMENT (PROJECTED VERTICALLY) @ 10' - 0" MAX O.C. AND SHALL BE LOCATED A MAXIMIUM OF 2'-0" FROM CORNERS

5. STACKED FOUNDATION MEMBERS SHALL BE FASTENED TO ONE ANOTHER W/ CORROSION RESISTANT NAILS.

6. WOOD FOUNDATION HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 1,000 PSF IN ABSENSE OF A SOILS INVESTIGATION REPORT PROVIDED BY A LICENSED GEOTECHNICAL ENGINEER.

7. REFER TO ARCHITECT'S SITE PLAN FOR DRAINAGE.

**7** *1/4" = 1'-0"*
*NOTES FOR 50+15*

### (2) 16d NAILS SILL TO BASE CONNECTION FOR 50+15 SEE 7 / F1.10

| | ENDWALL | SIDEWALL | SEPERATION |
|---|---|---|---|
| 24x40 | 7" O.C | 12" O.C | 12" O.C |
| 36x40 | 7" O.C | 12" O.C | 12" O.C |
| 48x40 | 7" O.C | 12" O.C | 12" O.C |

**6** *1/4" = 1'-0"*
*NAILING SCHEDULE FOR 50+15*

### TIE PLATE SCHEDULE

| | END WALL | SIDE WALL |
|---|---|---|
| 24x40 | 5 | 3 |
| ~~36x40~~ | ~~7~~ | ~~3~~ |
| ~~48x40~~ | ~~10~~ | ~~3~~ |

**4** *1/4" = 1'-0"*
*TIE PLATE SCHEDULE FOR 50+15*

PROJECT SPECIFIC STATE AGENCY APPROVAL

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DATE: 03/13/2024

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STATE OF CALIFORNIA
RST#22088
02/16/24

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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
WOOD FOUNDATION NOTES SCHED FOR BLDG W/ 50+15

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

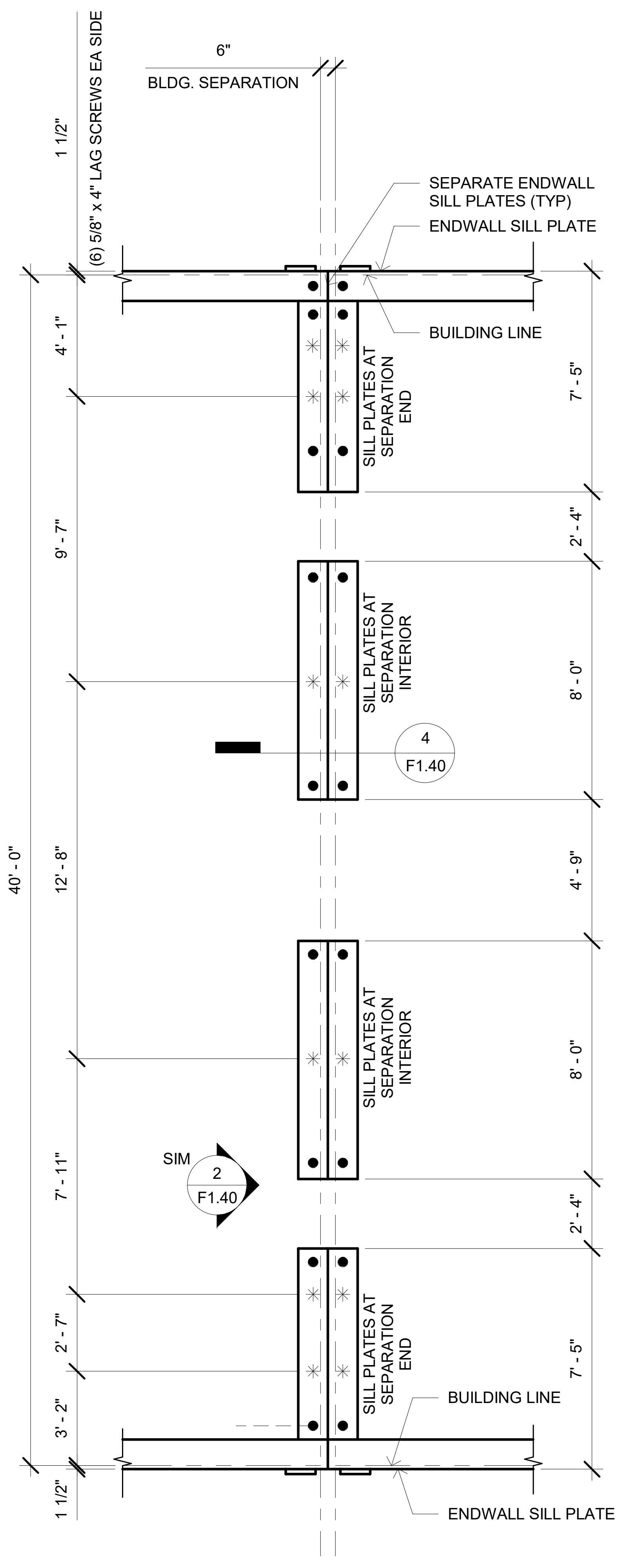
CHECKED BY
JA/RT

DATE

SHEET NO.
F1.10

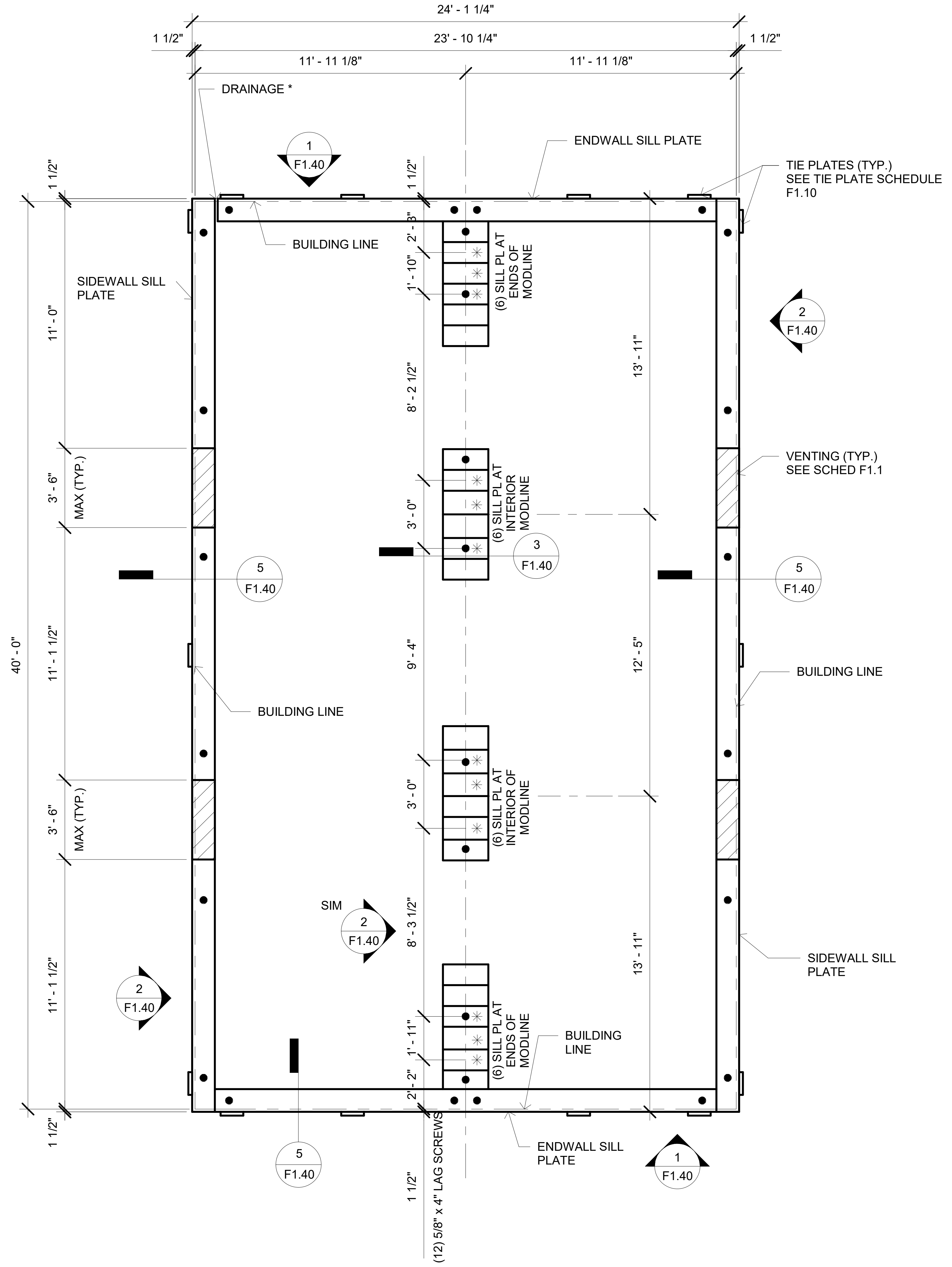
SHEET OF

6/16/2021 7:44:47 AM C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt



| SYMBOLS LEGEND |
|---|
| ✳ LAG SCREWS (6 TOTAL EACH SIDE) |
| ● SILL RESTRAINTS (SEE NOTE #4, 7 / F1.10) |

3 1/4" = 1'-0"
FOOTING AT SEPARATION



* REFER TO ARCHITECTURAL SITE PLAN FOR DRAINAGE

| SYMBOLS LEGEND |
|---|
| ✳ LAG SCREWS (12 TOTAL) |
| ● SILL RESTRAINTS (SEE NOTE #4,7 / F1.10) |

2 1/4" = 1'-0"
24x40 FOUNDATION PLAN

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
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PROFESSIONAL STAMP

MANNY D. FRISCH
No. 63380
Exp. 03/31/24
RST#22088
02/16/24

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
WOOD
FOUNDATION
PLAN 24x40 BLDG
W/ 50+15

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
JA/RT

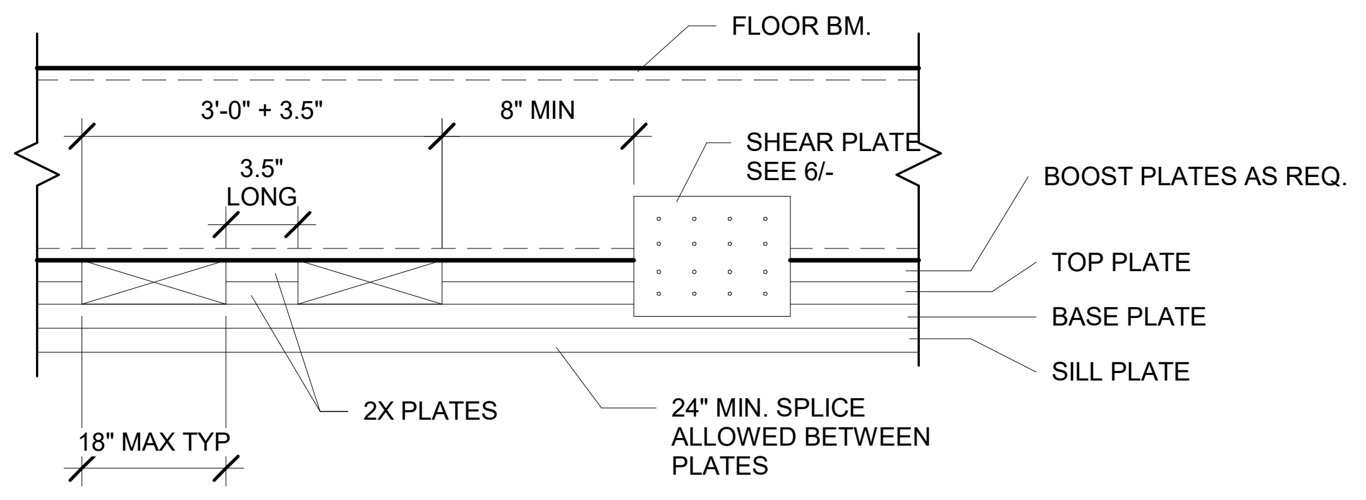
DATE

SHEET NO.
F1.11

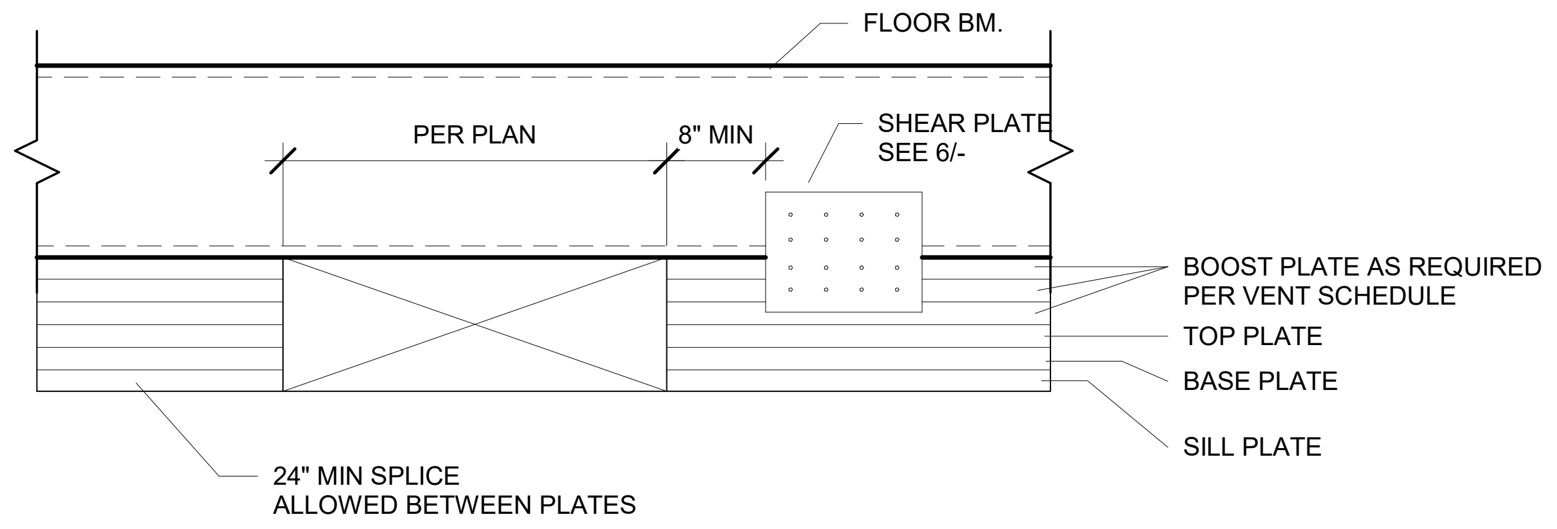
SHEET OF

C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt

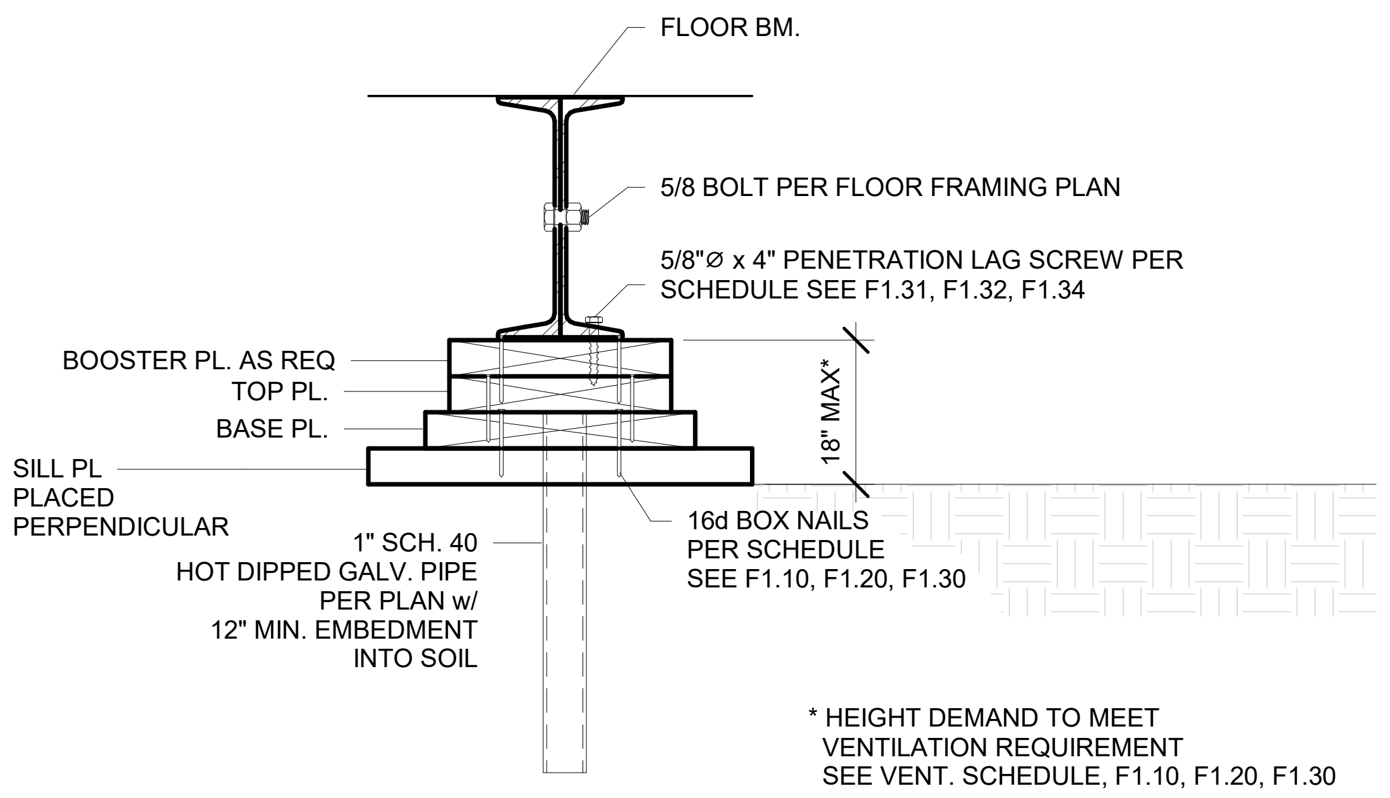
6/16/2021 7:44:48 AM



**1** *1 1/2" = 1'-0"*
***VENT OPENING OVER BASE PLATE***

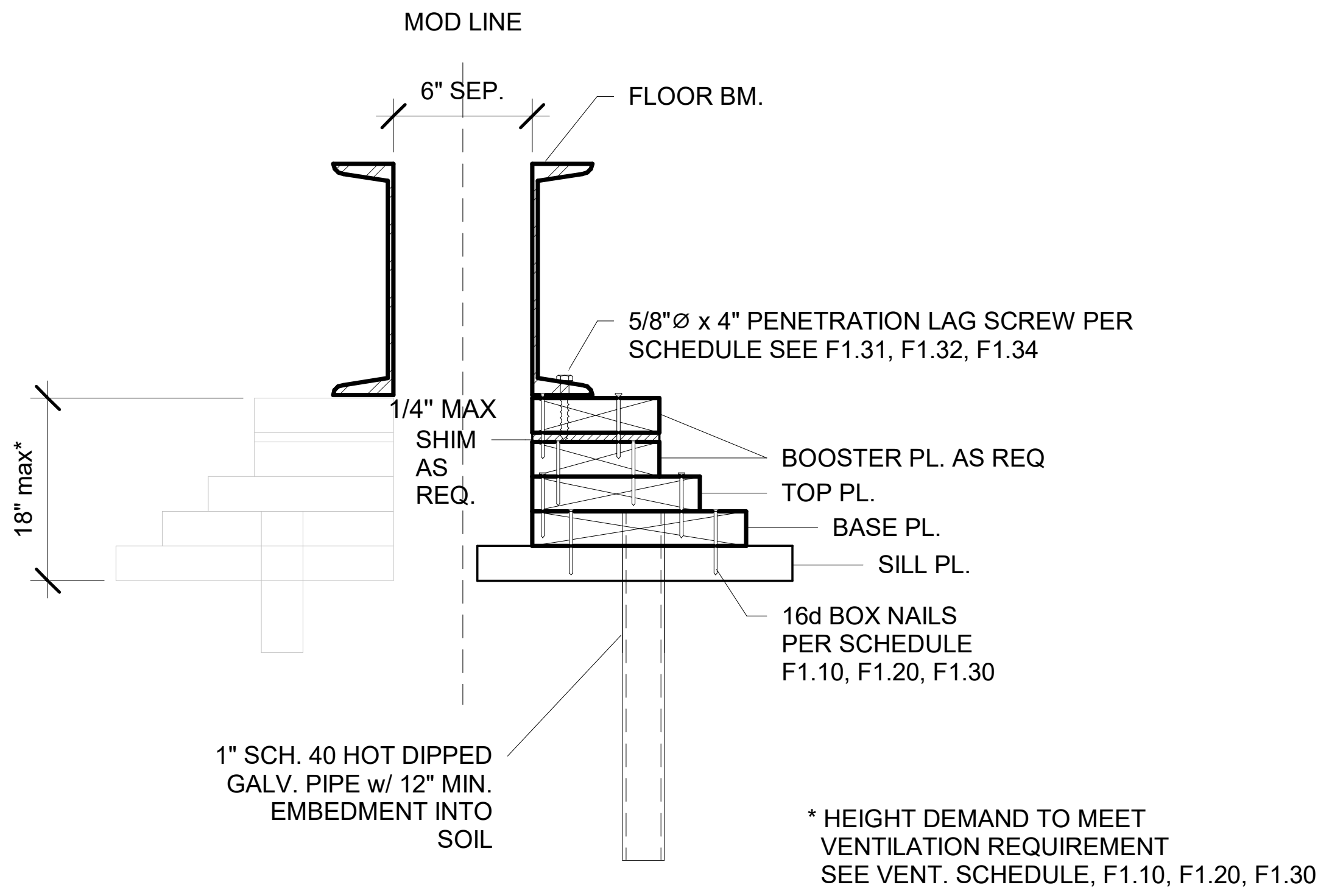

FLOOR BM.
PER PLAN
8" MIN
SHEAR PLATE SEE 6/-
BOOST PLATE AS REQUIRED PER VENT SCHEDULE
TOP PLATE
BASE PLATE
SILL PLATE
24" MIN SPLICE ALLOWED BETWEEN PLATES

**2** *1 1/2" = 1'-0"*
***VENT OPENING @ SIDEWALL OR MODLINE @ SEPERATION***


FLOOR BM.
5/8 BOLT PER FLOOR FRAMING PLAN
5/8"Ø x 4" PENETRATION LAG SCREW PER SCHEDULE SEE F1.31, F1.32, F1.34
BOOSTER PL. AS REQ
TOP PL.
BASE PL.
SILL PL PLACED PERPENDICULAR
18" MAX*
1" SCH. 40 HOT DIPPED GALV. PIPE PER PLAN w/ 12" MIN. EMBEDMENT INTO SOIL
16d BOX NAILS PER SCHEDULE SEE F1.10, F1.20, F1.30

* HEIGHT DEMAND TO MEET VENTILATION REQUIREMENT SEE VENT. SCHEDULE, F1.10, F1.20, F1.30

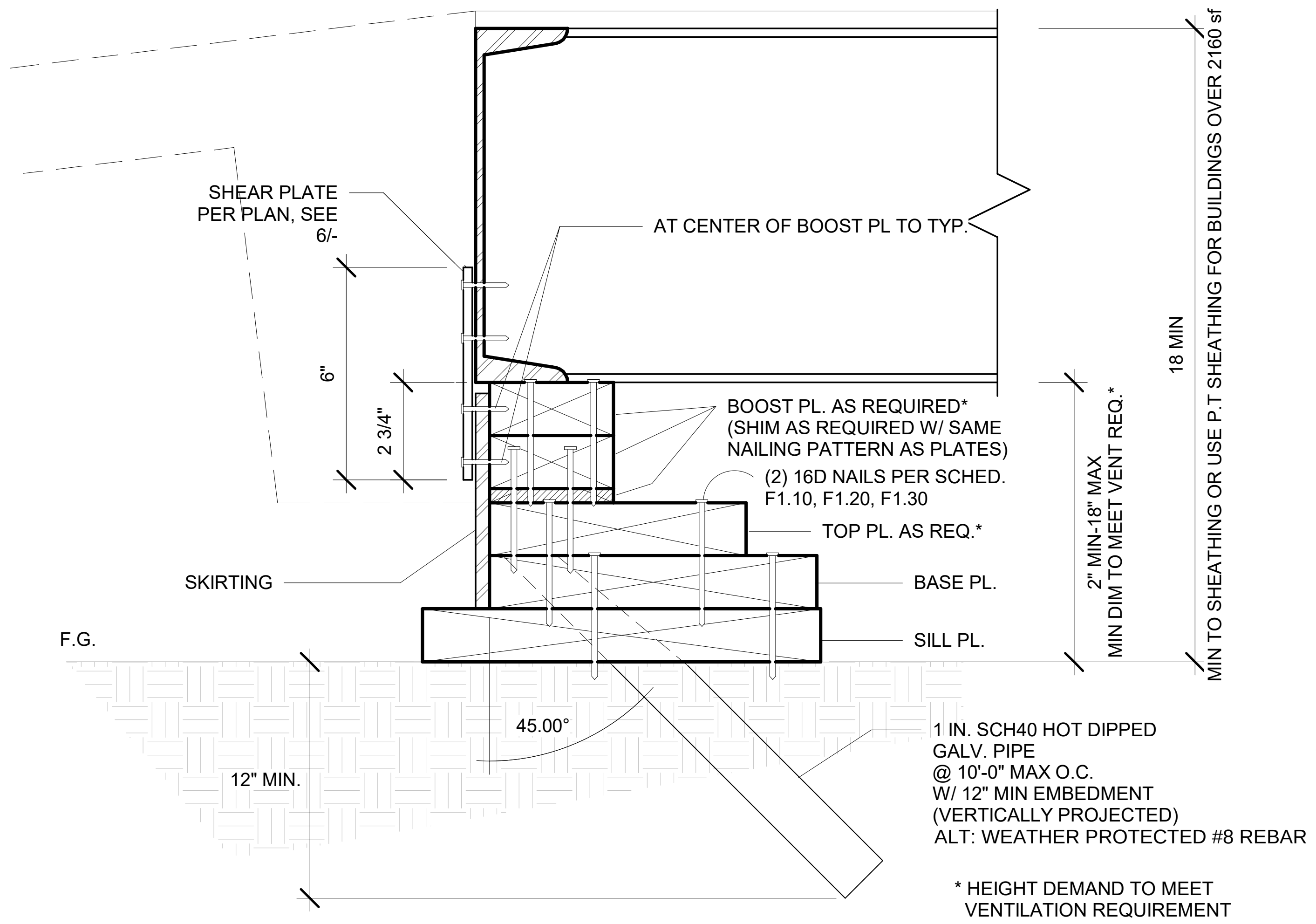
**3** *1 1/2" = 1'-0"*
***FOUNDATION PAD AT MOD LINE***


MOD LINE
6" SEP.
FLOOR BM.
5/8"Ø x 4" PENETRATION LAG SCREW PER SCHEDULE SEE F1.31, F1.32, F1.34
1/4" MAX SHIM AS REQ.
18" max*
BOOSTER PL. AS REQ
TOP PL.
BASE PL.
SILL PL.
16d BOX NAILS PER SCHEDULE F1.10, F1.20, F1.30
1" SCH. 40 HOT DIPPED GALV. PIPE w/ 12" MIN. EMBEDMENT INTO SOIL

* HEIGHT DEMAND TO MEET VENTILATION REQUIREMENT SEE VENT. SCHEDULE, F1.10, F1.20, F1.30

**4** *1 1/2" = 1'-0"*
***FOUNDATION PAD AT SEPARATION***

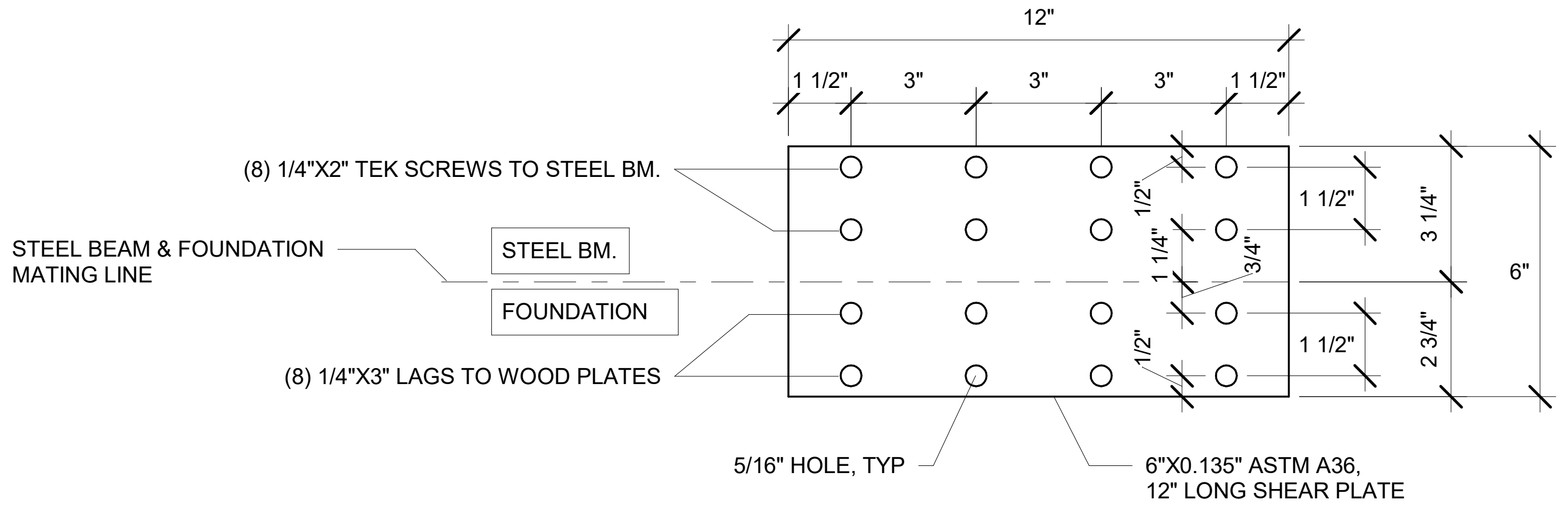
*NOTE: WHERE GRADE IS INSTALLED FLUSH WITH FLOOR ELEVATION, PROVIDE FLASHING AND DRAINAGE PER 1C OR 6C/A2.9


SHEAR PLATE PER PLAN, SEE 6/-
AT CENTER OF BOOST PL TO TYP.
6"
2 3/4"
BOOST PL. AS REQUIRED* (SHIM AS REQUIRED W/ SAME NAILING PATTERN AS PLATES)
(2) 16D NAILS PER SCHED. F1.10, F1.20, F1.30
TOP PL. AS REQ.*
BASE PL.
SILL PL.
SKIRTING
F.G.
45.00°
12" MIN.
2" MIN-18" MAX MIN DIM TO MEET VENT REQ.*
18 MIN
MIN TO SHEATHING OR USE P.T SHEATHING FOR BUILDINGS OVER 2160 sf
1 IN. SCH40 HOT DIPPED GALV. PIPE @ 10'-0" MAX O.C. W/ 12" MIN EMBEDMENT (VERTICALLY PROJECTED) ALT: WEATHER PROTECTED #8 REBAR

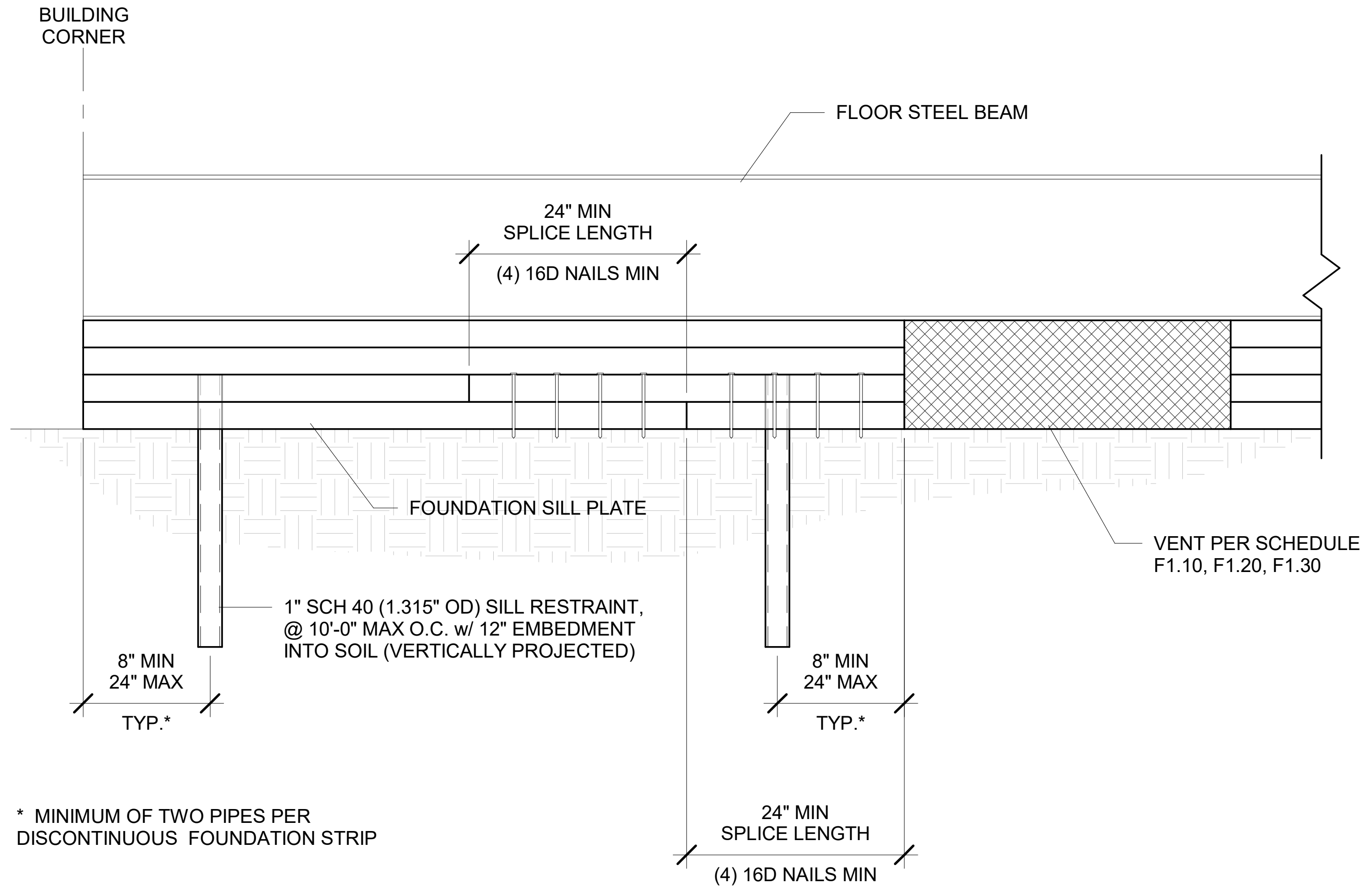
* HEIGHT DEMAND TO MEET VENTILATION REQUIREMENT SEE VENT. SCHEDULE, F1.10, F1.20, F1.30

**NOTE:**
(BASED ON DSA IR-16-1, SECTIONS 2.2.3, 2.3 AND 2.4, ANY BUILDING UNDER 2160 SQFT MAY BE LOWER THAN 18", THE REQUIREMENT FOR PRESERVATIVE FLOOR FINISH SHEATHING OR WALL FRAMING DOES NOT APPLY. A WAIVER OF DURABILITY WILL BE SUBMITTED FOR APPROVAL BY THE CLIENT'S APPOINTED AGENT.)

**5** *3" = 1'-0"*
***SILL PLATE PROFILE***


12"
1 1/2"
3"
3"
3"
1 1/2"
(8) 1/4"X2" TEK SCREWS TO STEEL BM.
STEEL BEAM & FOUNDATION MATING LINE
STEEL BM.
FOUNDATION
(8) 1/4"X3" LAGS TO WOOD PLATES
1/2"
1 1/4"
3/4"
1/2"
1 1/2"
1 1/2"
3 1/4"
2 3/4"
6"
5/16" HOLE, TYP
6"X0.135" ASTM A36, 12" LONG SHEAR PLATE

**6** *3" = 1'-0"*
***SHEAR PLATE***



* MINIMUM OF TWO PIPES PER DISCONTINUOUS FOUNDATION STRIP

**7** *1 1/2" = 1'-0"*
***Splice at Sills***

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WOOD
FOUNDATION
DETAILS

PROJECT NUMBER
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SHEET NO.
F1.40

SHEET OF

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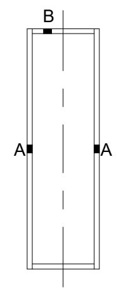
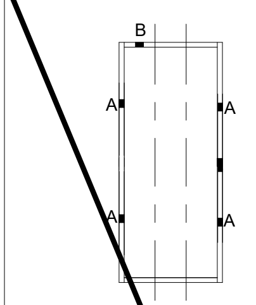
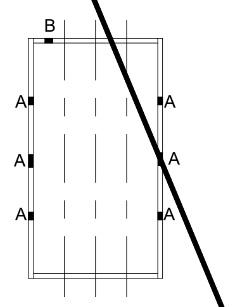
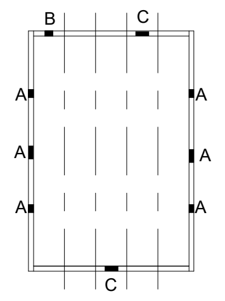
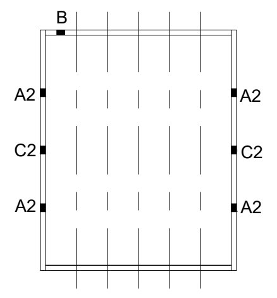
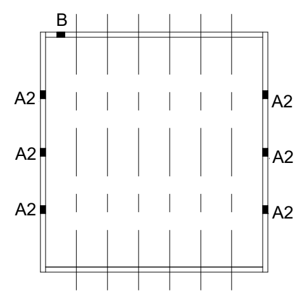
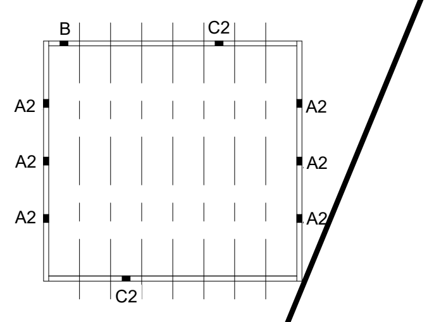
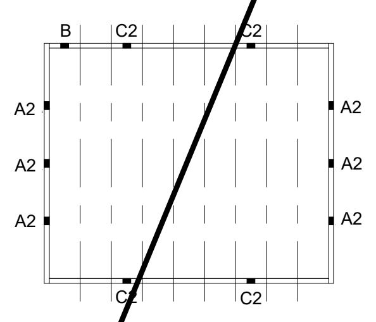
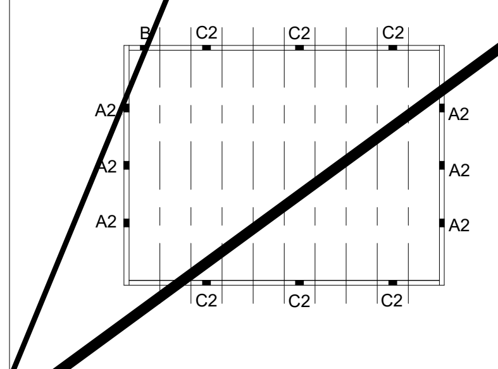
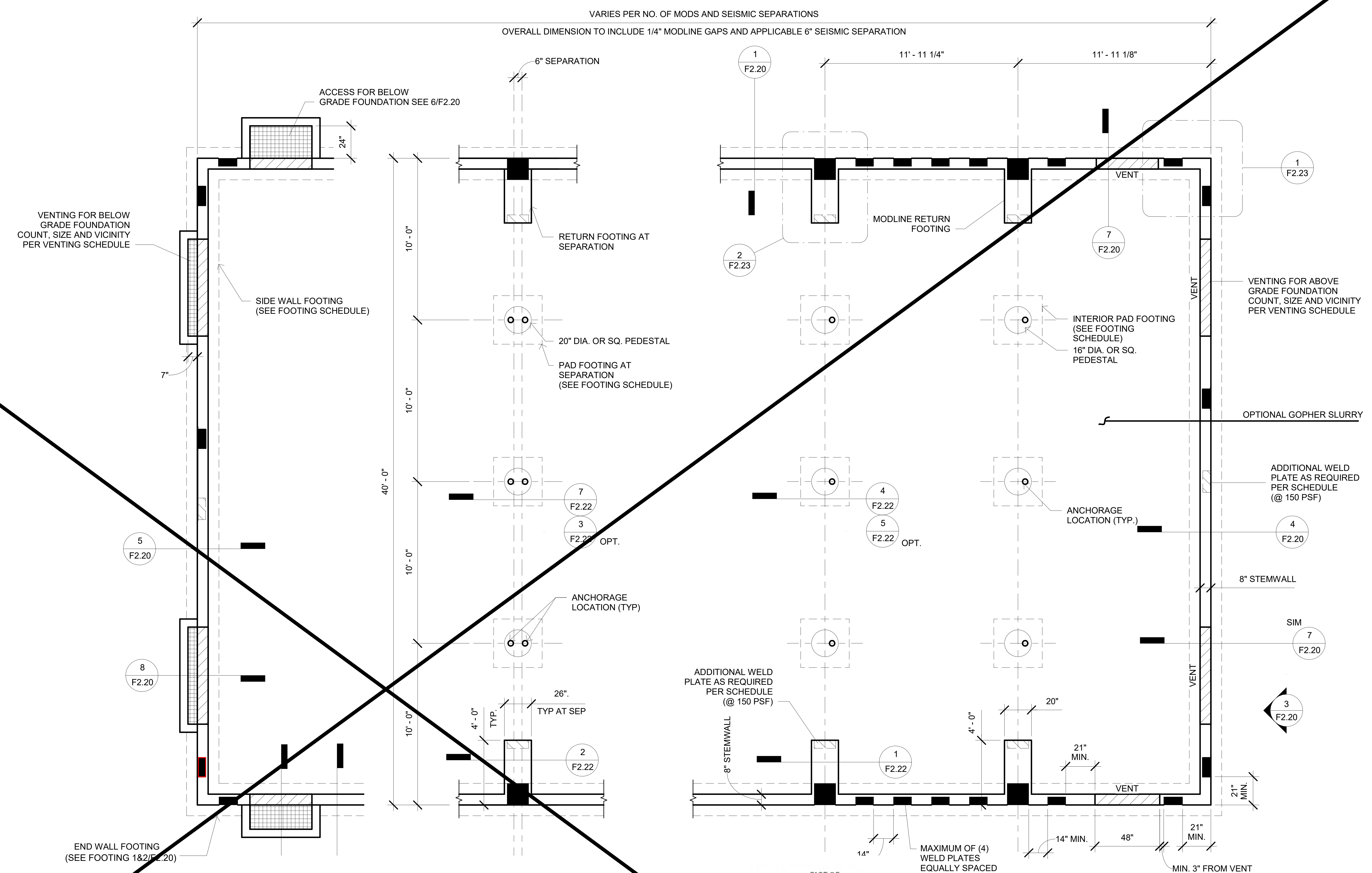
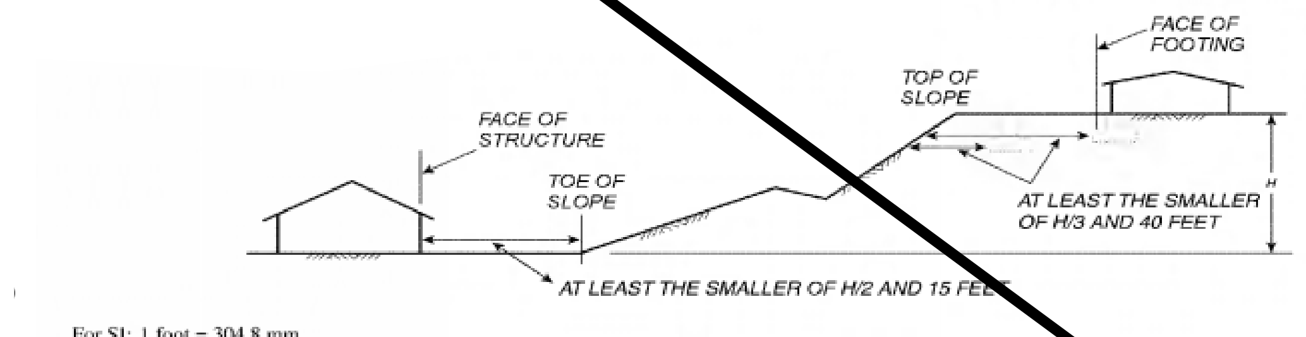
6/16/2021 7:45:08 AM

## VENTILATION PLAN AND SCHEDULE

VENT "A" 7.83' W x 0.42' H = 3.26 SF
VENT "B" 2.83' W x 1.50' H = 4.25 SF ACCESS
VENT "C" 4.00' W x 0.42' H = 1.8 SF
VENT A2=5.55 SF
VENT C2=2.83 SF

| | |
|---|---|
|  | VENT AREA REQ = $\frac{960}{150}$ SF = 6.4 SF<br>VENT AREA AVAIL = (2) 3.26 SF + (1) 4.25 SF = 10.77 SF<br>NET AREA AVAIL = 0.6 * 10.77 SF = 6.5 SF |
|  | VENT AREA REQ = $\frac{1440}{150}$ SF = 9.6 SF<br>VENT AREA AVAIL = (4) 3.26 SF + (1) 4.25 SF = 18.962 SF<br>NET AREA AVAIL = 0.6 * 18.962 SF = 11.377 SF |
|  | VENT AREA REQ = $\frac{1920}{150}$ SF = 12.8 SF<br>VENT AREA AVAIL = (6) 3.26 SF + (1) 4.25 SF = 23.82 SF<br>NET AREA AVAIL = 0.6 * 23.82 SF = 14.29 SF |
|  | VENT AREA REQ = $\frac{2400}{150}$ SF = 16 SF<br>VENT AREA AVAIL = (6) 3.26 SF + (1) 4.25 SF + (2) 1.8 = 27.153 SF<br>NET AREA AVAIL = 0.6 * 27.15 SF = 16.3 SF |
|  | VENT AREA REQ = $\frac{2880}{150}$ SF = 19.2 SF<br>VENT AREA AVAIL = (2) 5.55 SF + (1) 4.25 SF + (2) 2.83 = 32.1 SF<br>NET AREA AVAIL = 0.6 * 32.1 SF = 19.258 SF |
|  | VENT AREA REQ = $\frac{3360}{150}$ SF = 22.4 SF<br>VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF = 37.52 SF<br>NET AREA AVAIL = 0.6 * 37.52 SF = 22.51 SF |
|  | VENT AREA REQ = $\frac{3840}{150}$ SF = 25.6 SF<br>VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF + (2) 2.833 = 37.52 SF<br>NET AREA AVAIL = 0.6 * 37.52 SF = 25.91 SF |
|  | VENT AREA REQ = $\frac{4320}{150}$ SF = 28.8 SF<br>VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF + (4) 2.833 = 48.86 SF<br>NET AREA AVAIL = 0.6 * 48.86 SF = 29.314 SF |
|  | VENT AREA REQ = $\frac{4800}{150}$ SF = 32 SF<br>VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF + (6) 2.833 = 54.52 SF<br>NET AREA AVAIL = 0.6 * 54.52 SF = 32.71 SF |


VARIES PER NO. OF MODS AND SEISMIC SEPARATIONS
OVERALL DIMENSION TO INCLUDE 1/4" MODLINE GAPS AND APPLICABLE 6" SEISMIC SEPARATION
6" SEPARATION
11' - 11 1/4"
11' - 11 1/8"
1 F2.20
ACCESS FOR BELOW GRADE FOUNDATION SEE 6/F2.20
24"
1 F2.23
2 F2.23
RETURN FOOTING AT SEPARATION
MODLINE RETURN FOOTING
VENT
7 F2.20
VENTING FOR BELOW GRADE FOUNDATION COUNT, SIZE AND VICINITY PER VENTING SCHEDULE
SIDE WALL FOOTING (SEE FOOTING SCHEDULE)
10' - 0"
40' - 0"
VENTING FOR ABOVE GRADE FOUNDATION COUNT, SIZE AND VICINITY PER VENTING SCHEDULE
INTERIOR PAD FOOTING (SEE FOOTING SCHEDULE)
16" DIA. OR SQ. PEDESTAL
20" DIA. OR SQ. PEDESTAL
PAD FOOTING AT SEPARATION (SEE FOOTING SCHEDULE)
7"
OPTIONAL GOPHER SLURRY
ADDITIONAL WELD PLATE AS REQUIRED PER SCHEDULE (@ 150 PSF)
7 F2.22
3 F2.22 OPT.
4 F2.22
5 F2.22 OPT.
ANCHORAGE LOCATION (TYP.)
4 F2.20
5 F2.20
8" STEMWALL
SIM
7 F2.20
ANCHORAGE LOCATION (TYP)
8 F2.20
3 F2.20
26".
TYP AT SEP
4' - 0"
TYP.
8" STEMWALL
2 F2.22
1 F2.22
20"
21" MIN.
VENT
END WALL FOOTING (SEE FOOTING 1&2/F2.20)
14"
MAXIMUM OF (4) WELD PLATES EQUALLY SPACED PER MOD. ENDWALL W/O VENT
14" MIN.
48"
MIN. 3" FROM VENT


FACE OF STRUCTURE
TOE OF SLOPE
TOP OF SLOPE
FACE OF FOOTING
AT LEAST THE SMALLER OF H/3 AND 40 FEET
H
AT LEAST THE SMALLER OF H/2 AND 15 FEET

For SI: 1 foot = 304.8 mm.

FIGURE 1808.7.1
FOUNDATION CLEARANCES FROM SLOPES

NOTES:

1. THE FOUNDATION DESIGN CONSIDERS AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF FOR LOCATIONS THAT DO NOT REQUIRE A SOILS INVESTIGATION REPORT.
2. DISTRICT SHALL BE RESPONSIBLE IN ISSUING AND CONTRACTING A SOILS INVESTIGATION THROUGH A QUALIFIED GEOTECHNICAL ENGINEER FOR LOCATIONS DEEMED QUALIFIED BY CBC 1803A.2.
3. WELD PLATES SAHLL BE PLACED PER PLAN AT 21" MINIMUM FROM BUILDING CORNERS AND 14" MINIMUM FROM ADJACENT WELD PLATE.
4. WELD PLATES WITHIN 21" FROM VENT SHALL REQUIRE REINFORCEMENT HAIRPINNED AROUND THE ANCHOR BOLT CLOSEST TO THE VENT. SEE DETAIL 1/F2.23
5. FOUNDATION OVERALL CONSIDERS A 1/4" GAP AT EVERY MODLINE AND 6" SEISMIC SEPARATION GAP WHEN APPLICABLE.
6. SIZE OF UNDER-FLOOR VENITIALATION CONSIDERS A RATIO OF 1:150 FOR THE TOTAL AREA OF OPENEINGS TO CRAWL SPACE AREA. CRAWL SPACE AREAS FITTED WITH A VAPOR BARIER IN ACCORDANCE WITH IBC, 1203.3.2 SHALL BE PERMITTED A RATIO ADJUSTMENT TO 1:1500.
7. VENTILLATION OPENING SHALL BE COVERED WITH CORROSION RESITANT WIRE WITH THE LEAST DIMENSION NOT GREATER THAN 1/8".

### SYMBOLS LEGEND

| | |
|---|---|
| ▬ | L6X4X3/8, 14" LONG WELD PLATE PER SCHEDULE BELOW (SEE 6 / F2.23 ) |
| ▨ | ADDITIONAL WELD PLATES (FOR 150 PSF OPTION) |
| ■ | 16"x16"x3/8" WELD PLATE, SEE DETAIl4 / F2.23 |
| ▨ VENT | UNDER FLOOR VENTILATION, SEE VENTILATION SCHEDULE |

### FOOTING SCHEDULE (WOOD FLOOR)

| DESIGN FLOOR LIVE LOAD | SIDEWALL FOOTING | ENDWALL FOOTING | INTERIOR PAD FOOTING | PAD FOOTING @ SEPARATION |
|---|---|---|---|---|
| ☐ 50 + 15 PSF | 12" WIDE (2) #5 CONT T&B | 14" WIDE (3) #5 CONT T&B | 3' - 0" SQ (3) #5 EW | 3' - 8" SQ (4) #5 EW |
| ☐ 100 PSF | 12" WIDE (2) #5 CONT T&B | 16" WIDE (3) #5 CONT T&B | 3' - 4" SQ (3) #5 EW | 4' - 2" SQ (4) #5 EW |
| ☐ 150 PSF | 14" WIDE (2) #5 CONT T&B | 16" WIDE (3) #5 CONT T&B | 4' - 0" SQ (4) #5 EW | 4' - 8" SQ (4) #5 EW |

### FOOTING SCHEDULE (CONCRETE FLOOR)

| DESIGN FLOOR LIVE LOAD | SIDEWALL FOOTING | ENDWALL FOOTING | INTERIOR PAD FOOTING | PAD FOOTING @ SEPARATION |
|---|---|---|---|---|
| ☐ 50 + 15 PSF | 12" WIDE (2) #5 CONT T&B | 14" WIDE (3) #5 CONT T&B | 3' - 2" SQ (3) #5 EW | 4' - 0" SQ (4) #5 EW |
| ☐ 100 PSF | 12" WIDE (2) #5 CONT T&B | 16" WIDE (3) #5 CONT T&B | 3' - 6" SQ (3) #5 EW | 4' - 6" SQ (4) #5 EW |
| ☐ 150 PSF | 14" WIDE (2) #5 CONT T&B | 16" WIDE (3) #5 CONT T&B | 4' - 2" SQ (4) #5 EW | 4' - 10" SQ (5) #5 EW |

### WELD PLATE SCHEDULE

| | | L6x4x3/8, 14" LONG | | 16x3/8 SQ PL |
|---|---|---|---|---|
| | | ≤ 100 PSF | 150 PSF | ≤ 150 PSF |
| EACH SIDEWALL | | 3 | 4 | - |
| EACH MODLINE | | - | 2 | 2 |
| EACH END-WALL | 24x40 | 5 | 7 | |
| | 36x40 | 6 | 7/10 | |
| | 48x40 | 7 | 10/13 | |
| | 60x40 | 9 | 12 | |
| | 72x40 | 10 | 14 | |
| | 84x40 | 12 | 17 | |
| | 96x40 | 13 | 19 | |
| | 108x40 | 15 | 21 | |
| | 120x40 | 16 | 23 | |

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PC 2022 CBC:24' x 40'
EXPANDABLE TO
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PLAN

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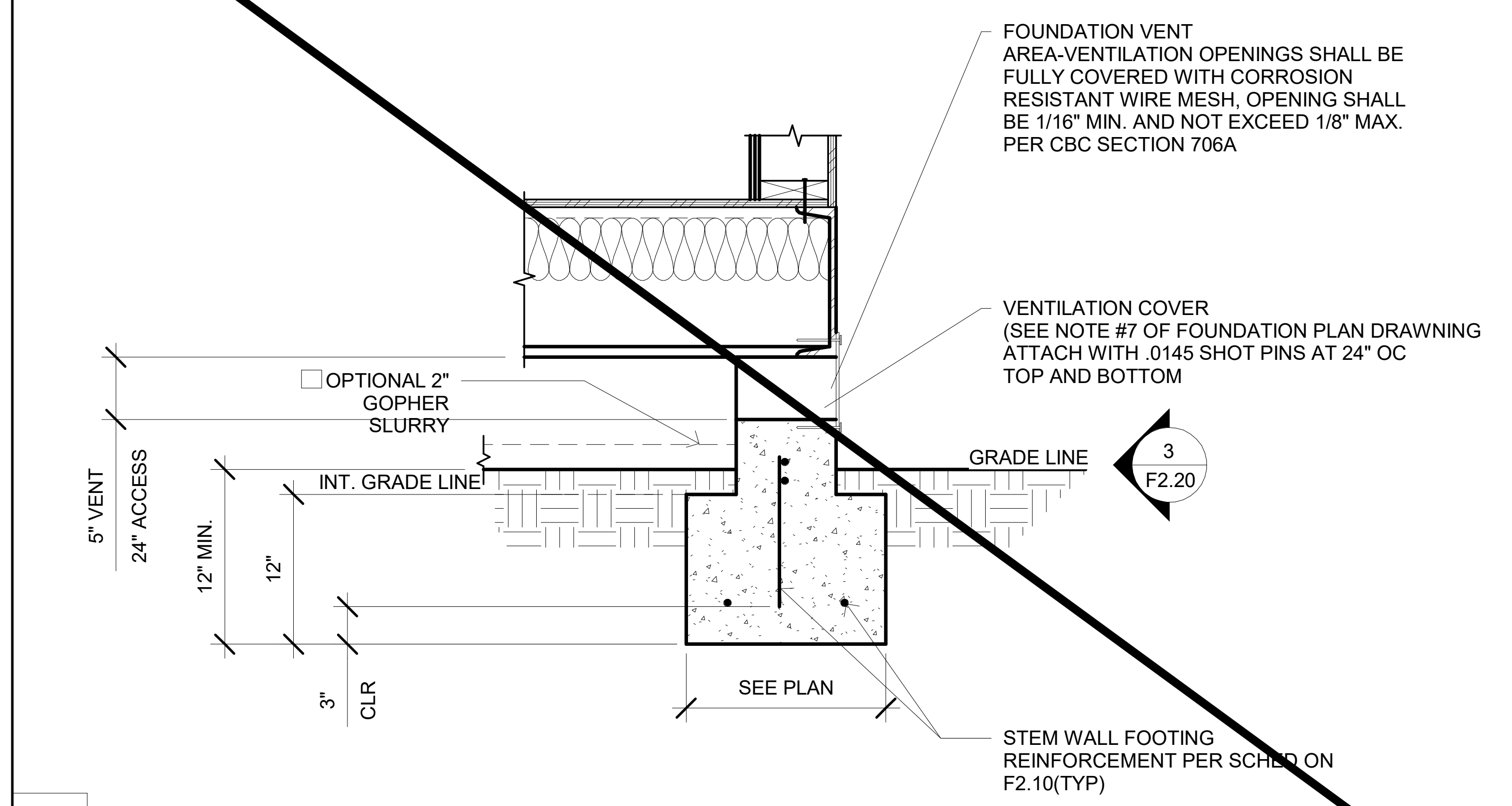
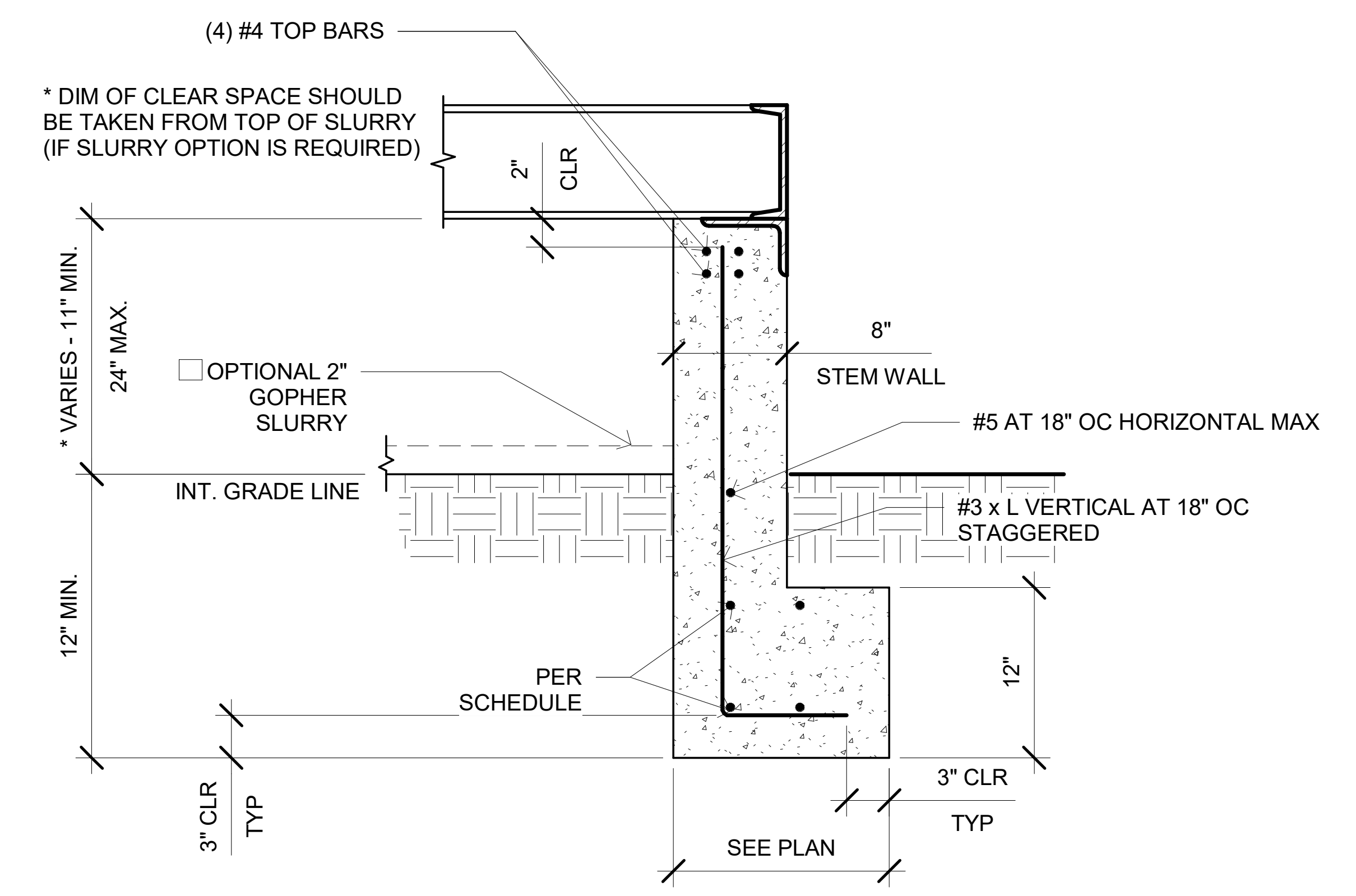
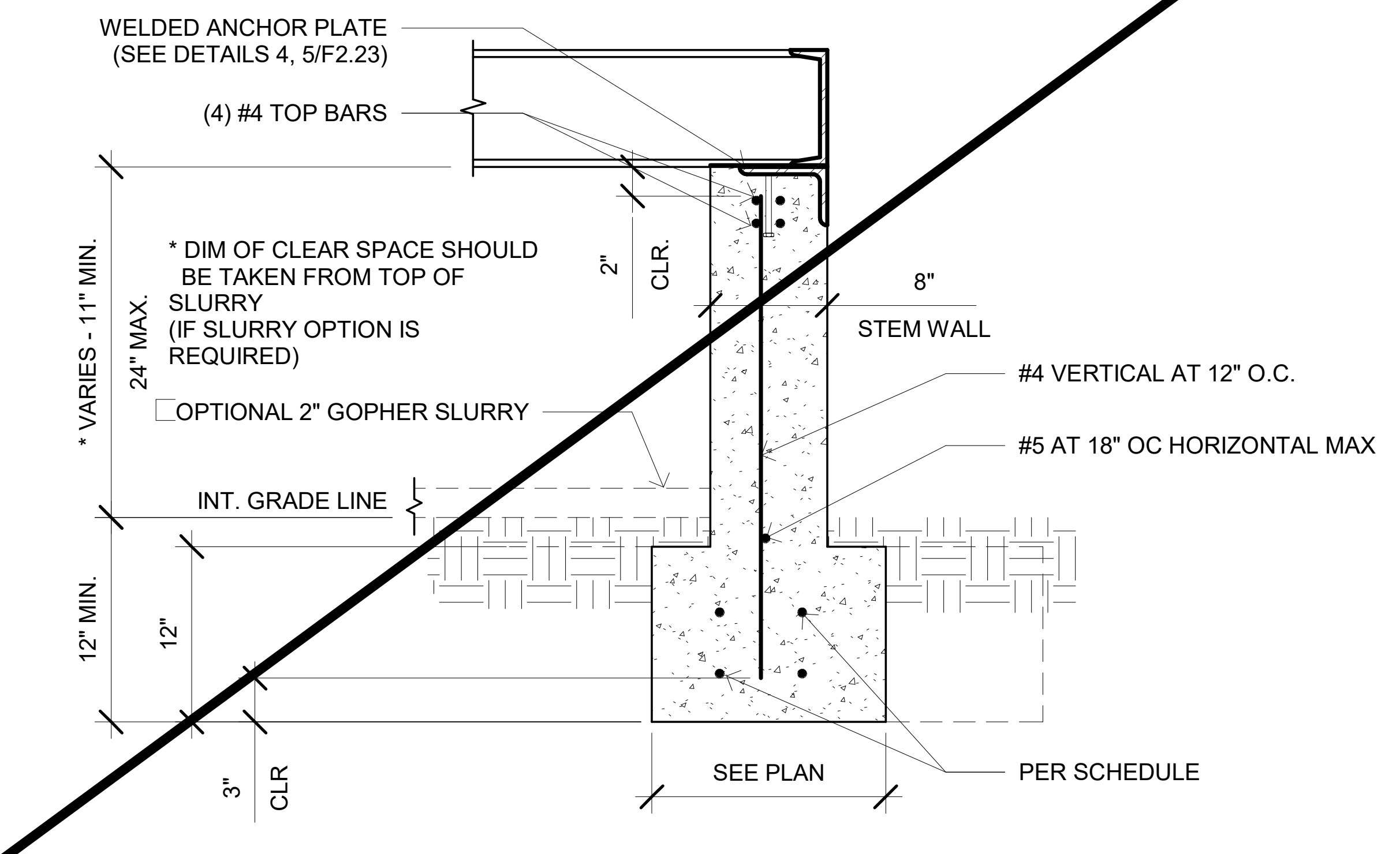

FOUNDATION VENT
AREA-VENTILATION OPENINGS SHALL BE FULLY COVERED WITH CORROSION RESISTANT WIRE MESH, OPENING SHALL BE 1/16" MIN. AND NOT EXCEED 1/8" MAX. PER CBC SECTION 706A
VENTILATION COVER
(SEE NOTE #7 OF FOUNDATION PLAN DRAWNING ATTACH WITH .0145 SHOT PINS AT 24" OC TOP AND BOTTOM
OPTIONAL 2" GOPHER SLURRY
INT. GRADE LINE
GRADE LINE
3
F2.20
5" VENT
24" ACCESS
12" MIN.
12"
3"
CLR
SEE PLAN
STEM WALL FOOTING REINFORCEMENT PER SCHED ON F2.10(TYP)

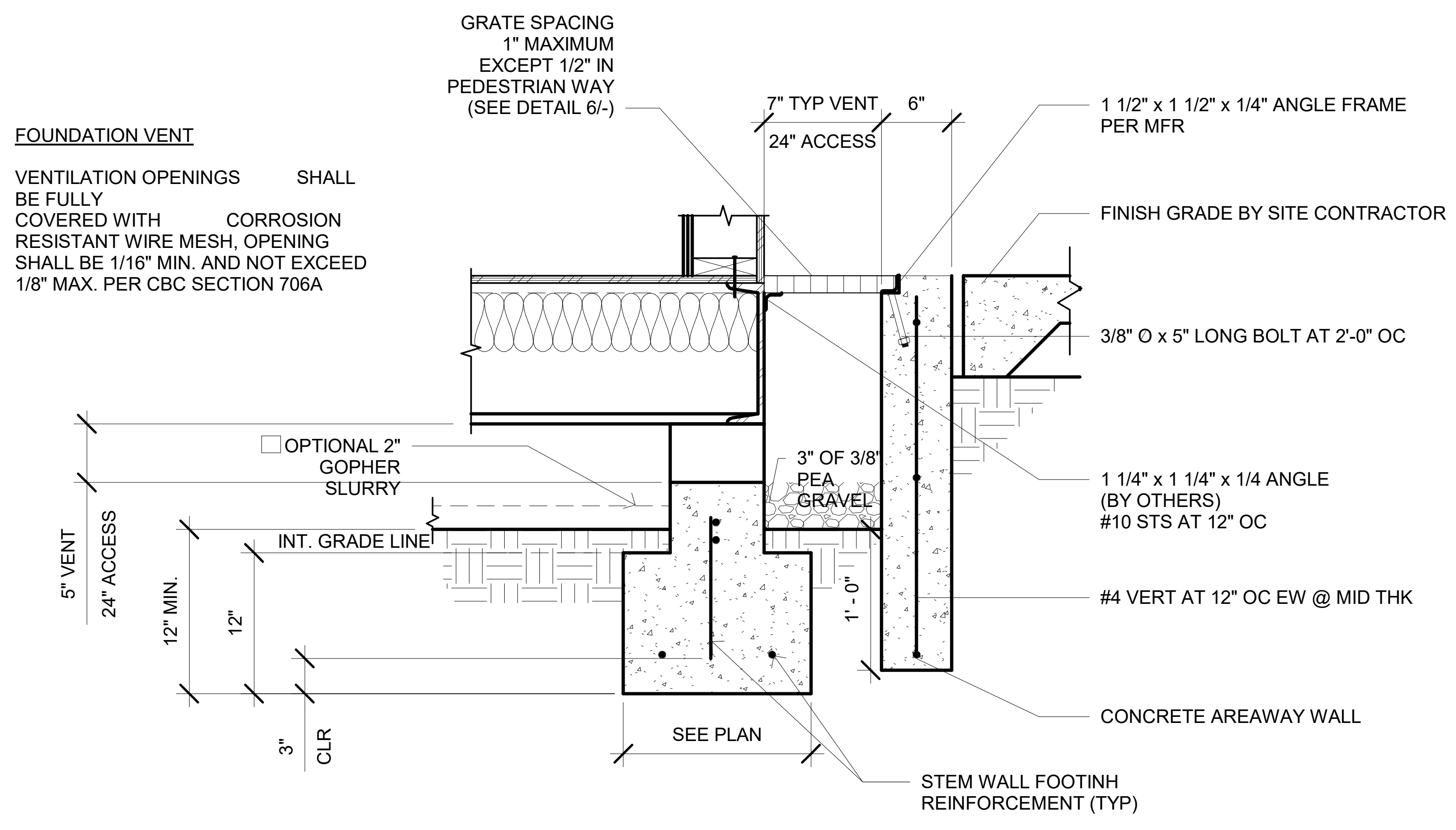
7 1" = 1'-0"
**VENT/ACCESS SECTION, ABOVE GRADE**


(4) #4 TOP BARS
* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
2"
CLR
* VARIES - 11" MIN.
24" MAX.
OPTIONAL 2" GOPHER SLURRY
INT. GRADE LINE
8"
STEM WALL
#5 AT 18" OC HORIZONTAL MAX
#3 x L VERTICAL AT 18" OC STAGGERED
12" MIN.
PER SCHEDULE
12"
3" CLR
TYP
3" CLR
TYP
SEE PLAN

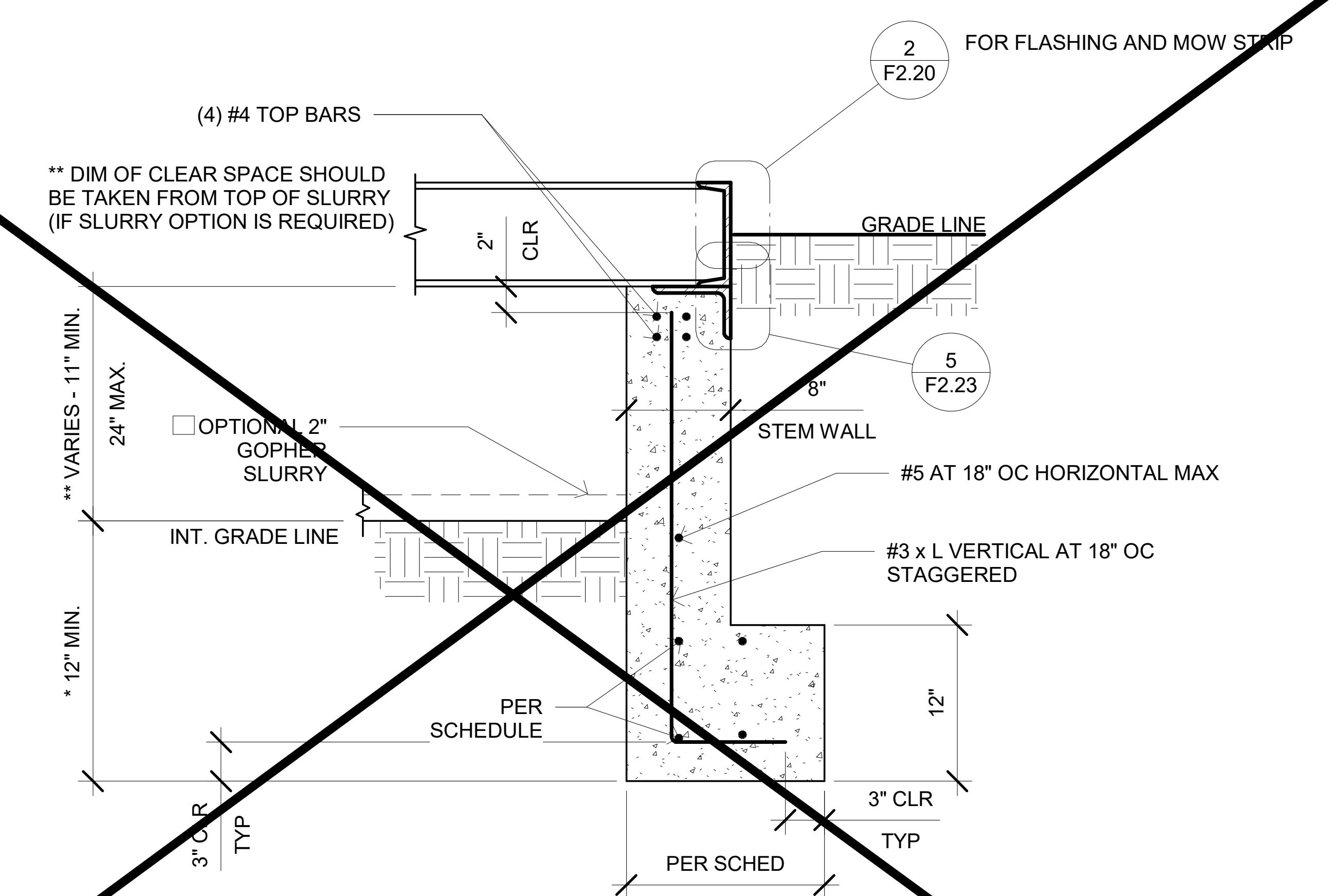
4 1" = 1'-0"
**SIDE WALL FOOTING, ABOVE GRADE**


WELDED ANCHOR PLATE (SEE DETAILS 4, 5/F2.23)
(4) #4 TOP BARS
* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
2"
CLR.
* VARIES - 11" MIN.
24" MAX.
OPTIONAL 2" GOPHER SLURRY
8"
STEM WALL
#4 VERTICAL AT 12" O.C.
#5 AT 18" OC HORIZONTAL MAX
INT. GRADE LINE
12" MIN.
12"
3"
CLR
SEE PLAN
PER SCHEDULE

1 1" = 1'-0"
**END WALL FOOTING, ABOVE GRADE**

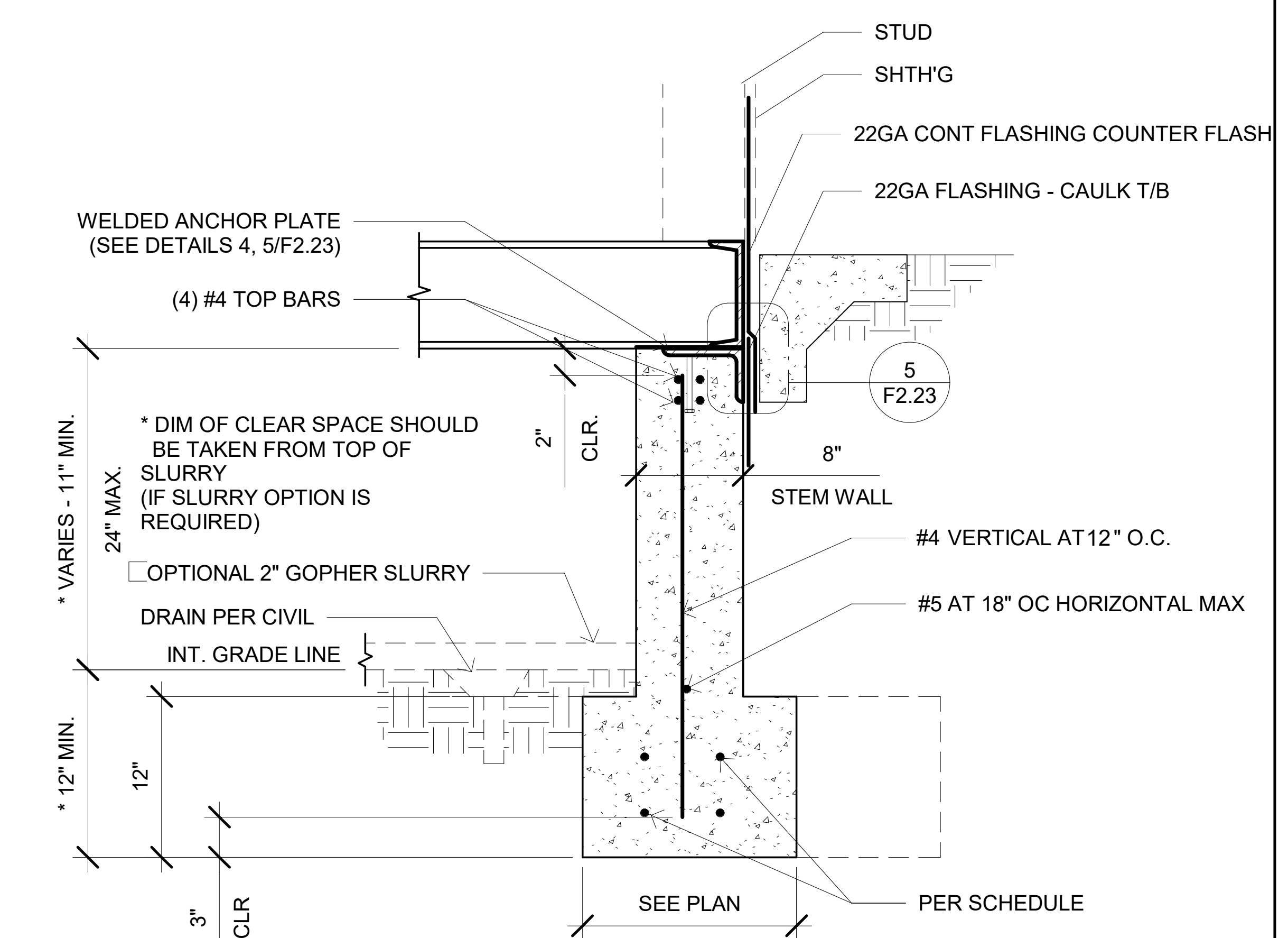

GRATE SPACING 1" MAXIMUM EXCEPT 1/2" IN PEDESTRIAN WAY (SEE DETAIL 6/-)
FOUNDATION VENT
VENTILATION OPENINGS SHALL BE FULLY COVERED WITH CORROSION RESISTANT WIRE MESH, OPENING SHALL BE 1/16" MIN. AND NOT EXCEED 1/8" MAX. PER CBC SECTION 706A
7" TYP VENT
24" ACCESS
6"
1 1/2" x 1 1/2" x 1/4" ANGLE FRAME PER MFR
FINISH GRADE BY SITE CONTRACTOR
3/8" O x 5" LONG BOLT AT 2'-0" OC
OPTIONAL 2" GOPHER SLURRY
3" OF 3/8" PEA GRAVEL
1 1/4" x 1 1/4" x 1/4 ANGLE (BY OTHERS) #10 STS AT 12" OC
INT. GRADE LINE
5" VENT
24" ACCESS
12" MIN.
12"
1'-0"
#4 VERT AT 12" OC EW @ MID THK
CONCRETE AREAWAY WALL
3"
CLR
SEE PLAN
STEM WALL FOOTINH REINFORCEMENT (TYP)

8 1" = 1'-0"
**VENT/ACCESS SECTION, BELLOW GRADE**


2
F2.20
FOR FLASHING AND MOW STRIP
(4) #4 TOP BARS
** DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
2"
CLR
GRADE LINE
5
F2.23
** VARIES - 11" MIN.
24" MAX.
OPTIONAL 2" GOPHER SLURRY
8"
STEM WALL
#5 AT 18" OC HORIZONTAL MAX
INT. GRADE LINE
#3 x L VERTICAL AT 18" OC STAGGERED
* 12" MIN.
PER SCHEDULE
12"
3" CLR
TYP
3" CLR
TYP
PER SCHED

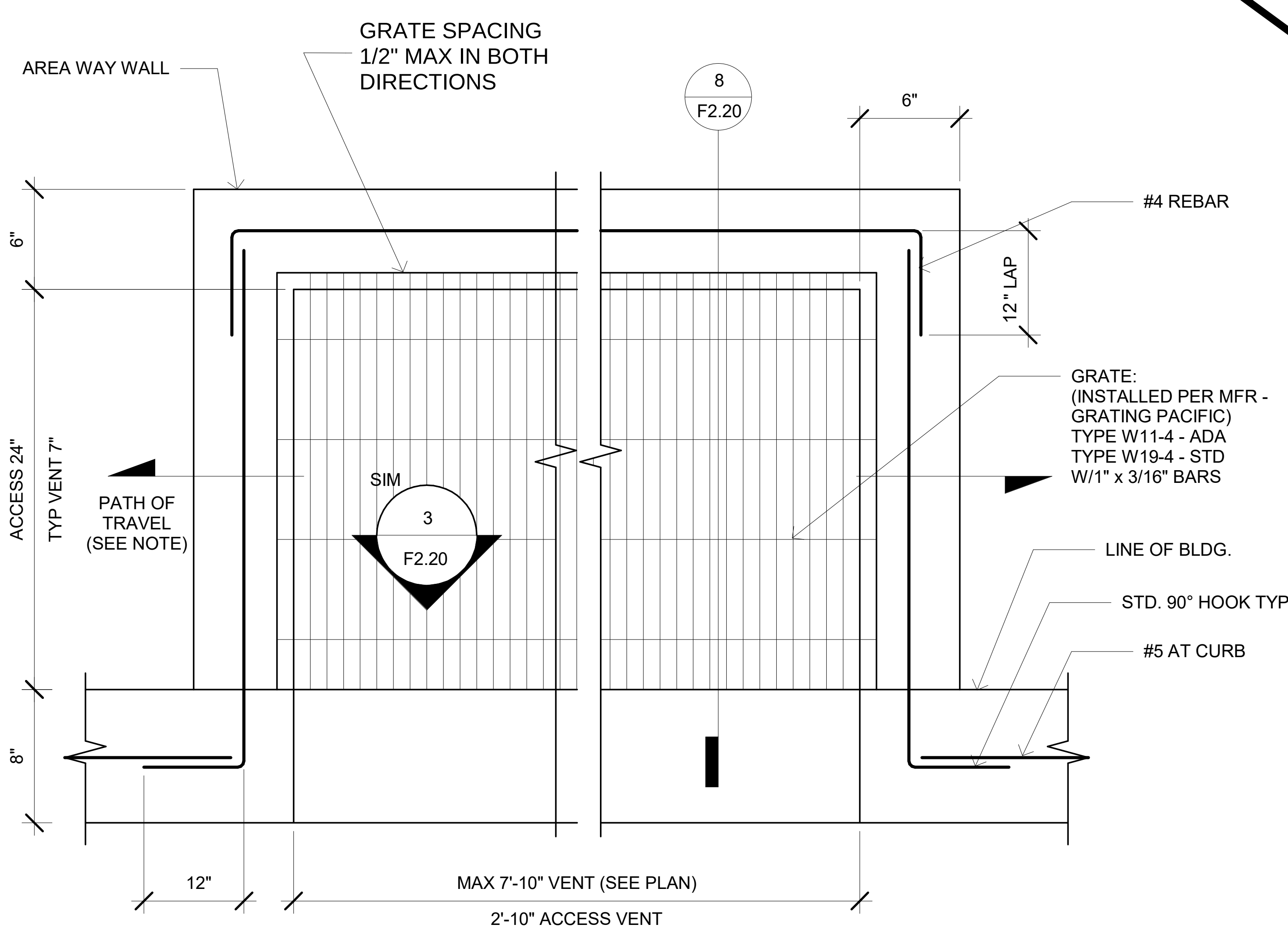
*MINIMUM FOOTING DEPTH w/ INSULATION AT EXTERIOR FOOTINGS. WHEN INSULATION IS NOT PROVIDED, MIN. FOOTING DEPTH SHALL BE 18" BELOW INT. GRADE

5 1" = 1'-0"
**SIDE WALL FOOTING, BELOW GRADE**

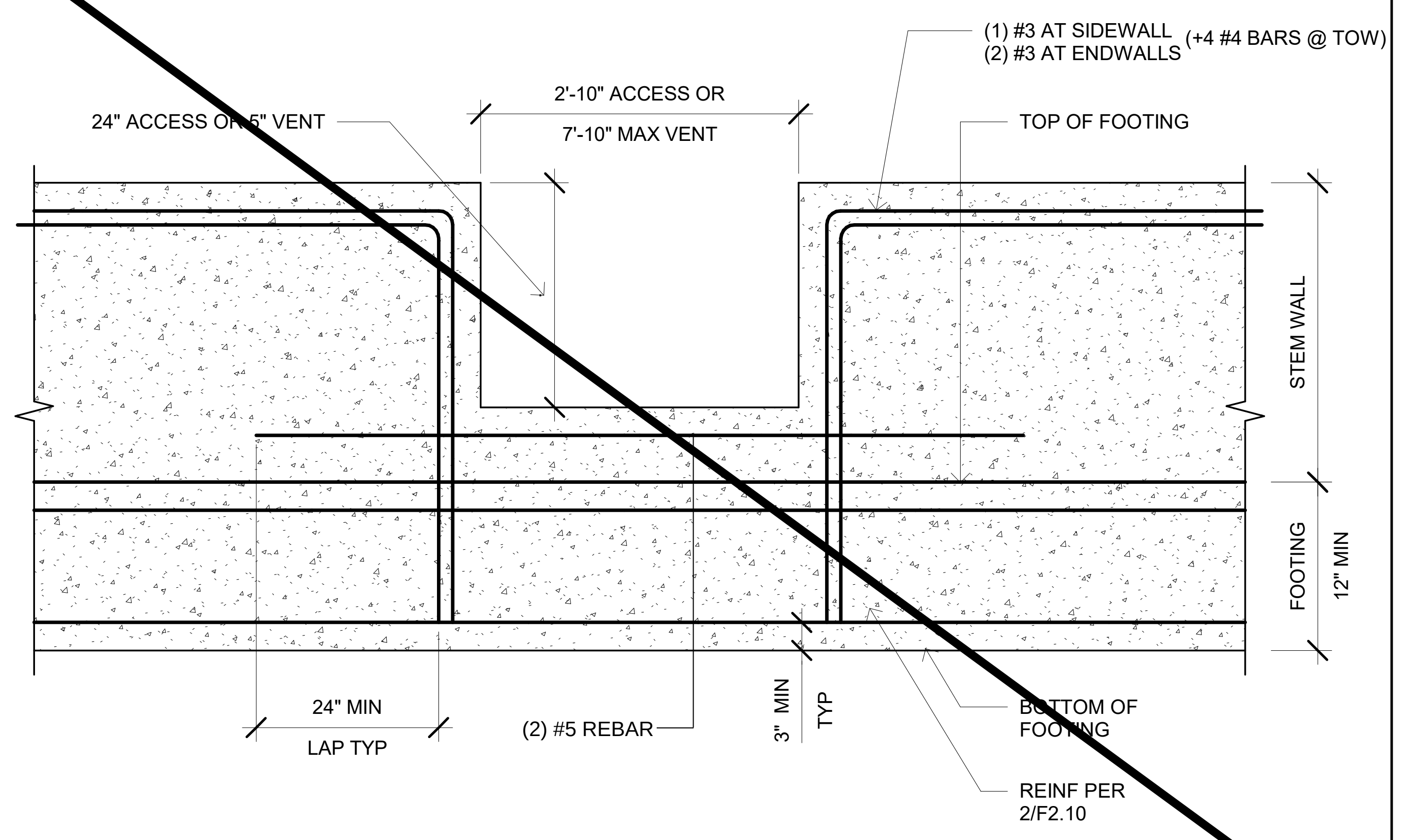

STUD
SHTH'G
22GA CONT FLASHING COUNTER FLASH
22GA FLASHING - CAULK T/B
WELDED ANCHOR PLATE (SEE DETAILS 4, 5/F2.23)
(4) #4 TOP BARS
5
F2.23
* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
2"
CLR.
8"
STEM WALL
* VARIES - 11" MIN.
24" MAX.
#4 VERTICAL AT 12" O.C.
#5 AT 18" OC HORIZONTAL MAX
OPTIONAL 2" GOPHER SLURRY
DRAIN PER CIVIL
INT. GRADE LINE
* 12" MIN.
12"
3"
CLR
SEE PLAN
PER SCHEDULE

*MINIMUM FOOTING DEPTH w/ INSULATION AT EXTERIOR FOOTINGS. WHEN INSULATION IS NOT PROVIDED, MIN. FOOTING DEPTH SHALL BE 18" BELOW INT. GRADE

2 1" = 1'-0"
**END WALL FOOTING, BELOW GRADE**


AREA WAY WALL
GRATE SPACING 1/2" MAX IN BOTH DIRECTIONS
8
F2.20
6"
#4 REBAR
6"
12" LAP
GRATE: (INSTALLED PER MFR - GRATING PACIFIC) TYPE W11-4 - ADA TYPE W19-4 - STD W/1" x 3/16" BARS
ACCESS 24"
TYP VENT 7"
PATH OF TRAVEL (SEE NOTE)
SIM
3
F2.20
LINE OF BLDG.
STD. 90° HOOK TYP
#5 AT CURB
8"
12"
MAX 7'-10" VENT (SEE PLAN)
2'-10" ACCESS VENT

6 1 1/2" = 1'-0"
**ACCESS VENT FOR BELLOW GRADE FOUDATION**



3 3/4" = 1'-0"
**VENT OPENING**

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA
02/16/24
RST#22088

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CONCRETE FOUNDATION DETAILS

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
JA/RT

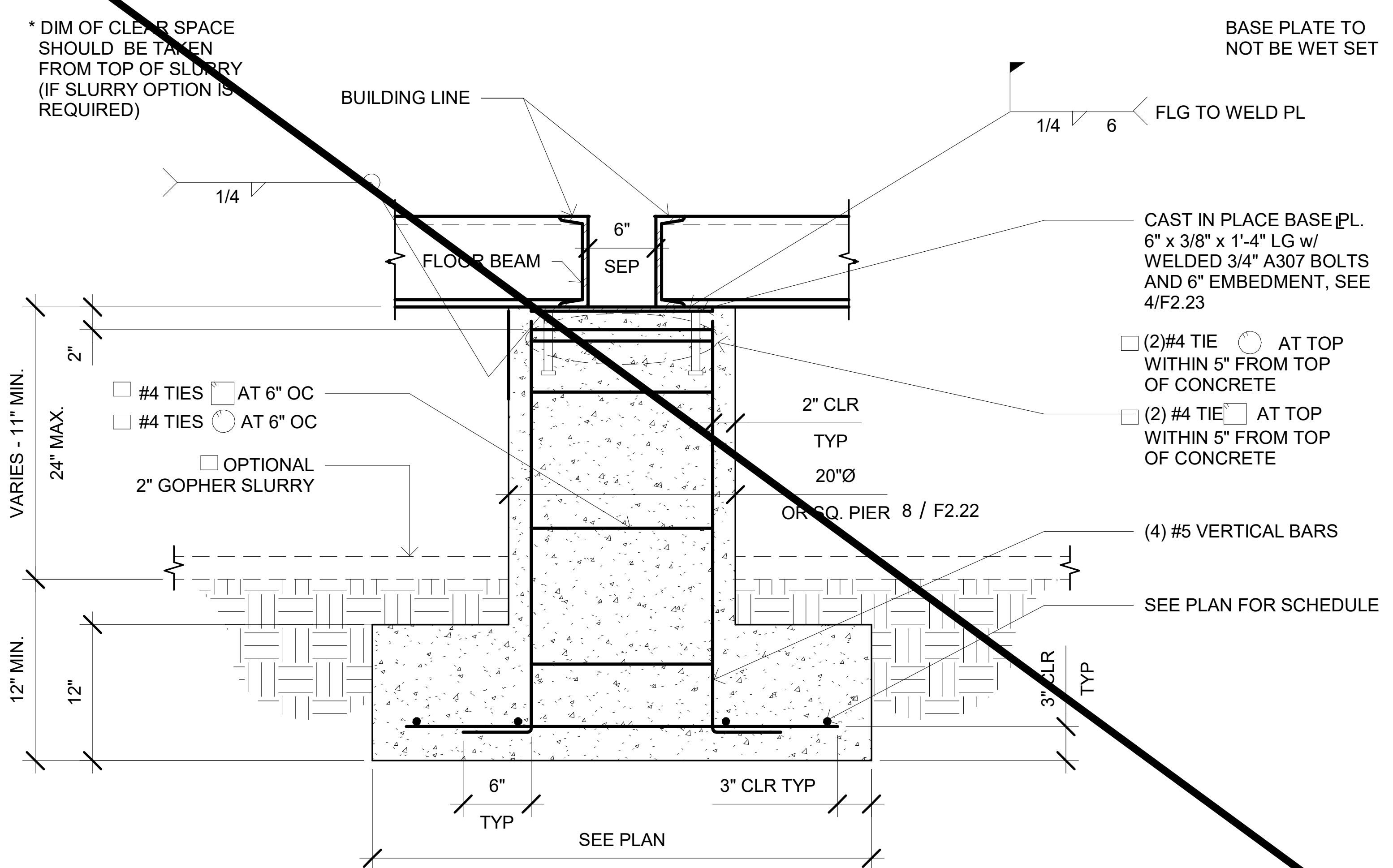
DATE

SHEET NO.
F2.20

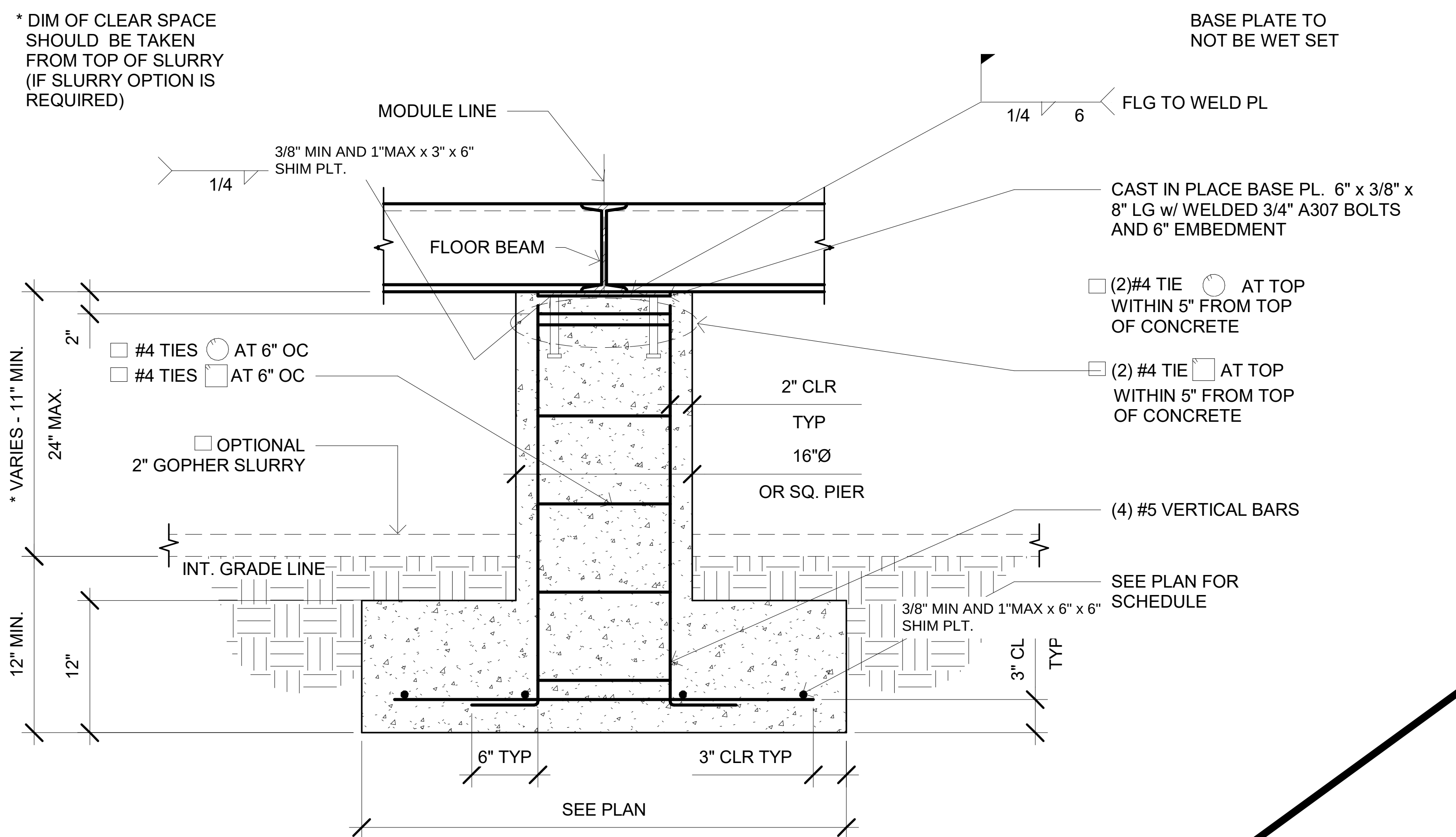
SHEET OF

C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt

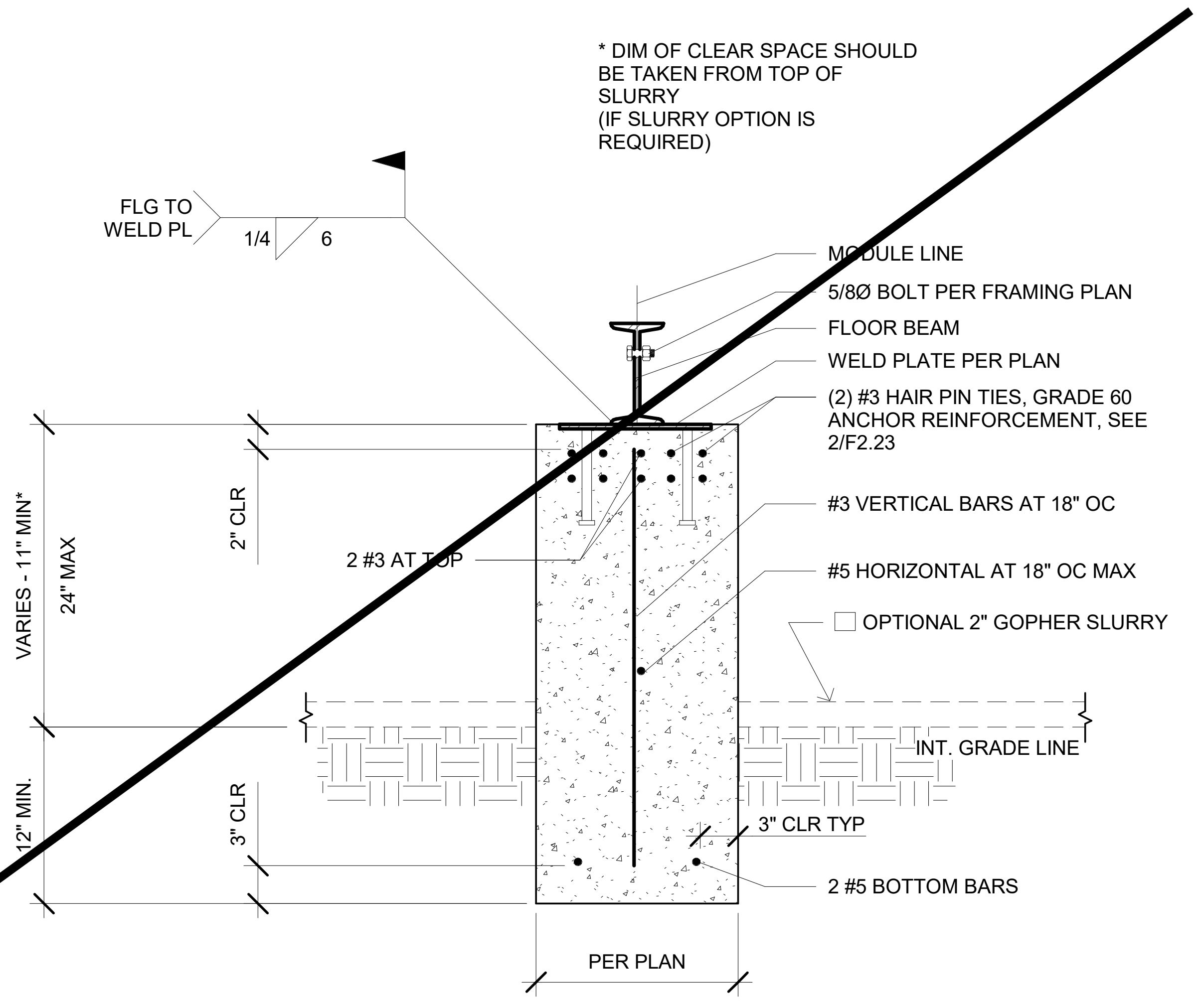
6/16/2021 7:45:12 AM


* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
BUILDING LINE
BASE PLATE TO NOT BE WET SET
1/4 6 FLG TO WELD PL
1/4
6" SEP
FLOOR BEAM
CAST IN PLACE BASE PL. 6" x 3/8" x 1'-4" LG w/ WELDED 3/4" A307 BOLTS AND 6" EMBEDMENT, SEE 4/F2.23
☐ (2)#4 TIE ○ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ (2) #4 TIE ☐ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ #4 TIES ☐ AT 6" OC
☐ #4 TIES ○ AT 6" OC
☐ OPTIONAL 2" GOPHER SLURRY
2" CLR TYP
20"Ø OR SQ. PIER 8 / F2.22
(4) #5 VERTICAL BARS
SEE PLAN FOR SCHEDULE
VARIES - 11" MIN.
24" MAX.
2"
12" MIN.
12"
3" CLR TYP
6" TYP
3" CLR TYP
SEE PLAN

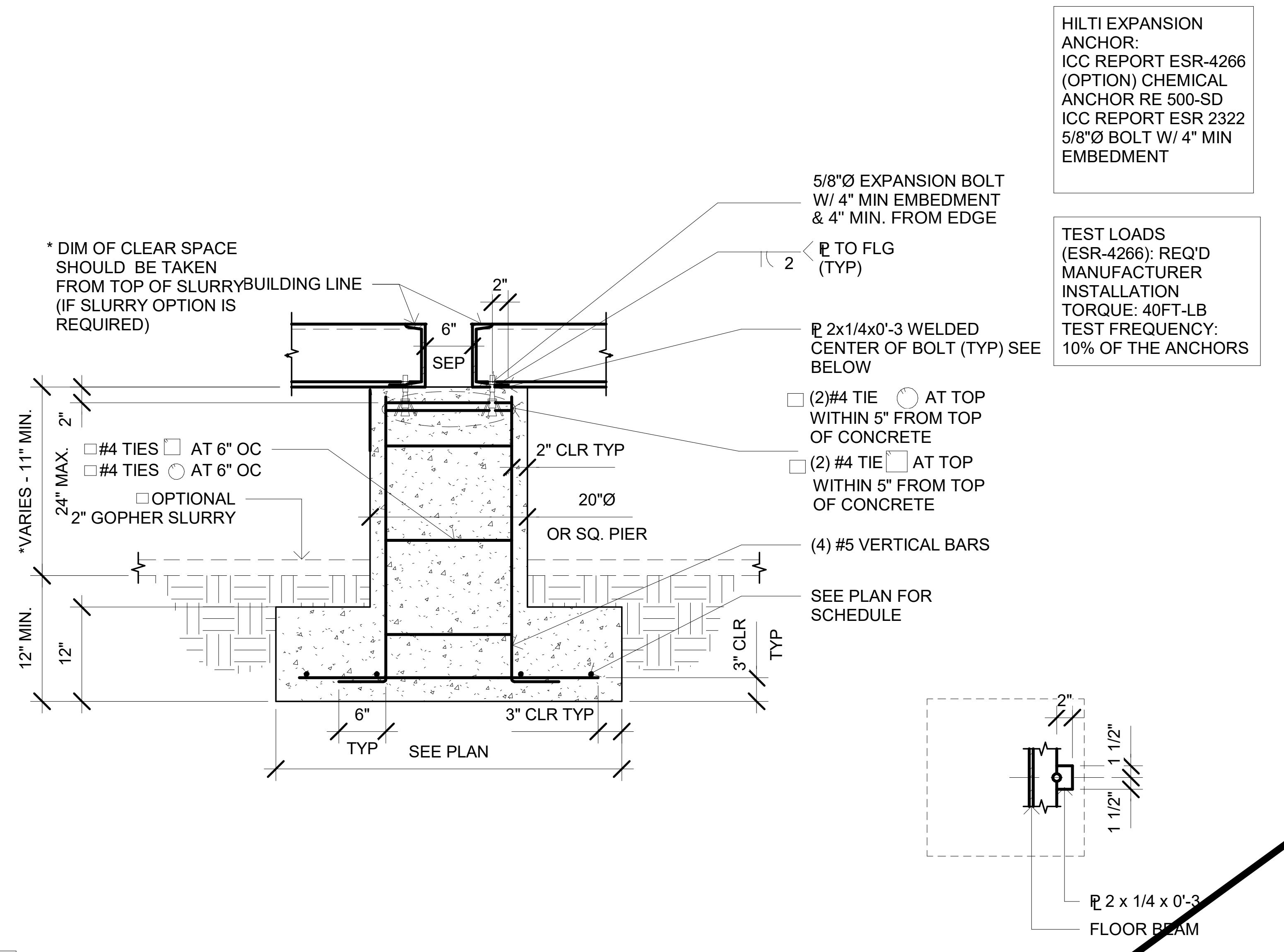
**7** *1" = 1'-0"*
### *INTERIOR PAD FOOTING (AT SEPARATION)*


* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
MODULE LINE
BASE PLATE TO NOT BE WET SET
1/4 6 FLG TO WELD PL
3/8" MIN AND 1"MAX x 3" x 6" SHIM PLT.
1/4
FLOOR BEAM
CAST IN PLACE BASE PL. 6" x 3/8" x 8" LG w/ WELDED 3/4" A307 BOLTS AND 6" EMBEDMENT
☐ (2)#4 TIE ○ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ (2) #4 TIE ☐ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ #4 TIES ○ AT 6" OC
☐ #4 TIES ☐ AT 6" OC
☐ OPTIONAL 2" GOPHER SLURRY
2" CLR TYP
16"Ø OR SQ. PIER
(4) #5 VERTICAL BARS
SEE PLAN FOR SCHEDULE
3/8" MIN AND 1"MAX x 6" x 6" SHIM PLT.
INT. GRADE LINE
* VARIES - 11" MIN.
24" MAX.
2"
12" MIN.
12"
3" CL TYP
6" TYP
3" CLR TYP
SEE PLAN

**4** *1" = 1'-0"*
### *INTERIOR PAD FOOTING (ATTACHMENT AT PLATE)*


* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
FLG TO WELD PL 1/4 6
MODULE LINE
5/8Ø BOLT PER FRAMING PLAN
FLOOR BEAM
WELD PLATE PER PLAN
(2) #3 HAIR PIN TIES, GRADE 60 ANCHOR REINFORCEMENT, SEE 2/F2.23
#3 VERTICAL BARS AT 18" OC
#5 HORIZONTAL AT 18" OC MAX
☐ OPTIONAL 2" GOPHER SLURRY
2 #3 AT TOP
INT. GRADE LINE
3" CLR TYP
2 #5 BOTTOM BARS
VARIES - 11" MIN*
24" MAX
2" CLR
12" MIN.
3" CLR
PER PLAN

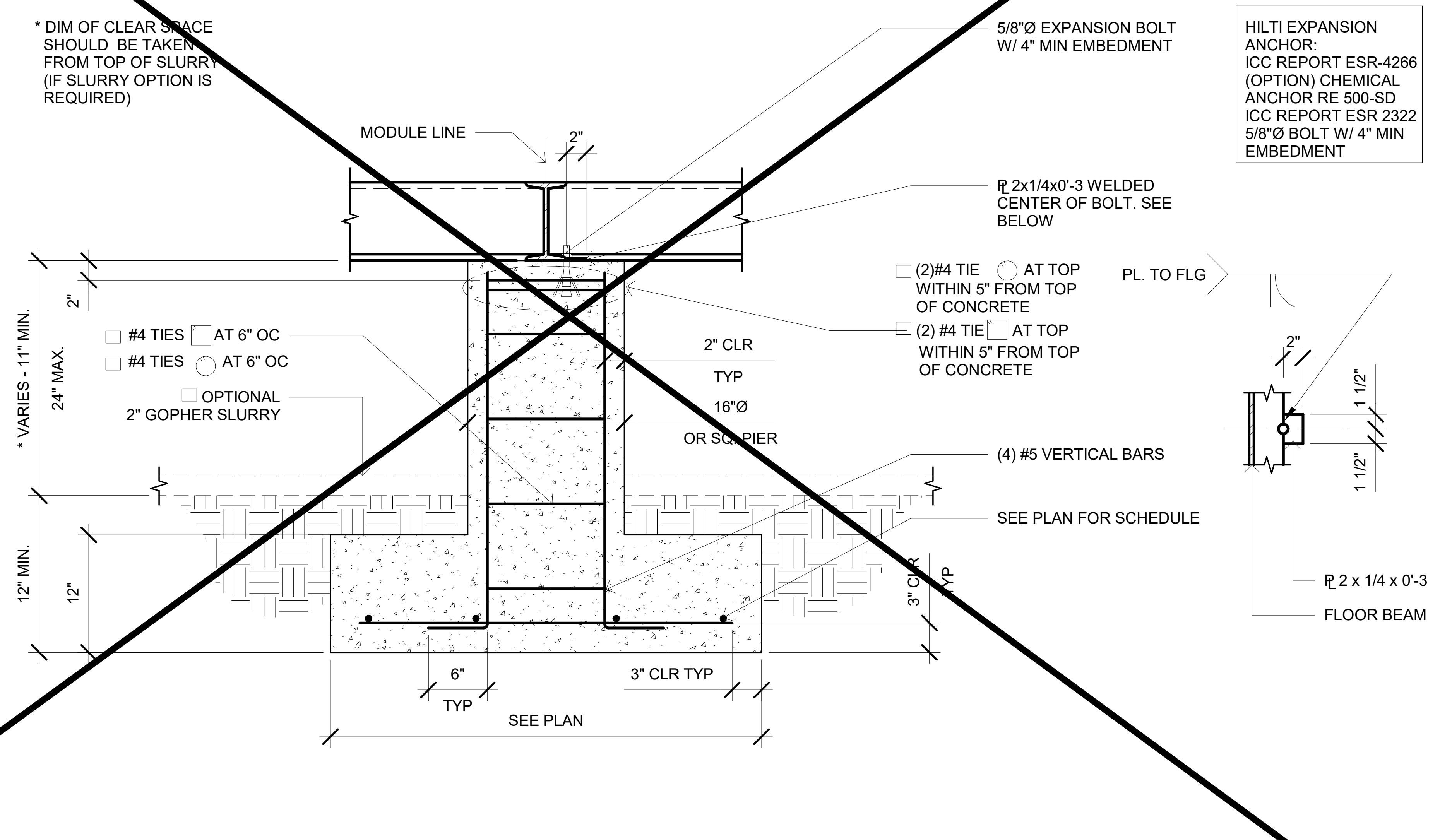
**1** *1" = 1'-0"*
### *INTERIOR RETURN FOOTING*


* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
BUILDING LINE
2"
6" SEP
5/8"Ø EXPANSION BOLT W/ 4" MIN EMBEDMENT & 4" MIN. FROM EDGE
2 ℄ TO FLG (TYP)
℄ 2x1/4x0'-3 WELDED CENTER OF BOLT (TYP) SEE BELOW
☐ (2)#4 TIE ○ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ (2) #4 TIE ☐ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ #4 TIES ☐ AT 6" OC
☐ #4 TIES ○ AT 6" OC
☐ OPTIONAL 2" GOPHER SLURRY
2" CLR TYP
20"Ø OR SQ. PIER
(4) #5 VERTICAL BARS
SEE PLAN FOR SCHEDULE
*VARIES - 11" MIN.
24" MAX.
2"
12" MIN.
12"
3" CLR TYP
6" TYP
3" CLR TYP
SEE PLAN
2"
1 1/2"
1 1/2"
℄ 2 x 1/4 x 0'-3
FLOOR BEAM

HILTI EXPANSION ANCHOR:
ICC REPORT ESR-4266
(OPTION) CHEMICAL ANCHOR RE 500-SD
ICC REPORT ESR 2322
5/8"Ø BOLT W/ 4" MIN EMBEDMENT

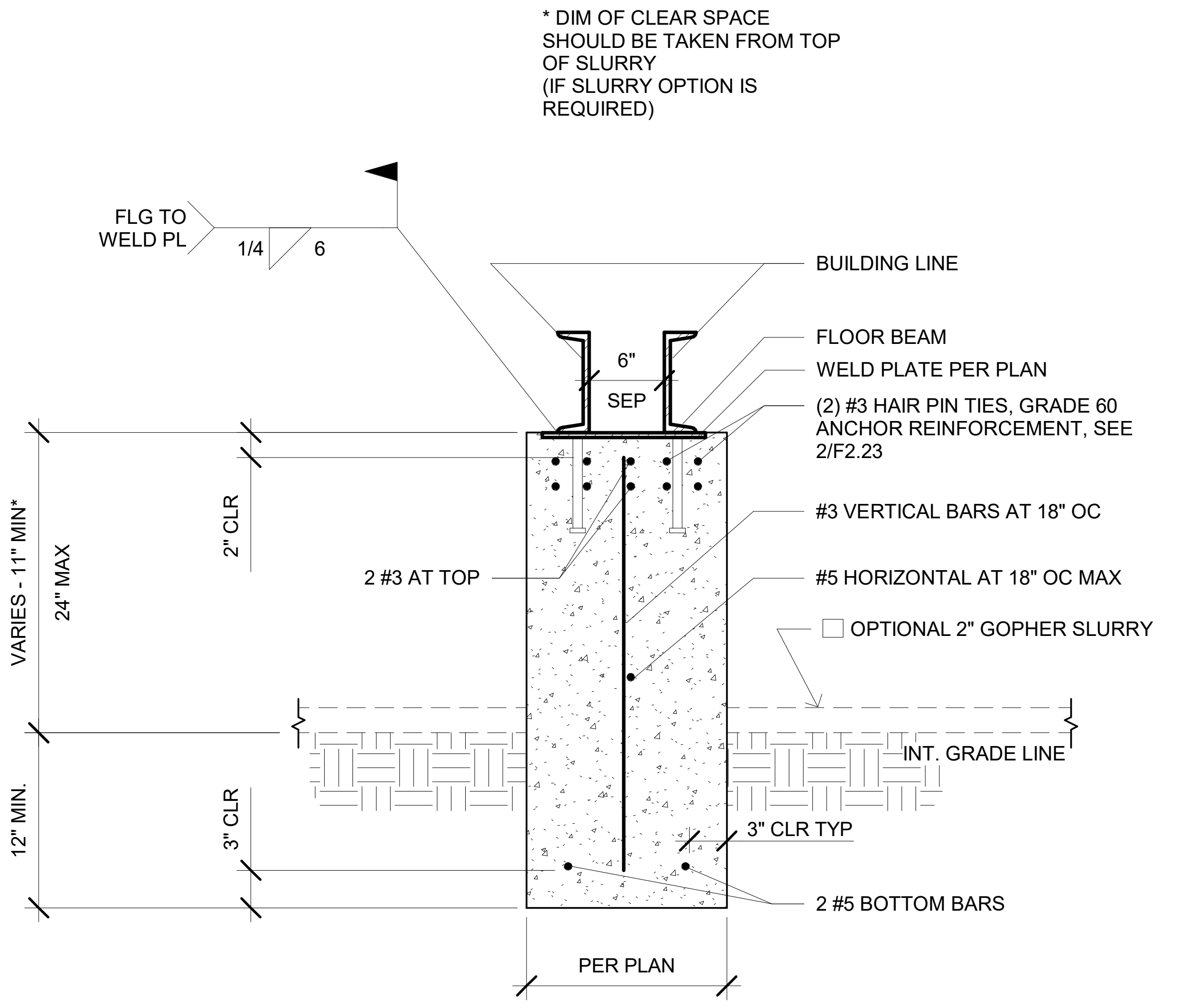
TEST LOADS (ESR-4266): REQ'D MANUFACTURER INSTALLATION
TORQUE: 40FT-LB
TEST FREQUENCY: 10% OF THE ANCHORS

**3** *3/4" = 1'-0"*
### *OPT. INTERIOR PAD FOOTING (AT SEPARATION)*

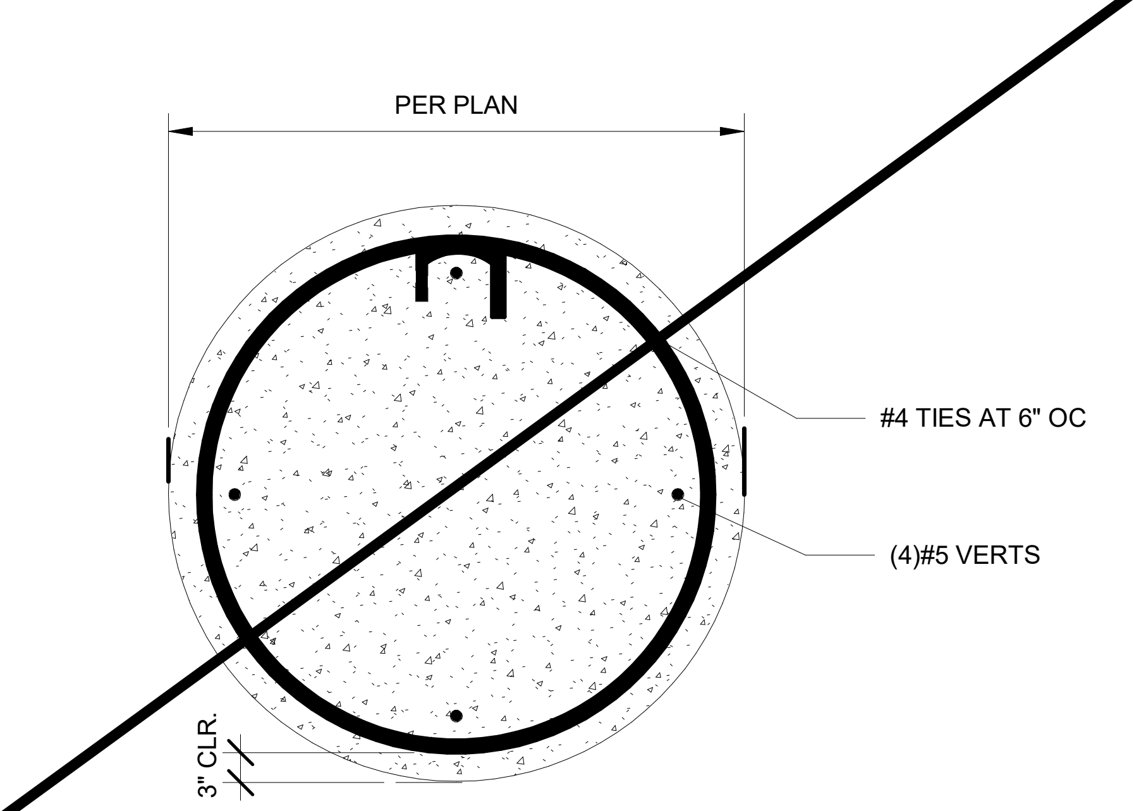

* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
MODULE LINE
2"
5/8"Ø EXPANSION BOLT W/ 4" MIN EMBEDMENT
℄ 2x1/4x0'-3 WELDED CENTER OF BOLT. SEE BELOW
☐ (2)#4 TIE ○ AT TOP WITHIN 5" FROM TOP OF CONCRETE
☐ (2) #4 TIE ☐ AT TOP WITHIN 5" FROM TOP OF CONCRETE
PL. TO FLG
☐ #4 TIES ☐ AT 6" OC
☐ #4 TIES ○ AT 6" OC
☐ OPTIONAL 2" GOPHER SLURRY
2" CLR TYP
16"Ø OR SQ. PIER
(4) #5 VERTICAL BARS
SEE PLAN FOR SCHEDULE
* VARIES - 11" MIN.
24" MAX.
2"
12" MIN.
12"
3" CLR TYP
6" TYP
3" CLR TYP
SEE PLAN
2"
1 1/2"
1 1/2"
℄ 2 x 1/4 x 0'-3
FLOOR BEAM

HILTI EXPANSION ANCHOR:
ICC REPORT ESR-4266
(OPTION) CHEMICAL ANCHOR RE 500-SD
ICC REPORT ESR 2322
5/8"Ø BOLT W/ 4" MIN EMBEDMENT

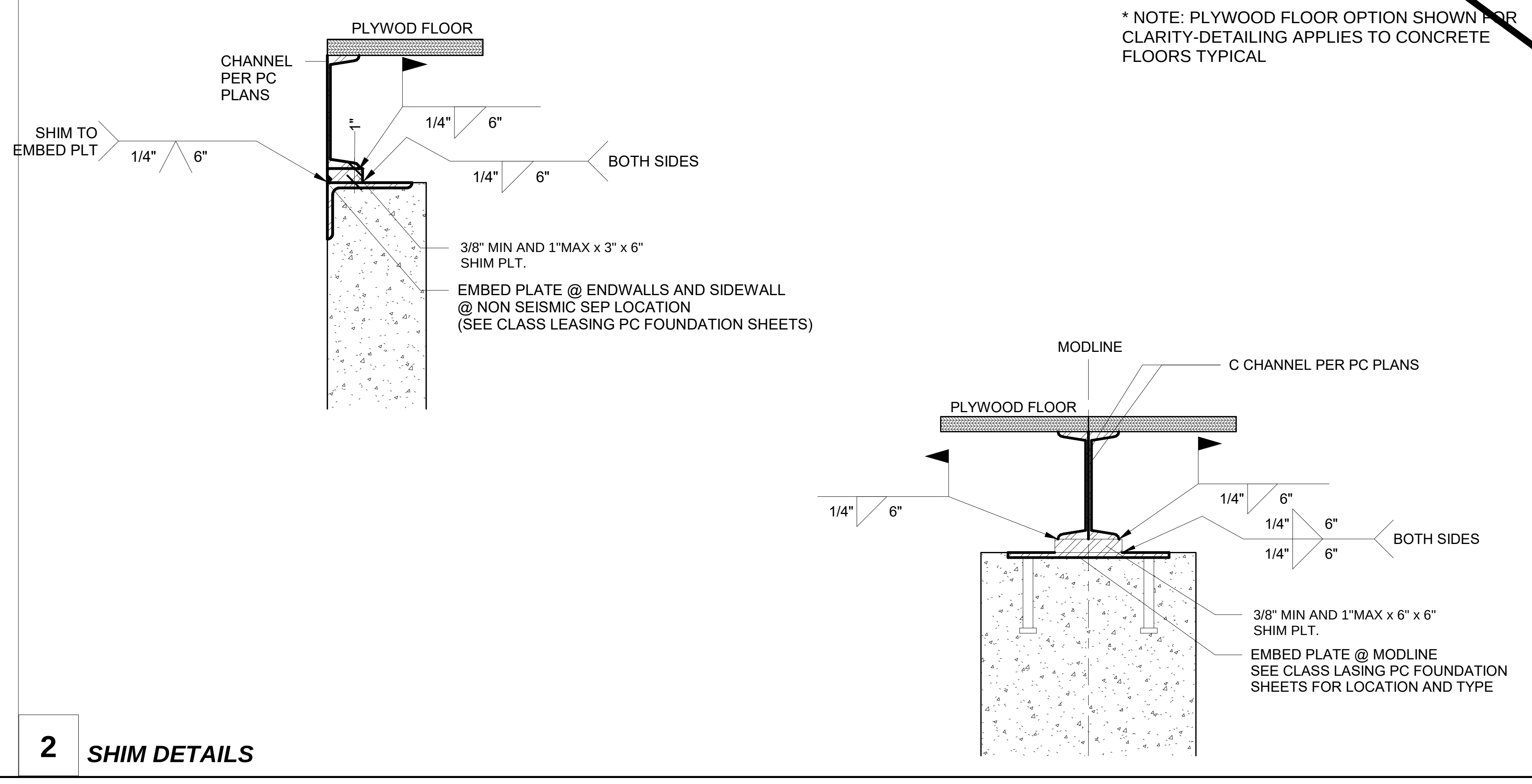
**5** *1" = 1'-0"*
### *OPT. INTERIOR PAD FOOTING (ATTACHMENT AT PLATE)*


* DIM OF CLEAR SPACE SHOULD BE TAKEN FROM TOP OF SLURRY (IF SLURRY OPTION IS REQUIRED)
FLG TO WELD PL 1/4 6
BUILDING LINE
6" SEP
FLOOR BEAM
WELD PLATE PER PLAN
(2) #3 HAIR PIN TIES, GRADE 60 ANCHOR REINFORCEMENT, SEE 2/F2.23
#3 VERTICAL BARS AT 18" OC
#5 HORIZONTAL AT 18" OC MAX
☐ OPTIONAL 2" GOPHER SLURRY
2 #3 AT TOP
INT. GRADE LINE
3" CLR TYP
2 #5 BOTTOM BARS
VARIES - 11" MIN*
24" MAX
2" CLR
12" MIN.
3" CLR
PER PLAN

**2** *1" = 1'-0"*
### *INTERIOR RETURN FOOTING AT SEPARATION*



**8** *1 1/2" = 1'-0"*
### *TYP. CIRCULART FTG.*


PLYWOD FLOOR
CHANNEL PER PC PLANS
SHIM TO EMBED PLT 1/4" 6"
1"
1/4" 6"
1/4" 6" BOTH SIDES
3/8" MIN AND 1"MAX x 3" x 6" SHIM PLT.
EMBED PLATE @ ENDWALLS AND SIDEWALL @ NON SEISMIC SEP LOCATION (SEE CLASS LEASING PC FOUNDATION SHEETS)
MODLINE
C CHANNEL PER PC PLANS
PLYWOOD FLOOR
1/4" 6"
1/4" 6"
1/4" 6"
1/4" 6" BOTH SIDES
3/8" MIN AND 1"MAX x 6" x 6" SHIM PLT.
EMBED PLATE @ MODLINE SEE CLASS LASING PC FOUNDATION SHEETS FOR LOCATION AND TYPE

* NOTE: PLYWOOD FLOOR OPTION SHOWN FOR CLARITY-DETAILING APPLIES TO CONCRETE FLOORS TYPICAL

**2** 
### *SHIM DETAILS*

6/20/2023 8:33:00 AM C:\Users\User\Documents\22088- Aries, 24x40 PC - MainFile - Low Seismic_detached (2022)_CESAR24D63.rvt

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

**THE PLANS, IDEAS & DESIGNS SHOWN ON THESE DRAWINGS ARE THE PROPERTY OF R&S TAVARES ASSOCIATES, INC. DEVISED SOLELY FOR THIS CONTRACT. THESE PLANS SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH THEY WERE NOT INTENDED WITHOUT THE EXPRESS WRITTEN CONSENT OF R&S TAVARES ASSOCIATES, INC. ©**

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
CONCRETE
FOUNDATION
DETAILS

PROJECT NUMBER
22088

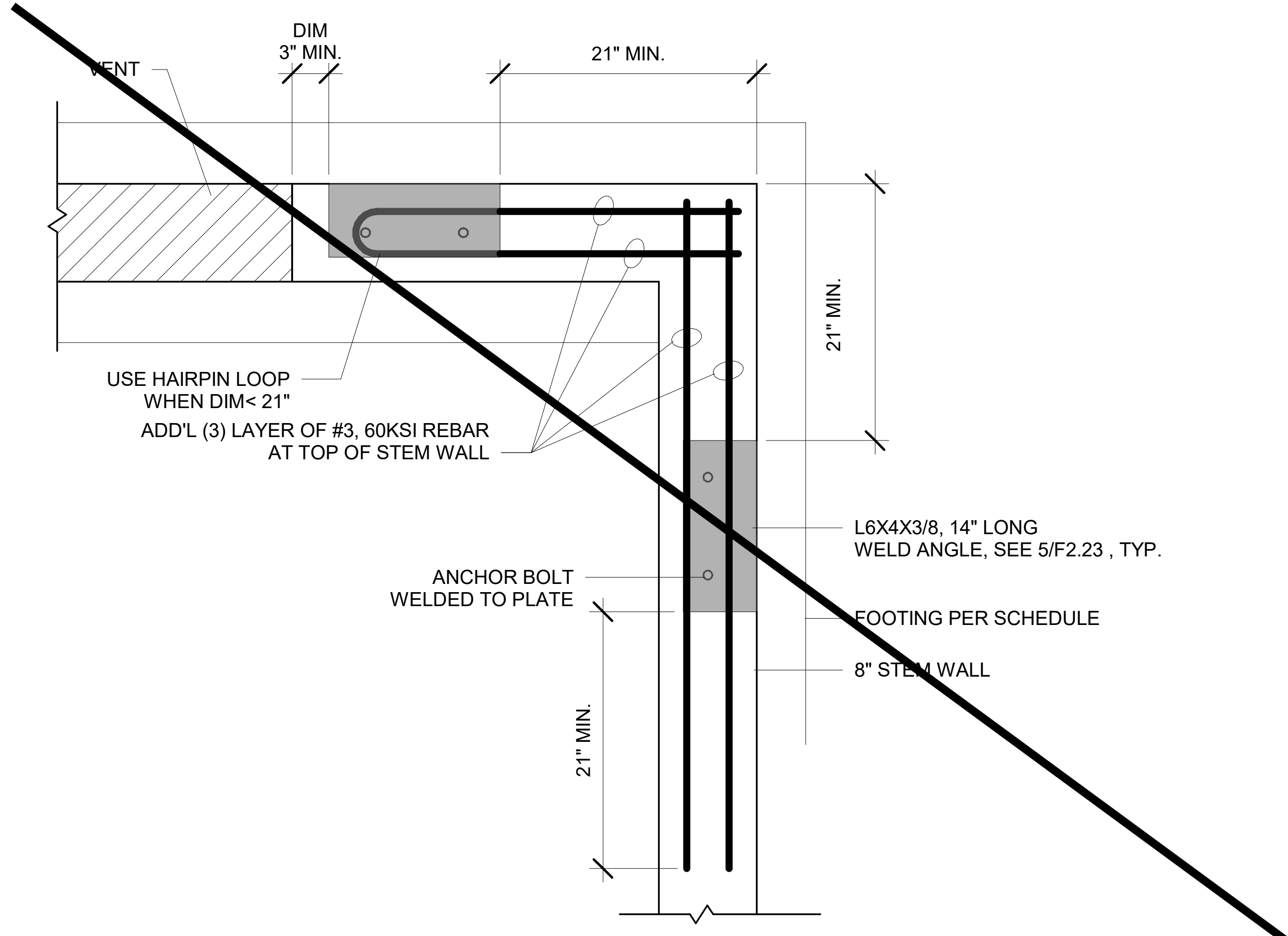
DRAWN BY
rMc/SC

CHECKED BY
JA/RT

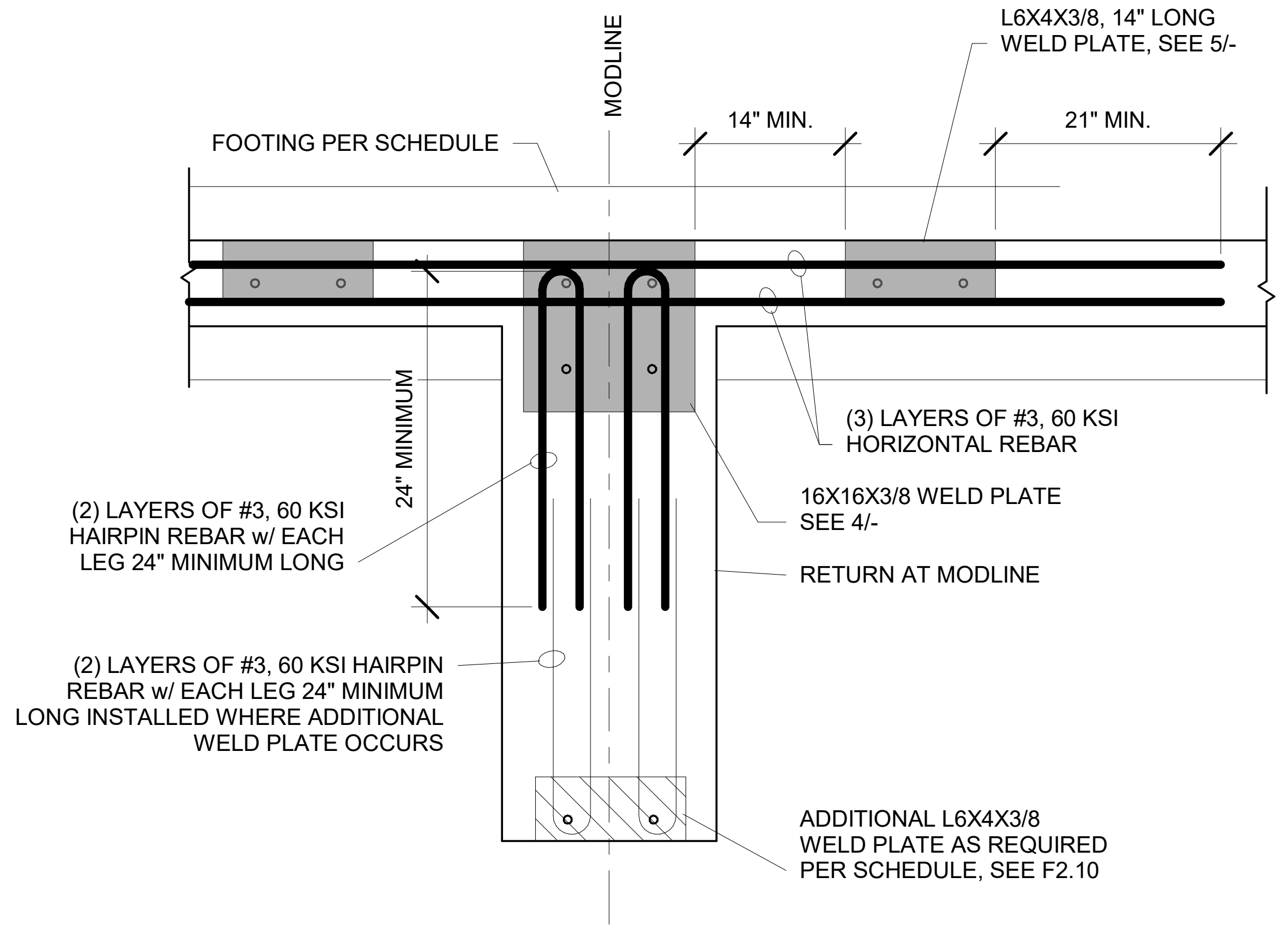
DATE

SHEET NO.
F2.22

SHEET OF

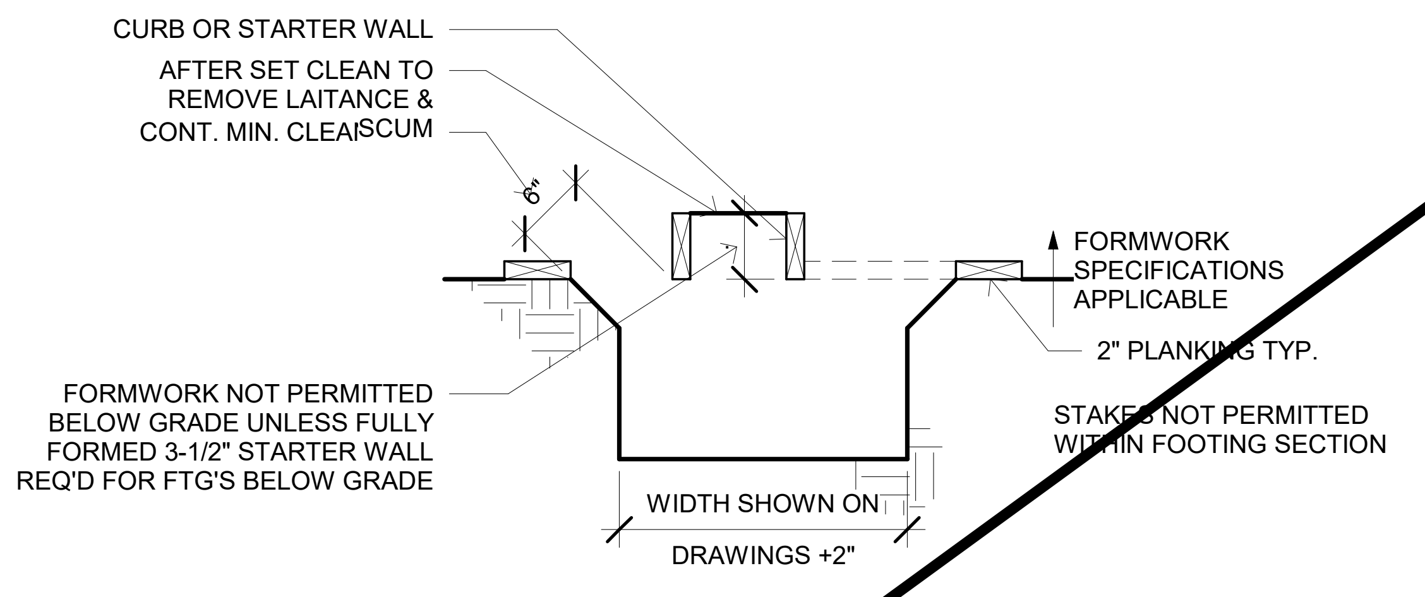

DIM
3" MIN.
VENT
21" MIN.
21" MIN.
USE HAIRPIN LOOP WHEN DIM< 21"
ADD'L (3) LAYER OF #3, 60KSI REBAR AT TOP OF STEM WALL
L6X4X3/8, 14" LONG WELD ANGLE, SEE 5/F2.23 , TYP.
ANCHOR BOLT WELDED TO PLATE
FOOTING PER SCHEDULE
8" STEM WALL
21" MIN.

**1** 1" = 1'-0"
**WELD PLATE AT CORNER**


MODLINE
L6X4X3/8, 14" LONG WELD PLATE, SEE 5/-
FOOTING PER SCHEDULE
14" MIN.
21" MIN.
24" MINIMUM
(3) LAYERS OF #3, 60 KSI HORIZONTAL REBAR
16X16X3/8 WELD PLATE SEE 4/-
(2) LAYERS OF #3, 60 KSI HAIRPIN REBAR w/ EACH LEG 24" MINIMUM LONG
RETURN AT MODLINE
(2) LAYERS OF #3, 60 KSI HAIRPIN REBAR w/ EACH LEG 24" MINIMUM LONG INSTALLED WHERE ADDITIONAL WELD PLATE OCCURS
ADDITIONAL L6X4X3/8 WELD PLATE AS REQUIRED PER SCHEDULE, SEE F2.10

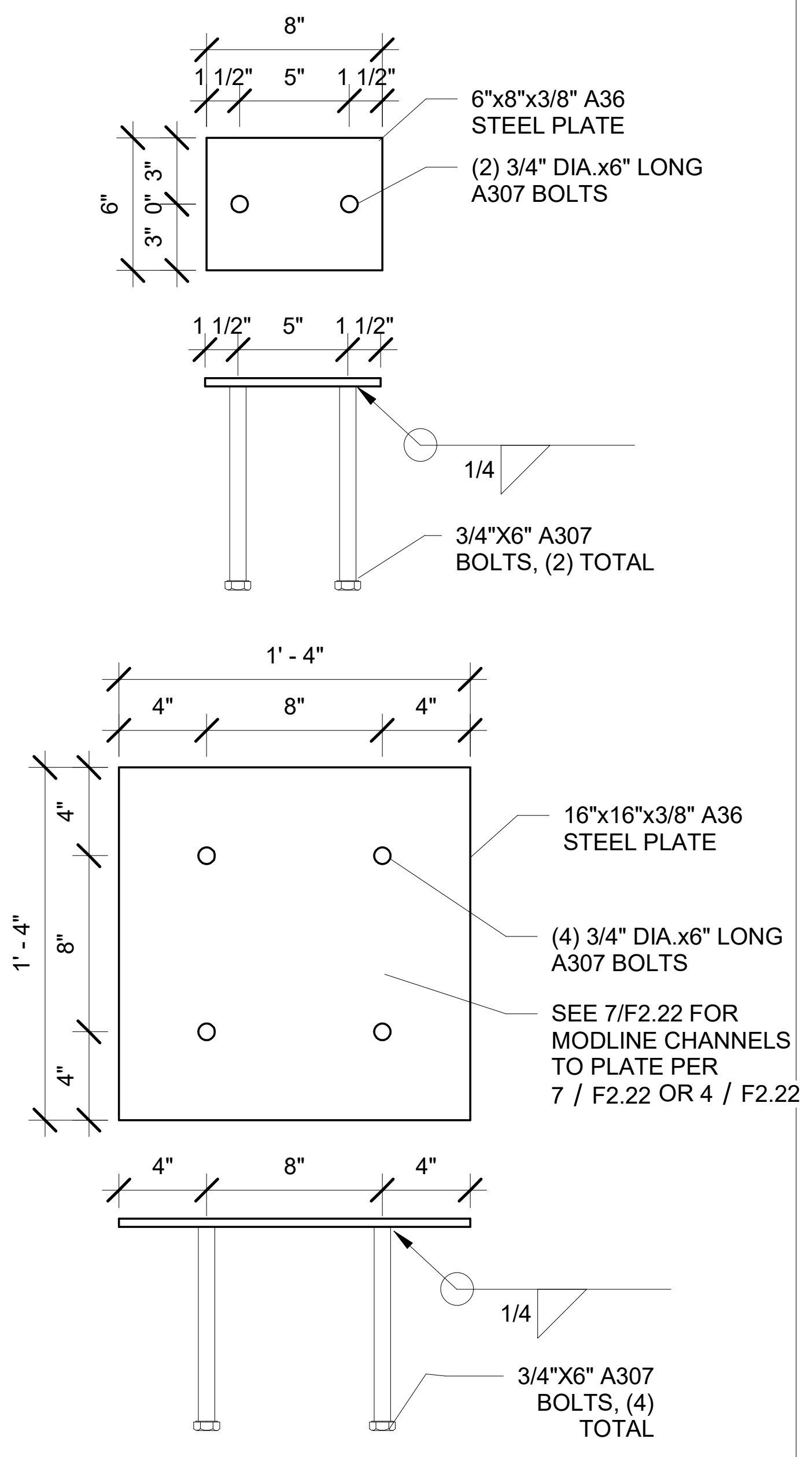
**2** 3/4" = 1'-0"
**RETURN AT MOD LINE**

* NOTE: PLYWOOD FLOOR OPTION SHOWN FOR CLARITY-DETAILING APPLIES TO CONCRETE FLOORS TYPICAL

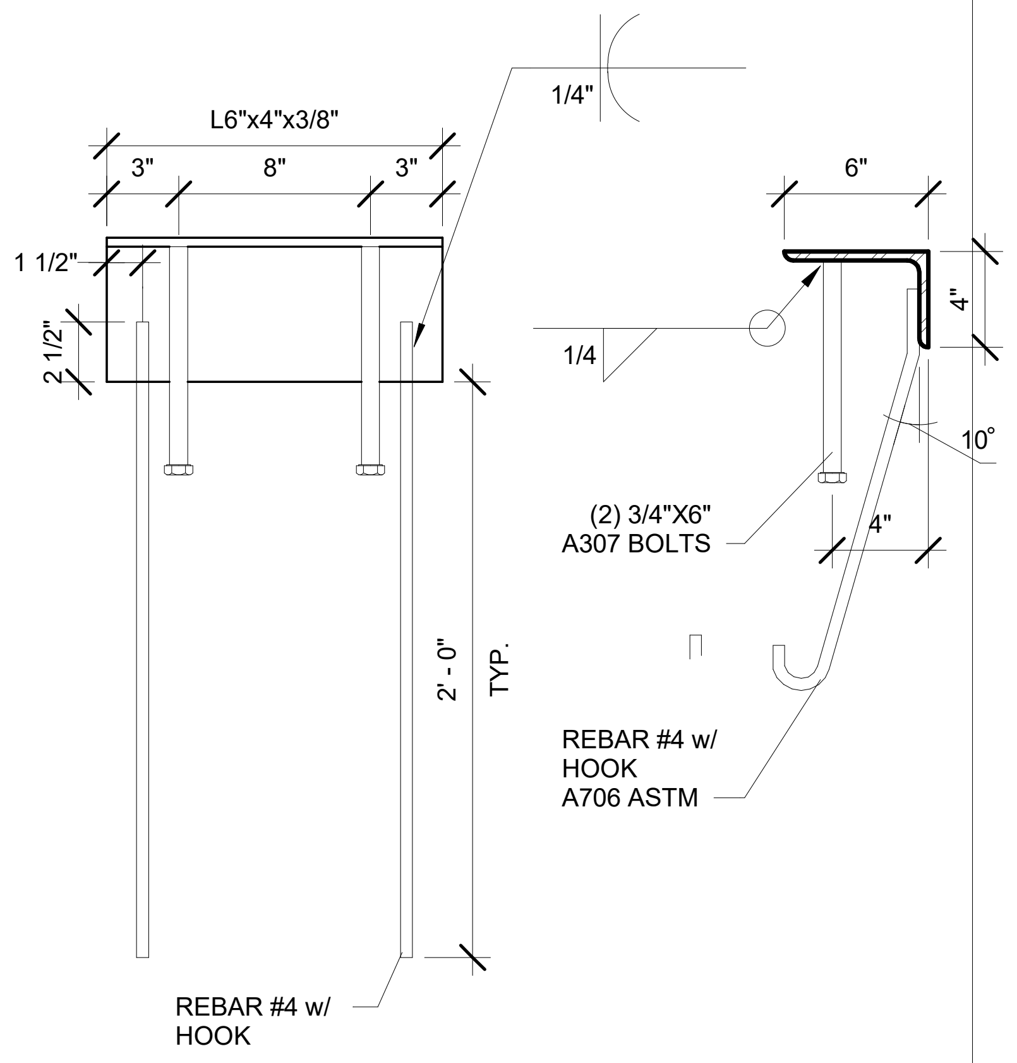

CURB OR STARTER WALL
AFTER SET CLEAN TO REMOVE LAITANCE & CONT. MIN. CLEAN SCUM
6"
FORMWORK SPECIFICATIONS APPLICABLE
2" PLANKING TYP.
FORMWORK NOT PERMITTED BELOW GRADE UNLESS FULLY FORMED 3-1/2" STARTER WALL REQ'D FOR FTG'S BELOW GRADE
STAKES NOT PERMITTED WITHIN FOOTING SECTION
WIDTH SHOWN ON DRAWINGS +2"

"FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ARCHITECT (STRUCTURAL ENGINEER). SUBJECT TO THE APPROVAL OF THE DIVISION OF THE STATE ARCHITECT. IN SUCH CASE THE MINIMUM FORMWORK SHOWN ON THE DRAWINGS IS MANDATORY TO INSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE."

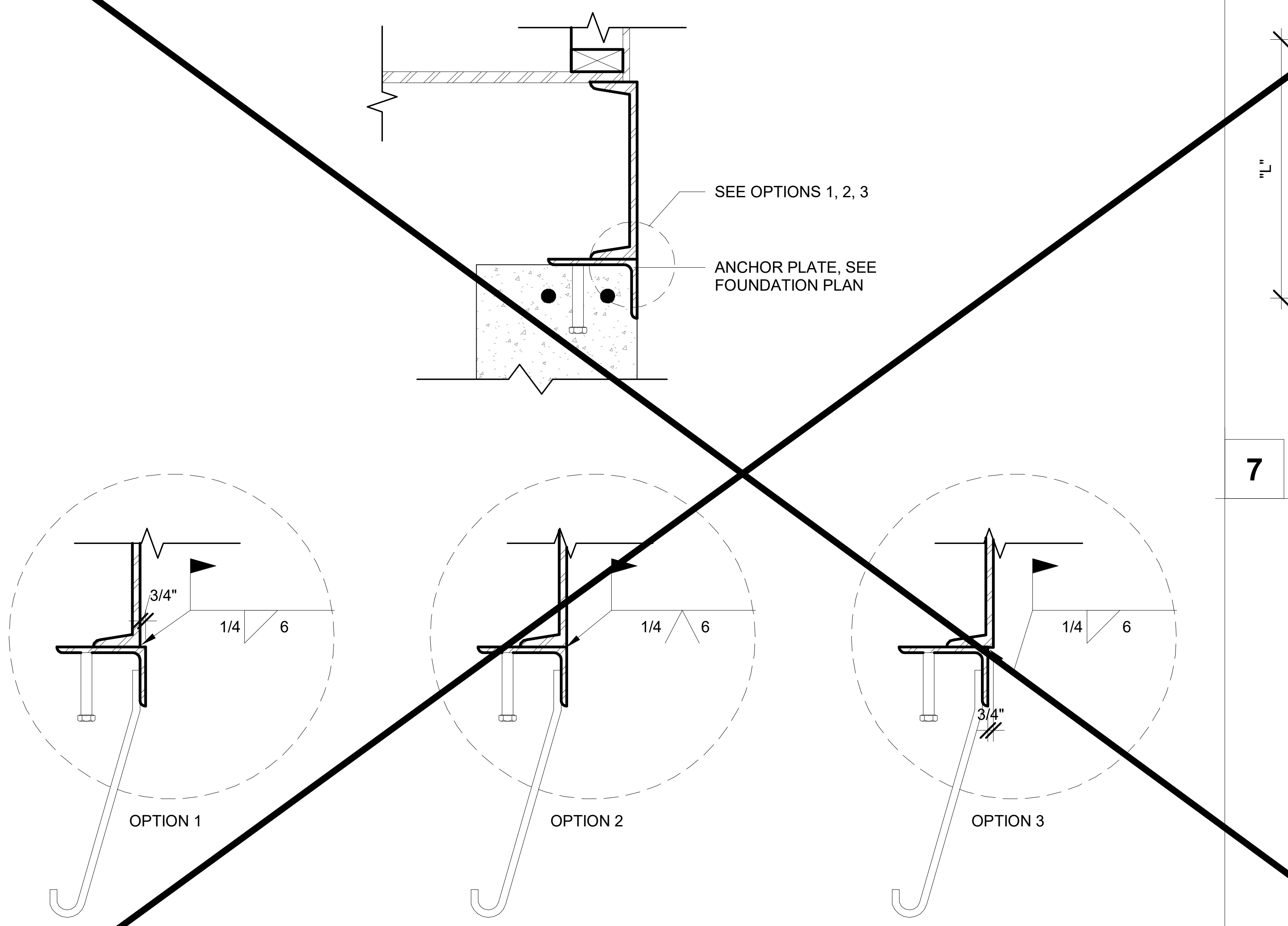
**3** 3/4" = 1'-0"
**MANDATORY MINIMUM FORMWORK (UNLESS FULLY FORMED)**


8"
1 1/2"
5"
1 1/2"
6"x8"x3/8" A36 STEEL PLATE
(2) 3/4" DIA.x6" LONG A307 BOLTS
6"
3"
3"
1/4
3/4"X6" A307 BOLTS, (2) TOTAL
1' - 4"
4"
8"
4"
16"x16"x3/8" A36 STEEL PLATE
(4) 3/4" DIA.x6" LONG A307 BOLTS
SEE 7/F2.22 FOR MODLINE CHANNELS TO PLATE PER 7 / F2.22 OR 4 / F2.22
1/4
3/4"X6" A307 BOLTS, (4) TOTAL

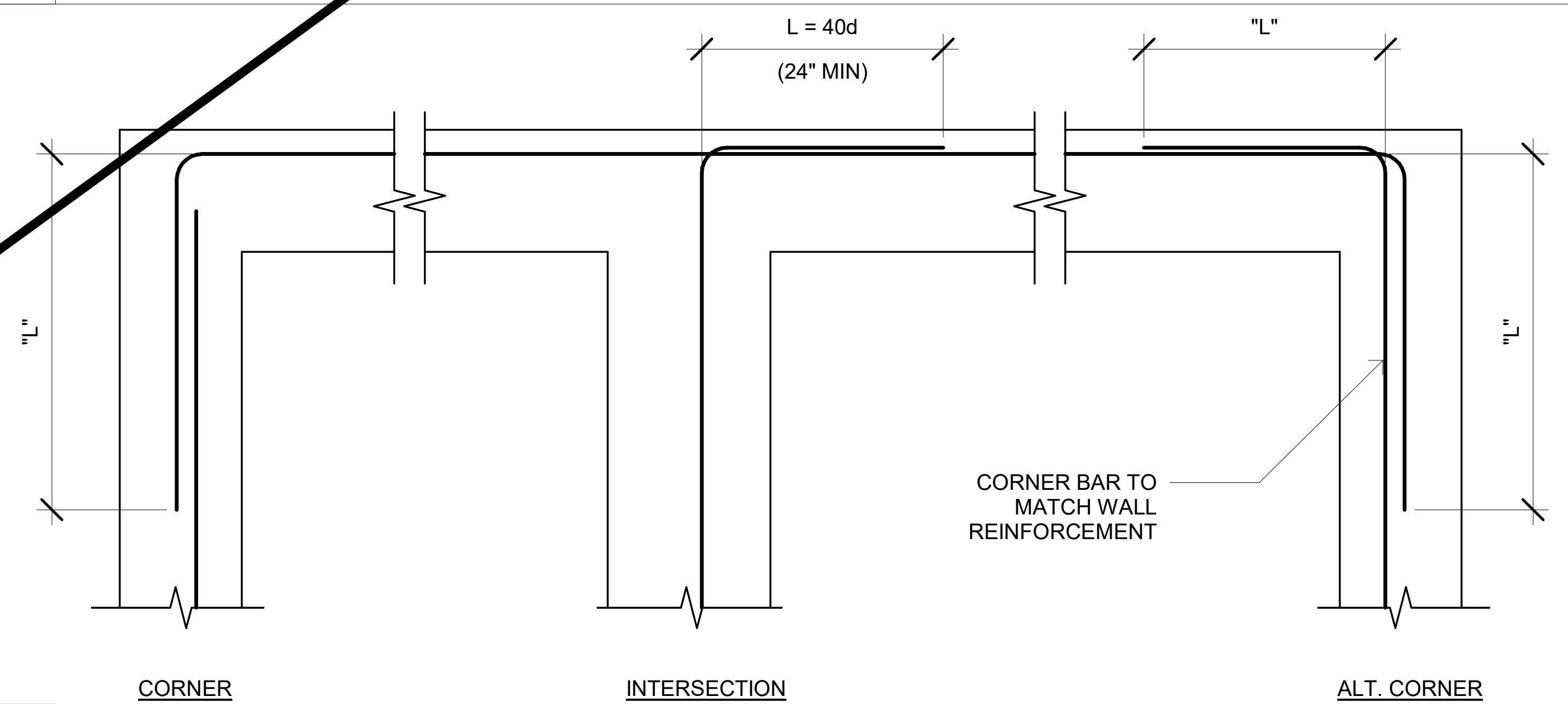
**4** 1 1/2" = 1'-0"
**EMBEDDED PLATE DETAILS**



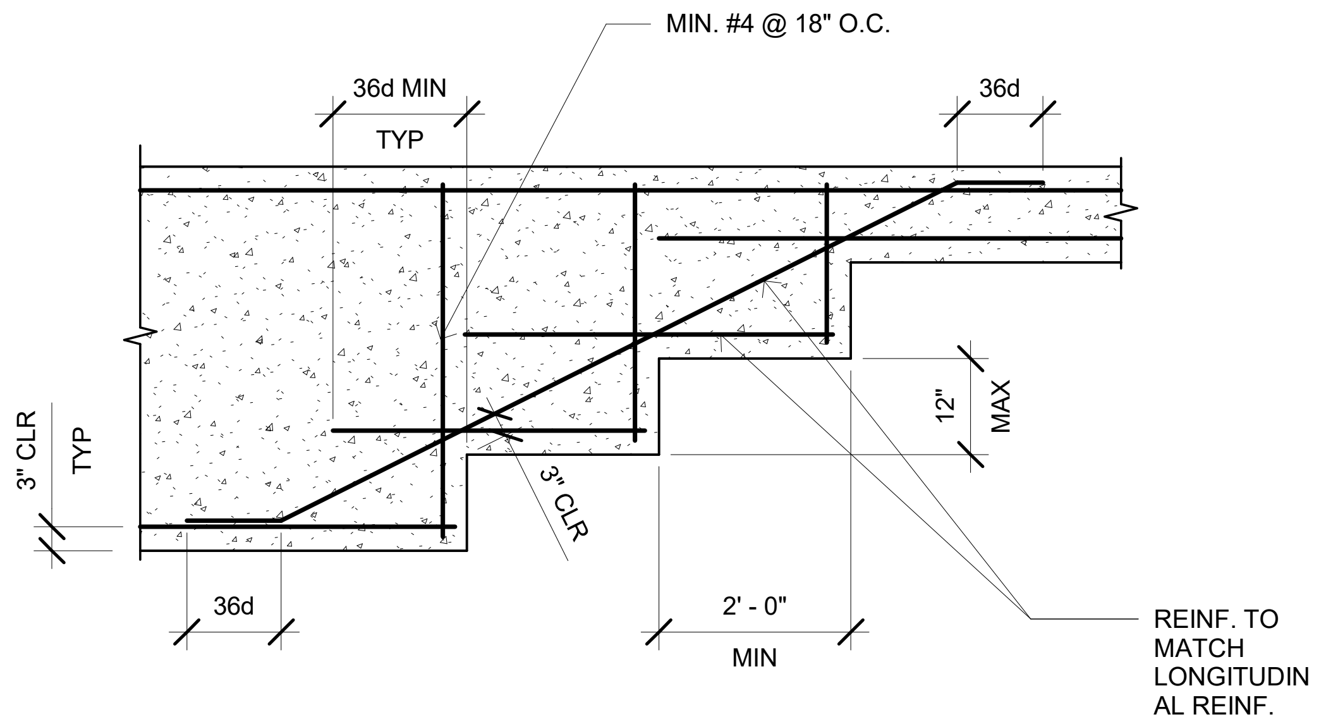
**6** 1 1/2" = 1'-0"
**WELD ANGLE DETAIL3**



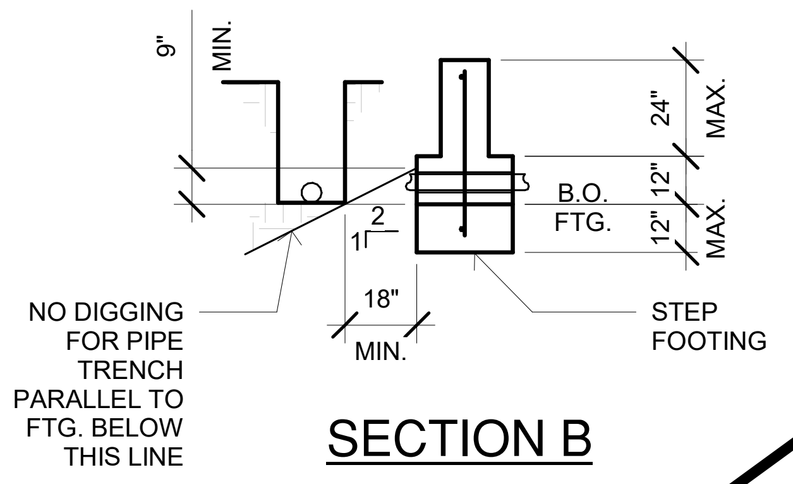
**5** 1 1/2" = 1'-0"
**FOUNDATION - WELDED4**



**7** 3/4" = 1'-0"
**TYPICAL REINFORCING AT CORNER AND INTERSECTIONS**



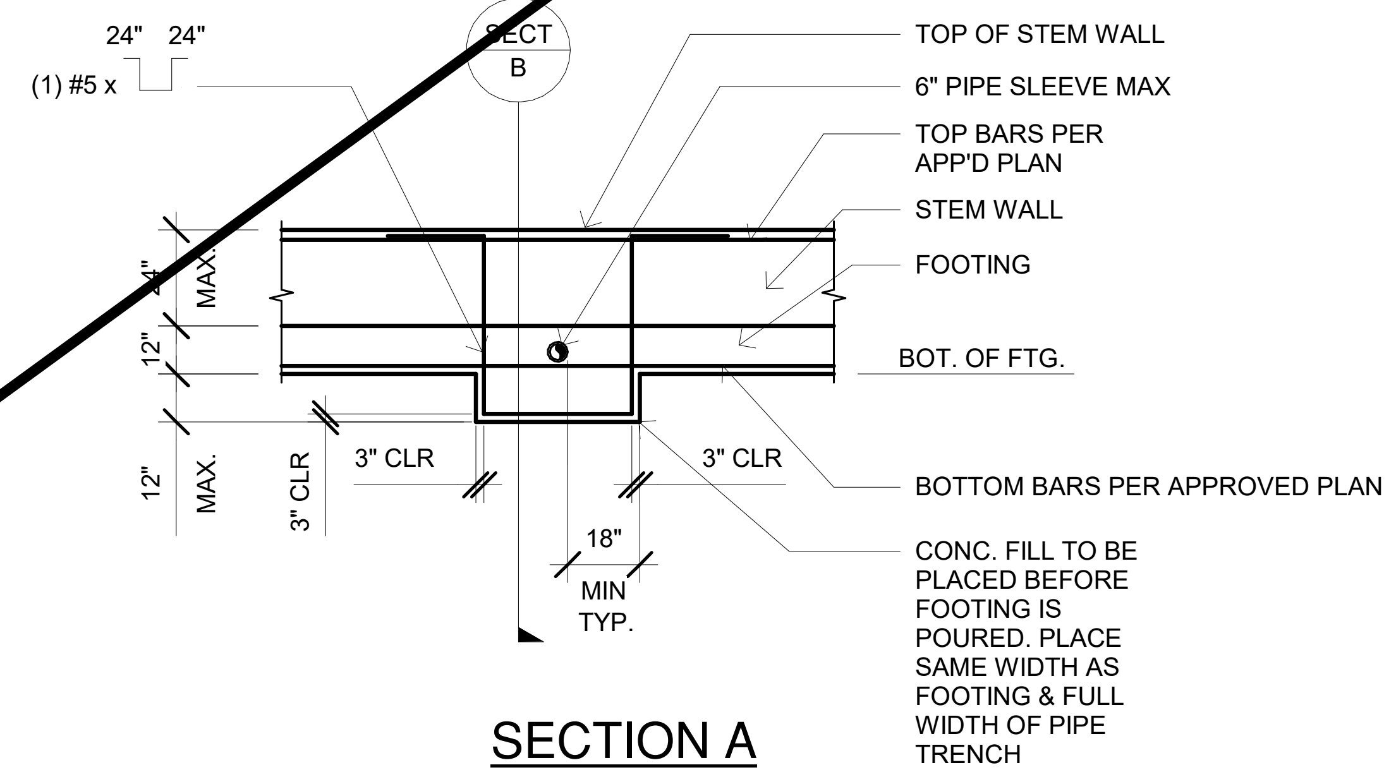
**10** 1/2" = 1'-0"
**TYPICAL STEPPED FOOTING**



SECTION B

NOTES:

1. ALL PIPES SHALL BE ENCASED IN SLEEVES W/ 1" CLEAR SPACE AROUND PIPE. SEAL AND MAKE WATERTIGHT WITH PLASTIC MATERIAL (REF CPC SECTION 313.10 SLEEVES)



SECTION A

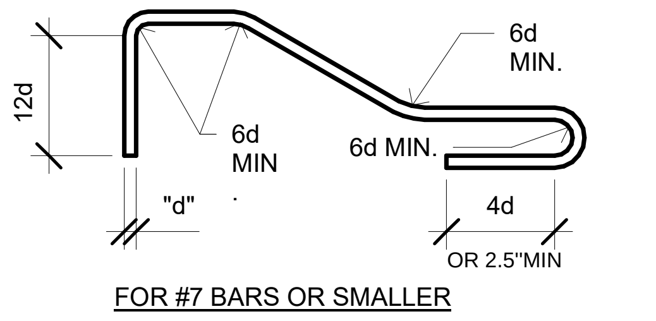
**8** 1/4" = 1'-0"
**PIPE SLEEVE THRU FOUNDATION FOOTING**

| STANDARD HOOKS FOR PRIMARY REINFORCEMENT | |
|---|---|
| BAR SIZE, No. | MINIMUM FINISHED BEND DIAMETER(a) |
| 3 THROUGH 8 | $6d_b$ |
| 9 THROUGH 11 | $8d_b$ |
| 14 AND 18 | $10d_b$ |

(a) MEASURED ON INSIDE OF BAR

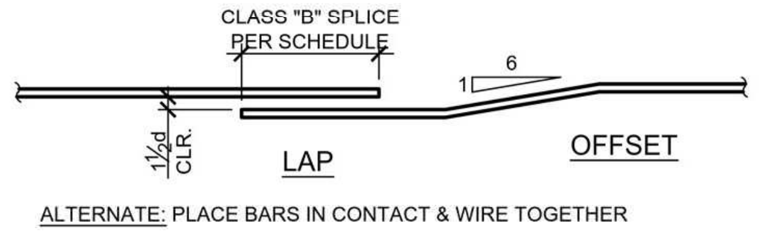
| STANDARD HOOKS FOR STIRRUPS AND TIE REINFORCEMENT | |
|---|---|
| BAR SIZE, No. | MINIMUM FINISHED BEND DIAMETER(b) |
| 3 THROUGH 5 | $4d_b$ |
| 6 THROUGH 8 | $6d_b$ |

(b) MEASURED ON INSIDE OF BAR

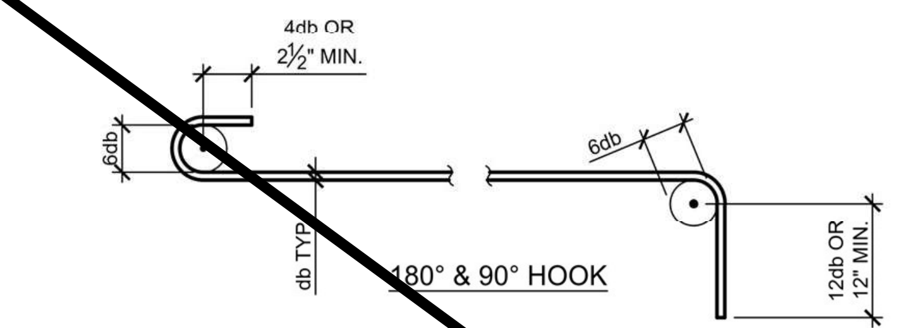


FOR #7 BARS OR SMALLER

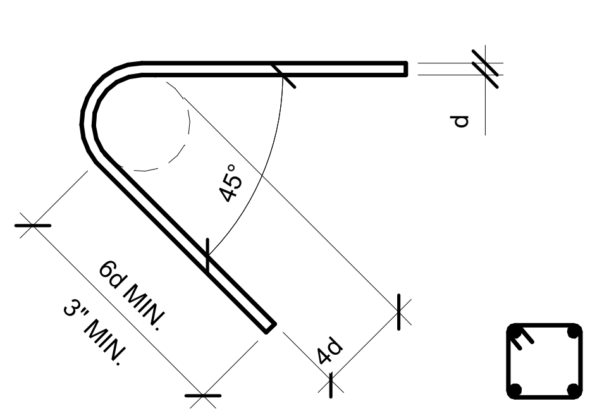
TYP. REINF. BENDING DETAIL



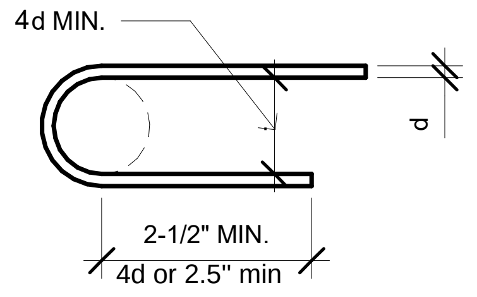
ALTERNATE: PLACE BARS IN CONTACT & WIRE TOGETHER



180° & 90° HOOK



STIRRUP AND TIE HOOK



STANDARD HOOK

| BAR SIZE # | DEVELOPMENT LENGTH[3] | | | TYPICAL CLASS B LAP SPLICE LENGTH[4] | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 3000 PSI (IN) | 3500 PSI (IN) | 4000+ PSI (IN) | 3000 PSI | | 3500 PSI | | 4000+ PSI | |
| | | | | TOP[2] (IN) | BOTTOM (IN) | TOP[2] (IN) | BOTTOM (IN) | TOP[2] (IN) | BOTTOM (IN) |
| 3 | 13 | 12 | 12 | 21 | 16 | 20 | 16 | 20 | 16 |
| 4 | 17 | 16 | 15 | 28 | 22 | 26 | 20 | 24 | [illegible] |
| 5 | 21 | 20 | 18 | 35 | 27 | 33 | 25 | 30 | 24 |
| 6 | 25 | 23 | 22 | 42 | 32 | 39 | 30 | 36 | 28 |

NOTES:
1. THE ABOVE TABLE IS BASED ON GRADE 60 STEEL
2. TOP BARS ARE ANY BARS WITH MORE THAN 12" OF CONCRETE PLACED BELOW.
3. DEVELOPMENT LENGTH IS CALCULATED FOR TYP. BARS - $\Psi_t$=1.0
4. LAP SPLICES IN ADJACENT BARS SHALL BE STAGGERED, UNLESS OTHERWISE NOTED.

**9** 1 1/2" = 1'-0"
**TYPICAL REINFORCING BENDING DETAILS**

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
EXP. 03/31/24
02/16/24
RST#22088

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
CONCRETE FOUNDATION DETAILS

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
JA/RT

DATE

SHEET NO.
F2.23

SHEET OF

STRUCTRUAL STEEL:

A. ALL WORK, UNLESS MODIFIED BY THE CONCTRACT DOCUMENTS, SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT AISC SPECIFICATIONS AND STANDARDS.
B. STEEL SHAPES SHALL COMFORM TO THE FOLLOWING STANDARD:

| | | |
|---|---|---|
| a. | STRUCTURAL HSS COLUMNS: | ASTM A500 GRADE B |
| b. | STRUCTURAL W-SHAPES: | ASTM A992 GRADE 50 |
| c. | TUBE STEEL: | ASTM A500 GRADE A |
| d. | ALL OTHER: | ASTM A36 |

C. FABRICATION, ERECTION, AND SHOP PAINTING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE AISC *CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES*.
D. HOLES IN STRUCTURAL STEEL SHALL NOT BE PERMITTED, UNLESS SPECIFIED IN THE STRUCTURAL DRAWINGS

CONCRETE

A. ALL CONCRETE WORK, UNLESS MODIFIED BY CONTRACT DOCUMENTS, SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 19A, CBC 2022 AND ACI 318-19.

B. TESTS AND INSPECTION SHALL BE PERFORMED BY A TESTING LABORATRY CONTRACTED BY THE DISTRICT.

C. MIX DESIGN SHALL BE SUBMITTED FOR QUALIFICATION AND PROVIDE A 28-DAY COMPRESSIVE STRENGTH F'C OF 3500 PSI, COMPOSED OF NORMAL WEIGHT TYPE I PORTALAND CEMENT IN CONFORMANCE WITH ASTM C150.

D. FORMWORK SHALL RESULT IN FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS AS REQUIRED BY THE CONTRACT DOCUMENTS.

E. LOCATIONS OF VENTS AND OPENINGS FOR MECHANICAL AND ELECTRICAL USE SHALL BE VERIFIED BY ARCHITECT.

F. EMBEDMENT OF MATERIALS NOT HARMFULL TO CONCRETE AND WITHIN LIMITATIONS OF SECTION 20.6, ACI-318-19 SHALL BE PERMITTED. REFER TO OTHER DISCIPLINES FOR LOCATION OF CONDUIT, PIPES, FITTINGS, SLEEVES, ETC.

G. CONTINUOUS BATCH PLANT INSPECTION WAIVED PER CBC 1705A3.3. WHEN CONTINUOUS BATCH PLANT INSPECTION
IS WAIVED, THE FOLLOWING PERIODIC INSPECTION SHALL BE REQUIRED:(INSPECTIONS PROVIDED BY DISTRICT)

1. QUALIFIED TECHNICIAN OF THE TESTING LABORATORY SHALL CHECK THE FIRST BATCH AT THE START OF THE DAY.
2. LICENSED WEIGHMASTER TO POSITIVELY IDENTIFY MATERIALS AS TO QUANTIFY AND CERTIFY TO EACH LOAD BY A BATCH TICKET.
3. BATCH TICKETS, INCLUDING MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD, SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY A TRUCK DRIVER WITH THE LOAD IDENTIFIED THEREON. THE LOAD SHALL NOT BE PLACED WITHOUT A BATCH TICKET IDENTIFYING THE MIX. THE INSPECTOR WILL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK, ITS LOAD, AND TIME OF RECEIPT, AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND WILL TRANSMIT A COPY OF THE DAILY RECORD TO THE ENFORCEMENT AGENCY.

H. ANCHOR BOLTS, AND REINFORCING STEEL SHALL BE SECURELY TIED BEFORE CONCRETE IS POURED.

**CONCRETE MIX**

IN ADDITION TO THOSE REQUIREMENTS DICTATED BY THE PC DESIGN, THE CONCRETE MIX USED IN THE FOUNDATION ELEMENTS SHALL COMPLY WITH THE DURABILITY REQUIREMENTS OF AMERICAN CONCRETE INSTITUTE (ACI) 318 SECTION 19.3. THE PC DRAWINGS SHALL ACCOUNT FOR THE DEPENDENCY OF THESE DURABILITY REQUIREMEMNTS ON SITE-SPECIFIC CHARACTERISTICS.

A. WHEN THE PC DRAWINGS DO NOT REQUIRE A SITE-SPECIFIC GEOTECHNICAL REPORT THAT QUANTIFIES SULFATE CONTENT IN THE SOIL, THE PC DRAWINGS SHALL REQUIRE A CONCRETE MIX SHALL COMPLYING WITH ONE OF THE FOLLOWING PER ACI 318 TABLE 19.3.2.1. SEE THIS SHEET A.1 & A.2 FOR OPTIONS

B. MAXIMUM WATER/CEMENT RATION OF 0.45; MINIMUM COMPRESSIVE STRENGTH OF 4,500 POUNDS PER SQUARE INCH (PSI); TYPE V CEMENT PLUS POZZOLAN OR SLAG CEMENT COMPLYING WITH FOOTNOTE 7; AND PROHIBITION OF ADMIXTURES CONTAINING CALCIUM CHLORIDE

C. MAXIMUM WATER/CEMENT RATIO OF 0.40; MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI; TYPE V CEMENT COMPLYING WITH FOOTNOTE 8; AND PROHIBITION OF ADMIXTURES CONTAING CALCIUM CHLORIDE.

D. WHEN THE PC DRAWINGS REQUIRE A SITE-SPECIFIC GEOTECHNICAL REPORT THAT QUANTIFIES SULFATE CONTENT IN THE SOIL, THE PC DRAWINGS SHALL CLEARLY STATE THE EXPOSURE CLASS FOR EACH CATAGORY (I.E., F, S, W, AND C) OR COMBINATION THEREOF THE PC DESIGN IS APPROVED FOR. THE MAXIMUM WATER/CEMENT RATIO, MINIMUM COMPRESSIVE STRENGTH, CEMENTITOUS MATERIAL REQUIREMENTS, AND ADMIXTURE LIMITATIONS SHALL BE STATED ON THE PC DRAWINGS FOR EACH APPROVED CASE.

E. BOTH APPROACHES GIVEN SECTIONS 5.5.1 AND 5.5.2 ABOVE CAN BE INCLUDED ON THE PC DRAWINGS AS ALTERNATE OPTIONS IN ACCORDANCE WITH SECTION 1.4 ABOVE

F. CONCRETE EXPOSE TO THAW AND FREEZE CYCLES SHALL BE AIR ENTRAINED PER ACI 318 SECTION 19.3.3.1

STEEL REINFORCEMENT

A. DEFORMED BARS SHALL CONFORM TO ASTM A615.
B. fy= 60,000 PSI, FOR ALL BARS EXEPT FOR #3 BARS, fy= 40,000 PSI.
C. PROVIDE A MINIMUM CONCRETE COVER FOR REINFORCEMENT EMBEDDED IN:
  a. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3"
  b. CONCRETE EXPOSED TO EARTH OR WEATHER FOR #5 BARS OR SMALLER = 1.5"
D. SPLICE LENGTHS SHALL BE A MINIMUM OF 48" FOR #5 BARS, AND 30" FOR #4 BARS UNLESS OTHERWISE SPECIFIED
IN DRAWINGS.

BOLTS

A. ALL BOLTS AND ANCHOR BOLTS SHALL COMFORM TO ASTM A-307
B. BOLTS EXPOSED TO THE ELEMENTS SHALL BE GALVANIZED BY THE HOT-DIP OR MECHANICAL PROCESS

WELDING

A. ALL WELDING SAHLL BE IN COMFORMANCE TO:
  a. AWS D1.1, EXCEPT AS MODIFIED IN SECTION J2, AISC-360 FOR STEEL
  b. AWS D1.3 FOR LIGHT GAUGE STEEL
  c. AWS D1.4 FOR REINFORCING STEEL

B. ELECTRODE CLASSIFICATION:
  a. E70XX FOR STEEL AND CONCRETE STEEL REINFORCEMENT
  b. E60XX FOR LIGHT GAUGE STEEL

C. WELDS SHALL BE CAPABLE OF PRODUCING THE FOLLOWING V-NOTCH TOUGHNESS AS DETERMINED BY APPROPRIATE AWS A5 CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION:
  a. LATERAL FORCE RESISTING SYSTEM (LFRS) = 20 FT-LB AT 0 DEGREE F
  b. COMPLETE JOINT PENETRATION GROOVE WELD = 20 FT-LB AT 40 DEGREE F

D. SHOP AND FIELD WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

E. INSPECTION:
  a. PERIODIC INSPECTION OF FILLET WELDS LESS THAN OR EQUAL TO 5/16", FLOOR AND ROOF DECK WELDS.
  b. CONTINUOUS INSPECTION FOR OTHER WELDS.

F. NONDESTRUCTIVE TESTING (NDT):
  a. ULTRASONIC TESTING SHALL BE PERFORMED ON 100 PERCENT OF CJP GROOVE WELDS IN MATERIALS 5/16" OR THICK OR GREATER. ULTRASONIC TESTING NOT REQUIRED FOR MATERIALS LESS THAN 5/16" THICK. TESTING FREQUENCY MAY BE REDUCED TO 25%, PROVIDED PROVISIONS SET FORTH IN SECTION N5.5e, AISC-360 IS MET.
  b. MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON 25 PERCENT OF ALL BEAM-TO-COLUMN CJP GROOVE WELDS. TESTING FREQUENCY MAY BE REDUCED TO 10%, PROVIDED PROVISIONS SET FORTH IN J6.2g, AISC-341 IS MET.

***12" = 1'-0"***
***STRUCTURAL NOTES***

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FOUNDATIONS

GEOTECHNICAL INVESTIGATION SHALL BE CONDUCTED IN ACCORDANCE WITH SECTION 1803A.1 THROUGH 1803A.8 BY GEOTECHNICAL ENGINEER CONTRACTED BY THE DISTRICT. ALLOWABLE FOUNDATION AND LATERAL SOIL PRESSURE VALUES MAY BE DETERMINED FROM TALBLE 1806A.2, WHERE GEOTECHNINCAL REPORTS IS NOT REQUIRED PER SECT 1803A.2. A MAXIMUM ALLOWABLE SOIL PRESSURE OF 1000 PSF AND 1500 PSF SHALLBE PERMITTED FOR TEMPORARY W AND PERMANENT CONCRETE FOUNDATIONS RESPECTIVELY IN ACCORDANCE WITH SECTION 4.6, IR 16-1

A PREVIIOUS REPORT FOR A SPECIFIC SITE MAY BE RESUBMITTED. THE ALLOWABLE FOUNDATIONA AND LATERAL SOIL PRESSURE VALUES ARE ALLOWED A 33% INCREASE FOR SHORT TERM WIND AND SEIMIC LOADS.

THE DISTRCT SHALL BE RESPONSIBLE FOR EXCAVATION, BACKFILL, SETTING ELEVATIONS, CRANING AND RIGGING. PROVIDE SHIMS TO LEVEL BUILDING WITHIN 1/2" TOLERANCE.

COLD-FORMED STEEL:

A. ALL WORK SHALL, UNLESS MODIFIED BY THE CONCTRACT DOCUMENTS, SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT AISI SPECIFICATIONS AND STANDARDS.

B. MATERIAL SPECIFICATION:
  a. ASTM A-1011/A, GRADE 33 FOR MATERIALS THICKNESS 0.120 OR LESS UNLESS OTHERWISE NOT
  b ASTM A-1003, GRADE 33 TYPE H FOR LIGHT GUAGE STUDS AND TRACKS
  c. SHAPES SHALL BE DIMENSIONED TO SSMA SPECIFICATIONS.

C. SCREWS EXPOSED TO THE ELEMENTS SHALL BE GALVANIZED

~~STEEL DECK~~

~~MINIMUM THICKNESS PERMITTED FOR FLOOR STEEL DECKS IS 20GA. PER DSA IR 16-1, 1.2.1, MINIMUM THICKNESS OF NON-STRUCTURAL STEEL ROOF DECKING IS 20GA. STANDING SEAM ROOF PANELS ARE GRADE 40 SHEET STEEL WITH ALUMINUM ZINC COATING CONFORMING TO ASTM A792 AND AZ55.~~

CHANGES

CHANGES AFFECTING STRUCTURAL PORTION OF THE APPROVED PC SHALL NEED DSA APPROVAL AND SHALL BE CLASSIFIED AS CCD CATEFORY A.

WOOD

ALL FRAMING LUMBER SHALL BE GRADE MARKED BY AN APPROVED GRADING AGENCY

SHEATHING:

EACH SHEET SHALL BE GRADE MARKED BY THE AMERICAN PLYWOOD ASSOCIATION IN ACCORDANCE WITH THE PROCEDURES AND QUALIFICATIONS SET FORTH BY PS 1-19.

1. SUB FLOOR: 1 1/8" T&G UNBLOCKED PLYWOOD, SHALL PROVIDE A SMOOTH AND UNIFORM SURFACE CAPABLE OF ACCEPTING CARPET FINISH
2. PLYWOOD ROOF DECK OPTION: APA RATED 3/4" T&G OSB OR EQUIVALENT RATED SHEATHING
3. EXTERIOR WALL SIDING:
  I. STANDARD: 5/8" DURATEMP OR 5/8" SMART PANEL
  II. OPTION: 5/8" MOD
  III. OPTION: 1/2" OSB OR CDX PLYWOOD FOR PLASTER/STUCCO FINISH
  IV. OPTION: 1/2" OSB OR CDX PLYWOOD FOR HARDIE BOARD (LAP SIDING) FINISH

4. EXTERIOR WALL SIDING ATTACHMENT:

FASTENERS USED FOR THE ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE HOT-DIPPED GALVANIZED, MECHANICALLY DEPOSITED ZINC-COATED, STAINLESS, SILICON BRONZE OR COPPER PER CBC SECTION 2304.10.1.1

FASTEN TO WOOD FRAMING WITH 8D BOX NAILS @ 6" E.N., 12" F.N.
FASTEN TO LIGHT GAGE METAL FRAMING WITH #8 WAFER HEAD STSMS @ 6" E.N., 12" F.N.
FASTEN TO STRUCTURAL STEEL WITH #12 STSMS OR 0.145 DIAM SHOT PINS @ 12" O.C.

TREATED WOOD:

ALL WOOD LOCATED WITHIN 6" OF EXPOSED EARTH SHALL BE "PRESERVATIVE TREATED" OR SHALL BE "NATURALLY DURABLE" MATERIAL IN ACCORDANCE WITH CBC SECTION 2304.12.1.2.
1. ALL ROUGH LUMBER SHALL BE DF #2 OR BETTER.
2. ALL POWER DRIVEN FASTENERS SHALL BE HILTI FASTENERS ICC# ESR-1663, AND RAMSET POWER DRIVEN FASTENERS (ICC # ESR-1799), OR SIMPSON POWER DRIVEN FASTENERS ICC #ESR-2138, OR OTHER EQUIVALENT PRODUCTS WITH ICC REPORTS AND APPROVED BY DSA.
3. FASTENERS, INCLUDING NUTS AND WASHERS, IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER PER CBC 2304.10.1.1

ROOF DIAPHRAGM:

3/4" T&G RATED SHEATHING UNBLOCKED DIAPHRAGM, EXPOSURE 1, 48/24 SPAN RATING
FASTEN AT METAL SUPPORTS W/ #10 x 1 1/4" SELF-TAPPING PHILLIPS FLAT-HEAD ZINC COATED TEKS SCREWS @ 6" BN/CON. EDGE, 6" EN, AND 12" O.C. FN. PROVIDE A MINIMUM OF 3/8" EDGE DISTANCE FOR FASTENERS TO PLYWOOD EDGE PER CBC SECTION 2306.2.
NOTE: ALL PANEL EDGES SHALL BE ATTACHED TO FRAMING MEMBERS OR BLOCKING. WHERE USED AS BLOCKING, FLAT STRAPPING SHALL BE A MINIMUM THICKNESS OF 33MILS WITH A MINIMUM WIDTH OF 1.5 INCHES AND SHALL BE EITHER INSTALLED BELOW SHEATHING. FOR OTHER THAN STEEL SHEATHING, THE SCREWS SHALL BE INSTALLED THROUGH THE SHEATHING TO THE BLOCKING.

FLOOR DIAPHRAGM:

1 1/8" PLYWOOD UNBLOCKED DIAPHRAGM - STURD-I-FLOOR T&G RATED SHEATHING, EXTERIOR, 48" oc SPAN RATING
FASTEN AT METAL SUPPORTS W/ #10 - 24 x 2" SELF-TAPPING PHILLIPS FLAT-HEAD
ZINC COATED TEKS @ 6" O.C. BN/CON. EDGE, 6" O.C. EN, 12" FN. PROVIDE A MINIMUM OF 3/8" EDGE DISTANCE FOR FASTENERS TO PLYWOOD EDGE PER CBC SECTION 2306.2
NOTE: ALL PANEL EDGES SHALL BE ATTACHED TO FRAMING MEMBERS OR BLOCKING. WHERE USED AS BLOCKING, FLAT STRAPPING SHALL BE A MINIMUM THICKNESS OF 33MILS WITH A MINIMUM WIDTH OF 1.5 INCHS AND SHALL BE EITHER INSTALLED BELOW SHEATHING. FOR OTHER THAN STEEL SHEATHING, THE SCREWS SHALL BE INSTALLED THROUGH THE SHEATHING TO THE BLOCKING.

CONCRETE FLOOR DATA:
LIGHTWEIGHT CONCRETE FLOOR
STRENGTH: 3500 PSI
TYPE: I OR II
DESINTY: 110 PCF - MAX

DIMENSION LUMBER ATTACHMENT TO STEEL FRAMING:

2 x STUDS AT CORNER STEEL COLUMNS (NAILING STUD)
USE: #10 - 24 x 2 1/2" LG. SELF-DRILLING SELF-TAPPING PHILLIPS FLAT-HEAD WITH WASHER ZINC COATED TEK SCREWS AT 24" OC.

NAILING NOTES:

1. ALL NAILS SHALL BE COMMON UNLESS OTHERWISE NOTED
2. MACHINE APPLIED 16d FASTENERS SHALL HAVE AN EMBEDMENT OF NOT LESS THAN 1 1/2" INTO THE SECOND MEMBER, AND SHALL NOT BE LESS THAN 3" IN OVERALL LENGTH.
3. NAILS SHALL BE ACCEPTABLE FOR HAND NAILING, PROVIDED THE REQUIREMENT EMBEDMENT IS MAINTAINE

CONNECTIONS AND FASTENERS:

ALL CONNECTIONS AND FASTENERS IN DRAWINGS CAN BE SUBSTITUTED BY AN EQUIVALENT PRODUCT PROVIDING REPORTS ARE SUBMITTED TO AND APPROVED BY DSA.

CONNECTIONS LAG SCREWS:

LAG SCREWS SHALL BE INSTALLED WITH WASHER AND TURNED BY WRENCH, OVER-TORQUING SHALL BE AVOIDED. PRE-DRILLED CLEARANCE AND LEAD HOLE SHALL BE REQUIRED AS DESCRIBED BELOW:

a) THE CLEARANCE HOLE FOR THE UNTHREADED PORTION OR THE SHANK SHALL HAVE SAME DEPTH AND DIAMETER.

b) THE LEAD HOLE FOR THE THREADED PORTION OF THE SHANK SHALL HAVE SAME DEPTH AND
65% TO 85% OF SHANK DIAMETER FOR LUMBER WITH SPECIFC GRAVITY OF, $G > 0.6$
60% TO 75% OF SHANK DIAMETER FOR LUMBER WITH SPECIFC GRAVITY OF, $0.5 < G \leq 0.6$
40% TO 70% OF SHANK DIAMETER FOR LUMBER WITH SPECIFC GRAVITY OF, $G \leq 0.5$

LEAD OR CLEARANCE HOLES SHALL NOT BE REQUIRED FOR 3/8" DIAMETER OR SMALLER LAG SCREWS.

NAILING SCHEDULE: (ALL NAILS SHALL BE COMMON OR BOX NAILS, GALVANIZED WHERE EXPOSED) PER CBC TABLE 2304.10.2

| CONNECTION | COMMON FASTENERS | | | BOX NAIL FASTENERS | | | LOCATION |
|---|---|---|---|---|---|---|---|
| | QTY | SIZE | SPACING O.C. | QTY | SIZE | SPACING O.C. | |
| 1. JOIST TO SILL OR GIRDER | 3- | 8d | | 3- | 10d | | TOENAIL |
| 2. BRIDGING TO JOIST | 2- | 8d | | 2- | 10d | | TOENAIL EA. END |
| 3. 1X6 OR LESS SUBFLOOR TO EA. JOIST | 2- | 8d | | 2- | 10d | | FACE NAIL |
| 4. WIDER THAN 1X6 SUBFLOOR TO EA. JOIST | 3- | 8d | | 3- | 10d | | FACE NAIL |
| 5. 2" SUBFLOOR TO JOIST | 2- | 16d | | N/A | N/A | N/A | BLIND & FACE NAIL |
| 6. SOLE PLT. TO JOIST OR BLK'G TO EA. JOIST | | 16d | @ 16" | | 16d | @ 12" | FACE NAIL |
| SOLE PLT. TO JOIST OR BLK'G @ BRACED WALL PANEL | 3- | 16d | @ 16" | 3- | 16d | @ 16" | TYP. FACE NAIL |
| 7. TOP PLT. TO STUD | 2- | 16d | | 3- | 10d | | END NAIL |
| 8. STUD TO SOLE PLT. | 2- | 16d | | 3- | 10d | | END NAIL |
| OR | 4- | 8d | | 4- | 10d | | TOENAIL |
| 9. DOUBLE STUDS | | 16d | @ 24" | | 10d | @ 16" | FACE NAIL |
| 10. DOUBLE TOP PLT. | | 16d | @ 16" | | 10d | @ 12" | TYP. FACE NAIL |
| DOUBLE TOP PLT. | 8- | 16d | MIN. U.N.O. | 12- | 10d | | 24" MIN LAP SPLICE |
| 11. BLKG. BTW. JOIST OR RAFTERS TO TOP PLT. | 3- | 8d | | 3- | 10d | | TOENAIL |
| 12. RIM JOIST TO TOP PLT. | | 8d | @ 6" | | 10d | @ 6" | TOENAIL |
| 13. TOP PLT., LAPS & INTERSECTIONS | 2- | 16d | | 3- | 10d | | FACE NAIL |
| 14. CONT. HDR. 2 PIECES | | 16d | @ 16" | | | | ALONG EDGE |
| 15. CLG. JOIST TO PLT. | 3- | 8d | | 3- | 10d | | EA. JOIST, TOENAIL |
| 16. CONT. HDR. TO STUD | 4- | 8d | | 4- | 10d | | TOENAIL |
| 17. CLG. JOIST LAP OVER PARTITIONS | 3- | 16d | | 4- | 10d | | FACE NAIL |
| 18. CLG. JOIST PARALLEL TO RAFTERS | 3- | 16d | | SEE TABLE 2308.7.3.1 | | | FACE NAIL |
| 19. RAFTER TO PLT. | 3- | 8d | | 3- | 16d | | TOENAIL$^{c}$ |
| 20. 1" DIA. BRACE TO EZ. STUD & PLT. | 2- | 8d | | 2- | 10d | | FACE NAIL |
| 21. 1X8 SHT'G. TO EA. BRG. | 3- | 8d | | 3- | 10d | | FACE NAIL |
| 22. WIDER THAN 1X8 SHT'G TO BRG. | 3- | 8d | | 3- | 10d | | FACE NAIL |
| 23. BUILT-UP CORNER STUDS | | 16d | @ 24" | | | | FACE NAIL |
| 24. BUILT-UP GIRDERS & BEAMS | | 20d | @ 32" | | 10d | @ 24" | FACE NAIL @ TOP & BTM. STAGR. ON OPP. SIDES |
| | 2- | 20d | | N/A | N/A | N/A | FACE NAIL @ ENDS & @ EA. SPLICE |
| 25. 2" PLANKS | 2- | 16d | | N/A | N/A | N/A | @ EA. BRG. |
| 26. COLLAR TIE TO RAFTER | 3- | 10d | | 4- | 10d | | FACE NAIL |
| 27. JACK RAFTER TO HIP | 3- | 10d | | 4- | 16d | | TOENAIL |
| 28. ROOF RAFTER TO 2X RIDGE | 2- | 16d | | 3- | 10d | | END NAIL |
| 29. JOIST TO BAND JOIST | 3- | 16d | | 4- | 10d | | END NAIL |
| 30. 4X BLOCKING TO STUDS | 1- | A34 | | N/A | N/A | N/A | FACE NAIL |
| OR | 4- | 8d | | 4- | 10d | | TOENAIL |

A.) NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPGHRAMS AND SHEAR WALLS, REFER TO SECTION 2305 NAILS. FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.

B.)SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).

C.) WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.

D.) RSRS-01 IS A ROOF SHEATHING RING SHANK NAIL MEETING THE SPECIFICATIONS IN ASTM F1667

**DECIMAL AND GAUGE CHARTS**

| FRACTION | DECIMAL |
|---|---|
| 1/32 | 0.03125 |
| 1/16 | 0.0625 |
| 3/32 | 0.09375 |
| 1/8 | 0.125 |
| 5/32 | 0.15625 |
| 3/16 | 0.1875 |
| 7/32 | 0.21875 |
| 1/4 | 0.25 |
| 9/32 | 0.28125 |
| 5/16 | 0.3125 |
| 11/32 | 0.34375 |
| 3/8 | 0.375 |
| 13/32 | 0.40625 |
| 7/16 | 0.4375 |
| 15/32 | 0.46875 |
| 1/2 | 0.5 |
| 17/32 | 0.53125 |
| 9/16 | 0.5625 |
| 19/32 | 0.59375 |
| 5/8 | 0.625 |
| 21/32 | 0.65625 |
| 11/16 | 0.6875 |
| 23/32 | 0.71875 |
| 3/4 | 0.75 |
| 25/32 | 0.78125 |
| 13/16 | 0.8125 |
| 27/32 | 0.84375 |
| 7/8 | 0.875 |
| 29/32 | 0.90625 |
| 15/16 | 0.9375 |
| 31/32 | 0.96875 |
| 1 | 1 |

| PENNY | GAUGE | DEC. |
|---|---|---|
| 60d, 40d | 4 | 0.2242 |
| 30d | 5 | 0.2092 |
| 20d | 6 | 0.1943 |
| | 7 | 0.1793 |
| 16d | 8 | 0.1644 |
| 12d, 10d | 9 | 0.1495 |
| 8d | 10 | 0.1345 |
| 6d | 11 | 0.1196 |

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT
11777 BERNARDO PLAZA COURT, SUITE 105
SAN DIEGO, CA 92128

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
RST#22088
02/16/24

CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 60' EXPANDABLE TO 72' x 60'

SHEET TITLE
STRUCTURAL GEN NOTES

PROJECT NUMBER
22088

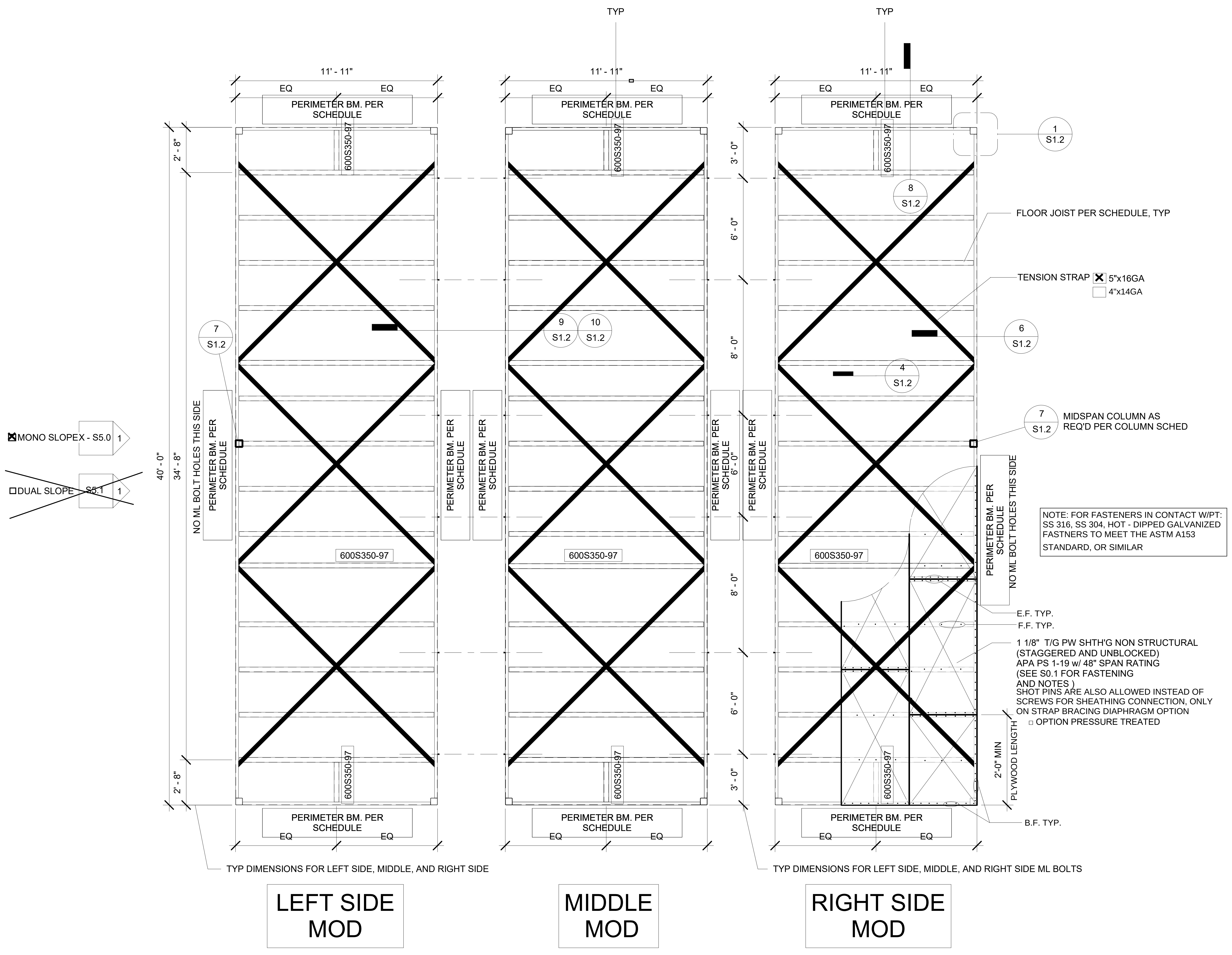
DRAWN BY
rMc/SM

CHECKED BY
JA/RT

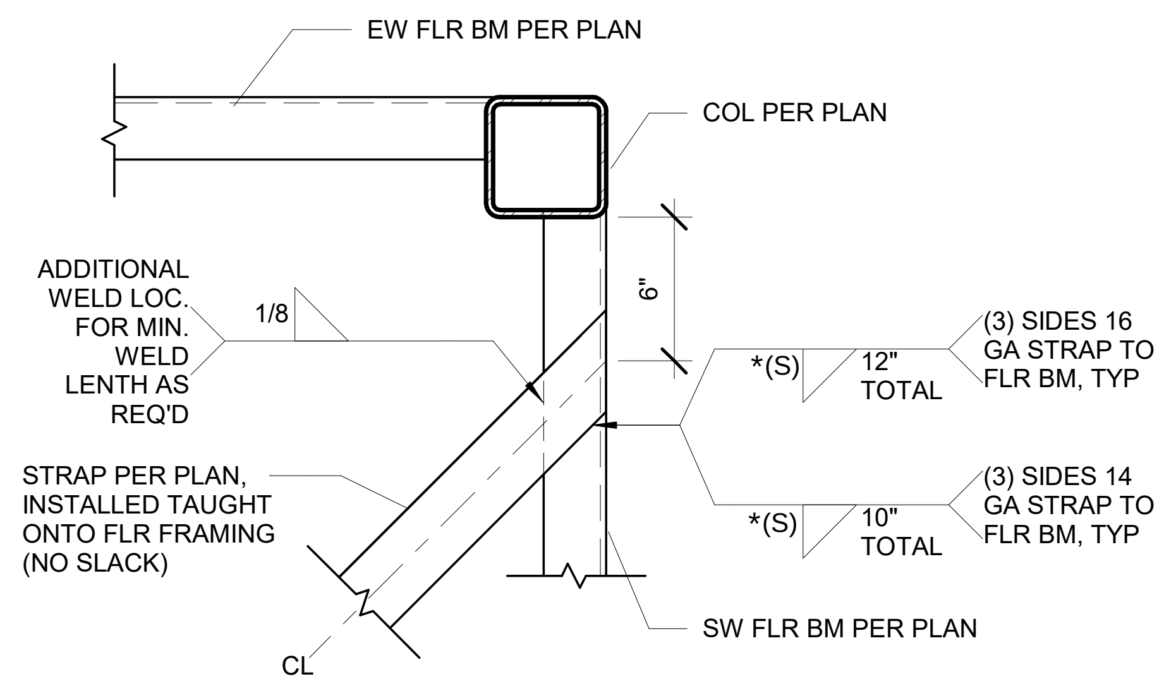
DATE

SHEET NO.
S0.1

SHEET OF

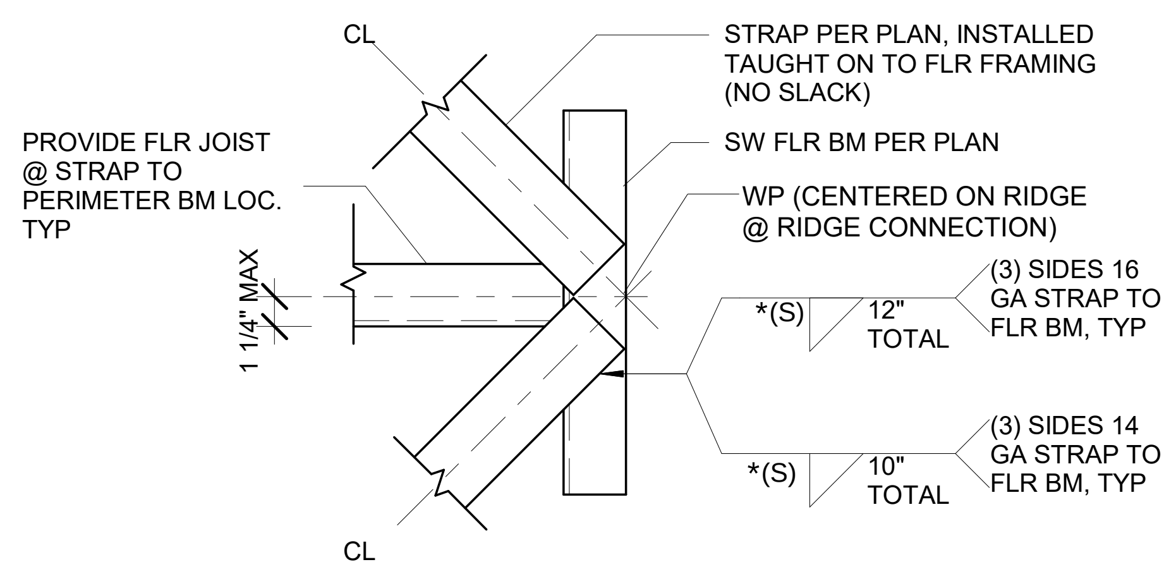

TYP
TYP
11' - 11"
EQ
EQ
PERIMETER BM. PER SCHEDULE
600S350-97
1
S1.2
8
S1.2
2' - 8"
3' - 0"
6' - 0"
8' - 0"
8' - 0"
6' - 0"
3' - 0"
2' - 8"
40' - 0"
34' - 8"
FLOOR JOIST PER SCHEDULE, TYP
TENSION STRAP ☒ 5"x16GA
☐ 4"x14GA
7
S1.2
9
S1.2
10
S1.2
6
S1.2
4
S1.2
7
S1.2
MIDSPAN COLUMN AS REQ'D PER COLUMN SCHED
☒MONO SLOPE X - S5.0 1
~~☐DUAL SLOPE - S5.1 1~~
NO ML BOLT HOLES THIS SIDE
PERIMETER BM. PER SCHEDULE
600S350-97
NOTE: FOR FASTENERS IN CONTACT W/PT: SS 316, SS 304, HOT - DIPPED GALVANIZED FASTNERS TO MEET THE ASTM A153 STANDARD, OR SIMILAR
E.F. TYP.
F.F. TYP.
1 1/8" T/G PW SHTH'G NON STRUCTURAL (STAGGERED AND UNBLOCKED) APA PS 1-19 w/ 48" SPAN RATING (SEE S0.1 FOR FASTENING AND NOTES )
SHOT PINS ARE ALSO ALLOWED INSTEAD OF SCREWS FOR SHEATHING CONNECTION, ONLY ON STRAP BRACING DIAPHRAGM OPTION
☐ OPTION PRESSURE TREATED
2'-0" MIN
PLYWOOD LENGTH
B.F. TYP.
TYP DIMENSIONS FOR LEFT SIDE, MIDDLE, AND RIGHT SIDE
TYP DIMENSIONS FOR LEFT SIDE, MIDDLE, AND RIGHT SIDE ML BOLTS
LEFT SIDE MOD
MIDDLE MOD
RIGHT SIDE MOD

1 **1/4" = 1'-0"**
***WD Shth'g Flr Framing Plan (50+15 PSF) CROSS-STRAP OPT.***


EW FLR BM PER PLAN
COL PER PLAN
ADDITIONAL WELD LOC. FOR MIN. WELD LENTH AS REQ'D
1/8
6"
*(S)
12" TOTAL
(3) SIDES 16 GA STRAP TO FLR BM, TYP
*(S)
10" TOTAL
(3) SIDES 14 GA STRAP TO FLR BM, TYP
STRAP PER PLAN, INSTALLED TAUGHT ONTO FLR FRAMING (NO SLACK)
SW FLR BM PER PLAN
CL

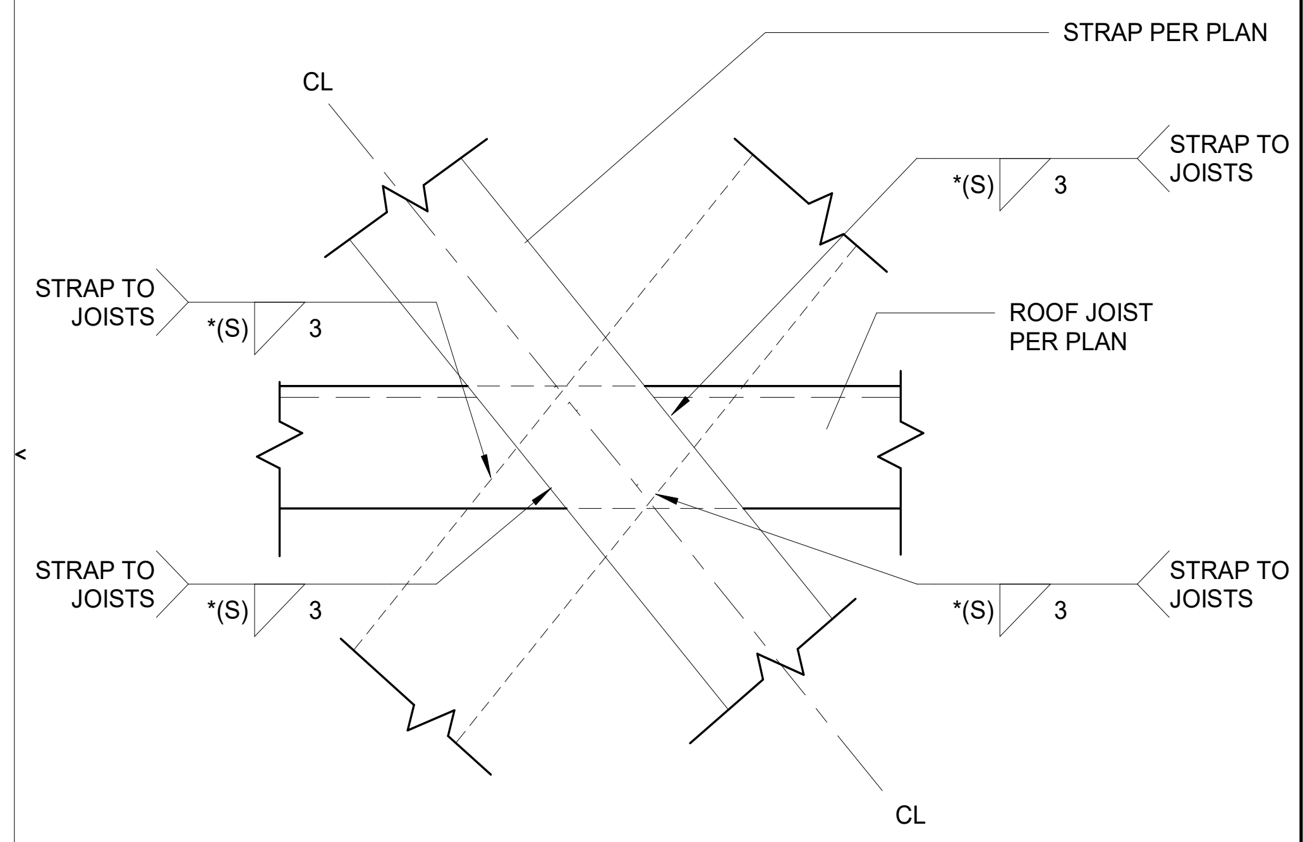
2 ***1 1/2" = 1'-0"***
***FLOOR BRACING STRAP @ ENDWALL***

* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL


CL
STRAP PER PLAN, INSTALLED TAUGHT ON TO FLR FRAMING (NO SLACK)
SW FLR BM PER PLAN
PROVIDE FLR JOIST @ STRAP TO PERIMETER BM LOC. TYP
WP (CENTERED ON RIDGE @ RIDGE CONNECTION)
1 1/4" MAX
*(S)
12" TOTAL
(3) SIDES 16 GA STRAP TO FLR BM, TYP
*(S)
10" TOTAL
(3) SIDES 14 GA STRAP TO FLR BM, TYP
CL

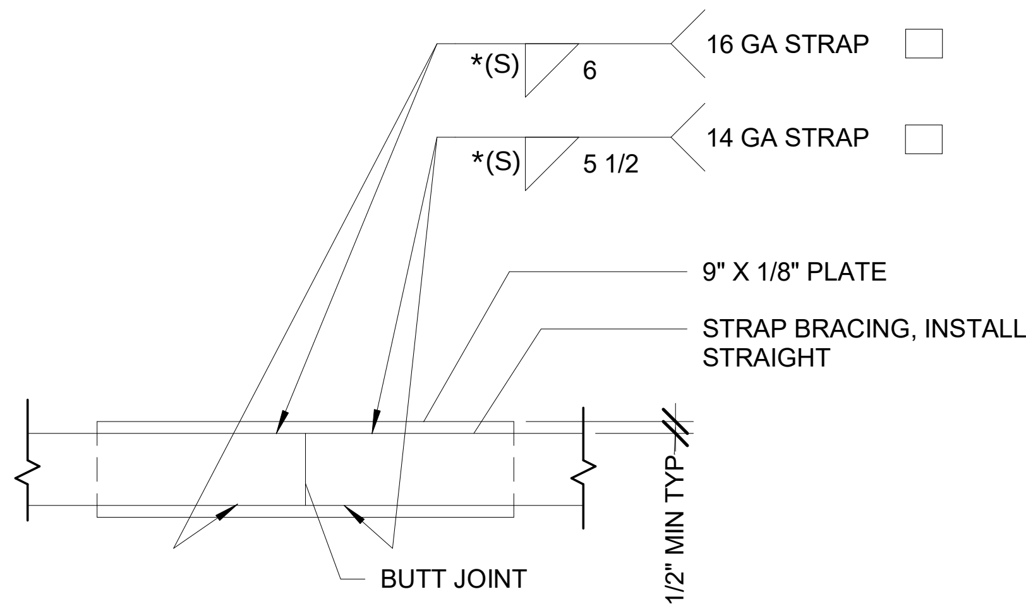
3 ***1 1/2" = 1'-0"***
***FLOOR STRAP BRACING @ SIDEWALL***

* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL



4 ***3" = 1'-0"***
***STRAP TO JOIST CONNECTION***

* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL



5 ***1 1/2" = 1'-0"***
***STRAP SPLICE DETAIL***

* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL

NOTE: ALL PANEL EDGES SHLL BE ATTACHED TO FRAMING MEMBERS OR BLOCKING. WHERE USED AS BLOCKING, FLAT STRAPPING SHALL BE A MINIMUM THICKNESS OF 33MILS WITH A MINIMUM WIDTH OF 1.5 INCHES AND SHALL BE INSTALLED BELOW SHEATHING. FOR OTHER THAN STEEL SHEATHING, THE SCREWS SHALL BE INSTALLED THROUGH THE SHEATHING TO THE BLOCKING.

Floor Joist Schedule

| FLL | JOIST | SPACING |
|---|---|---|
| ☐ 50+15 PSF[1] | 600S350-97 | 32" O.C. |
| ~~☐ 100 PSF[1]~~ | ~~600S350-97~~ | ~~24" O.C.~~ |
| ~~☐ 150 PSF[2]~~ | ~~600S350-97~~ | ~~16" O.C.~~ |

FOOTNOTES:
1. APPLICABLE FOR OCCUPANCY E
2. APPLICABLE FOR OCCUPANCY E &B

Perimeter Floor Beam Schedule

| HT | No Plaster Walls | ~~Plaster Walls~~ | ~~w/ Parapet, 18" max~~ |
|---|---|---|---|
| ☒ 9' | C10x15.3 | ~~C10x15.3~~ | ~~C10x15.3~~ |
| ☐ 10' | C10x15.3 | ~~C10x15.3~~ | ~~C10x15.3~~ |

NOTE: SPLICE AT FLOOR BEAM PERMITTED PER 3/S1.2

Column Schedule

| HT | No Plaster Walls | ~~Plaster Walls~~ | ~~w/ Parapet, 18" max~~ |
|---|---|---|---|
| ☒ 9' | 5x5x1/4 | ~~5x5x1/4~~ | ~~6x6X1/4~~ |
| ☐ 10' | 6x6x1/4 | ~~6x6x1/4~~ | ~~6x6X1/4~~ |
|  |  |  | ~~3x3X3/16 mid-span column~~ |

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT
11590 W. BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

REVISIONS

| # | Description | BY |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

EL DORADO 160# SNOW LOAD

SHEET TITLE
WD SHTH'G FLR
FRAMING PLAN
CROSS-STRAP OPT.
50 + 15 PSF
100 PSF
150 PSF

PROJECT NUMBER
22073

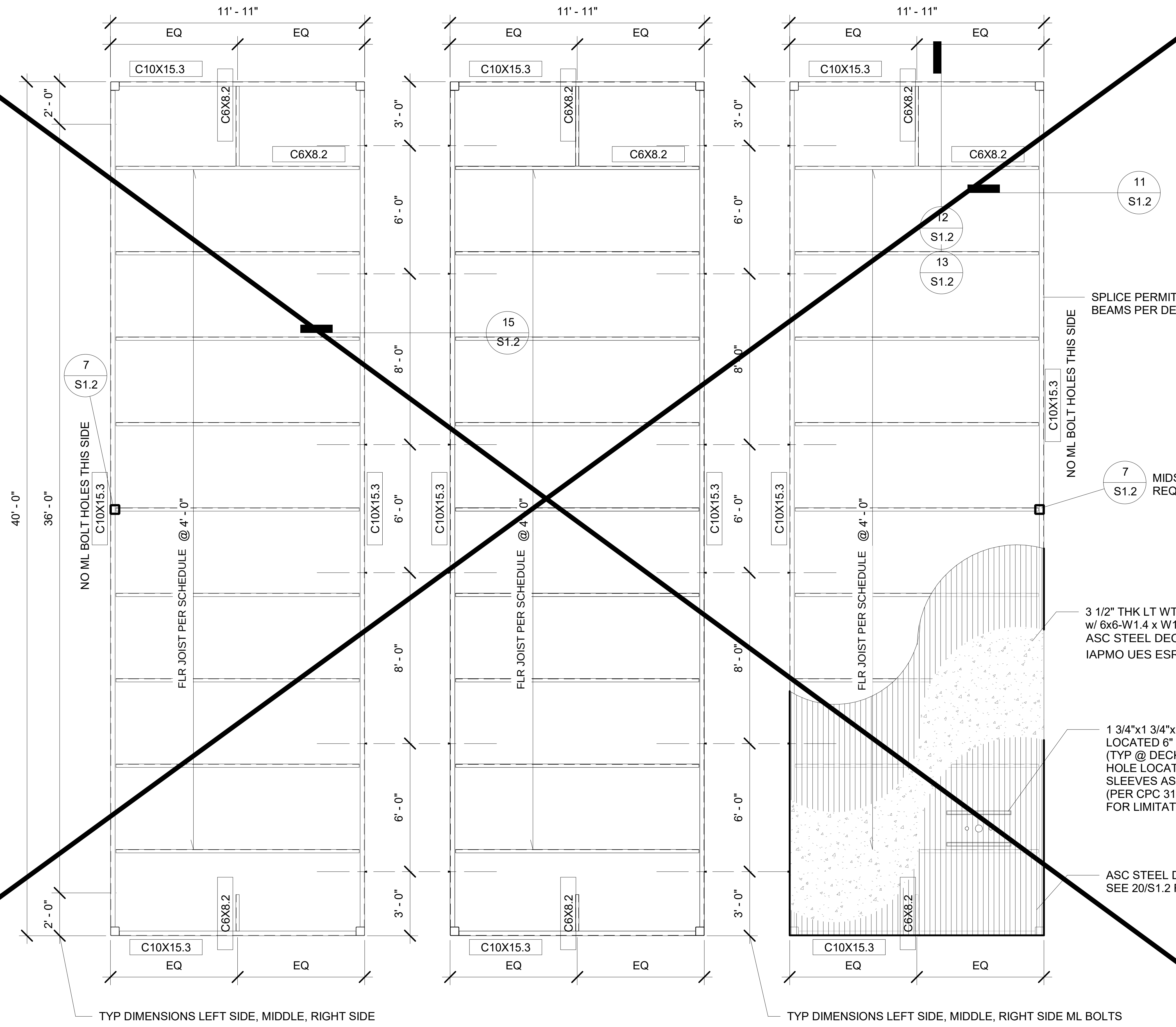
DRAWN BY
Author

CHECKED BY
Checker

DATE
06/07/2021

SHEET NO.
S1.0.4

SHEET OF SHEETS



SPLICE PERMITTED AT PERIMETER BEAMS PER DETAIL 3/S1.2

7/S1.2 MIDSPAN COLUMN AS REQ'D PER COLUMN SCHED

3 1/2" THK LT WT CONC FILL - 110 PCF (OVER "B" DECK) w/ 6x6-W1.4 x W1.4 WELDED WIRE FABRIC
ASC STEEL DECKING:
IAPMO UES ESR #0329

1 3/4"x1 3/4"x1/4"x3'-0"
LOCATED 6" FROM HOLE
(TYP @ DECK PENETRATION)
HOLE LOCATION MAY VARY
SLEEVES AS REQ'D
(PER CPC 313.10) SEE 16/S1.2
FOR LIMITATIONS

ASC STEEL DECK 1 1/2" x 0.036" "BH36" DECK
SEE 20/S1.2 FOR SECTION

TYP DIMENSIONS LEFT SIDE, MIDDLE, RIGHT SIDE

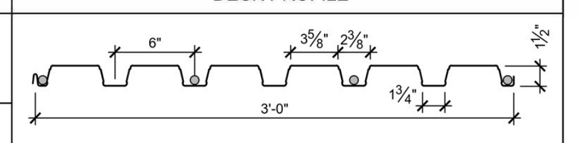
TYP DIMENSIONS LEFT SIDE, MIDDLE, RIGHT SIDE ML BOLTS

LEFT SIDE MOD

MIDDLE MOD

RIGHT SIDE MOD

BH-36 METAL DECK PROPERTIES & PROFILE

| PLAN DESIGNATION | DECK TYPE | MINIMUM EFFECTIVE PROPERTIES | | | | DECK PROFILE |
|---|---|---|---|---|---|---|
| | | $S_e+$ IN$^3$/FT | $S_E-$ IN$^3$/FT | $I_E+$ IN$^4$/FT | $I_E-$ IN$^4$/FT | |
| | 1-1/2"-18GA ASC BH-36 GALV DECK (36" WIDE) | 0.311 | 0.329 | 0.287 | 0.313 |  <br>○ = (4) ½"Ø EFFECTIVE FUSION WELDS*<br>ALTERNATE: (4) #12 SDSTS<br>(11 & 14/S1.2 FOR ATTACHMENT @ PARALLEL SUPPORTS)<br>* ½"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD |

NOTE:
ASC STEEL DECKING: IAPMO UES ER #0329

- SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 24" O.C. WHEN WELDED
- SIDE LAP ATTACHMENT TO BE #10 SDSTS @ 24" O.C. WHEN SCREWED

BH-36 METAL DECK PROPERTIES & PROFILE

NOTE: ALL PANEL EDGES SHLL BE ATTACHED TO FRAMING MEMBERS OR BLOCKING. WHERE USED AS BLOCKING, FLAT STRAPPING SHALL BE A MINIMUM THICKNESS OF 33MILS WITH A MINIMUM WIDTH OF 1.5 INCHES AND SHALL BE EITHER INSTALLED ON TOP OF OR BELOW SHEATHING. FOR OTHER THAN STEEL SHEATHING, THE SCREWS SHALL BE INSTALLED THROUGH THE SHEATHING TO THE BLOCKING.

Concrete Floor Joist Schedule

| FLL | JOIST | SPACING |
|---|---|---|
| ☐ 50+15 PSF | C6x8.2 | 4'-0" O.C. |
| ☐ ~~100 PSF~~ | ~~C6x8.2~~ | ~~3'-0" O.C.~~ |
| ☐ ~~150 PSF~~ | ~~C6x8.2~~ | ~~2'-2" O.C.~~ |

Column Schedule

| HT | No Plaster Walls | Plaster Walls | w/ Parapet, 18" max |
|---|---|---|---|
| ☐ 9' | 5x5X1/4 | 5x5X1/4 | 6x6X1/4 |
| ☐ 10' | 6x6X1/4 | 6x6X1/4 | 6x6X1/4 |
| | | | 3x3X3/16 mid-span column |

1 *1/4" = 1'-0"*
***Conc Flr Framing Plan (50+15 PSF)***

C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt

6/8/2021 1:52:25 AM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
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PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
CONC FLR
FRM'G PLAN
50 + 15 PSF
100 PSF
150 PSF

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

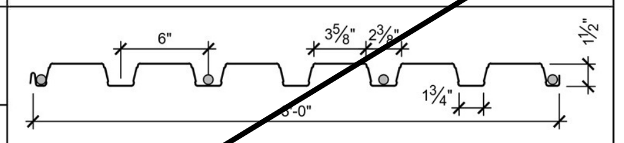
CHECKED BY
JA/RT

DATE

SHEET NO.
S1.1.1

SHEET OF

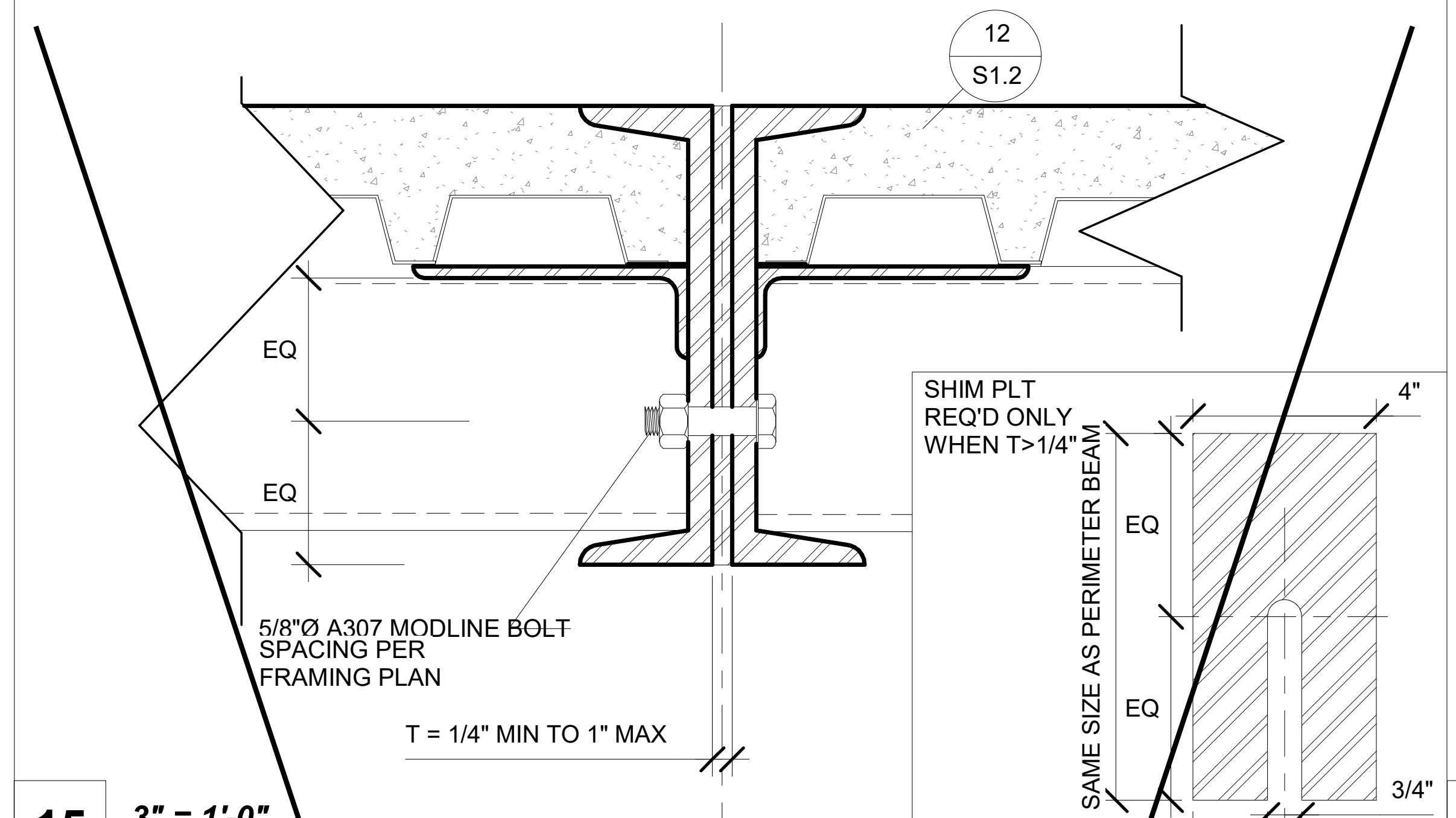
BH-36 METAL DECK PROPERTIES & PROFILE

| PLAN DESIGNATION | DECK TYPE | MINIMUM EFFECTIVE PROPERTIES | | | | DECK PROFILE |
|---|---|---|---|---|---|---|
| | | $S_e+$ $IN^3/FT$ | $S_E-$ $IN^3/FT$ | $I_E+$ $IN^4/FT$ | $I_E-$ $IN^4/FT$ | |
| ▨ | 1-1/2"-18GA<br>ASC<br>BH-36 GALV<br>DECK<br>(36" WIDE) | 0.311 | 0.329 | 0.287 | 0.313 |  <br>● = (4) ½"Ø EFFECTIVE FUSION WELDS*<br>ALTERNATE: (4) #12 SDSTS<br>(14 & 14/- FOR ATTACHMENT @ PARALLEL SUPPORTS)<br>* ½"Ø EFFECTIVE FUSION WELD = 1"Ø VISUAL FUSION WELD |

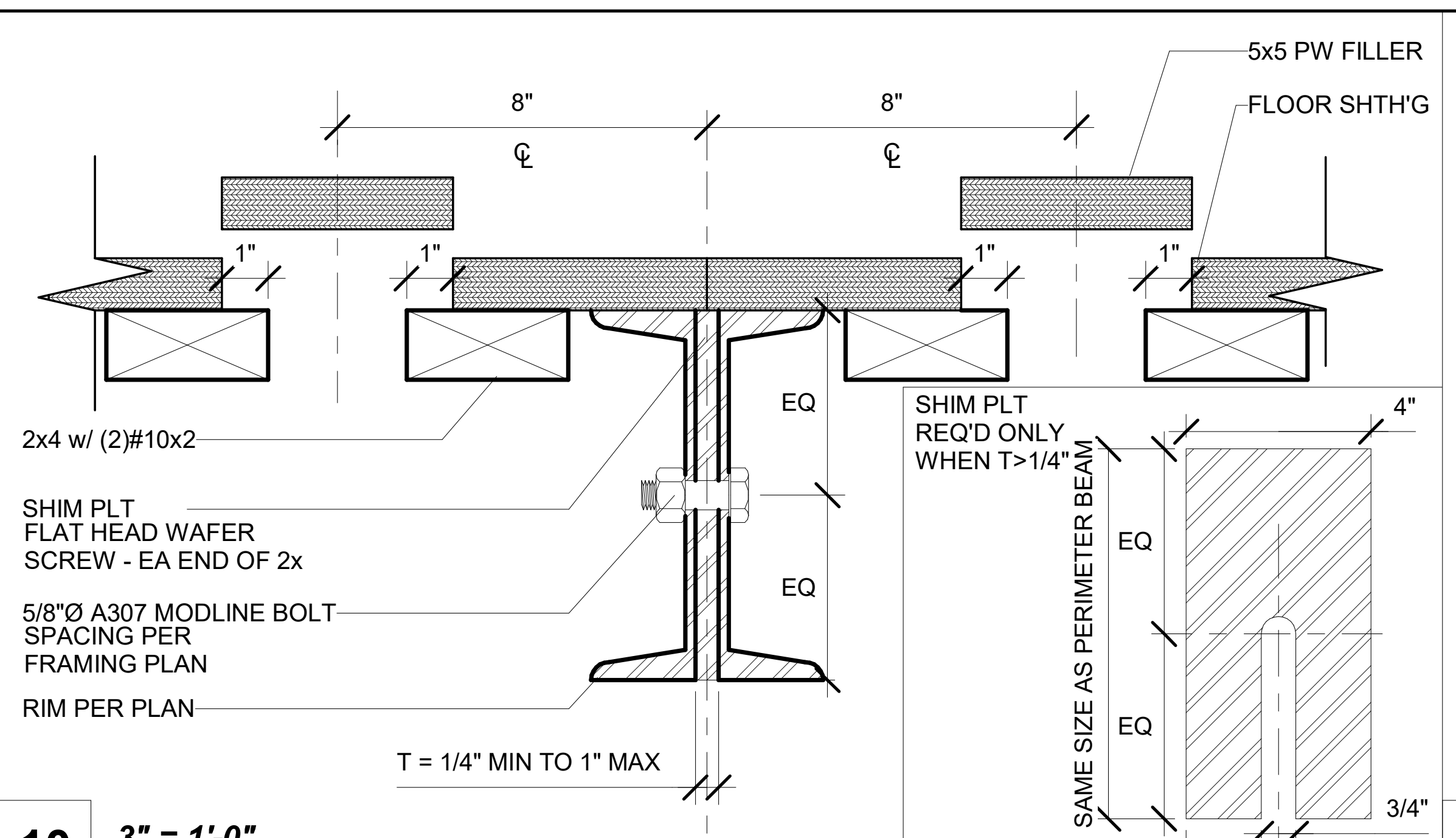
NOTE:
ASC STEEL DECKING: IAPMO UES ER #0329

- SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 24" O.C. WHEN WELDED
- SIDE LAP ATTACHMENT TO BE #10 SDSTS @ 24" O.C. WHEN SCREWED

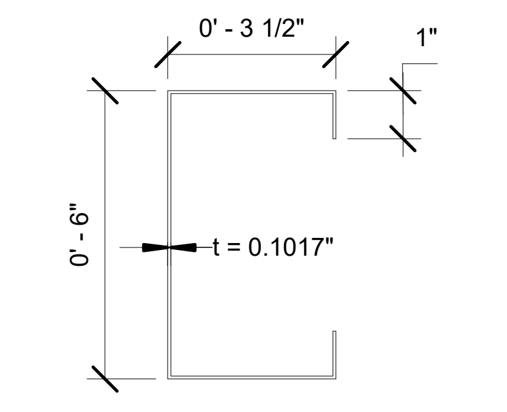
**20** 1 1/2" = 1'-0"
*BH-36 Metal Deck Properties & Profile*


12
S1.2
EQ
EQ
5/8"Ø A307 MODLINE BOLT SPACING PER FRAMING PLAN
T = 1/4" MIN TO 1" MAX
SHIM PLT REQ'D ONLY WHEN T>1/4"
4"
EQ
EQ
3/4"
EQ
SAME SIZE AS PERIMETER BEAM
MODLINE
SHIM PLT

**15** 3" = 1'-0"
*Flr @ ML w/ Shim (CONC FLR)*


5x5 PW FILLER
FLOOR SHTH'G
8"
8"
℄
℄
1"
1"
1"
1"
2x4 w/ (2)#10x2
SHIM PLT
FLAT HEAD WAFER SCREW - EA END OF 2x
5/8"Ø A307 MODLINE BOLT SPACING PER FRAMING PLAN
RIM PER PLAN
EQ
EQ
T = 1/4" MIN TO 1" MAX
SHIM PLT REQ'D ONLY WHEN T>1/4"
4"
EQ
EQ
3/4"
EQ
SAME SIZE AS PERIMETER BEAM
SHIM PLT

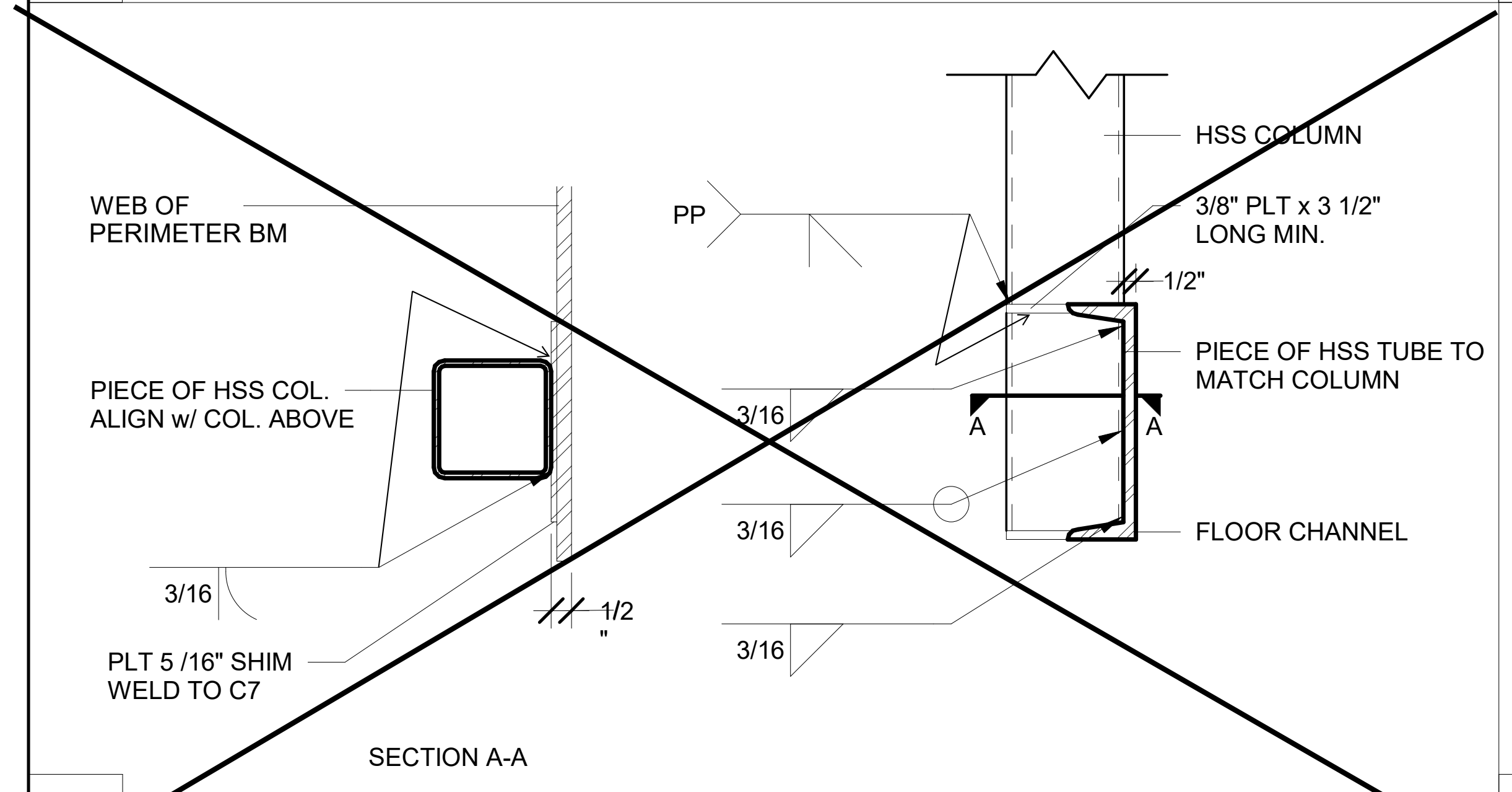
**10** 3" = 1'-0"
*Flr @ ML w/ Shim (WD FLR)*



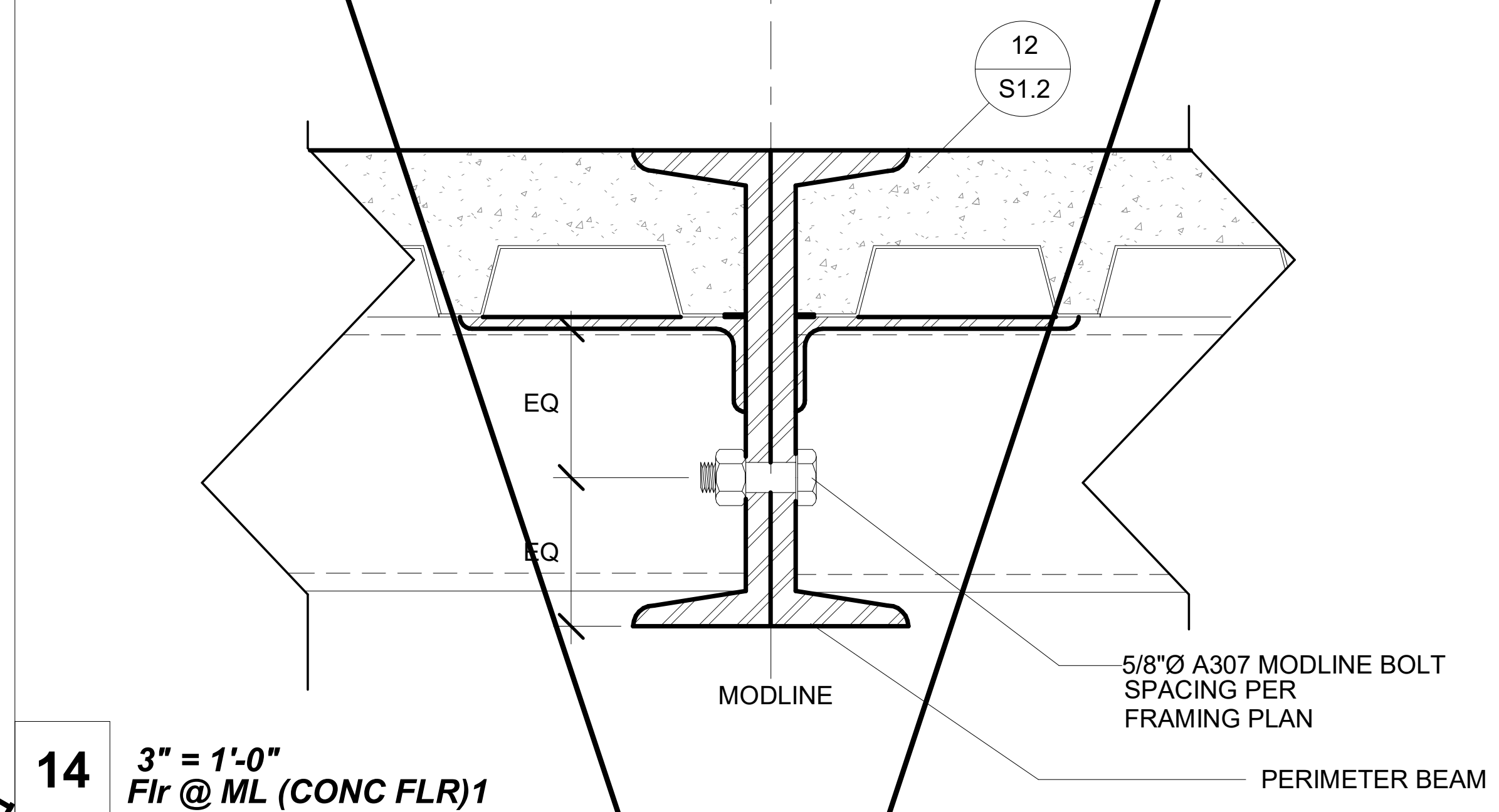
CHANNEL JOIST SECTION PROPERTIES
A-1011, GRADE 33

$t$ = 0.1017"
$S_x$ = 2.822 $IN^3$
$I_x$ = 8.631 $IN^4$
$F_y$ = 33 KSI

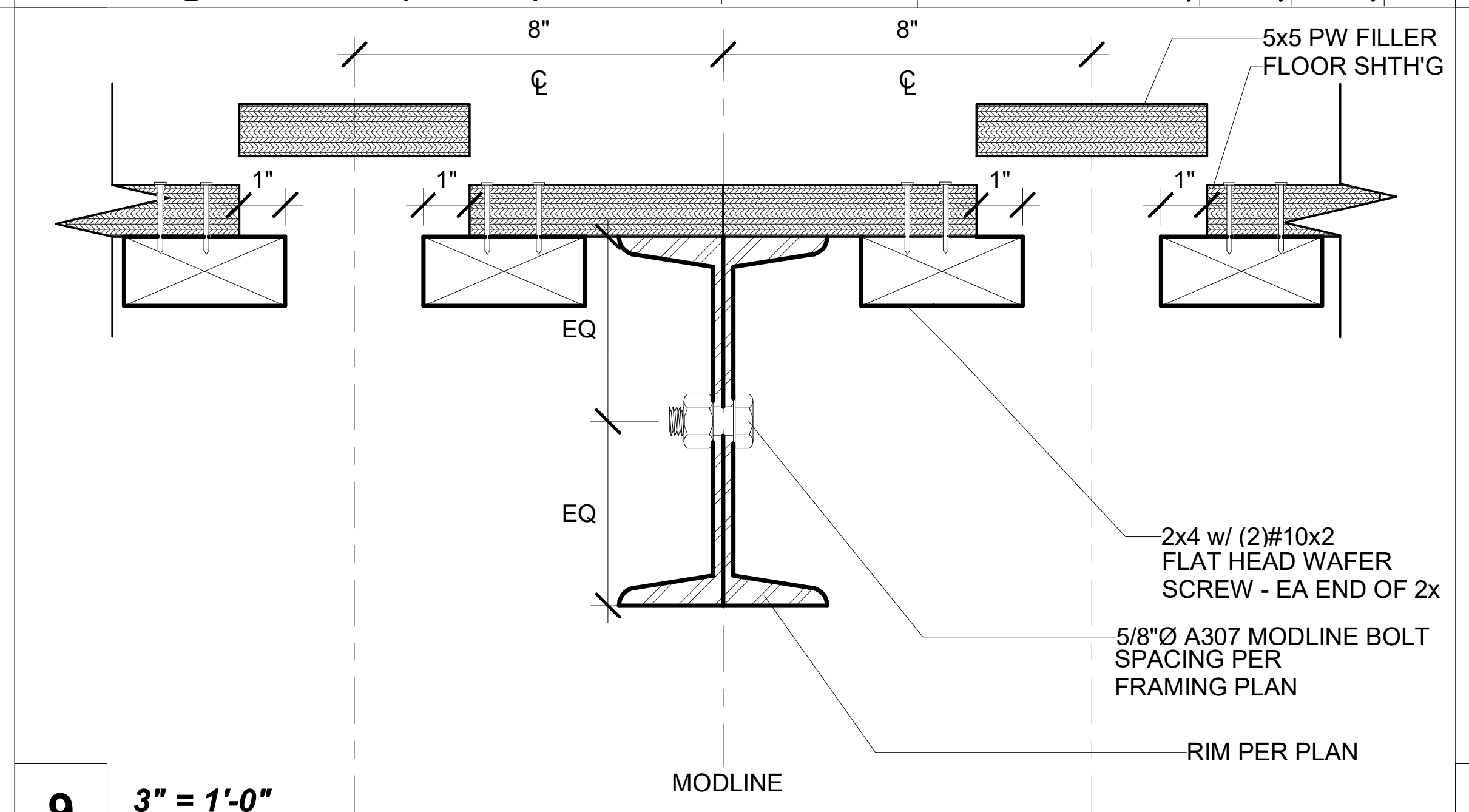
**5** 3" = 1'-0"
*Channel Joist Section Properties (600S350-97)*


WEB OF PERIMETER BM
PP
HSS COLUMN
3/8" PLT x 3 1/2" LONG MIN.
1/2"
PIECE OF HSS COL. ALIGN w/ COL. ABOVE
3/16
A
A
PIECE OF HSS TUBE TO MATCH COLUMN
3/16
FLOOR CHANNEL
3/16
1/2
PLT 5/16" SHIM WELD TO C7
3/16
SECTION A-A

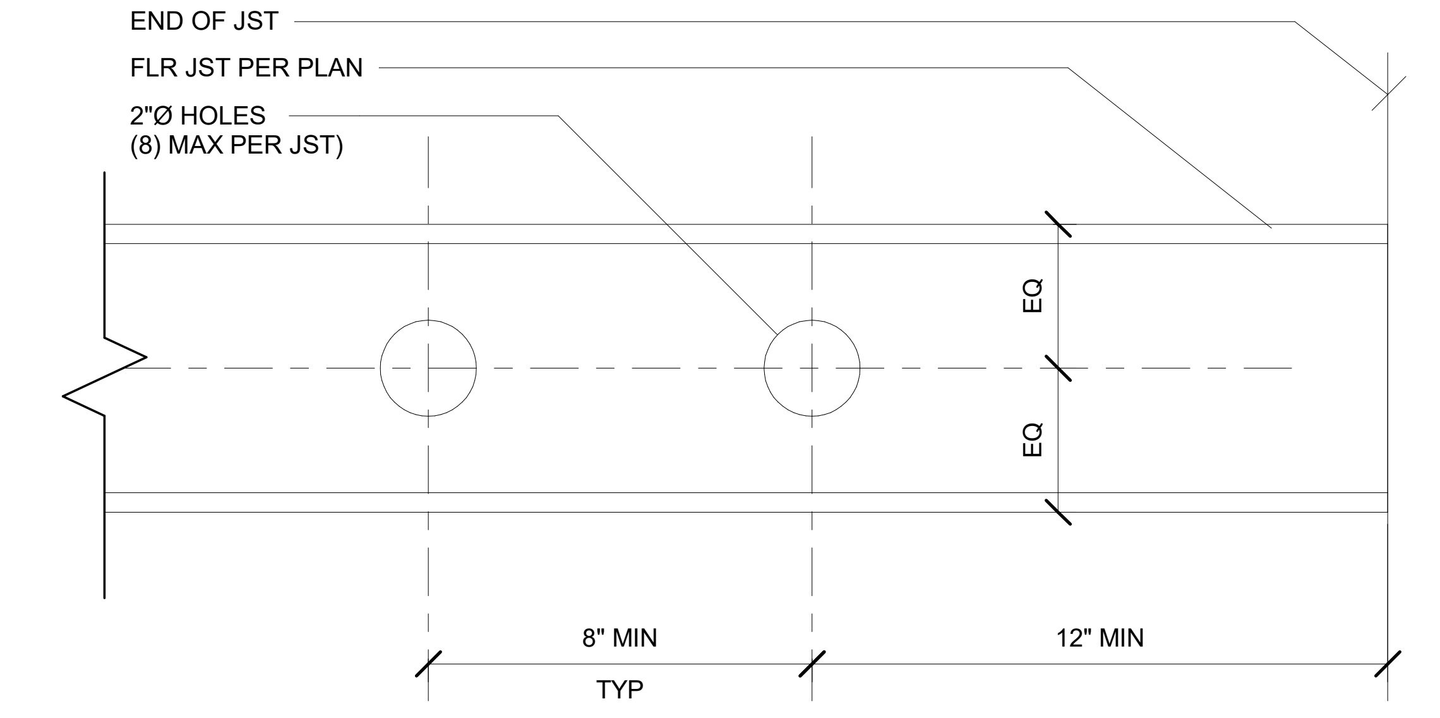
**7** 1 1/2" = 1'-0"
*Mid-Span Column Connection*



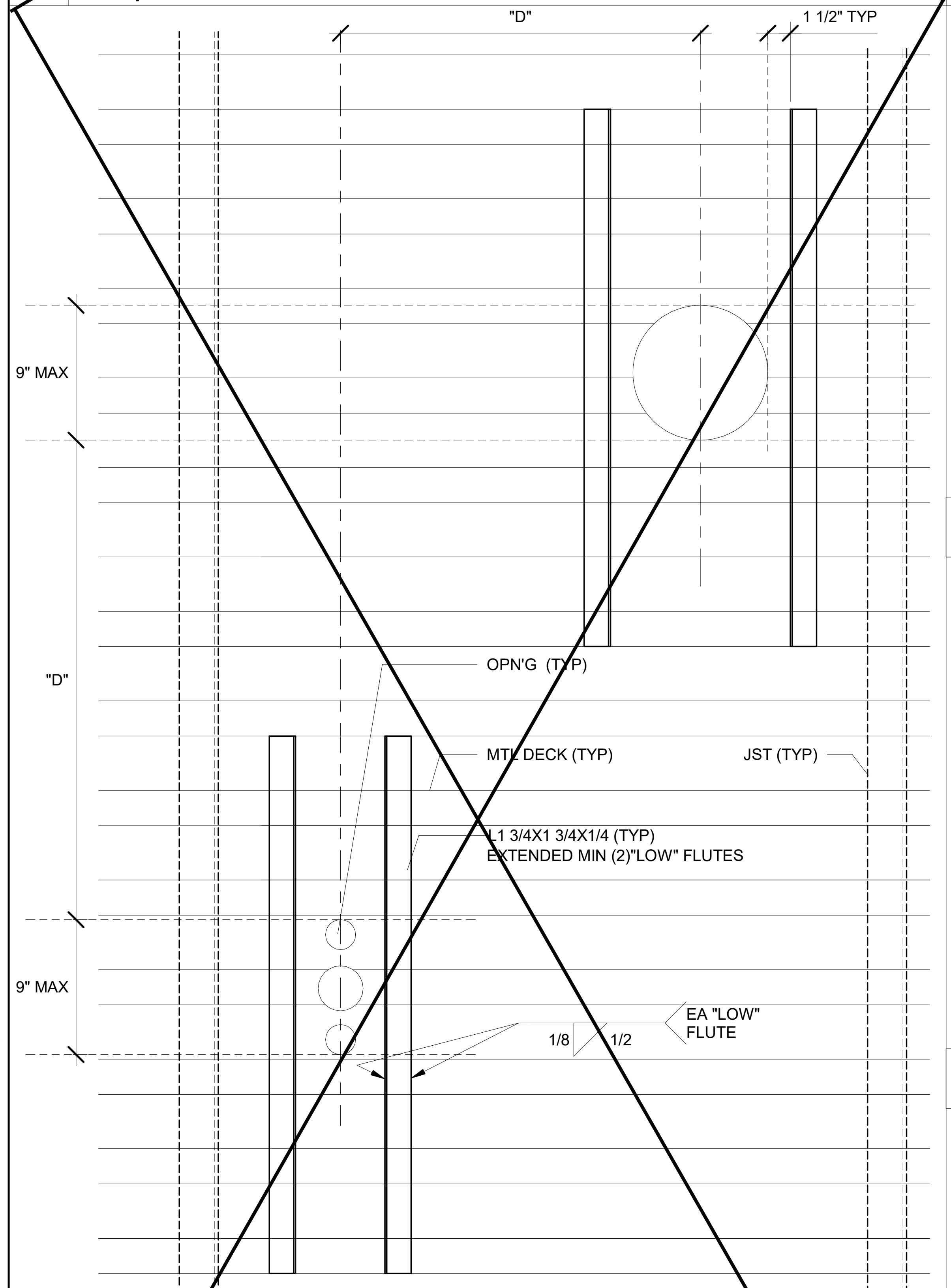
**14** 3" = 1'-0"
*Flr @ ML (CONC FLR)1*


8"
8"
℄
℄
5x5 PW FILLER
FLOOR SHTH'G
1"
1"
1"
1"
EQ
EQ
2x4 w/ (2)#10x2 FLAT HEAD WAFER SCREW - EA END OF 2x
5/8"Ø A307 MODLINE BOLT SPACING PER FRAMING PLAN
RIM PER PLAN
MODLINE

**9** 3" = 1'-0"
*Flr @ ML (WD FLR)1*



**4** 3" = 1'-0"
*Elevation - Allowable Jst Holes*



1. THIS DETAIL IS FOR USE ONLY FOR OPENINGS OR OPENING GROUPS THAT ARE 0'-9" OR SMALLER.

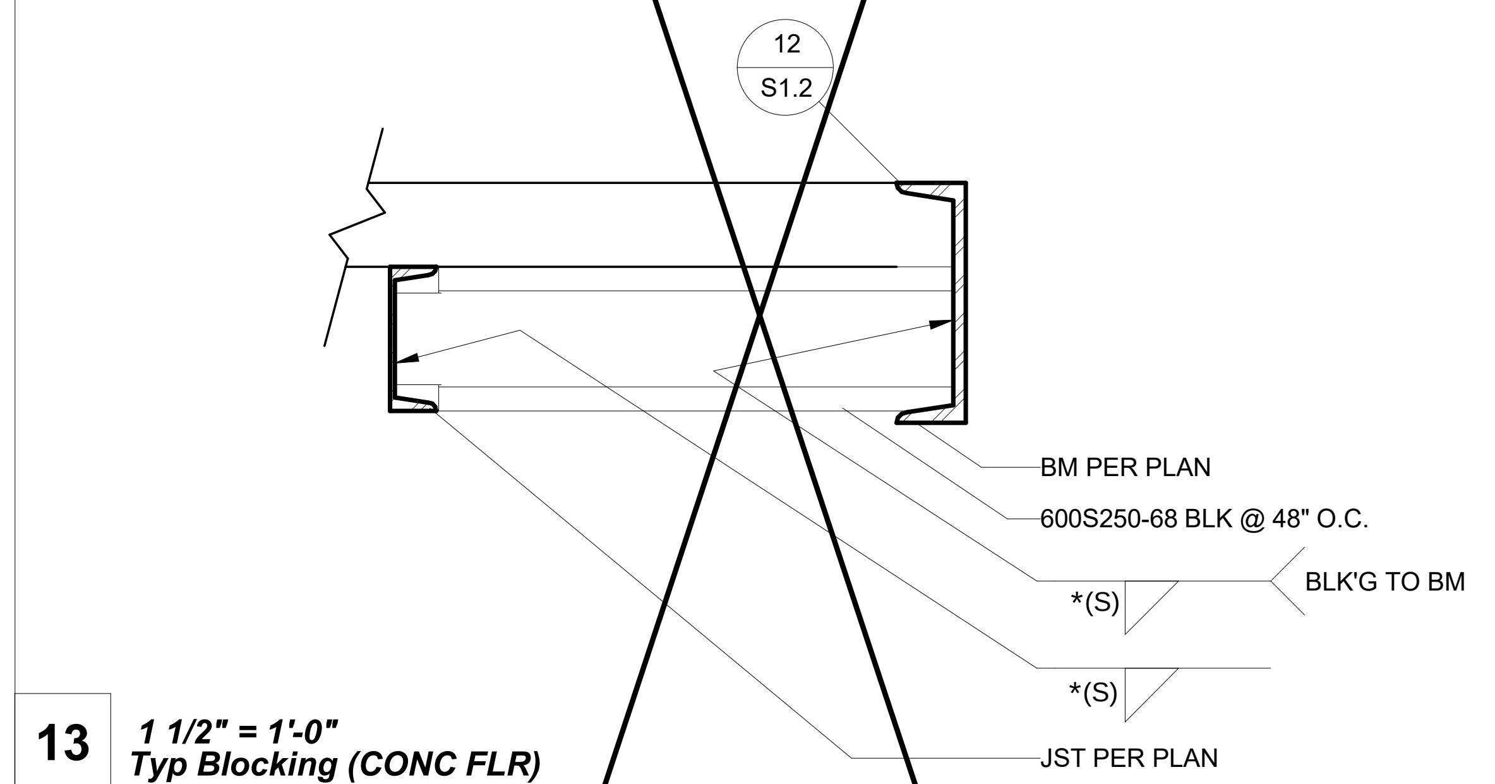
2. OPENINGS 2"Ø OR LESS NOT OCCURING IN THE LOWER FLUTE DO NOT REQUIRE REINFORCING AND MAY BE CORED THRU THE CONCRETE.

3. IF "D" IS LESS THAN 32" THEN THE GROUP OF OPENINGS MUST BE BLOCKED OUT WITH ADDITIONAL FRAMING.

4. PRIOR TO CONCRETE POUR, BLOCK OUT THE OPENINGS. AFTER THE CONCRETE HAS BEEN CURED THE DECK MAY BE CUT.

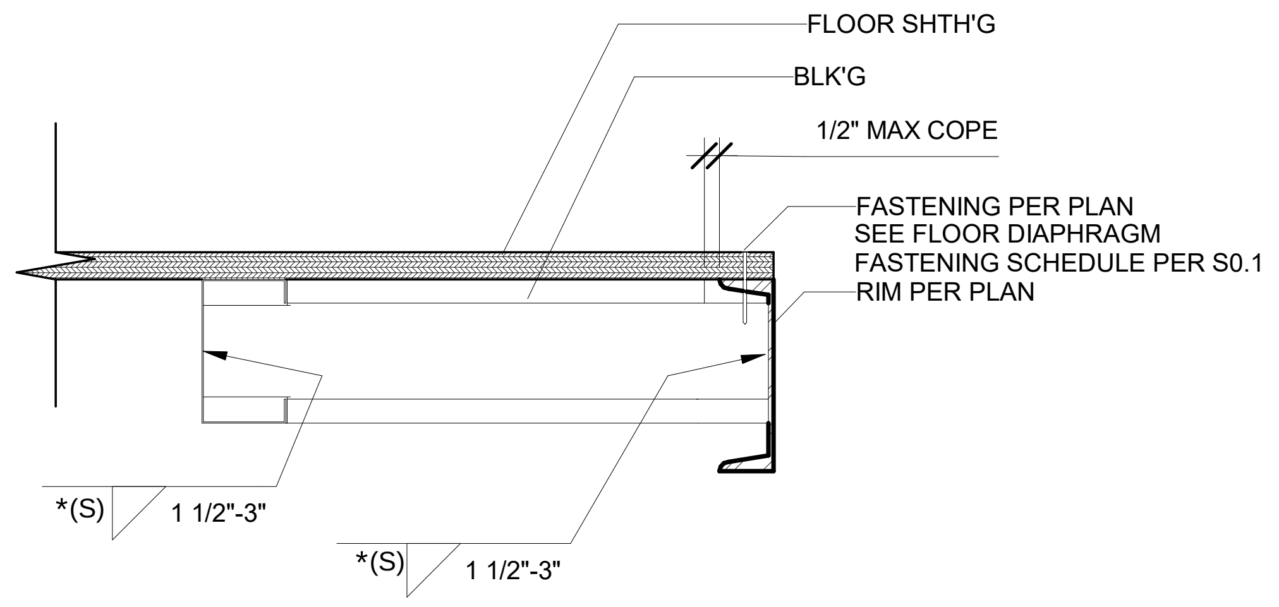
**16** 1 1/2" = 1'-0"
*Typ Deck Penetrations (CONC FLR)*

* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL

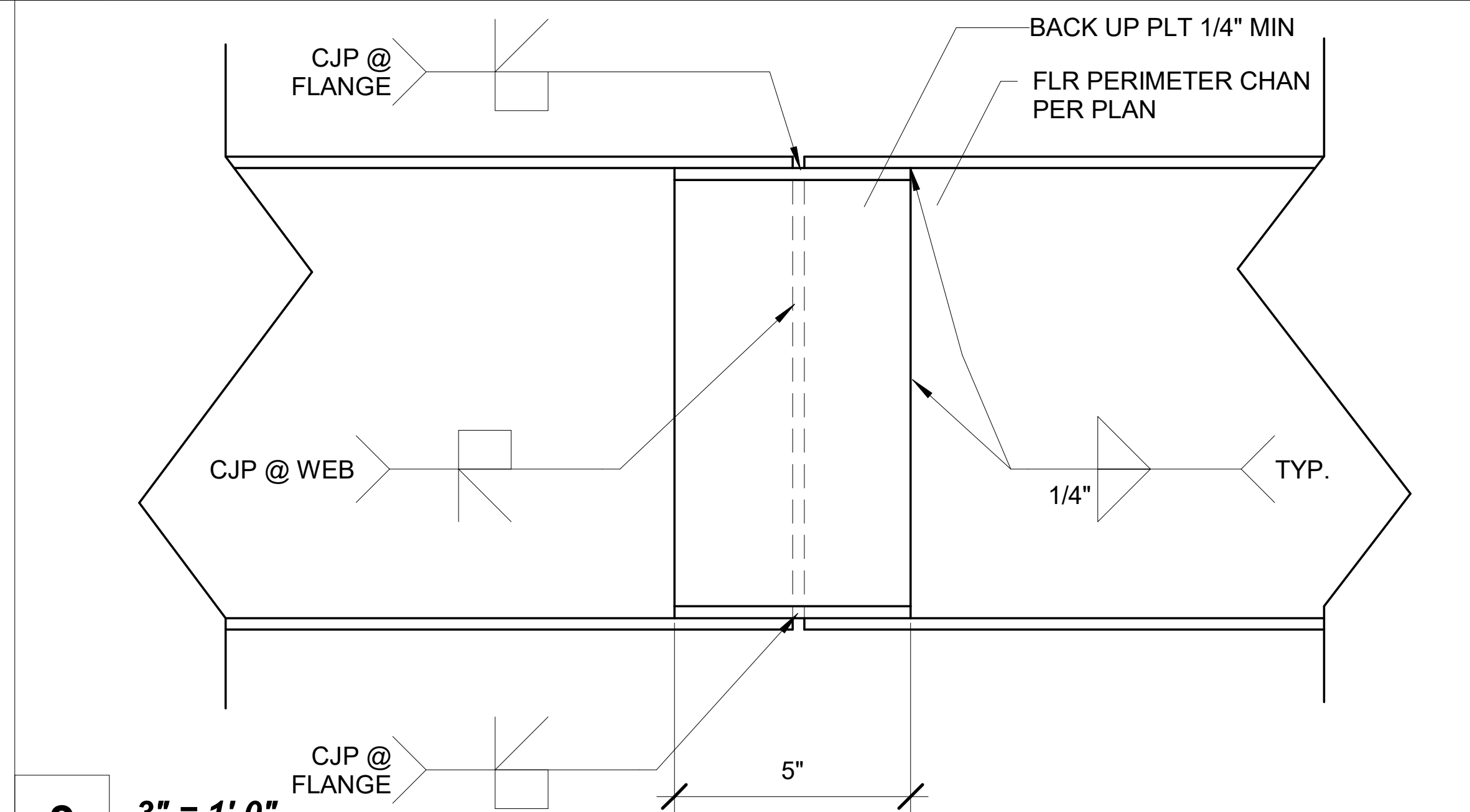


**13** 1 1/2" = 1'-0"
*Typ Blocking (CONC FLR)*

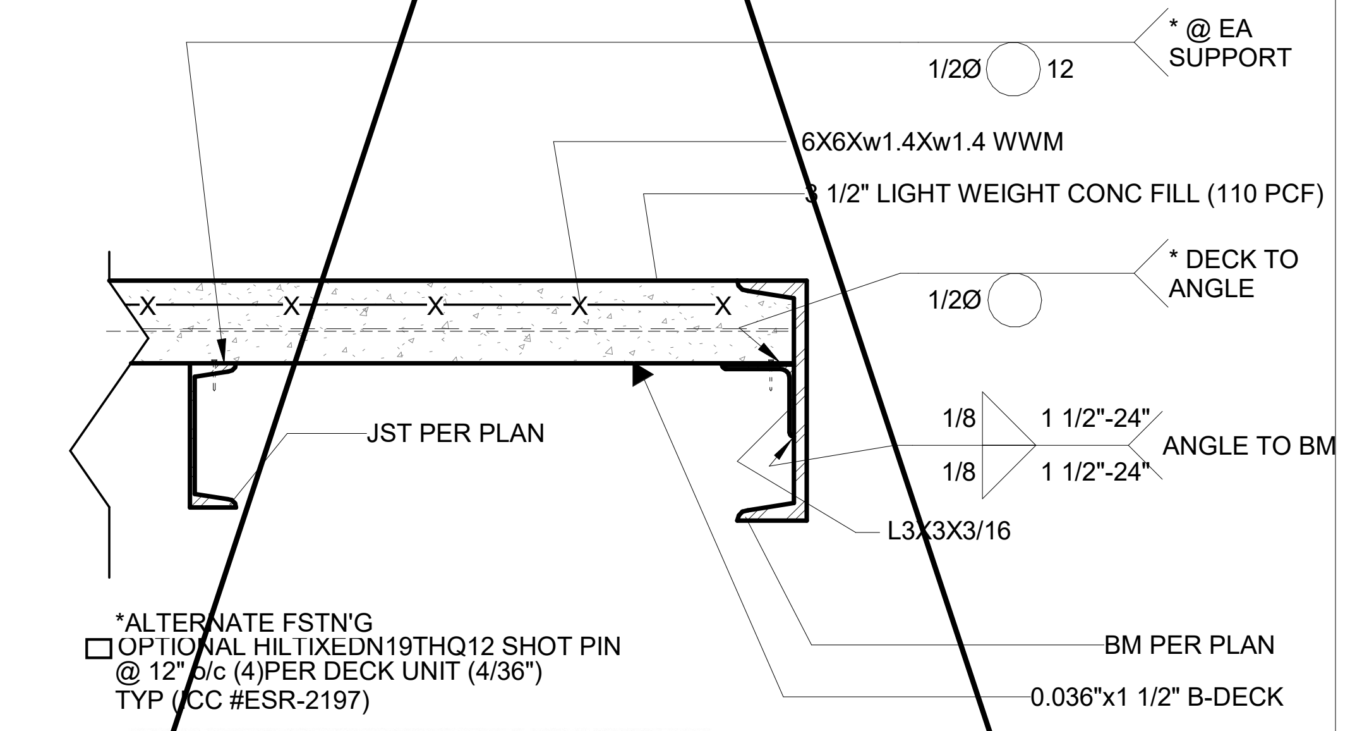
* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL



**8** 1 1/2" = 1'-0"
*Typ Blk'g Connection @ Rim (WD FLR)*



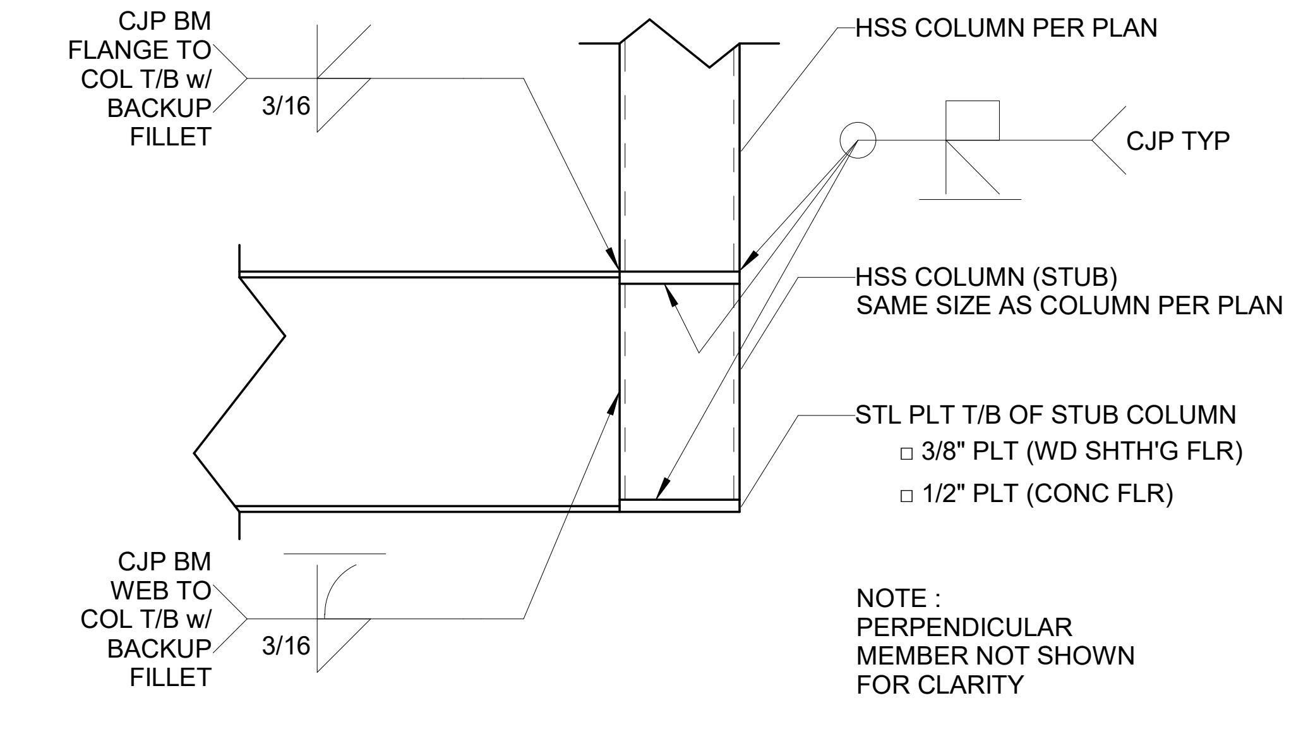
**3** 3" = 1'-0"
*Flr Perimeter Beam Splice*



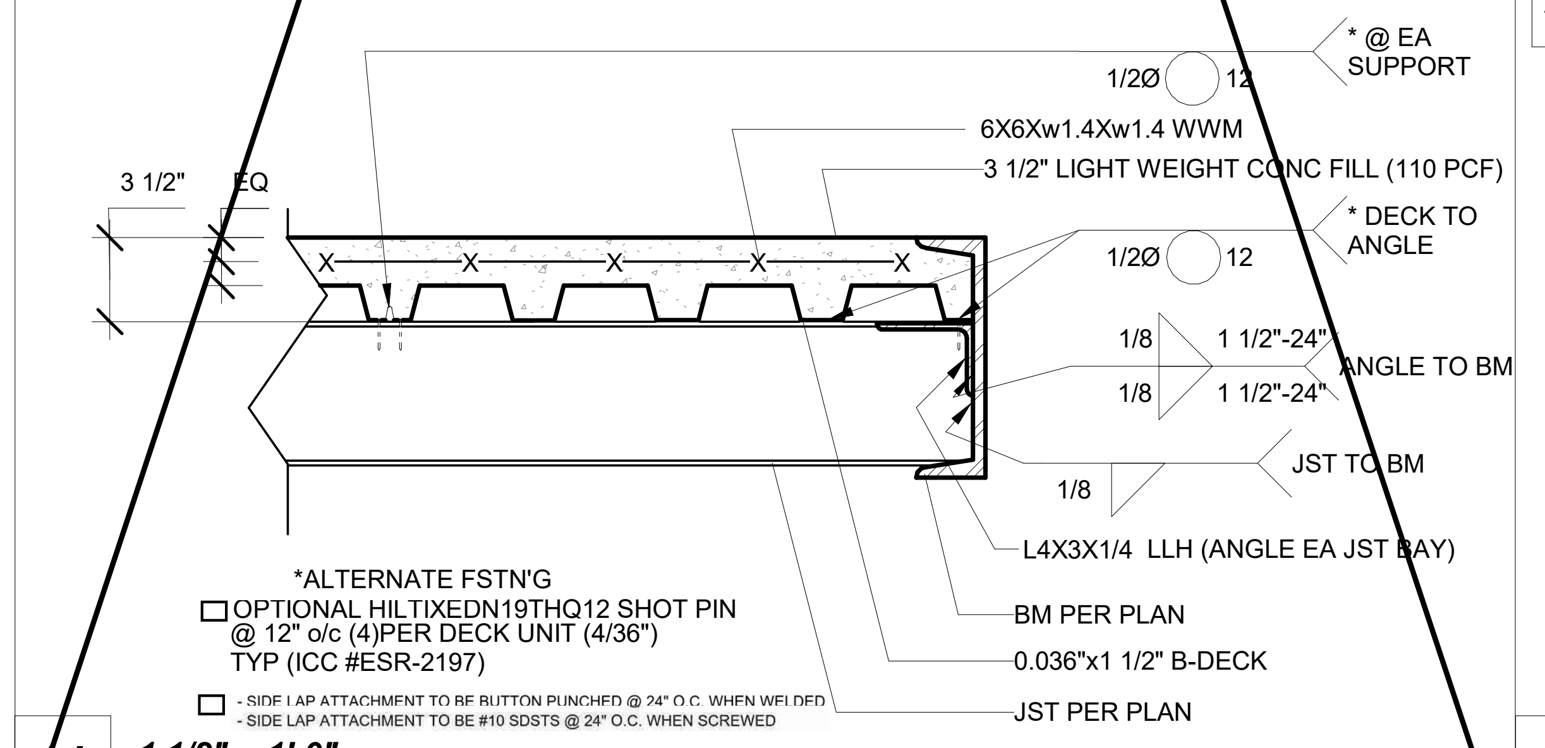
*ALTERNATE FSTN'G
☐ OPTIONAL HILTIXEDN19THQ12 SHOT PIN @ 12" o/c (4)PER DECK UNIT (4/36") TYP (ICC #ESR-2197)

☐ - SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 24" O.C. WHEN WELDED
- SIDE LAP ATTACHMENT TO BE #10 SDSTS @ 24" O.C. WHEN SCREWED

**12** 1 1/2" = 1'-0"
*Typ End Beam Connection @ Rim (CONC FLR)*


CJP BM FLANGE TO COL T/B w/ BACKUP FILLET
3/16
HSS COLUMN PER PLAN
CJP TYP
HSS COLUMN (STUB) SAME SIZE AS COLUMN PER PLAN
STL PLT T/B OF STUB COLUMN
□ 3/8" PLT (WD SHTH'G FLR)
□ 1/2" PLT (CONC FLR)
CJP BM WEB TO COL T/B w/ BACKUP FILLET
3/16
NOTE : PERPENDICULAR MEMBER NOT SHOWN FOR CLARITY

**2** 1 1/2" = 1'-0"
*Typ Flr Bm to Column Connection*

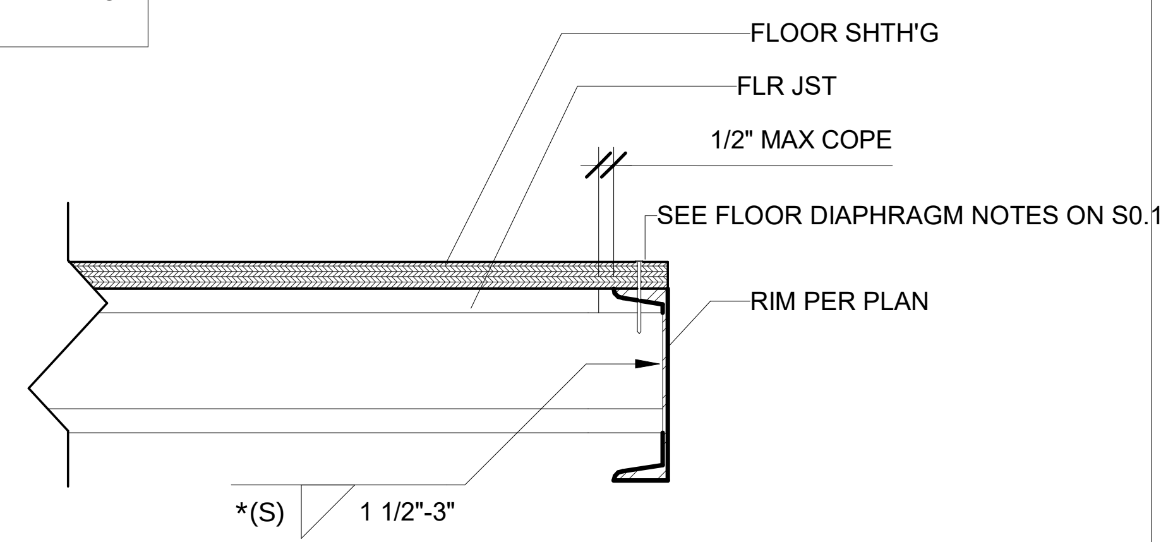


*ALTERNATE FSTN'G
☐ OPTIONAL HILTIXEDN19THQ12 SHOT PIN @ 12" o/c (4)PER DECK UNIT (4/36") TYP (ICC #ESR-2197)

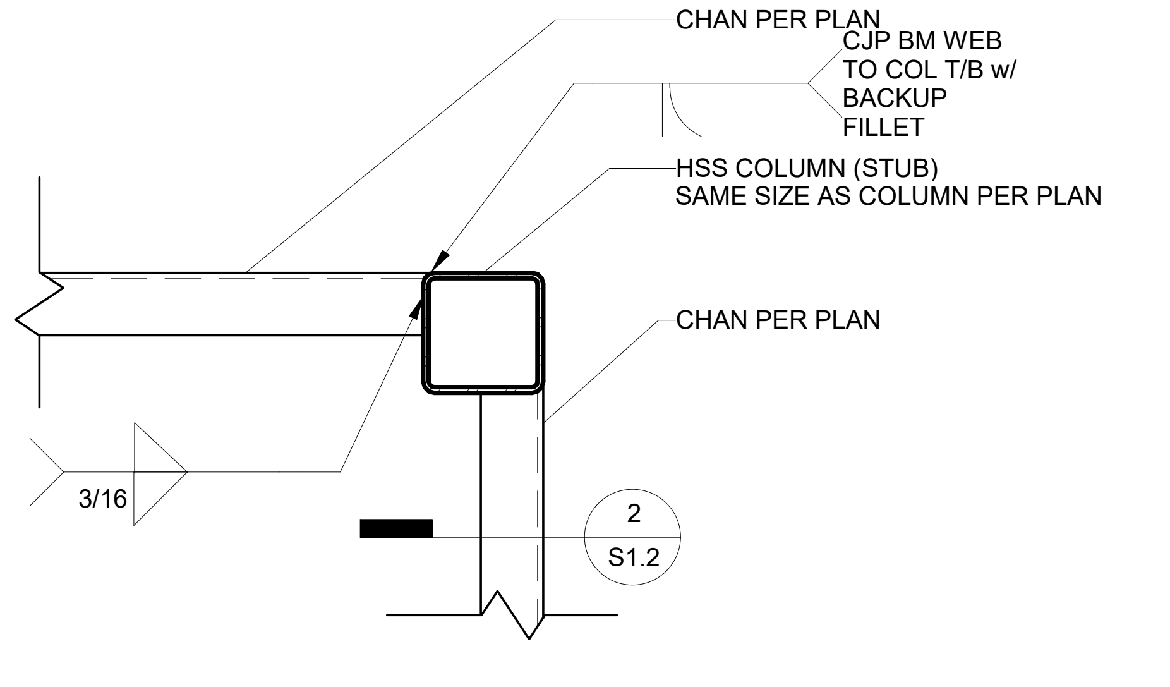
☐ - SIDE LAP ATTACHMENT TO BE BUTTON PUNCHED @ 24" O.C. WHEN WELDED
- SIDE LAP ATTACHMENT TO BE #10 SDSTS @ 24" O.C. WHEN SCREWED

**11** 1 1/2" = 1'-0"
*Typ Side Beam Connection @ Rim (CONC FLR)*

* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL



**6** 1 1/2" = 1'-0"
*Typ Joist Connection @ Rim (WD FLR)*


CHAN PER PLAN
CJP BM WEB TO COL T/B w/ BACKUP FILLET
HSS COLUMN (STUB) SAME SIZE AS COLUMN PER PLAN
CHAN PER PLAN
3/16
2
S1.2

**1** 1 1/2" = 1'-0"
*Typ Corner Connection*

C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt

6/8/2021 1:52:34 AM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
STRUCTURAL
DETAILS
(FLOOR)

PROJECT NUMBER
22088

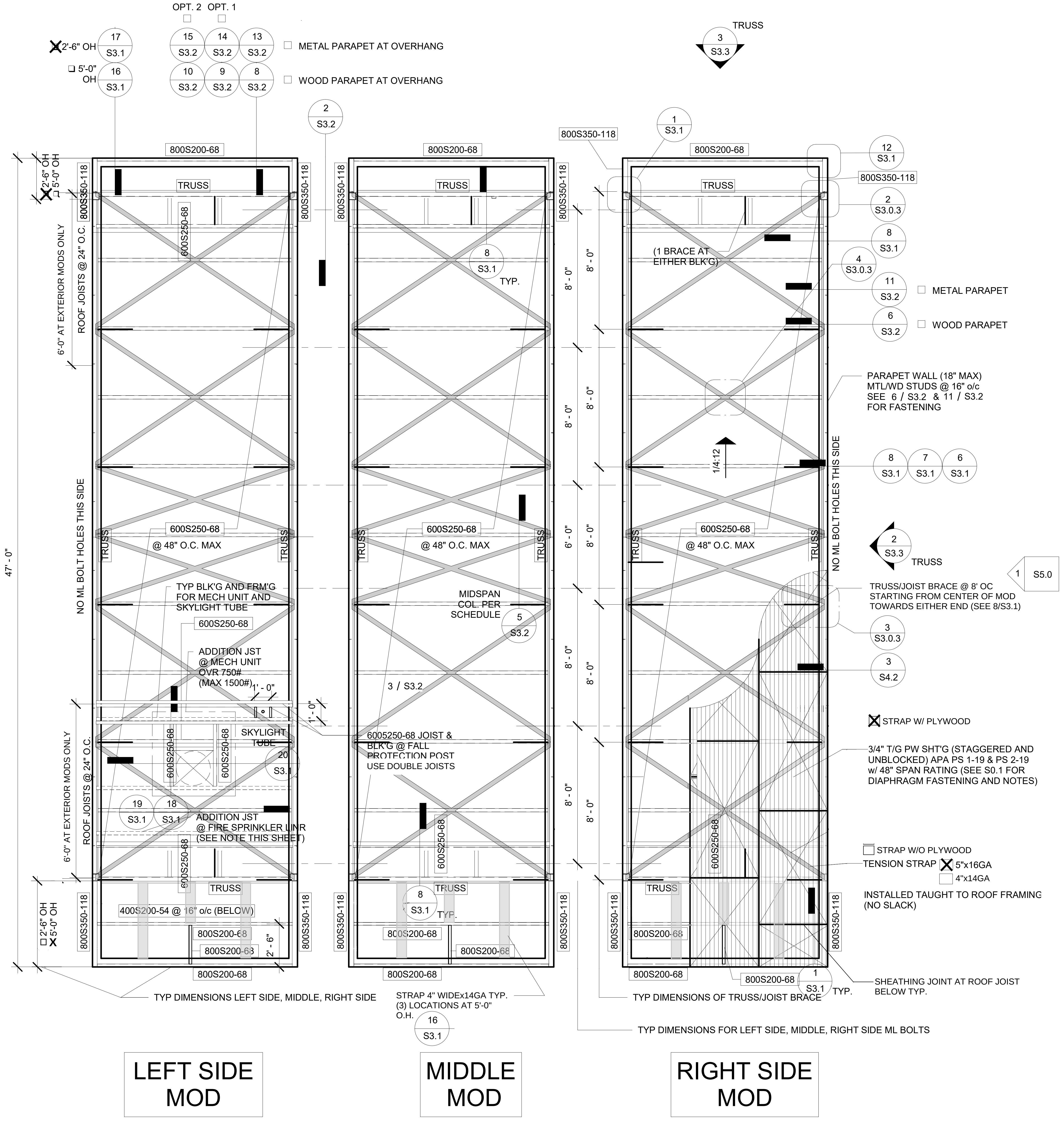
DRAWN BY
rMc/SC

CHECKED BY
JA/RT

DATE

SHEET NO.
S1.2

SHEET OF


OPT. 2 OPT. 1
☒ 2'-6" OH
☐ 5'-0" OH
17 S3.1
16 S3.1
15 S3.2
14 S3.2
13 S3.2
10 S3.2
9 S3.2
8 S3.2
☐ METAL PARAPET AT OVERHANG
☐ WOOD PARAPET AT OVERHANG
3 S3.3 TRUSS
2 S3.2
1 S3.1
800S200-68
800S350-118
TRUSS
ROOF JOISTS @ 24" O.C.
6'-0" AT EXTERIOR MODS ONLY
NO ML BOLT HOLES THIS SIDE
47' - 0"
8' - 0"
6' - 0"
600S250-68
@ 48" O.C. MAX
TYP BLK'G AND FRM'G FOR MECH UNIT AND SKYLIGHT TUBE
ADDITION JST @ MECH UNIT OVR 750# (MAX 1500#)
SKYLIGHT TUBE
1' - 0"
20 S3.1
19 S3.1
18 S3.1
ADDITION JST @ FIRE SPRINKLER LINR (SEE NOTE THIS SHEET)
400S200-54 @ 16" o/c (BELOW)
8 S3.1 TYP.
MIDSPAN COL. PER SCHEDULE
5 S3.2
3 / S3.2
600S250-68 JOIST & BLK'G @ FALL PROTECTION POST USE DOUBLE JOISTS
(1 BRACE AT EITHER BLK'G)
1/4:12
12 S3.1
2 S3.0.3
8 S3.1
4 S3.0.3
11 S3.2 ☐ METAL PARAPET
6 S3.2 ☐ WOOD PARAPET
PARAPET WALL (18" MAX) MTL/WD STUDS @ 16" o/c SEE 6 / S3.2 & 11 / S3.2 FOR FASTENING
8 S3.1
7 S3.1
6 S3.1
2 S3.3 TRUSS
1 S5.0
TRUSS/JOIST BRACE @ 8' OC STARTING FROM CENTER OF MOD TOWARDS EITHER END (SEE 8/S3.1)
3 S3.0.3
3 S4.2
☒ STRAP W/ PLYWOOD
3/4" T/G PW SHT'G (STAGGERED AND UNBLOCKED) APA PS 1-19 & PS 2-19 w/ 48" SPAN RATING (SEE S0.1 FOR DIAPHRAGM FASTENING AND NOTES)
☐ STRAP W/O PLYWOOD
TENSION STRAP ☒ 5"x16GA
☐ 4"x14GA
INSTALLED TAUGHT TO ROOF FRAMING (NO SLACK)
SHEATHING JOINT AT ROOF JOIST BELOW TYP.
1 S3.1 TYP.
TYP DIMENSIONS LEFT SIDE, MIDDLE, RIGHT SIDE
STRAP 4" WIDEx14GA TYP. (3) LOCATIONS AT 5'-0" O.H.
16 S3.1
TYP DIMENSIONS OF TRUSS/JOIST BRACE
TYP DIMENSIONS FOR LEFT SIDE, MIDDLE, RIGHT SIDE ML BOLTS
LEFT SIDE MOD
MIDDLE MOD
RIGHT SIDE MOD

NOTES:

FIRE SPRINKLER
ADDITIONAL ROOF JOIST FOR FIRE SPRINKLER LINE AS REQ'D
LOCATION OF FIRE SPRINKLER AND ADDITIONAL JOIST TO BE DETERMINED

**PV REQUIREMENTS:**

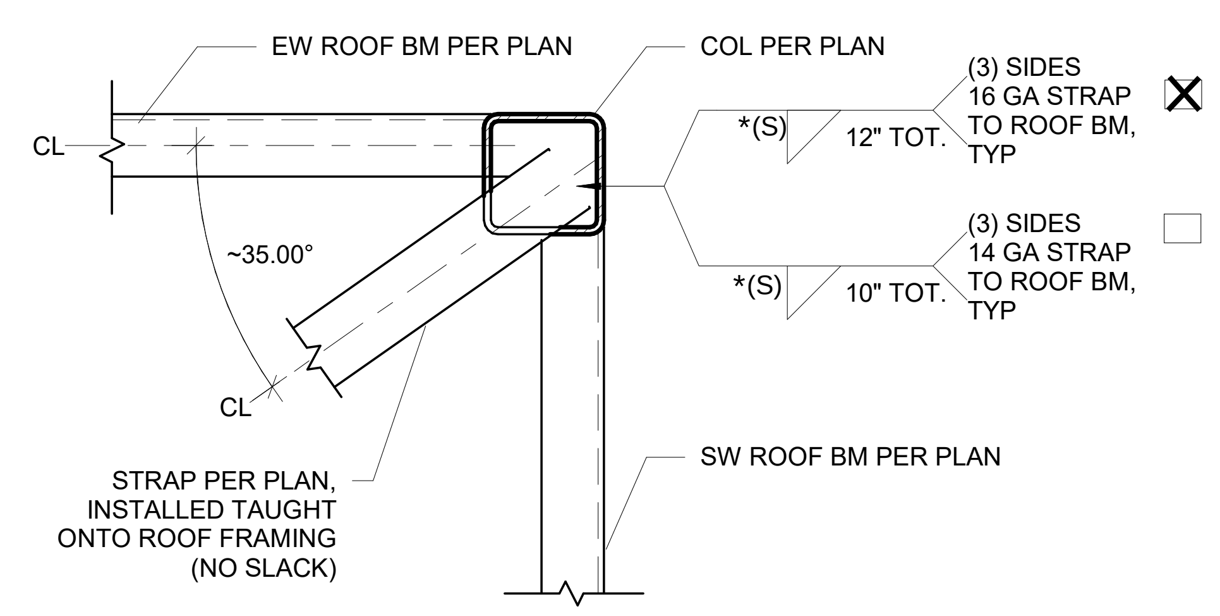
**1.7 REQUIRED PHOTOVOLTAIC (PV) SYSTEMS**

WHEN A PV SYSTEM IS REQUIRED BY THE CALIFORNIA ENERGY CODE FOR A PC BUILDING CONFIGURATION, THE PV SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH IR 16-8: SOLAR PHOTOVOLTAIC AND THERMAL SYSTEMS REVIEW AND APPROVAL REQUIREMENTS. THE PC DESIGN SHALL SHOW THAT THE STRUCTURE CAN SUPPORT THE REQUIRED SYSTEM LOADS WHEN THE BUILDING IS SUPPORTING THE PV SYSTEM. IF THE PV SYSTEM IS REQUIRED IT WILL BE SUBMITTED WITH THE SITE SPECIFIC APPLICATION

**8.3 REQUIRED PHOTOVOLTAIC (PV) SYSTEMS ENERGY REVIEW**

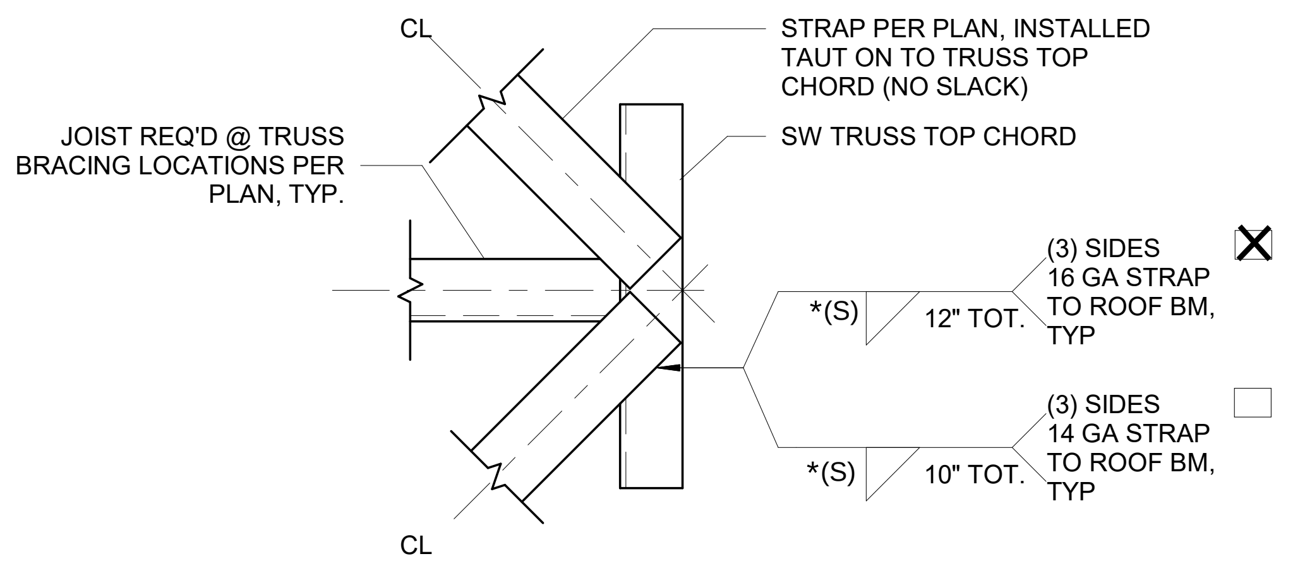
WHEN A PV SYSTEM IS REQUIRED PER THE CALIFORNIA ENERGY CODE FOR A PC CONFIGURATION, THE SYSTEM POWER REQUIREMENTS SHALLL BE CLEARLY DELINEATED ON THE PC PLANS IN THE DESIGN INFORMATION SECTION FOR THE PC. SEE SECTION 1.7 ABOVE FOR DESIGN AND SUBMITTAL REQUIREMENTS OF THE PV SYSTEM.

**1** *1/4" = 1'-0"*
***Mono Roof Framing Plan***


EW ROOF BM PER PLAN
COL PER PLAN
CL
~35.00°
CL
*(S) 12" TOT.
*(S) 10" TOT.
(3) SIDES 16 GA STRAP TO ROOF BM, TYP ☒
(3) SIDES 14 GA STRAP TO ROOF BM, TYP ☐
STRAP PER PLAN, INSTALLED TAUGHT ONTO ROOF FRAMING (NO SLACK)
SW ROOF BM PER PLAN

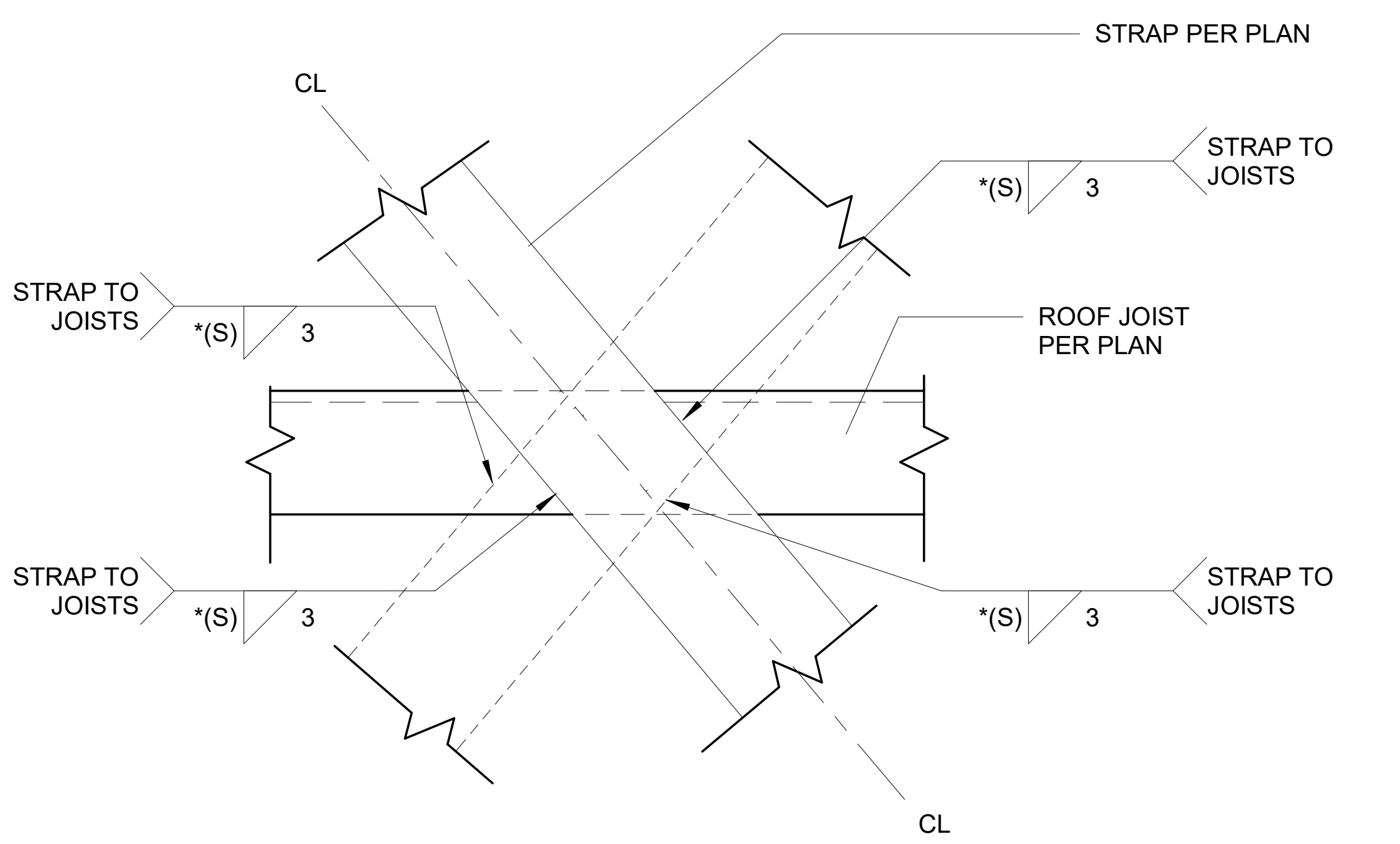
* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL

**2** *1 1/2" = 1'-0"*
***ROOF BRACING STRAP @ ENDWALL***


CL
STRAP PER PLAN, INSTALLED TAUT ON TO TRUSS TOP CHORD (NO SLACK)
JOIST REQ'D @ TRUSS BRACING LOCATIONS PER PLAN, TYP.
SW TRUSS TOP CHORD
*(S) 12" TOT.
*(S) 10" TOT.
(3) SIDES 16 GA STRAP TO ROOF BM, TYP ☒
(3) SIDES 14 GA STRAP TO ROOF BM, TYP ☐
CL

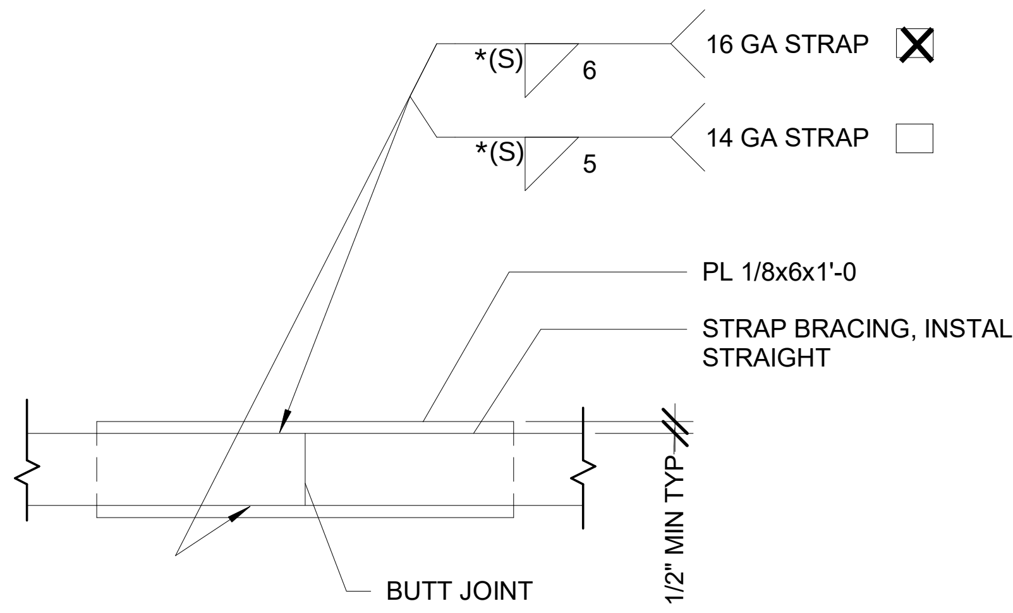
* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL

**3** *1 1/2" = 1'-0"*
***ROOF STRAP BRACING @ SIDEWALL***



* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL

**4** *3" = 1'-0"*
***STRAP TO JOIST CONNECTION (ROOF)***



* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL

**5** *1 1/2" = 1'-0"*
***STRAP SPLICE DETAIL (ROOF)***

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24
02/16/24
RST#22088

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) ALTERNATE DOCUMENT**

**CODE: 2019 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
MONO SLOPE ROOF FRM'G PLAN CROSS-STRAP OPT.

PROJECT NUMBER
22088

DRAWN BY
MJM

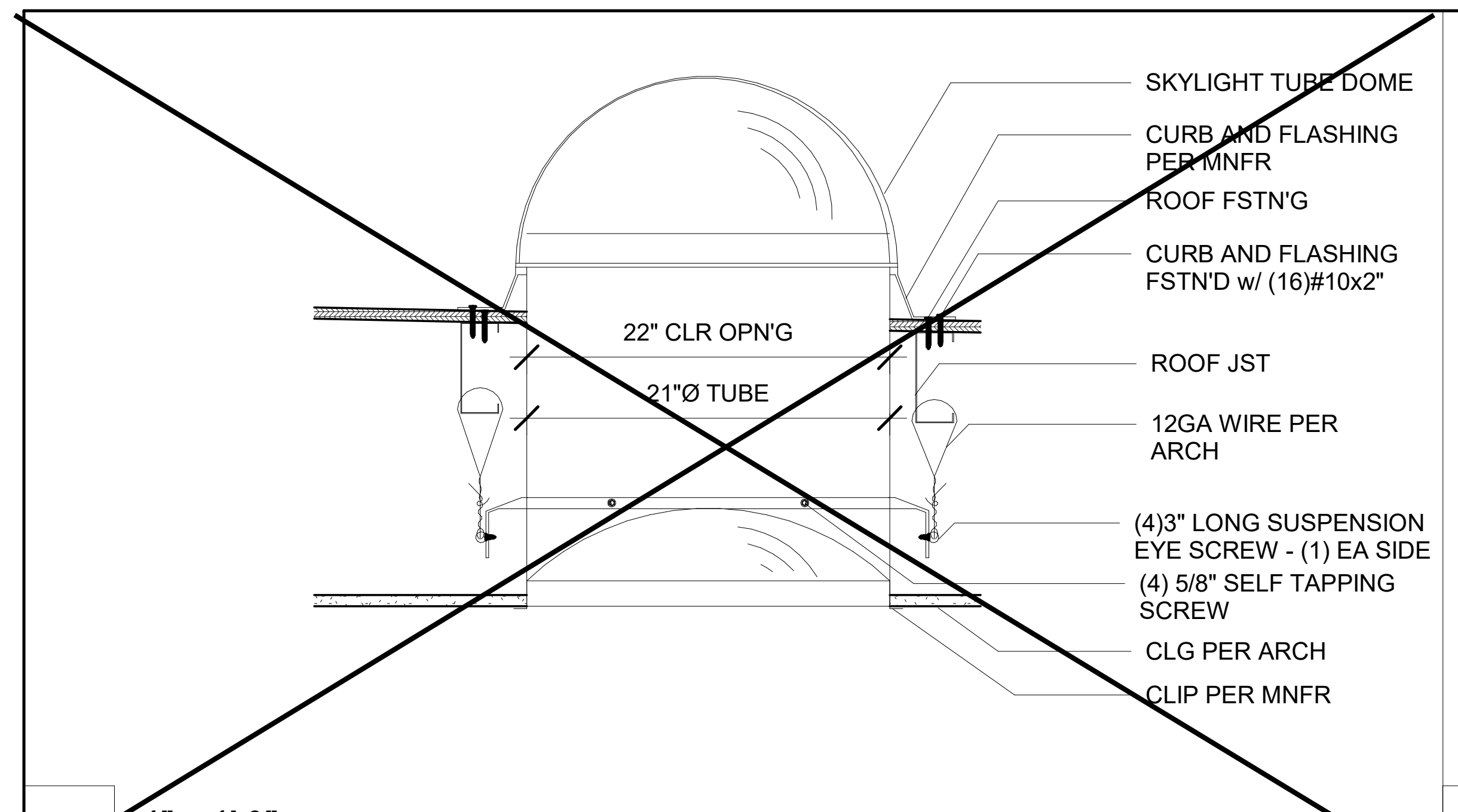
CHECKED BY
RH/rMc

DATE
06/07/2021

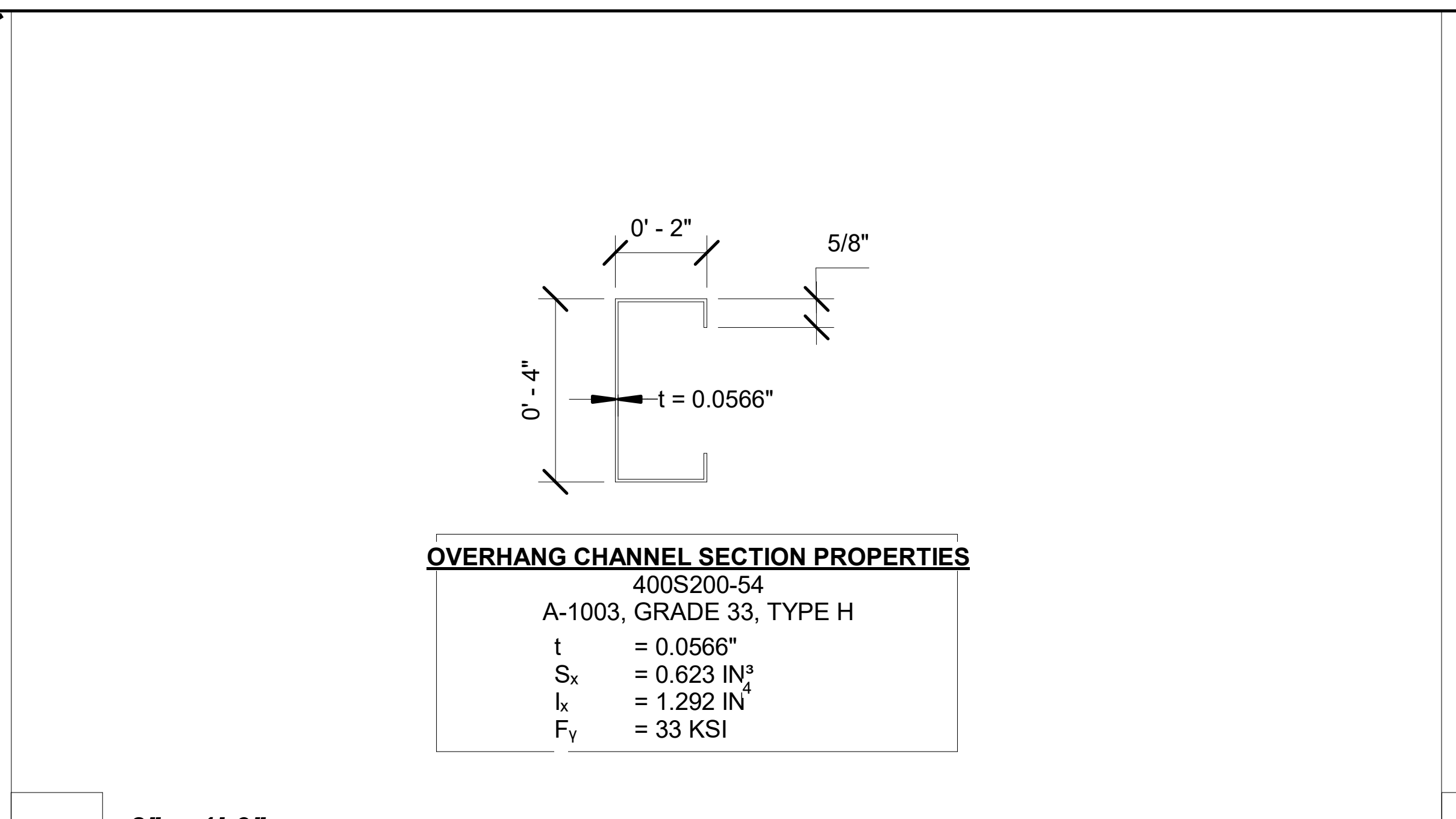
SHEET NO.
S3.0.3

SHEET OF

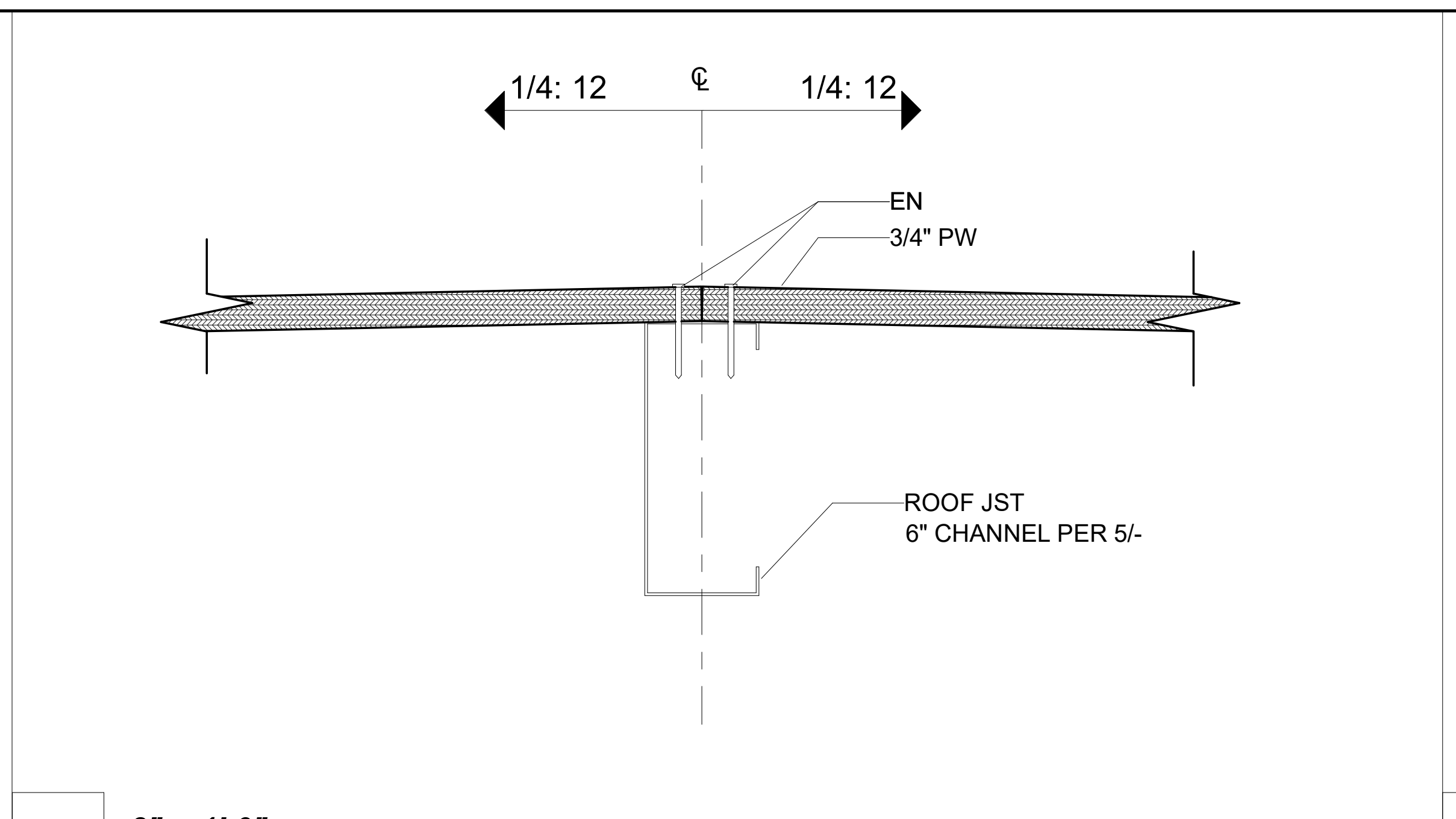
10/25/2022 3:45:46 PM M:\2022\22088 - Class Leasing, 24x40 to 120x40 High Seismic 2022 PC\REVIT\source file detached 22095 for S3.0.3 and S3.0.4\source file detached 22095 for S3.0.3 and S3.0.4.rvt


SKYLIGHT TUBE DOME
CURB AND FLASHING PER MNFR
ROOF FSTN'G
CURB AND FLASHING FSTN'D w/ (16)#10x2"
22" CLR OPN'G
21"Ø TUBE
ROOF JST
12GA WIRE PER ARCH
(4)3" LONG SUSPENSION EYE SCREW - (1) EA SIDE
(4) 5/8" SELF TAPPING SCREW
CLG PER ARCH
CLIP PER MNFR

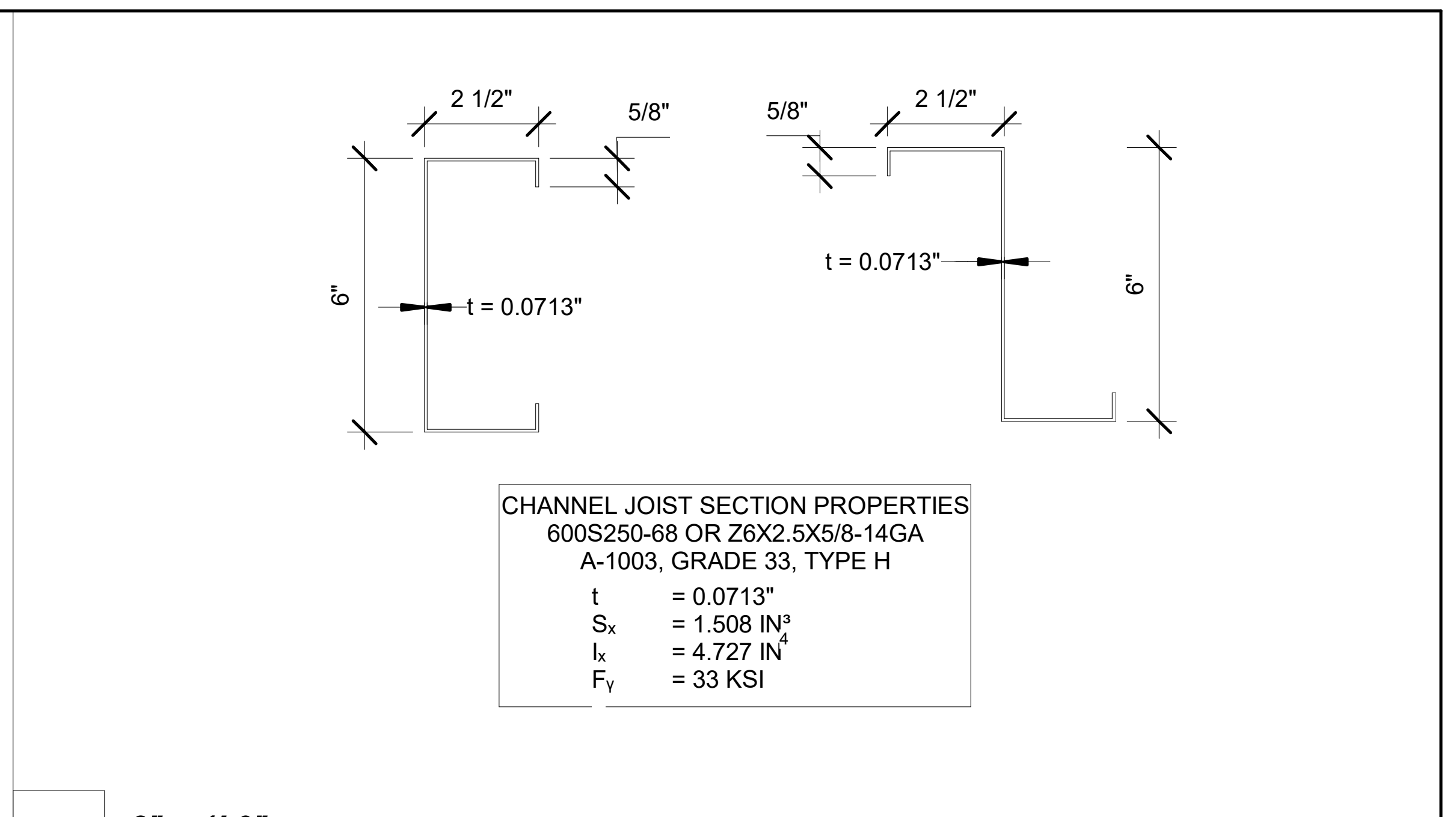
20 1" = 1'-0"
**SKYLIGHT TUBE**



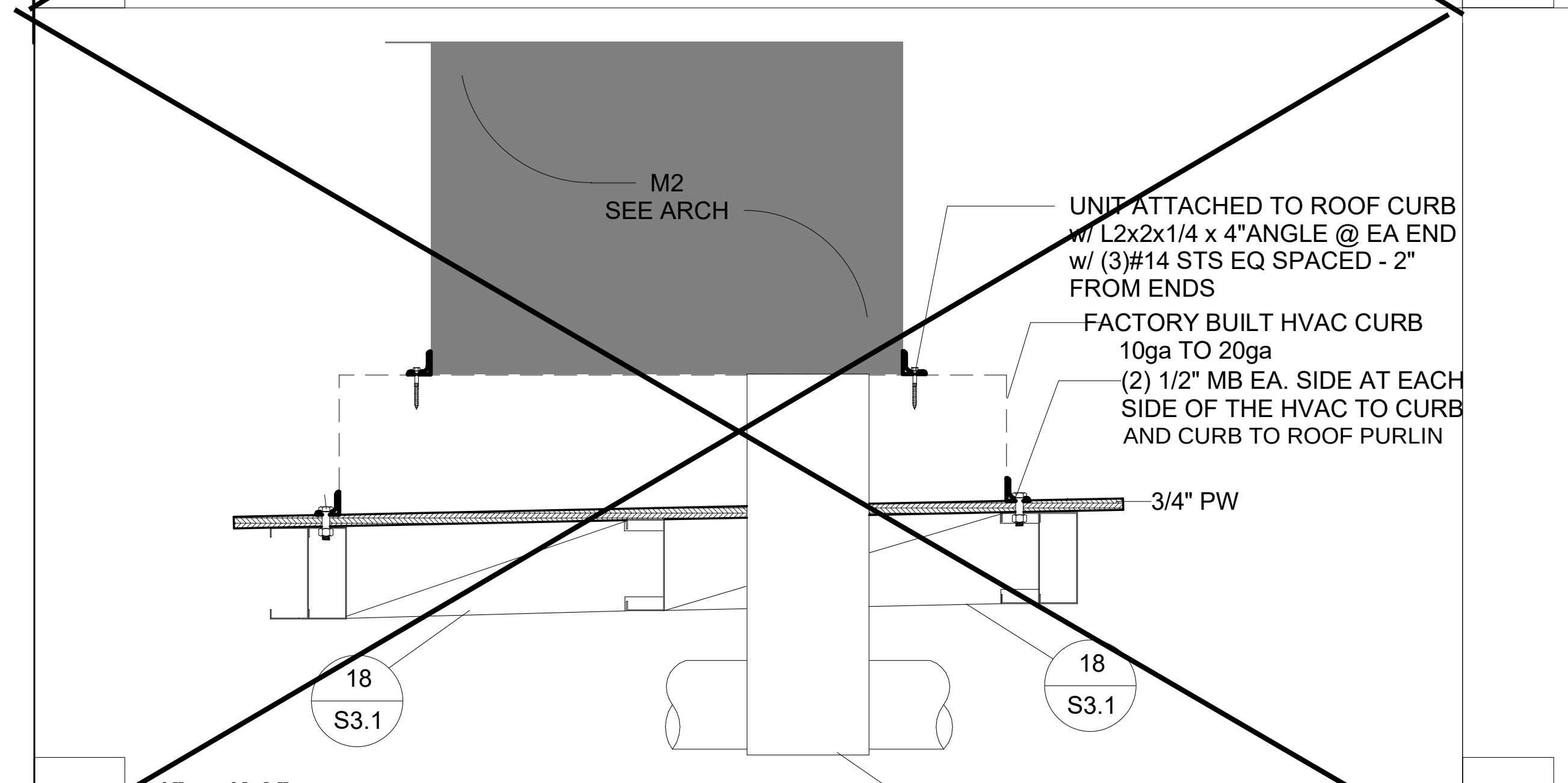
15 3" = 1'-0"
**Soffit Channel Section Properties**



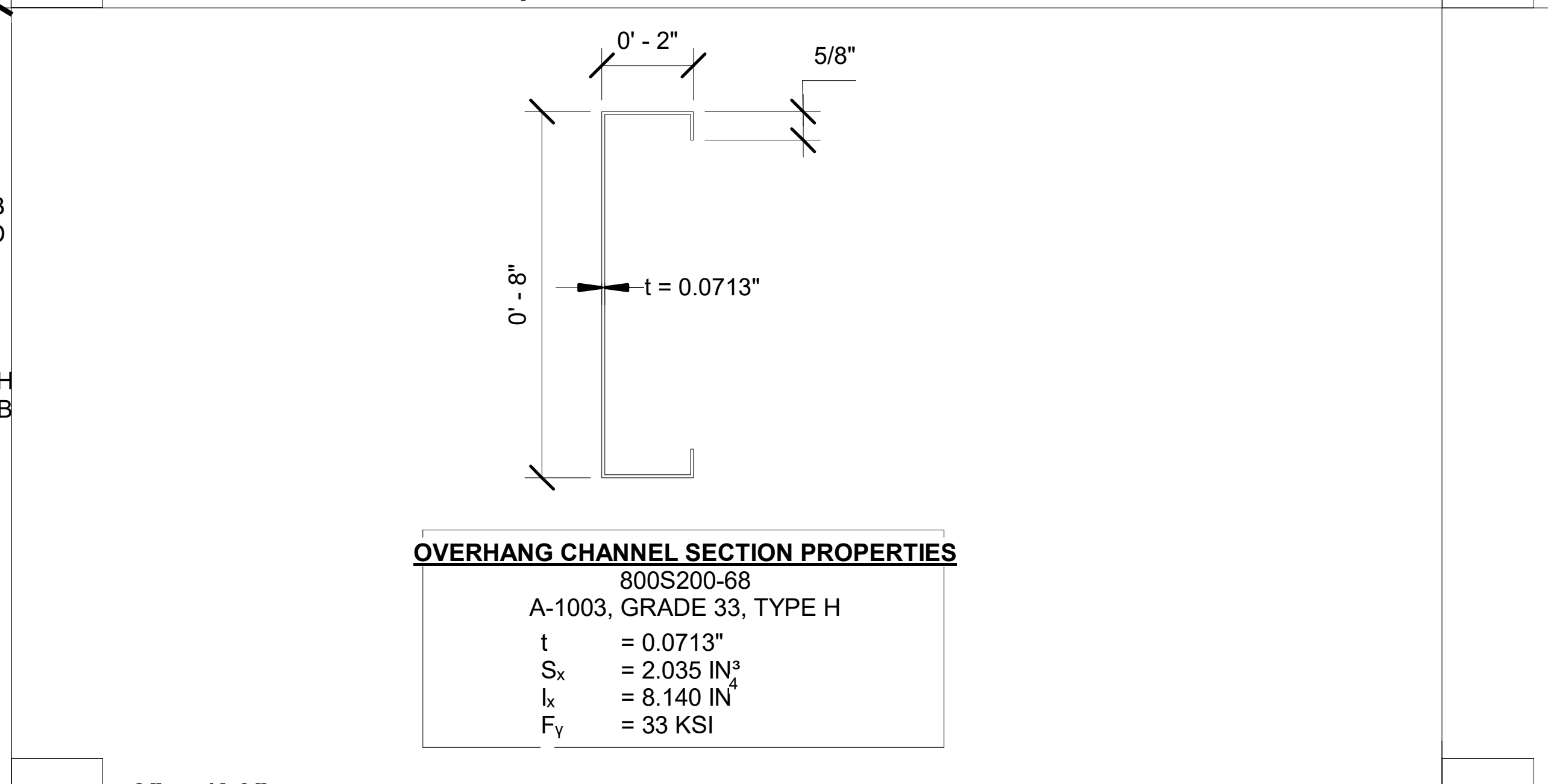
10 3" = 1'-0"
**Roof @ Ridge**



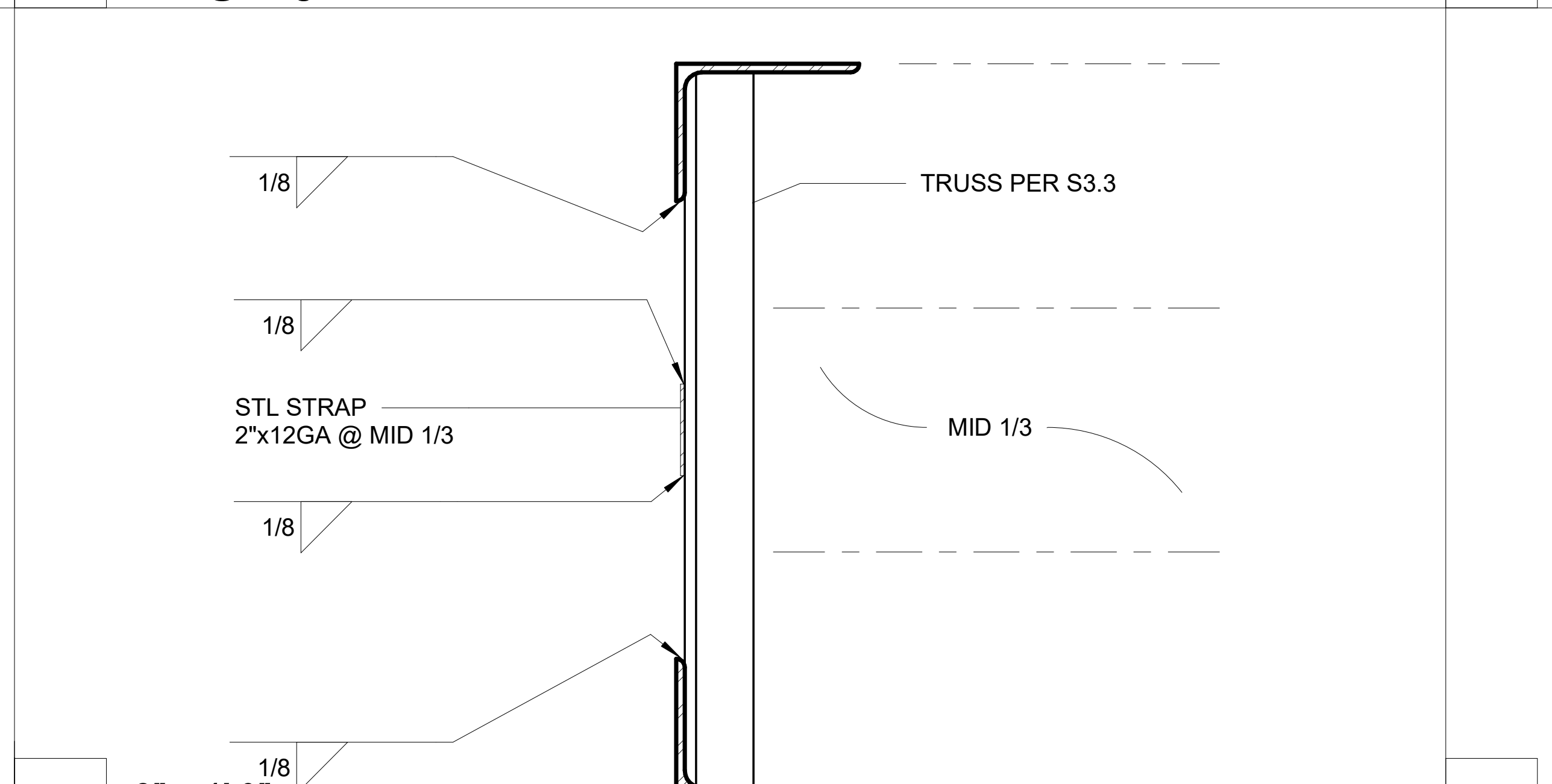
5 3" = 1'-0"
**Roof Channel Joist Section Properites**


M2
SEE ARCH
UNIT ATTACHED TO ROOF CURB w/ L2x2x1/4 x 4"ANGLE @ EA END w/ (3)#14 STS EQ SPACED - 2" FROM ENDS
FACTORY BUILT HVAC CURB 10ga TO 20ga
(2) 1/2" MB EA. SIDE AT EACH SIDE OF THE HVAC TO CURB AND CURB TO ROOF PURLIN
3/4" PW
18
S3.1
18
S3.1
SUPPLY AND RETURN

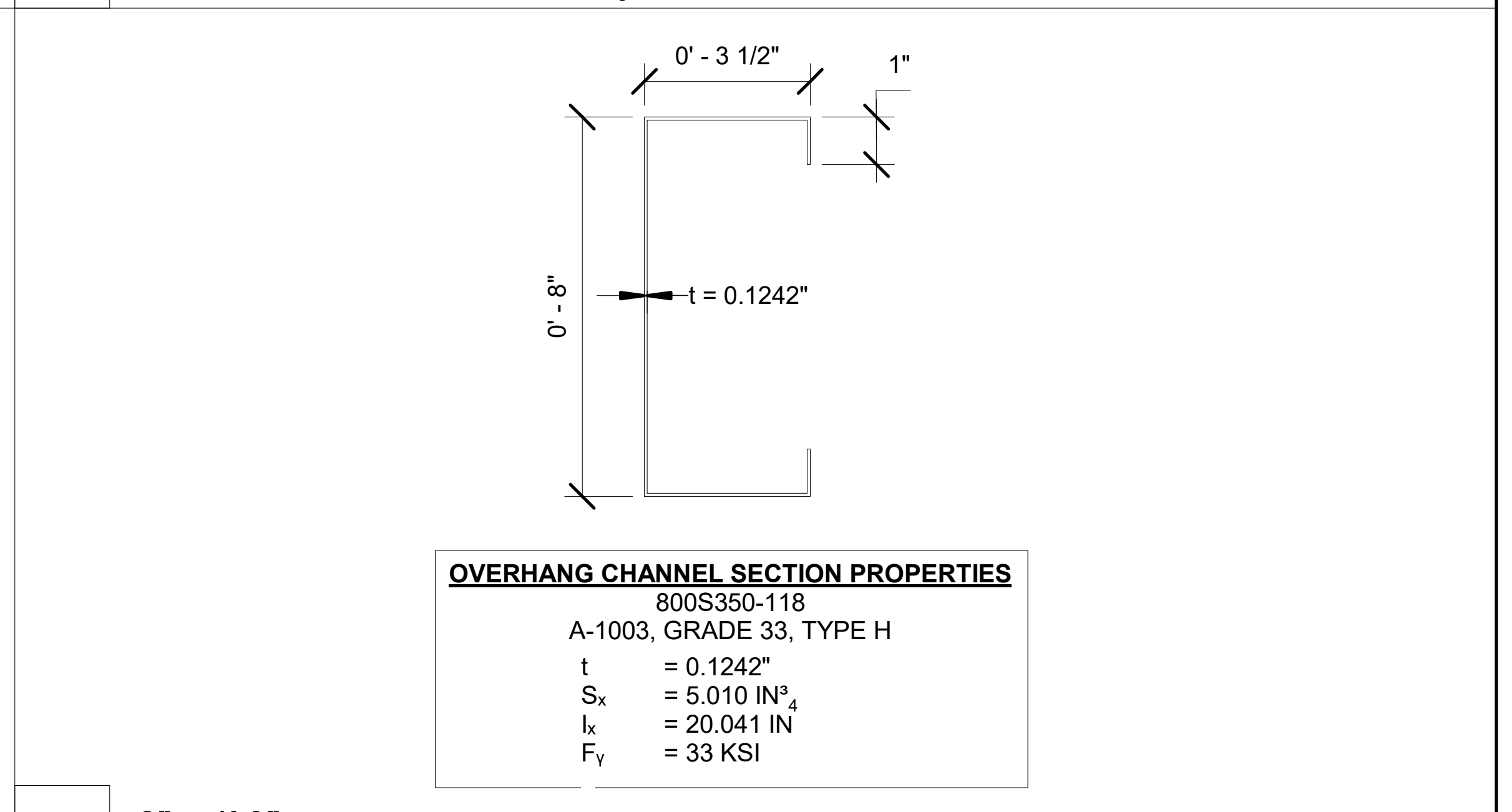
19 1" = 1'-0"
**HVAC**



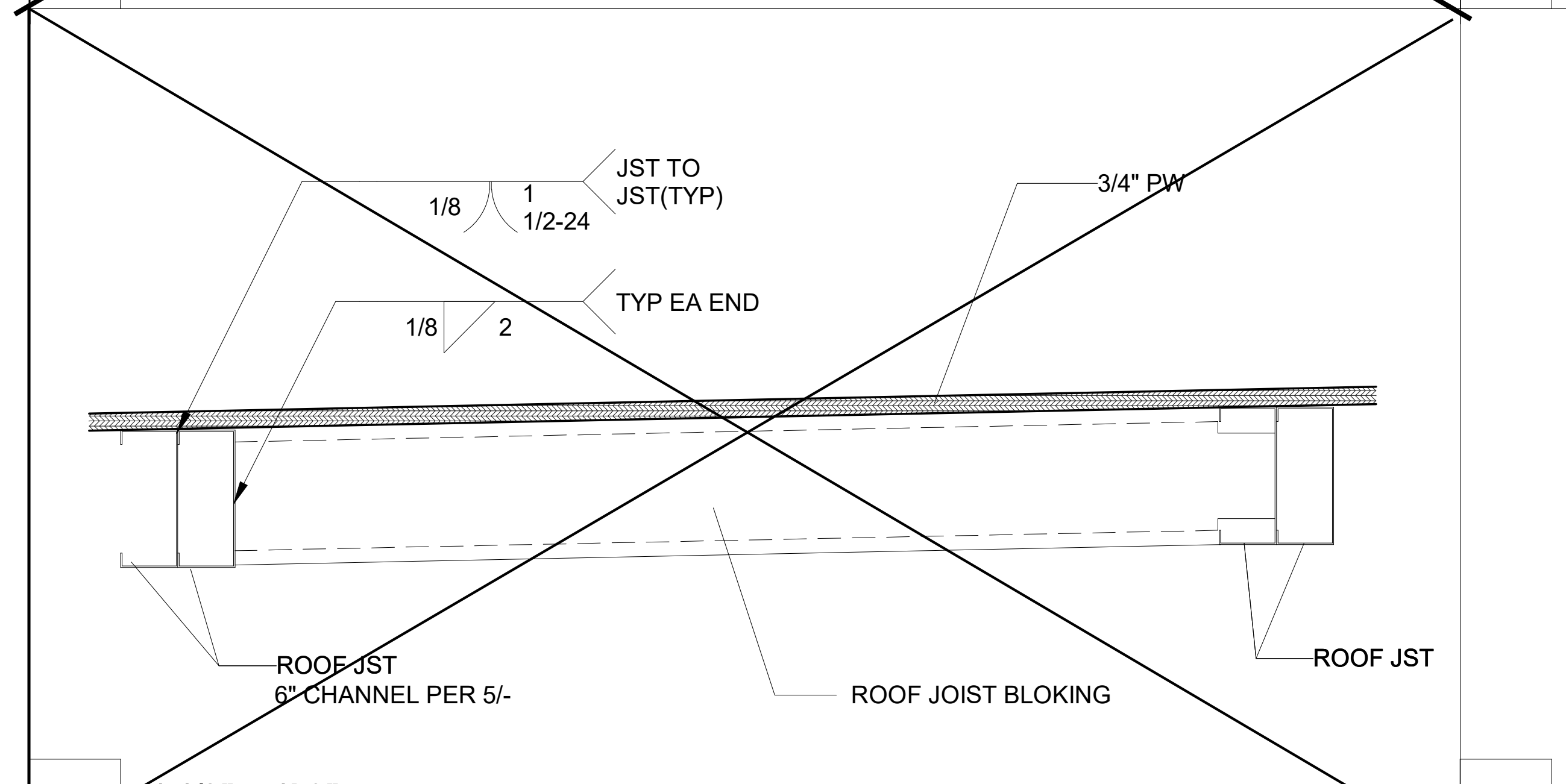
14 3" = 1'-0"
**Fascia Channel Section Properties**



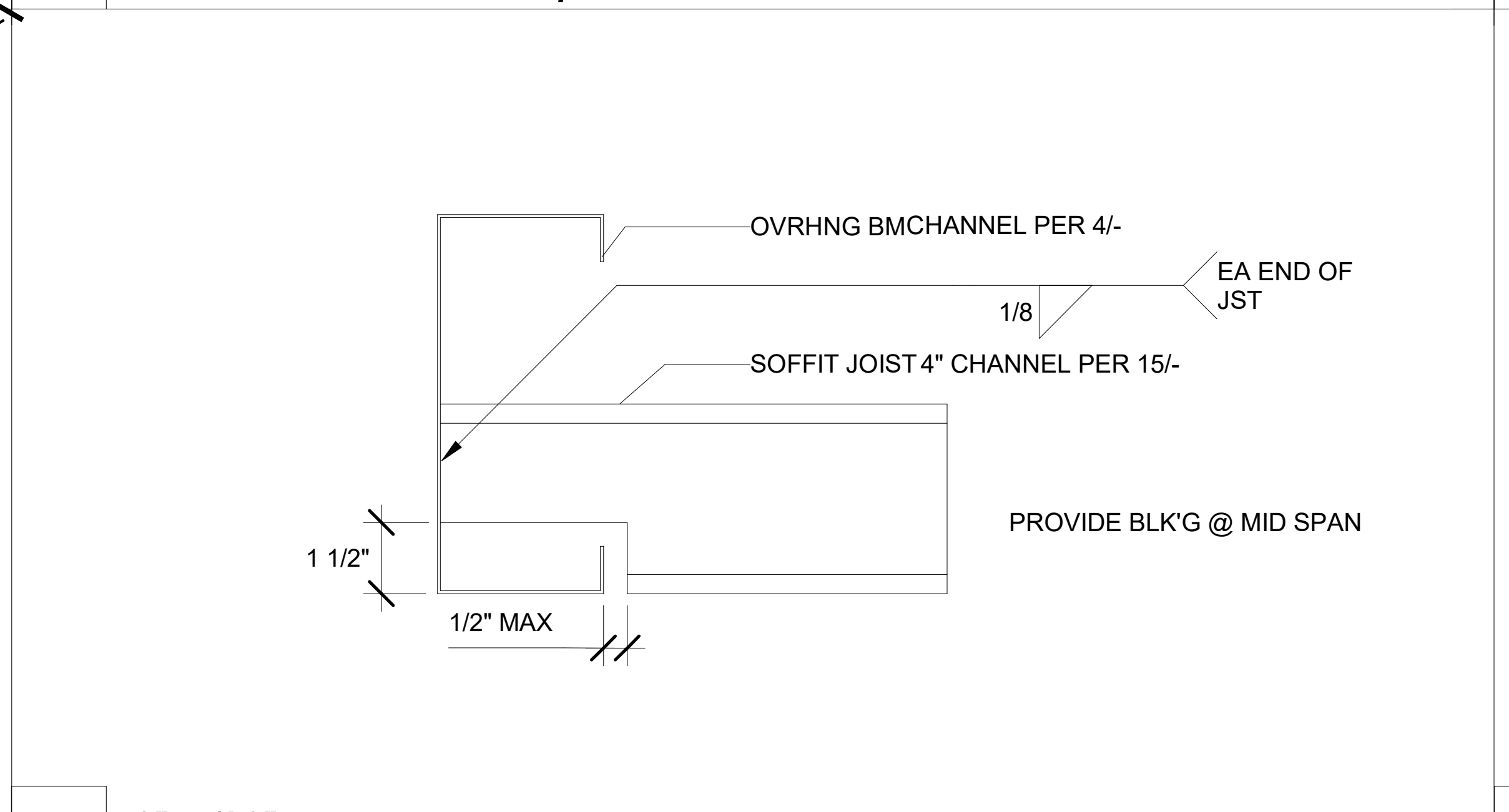
9 3" = 1'-0"
**Strap to Truss**



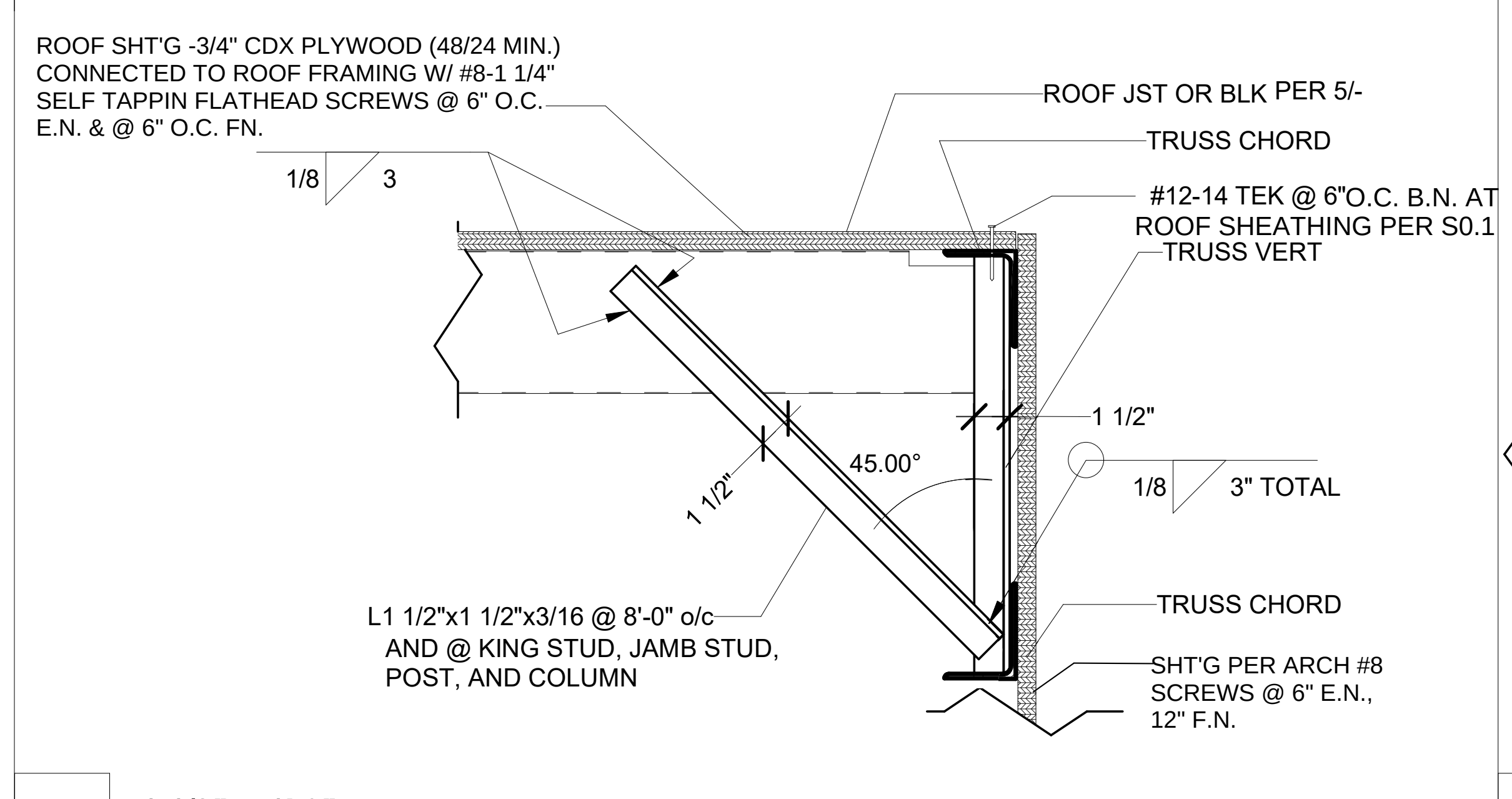
4 3" = 1'-0"
**Overhang Beam Section Properites**



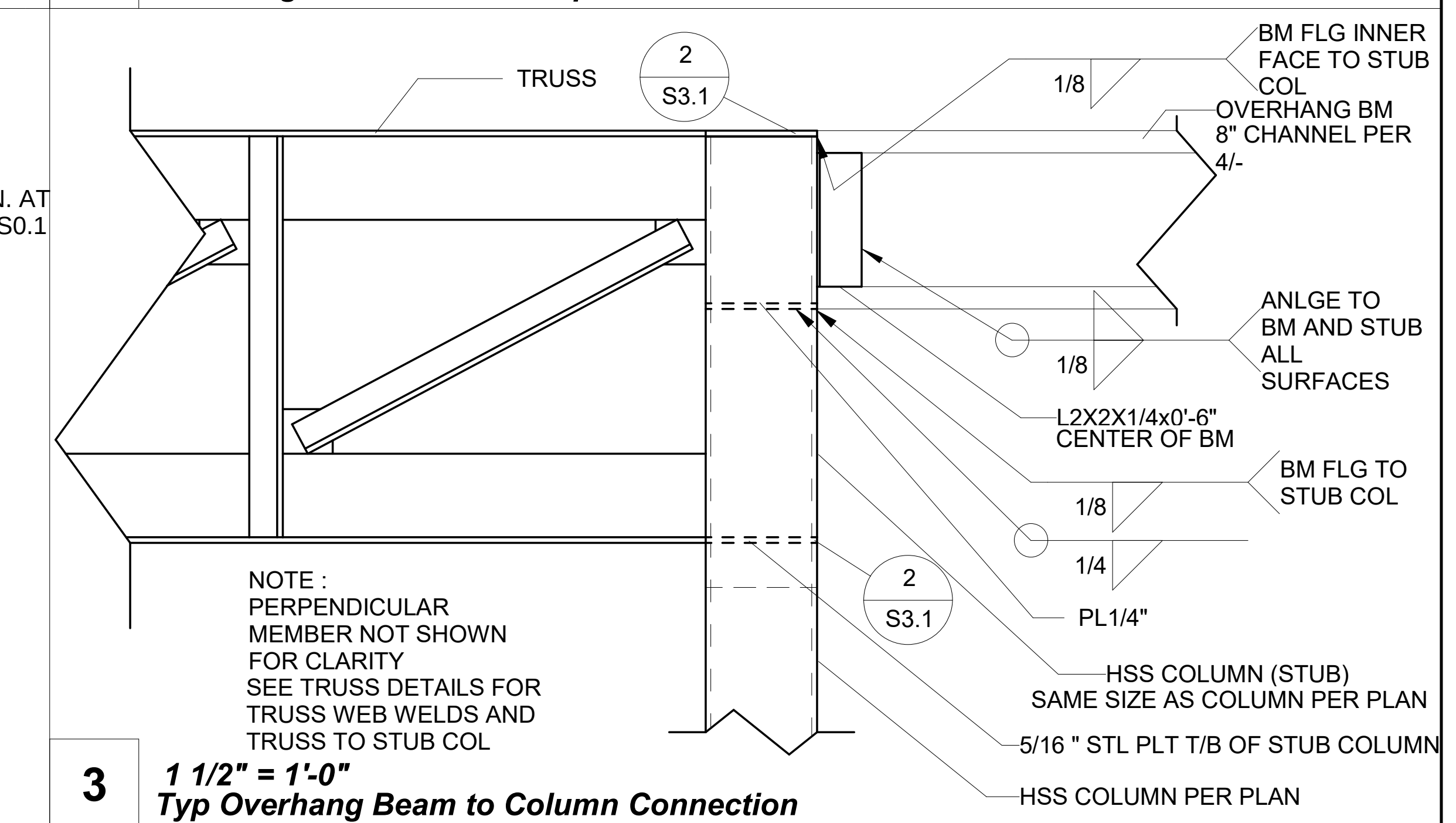
18 1 1/2" = 1'-0"
**HVAC Frmg**



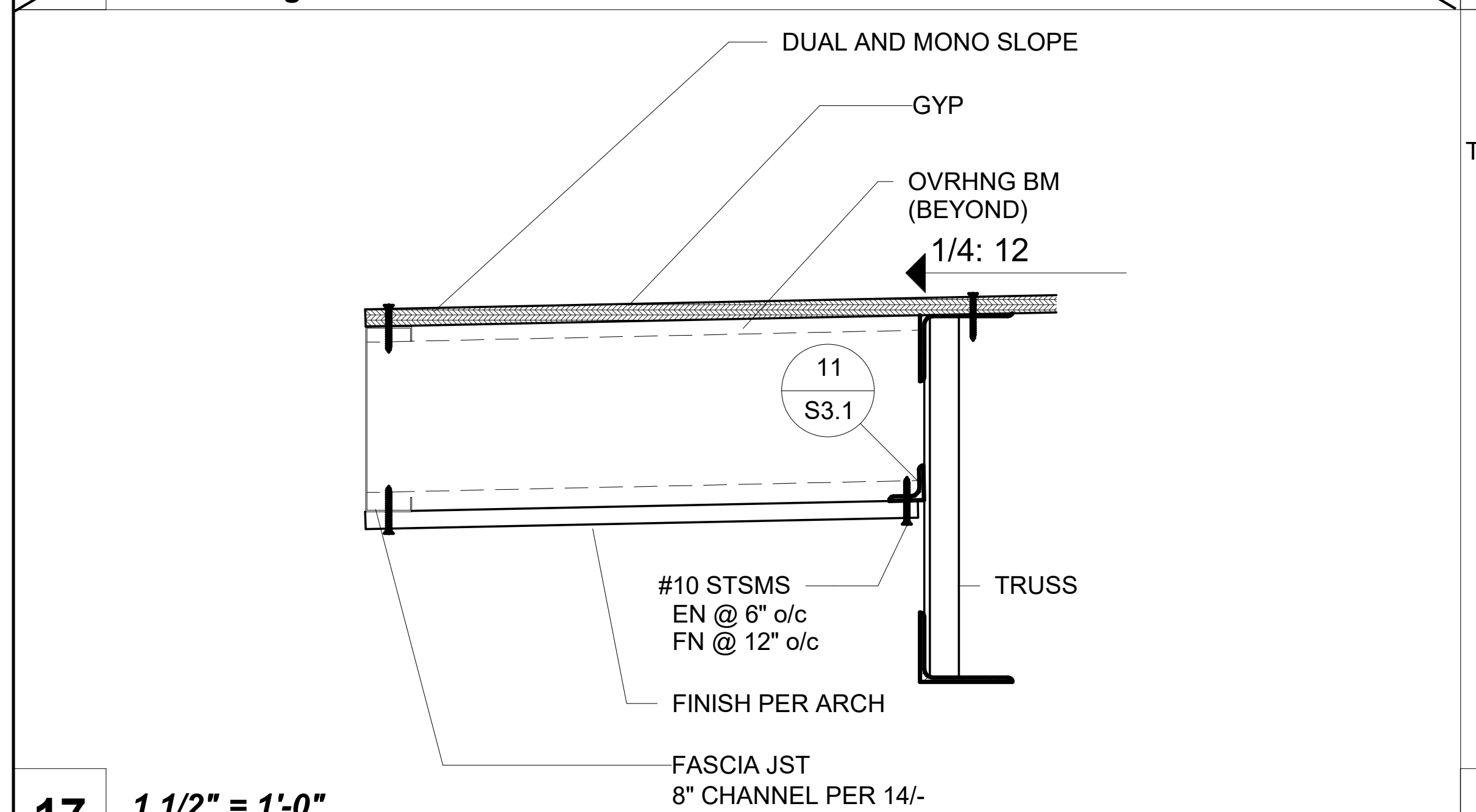
13 3" = 1'-0"
**Typ Soffit Joist Connection**


ROOF SHT'G -3/4" CDX PLYWOOD (48/24 MIN.) CONNECTED TO ROOF FRAMING W/ #8-1 1/4" SELF TAPPIN FLATHEAD SCREWS @ 6" O.C. E.N. & @ 6" O.C. FN.
1/8
3
ROOF JST OR BLK PER 5/-
TRUSS CHORD
#12-14 TEK @ 6"O.C. B.N. AT ROOF SHEATHING PER S0.1
TRUSS VERT
1 1/2"
45.00°
1 1/2"
1/8
3" TOTAL
L1 1/2"x1 1/2"x3/16 @ 8'-0" o/c AND @ KING STUD, JAMB STUD, POST, AND COLUMN
TRUSS CHORD
SHT'G PER ARCH #8 SCREWS @ 6" E.N., 12" F.N.

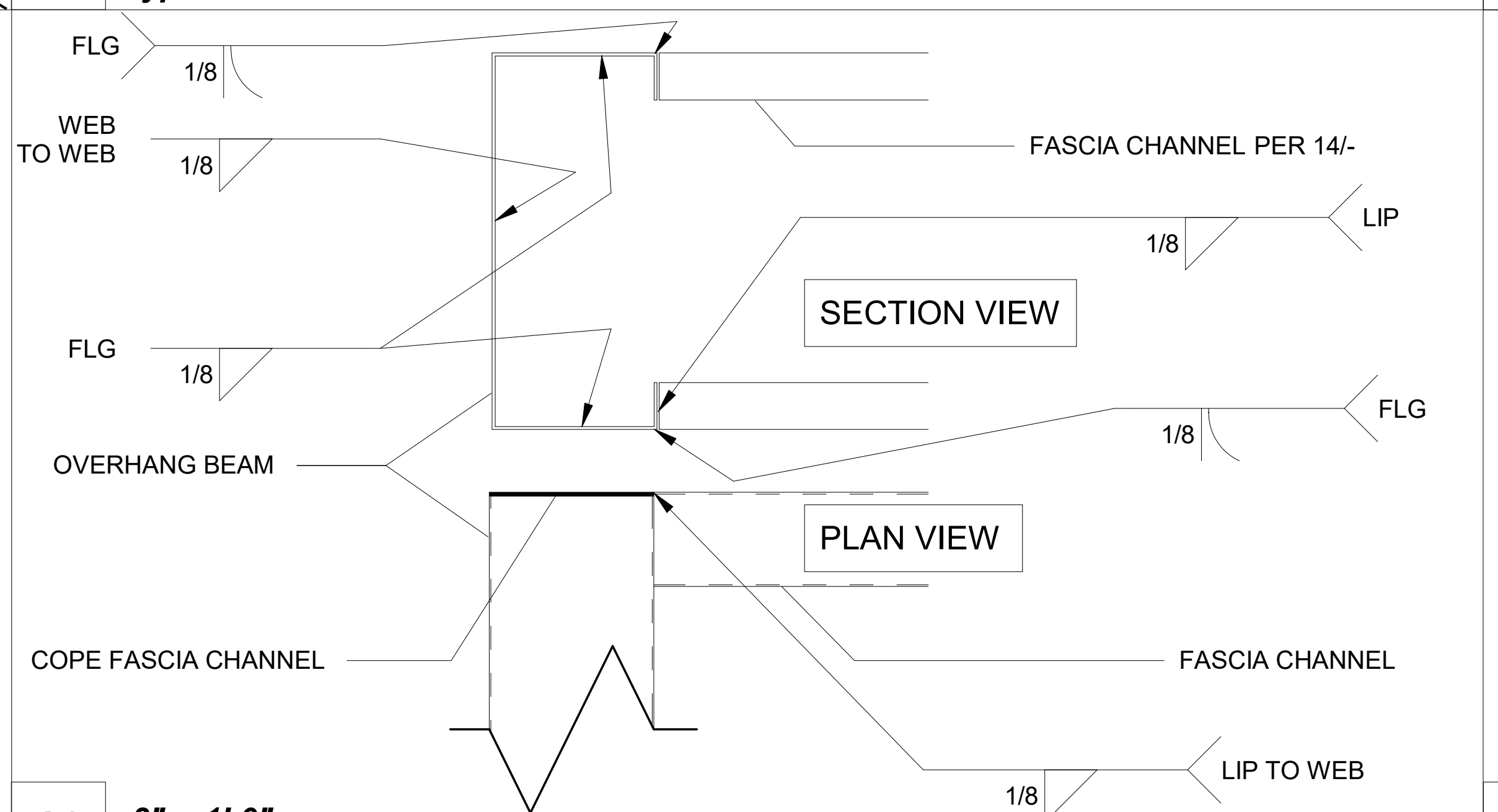
8 1 1/2" = 1'-0"
**Typ Roof Jst Bracing**


TRUSS
2
S3.1
1/8
BM FLG INNER FACE TO STUB COL
OVERHANG BM 8" CHANNEL PER 4/-
ANLGE TO BM AND STUB ALL SURFACES
1/8
L2X2X1/4x0'-6" CENTER OF BM
1/8
BM FLG TO STUB COL
1/4
2
S3.1
PL1/4"
NOTE : PERPENDICULAR MEMBER NOT SHOWN FOR CLARITY SEE TRUSS DETAILS FOR TRUSS WEB WELDS AND TRUSS TO STUB COL
HSS COLUMN (STUB) SAME SIZE AS COLUMN PER PLAN
5/16 " STL PLT T/B OF STUB COLUMN
HSS COLUMN PER PLAN

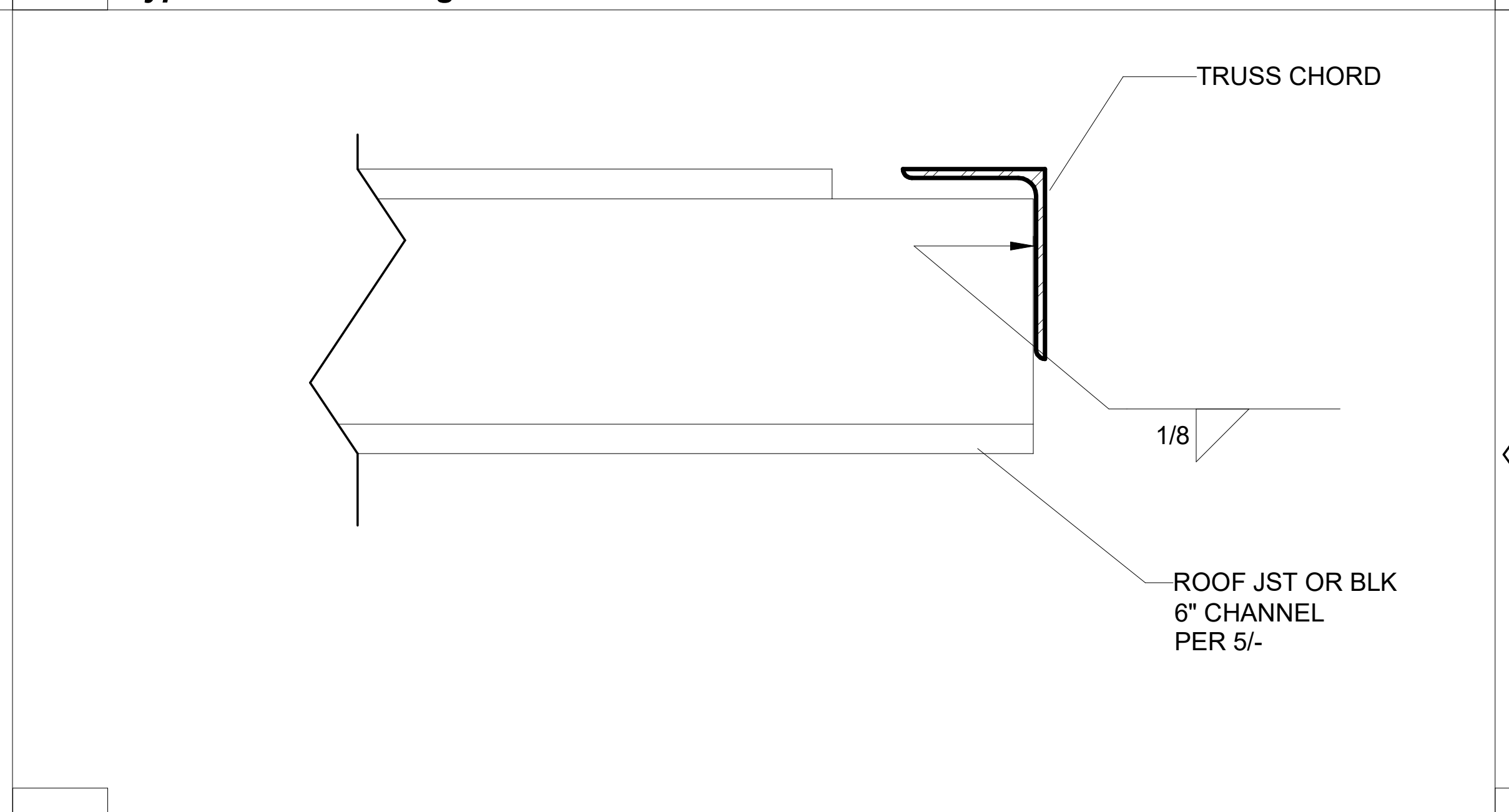
3 1 1/2" = 1'-0"
**Typ Overhang Beam to Column Connection**



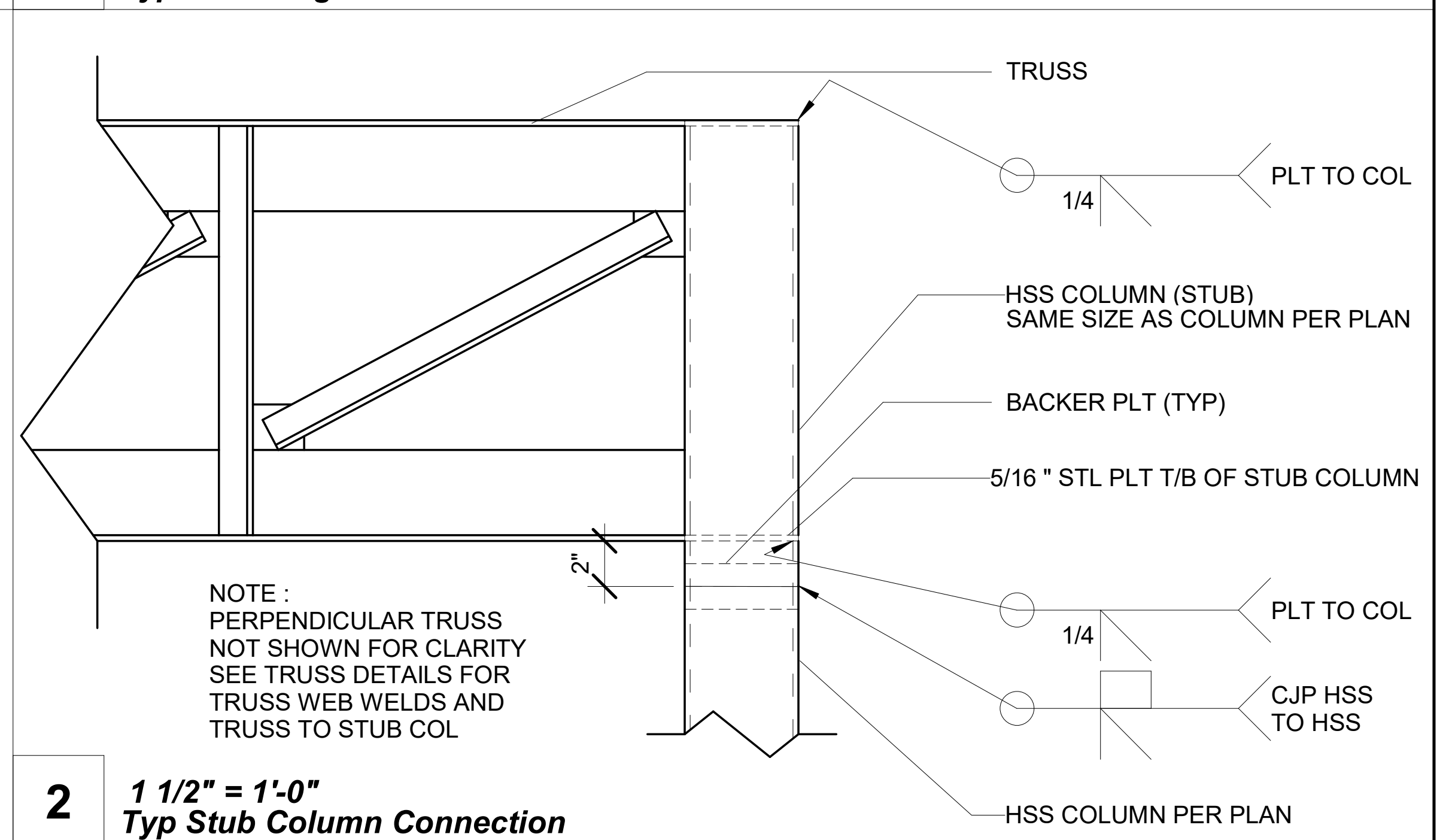
17 1 1/2" = 1'-0"
**2'-6" Overhang @ Endwall**



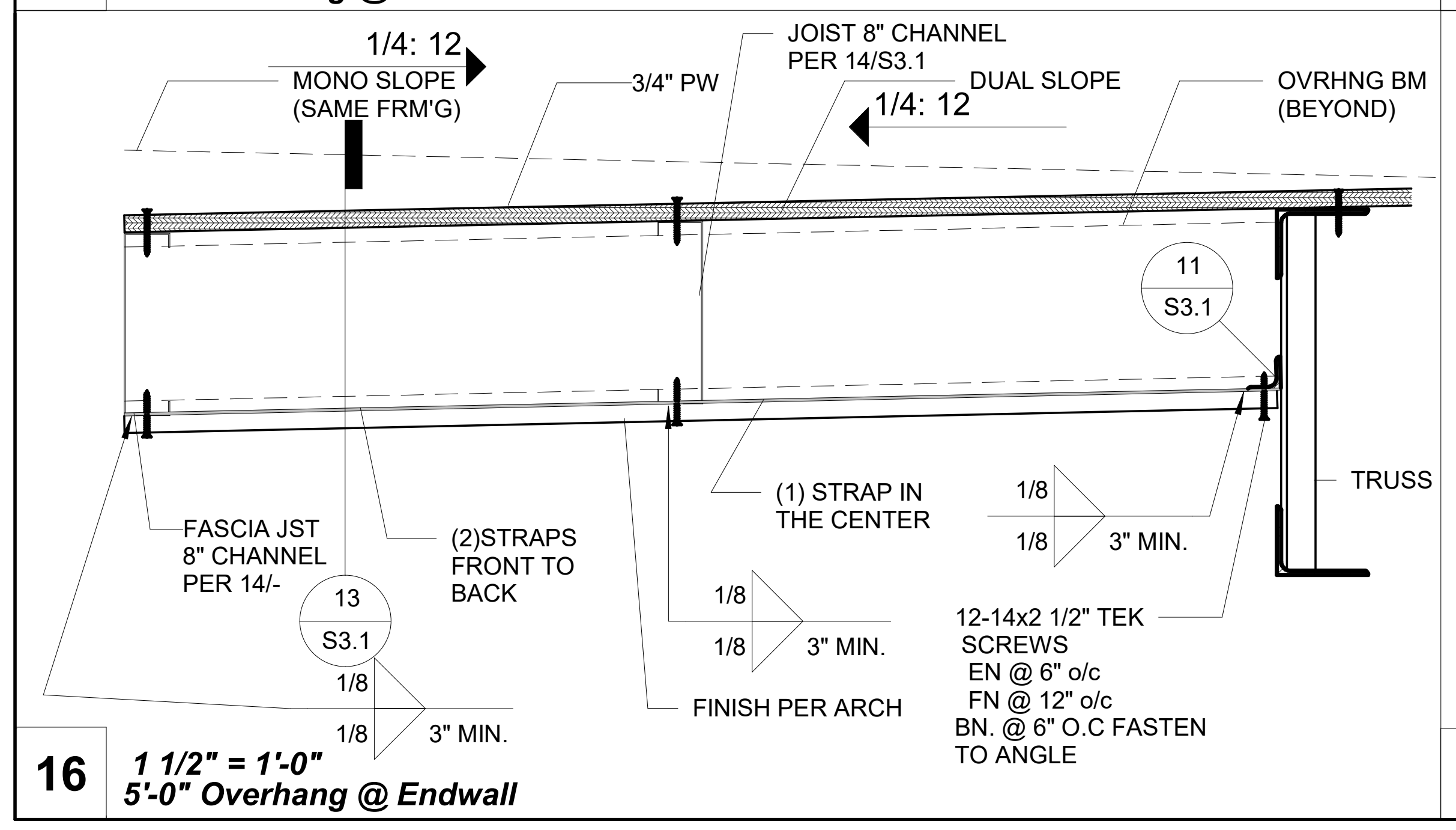
12 3" = 1'-0"
**Fascia to Overhang Beam**



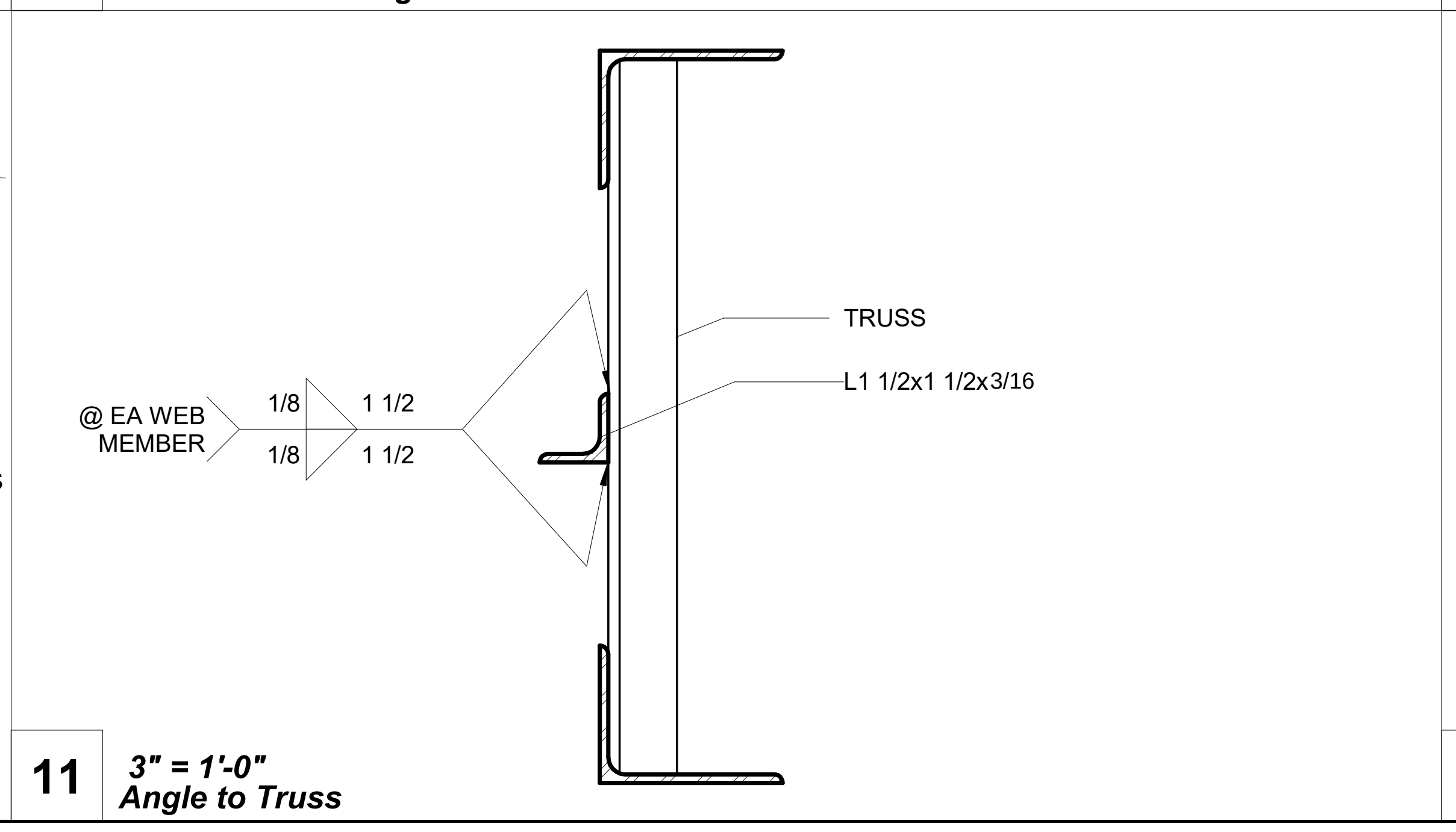
7 3" = 1'-0"
**Typ Roof Joist Connection @ Truss Chord**


TRUSS
PLT TO COL
1/4
HSS COLUMN (STUB) SAME SIZE AS COLUMN PER PLAN
BACKER PLT (TYP)
5/16 " STL PLT T/B OF STUB COLUMN
2"
NOTE : PERPENDICULAR TRUSS NOT SHOWN FOR CLARITY SEE TRUSS DETAILS FOR TRUSS WEB WELDS AND TRUSS TO STUB COL
PLT TO COL
1/4
CJP HSS TO HSS
HSS COLUMN PER PLAN

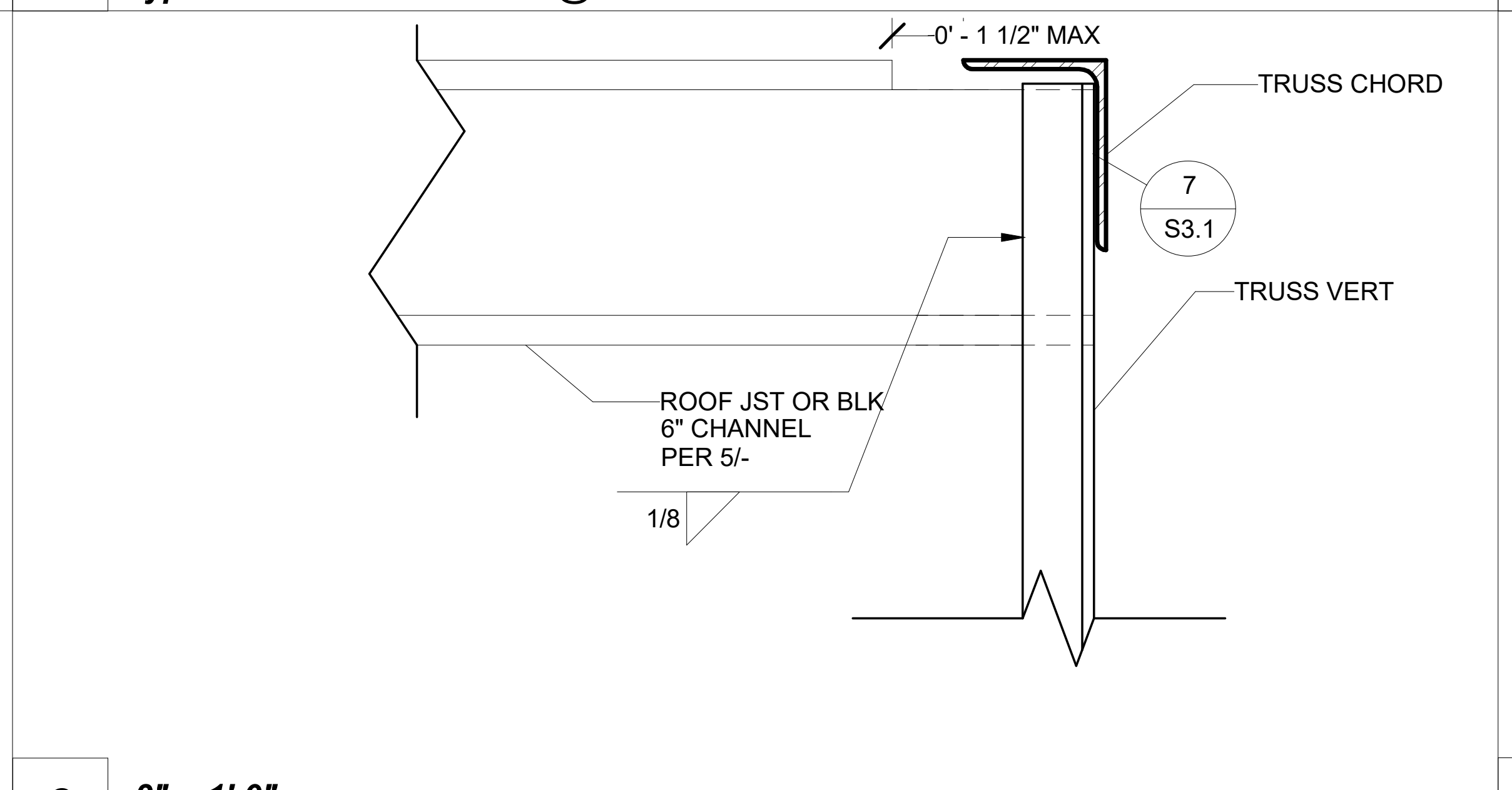
2 1 1/2" = 1'-0"
**Typ Stub Column Connection**



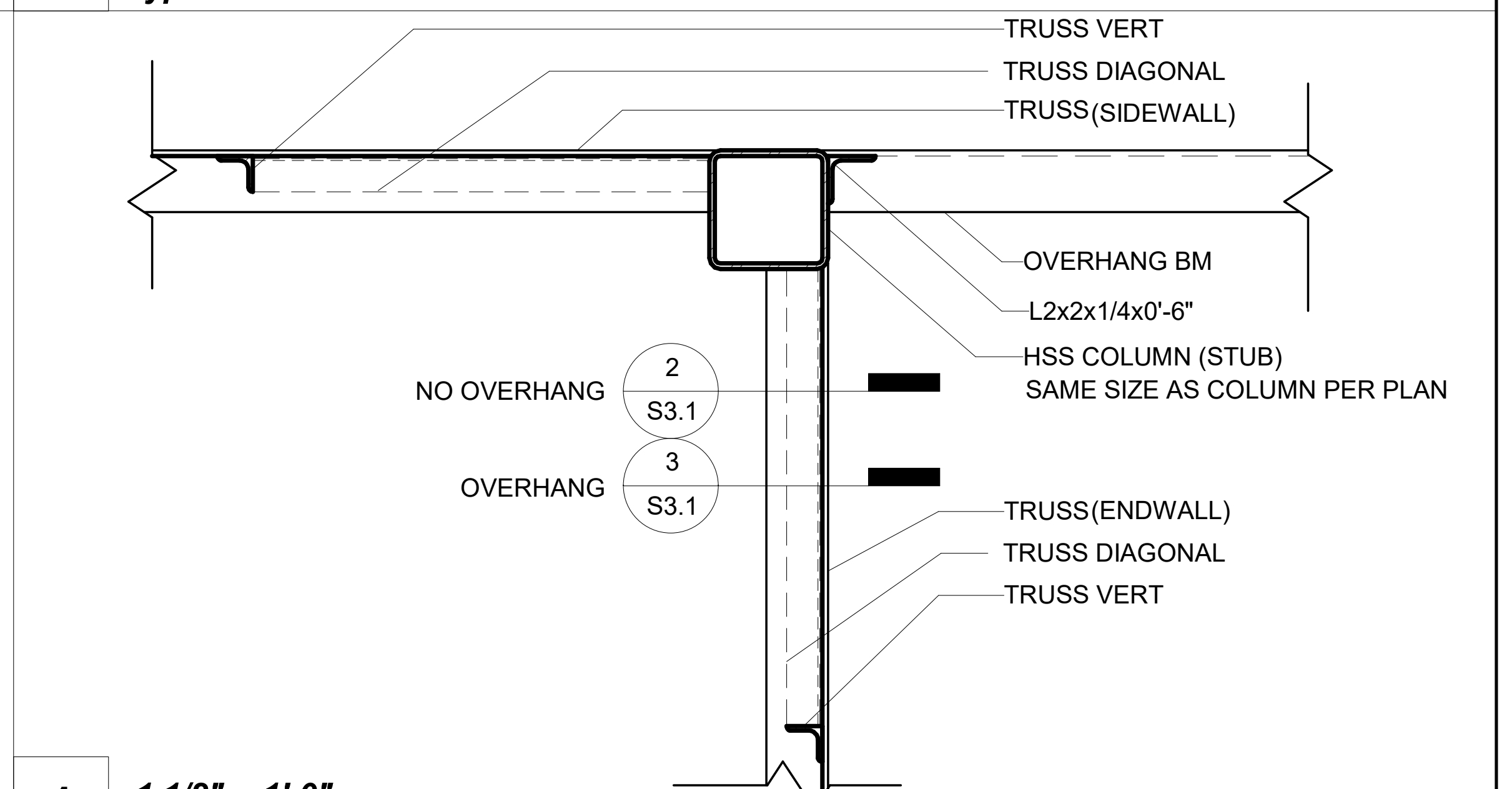
16 1 1/2" = 1'-0"
**5'-0" Overhang @ Endwall**



11 3" = 1'-0"
**Angle to Truss**



6 3" = 1'-0"
**Typ Roof Joist Connection @ Truss Vert**



1 1 1/2" = 1'-0"
**Typ Corner Connection @ Roof**

C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt

6/8/2021 1:52:44 AM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

Manny D. Frisch
No. S3380
03/31/24
RST#22088
02/16/24

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
STRUCTURAL
DETAILS
(ROOF)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
JA/RT

DATE

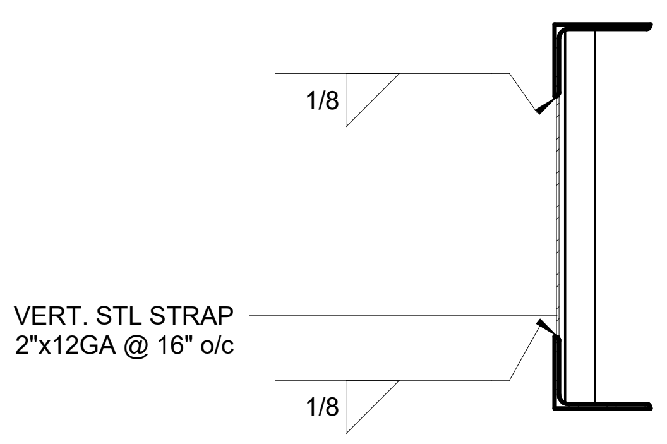
SHEET NO.
S3.1

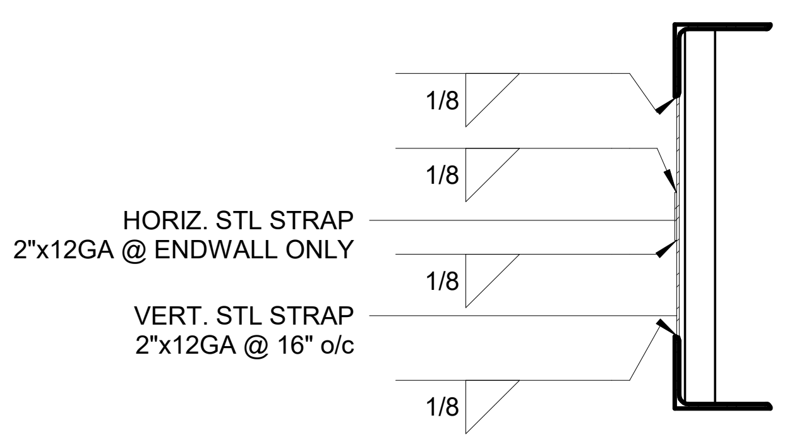
SHEET OF

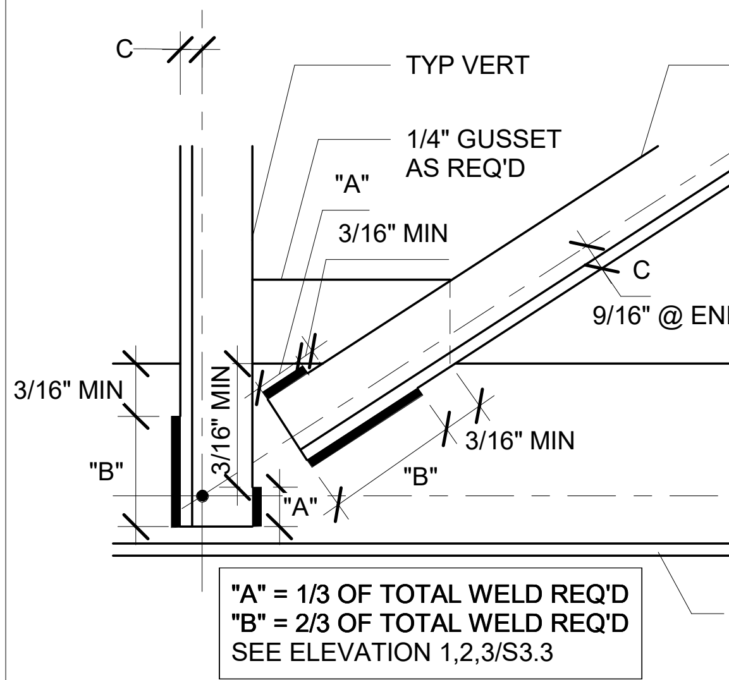
| TABLE A-SECTION CENTROID | |
|---|---|
| SECTION | CENTROID C |
| L4X3 (LLV) | 1 1/4" |
| L4X3 (LLH) | 3/4" |
| L2X2X3/16 | 9/16" |
| L1.5X1.5X3/16 | 7/16" |

NOTE: SEE DETAIL 8 / S3.3

**12** 1/2" = 1'-0"
### TABLE A - SECTION CENTROID

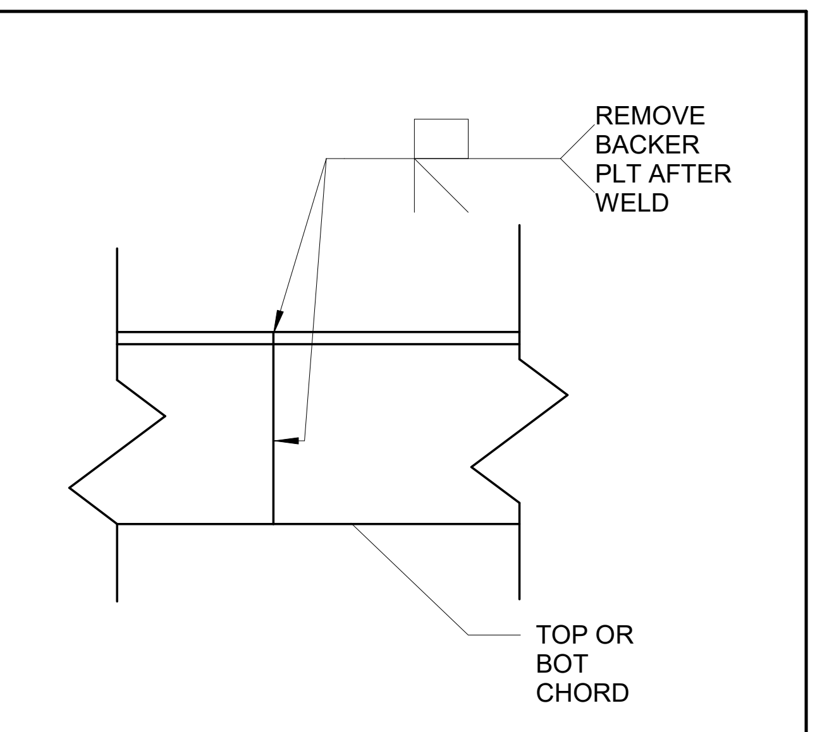




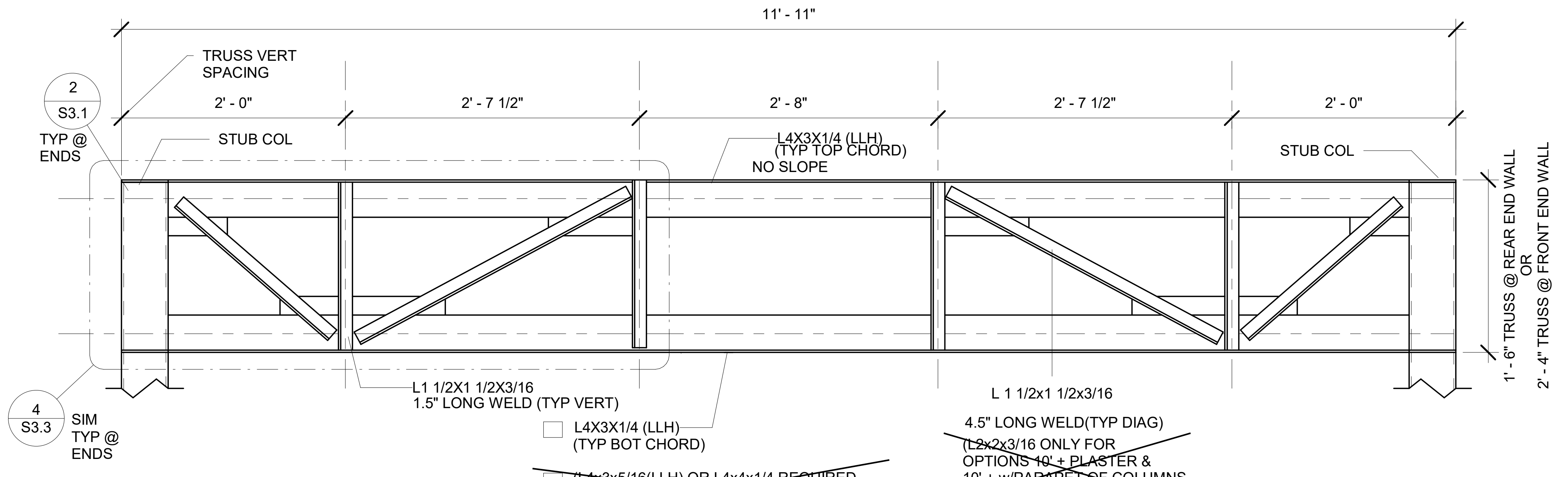


"A" = 1/3 OF TOTAL WELD REQ'D
"B" = 2/3 OF TOTAL WELD REQ'D
SEE ELEVATION 1,2,3/S3.3

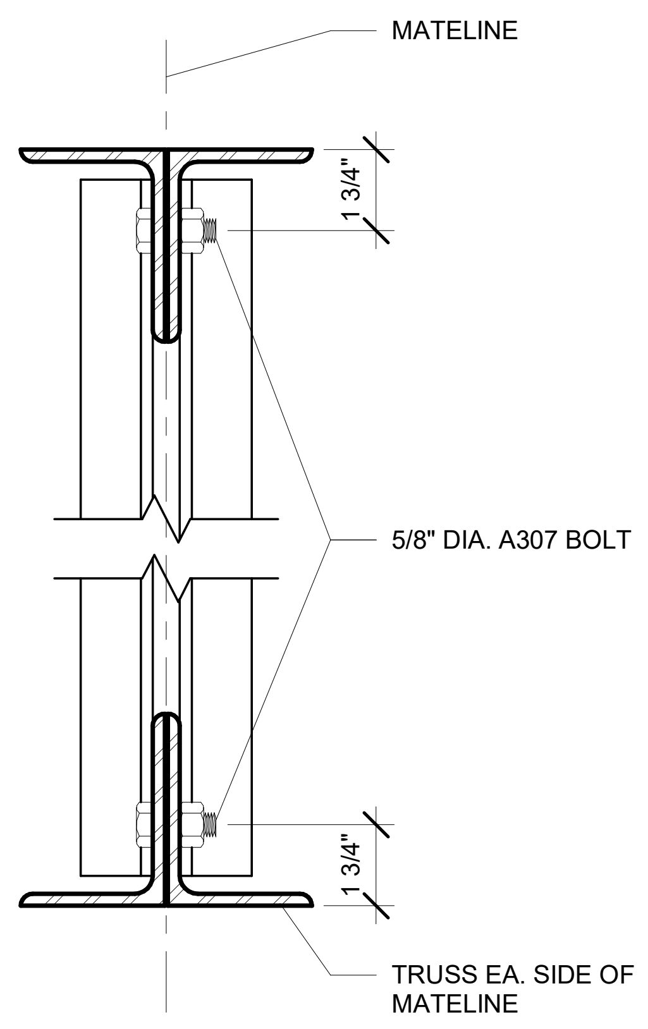
**8** 3" = 1'-0"
### Typ Fillet Weld Lengths



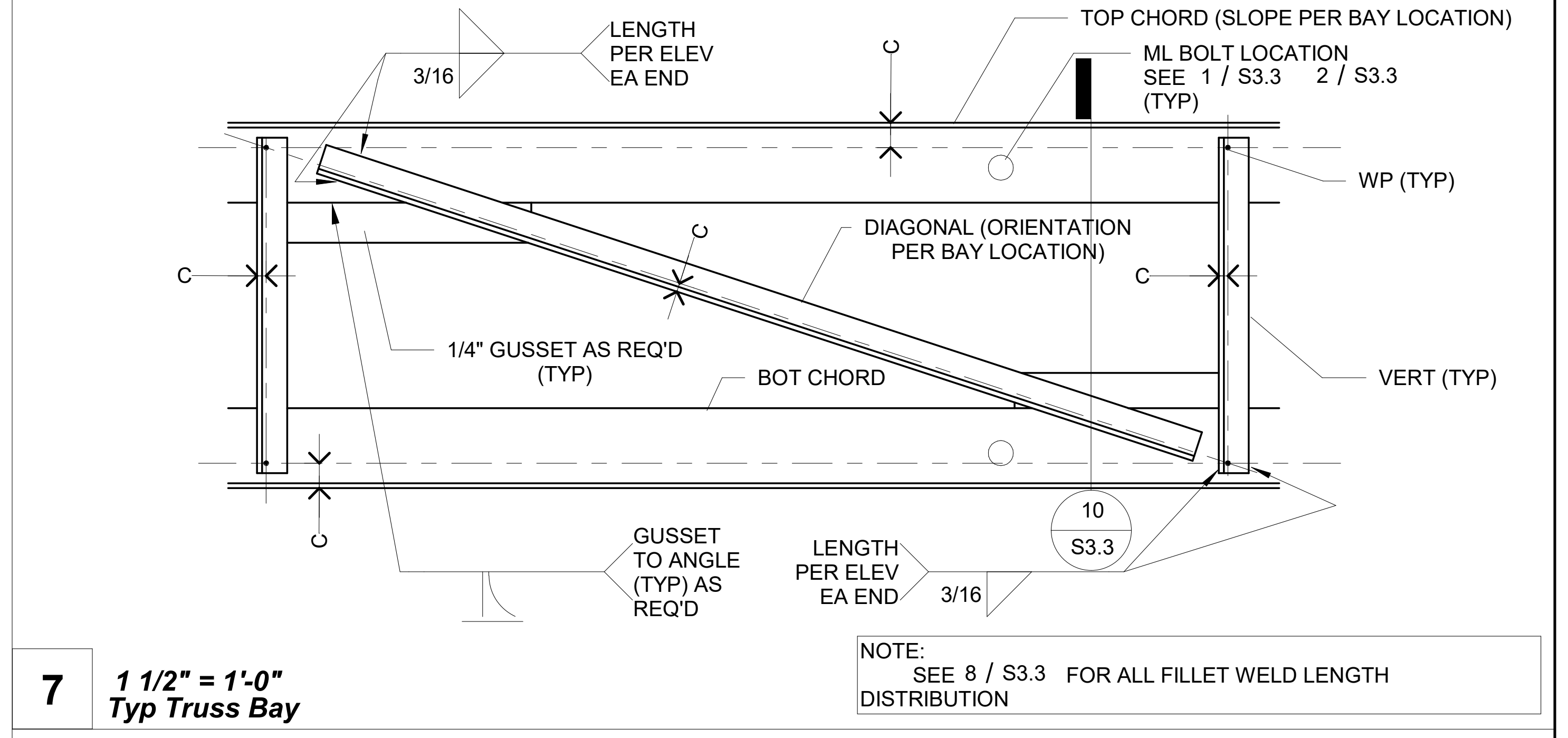
**9** 3" = 1'-0"
### Typ Truss Chord Splice


11' - 11"
TRUSS VERT
SPACING
2
S3.1
TYP @
ENDS
2' - 0"
2' - 7 1/2"
2' - 8"
2' - 7 1/2"
2' - 0"
STUB COL
L4X3X1/4 (LLH)
(TYP TOP CHORD)
NO SLOPE
STUB COL
1' - 6" TRUSS @ REAR END WALL
OR
2' - 4" TRUSS @ FRONT END WALL
4
S3.3
SIM
TYP @
ENDS
L1 1/2X1 1/2X3/16
1.5" LONG WELD (TYP VERT)
L 1 1/2x1 1/2x3/16
4.5" LONG WELD(TYP DIAG)
~~(L2x2x3/16 ONLY FOR OPTIONS 10' + PLASTER & 10' + w/PARAPET OF COLUMNS SCHEDULES)~~
L4X3X1/4 (LLH)
(TYP BOT CHORD)
~~(L4x3x5/16(LLH) OR L4x4x1/4 REQUIRED ONLY FOR OPTIONS 10' W/PLASTER AND 10' W/ PARAPET OF COLUMN SCHEDULES)~~

**3** 1" = 1'-0"
### End Wall Truss

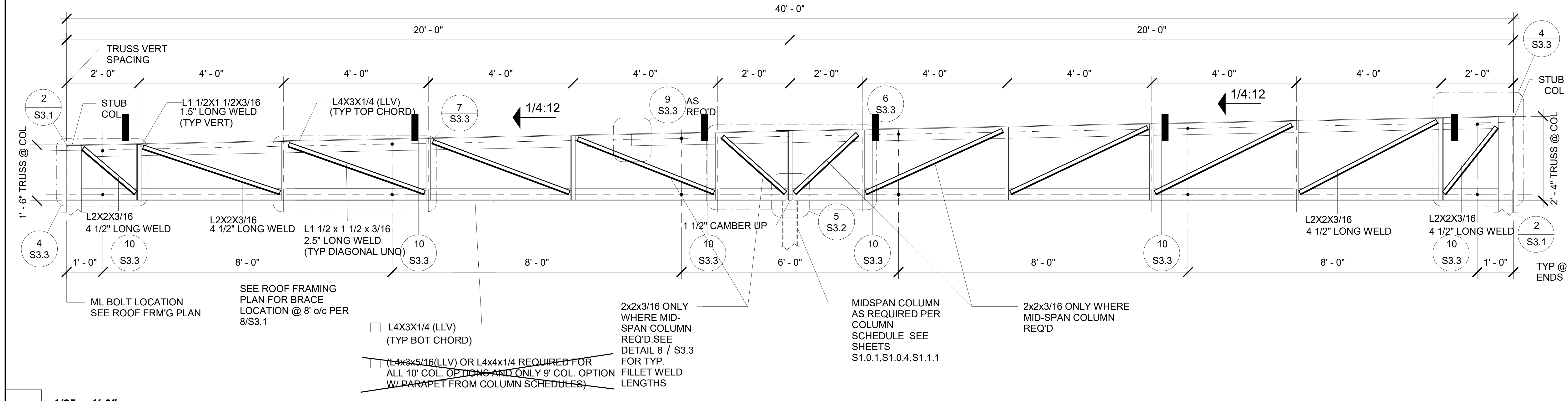


**10** 3" = 1'-0"
### TRUSS CONN. @ MATELINE

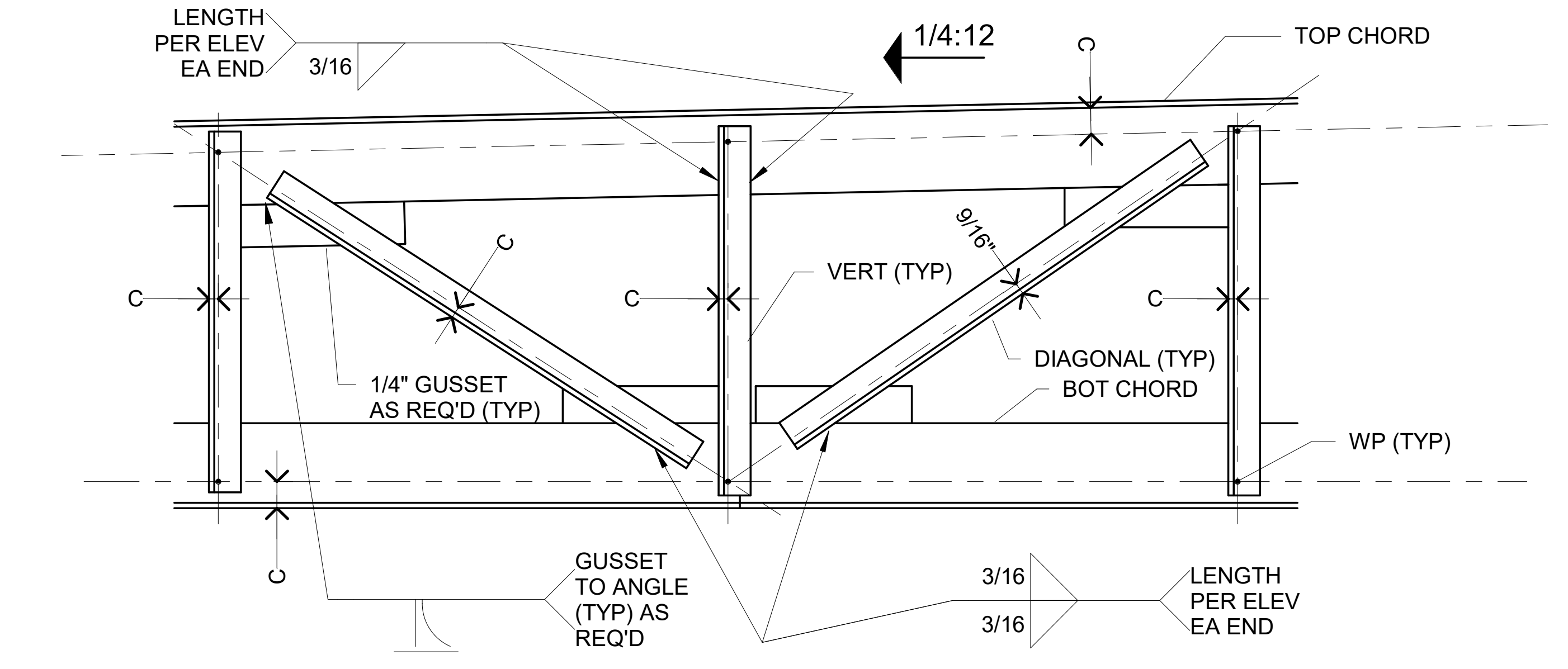


NOTE:
SEE 8 / S3.3 FOR ALL FILLET WELD LENGTH DISTRIBUTION

**7** 1 1/2" = 1'-0"
### Typ Truss Bay

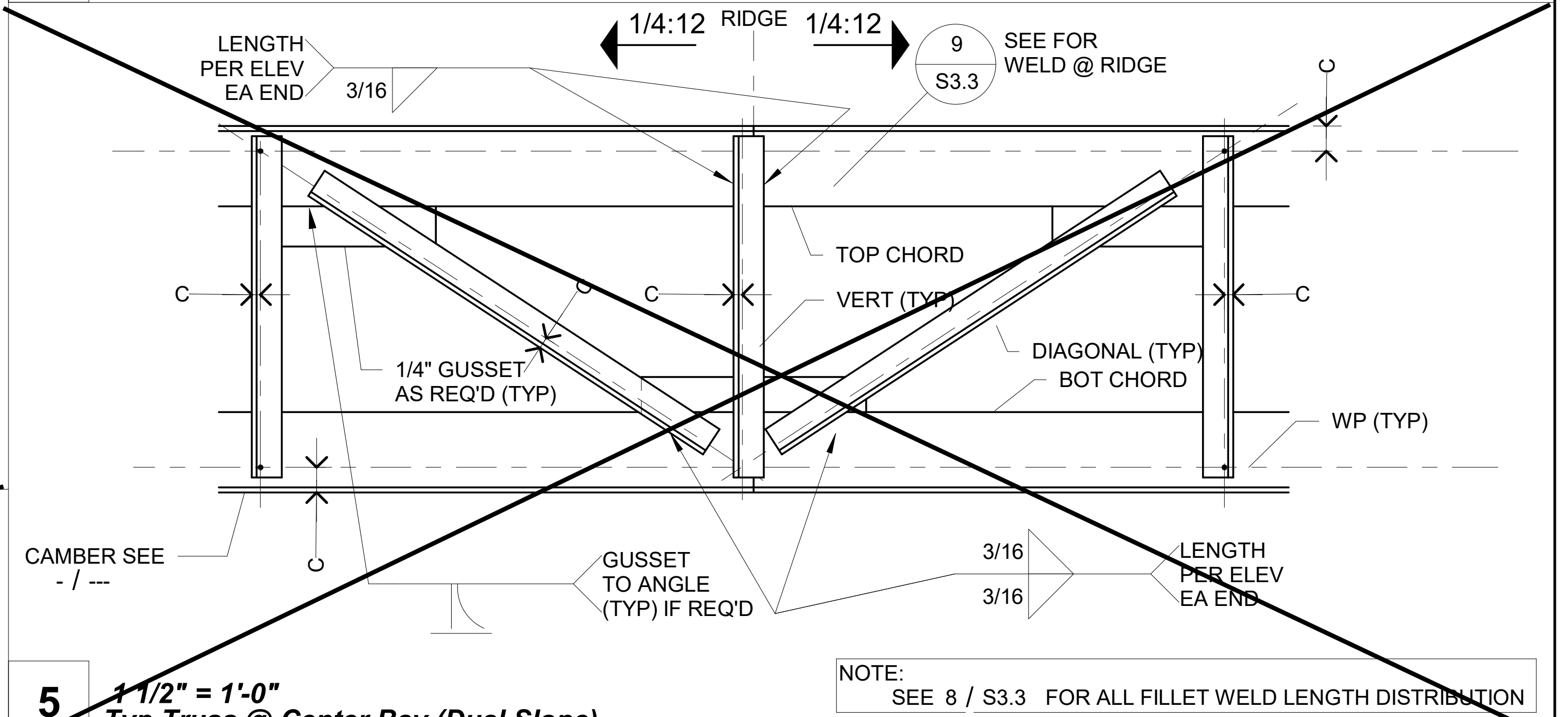


**2** 1/2" = 1'-0"
### Mono Truss



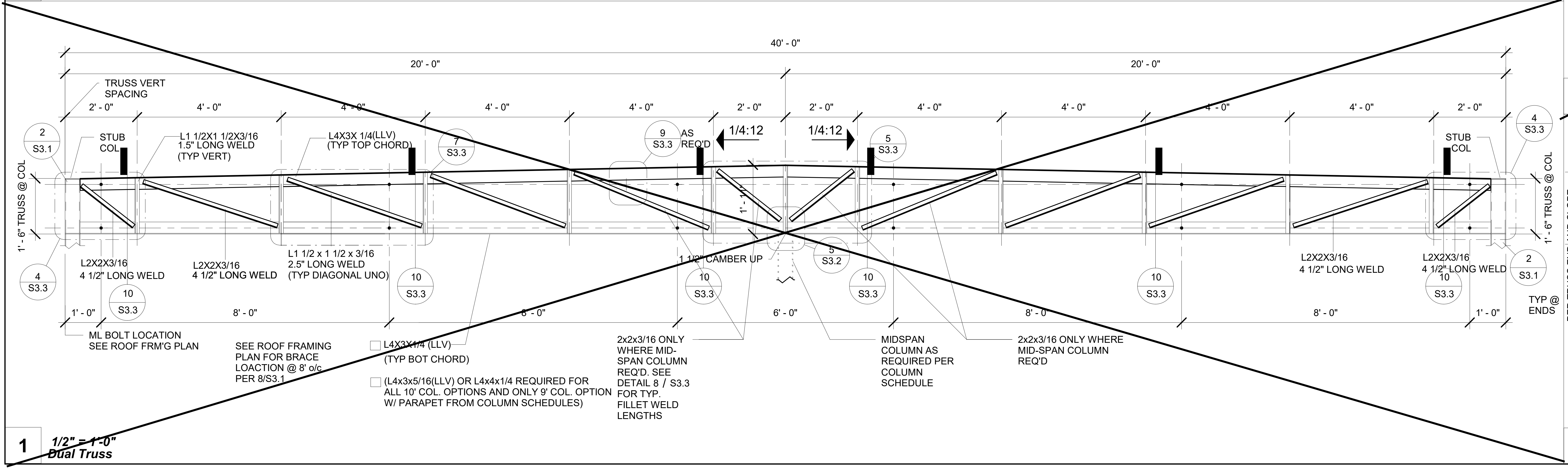
NOTE:
SEE 8 / S3.3 FOR ALL FILLET WELD LENGTH DISTRIBUTION

**6** 1 1/2" = 1'-0"
### Typ Truss @ Center Bay (Mono Slope)

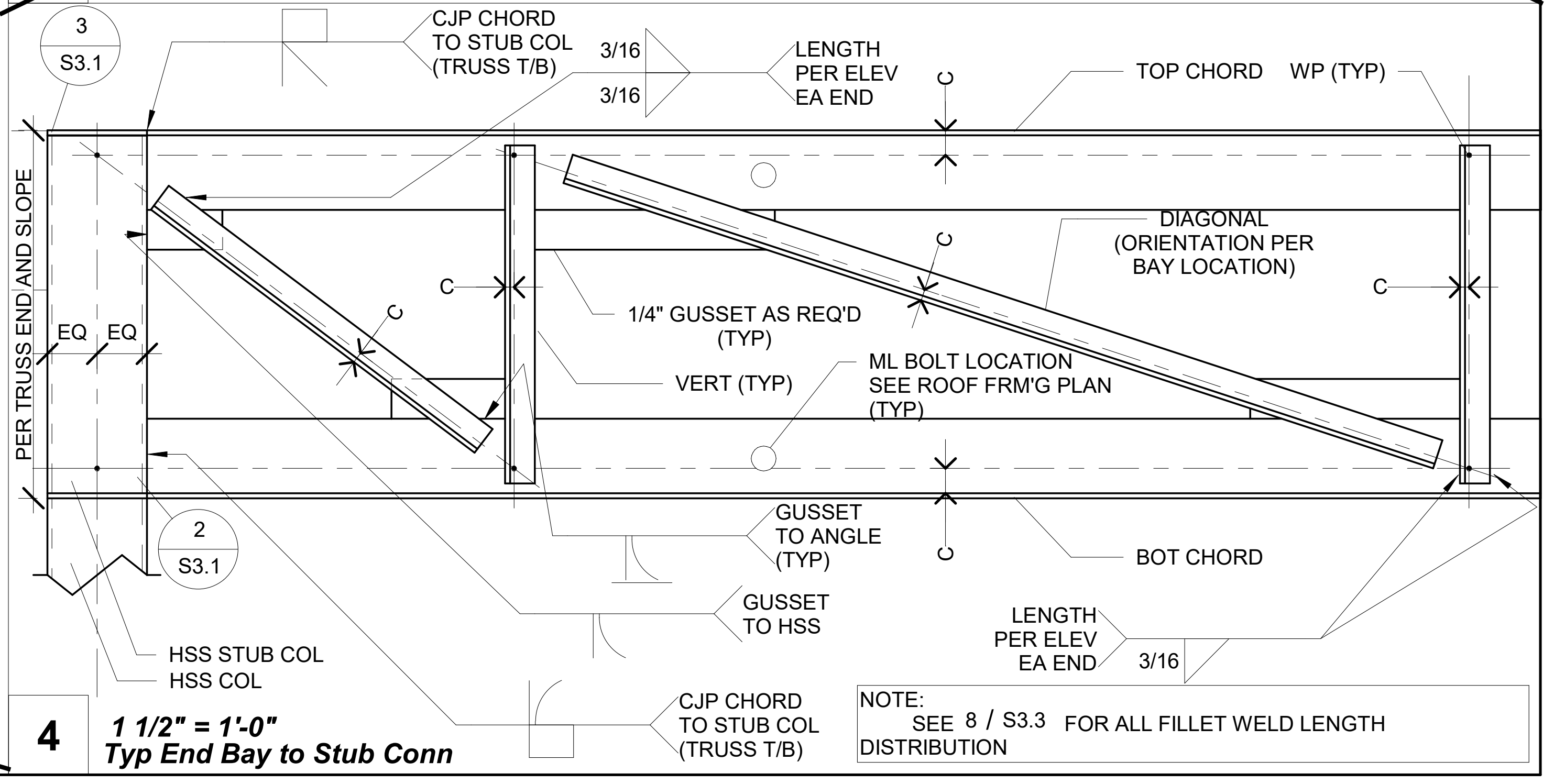


NOTE:
SEE 8 / S3.3 FOR ALL FILLET WELD LENGTH DISTRIBUTION

**5** 1 1/2" = 1'-0"
### Typ Truss @ Center Bay (Dual Slope)



**1** 1/2" = 1'-0"
### Dual Truss



NOTE:
SEE 8 / S3.3 FOR ALL FILLET WELD LENGTH DISTRIBUTION

**4** 1 1/2" = 1'-0"
### Typ End Bay to Stub Conn

M:\2022\22088 - Class Leasing, 24x40 to 120x40 High Seismic 2022 PC\REV\T22088- 2022.09.updated S3.3 with truss cross-section detail and call outs- source 20093.rvt

9/22/2022 11:10:42 AM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRUSH
S3380
03/31/24
STRUCTURAL
STATE OF CALIFORNIA

RST#22088

02/16/24

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
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ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**CODE: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
ROOF PERIMETER TRUSS

PROJECT NUMBER
22088

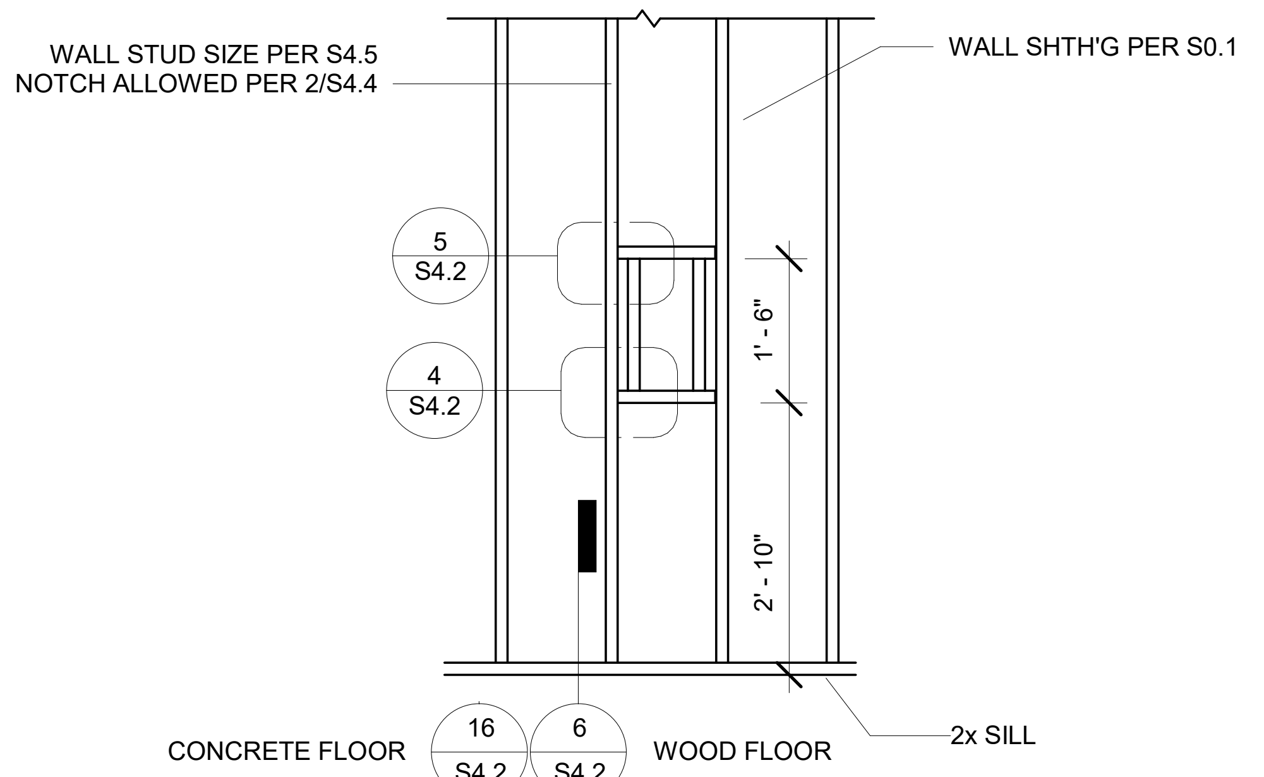
DRAWN BY
rMc/SC

CHECKED BY
RH/RT

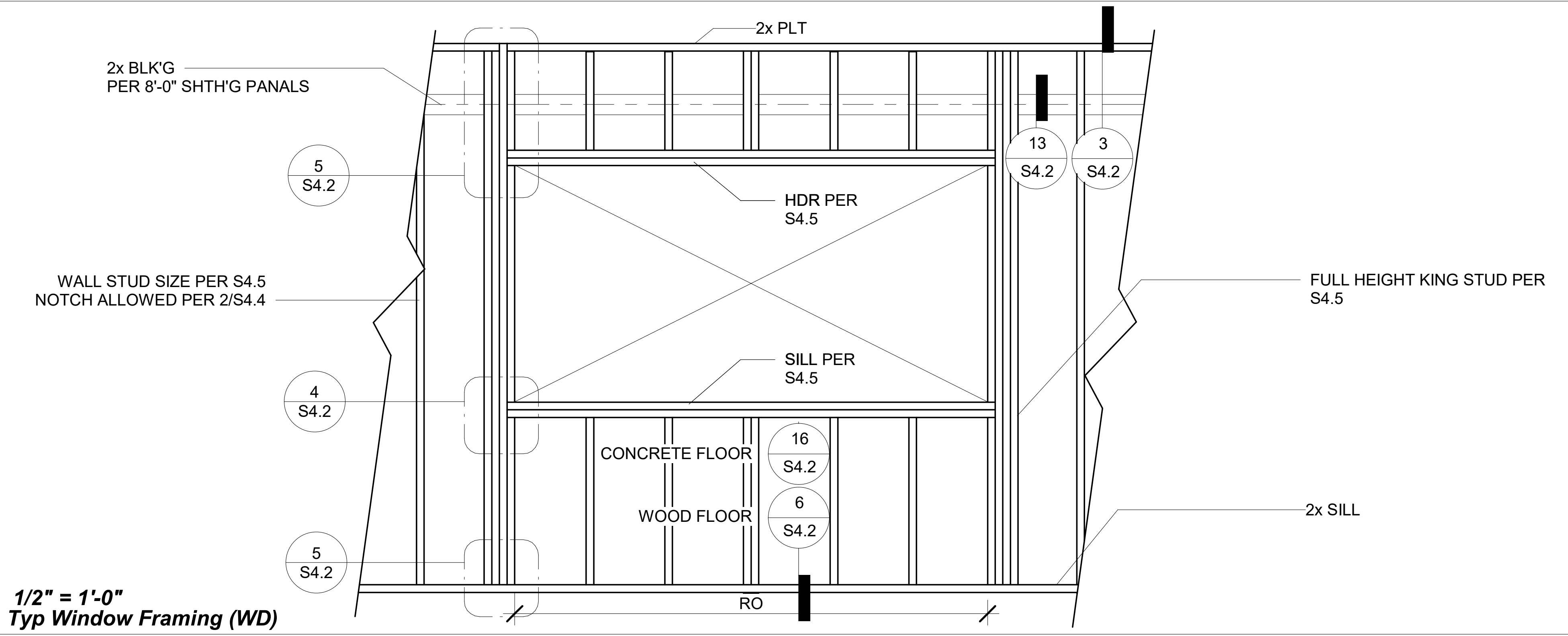
DATE

SHEET NO.
S3.3

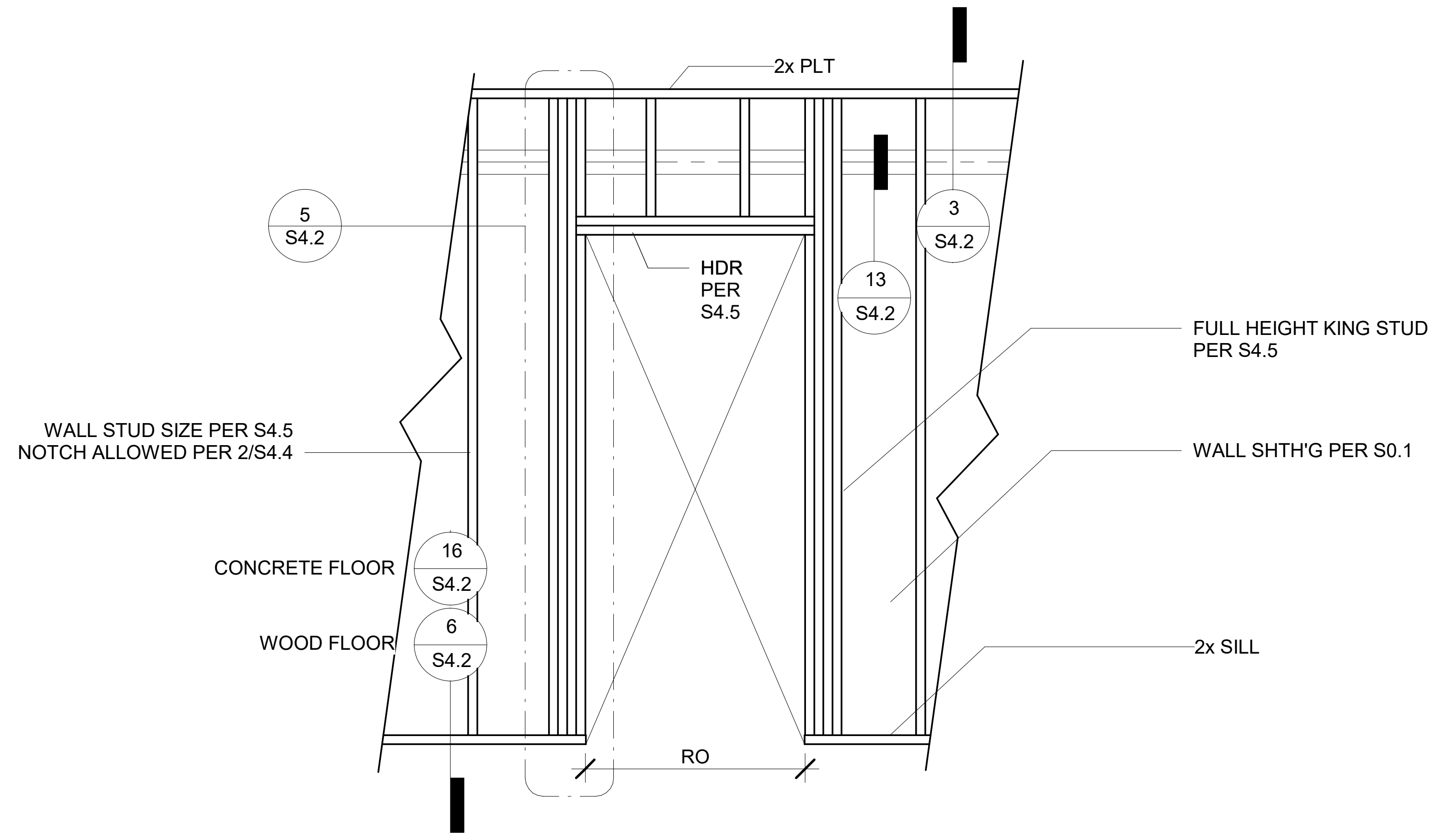
SHEET OF



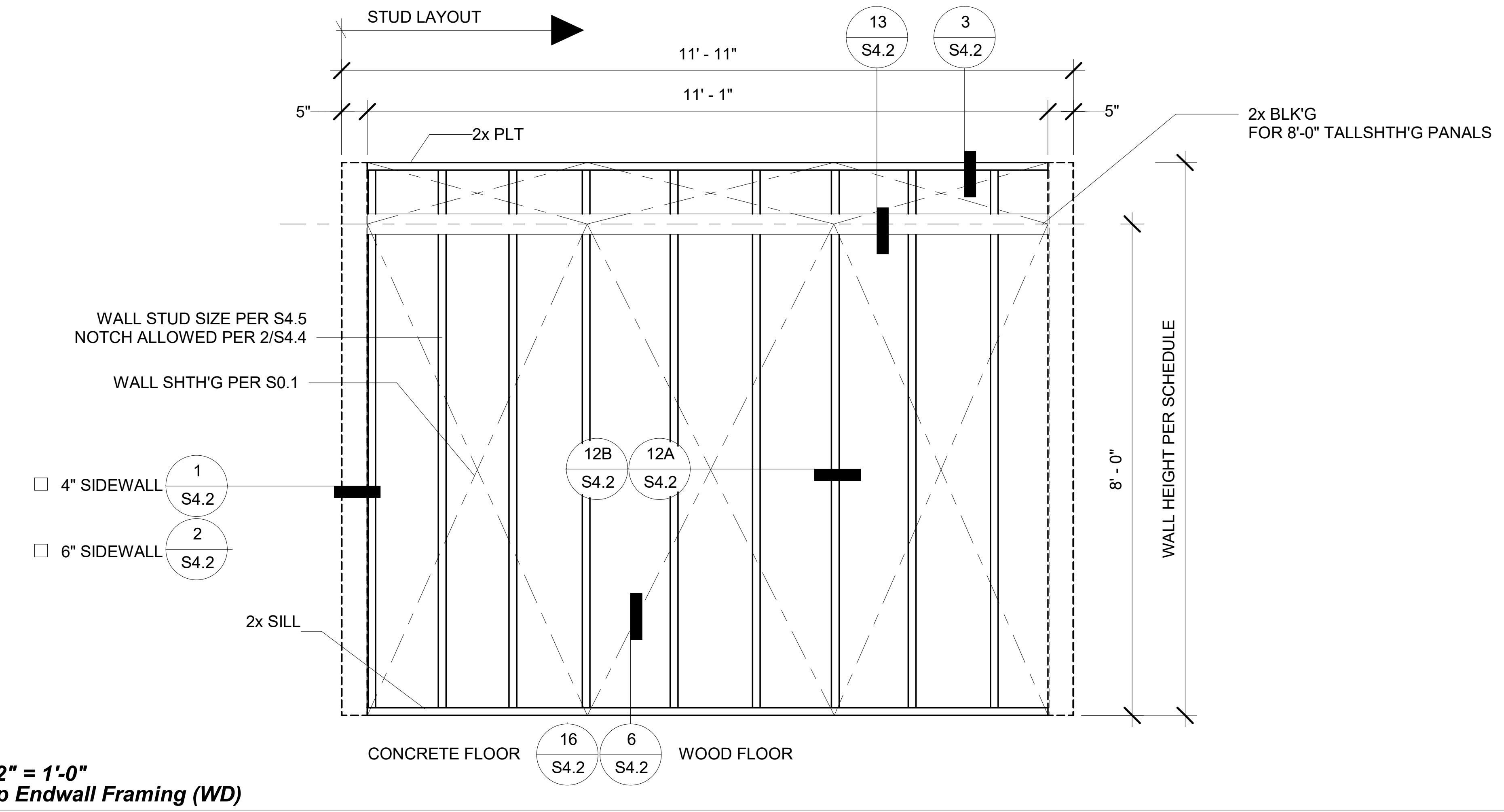
**6** *1/2" = 1'-0"*
***Typ Fire Extinguisher Framing (WD)***



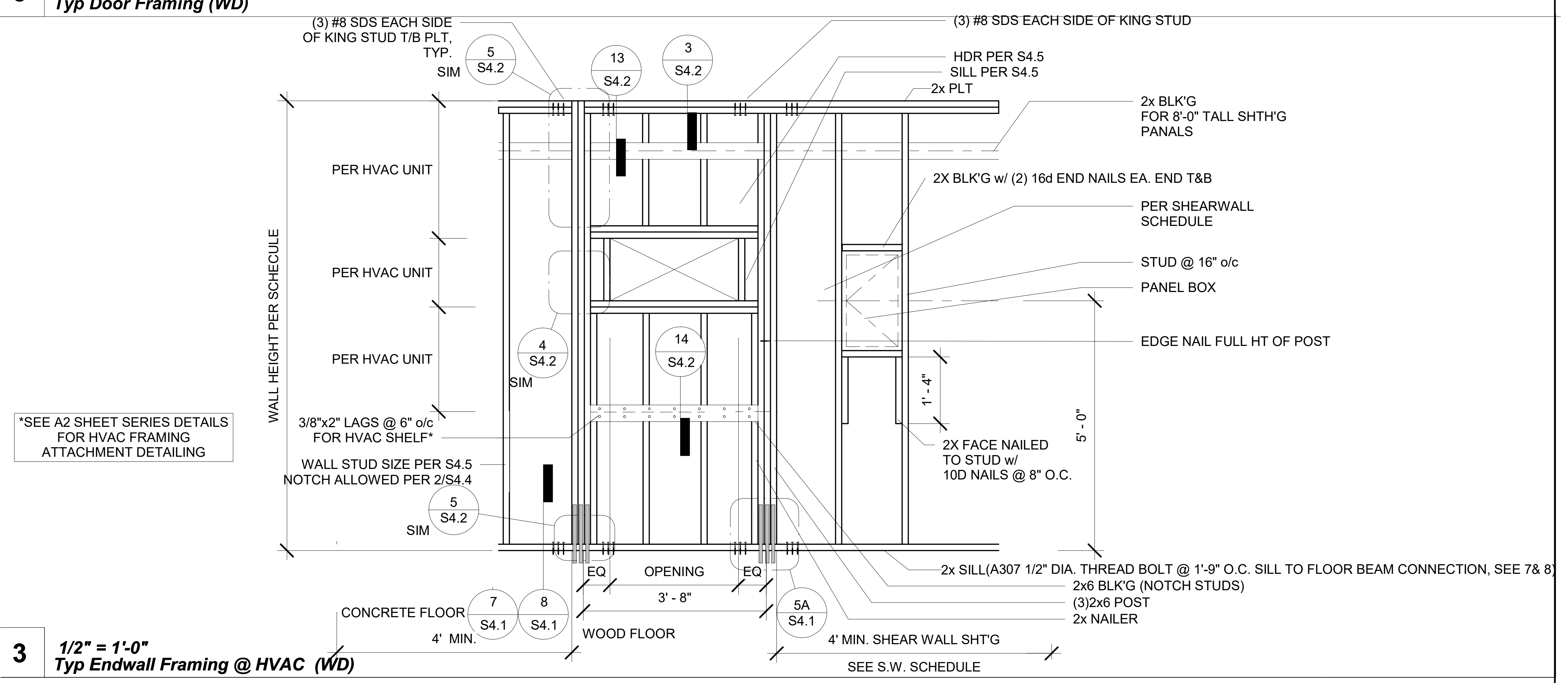
**4** *1/2" = 1'-0"*
***Typ Window Framing (WD)***



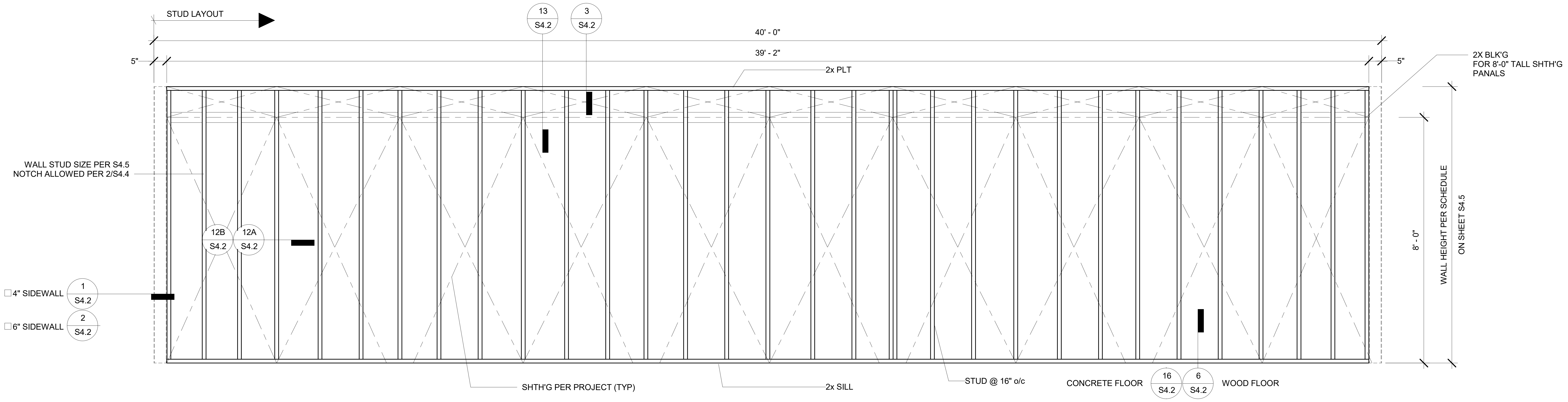
**5** *1/2" = 1'-0"*
***Typ Door Framing (WD)***



**2** *1/2" = 1'-0"*
***Typ Endwall Framing (WD)***



**3** *1/2" = 1'-0"*
***Typ Endwall Framing @ HVAC (WD)***



**1** *1/2" = 1'-0"*
***Typ Sidewall Framing (WD)***

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6/8/2021 1:52:57 AM

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24

02/16/24

RST#22088

CLIENT

Class Leasing
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Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
WD WALL
FRAMING
ELEVATIONS

PROJECT NUMBER
22088

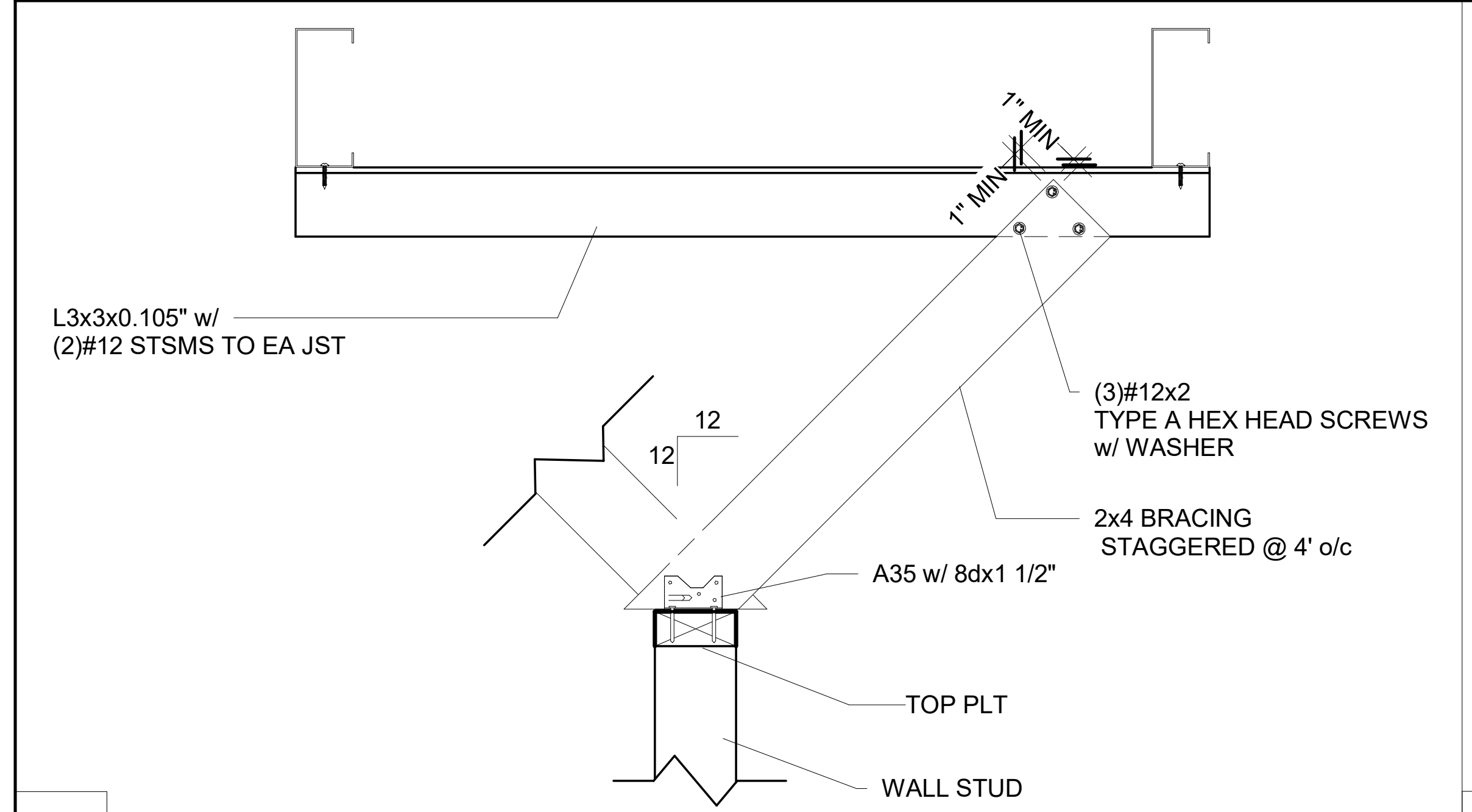
DRAWN BY
rMc/SC

CHECKED BY
JA/RT

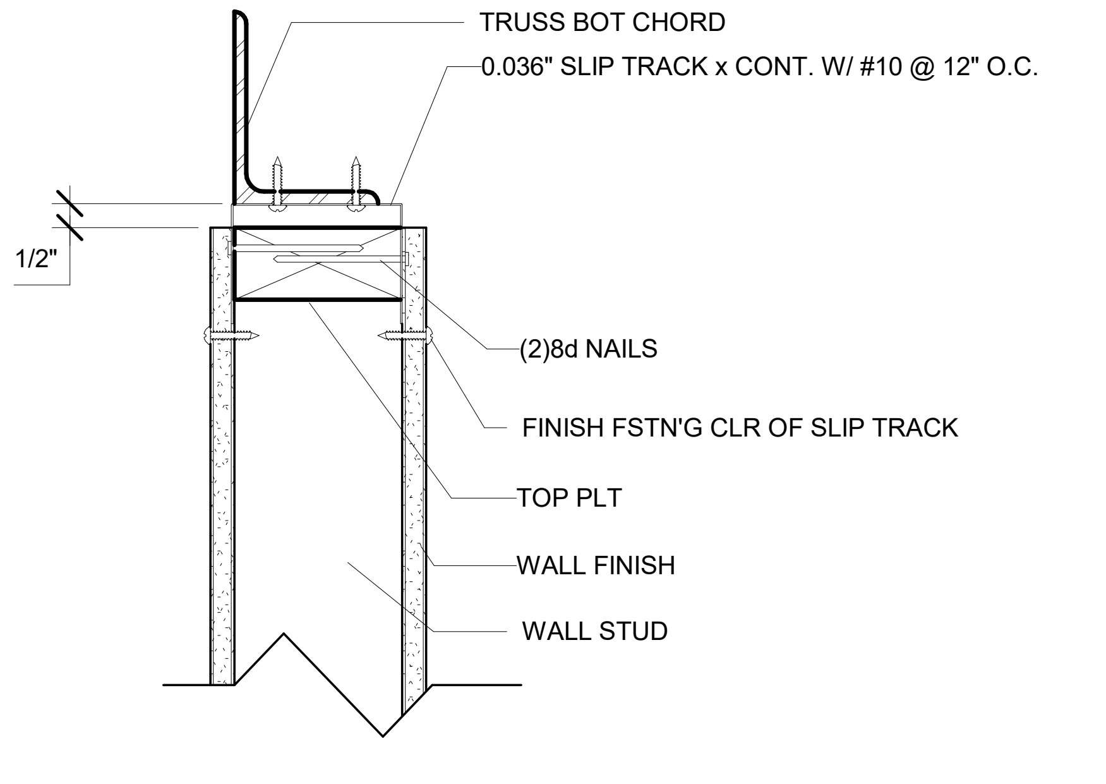
DATE

SHEET NO.
S4.1

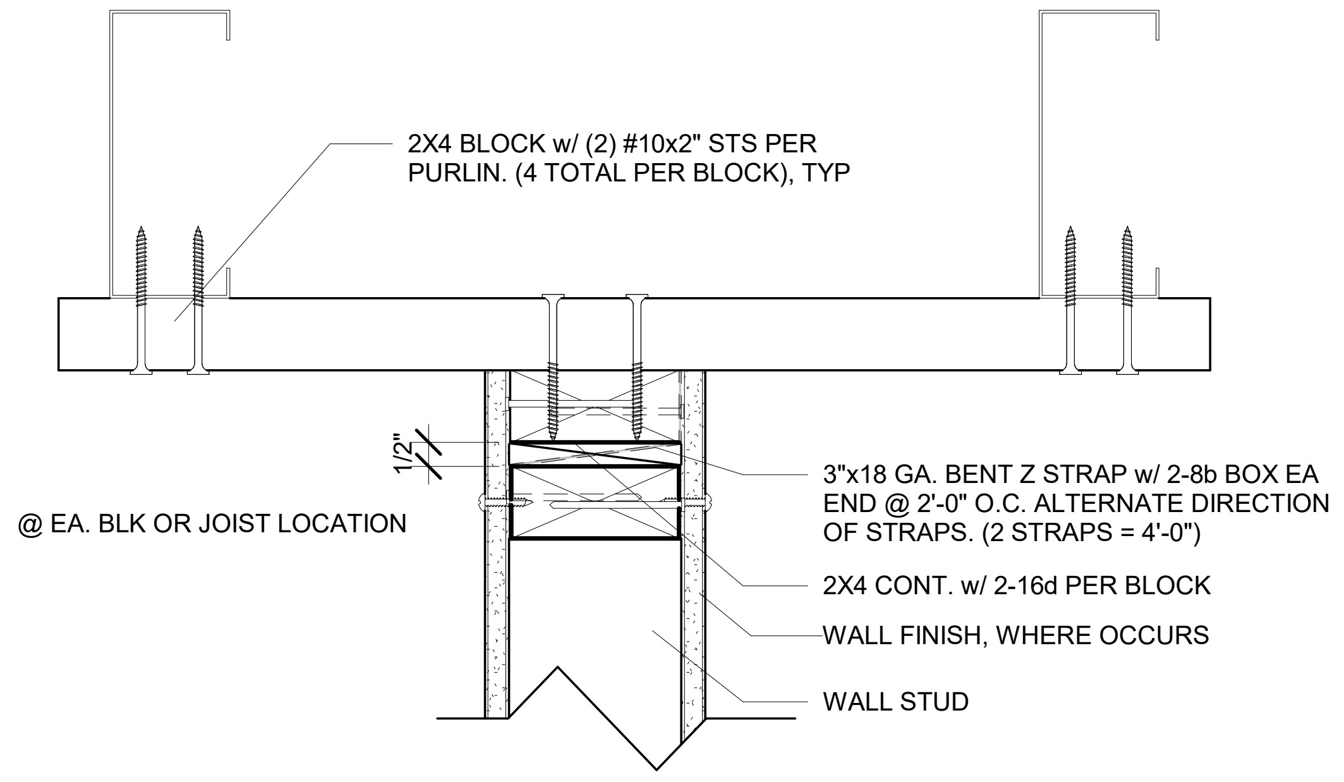
SHEET OF


1" MIN
1" MIN
L3x3x0.105" w/ (2)#12 STSMS TO EA JST
12
12
(3)#12x2 TYPE A HEX HEAD SCREWS w/ WASHER
2x4 BRACING STAGGERED @ 4' o/c
A35 w/ 8dx1 1/2"
TOP PLT
WALL STUD

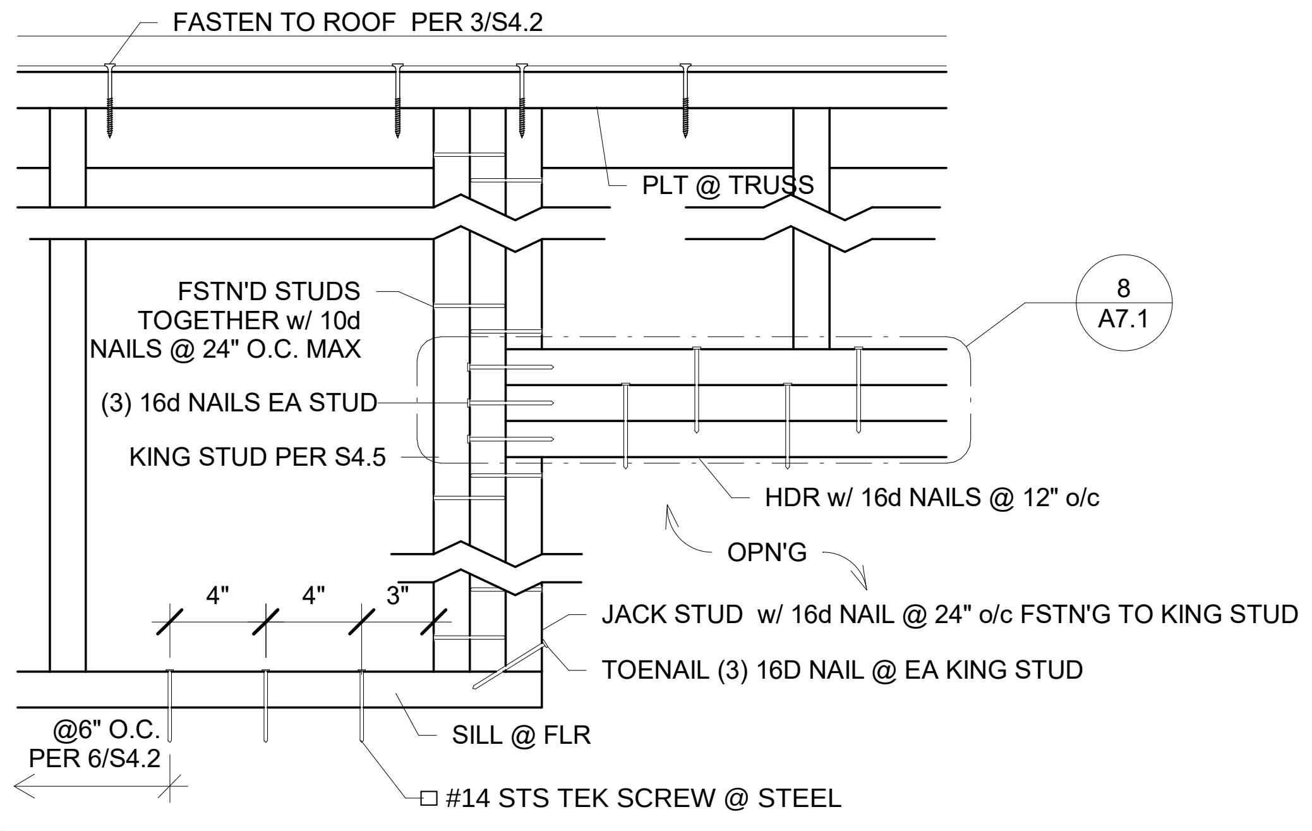
20 1 1/2" = 1'-0"
Sections - Interior Partition w/ Brace to Blk'g (WD)


TRUSS BOT CHORD
0.036" SLIP TRACK x CONT. W/ #10 @ 12" O.C.
1/2"
(2)8d NAILS
FINISH FSTN'G CLR OF SLIP TRACK
TOP PLT
WALL FINISH
WALL STUD

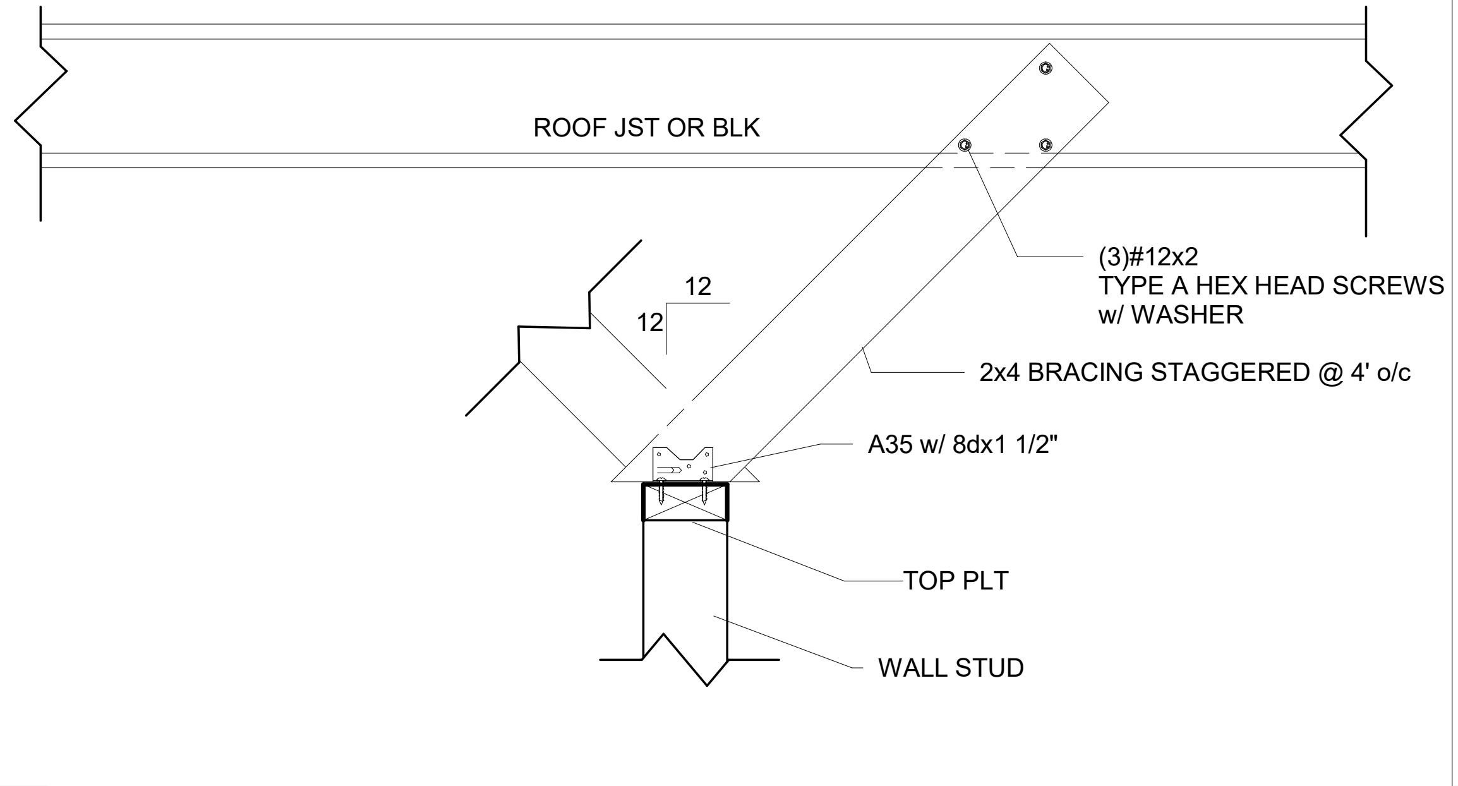
15 3" = 1'-0"
Section - Interior Wall Top Plate @ Truss (ML)


2X4 BLOCK w/ (2) #10x2" STS PER PURLIN. (4 TOTAL PER BLOCK), TYP
1/2"
@ EA. BLK OR JOIST LOCATION
3"x18 GA. BENT Z STRAP w/ 2-8b BOX EA END @ 2'-0" O.C. ALTERNATE DIRECTION OF STRAPS. (2 STRAPS = 4'-0")
2X4 CONT. w/ 2-16d PER BLOCK
WALL FINISH, WHERE OCCURS
WALL STUD

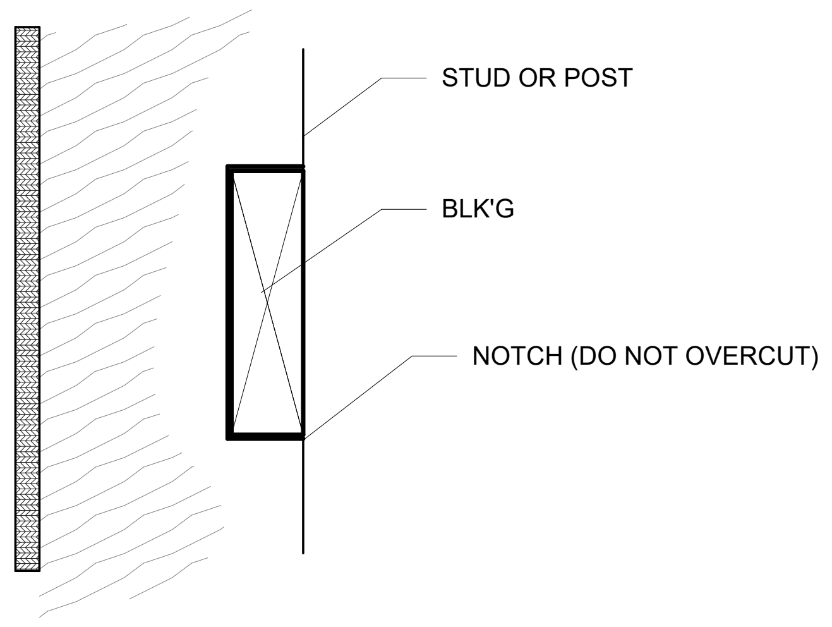
10 3" = 1'-0"
Sections - Interior Partition @ Blk'g (WD)


FASTEN TO ROOF PER 3/S4.2
PLT @ TRUSS
FSTN'D STUDS TOGETHER w/ 10d NAILS @ 24" O.C. MAX
(3) 16d NAILS EA STUD
KING STUD PER S4.5
8
A7.1
HDR w/ 16d NAILS @ 12" o/c
OPN'G
4"
4"
3"
JACK STUD w/ 16d NAIL @ 24" o/c FSTN'G TO KING STUD
TOENAIL (3) 16D NAIL @ EA KING STUD
@6" O.C. PER 6/S4.2
SILL @ FLR
#14 STS TEK SCREW @ STEEL
SHOT PINS PER S0.1 @ STEEL RIM OR CONCRETE FLR

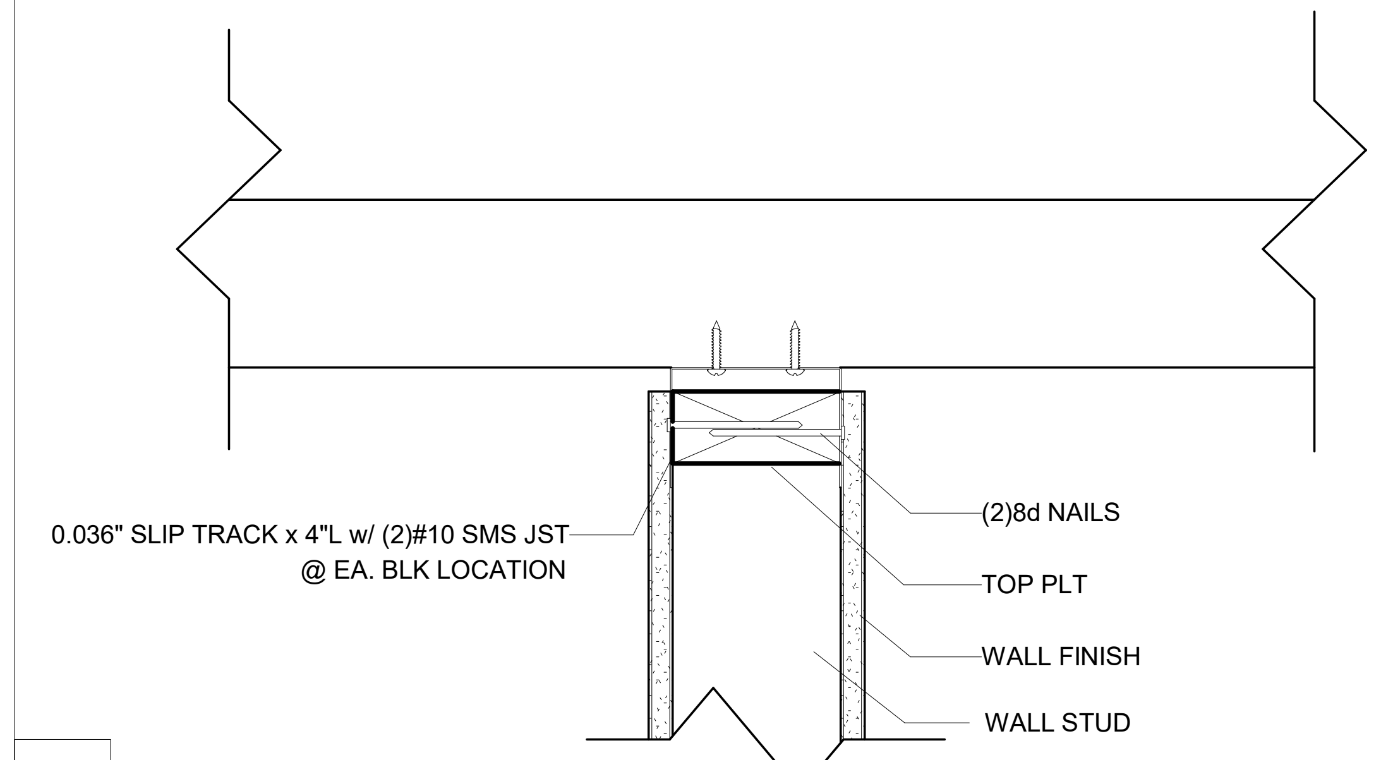
5 1 1/2" = 1'-0"
Elevation - Window/Door Hdr and Sill


ROOF JST OR BLK
12
12
(3)#12x2 TYPE A HEX HEAD SCREWS w/ WASHER
2x4 BRACING STAGGERED @ 4' o/c
A35 w/ 8dx1 1/2"
TOP PLT
WALL STUD

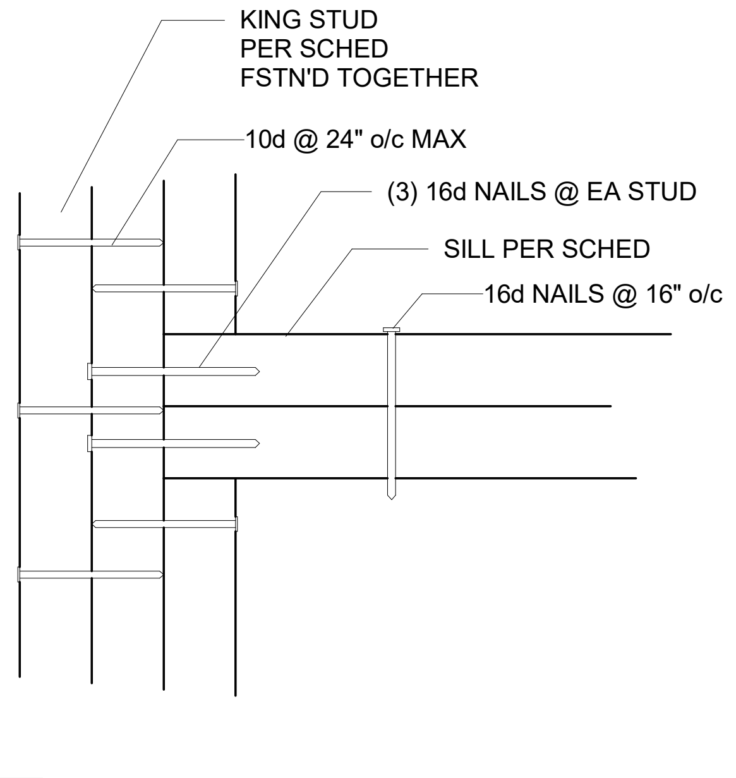
19 1 1/2" = 1'-0"
Sections - Interior Partition w/ Brace (WD)



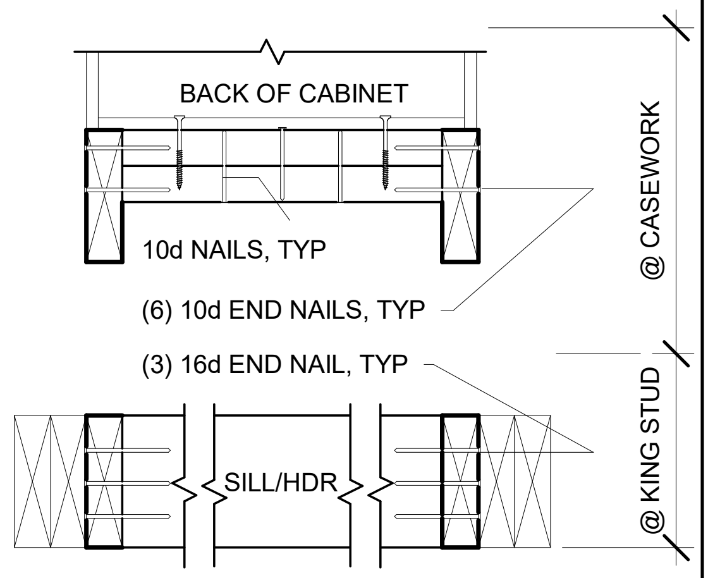
14 3" = 1'-0"
Notch Stud @ Blk'g


0.036" SLIP TRACK x 4"L w/ (2)#10 SMS JST @ EA. BLK LOCATION
(2)8d NAILS
TOP PLT
WALL FINISH
WALL STUD

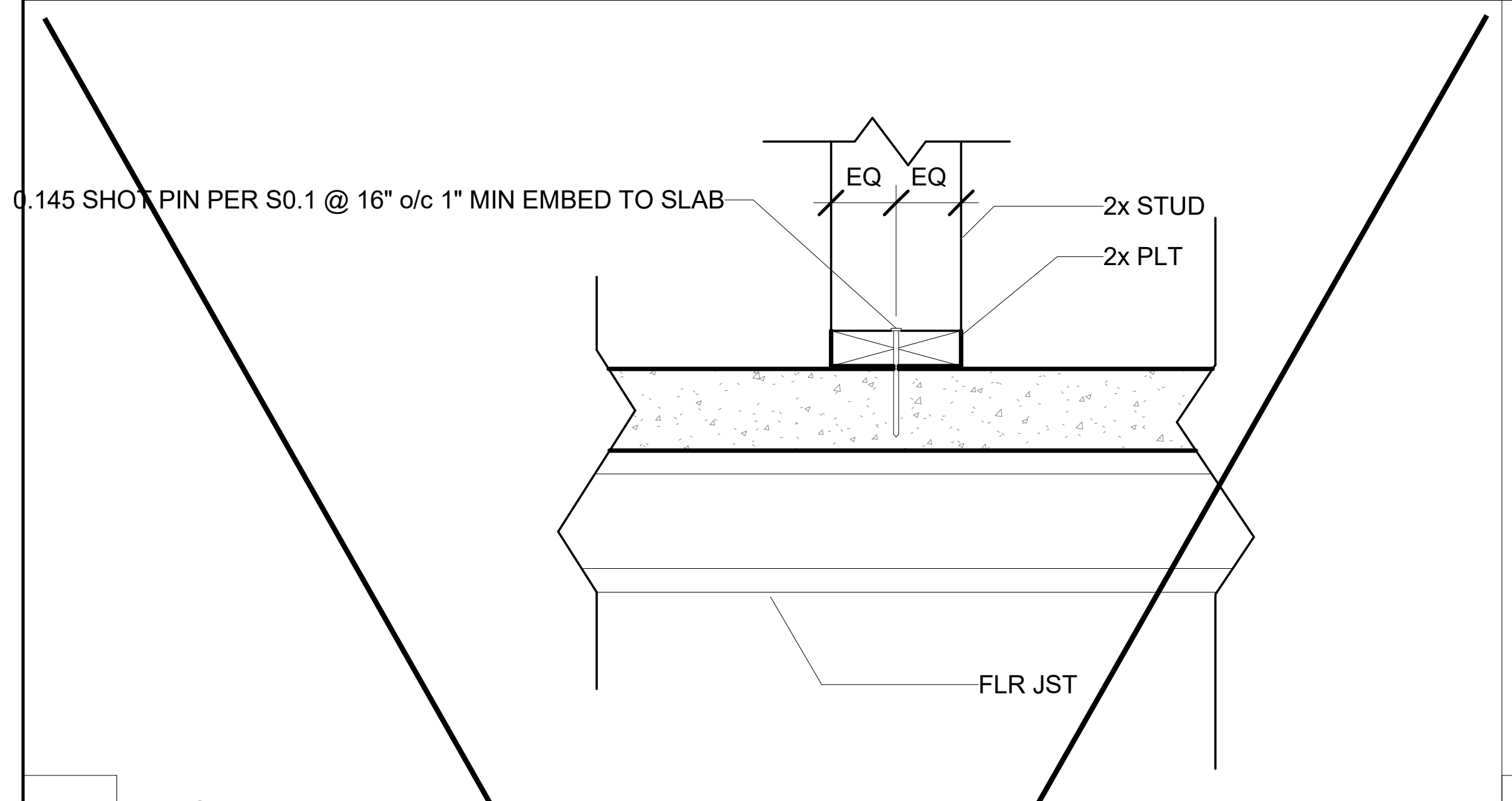
9 3" = 1'-0"
Sections - Interior Partition @ Jst (WD)



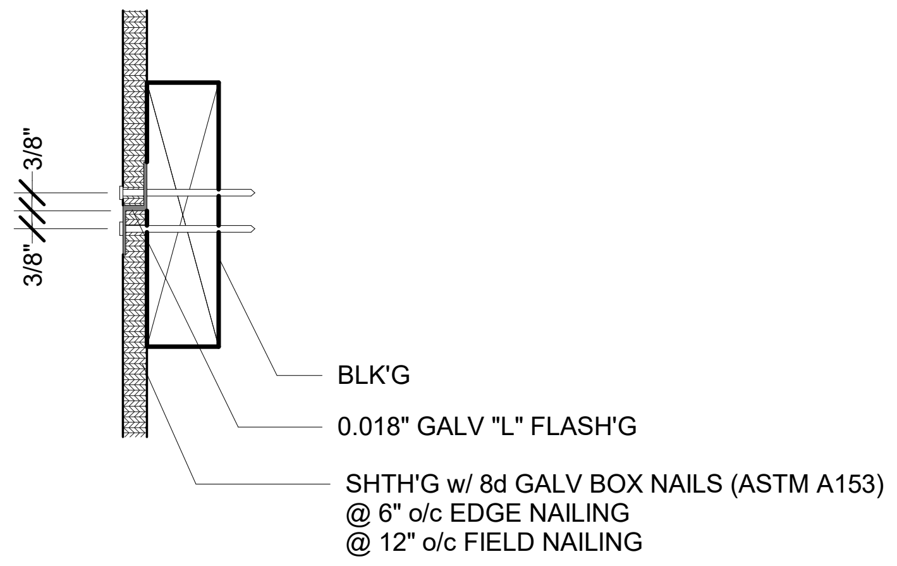
4 3" = 1'-0"
Elevation - Ext Wall Sill @ Window



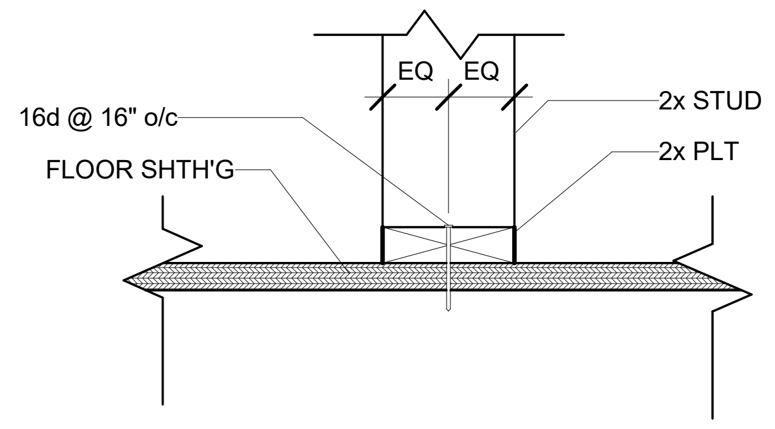
12 1 1/2" = 1'-0"
CASEWORK END NAIL PLAN



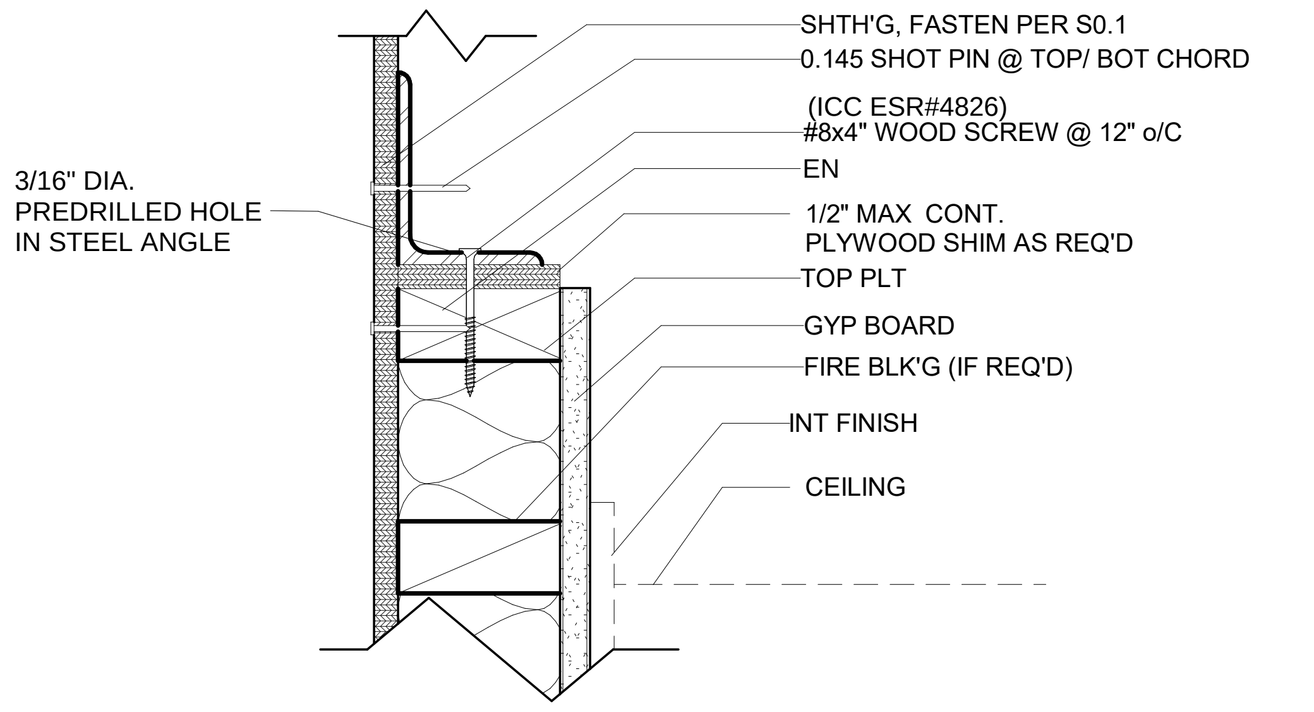
18 1 1/2" = 1'-0"
Typ Partition Sill Connection (CONC)


3/8"
3/8"
BLK'G
0.018" GALV "L" FLASH'G
SHTH'G w/ 8d GALV BOX NAILS (ASTM A153) @ 6" o/c EDGE NAILING @ 12" o/c FIELD NAILING

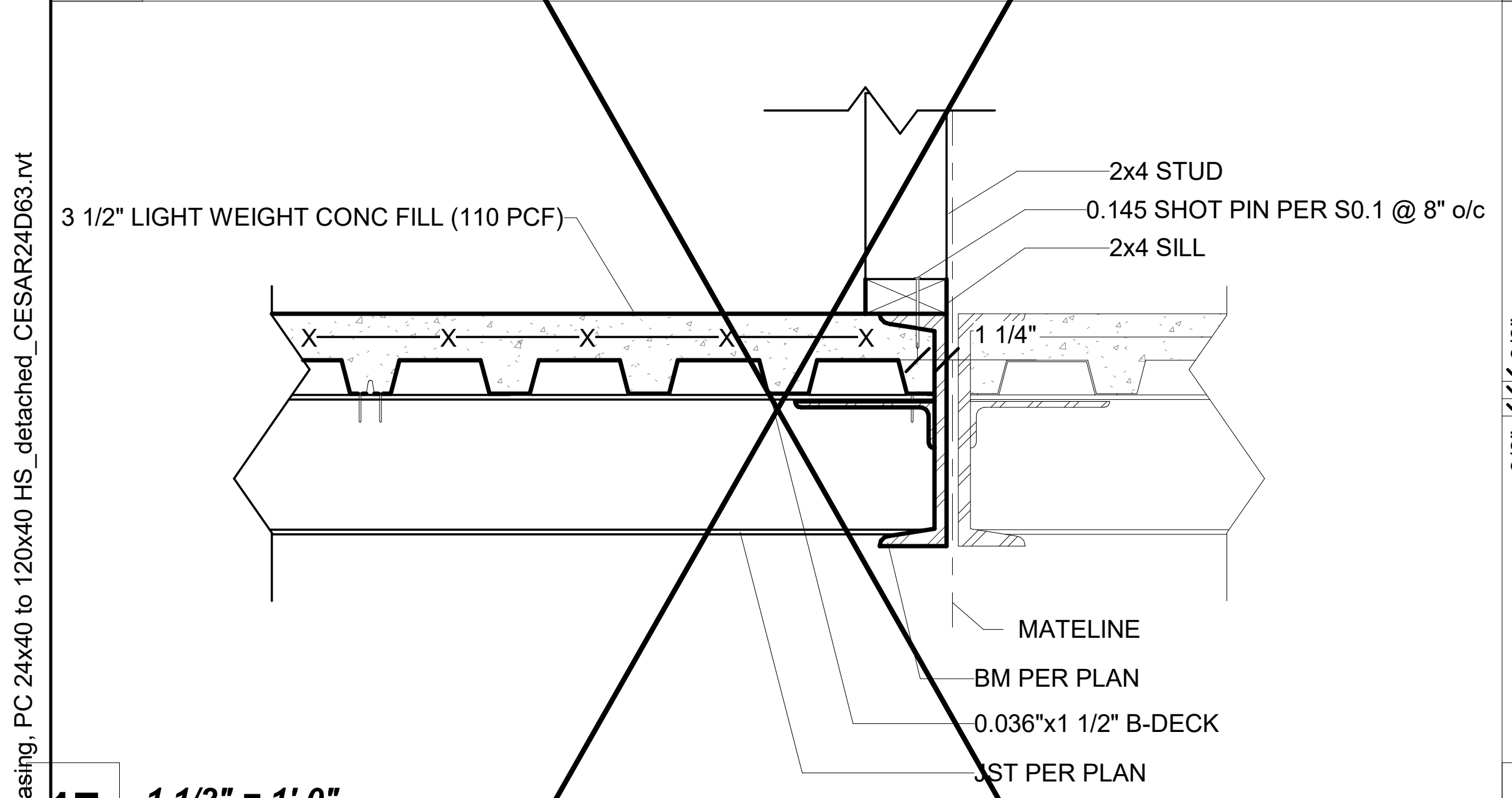
13 3" = 1'-0"
Shth'g @ Blk'g



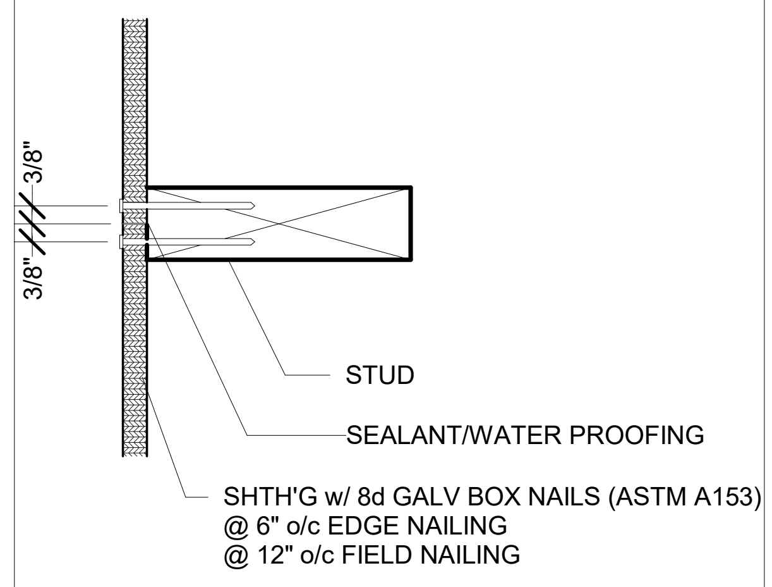
8 1 1/2" = 1'-0"
Typ Partition Sill Connection (WD)


3/16" DIA. PREDRILLED HOLE IN STEEL ANGLE
SHTH'G, FASTEN PER S0.1
0.145 SHOT PIN @ TOP/ BOT CHORD
(ICC ESR#4826)
#8x4" WOOD SCREW @ 12" o/c
EN
1/2" MAX CONT. PLYWOOD SHIM AS REQ'D
TOP PLT
GYP BOARD
FIRE BLK'G (IF REQ'D)
INT FINISH
CEILING

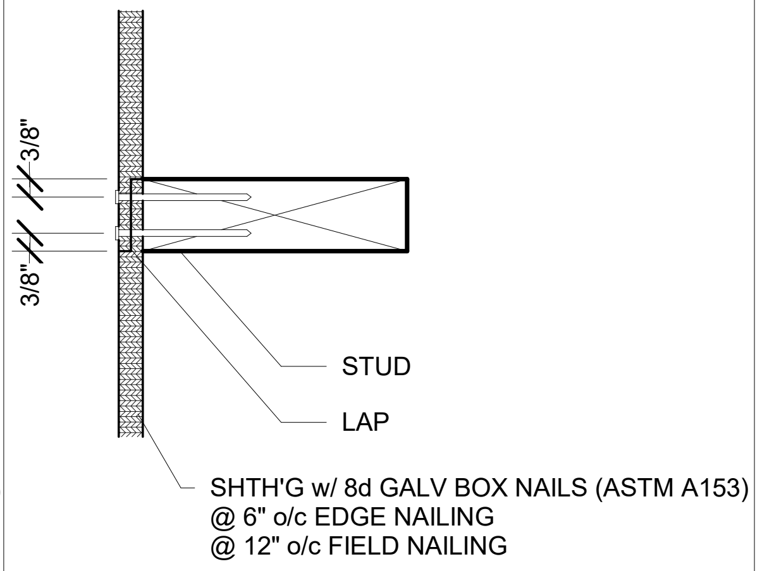
3 3" = 1'-0"
Section - Exterior Wall Top Plate @ Truss (WD)



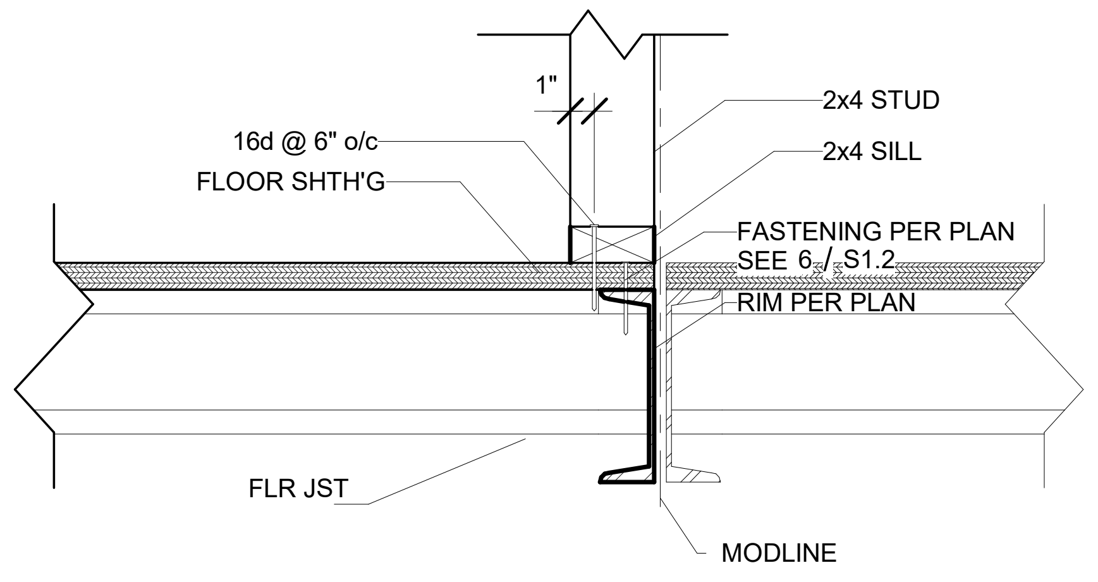
17 1 1/2" = 1'-0"
Wall Sill Plt Connection @ Interior Sidewall (CONC)


3/8"
3/8"
STUD
SEALANT/WATER PROOFING
SHTH'G w/ 8d GALV BOX NAILS (ASTM A153) @ 6" o/c EDGE NAILING @ 12" o/c FIELD NAILING

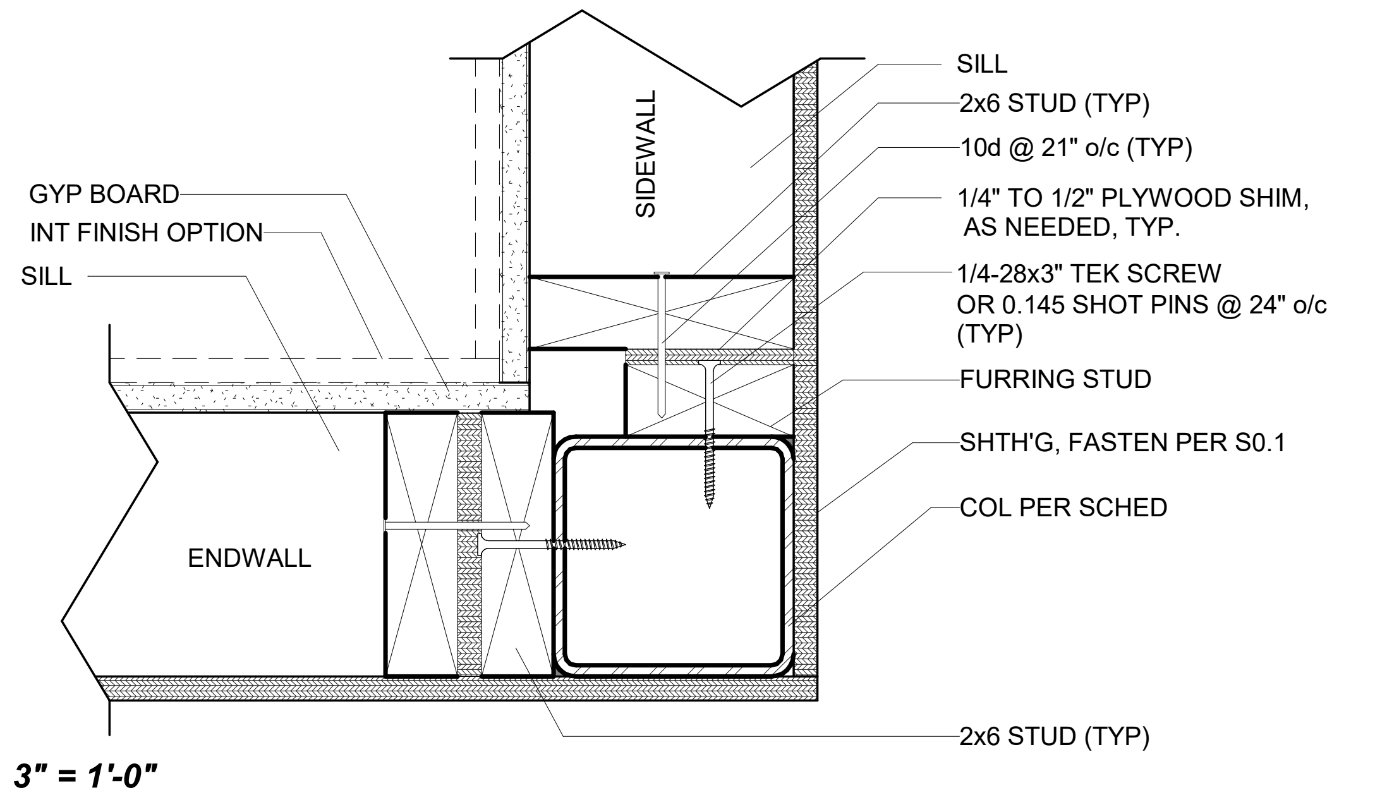
12A 3" = 1'-0"
Shth'g @ Butt Jnt


3/8"
3/8"
STUD
LAP
SHTH'G w/ 8d GALV BOX NAILS (ASTM A153) @ 6" o/c EDGE NAILING @ 12" o/c FIELD NAILING

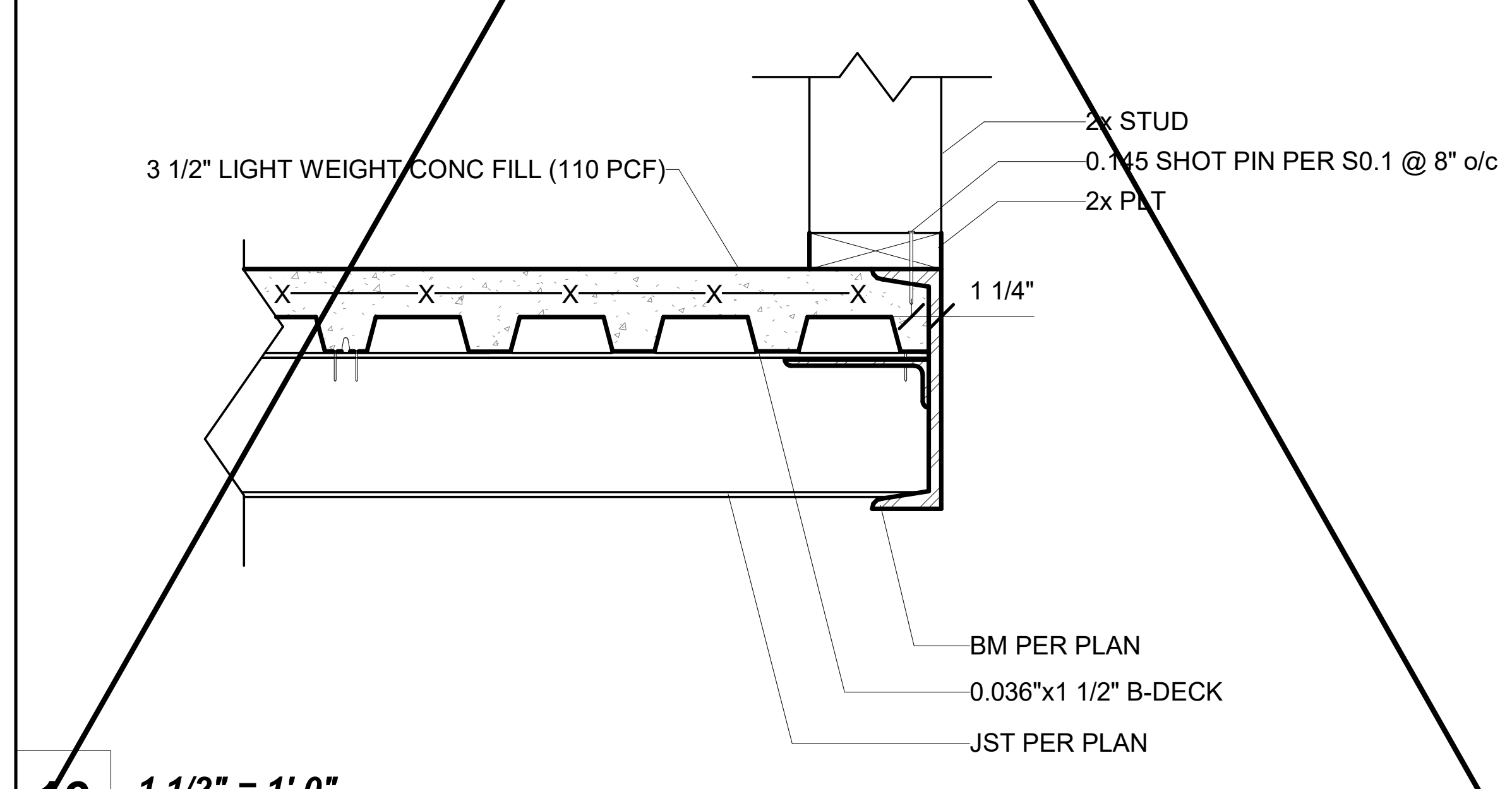
12B 3" = 1'-0"
Shth'g @ Lap Jnt



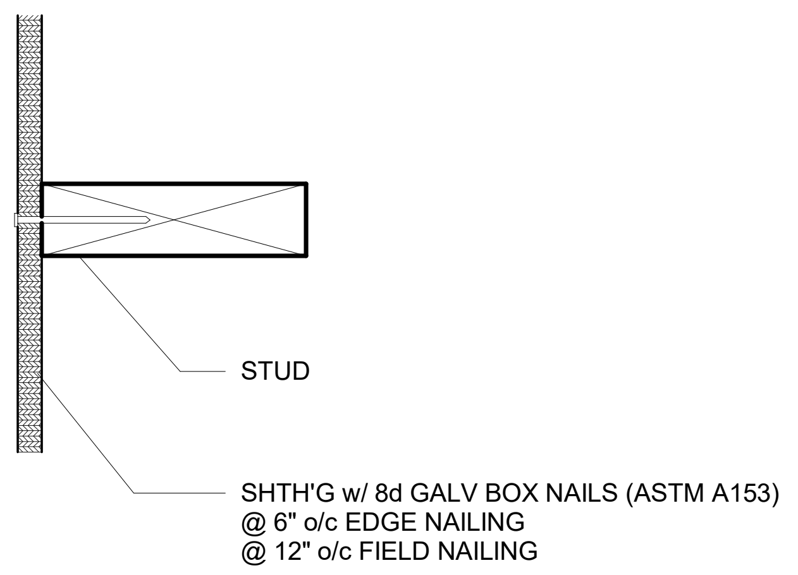
7 1 1/2" = 1'-0"
2x4 Wall Sill Connection @ Interior Sidewalls (WD)



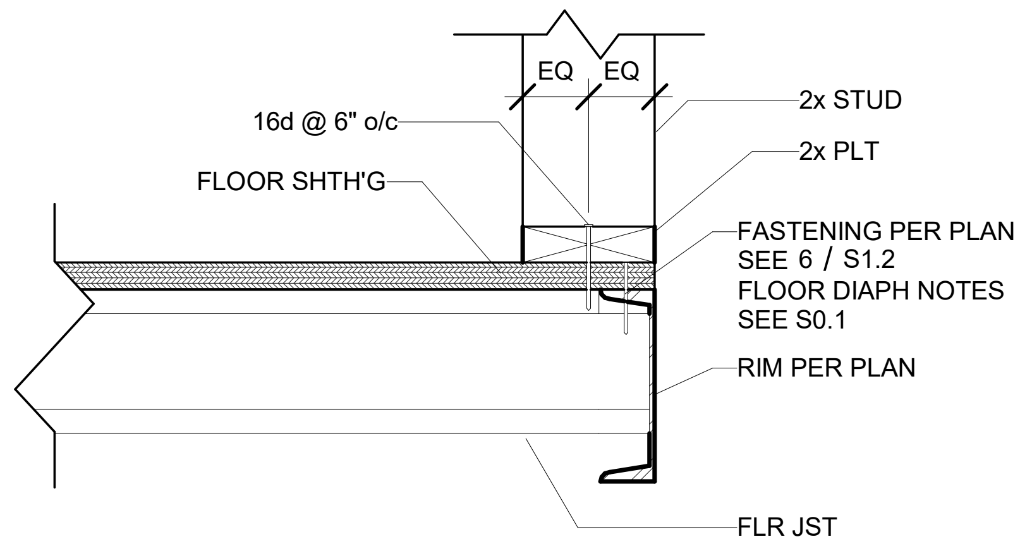
2 3" = 1'-0"
2x6 Framing @ Column (WD)


3 1/2" LIGHT WEIGHT CONC FILL (110 PCF)
2x STUD
0.145 SHOT PIN PER S0.1 @ 8" o/c
2x PLT
1 1/4"
BM PER PLAN
0.036"x1 1/2" B-DECK
JST PER PLAN

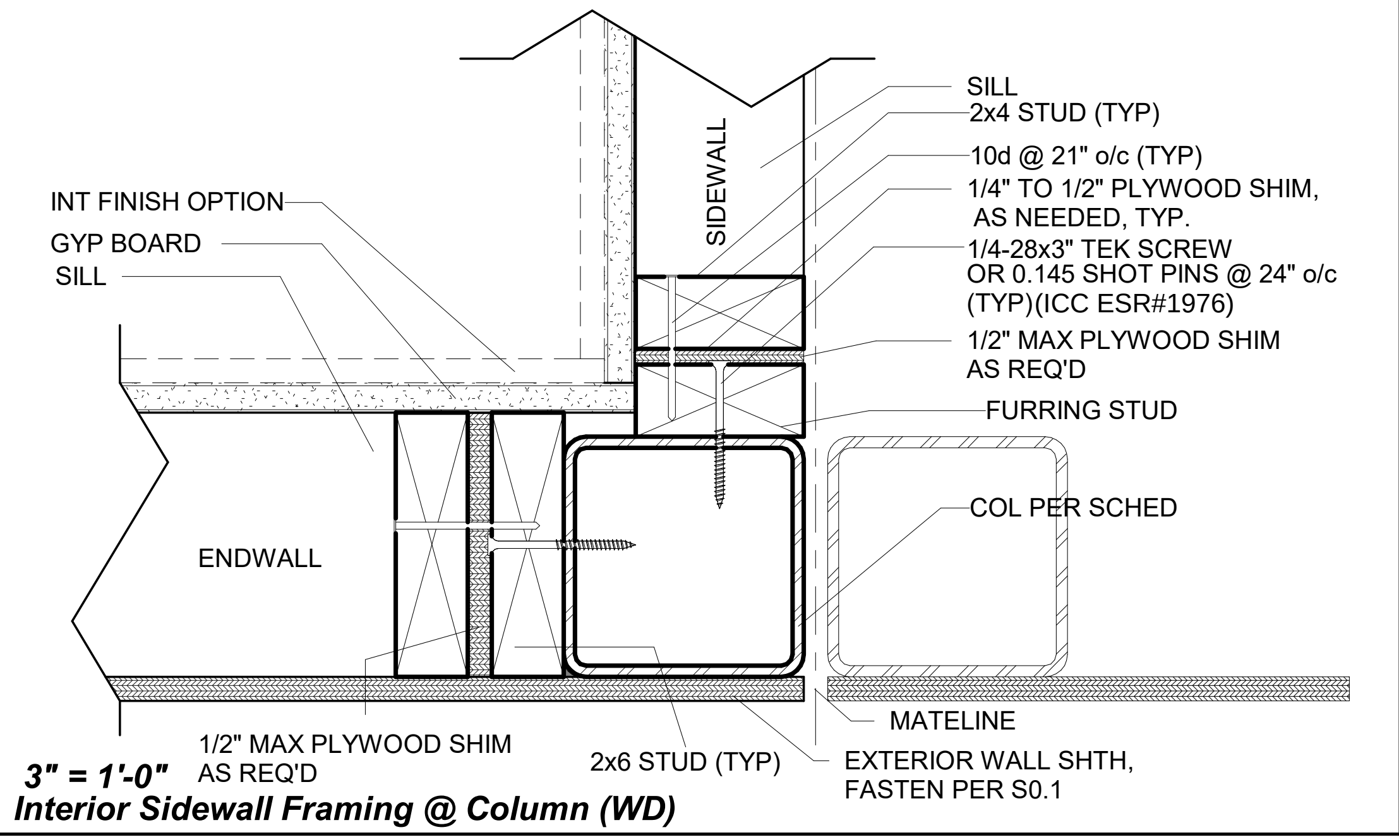
16 1 1/2" = 1'-0"
Wall Sill Plt Connection @ Exterior Rim (CONC)


STUD
SHTH'G w/ 8d GALV BOX NAILS (ASTM A153) @ 6" o/c EDGE NAILING @ 12" o/c FIELD NAILING

11 3" = 1'-0"
Shth'g @ Stud Conn



6 1 1/2" = 1'-0"
Wall Sill Connection @ Exterior Rim (WD)


SILL
2x4 STUD (TYP)
10d @ 21" o/c (TYP)
1/4" TO 1/2" PLYWOOD SHIM, AS NEEDED, TYP.
1/4-28x3" TEK SCREW OR 0.145 SHOT PINS @ 24" o/c (TYP)(ICC ESR#1976)
1/2" MAX PLYWOOD SHIM AS REQ'D
FURRING STUD
COL PER SCHED
INT FINISH OPTION
GYP BOARD
SILL
SIDEWALL
ENDWALL
1/2" MAX PLYWOOD SHIM AS REQ'D
2x6 STUD (TYP)
MATELINE
EXTERIOR WALL SHTH, FASTEN PER S0.1

1 3" = 1'-0"
Interior Sidewall Framing @ Column (WD)

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN • CONSULTING • PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
S3380
03/31/24
STRUCTURAL
STATE OF CALIFORNIA
RST#22088
02/16/24

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Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE
WALL DETAILS (WOOD FRAMING)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

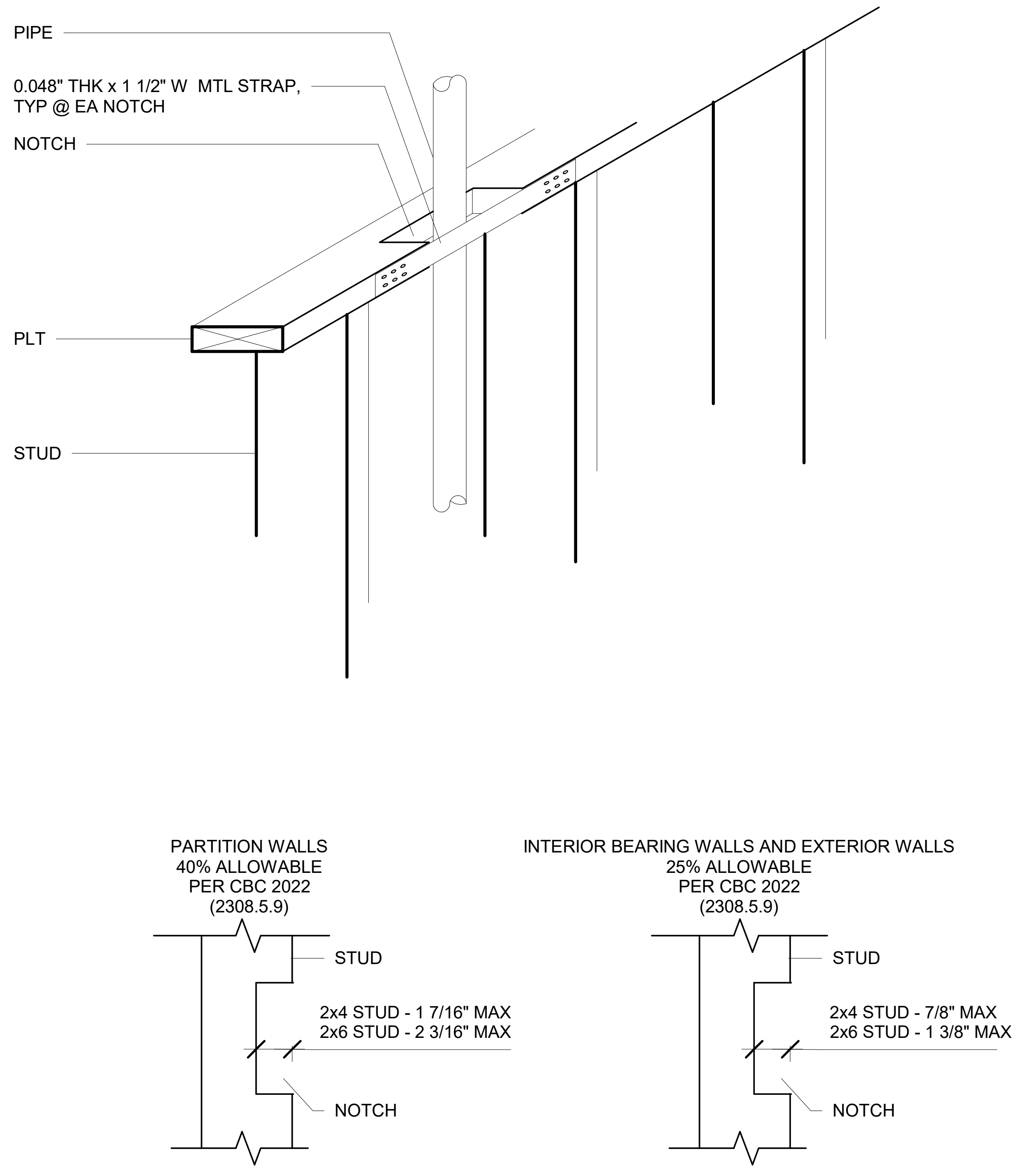
CHECKED BY
JA/RT

DATE

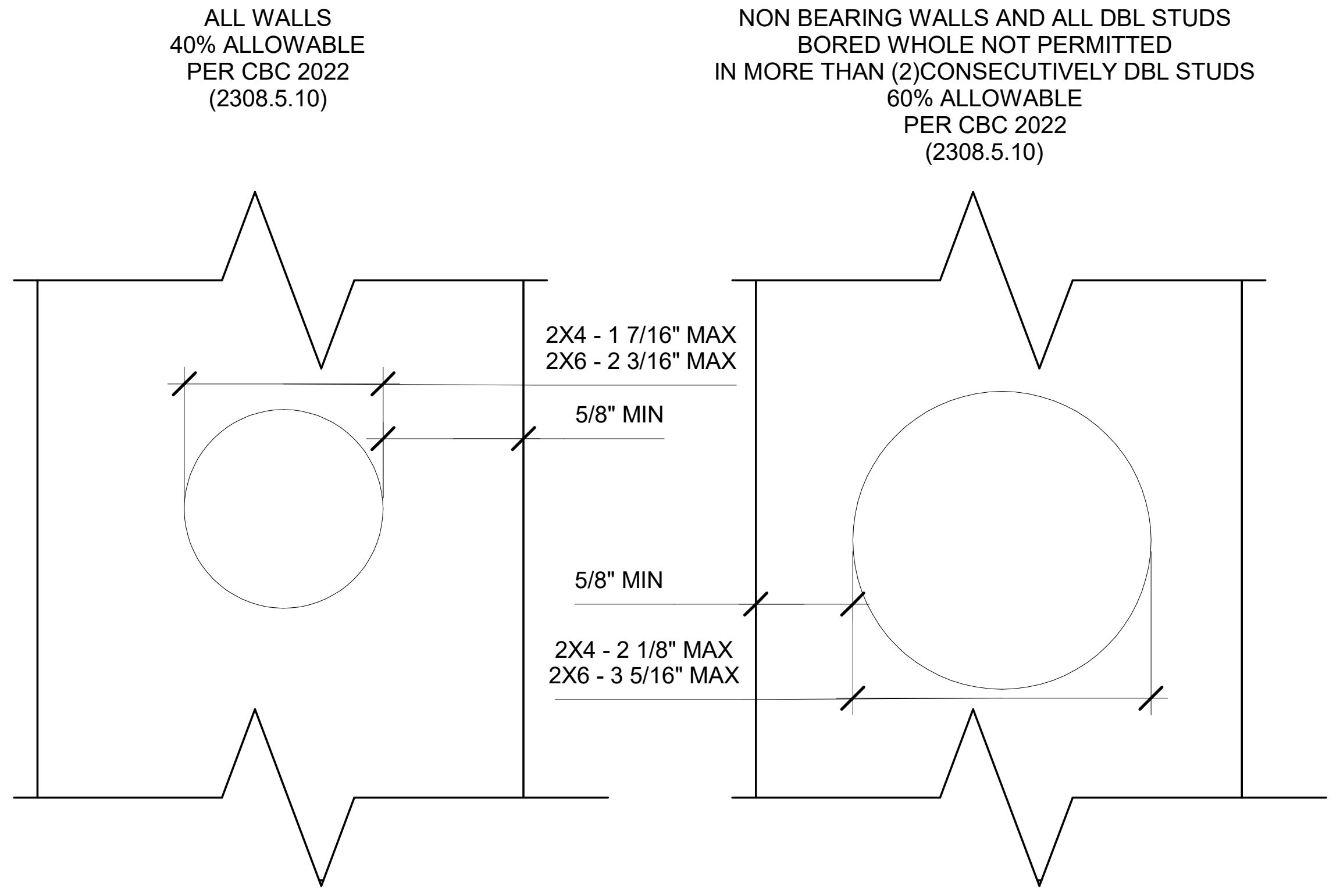
SHEET NO.
S4.2

SHEET OF

C:\Users\User\Documents\RST#20132 - Class Leasing, PC 24x40 to 120x40 HS_detached_CESAR24D63.rvt
6/8/2021 1:53:00 AM



**2** *1 1/2" = 1'-0"*
***Plt Notch***



**1** *6" = 1'-0"*
***Stud Penetration***

PROJECT SPECIFIC STATE AGENCY APPROVAL

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DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
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DATE: 03/13/2024

R&S TAVARES ASSOCIATES
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PROFESSIONAL STAMP

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No. S3380
Exp. 03/31/24
RST#22088
02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
TYP FRAMING

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
JA/RT

DATE

SHEET NO.
S4.4

SHEET OF

6/8/2021 1:53:06 AM
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### 2x4 Interior Wall Opening Schedule

| COL HEIGHT | OPN'G SIZE | HDR | | | SILL | | | FULL HEIGHT KING STUD | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Lumber | Number | Type | Lumber | Number | Type | Lumber | Number | Type |
| 9FT | 3070 | HF / SYP | 1 | #2 | - | - | - | HF | 2 | #2 |
| | | DF / SYP | 1 | #2 | - | - | - | DF | 2 | #2 |
| | 4070 | HF / SYP | 1 | #2 | - | - | - | HF | 2 | #2 |
| | | DF / SYP | 1 | #2 | - | - | - | DF | 2 | #2 |
| | 6040 | HF / SYP | 2 | #2 | DF | 2 | #2 | HF | 2 | #2 |
| | | DF / SYP | 2 | #2 | DF | 2 | #2 | DF | 2 | #2 |
| | 8040 | HF / SYP | 3 | #2 | HF | 3 | #2 | HF | 2 | #2 |
| | | DF / SYP | 3 | #2 | DF | 3 | #2 | DF | 2 | #2 |
| 10FT | 3070 | HF / SYP | 1 | #2 | - | - | - | HF | 2 | #2 |
| | | DF / SYP | 1 | #2 | - | - | - | DF | 2 | #2 |
| | 4070 | HF / SYP | 1 | #2 | - | - | - | HF | 2 | #2 |
| | | DF / SYP | 1 | #2 | - | - | - | DF | 2 | #2 |
| | 6040 | HF / SYP | 2 | #2 | HF | 2 | #2 | HF | 2 | #2 |
| | | DF / SYP | 2 | #2 | DF | 2 | #2 | DF | 2 | #2 |
| | 8040 | HF / SYP | 3 | #2 | HF | 3 | #2 | HF | 2 | #2 |
| | | DF / SYP | 3 | #2 | DF | 3 | #2 | DF | 2 | #2 |

### 2x6 Exterior Wall Opening Schedule (SHTH'G FINISH)

| COL HEIGHT | OPN'G SIZE | HDR | | | SILL | | | FULL HEIGHT KING STUD | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Lumber | Number | Type | Lumber | Number | Type | Lumber | Number | Type |
| 9FT | 3070 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 4070 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 6040 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 8040 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 2 | #2 |
| 10FT | 3070 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 4070 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 6040 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF / SYP | 1 | #2 | DF | 1 | #2 | DF | 2 | #2 |
| | 8040 | HF / SYP | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | | 1 | #2 | DF | 1 | #2 | DF | 2 | #2 |

### 2x6 Exterior Wall Opening Schedule (PLASTER FINISH)

| COL HEIGHT | OPN'G SIZE | HDR | | | SILL | | | FULL HEIGHT KING STUD | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Lumber | Number | Type | Lumber | Number | Type | Lumber | Number | Type |
| 9FT | 3070 | HF | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 4070 | HF | 1 | #2 | HF | 1 | #2 | HF | 1 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 6040 | HF | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 8040 | HF | 2 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 2 | #2 |
| 10FT | 3070 | HF | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 4070 | HF | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 1 | #2 |
| | 6040 | HF | 1 | #2 | HF | 1 | #2 | HF | 2 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 2 | #2 |
| | 8040 | HF | 2 | #2 | HF | 1 | #2 | HF | 3 | #2 |
| | | DF | 1 | #2 | DF | 1 | #2 | DF | 2 | #2 |

### 2x4 Interior Wall Framing Schedule

| COL HEIGHT | Typical Location | | | | 4ft From Building Corner | | | |
|---|---|---|---|---|---|---|---|---|
| | Lumber | Number | Type | Spacing | Lumber | Number | Type | Spacing |
| 9 | HF | 1 | #2 | 16" O.C. | - | - | - | - |
| | DF | 1 | #2 | 16" O.C. | - | - | - | - |
| 10 | HF | 1 | #2 | 16" O.C. | - | - | - | - |
| | DF | 1 | #2 | 16" O.C. | - | - | - | - |

### 2x6 Exterior Wall Framing Schedule (SHTH'G FINISH)

| COL HEIGHT | Typical Location | | | | 4ft From Building Corner | | | |
|---|---|---|---|---|---|---|---|---|
| | Lumber | Number | Type | Spacing | Lumber | Number | Type | Spacing |
| 9 | HF | 1 | #2 | 16" O.C. | HF | 1 | #2 | 16" O.C. |
| | DF | 1 | #2 | 16" O.C. | DF | 1 | #2 | 16" O.C. |
| 10 | HF | 1 | #2 | 16" O.C. | HF | 1 | #2 | 16" O.C. |
| | DF | 1 | #2 | 16" O.C. | DF | 1 | #2 | 16" O.C. |

### 2x6 Exterior Wall Framing Schedule (PLASTER FINISH)

| COL HEIGHT | Typical Location | | | | 4ft From Building Corner | | | |
|---|---|---|---|---|---|---|---|---|
| | Lumber | Number | Type | Spacing | Lumber | Number | Type | Spacing |
| 9 | HF | 1 | #2 | 16" O.C. | HF | 1 | #2 | 16" O.C. |
| | DF | 1 | #2 | 16" O.C. | DF | 1 | #2 | 16" O.C. |
| 10 | HF | 1 | #2 | 16" O.C. | HF | 1 | #2 | 16" O.C. |
| | DF | 1 | #2 | 16" O.C. | DF | 1 | #2 | 16" O.C. |

NOTE: SEE DETAIL 1 ON SHEETS A2.1 - A2.6

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
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www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24

02/16/24

RST#22088

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CLIENT

Class Leasing
1651Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☑
DATE: 02/20/2024

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE

PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE

FRAMING
SCHEDULES

PROJECT NUMBER

22088

DRAWN BY

rMc/SC

CHECKED BY

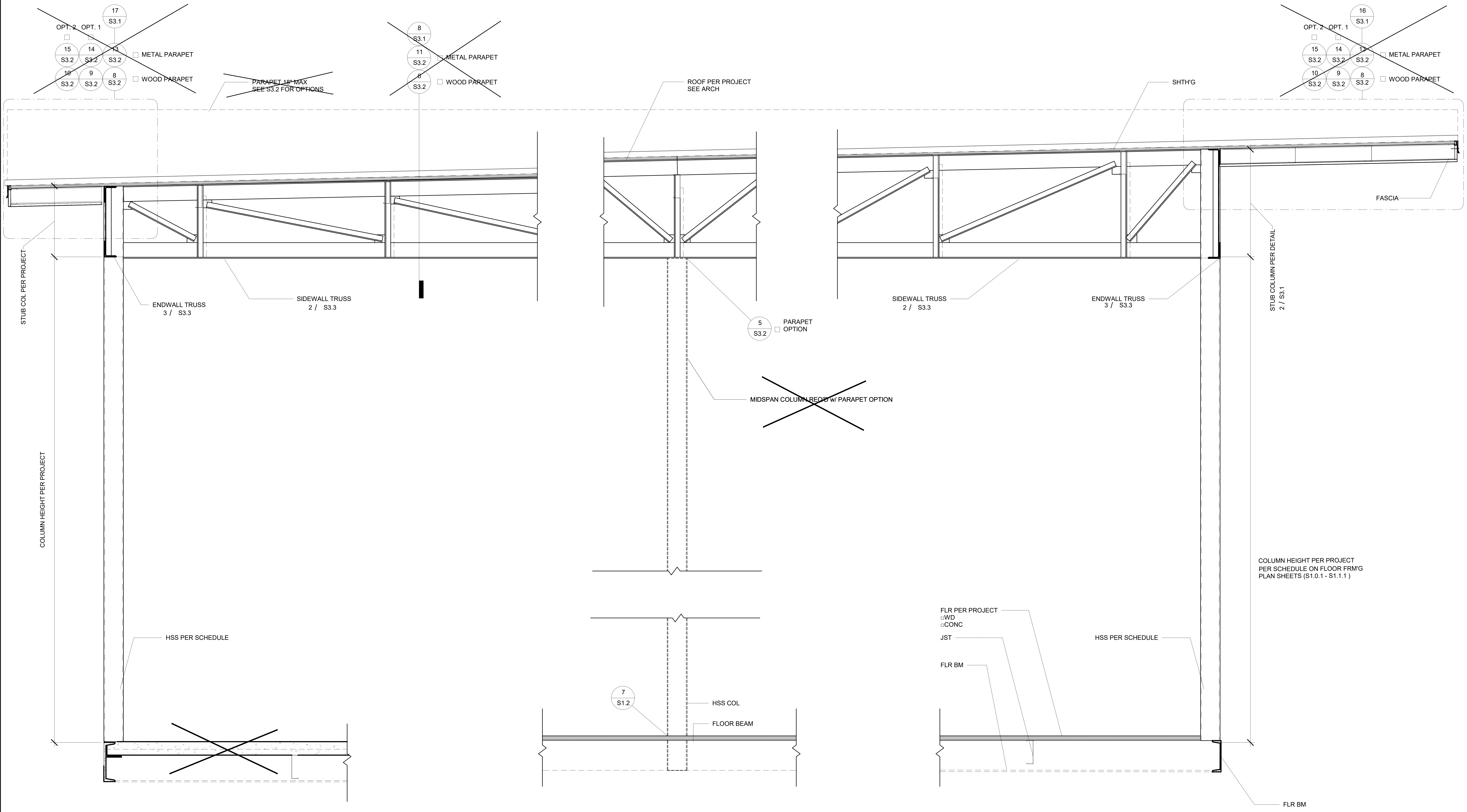
JA/RT

DATE

SHEET NO.

S4.5

SHEET OF



**1** *1" = 1'-0"*
***Structural Section (MONO)***

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
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MANNY D. FRISCH
No. 63380
Exp. 03/31/24
02/16/24
RST#22088

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Voice (951) 943-1908 Fax (951)943-5768

ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
LONG. SECTION -
(MONO)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
JA/RT

DATE

SHEET NO.
S5.0

SHEET OF

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020

## LIST OF APPLICABLE CODES

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
2022 CALIFORNIA GREEN BUILDING STANDARD CODE (CALGREEEN), PART 11, TITLE 24 CCR
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

## APPLICABLE STANDARDS

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

*CALIFORNIA ADMINISTRATIVE CODE, PART1, CHAPTER 10, ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC)

## GENERAL NOTES

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATION SHALL BE MADE BY AN ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT(CCD) BY DSA AS REQUIRED BY SECTION 4-338 PART1, TITLE 24, CCR

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

COMPLETE ACCESS IS A DIVISION OF INTEGRATED STAIR SYSTEMS INC. WITH CORPORATE OFFICES LOCATED IN 1345 RYAN RD, BUCKLEY, WA 98321, (360) 829-4220

## DESIGN LOADS

| | |
|---|---|
| LIVE LOAD: | 100 PSF (4.8 kPa) |
| HANDRAIL IMPACT: | 200 LBS (0.9kN) |
| HANDRAIL DIST. LOAD: | 50 PLF (0.7 kN/m) |
| RISK CATAGORY: | III |
| SEISMIC: | Ss=2.80g, S1=1.99g, R=1.25, SITE CLASS D |
| LATERAL RESISTING SYST: | OTHER STRUCTURES SIMILAR TO BUILDINGS |
| WIND: | 110 MPH, 3 SEC GUST EXPOSURE "C", Kzt=1.0 |
| SEIS IMPORTANCE FACTOR: | Ie=1.25, Iw=1.0 Cs=1.493 |
| DESIGN BASE SHEAR, V: | 1493 W |
| SNOW LOAD: | 0 PSF (0 kPa) |
| SOIL ALLOWABLE BEARING: | 1,000 PSF (4.8 kPa |

## MATERIALS

| | | |
|---|---|---|
| SQUARE STEEL TUBE | ASTM A513 GR. C | Fy= 33 KSI (345 MPa |
| RAMP OVERHANG POST | ASTM A500 B | Fy= 46 KSI |

*ALL STEEL TO BE COATED WITH GALVANIZED RUST INHIBITING COATING

WOOD FOUNDATION SHALL BE OF FOUNDATION GRADE REDWOOD OR PRESERVATIVE PRESSURE TREATED HEM-FIR #2 AND IS ALLOWED TO REST DIRECTLY ON SOIL OR PAVEMENT.

## WELDS

WELDING SHALL BE IN ACCORDANCE WITH AWS D.1.1-10 USING E70XX ELECTRODES FOR STEEL
AND AWS D1.2 AND A5.10 FOR ALUMINUM, USING ALMIGWELD ER4043

## BOLTS, SCREWS AND NAILS

STEEL TO STEEL CONNECTIONS: ASTM A307 CARBON STEEL BOLTS SHALL BE GRADE 5 ZINC PLATED, HOT DIPPED GALVANIZED TO ASTM A153 OR ELECTROGALVANIZED TO ASTM B63.3. FASTENER SHALL BE LUBRICATED TO ELIMINATE GALLING. ALL STEEL MEMBERS IN CONTACT WITH ALUMINIUM SHALL BE ZINC COATED TO ELIMINATE GALVANIC REACTION.

STEEL TO STEEL & WOOD CONNECTIONS: ANSI/ASME STEEL LAG SCREWS, STEEL STANDARD WOOD SCREWS, WOOD TO WOOD CONNECTION: ASTM STANDARD COMMOM STEEL NAIL.

ITW RED HEAD CONCRETE WEDGE ANCHORS SHALL BE INSTALLED PER RECOMMENDATION SHOWN IN ESR-2427

## HANDRAIL NOTES:

1) MANEUVERING CLEARANCE ON EXTERIOR PULL SIDE OF DOOR SHALL BE 42" TYPICAL (610MM) MINIMUM WITH 60" (1524MM) MINIMUM LANDING IN FRONT OF DOOR.

2) HANDRAILS SHALL BE CONTINUOUS ALONG BOTH SIDES. HANDRAILS SHALL BE PARALLEL WITH THE SURFACE AND PROJECT 12" (301MM) ON BEYOND TOP OF RISER AND 12" (301MM) PLUS 1 TREAD AT BOTTOM RISER. AT RAMPS WHERE HANDRAIL ARE NOT CONTINUOUS BETWEEN RUNS THE HANDRAIL SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12" (301MM) MINIMUM BEYOND THE BEGINNING AND ENDING OF RAMPS

3) TOP OF HANDRAILS SHALL BE MOUNTED BETWEEN 34" (864MM) AND 38" (965MM) ABOVE THE WALKING SURFACE, ONE CONSISTENT HEIGHT, BEIGINNING TO END.

4) CLEARANCE BETWEEN HANDRAIL AND WALL SHALL BE A MINIMUM OF 1-1/2" (38MM).

5) GUARDS ARE TO BE DESIGNED FOR A CONCENTRATED LOAD OF 200 LBF (0.9 kN) APPLIED @ ANY POINT AND ANY DIRECTION ALONG THE RAIL OR A UNIFORM LOAD OF 50 PLF (0.7 kN/m) APPLIED HORIZONTALLY @ HANDRAIL HEIGHT.

7) HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION WITH AN OUTSIDE DIAMETER OF 1-1/4" (31.75MM) MINIMUM AND NOT GREATER THAN 2" (51MM) MAXIMUM. **11B-505.7.2** NON-CIRCULAR CROSS SECTIONS. HANDRAIL GRIPPING SURFACES WITH A NON-CIRCULAR CROSS SECTION SHALL HAVE A PERIMETER DIMENSION OF 4 INCHES (102 MM) MINIMUM AND 6¼ INCHES (159 MM) MAXIMUM, AND A CROSS-SECTION DIMENSION OF 2 ¼ INCHES (57 MM) MAXIMUM.

8) GRIPPING SURFACE SHALL BE CONTINUOUS ALONG THIER LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES.

9) HANDRAILS SHALL NOT ROTATE IN THEIR FITTINGS.

10) ENDS OF HANDRAILS SHALL RETURN SMOOTHLY TO FLOOR, WALL OR POST.

## RAMP NOTES

1) RAMPS SHALL CONFORM TO CBC 2022 TITLE 24 PART 2, CHAPTER 11B, 11B-405

2) RAMP SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12 (8.33% SLOPE) FOR A MAXIMUM RISE OF 30" (762MM)

3) THE MAXIMUM VERTICAL RISE OF RAMP RUN SHALL BE 30" (762MM) MAXIMUM

4) RAMPS SHALL HAVE LANDING AT BOTTOM AND TOP OF EACH RAMP RUN

5) THE SLOPE ON LANDINGS SHALL NOT BE STEEPER THAN ONE UNIT VERTICAL IN 48 UNITS HORIZONTAL (2% SLOPE) IN ANY DIRECTION

6) LANDING SHALL HAVE A WIDTH AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING AND A MINIMUM LENGTH OF 60" IN THE DIRECTION OF TRAVEL @ TOP LANDING - 72" MIN @ BOT LANDING

7) CHANGES IN DIRECTION OF TRAVEL SHALL HAVE A LANDING 60" WIDE BY 72" LONG (1524MM x 1829MM) MINIMUM, WITH WITH THE LENGTH BEING IN THE DIRCTION OF DOWNWARD TRAVEL AND CHANGES IN DIRECTION

8) MANEUVERING CLEARANCE ON LANDING ADJACENT TO DOORWAYS SHALL BE NO LESS THAN 42" WITH DOOR IN ANY POSITION AND SHALL NOT BE REDUCED BY MORE THAN 3" WHEN DOOR IS FULLY OPENED

9) WALKING SURFACE SHALL BE ROUGHED OR SHALL BE OF SLIP RESISTANT DIAMOND PLATE ALUMINUM AND ALL LANDINGS TO BE DESIGNED TO NOT RETAIN STANDING WATER - 2.083 MAX SLOPE ANY DIRECTION

## ADDITIONAL NOTES

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR

## SCOPE OF WORK

CONSTRUCTION OF RAMP AND STAIRS BUILDINGS (RELOCATABLE)

## DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

**Application Number:** **School Name:** **School District:**

**DSA File Number:** **Increment Number:** **Date Created:**

### 2022 CBC

**IMPORTANT:** This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

**KEY TO COLUMNS**

| 1. TYPE | 2. PERFORMED BY |
|---|---|
| **Continuous** – Indicates that a continuous special inspection is required<br>**Periodic** – Indicates that a periodic special inspection is required<br>**Test** – Indicates that a test is required | **GE (Geotechnical Engineer)** – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.<br>**LOR (Laboratory of Record)** – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335.<br>**PI (Project Inspector) –** Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA.<br>**SI (Special Inspection)** – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector. |

| | | | | |
|---|---|---|---|---|
| | **C5. POST-INSTALLED ANCHORS:** | | | |
| | **Test or Special Inspection** | **Type** | **Performed By** | **Code References and Notes** |
| ☐ | **a.** Inspect installation of post-installed anchors | **See Notes** | **SI*** | **1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8** (See Appendix (end of this form) for exemptions). ACI 318-14 Sections 17.8 & 26.13. * May be performed by the project inspector when specifically approved by DSA. |
| ☐ | **b.** Test post-installed anchors. | **Test** | **LOR** | **1910A.5.** (See Appendix (end of this form) for exemptions.) |
| | **S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES** | | | |
| | **Test or Special Inspection** | **Type** | **Performed By** | **Code References and Notes** |
| ☑ | **a.** Verify identification of all materials and:<br>• Mill certificates indicate material properties that comply with requirements.<br>• Material sizes, types and grades comply with requirements. | **Periodic** | * | **Table 1705A.2.1 Item 3a–3c.** 2202A.1**;** AISI S100-20 Section A3.1 & A3.2, AISI S240-20 Section A3 & A5, AISI S220-20 Sections A4 & A6. * By special inspector or qualified technician when performed off-site. |
| ☑ | **b.** Test unidentified materials | **Test** | **LOR** | **2202A.1.** |
| ☑ | **c.** Examine seam welds of HSS shapes | **Periodic** | **SI** | DSA IR 17-3. |
| ☑ | **d.** Verify and document steel fabrication per DSA-approved construction documents. | **Periodic** | **SI** | Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**). |
| | **S/A3. WELDING:** | | | |
| | **Test or Special Inspection** | **Type** | **Performed By** | **Code References and Notes** |
| ☑ | **a.** Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS. | **Periodic** | **SI** | **1705A.2.5, Table 1705A.2.1 Items 4 & 5**; AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3. |
| ☑ | **b.** Verify weld filler material manufacturer's certificate of compliance. | **Periodic** | **SI** | DSA IR 17-3. |
| ☑ | **c.** Verify WPS, welder qualifications and equipment. | **Periodic** | **SI** | DSA IR 17-3. |
| | **S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):** | | | |
| | **Test or Special Inspection** | **Type** | **Performed By** | **Code References and Notes** |
| ☑ | **a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds. | **Continuous** | **SI** | **Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3. |
| ☑ | **b.** Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds. | **Periodic** | **SI** | **1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3. |
| ☑ | **c.** Inspect welding of stairs and railing systems. | **Periodic** | **SI** | **1705A.2.1**; AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. |

1. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291

2. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

THE EXAMPLE OF FORM DSA-103s SHOWN ON THIS SHEET ARE FOR ILLUSTRATION PURPOSE ONLY. A FORM DSA-103 IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS PC IS BEING INCORPORATED INTO AND ALL EXAMPLE FORM DSA-103s ARE TO BE CROSSED OUT ON THIS DRAWING.

1 — *1 1/2" = 1'-0"*
***Notes***

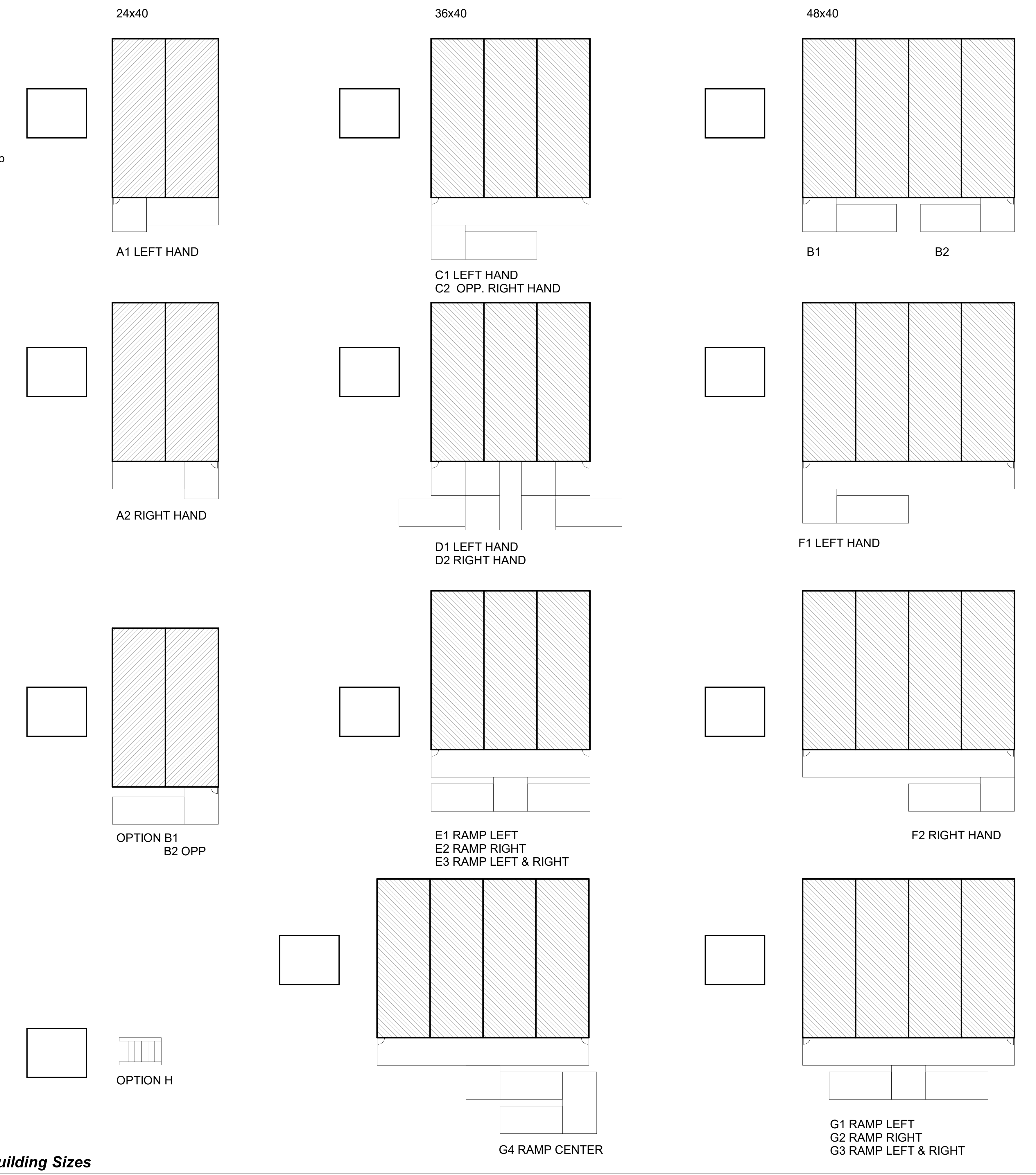
**Ramp Option Schedule:**

option1 : ramp & landing @ building
(plan view 1/SR1)

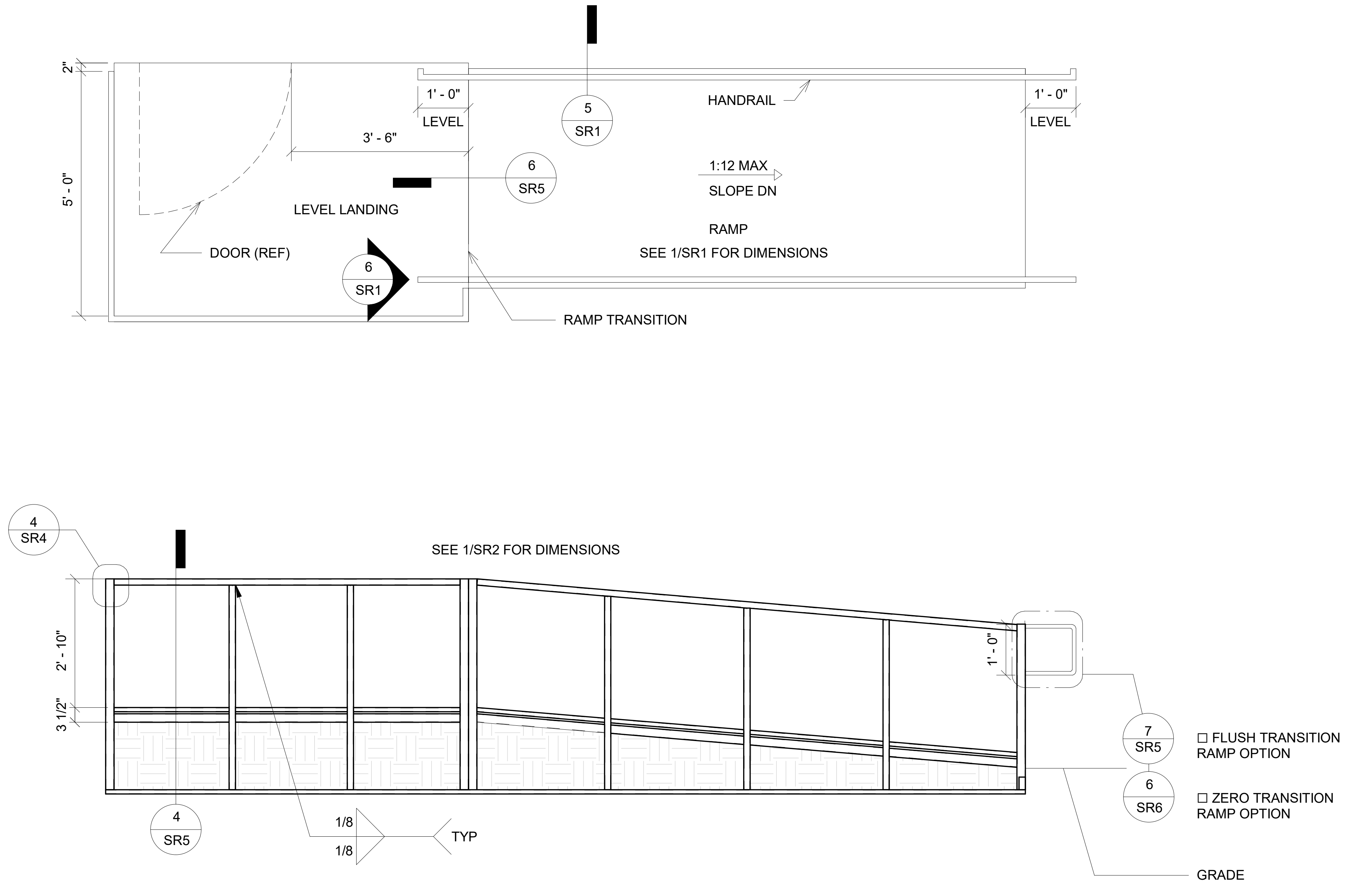
option 2 : ramp and landing with offset ramp
(plan view 2/SR1)

option 3: ramp and platform landing
(plan view 3/SR1)

option 4 : ramp and landing with switch back ramp
(plan view 4/SR1)



2 — ***Ramps Options w/ Different Building Sizes***



3 — *1/2" = 1'-0"*
***Standard Ramp***

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

Manny D. Frisch
No. S3380
Exp. 03/31/24
02/16/24

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Class Leasing
1320 W. Oleander Ave. Perris CA 92571-7408
VOICE (951) 943-1908 FAX Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date22079 |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Module Plan and Notes (COVER SHEET)

PROJECT NUMBER
22079

DRAWN BY
SM

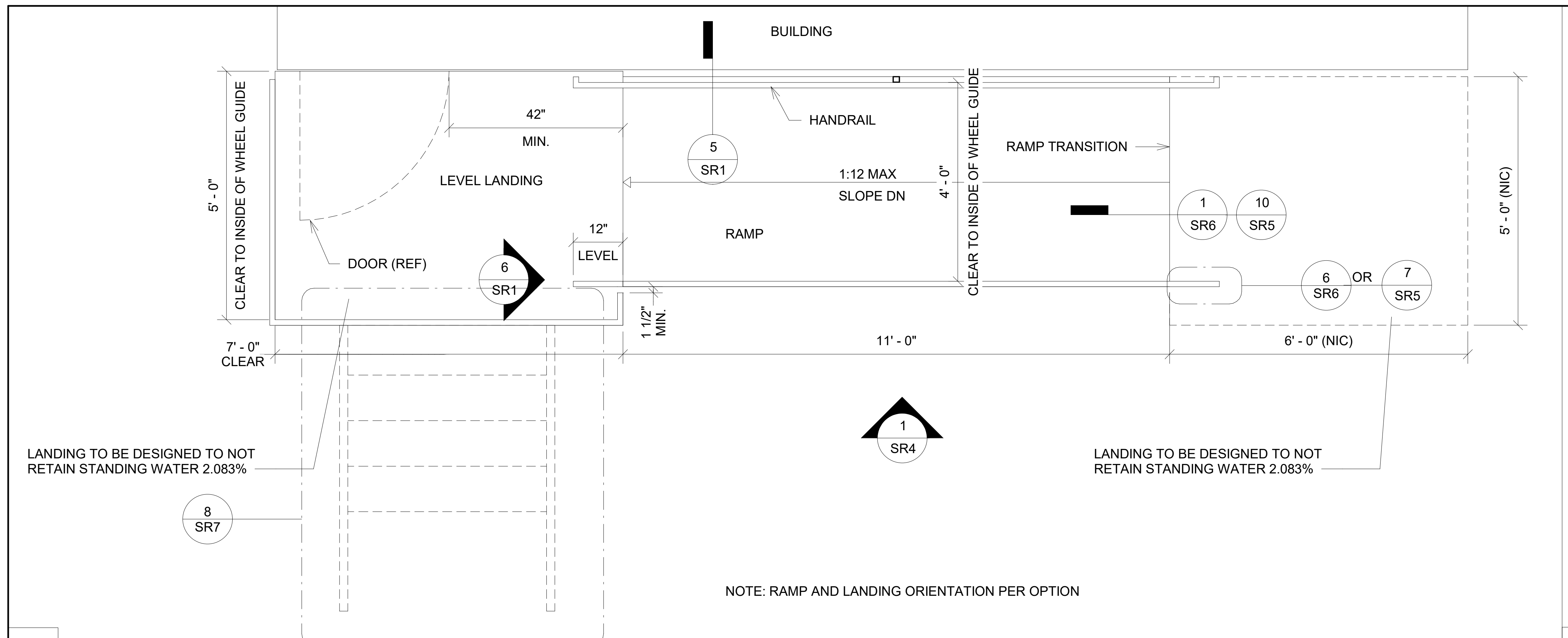
CHECKED BY
rMc

DATE
6/15/2021

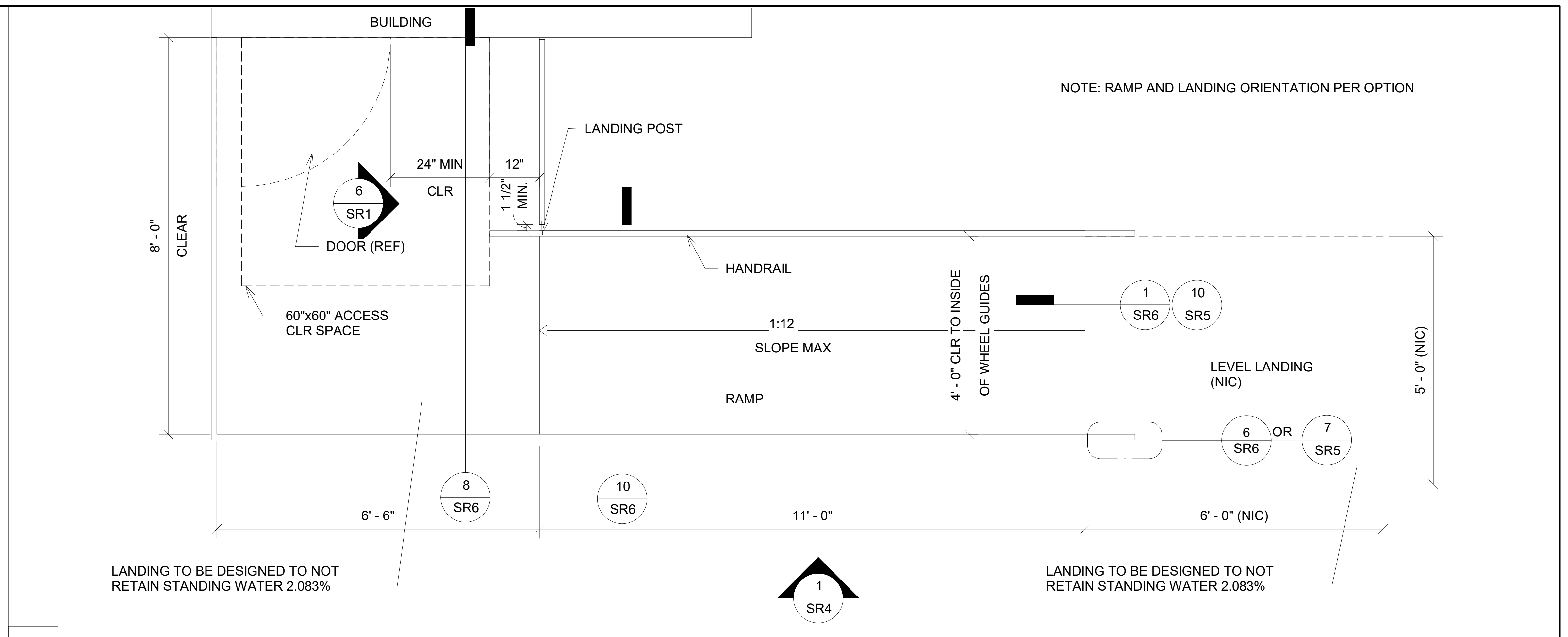
SHEET NO.
SR0

SHEET OF

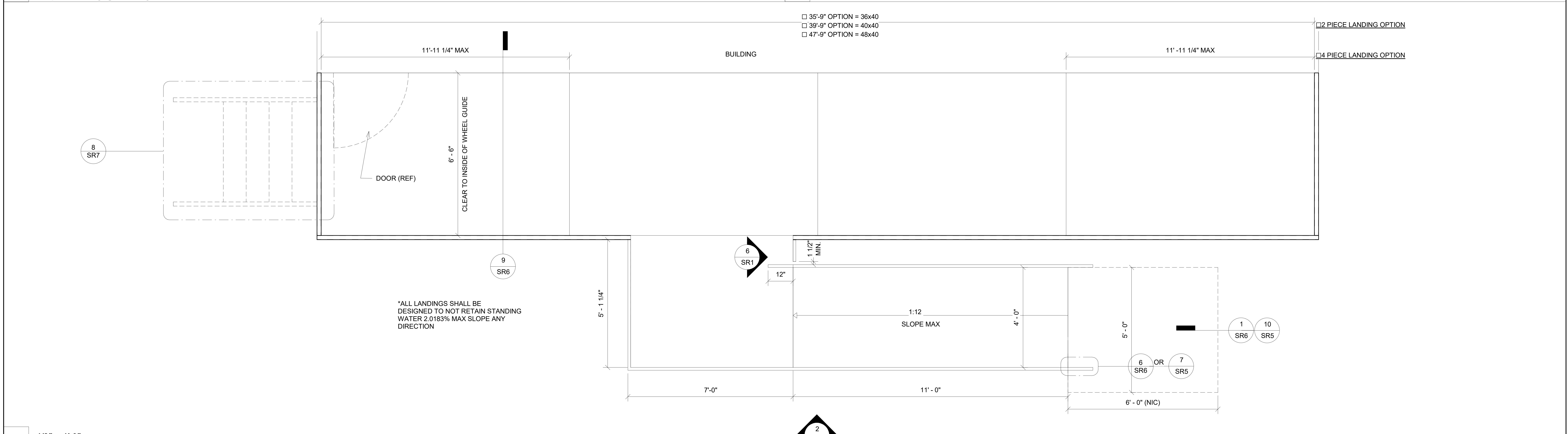
6/15/2021 7:29:24 PM M:\2020\22116 - Class Leasing, 24x40 - 120x40 2022 CBC Updates\REVIT\RST#22116 - Aries, Ramps and Stairs PC.rvt


BUILDING
42"
MIN.
LEVEL LANDING
5
SR1
HANDRAIL
1:12 MAX
SLOPE DN
RAMP TRANSITION
RAMP
5' - 0"
CLEAR TO INSIDE OF WHEEL GUIDE
4' - 0"
CLEAR TO INSIDE OF WHEEL GUIDE
5' - 0" (NIC)
1
SR6
10
SR5
12"
LEVEL
DOOR (REF)
6
SR1
6
SR6
OR
7
SR5
1 1/2" MIN.
7' - 0"
CLEAR
11' - 0"
6' - 0" (NIC)
1
SR4
LANDING TO BE DESIGNED TO NOT RETAIN STANDING WATER 2.083%
LANDING TO BE DESIGNED TO NOT RETAIN STANDING WATER 2.083%
8
SR7
NOTE: RAMP AND LANDING ORIENTATION PER OPTION

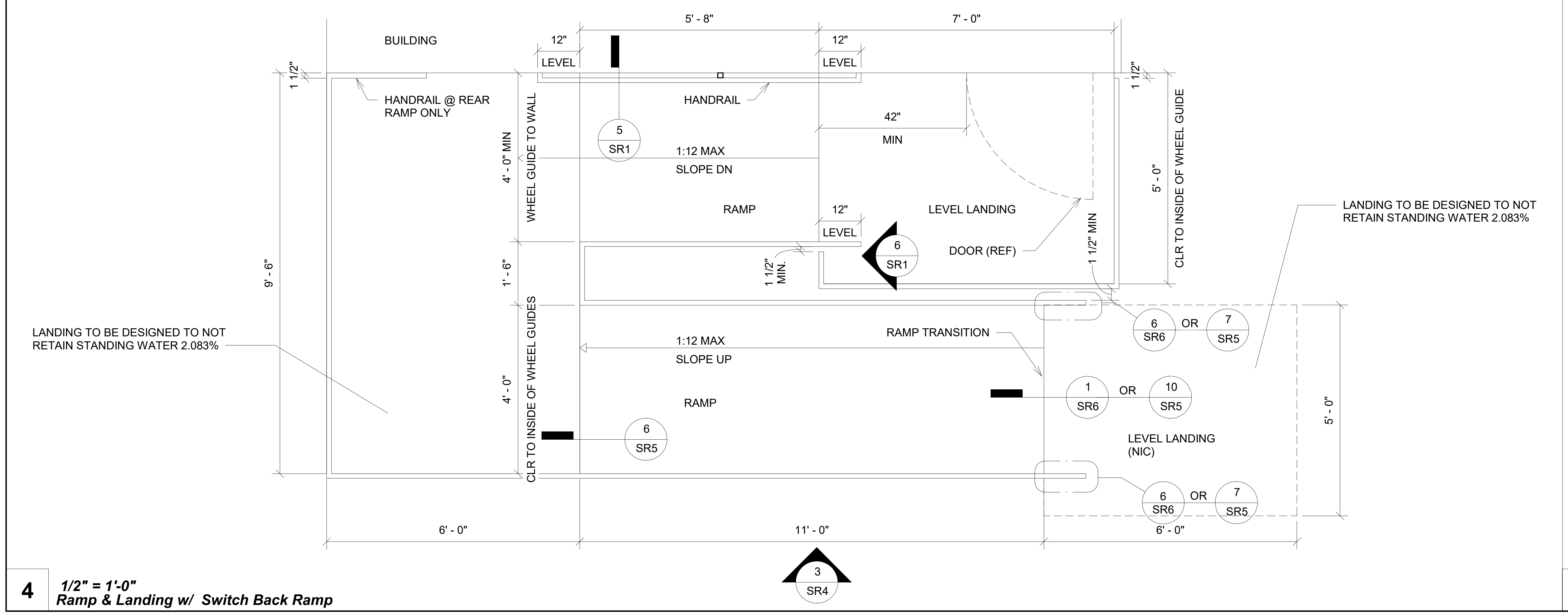
1 1/2" = 1'-0"
**Ramp & Landing @ Building**



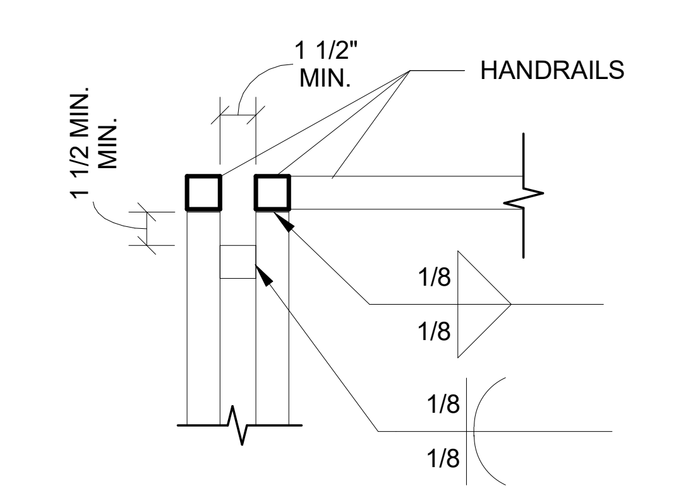
2 1/2" = 1'-0"
**Ramp & Landing w/ Offset Ramp**



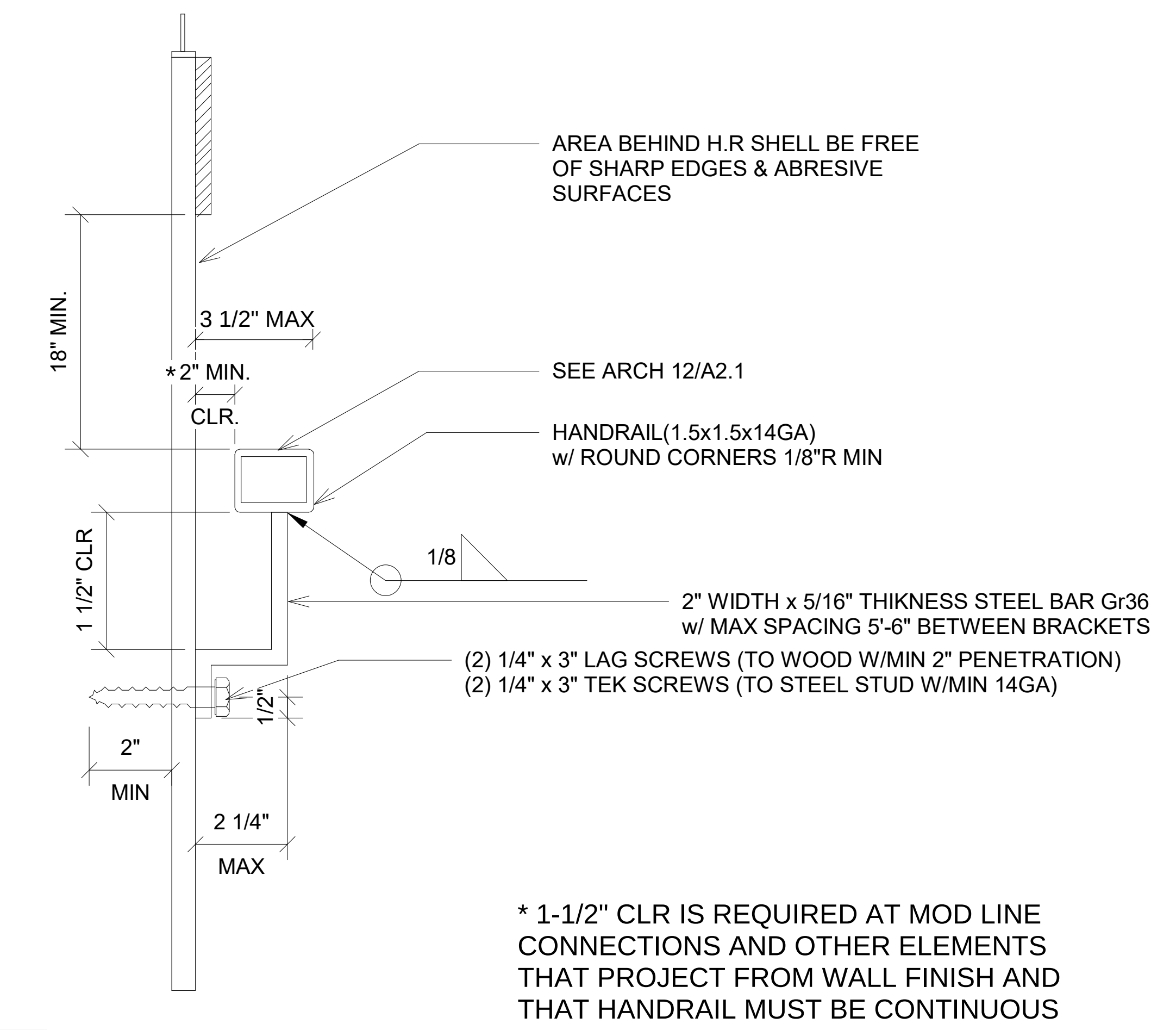
3 1/2" = 1'-0"
**Ramp and Platform Landing**



4 1/2" = 1'-0"
**Ramp & Landing w/ Switch Back Ramp**



6 1 1/2" = 1'-0"
**RAMP & LANDING CONNECTION @ RAILS**


AREA BEHIND H.R SHELL BE FREE OF SHARP EDGES & ABRESIVE SURFACES
18" MIN.
3 1/2" MAX
*2" MIN.
CLR.
SEE ARCH 12/A2.1
HANDRAIL(1.5x1.5x14GA) w/ ROUND CORNERS 1/8"R MIN
1/8
1 1/2" CLR
2" WIDTH x 5/16" THIKNESS STEEL BAR Gr36 w/ MAX SPACING 5'-6" BETWEEN BRACKETS
(2) 1/4" x 3" LAG SCREWS (TO WOOD W/MIN 2" PENETRATION)
(2) 1/4" x 3" TEK SCREWS (TO STEEL STUD W/MIN 14GA)
1/2"
2"
MIN
2 1/4"
MAX

* 1-1/2" CLR IS REQUIRED AT MOD LINE CONNECTIONS AND OTHER ELEMENTS THAT PROJECT FROM WALL FINISH AND THAT HANDRAIL MUST BE CONTINUOUS (CANNOT CURVE AROUND PROJECTION)

5 3" = 1'-0"
**Handrail**

M:\2020\20093 - Class Leasing, 24x40 - 120x40 2022 CBC Updates\REVIT\RST#20093 - Aries, Ramps and Stairs PC.rvt

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W Bernardo Court, Suite 100
San Diego, CA 92127
www.rstavares.com

PROFESSIONAL STAMP

MANNY D. FRISCH
No. S3380
Exp. 03/31/24

02/16/24

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1320 W. Oleander Ave. Perris CA 92571-7408
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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date22079 |
|---|---|---|

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Ramp and Landing Plan

PROJECT NUMBER
22079

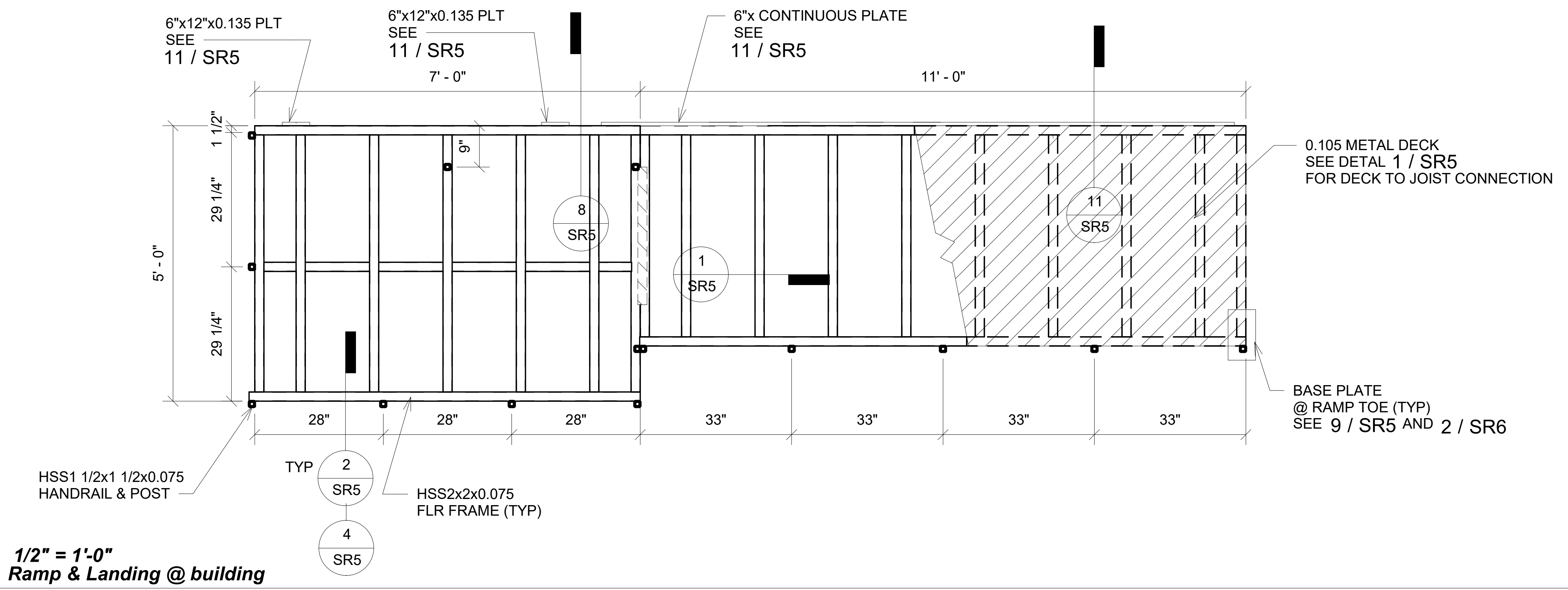
DRAWN BY
SM

CHECKED BY
rMc

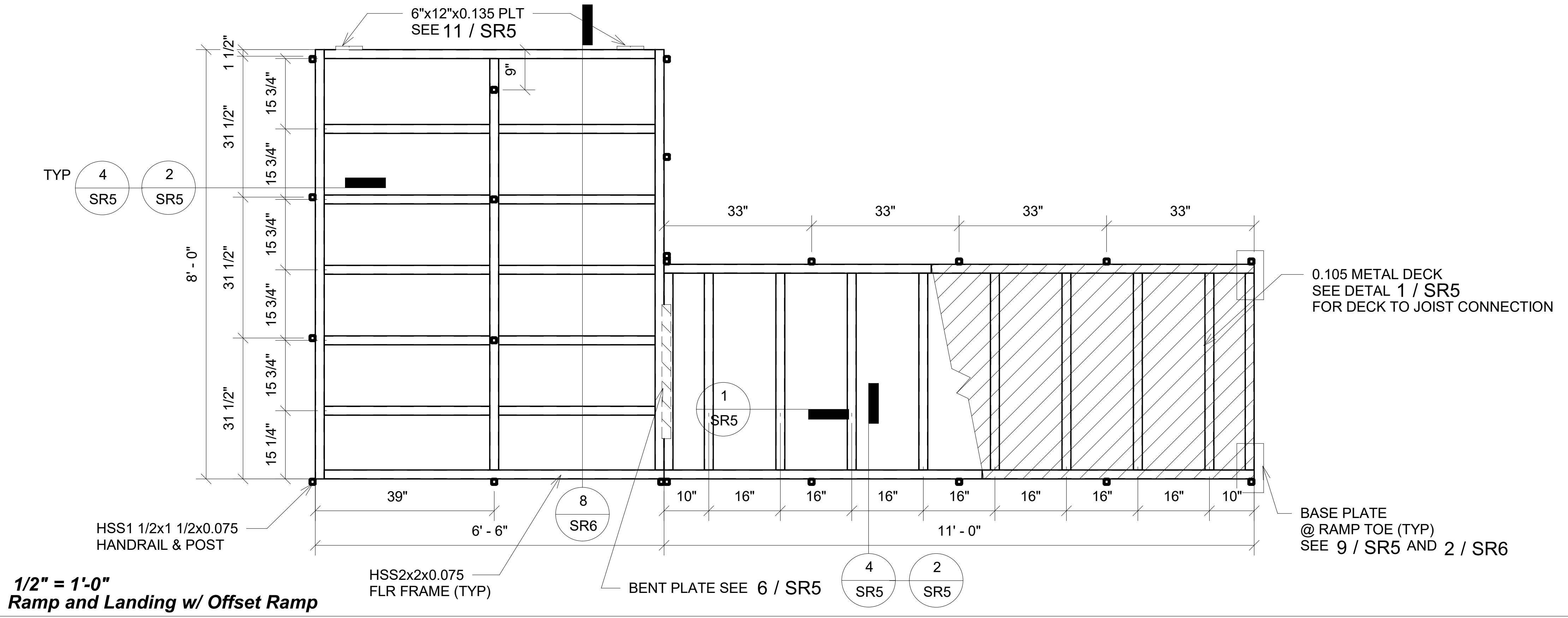
DATE
12/23/2022

SHEET NO.
SR1

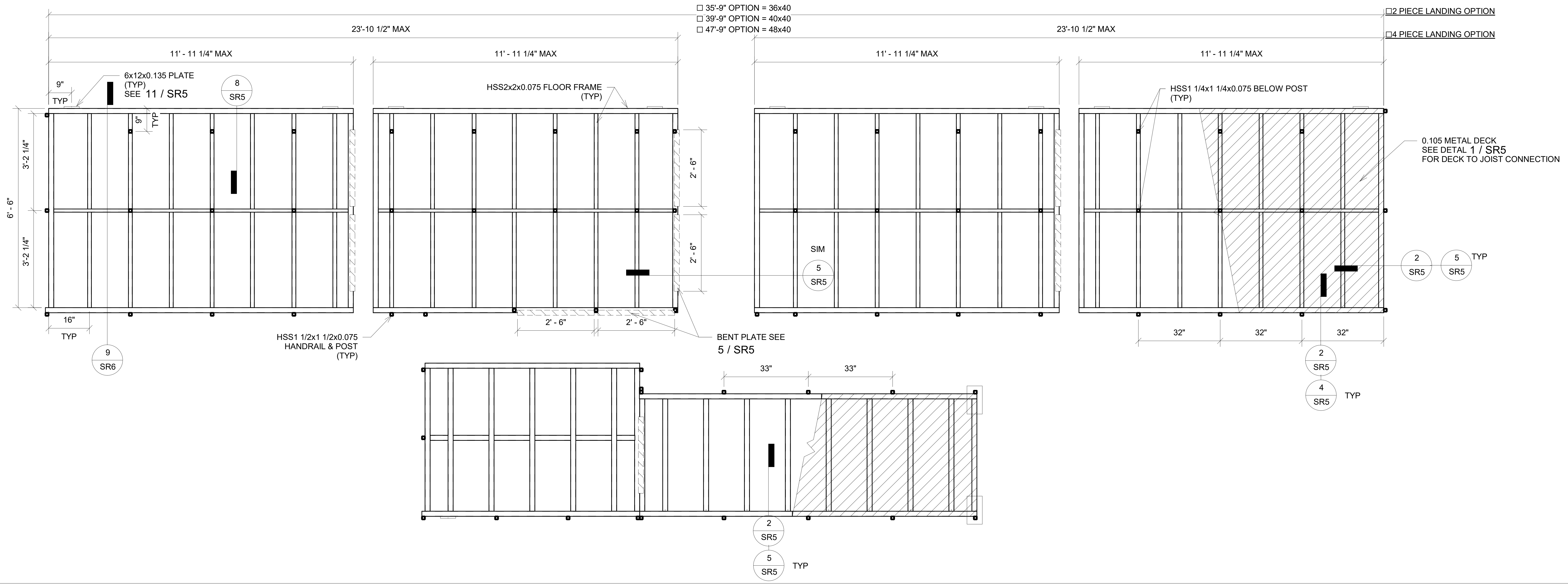
SHEET OF



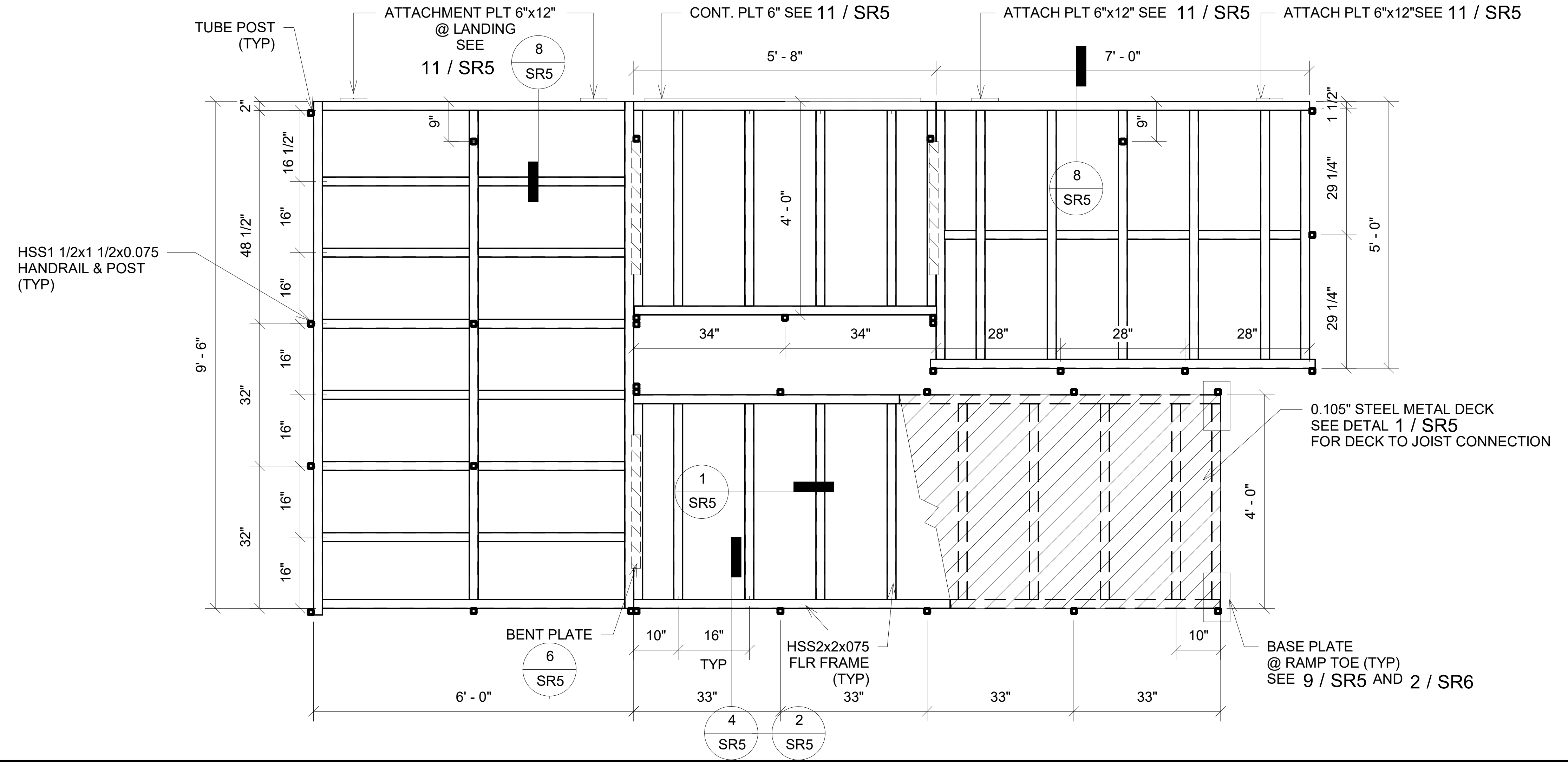
**1** ***1/2" = 1'-0"***
***Ramp & Landing @ building***



**2** ***1/2" = 1'-0"***
***Ramp and Landing w/ Offset Ramp***



**3** ***1/2" = 1'-0"***
***Ramp & Platform Landing Frame***



**4** ***1/2" = 1'-0"***
***Ramp & Landing w/ Switch Back Ramp***

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
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No. S3380
Exp. 03/31/24
02/16/24

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~~APP: 04-123059 PC~~
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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date22079 |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Ramp and Landing Framing

PROJECT NUMBER
22079

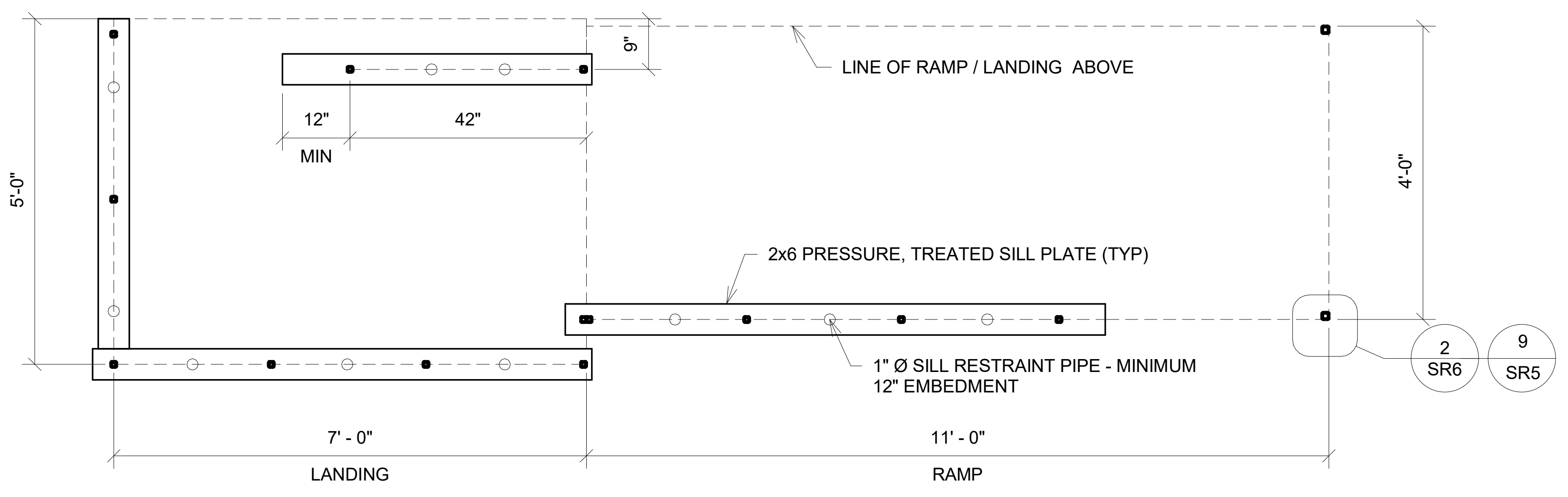
DRAWN BY
SM

CHECKED BY
BR/rMc

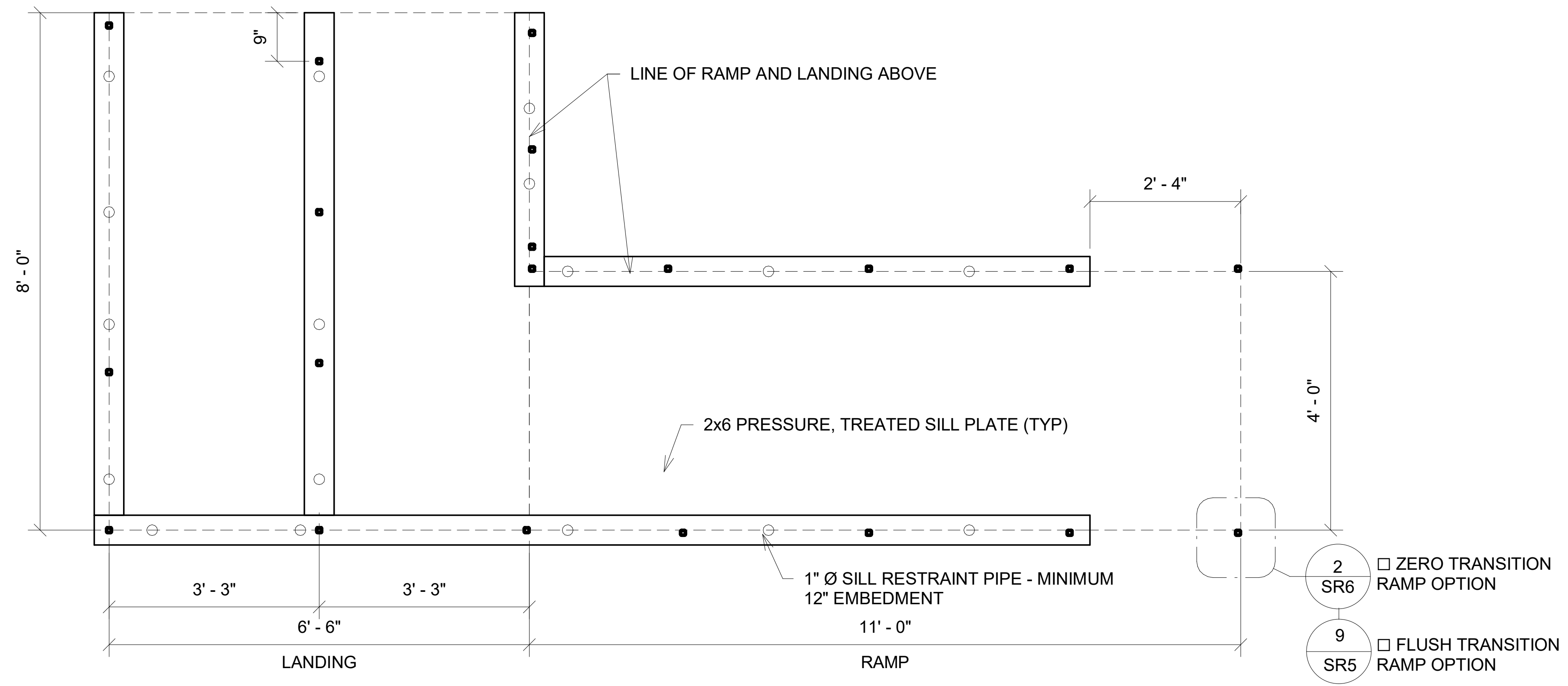
DATE
12/23/2022

SHEET NO.
SR2

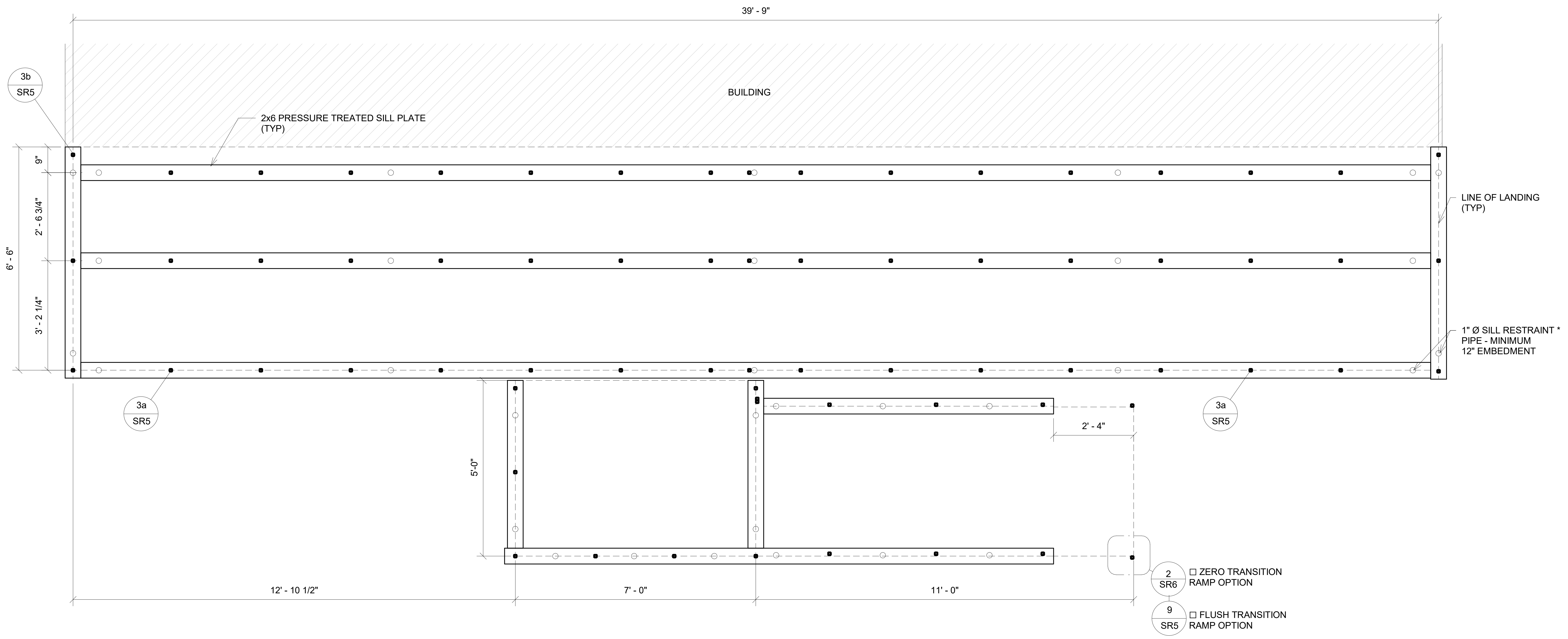
SHEET OF


9"
LINE OF RAMP / LANDING ABOVE
12"
42"
MIN
5'-0"
4'-0"
2x6 PRESSURE, TREATED SILL PLATE (TYP)
1" Ø SILL RESTRAINT PIPE - MINIMUM 12" EMBEDMENT
2 SR6
9 SR5
7' - 0"
11' - 0"
LANDING
RAMP

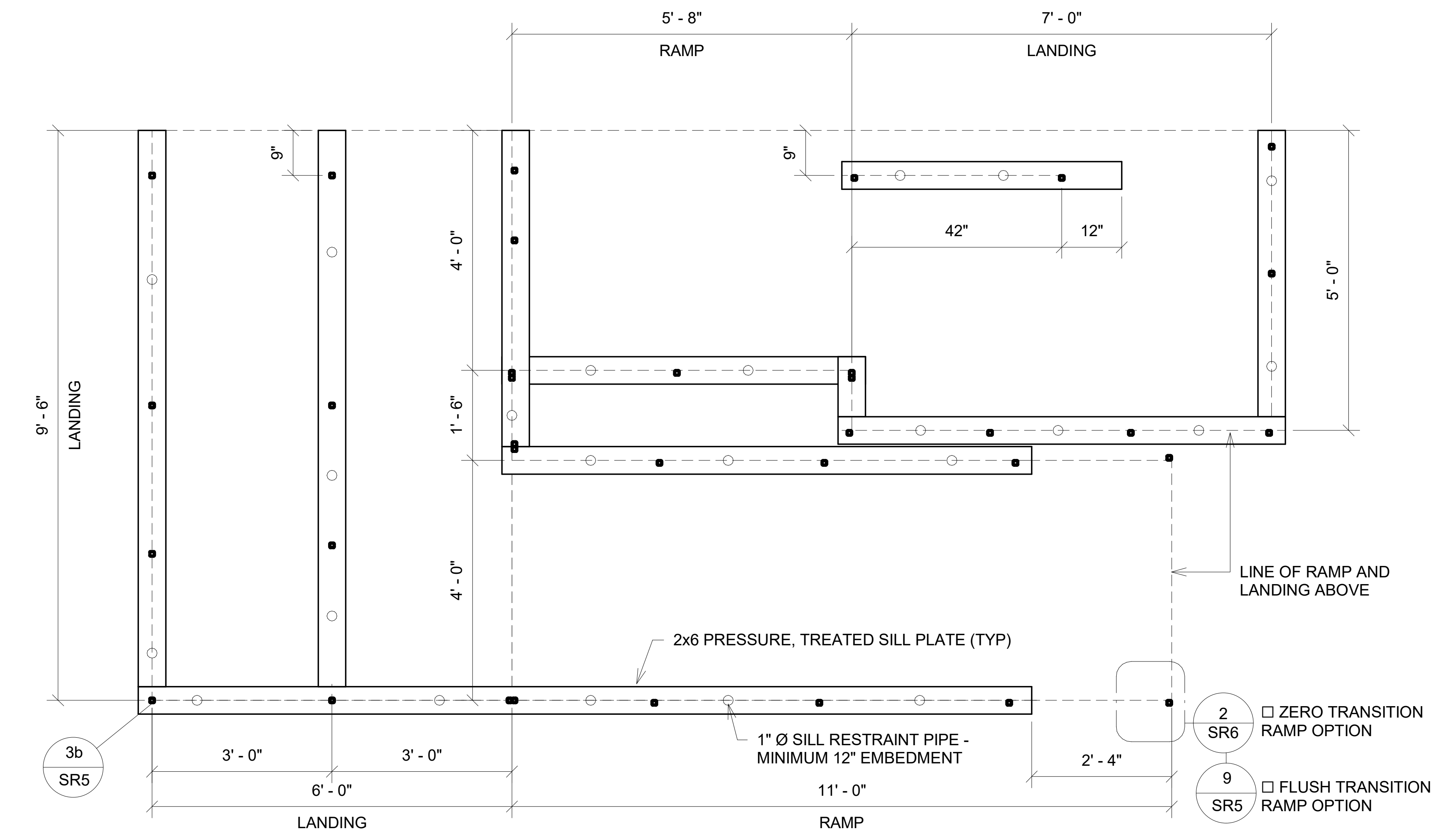
**1** *1/2" = 1'-0"*
***Sill Plan For Ramp & Landing***


9"
LINE OF RAMP AND LANDING ABOVE
2' - 4"
8' - 0"
4' - 0"
2x6 PRESSURE, TREATED SILL PLATE (TYP)
1" Ø SILL RESTRAINT PIPE - MINIMUM 12" EMBEDMENT
3' - 3"
3' - 3"
6' - 6"
11' - 0"
LANDING
RAMP
2 SR6
☐ ZERO TRANSITION RAMP OPTION
9 SR5
☐ FLUSH TRANSITION RAMP OPTION

**2** *1/2" = 1'-0"*
***Sill Plan For Ramp & Landing Offset***


39' - 9"
BUILDING
3b SR5
2x6 PRESSURE TREATED SILL PLATE (TYP)
9"
2' - 6 3/4"
6' - 6"
3' - 2 1/4"
LINE OF LANDING (TYP)
1" Ø SILL RESTRAINT * PIPE - MINIMUM 12" EMBEDMENT
3a SR5
3a SR5
5'-0"
2' - 4"
12' - 10 1/2"
7' - 0"
11' - 0"
2 SR6
☐ ZERO TRANSITION RAMP OPTION
9 SR5
☐ FLUSH TRANSITION RAMP OPTION

**3** *1/2" = 1'-0"*
***Platform Sill Plan For Ramp & Landing***


5' - 8"
RAMP
7' - 0"
LANDING
9"
9"
42"
12"
4' - 0"
1' - 6"
4' - 0"
9' - 6"
LANDING
5' - 0"
LINE OF RAMP AND LANDING ABOVE
2x6 PRESSURE, TREATED SILL PLATE (TYP)
1" Ø SILL RESTRAINT PIPE - MINIMUM 12" EMBEDMENT
3b SR5
3' - 0"
3' - 0"
6' - 0"
11' - 0"
2' - 4"
LANDING
RAMP
2 SR6
☐ ZERO TRANSITION RAMP OPTION
9 SR5
☐ FLUSH TRANSITION RAMP OPTION

**4** *1/2" = 1'-0"*
***Sill Plan For Ramp & Landing Switchback***

* "RESTRAINING PIPES / RODS SPECS"
ONE INCH DIAMETER STANDARD WEIGHT (1.315" ACTUAL 0.0) NOT DIPPED GALVANIZED PIPES OR ONE INCH DIAMETER SOLID STEEL RODS SPACED AT NOT MORE THAN 10'-0" o/c.
ONE PIPE / ROD SHALL BE LOCATED A MAXIMUM OF TWO FEET FROM EACH CORNERIN BOTH DIRECTIONS AND MINIMUM OF TWO PIPES / RODS PER DISCONTINUOUS FOUNDATION STRIP.
PIPES SHOULD PENETRATE INTO SOIL AND/OR PAVING A MIN. OF 12" MEASURED VERTICALLY.
PER DSA IR 16-1

M:\2020\20093 - Class Leasing, 24x40 - 120x40 2022 CBC Updates\REVIT\RST#20093 - Aries, Ramps and Stairs PC.rvt

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

No. S3380
Exp. 03/31/24
02/16/24

CLIENT

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1320 W. Oleander Ave. Perris CA 92571-7408
VOICE (951) 943-1908 FAX Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED~~
~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

# Description Date22079

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Foundation Plan

PROJECT NUMBER
22079

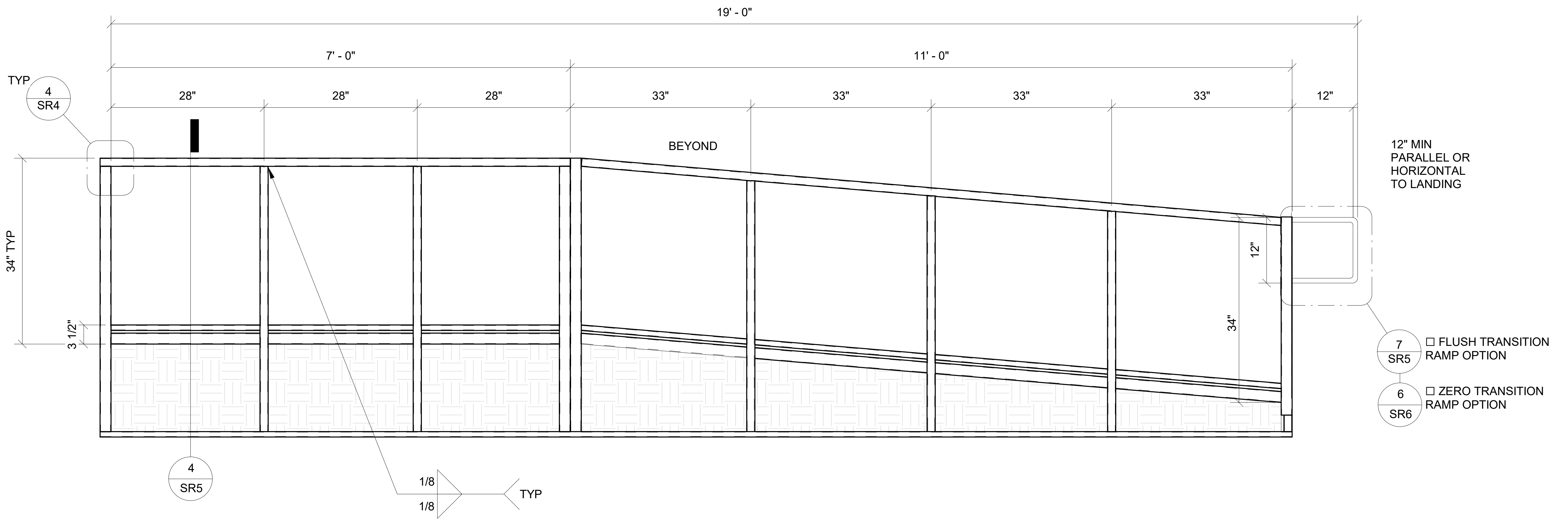
DRAWN BY
SM

CHECKED BY
rMc

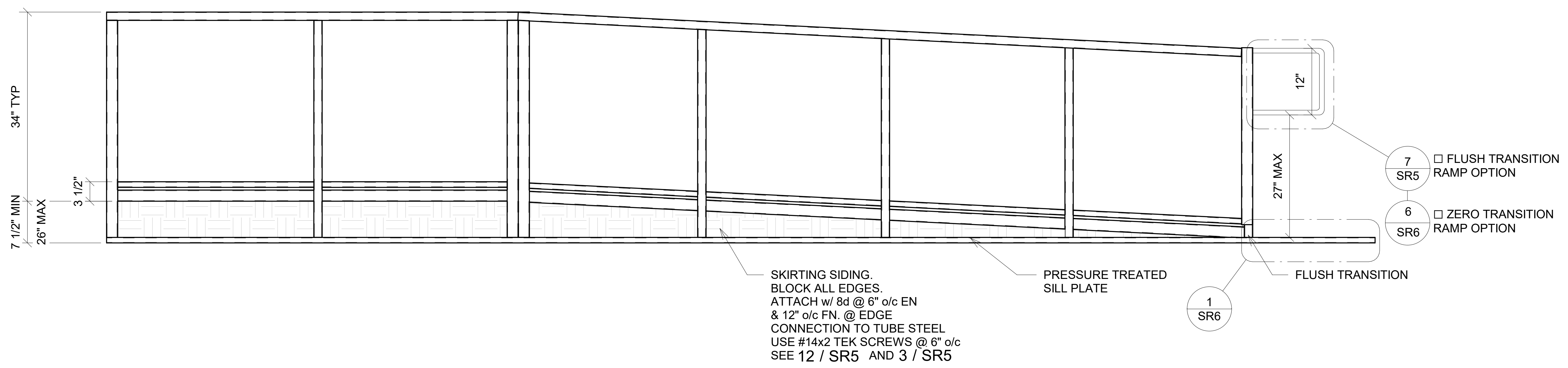
DATE
12/23/2022

SHEET NO.
SR3

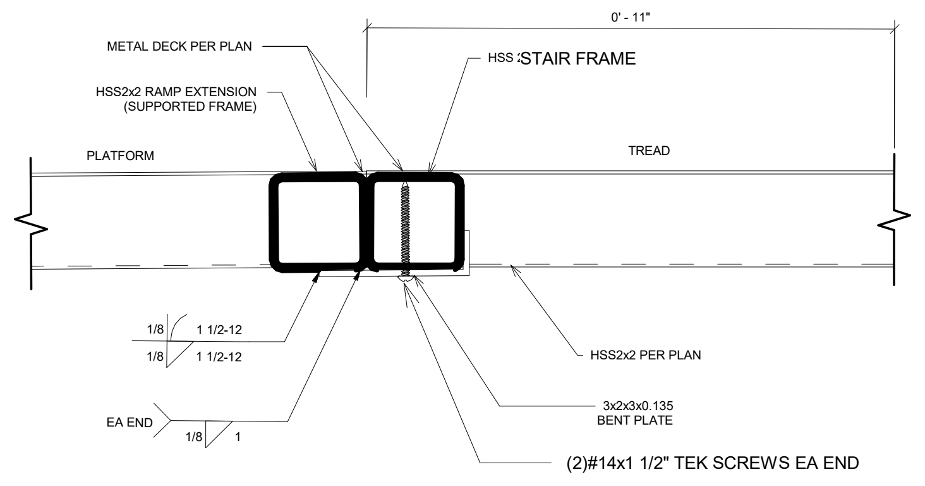
SHEET OF



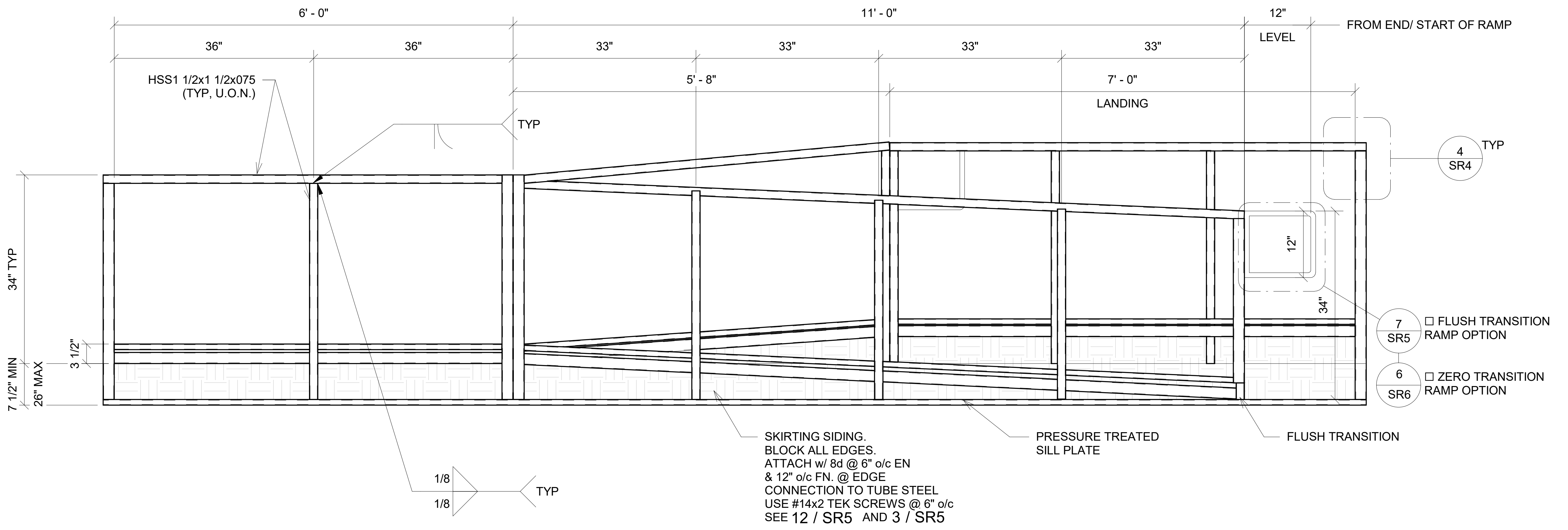
**1** *3/4" = 1'-0"*
***Ramp & Landing Elevation***



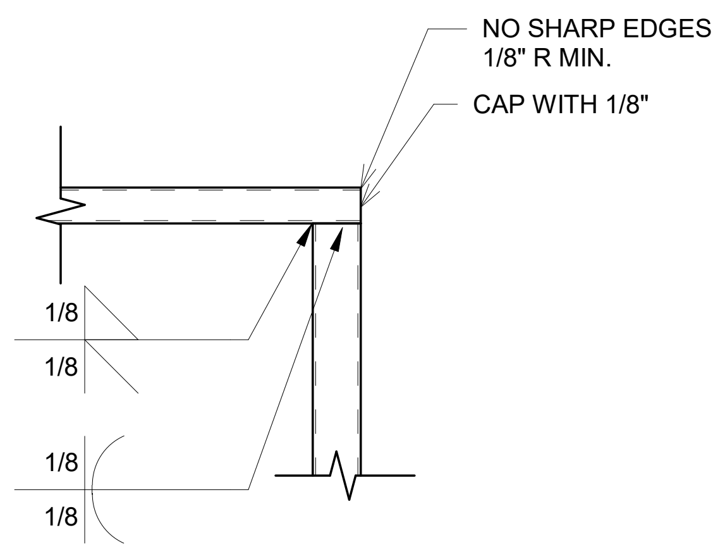
**2** *3/4" = 1'-0"*
***Ramp & Landing Elevation Option X Copy 1***



**5** *3" = 1'-0"*
***Conn @ Platform***



**3** *3/4" = 1'-0"*
***Ramp & Landing Elevation Option X***



**4** *1 1/2" = 1'-0"*
***Ramp & Landing Elevation Option X1 - Callout 1***

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
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San Diego, CA 92127
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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MANNY D. FRISCH
No. S3380
Exp. 03/31/24
STRUCTURAL
STATE OF CALIFORNIA

Manny D. Frisch

02/16/24

CLIENT

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ORIGINAL PC STATE AGENCY APPROVAL

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~~DIV. OF THE STATE ARCHITECT~~
~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date22079 |
|---|---|---|

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Ramp and Landing / Stair Framing Elevation

PROJECT NUMBER
22079

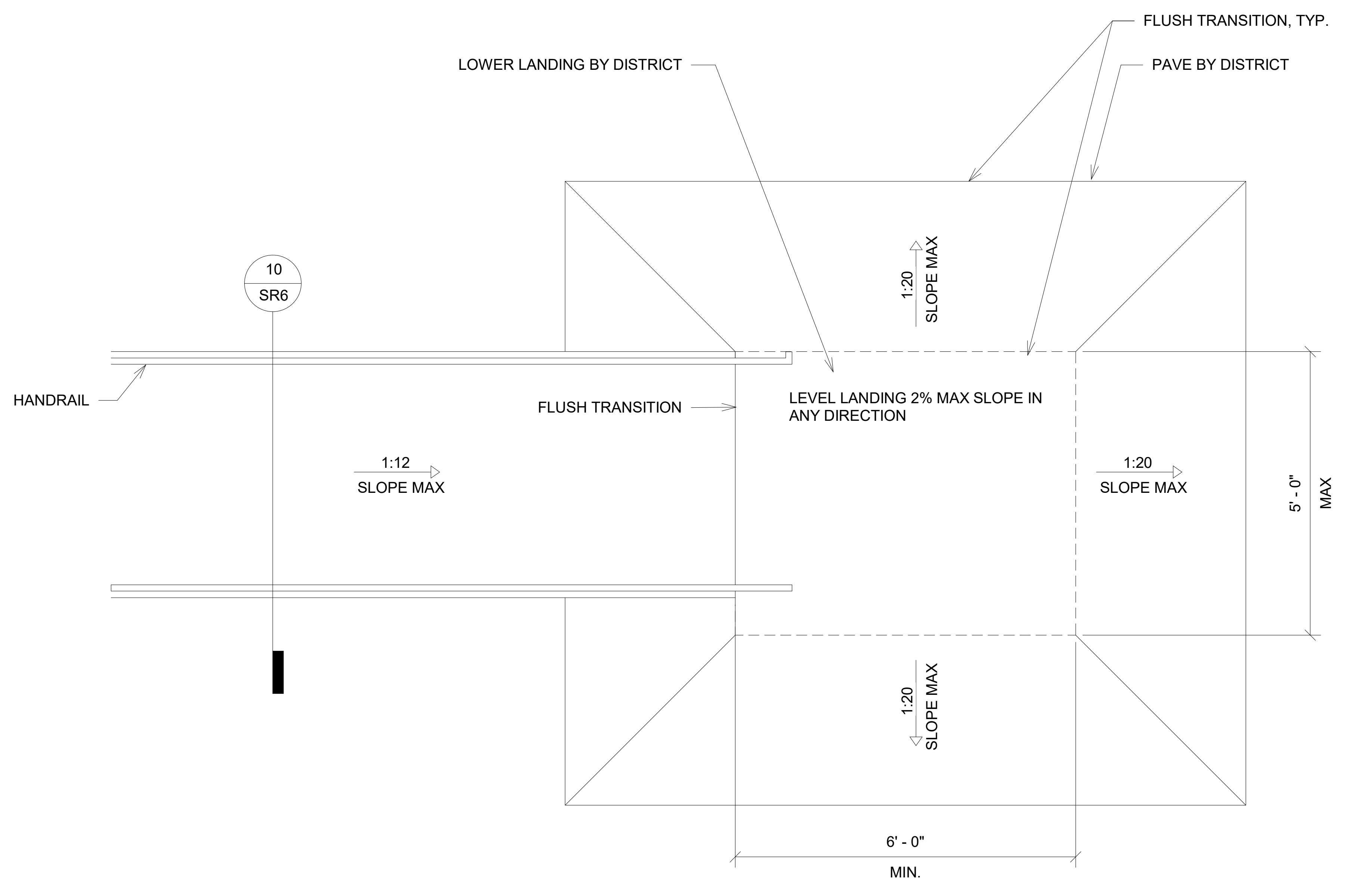
DRAWN BY
SM

CHECKED BY
rMc

DATE
12/23/2022

SHEET NO.
SR4

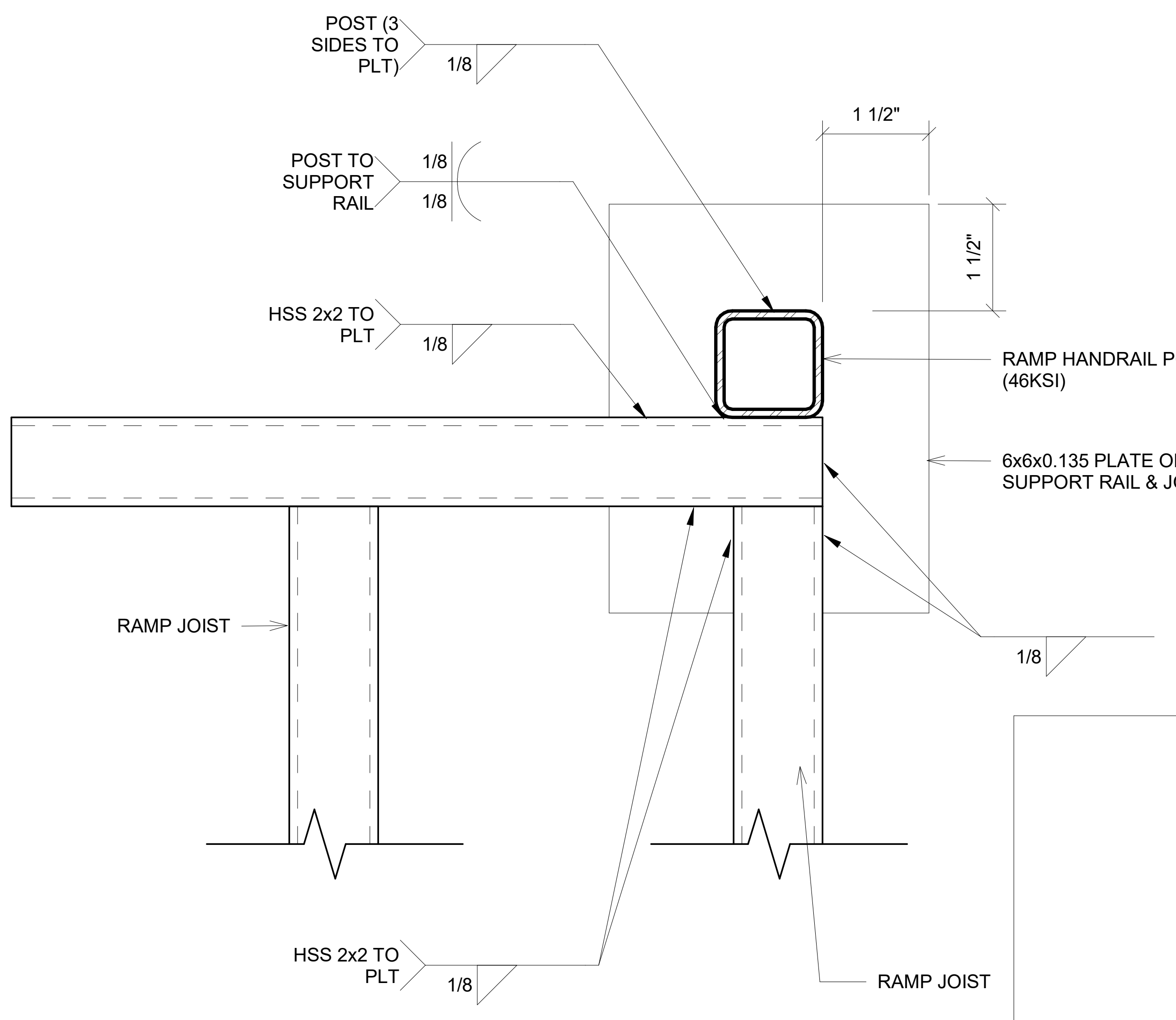
SHEET OF



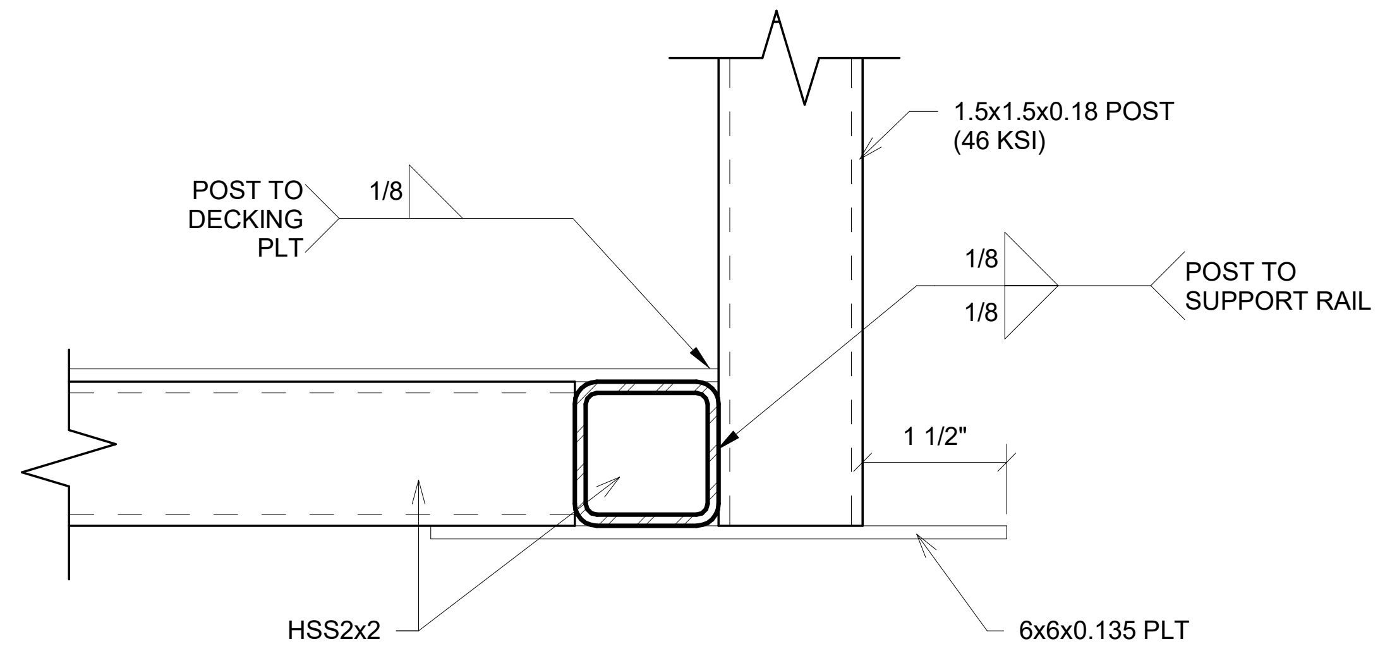
NOTE:
1. 1:20 TRANSITION OFF OF LOWER LANDING REQUIRES NO HANDRAIL.
2. TRANSITIONS EXCEEDING 1:20 BUT NOT EXCEED 1:12 REQUIRE REMOVAL OF 12" HANDRAIL EXTENSION AND ADDITIONAL HANDRAILING BY DISTRICT. (THIS CONDITION REQUIRES A SITE SPECIFIC DETAIL PROVIDED BY ARCHITECT TO DEMOSTRATE ACCESSIBLE RAMP)

LANDING TO BE DESIGNED TO NOT RETAIN STANDING WATER 1% 1% 2.083 MAX SLOPE

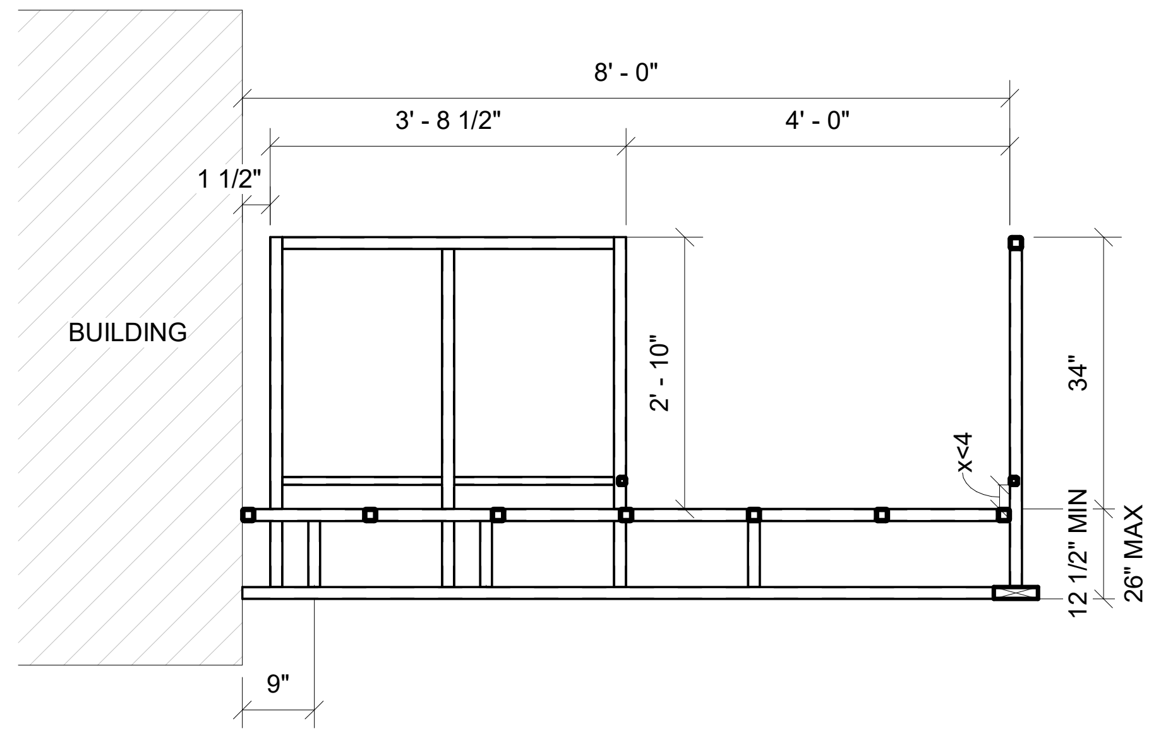
**7** *1/2" = 1'-0"*
***Ramp Transition***



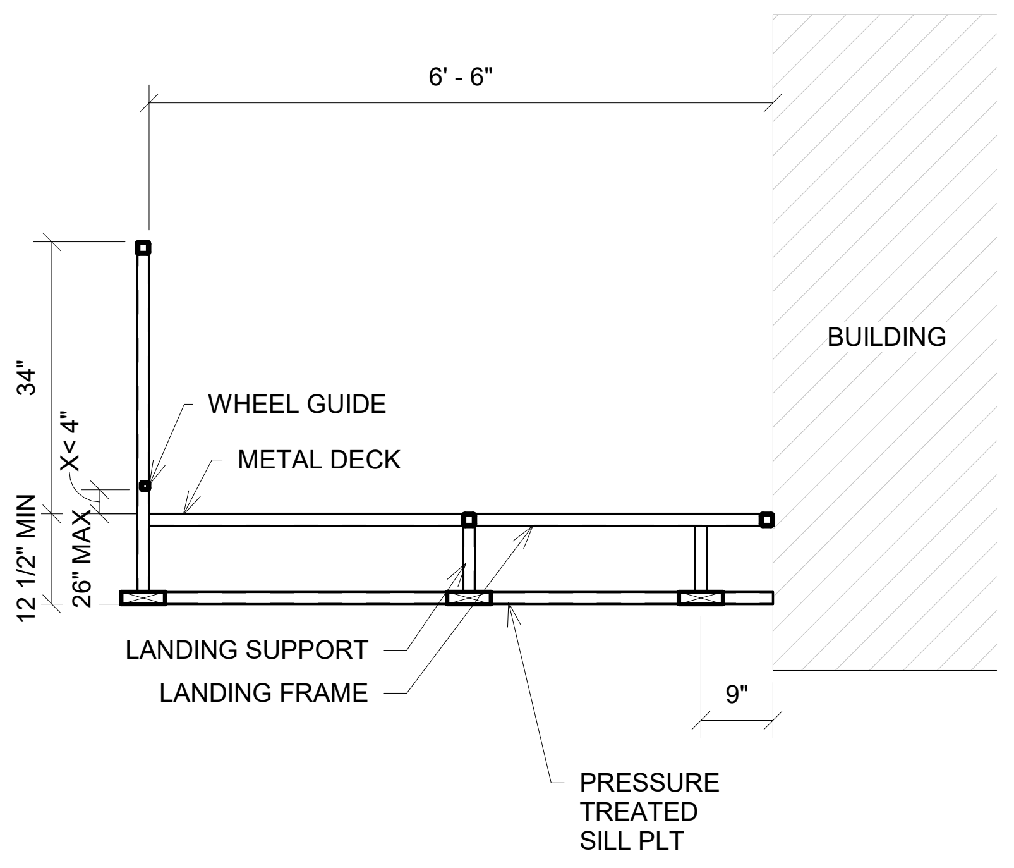
**2** *6" = 1'-0"*
***Base Plt @ Ramp Toe For Zero Transition***



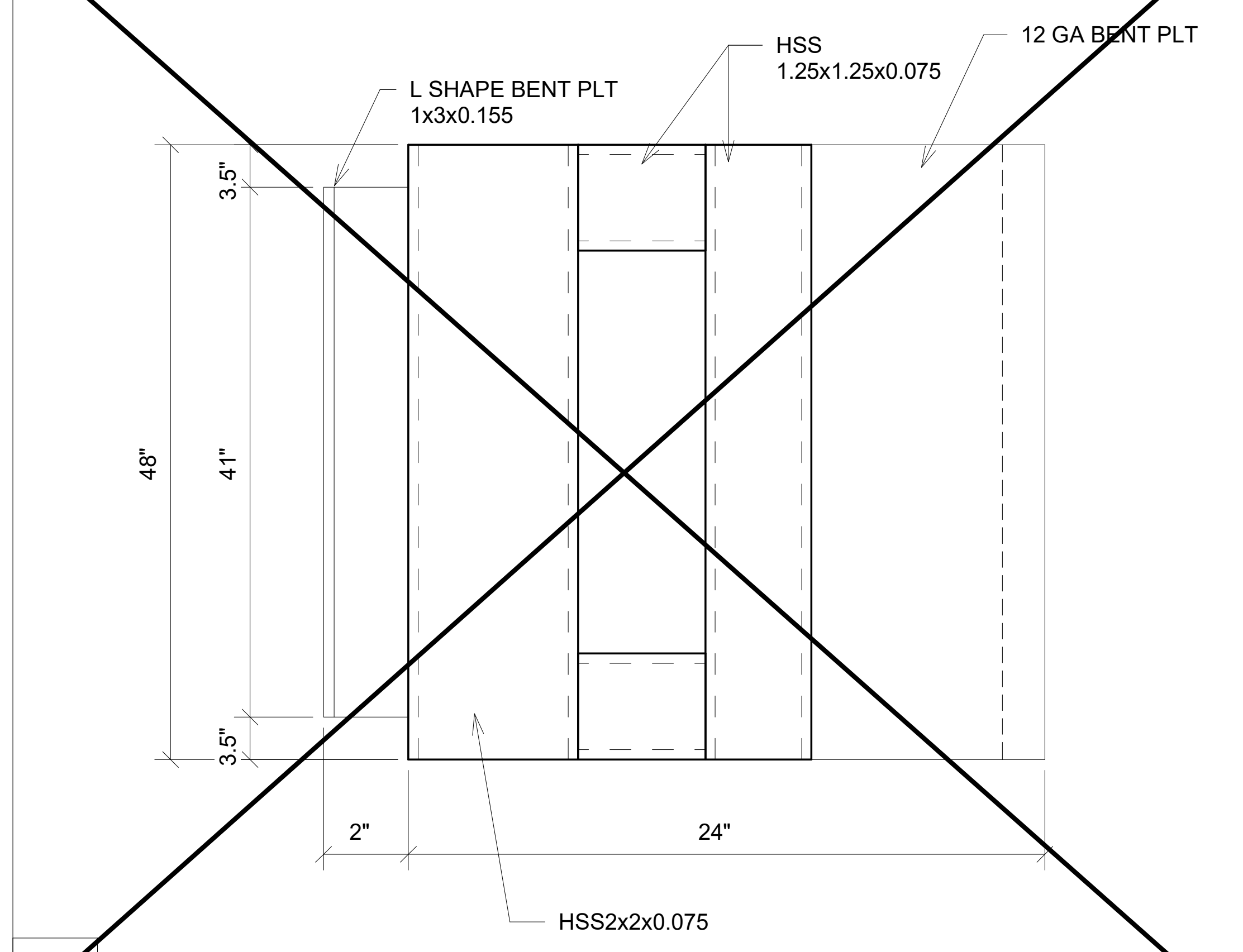
**3** *6" = 1'-0"*
***Base Plt @ Ramp Toe Low Zero Side View***



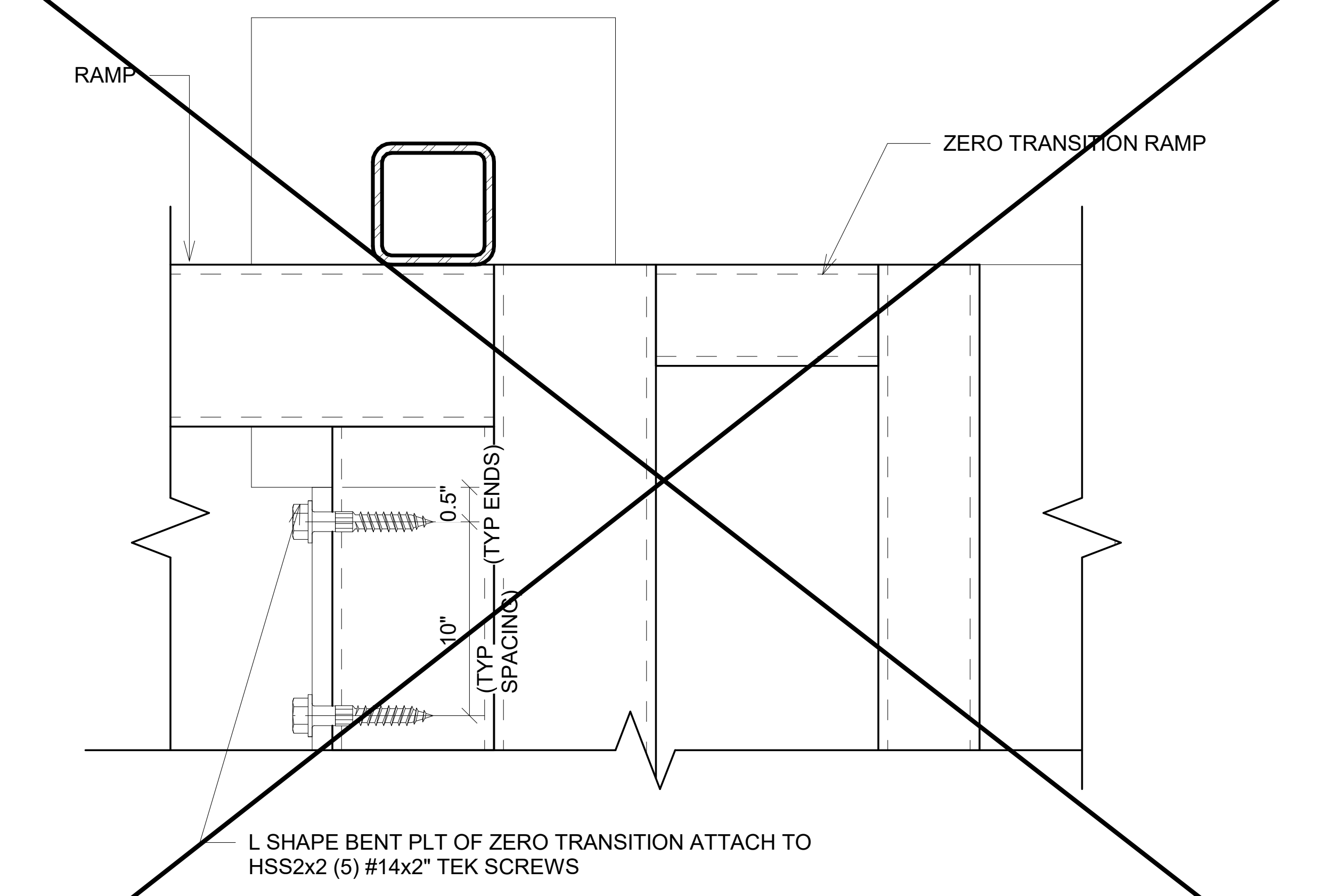
**8** *1/2" = 1'-0"*
***Section @ Landing***



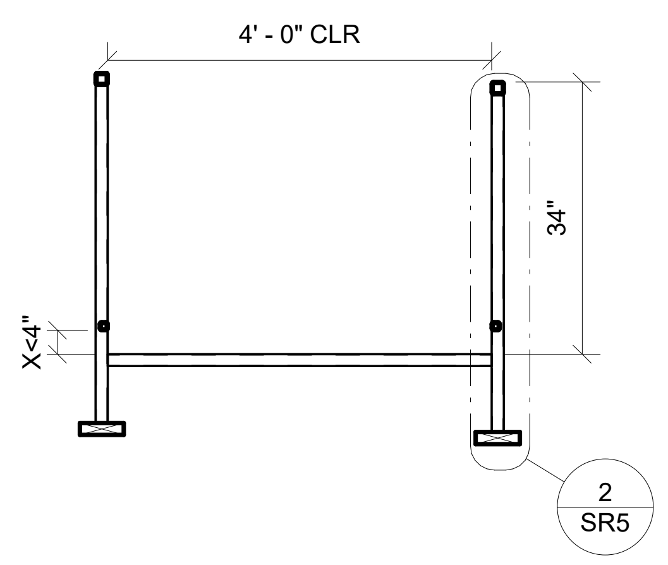
**9** *1/2" = 1'-0"*
***Section @ Landing***



**4** *6" = 1'-0"*
***Top View Ramp Zero Transition***

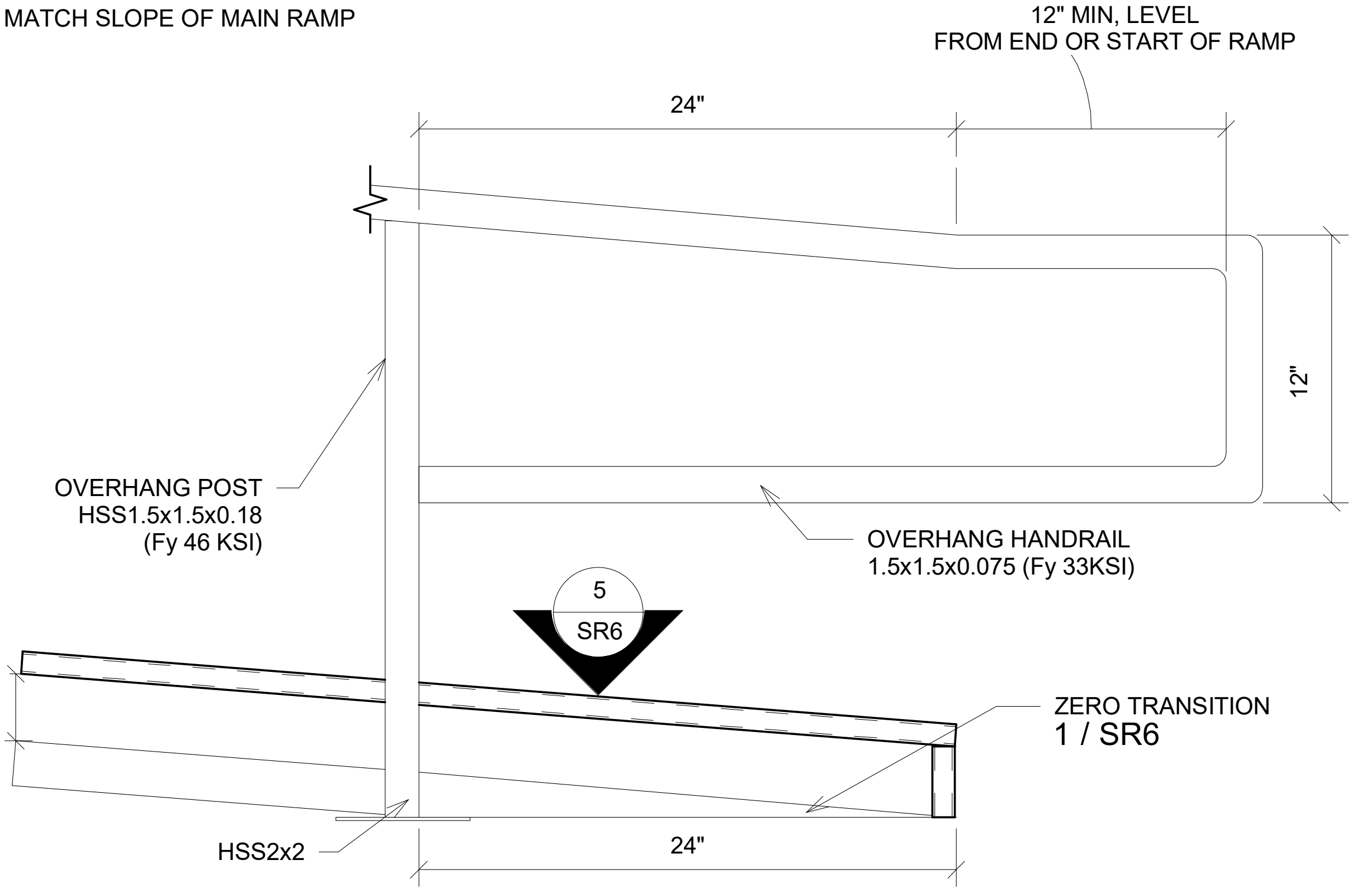

RAMP
ZERO TRANSITION RAMP
0.5"
(TYP ENDS)
10"
(TYP SPACING)
L SHAPE BENT PLT OF ZERO TRANSITION ATTACH TO HSS2x2 (5) #14x2" TEK SCREWS

**5** *6" = 1'-0"*
***Zero Transition Ramp Connection***



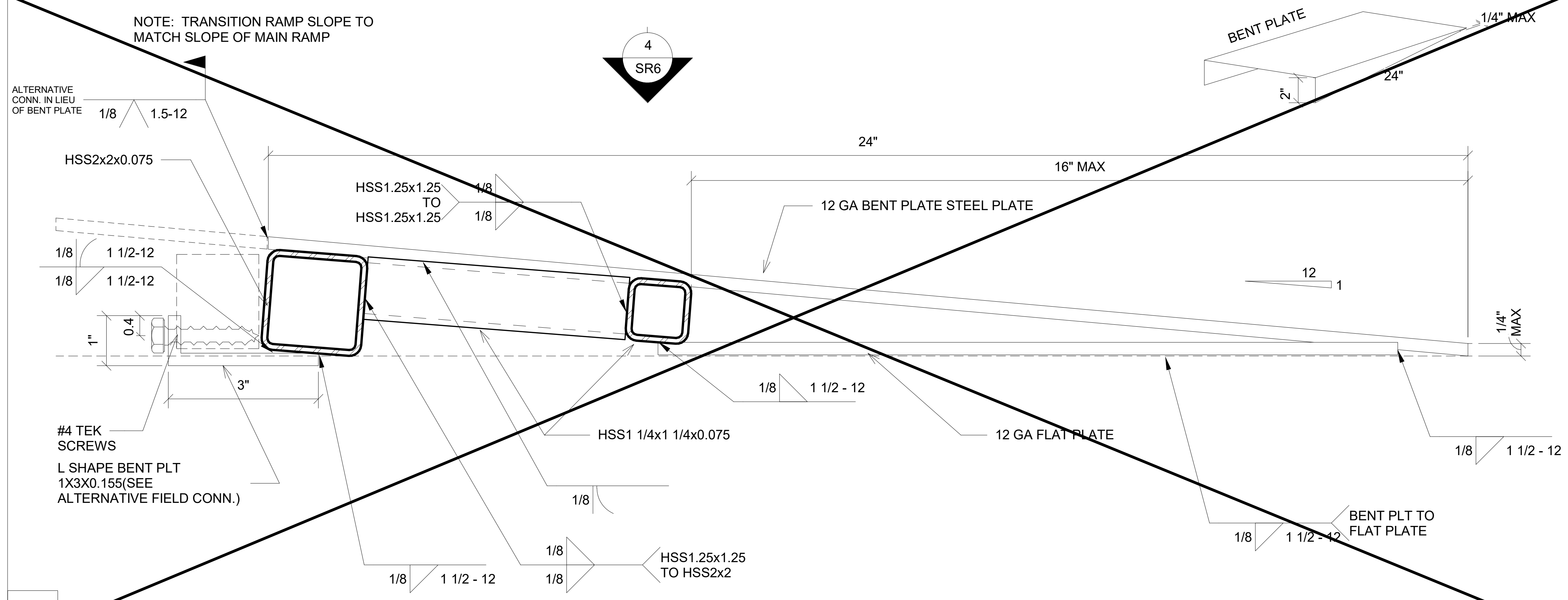
**10** *1/2" = 1'-0"*
***Section @ Ramp***

NOTE: TRANSITION RAMP SLOPE TO MATCH SLOPE OF MAIN RAMP



**6** *1 1/2" = 1'-0"*
***Extend Handrail @ Bottom End For Zero Transition Ramp***

NOTE: TRANSITION RAMP SLOPE TO MATCH SLOPE OF MAIN RAMP



**1** *6" = 1'-0"*
***Zero Transition Ramp***

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
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02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

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~~APP: 04-123059 PC~~
~~REVIEWED FOR~~
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~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date22079 |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Ramp Details

PROJECT NUMBER
22079

DRAWN BY
SM

CHECKED BY
rMc

DATE
12/23/2022

SHEET NO.
SR6

SHEET OF

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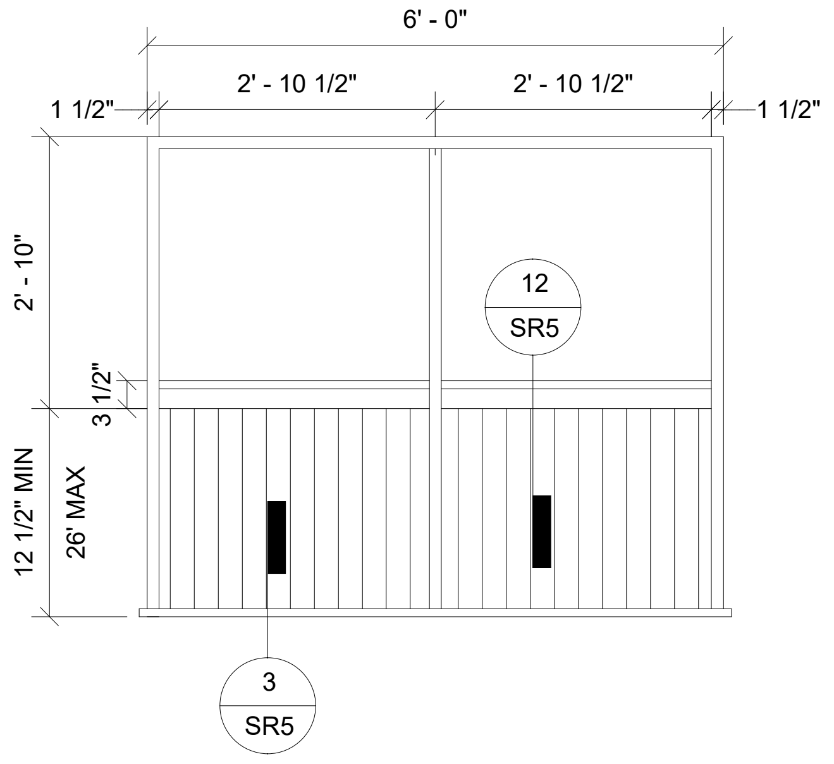
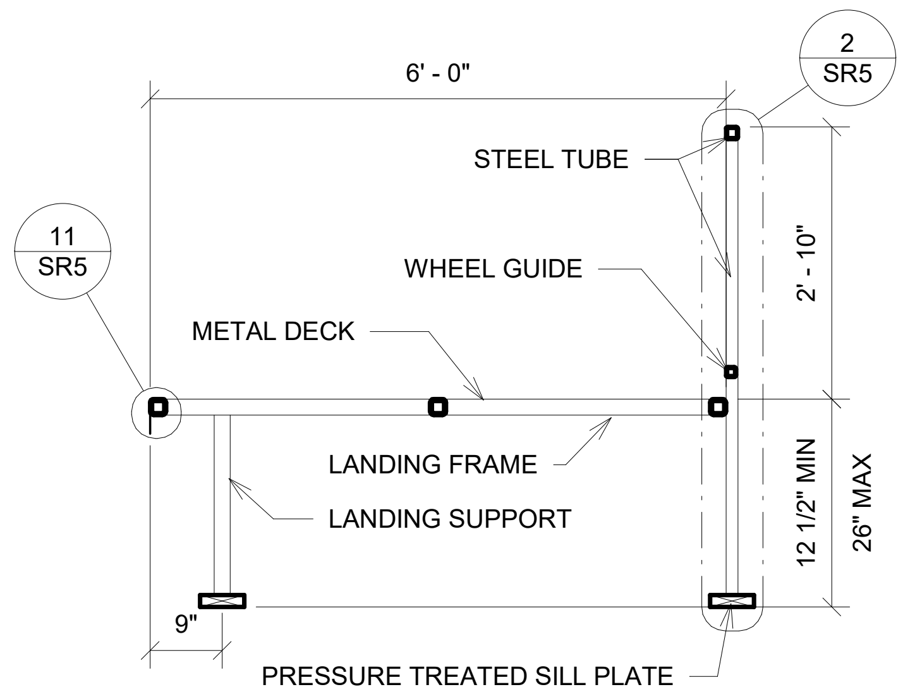
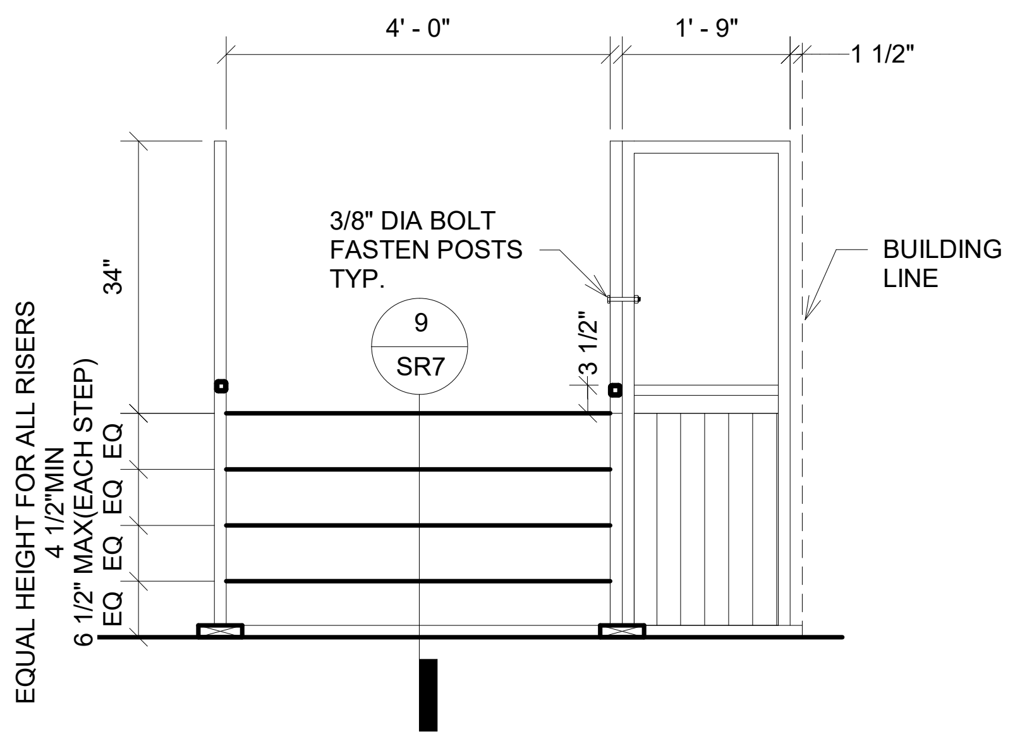


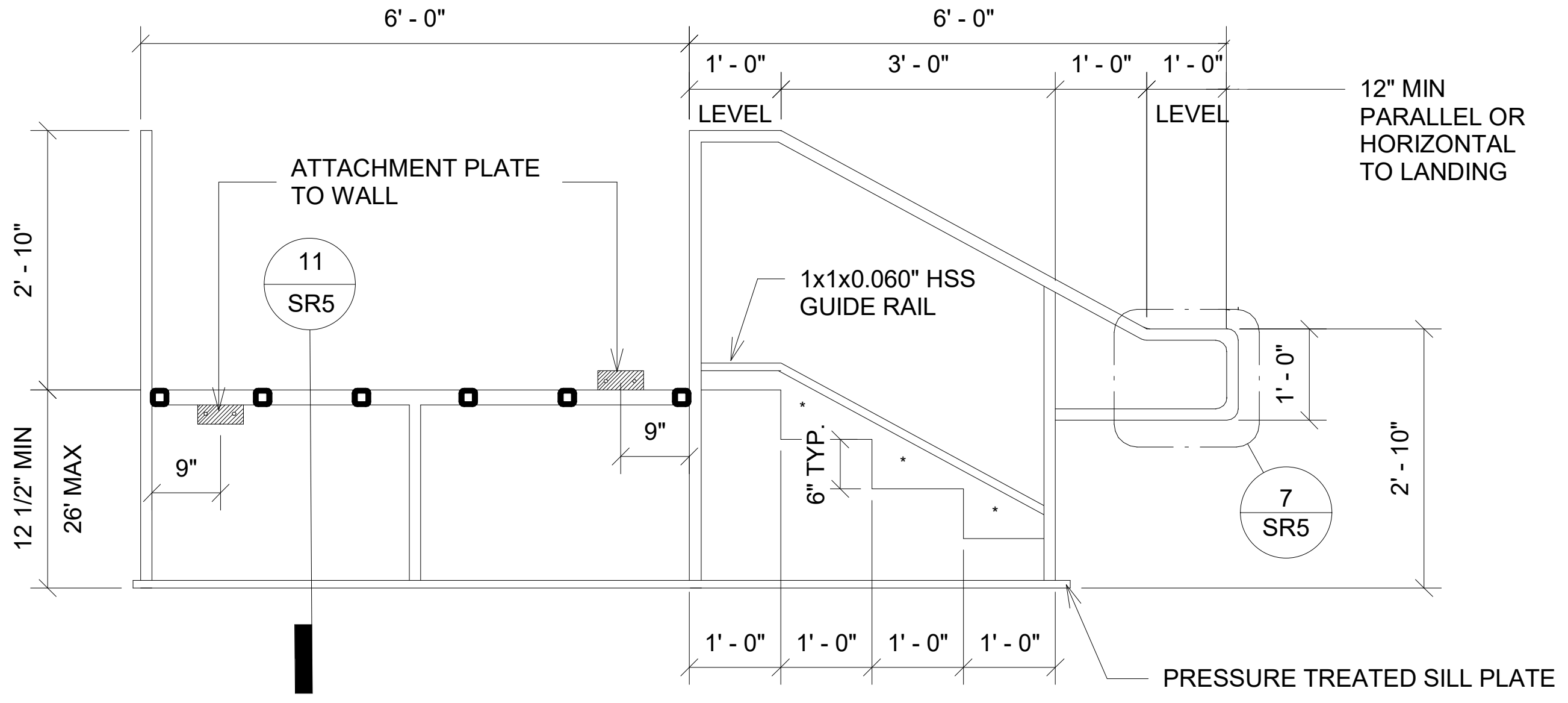
**1** *1/2" = 1'-0"*
***LANDING ELEVATION VIEW***



**2** *1/2" = 1'-0"*
***LANDING SECTION***

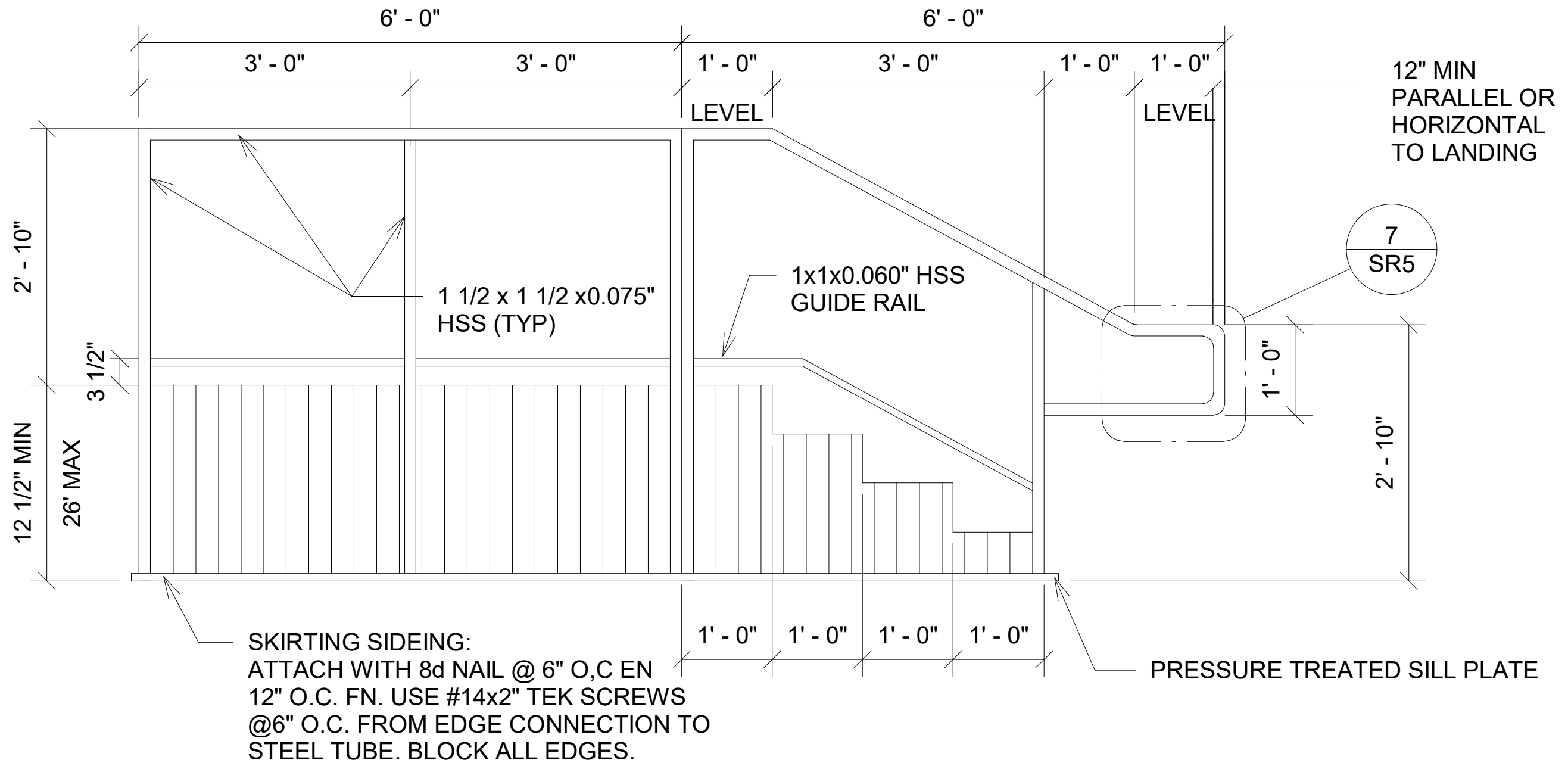


**6** *1/2" = 1'-0"*
***STEPS ELEVATION***

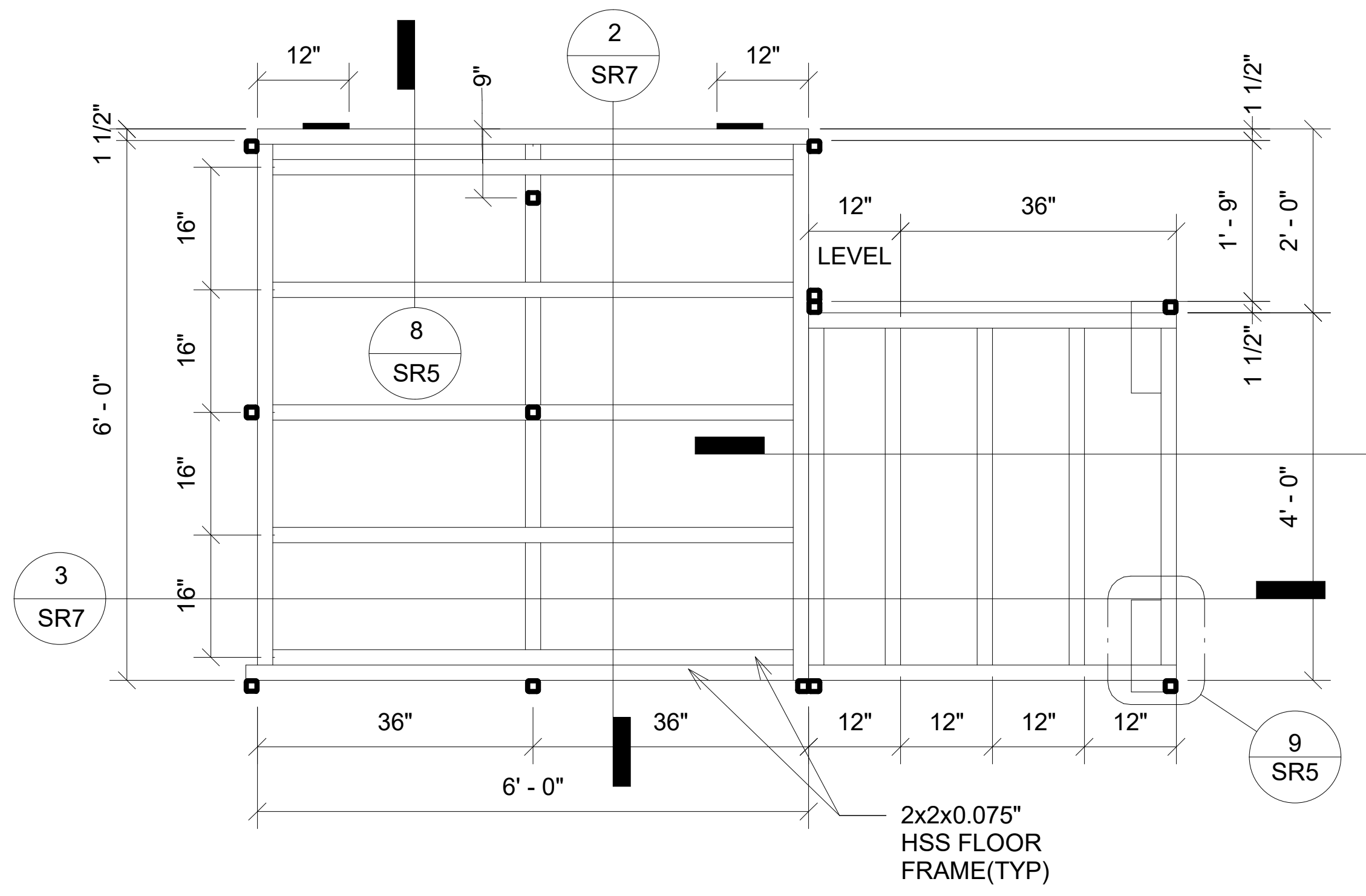


*THE TRIANGULAR OPENING AT THE OPEN SIDES OF A STAIR,FORMED BY THE RISER, TREAD, AND BOTTOM RAIL SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER PER CBC 1015.4(TYP)

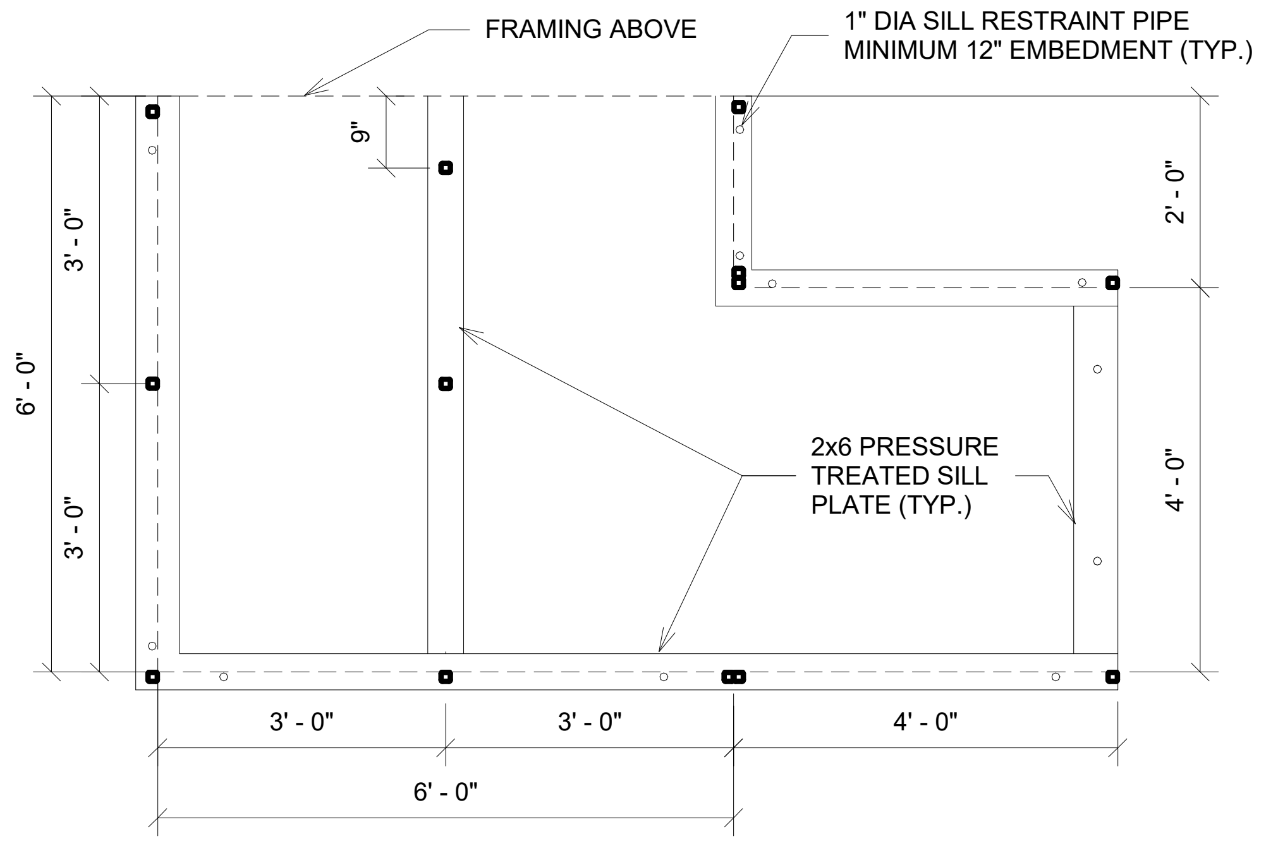
**3** *1/2" = 1'-0"*
***STEP AND LANDING SECTION***



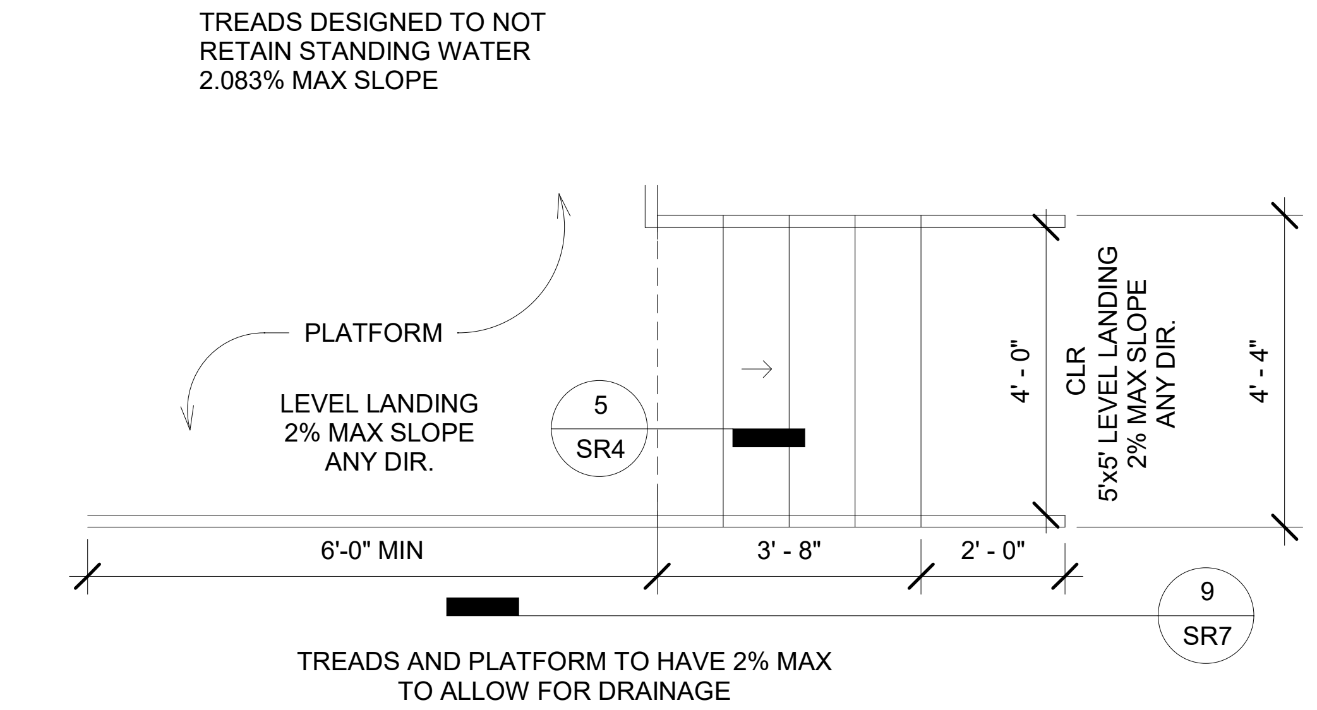
**4** *1/2" = 1'-0"*
***STEPS AND LANDING SECTION***



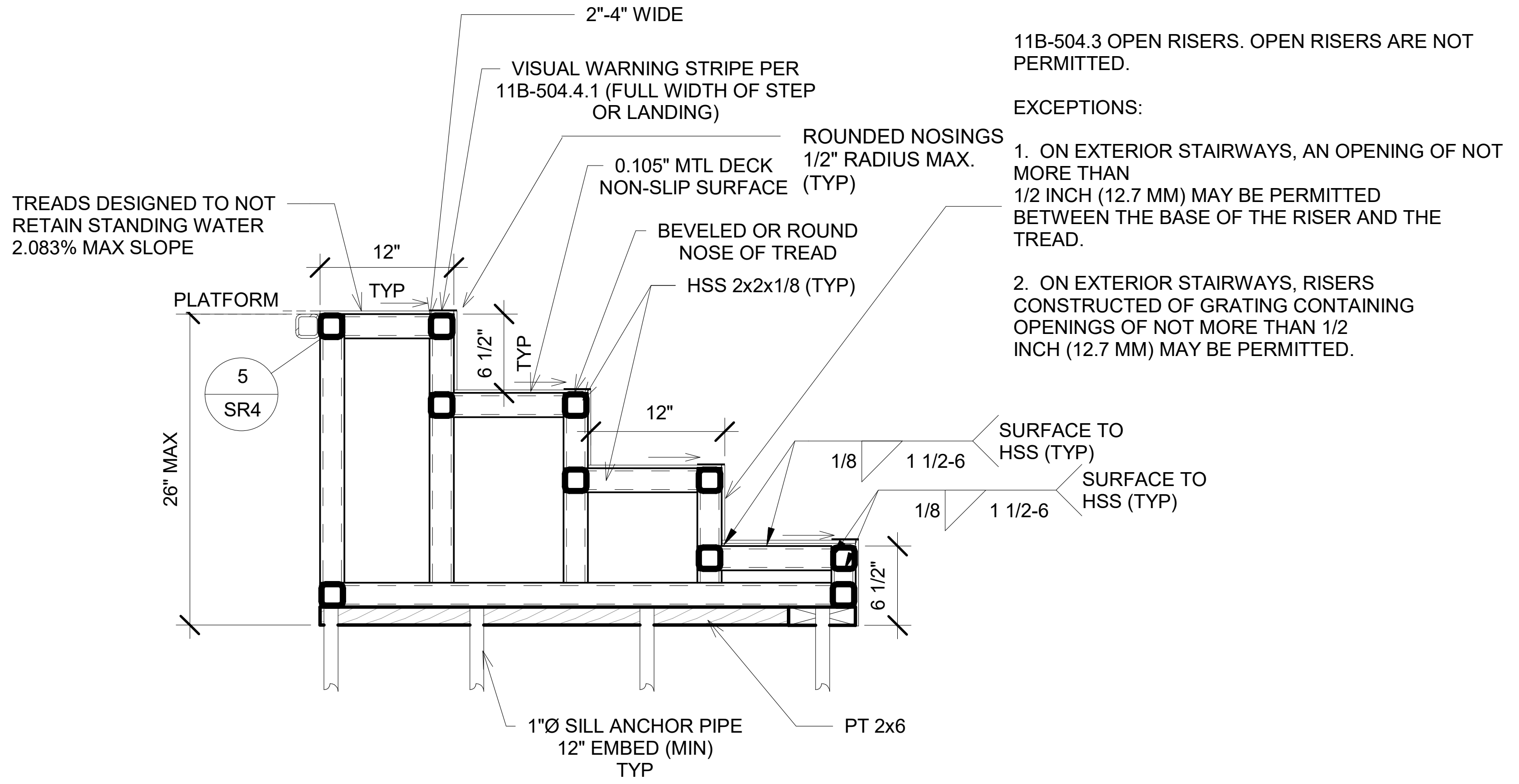
**5** *1/2" = 1'-0"*
***STEPS/LANDING FRAMING PLAN***



**7** *1/2" = 1'-0"*
***SILL PLAN***



**8** *3/8" = 1'-0"*
***Stair***



11B-504.3 OPEN RISERS. OPEN RISERS ARE NOT PERMITTED.

EXCEPTIONS:

1. ON EXTERIOR STAIRWAYS, AN OPENING OF NOT MORE THAN 1/2 INCH (12.7 MM) MAY BE PERMITTED BETWEEN THE BASE OF THE RISER AND THE TREAD.

2. ON EXTERIOR STAIRWAYS, RISERS CONSTRUCTED OF GRATING CONTAINING OPENINGS OF NOT MORE THAN 1/2 INCH (12.7 MM) MAY BE PERMITTED.

**9** *1" = 1'-0"*
***Stair Elev***

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PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-123316 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 03/13/2024

R&S TAVARES ASSOCIATES
DESIGN ◆ CONSULTING ◆ PROJECT MGT
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www.rstavares.com

PROFESSIONAL STAMP

Manny D. Frisch
No. S3380
Exp. 03/31/24
02/16/24

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ORIGINAL PC STATE AGENCY APPROVAL

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~~SS ☑ FLS ☑ ACS ☑ CG ☑~~
~~DATE: 02/20/2024~~

Revision Schedule

| # | Description | Date22079 |
|---|---|---|

**PRE-CHECK (PC) DOCUMENT**

**Code: 2022 CBC**

**A separate project application for construction is required**

PROJECT TITLE
RAMPS PC
CLASS LEASING
PC#04-121419

SHEET TITLE
Stair Conn

PROJECT NUMBER
22079

DRAWN BY
rMc

CHECKED BY
BR

DATE
12/23/2022

SHEET NO.
SR7

SHEET OF