

10/24/2024 4:58:54 PM

DESIGN CRITERIA

DESIGN CODES:
INTERNATIONAL BUILDING CODE: IBC 2018
RISK CATEGORY II
DEAD LOAD:
SELF WEIGHT
COLLATERAL LOAD 5 PSF
LIVE LOAD:
ROOF LIVE LOAD 20 PSF
FLOOR LIVE 100 PSF
SNOW LOAD:
GROUND SNOW P_G 20 PSF
FLAT ROOF SNOW P_F 12.6 PSF
SNOW EXPOSURE FACTOR C_E 0.9
SNOW IMPORTANCE FACTOR I_s 1.0
THERMAL FACTOR C_T 1.0
SNOW DRIFT P_D 39.8 PSF
DRIFT WIDTH W 6'-6"
WIND DATA:
WIND SPEED V_{ULT} 109 MPH
WIND SPEED V_{ASD} 84 MPH
RISK CATEGORY II
WIND EXPOSURE C
INTERNAL PRESSURE COEF. ±0.18
COMPONENTS & CLADDING PRESSURE Q_Z XX PSF

EARTHQUAKE DATA:
RISK CATEGORY II
SEISMIC IMPORTANCE FACTOR 1.0
MAPPED SPECTRAL RESPONSE ACCELERATION S_s 0.099
S₁ 0.088
SITE CLASS D - DEFAULT
DESIGNED SPRECTRAL RESPONSE ACCELERATION S_{Ds} 0.106
S_{D1} 0.109
SEISMIC DESIGN CATEGORY C
BASIC SFRS STEEL BRACE FRAME - NOT SPECIFICALLY DETAILED
DESIGN BASE SHEAR 12.0K
SEISMIC RESPONSE COEF. CS 0.035
RESPONSE MODIFICATION FACTOR 3
EQUIVALENT LATERAL FORCE PROCEDURE

GEOTECHNICAL INFORMATION:
SOIL BEARING PRESSURE 3,000 PSF
FRICTION COEFFICIENT 0.33

SPECIAL LOADS:
NONE
DEFLECTION REQUIREMENTS: PER IBC TABLE 1604.3

GENERAL

- THE STRUCTURE IS DESIGNED TO BE SELF- SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND ENSURE THE SAFETY OF THE CONSTRUCTION PERSONNEL, PUBLIC, BUILDING AND ITS COMPONENTS PARTS, AND ADJACENT BUILDINGS AND PROPERTIES. THIS INCLUDES THE ADDITION OF WHATEVER TEMPORARY OR PERMANENT SHORING, BRACING, NEEDLING, UNDERPINNINGS, OR SHEET PILING, ETC. THAT MAY BE NECESSARY TO BRACE NEW CONSTRUCTION, ADJACENT BUILDINGS, SO THAT THE STRUCTURE IS BRACED FOR WIND, SEISMIC, GRAVITY, CONSTRUCTION LOADS, ETC. AND THAT NO HORIZONTAL OR VERTICAL SETTLEMENT OR ANY DAMAGE OCCURS TO THE ADJACENT EXISTING STRUCTURE. TEMPORARY SUPPORTS SHALL BE MAINTAINED IN PLACE UNTIL PERMANENT SUPPORTS AND, OR SHORING AND BRACING ARE INSTALLED.
- FALL PROTECTION SUPPORTS FROM PERIMETER COLUMNS OR WALLS SHALL BE PROVIDED IN ACCORDANCE WITH OSHA REQUIREMENTS AS REQUIRED SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THE COMPLETION OF THE PROJECT.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
- THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION FOR THE PROJECT IN A MANNER AND SEQUENCE THAT ARE BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZED THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE, WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS, OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.
- CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DESIGN REQUIRED TO SUPPORT CONSTRUCTION EQUIPMENT USED IN CONSTRUCTING THIS PROJECT. SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. THE GENERAL CONTRACTOR SHALL EXAMINE THE STRUCTURAL AND MECHANICAL DRAWINGS FOR THE REQUIRED OPENINGS AND SHALL VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH THE MECHANICAL CONTRACTOR, PROVIDING ALL OPENINGS REQUIRED BY THE MECHANICAL, ELECTRICAL, PLUMBING, OR OTHER TRADES SHALL BE PART OF THE GENERAL CONTRACT. WHETHER OR NOT SHOWN IN THE STRUCTURAL DRAWINGS. ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR REVIEW.
- ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO AGREEING TO PERFORM THE WORK. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE CONTRACTOR FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
- DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILS. SUCH DETAILS APPLY WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY ENGINEERING OF CLARIFICATION REGARDING APPLICABILITY OF "TYPICAL DETAILS".
- WORK THESE DRAWINGS WITH ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS.
- DO NOT SCALE DRAWINGS.
- SHOULD ANY OF THE GENERAL NOTES CONFLICT WITH ANY DETAILS OR INSTRUCTIONS ON PLANS, THE STRICTEST PROVISION SHALL GOVERN.
- SHOP DRAWINGS AND SUBMITTALS:
 - THESE DRAWINGS SHALL BE CHECKED AND COORDINATED WITH OTHER MATERIALS AND CONTRACTS BY THE GENERAL CONTRACTOR AND SHOP DRAWINGS AND SUBMITTALS SHALL BEAR THE CONTRACTOR'S REVIEW STAMP WITH THE CHECKER'S INITIALS BEFORE BEING SUBMITTED TO THE ARCHITECT FOR APPROVAL
 - WHEN FABRICATOR HAS BEEN AUTHORIZED TO USE THE ARCHITECT AND ENGINEER'S DRAWINGS AS ERECTION DRAWINGS, THE FABRICATOR MUST REMOVE ALL TITLE BLOCKS, PROFESSIONAL SEALS AND ANY OTHER REFERENCE TO THE ARCHITECT AND ENGINEER FROM THAT ERECTION DRAWING. THE FABRICATOR'S NAME AND TITLE SHALL BE PLACED ON THE ERECTION DRAWING.

EXISTING WORK

- EXISTING CONDITIONS SHOWN OR NOTED ON THE DRAWINGS WERE OBTAINED FROM FIELD MEASUREMENTS OR WERE ASSUMED. IF CONDITIONS OTHER THAN THOSE SHOWN EXIST, IMMEDIATELY NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK AT THAT LOCATION. IF CONDITIONS OTHER THAN THOSE SHOWN EXIST, ALTERNATE METHODS OF CONSTRUCTION MAY NEED TO BE USED
- WHERE SPECIFICALLY NOTED ON THE DRAWINGS THAT EXISTING CONSTRUCTION BE VERIFIED, NOTIFY THE ENGINEER IN WRITING OF THE FINDINGS. VERIFICATION SHALL TAKE PLACE PRIOR TO PREPARATION OF SHOP DRAWINGS AND SHOP DRAWINGS SHALL SHOW ALL FIELD VERIFIED EXISTING CONDITIONS. MODIFICATIONS TO THE DETAILS MAY BE REQUIRED SHOULD ACTUAL CONDITION SIGNIFICANTLY DIFFER FROM THOSE PRESUMED. ANY REQUIRED MODIFICATIONS WILL BE MADE DURING THE REVIEW OF THE SHOP DRAWINGS.
- USE APPROPRIATE CONSTRUCTION METHODS AND EQUIPMENT AS NECESSARY TO SUPPORT EXISTING STRUCTURES AND TO AVOID OVER STRESSING THE EXISTING STRUCTURE.
- EXISTING FRAMING IS ASSUMED TO BE IN ORIGINAL CONDITION. IF DETERIORATION HAS OCCURRED NOTIFY THE ENGINEER IN WRITING OF THE FINDINGS. FOR EXAMPLE, SOME TYPES OF DETERIORATION ARE AS FOLLOWS: ROTTEN WOOD, BROKEN OR CRACKED MASONRY, AND BROKEN WOOD MEMBERS.

FOUNDATIONS

- THE FOUNDATIONS ARE DESIGNED USING PRESUMPTIVE SOIL BEARING PRESSURE OF 1,500 PSF.
- ALL SOIL SURROUNDING AND UNDER FOOTINGS SHALL BE PROTECTED FROM FROST ACTION AND FREEZING DURING THE COURSE OF CONSTRUCTION.
- NOTIFY STRUCTURAL ENGINEER OF ANY UNUSUAL SOIL CONDITIONS THAT ARE IN VARIANCE WITH THE GEOTECHNICAL REPORT.
- FOOTING EXCAVATIONS SHOULD BE MADE TO THE REQUIRED LINES AND GRADES AS RAPIDLY AS POSSIBLE. FOOTING EXCAVATIONS BE LEFT OPEN FOR A MINIMUM OF TIME TO PREVENT DISTURBANCE TO THE FOUNDATION SOILS. FOOT TRAFFIC SHOULD BE PREVENTED ON THE BASE OF THE FOOTING EXCAVATIONS IF DISTURBANCE IS NOTED. HAND CLEANING, IF REQUIRED AND SETTING OF REINFORCING STEEL SHOULD THEN BE ACCOMPLISHED FROM THE SIDES OF THE EXCAVATION.

MASONRY

- ALL DETAILS SHOWN SHALL BE CONSIDERED TYPICAL.
- CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI.
- MORTAR FOR MASONRY OPERATIONS SHALL COMPLY WITH ASTM C270, TYPE "M" OR TYPE "S".
- GROUT FOR MASONRY OPERATIONS SHALL COMPLY WITH ASTM C475 AND HAVE A MINIMUM 2500 PSI AT 28 DAYS USING ASTM C1019 TEST METHODS.
- INFILL CONCRETE COMPRESSIVE STRENGTH - 4000 PSI MINIMUM AT 28 DAYS.
- ALL BLOCK SHALL BE FILLED. MAXIMUM INFILL LIFTS SHALL BE 4 FEET
- MINIMUM REINFORCEMENT FOR VERTICAL WALLS SHALL BE #5 REBAR @ 32" O.C. SPACING NLESS OTHERWISE NOTED.
- HORIZONTAL JOINT REINFORCEMENT SHALL BE REQUIRED.
- WET STICKING OF DOWELS SHALL NOT BE PERMITTED.

CAST-IN-PLACE CONCRETE

- ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI301, "SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI302, "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION", ACI305 "SPECIFICATION FOR HOT WEATHER CONCRETING" AND ACI306, "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING", UNLESS NOTED OTHERWISE FOR THE YEAR REFERENCED IN THE BUILDING CODE NOTED.
- A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF KANSAS, SHALL DEVELOP CONCRETE MIX DESIGNS. SUBMIT CONCRETE MIX AND TEST DATA FOR INFORMATION. ACCEPTANCE AND PROPORTIONING CRITERIA INDICATED PER ACI-318.
- STRUCTURAL CONCRETE SHALL HAVE 28 DAY STRENGTH (F'C) AS FOLLOWS:
 - SLABS AND FLOOR FRAMING: 4000 PSI
 - SLAB ON GRADE: 4000 PSI
 - CAPS: 4000 PSI
 - CASSONS: 4000 PSI
 - GRADE BEAMS: 4000 PSI
 - COLUMNS & SHEAR WALLS 4000 PSI
- ALL DETAILING, FABRICATION AND PLACING OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL CONFORM TO ACI318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI117, "SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND THE LATEST ACI DETAILING MANUAL.
- ALL PIPE SLEEVE OPENINGS THROUGH CONCRETE SLABS SHALL BE FORMED WITH STANDARD STEEL PIPE.
- NO ELECTRICAL CONDUIT SHALL BE PLACED ABOVE THE WELDED WIRE FABRIC OR TOP REINFORCING OF SLAB.
- ALL ALUMINUM IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL BE COATED WITH TWO COATS OF COAL TAR EPOXY, APPROVED BY THE ENGINEER, UNLESS OTHERWISE NOTED.
- CONCRETE SHALL BE DISCHARGED AT THE SITE WITHIN 1 ½ HOURS AFTER WATER HAS BEEN ADDED TO THE CEMENT AND AGGREGATES. ADDITION OF WATER TO THE MIX AT THE PROJECT SITE WILL NOT BE PERMITTED. ALL WATER MUST BE ADDED AT THE BATCH PLANT. SLUMP MAY BE ADJUSTED ONLY THROUGH THE USE OF ADDITIONAL WATER REDUCING ADMIXTURES OR HIGH RANGE WATER REDUCING ADMIXTURE.
- ALL CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS, EXCEPT WHERE SPECIFICALLY NOTED.
- ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED ¼" UNLESS SHOWN OTHERWISE.
- SEE ARCHITECTURAL DRAWINGS FOR CONCRETE FINISHES, MASONRY ANCHORS, AND FOR MISCELLANEOUS PLATES, BOLTS, ANCHORS, ANGLES, ETC.
- THE PLACEMENT OF SLEEVES, OUTLET BOXES, BOX-OUTS NOT COVERED BY TYPICAL DETAILS IN THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED FOR APPROVAL.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, NO TACK WELDING FOR REINFORCING IN THE FIELD WILL BE PERMITTED.
- REINFORCING BARS FOR WELDED APPLICATIONS SHALL CONFORM TO ASTM A706, 60 KSI YIELD STRENGTH
- WELDED WIRE FABRIC REINFORCING SHALL CONFORM TO ASTM A185 AND BE FURNISHED IN FLAT SHEETS AND INSTALLED ON CHAIRS.
- WIRE BAR SUPPORTS SHALL BE FURNISHED FOR ALL REINFORCING WITHIN SLABS, INCLUSIVE OF WELDED WIRE FABRIC. BOTTOM BARS IN SLABS-ON-GRADE MAY BE SUPPORTED BY OTHER SUITABLE SUPPORTS. REINFORCING SHALL BE PROPERLY POSITIONED PRIOR TO CONCRETE PLACEMENT AND MAY NOT BE RE-POSITIONED ONCE CONCRETE OPERATIONS HAVE BEGUN. WIRE BAR AND OTHER TYPES OF SUPPORTS SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE MANUAL OF STANDARD PRACTICE.
- REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED ON DRAWINGS.
- ALL HOOKS SHOWN ON DRAWINGS SHALL BE STANDARD HOOKS, UNLESS OTHERWISE NOTED.
- WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND BE LAPPED AT NECESSARY SPLICES. LAP LENGTHS SHALL BE AS GIVEN IN THE SPLICE AND DEVELOPMENT TABLE.
- PROVIDE ADDITIONAL REINFORCING AT THE SIDE AND CORNERS OF ALL OPENINGS IN CONCRETE IN ACCORDANCE WITH TYPICAL DETAILS. MINIMUM ADDITIONAL REQUIREMENTS ARE AS FOLLOWS.
 - (2)-#5 TOP AND BOTTOM IN SLABS
 - (2)-#5 EACH FACE IN WALLS
 - (2)-#5 X 4'-0" LONG DIAGONALLY EACH CORNER OF OPENING
- EXTEND BARS A MINIMUM OF 2'-0" BEYOND OPENINGS, HOOK WHERE EXTENSION IS NOT POSSIBLE.
- IN REINFORCED CONCRETE WALLS, GRADE BEAMS AND TRENCH FOOTING PROVIDE CORNER DOWELS OF SAME SIZE AND SPACING AS HORIZONTAL REINFORCING. DOWELS SHALL LAP WITH HORIZONTAL REINFORCING IN EACH DIRECTION.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT, UNLESS OTHERWISE NOTED.
 - EARTH FORMED AND CAST DIRECTLY AGAINST SOIL- 3"
 - CAST AGAINST FORMS BUT EXPOSED TO EARTH AND WEATHER
 - #6 AND LARGER- 2"
 - #5 AND SMALLER- 1 ½"
 - SLABS AND WALLS NOT EXPOSED TO EARTH OR WEATHER- ¼"
 - OTHERS- 2"

STRUCTURAL STEEL

- DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC SPECIFICATIONS AND STANDARD CODE OF PRACTICE FOR THE YEAR REFERENCED IN THE BUILDING CODE NOTED, EXCEPT AS MODIFIED BY THESE NOTES AND THE PROJECT SPECIFICATIONS.
- STEEL SHAPES SHALL CONFORM TO THE FOLLOWING GRADES UNLESS NOTED OTHERWISE:
 - WIDE FLANGE (W) SHAPES ASTM A992 GR. 50
 - ANGLES, CHANNELS, S & M SHAPES ASTM A36
 - HP SHAPES ASTM A572 GR. 50
 - STRUCTURAL HSS TUBING ASTM A500 GR. C (FY=50 KSI)
 - STRUCTURAL HSS PIPE ASTM A500
 - PLATES ASTM A572 GR. 50
 - THREADED RODS ASTM A36
- STEEL MATERIAL OF FASTENERS AND WELDS SHALL CONFORM TO THE FOLLOWING UNLESS NOTED OTHERWISE:
 - COLUMN/BEAM CONNECTION BOLTS ASTM F3125 GR. A325
 - ANCHOR RODS ASTM F1554
 - NUT
 - WASHER ASTM F436
 - HEAVY HEX NUT ASTM A563 GR. A563
 - PLATE WASHER ASTM A572 GR. 50
 - WELDING ELECTRODES E70XX
- ALL BOLTS SHALL BE TYPE N UNLESS NOTED OTHERWISE.
- AT LONG-SLOTTED, SHORT-SLOTTED, OR OVERSIZED HOLES WASHERS SHALL BE PROVIDED. WHERE A490 BOLTS HAVE A DIAMETER > 1" USE EXTRA THICK WASHER.
- WHERE LONG SLOTTED HOLES ARE REQUIRED PLATE WASHERS SHALL BE PROVIDED. PLATE WASHER THICKNESS MUST BE 5/16" AT ALL A325 BOLT DIAMETERS AND A490 BOLTS WITH DIAMETER <= 1". WHERE A490 BOLTS WITH A DIAMETER >1" USE 3/8" PLATE WASHER.
- ALL BOLTS IN A SLIP CRITICAL CONNECTION SHALL USE COMPRESSIBLE-WASHER-TYPE DIRECT TENSION INDICATOR MEETING ASTM F959
- SLIP CRITICAL, BOLTS SHALL BE CONSIDERED BEARING AND TIGHTENED TO A SNUG TIGHT CONDITION AND INSPECTED BY A TESTING AGENCY FOR CONFORMANCE WITH RCSC.
- ALL WELDING SHALL BE CONFORM TO THE LATEST AWS D1.1.
- CONNECTIONS OR SPLICES OF STRUCTURAL MEMBERS NOT CLEARLY INDICATED IN THE DRAWINGS ARE PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
- ALL ANCHOR RODS/BOLTS SHALL BE SET IN CONCRETE WITH A TEMPLATE AND BE FURNISHED WILL DOUBLE NUTS.
- FABRICATE ALL BEAMS WITH THE MILL CAMBER UP
- ALL STEELS EXPOSED TO WEATHER AND NOT FULLY WITHIN A CONDITIONED SPACE ARE TO BE HOT DIPPED GALVANIZED PER ASTM A123 UNLESS OTHER WEATHER PROOFING METHODS HAVE BEEN SPECIFIED PER THE ARCHITECT.
- WHEN WELDING PAINTED OR GALVANIZED STEEL AWS METHODS MUST BE FOLLOWED. DO NOT FIELD WELD GALVANIZED OR PAINTED STEEL UNLESS INDICATED ON DRAWINGS.
- WHERE GALVANIZED SURFACES HAVE BEEN DAMAGED REPAIR THE SURFACE ACCORDING TO ASTM A780.
- WHERE PAINTED SURFACES HAVE BEEN DAMAGED PAINT IS TO BE REAPPLIED.

METAL DECK

- ALL METAL FLOOR DECK AND METAL ROOF DECK SHALL BE IN A 3-SPAN CONTINUOUS CONFIGURATION UNLESS NOTED OTHERWISE. WHERE 3-SPAN CONDITIONS CAN NOT BE MET THE STRUCTURAL ENGINEER IS TO BE NOTIFIED.
- AT SUPPORTS PARALLEL TO THE DECK SPAN, RAISE SUPPORTS AND PROVIDE SHIMS AT CONNECTIONS IF THE DECK DOES NOT ENGAGE THE SUPPORT.
- ALL MISCELLANEOUS ACCESSORIES (POUR STOPS, COLUMN CLOSURES, ETC.) WILL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE STEEL DECK INSTITUTE.
- MEP EQUIPMENT OR OTHER TYPES OF REQUIRED ITEMS SHALL NOT BE SUSPENDED/HUNG FROM ANY METAL ROOF DECK. ALL ITEMS REQUIRING THESE TYPES OF ATTACHMENTS ARE TO BE SUPPORTED BY AT THE STRUCTURAL STEEL FRAMING.
- VERIFY MINIMUM BEARING PER MANUFACTURER'S REQUIREMENTS.
- FLOOR DECK
 - DECK OVER JOIST: 1" FLOOR DECK (22 GAGE), TYPE 1.0 FD, FY=60 KSI
 - SUPPORT FASTENER: 3/8" EFF. DIAM. ARC SPOT WELD AT 36/10 PATTERN
 - SIDE LAP FASTENER: (1) #10 SCREW PER SPAN
- FLOOR DECK (BREAK ROOM)
 - DECK OVER CMU WALL: 1.5" FLOOR DECK (22 GAGE), TYPE 1.5 FD, FY=60 KSI
 - SUPPORT FASTENER: #12 SCREWS WITH 36/7 PATTERN
 - SIDE LAP FASTENER: (1) #10 SCREW PER SPAN
- ROOF DECK (FRONT CHASE)
 - DECK OVER JOIST: TYPE 1.5B (22 GAGE), FY=40 KSI MIN.
 - SUPPORT FASTENER: #12 SCREWS WITH 36/4 PATTERN
 - SIDE LAP FASTENER: (1) #10 SCREW PER SPAN



1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108



1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

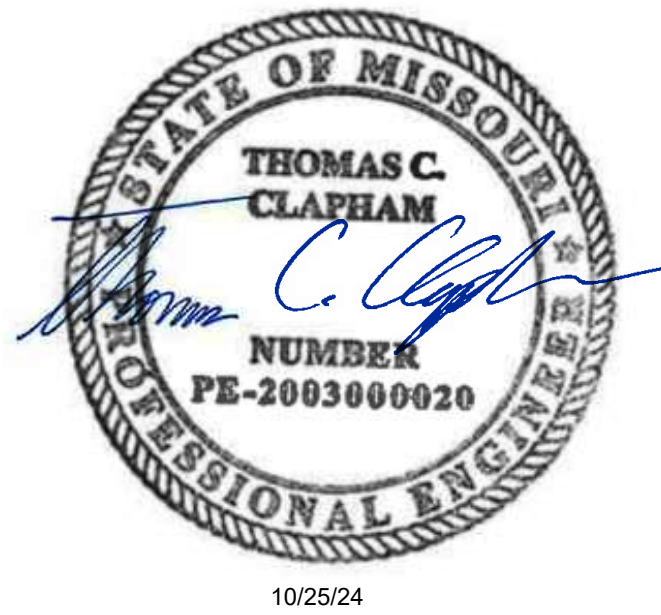


1701 WALNUT STREET, SUITE 300
KANSAS CITY, MO 64108

KC - LEE'S SUMMIT REGIONAL

LEE'S SUMMIT, MISSOURI

GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



10/25/24

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK DATE DESCRIPTION

PROJECT NO: 24KC0013
CAD DWG FILE: Lee's Summit - Hangar 2.rvt
DESIGNED BY: JDH & BLL
DRAWN BY: JDH
CHECKED BY: BLL
APPROVED BY:
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SHEET TITLE

GENERAL NOTES

S-001

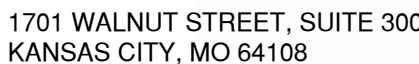
1. DESIGN, FABRICATE, TRANSPORT AND ERECT PRECAST MEMBERS ACCORDING TO THE LATEST ACI AND PCI BUILDING CODES, HANDBOOKS AND MANUALS.
2. SPECIFIED PRECAST CONCRETE 28 DAY MINIMUM CONCRETE COMPRESSIVE STRENGTH:
 - A. PRECAST HOLLOW CORE SLABS 6,000 PSI
 - B. PRECAST BEAMS 5,000 PSI
 - C. PRECAST COLUMNS 7,000 PSI
 - D. PRECAST WALL PANELS 6,000 PSI
3. ALL MEMBERS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI FOR THE STAINS AND LOADING CONDITIONS AS INDICATED ON THE STRUCTURAL PLANS AND ALL JOINT LAYOUTS AND DETAILS. THE PRECAST CONTRACTOR IS RESPONSIBLE FOR PICK-UP POINT LOCATIONS AND INSERTS, AND SPECIAL PICK-UP REINFORCING AND STRONG-BACKS FOR ALL PICK-UP AND PLACING OPERATIONS. THE PRECAST CONTRACTOR SHALL DESIGN ALL CONNECTIONS TO THE STRUCTURE AND BETWEEN PRECAST MEMBERS. ALL DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ARCHITECT FOR REVIEW PRIOR TO THE START OF FABRICATION.
4. ROOF PLANKS SHALL BE DESIGNED FOR CONCENTRATED POINT LOADS AS SHOWN ON PLANS IN ADDITION TO LOADS STATED UNDER DESIGN CRITERIA.
5. SUBMIT DETAILED SHOP DRAWINGS SHOWING ALL STRUCTURAL ELEMENTS, DETAILS, CONNECTIONS AND STRUCTURAL TOPPING (IF REQUIRED) TO THE STRUCTURAL ENGINEER AND ARCHITECT FOR REVIEW PRIOR TO THE START OF FABRICATION.
6. PRECAST MEMBERS SHALL BE ADEQUATELY REINFORCED UNTIL ALL CONNECTIONS ARE COMPLETED AND THE LATERAL LOAD RESISTING SYSTEM IS IN PLACE AS DESIGNED, AND THE GROUT AT DESIGN STRENGTH. BRACING SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI.
7. PRECAST MANUFACTURER SHALL INCLUDE IN FABRICATED EMBEDDED CONNECTION HARDWARE FOR TEMPORARY TIE-ING FOR ALL PRECAST MEMBERS.
8. DRILLING THROUGH PRECAST LOW CORE PLANKS SHALL BE BY ROTARY DRILL ONLY. DO NOT USE A HAMMER DRILL. LOCATE CORE VOIDS FOR DRILLING. DO NOT DRILL INTO "NO-DRILL" ZONES WHERE PRE-STRESSING STRANDS ARE LOCATED.

1. ALL FASTENERS ARE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. DO NOT SUBSTITUTE FASTENERS WITHOUT WRITTEN PERMISSION FROM ENGINEER.
2. PAF POINT MUST PENETRATE THROUGH FULL BASE STEEL THICKNESS. NOTIFY PAF MANUFACTURER OF ANY SITUATION WHERE FULL PENETRATION IS NOT ACHIEVED.
3. IF REQUIRED, ALL WELDED CONNECTIONS ARE TO BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF AWS D1.9-98 SPECIFICATIONS FOR WELDING STEEL IN STRUCTURES. CONSULT AWS D19.0 WELDING ZINC COATED STEEL & ANSI STANDARD Z49.1 FOR INFORMATION REGARDING SAFE WELDING PROCEDURES.
4. MINIMUM WELD THROAT THICKNESS (T) MUST MATCH OR EXCEED THE BASE STEEL THICKNESS OF CONNECTED PLATE OR ANGLE. NO OTHER TYPES OF WELDING SHALL BE USED. IN WELDING, THE ZINC COATING ON STEEL FRAMING WILL BE BURNED AWAY. THEREFORE, A ZINC RICH PAINT MUST BE APPLIED TO THE WELD AREA TO PROVIDE CORROSION RESISTANCE.
5. ALL SCREW CONNECTIONS ARE BASED ON NASPC SECTION E4, WHICH OUTLINES THE AISI SPECIFICATION PROVISIONS FOR SCREW CONNECTIONS.
6. FOR SCREWS OF TYPE A AND B, THE MINIMUM EDGE DISTANCE FROM THE CENTER LINE OF ALL EDGES OF THE STEEL MEMBERS, A MINIMUM OF 3.0 X SCREW DIAMETER ON-CENTER SPACING MUST BE MAINTAINED BETWEEN ADJACENT SCREWS.
7. POWER DRIVEN FASTENER SYSTEMS, EXPANSION ANCHOR SYSTEMS, MASONRY SCREW SYSTEMS, & ADHESIVE ANCHOR SYSTEMS CONNECTIONS ARE BASED ON LITERATURE FOR FASTENER REQUIREMENTS (E.G. SPACING, EDGE DISTANCE, BASE MATERIAL THICKNESS, ETC.). TENSILE/TORQUE CAPACITY OF THE FASTENERS OF COMPARABLE SPECIFICATIONS & LOAD CAPACITY ARE ACCEPTABLE.
8. ALL TRACKS SHALL BE FASTENED TO EACH STUD WITH #8 SCREWS AT EACH FLANGE.
9. ALL PAFS SHALL BE HILL 0.157" THX-U AND CONFORM TO THE FOLLOWING:
 - A. PAF'S INTO STEEL SHALL HAVE ½" MINIMUM EDGE DISTANCE AND 1" MINIMUM SPACING.
 - B. PAF'S INTO CONCRETE AT EXTERIOR WALLS SHALL HAVE 1-1/2" PENETRATION, 3" EDGE DISTANCE AND 2-1/2" MINIMUM SPACING.
 - C. PAF'S INTO CONCRETE AT INTERIOR WALLS SHALL HAVE 3/4" PENETRATION, 3" EDGE DISTANCE AND 2-1/2" MINIMUM SPACING.
10. SEE SHEAR WALL SCHEDULE FOR SPECIFIC REQUIREMENTS AT THESE LOCATIONS.

1. ANY DIMENSIONAL INFORMATION SHOWN INCLUDED FOR ENGINEERING PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BUILDING DIMENSIONS WITH THE A/E AND MEP DRAWINGS AND TO COMPLY WITH ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. SHOP DRAWINGS MUST BE SUBMITTED FOR ALL COLD FORMED STRUCTURAL STUD FRAMING.
3. ALL MATERIALS, PREPARED, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE THE LATEST EDITION OF THE AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS."
4. ANY PROPRIETARY CONNECTORS SHOWN HAVE BEEN SELECTED BASED ON SPECIFICATIONS AND CAPACITIES PUBLISHED BY THE MANUFACTURER. WELD DESIGN VALUES HAVE BEEN BASED ON THE LATEST EDITION OF THE AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS." ANY DEVIANCE FROM THE BRAND, TYPE, SIZE OR QUANTITY OF CONNECTORS INDICATED ON THESE DRAWINGS MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
5. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY OR AT AN ANGLE TO FIT SQUARELY AGAINST ABUTTING MEMBERS. SPLICING OF AXIALLY LOADED MEMBERS SHALL NOT BE PERMITTED. MEMBERS SHALL BE HELD FIRMLY IN PLACE UNTIL PROPERLY FASTENED. ATTACHMENTS OF SIMILAR COMPONENTS SHALL BE BY WELDING, SCREW ATTACHMENT, OR BOLTING. WIRE TYING OF COMPONENTS IS NOT PERMITTED.
6. MEMBERS SHALL NOT BE SPLICED OTHER THAN AT THE LOCATIONS INDICATED ON THE DRAWINGS. ALL SPLICES SHALL CONFORM TO THE DETAILS IN THE DRAWINGS.
7. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF STRUCTURAL COMPONENTS WHERE MEMBERS ATTACH.
8. ALL LOAD BEARING JOISTS SHALL HAVE BLOCKING WITH A MAXIMUM SPACING OF 8'-0" ON CENTER AT ATTACHED PER DETAILS.
9. TEMPORARY BRACING SHALL BE PROVIDED & REMAIN IN PLACE UNTIL WORK IS COMPLETELY STABILIZED.
10. NO NOTCHING OR COPING OF STUDS IS ALLOWED, UNLESS STATED WITHIN THIS DRAWING PACKAGE.
11. DESIGN ASSUMES CONDITIONS TO BE STABILIZED AND IN FINAL LOCATION. TEMPORARY BRACING (BY OTHERS) OR OTHER MEANS OF STABILIZATION MAY BE REQUIRED UNTIL FRAMING IS IN ITS STABLE & FINAL CONDITION.
12. PER AISI STANDARD, THE MAXIMUM ALLOWABLE CAP CAN BE MEASURED BETWEEN THE WEB OF THE STUD AND THE END OF THE STUD SEAS IN A TRUSS IS 14" FOR NON-AXIAL LOAD BEARING CONDITIONS AND 18" FOR AXIAL LOAD BEARING CONDITIONS (U.N.O.) PRESSURE SHOULD BE APPLIED TO NEST THE STUDS INTO THE TRACKS UNTIL THE TOLERANCES LISTED ABOVE ARE ACHIEVED. FAILURE TO DO SO COULD RESULT IN SERVICEABILITY PROBLEMS IN THE FUTURE.

1. THE OWNER SHALL BE RESPONSIBLE FOR THE COSTS OF ALL REQUIRED SPECIAL INSPECTIONS ALL SPECIAL INSPECTIONS ARE TO BE SCHEDULED AND COORDINATED BY THE CONTRACTOR. SPECIAL INSPECTORS SHALL BE A QUALIFIED PERSON(S) WITH DEMONSTRATED COMPETENCE FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS AND FURNISH COPIES TO THE ENGINEER OF RECORD UNLESS OTHERWISE NOTED. INSPECTIONS SHALL BE PERFORMED AS INDICATED BELOW AND/OR PRIOR TO THAT PORTION OF CONSTRUCTION BEING CONCEALED IN THE CASE OF PERIODIC INSPECTIONS.
 - A. CONCRETE PLACING
 - B. CONCRETE REINFORCING
 - C. STEEL BOLTING
 - D. STEEL WELDING
 - E. BOLTS EMBEDDED IN CONCRETE / POST-INSTALLED ANCHORS
 - F. ANCHOR RODS
 - G. ROOF DIAPHRAM ATTACHMENT
 - H. SOIL VERIFICATION
 - I. STEEL FRAME
2. THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

1. ALL SHOP DRAWINGS AND SUBMITTALS MUST BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL. ENGINEER'S REVIEW OF THE SHOP DRAWINGS IS LIMITED TO CHECKING FOR GENERAL CONFORMANCE WITH DESIGN DRAWINGS AND STRENGTH OF COMPONENTS AND MATERIALS. CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES FROM THE DESIGN DRAWINGS, QUANTITIES, DIMENSIONAL ERRORS, OR OMISSIONS IN THE SHOP DRAWINGS.
2. ALL SHOP DRAWINGS MUST BE ORIGINAL DOCUMENTS AND SHALL NOT BE REPRODUCTIONS OF THESE CONTRACT DOCUMENTS.
3. SIGNED AND SEALED DRAWINGS AND CALCULATIONS ARE TO BE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI FOR THE FOLLOWING DELEGATED DESIGN ITEMS.
 - A. STEEL FRAMING CONNECTIONS.
 - B. LIGHT GAGE METAL FRAMING AND CONNECTIONS.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE FOLLOWING ITEMS.
 - A. CONCRETE MIX DESIGN AND MATERIALS.
 - B. CONCRETE REINFORCING STEEL.
 - C. STRUCTURAL STEEL.
 - D. LIGHT GAGE METAL FRAMING.
5. PROVIDE A FINAL, "FOR CONSTRUCTION" SET OF ALL SHOP DRAWINGS TO THE ENGINEER OF RECORD PRIOR TO FABRICATION OR CONSTRUCTION OF THOSE ITEMS.



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LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

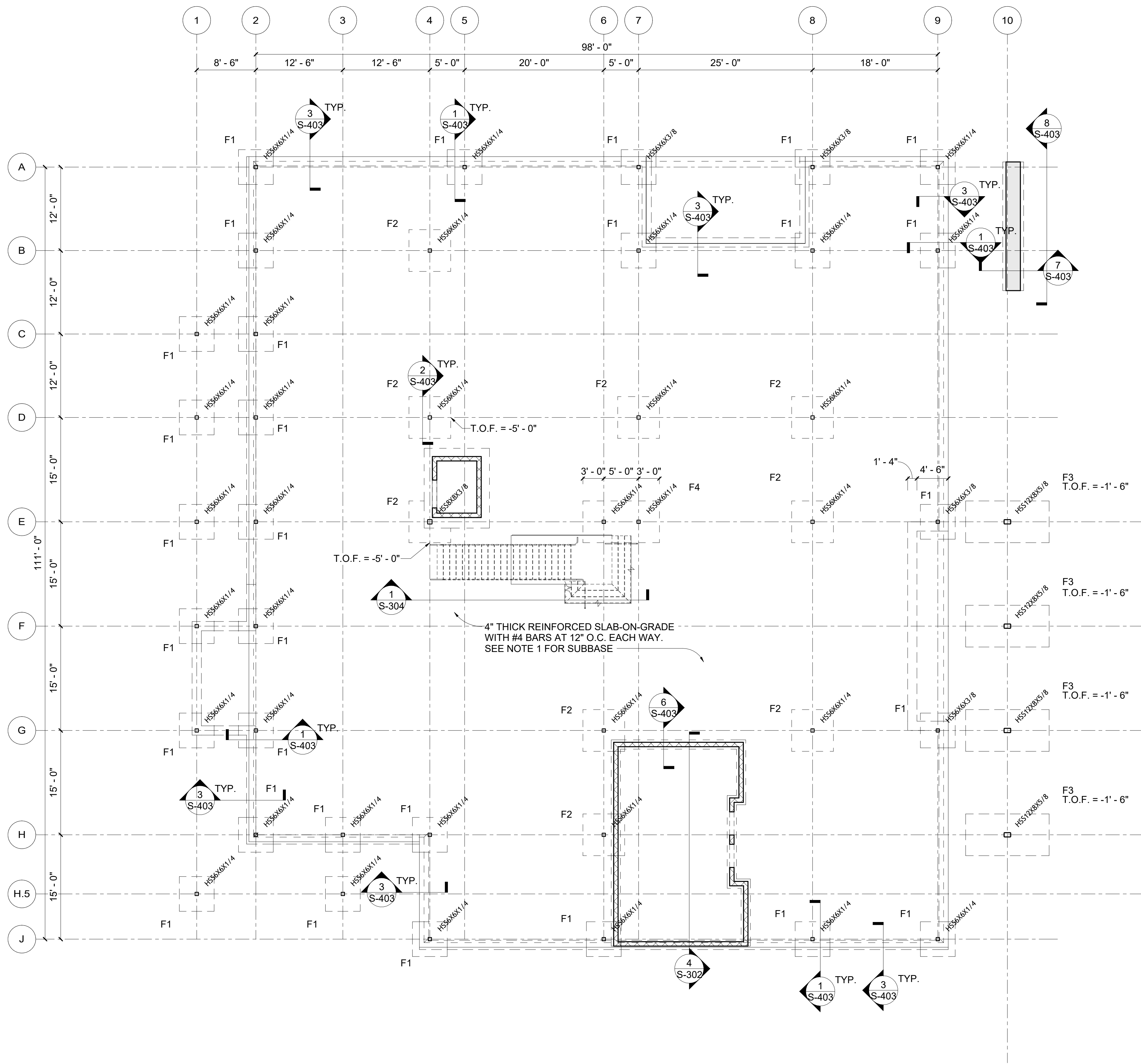
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SHEET TITLE

GENERAL NOTES

S-002

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1 Foundation Plan
1/8" = 1'-0"

SPREAD FOOTING							
ID	QTY.	DIMENSIONS			REINF.		COMMENTS
		WIDTH	LENGTH	THICKNESS	TOP	BOT	
F1	30	5' - 0"	5' - 0"	2' - 6"	~	#5 @ 12" O.C. E.W.	
F2	9	6' - 0"	6' - 0"	1' - 4"	~	#5 @ 10" O.C. E.W.	
F3	4	6' - 0"	12' - 0"	2' - 6"	5 - #8 LONG. 10 - #8 TRANS.	5 - #8 LONG. 10 - #8 TRANS.	
F4	1	11' - 0"	6' - 0"	1' - 4"	~	#5 @ 10" O.C. E.W.	

- NOTES:
- SLAB ON GRADE TO BE PLACED OVER 15-MIL VAPOR BARRIER OVER 4" CLEAN ROCK, OVER 12" CRUSHED LIMESTONE SCREENINGS PER GEOTECH REPORT
 - TOP OF FOOTING = -1' - 3" (UNLESS NOTED OTHERWISE)



1627 MAIN STREET, SUITE 600
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1627 MAIN STREET, SUITE 100
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1701 WALNUT STREET, SUITE 300
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LEES SUMMIT, MO

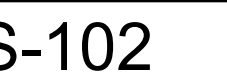
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FOUNDATION PLAN

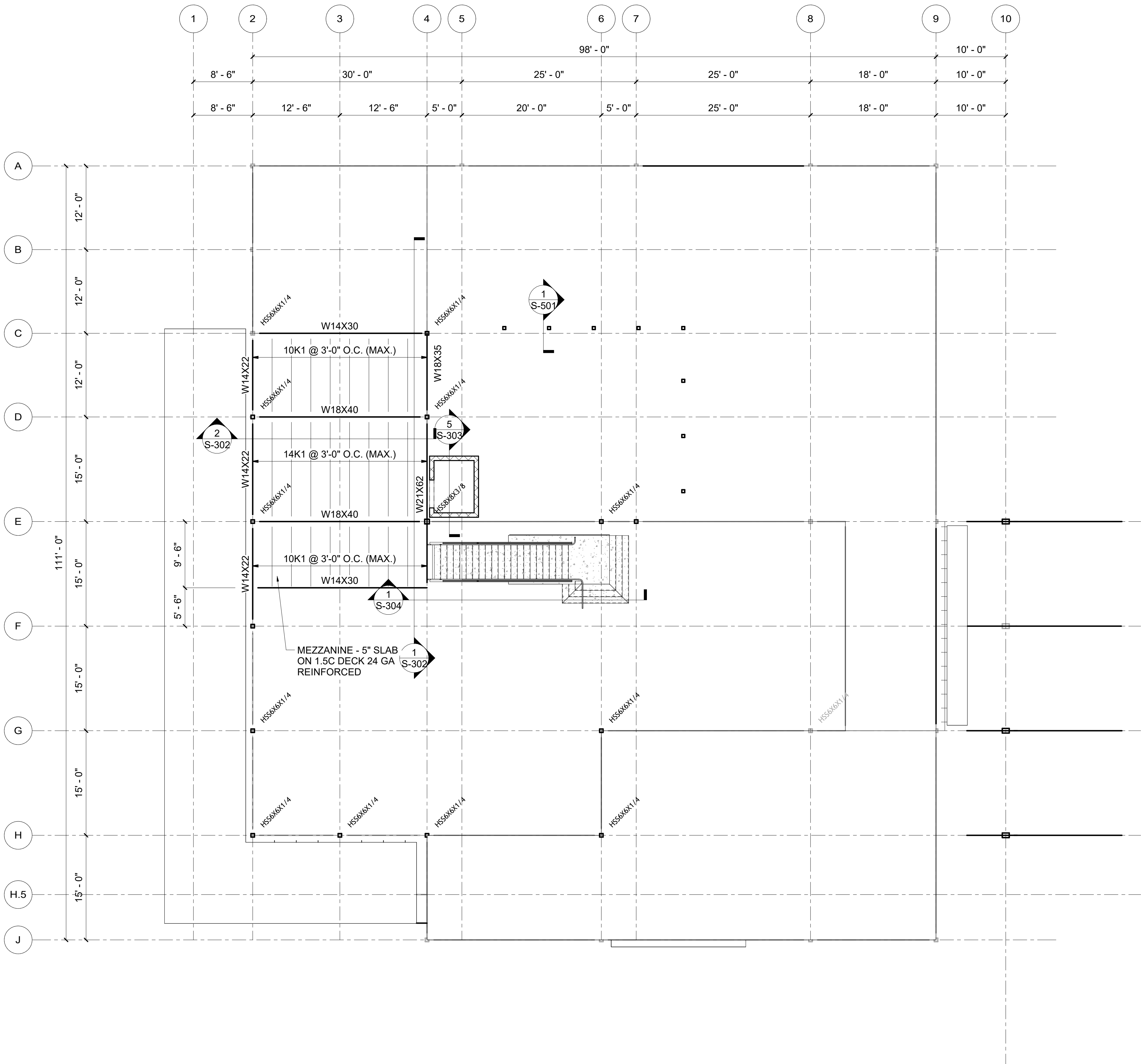
S-101



1. CMU WALLS SHALL BE 8" NOMINAL REINFORCED W/ #5 VERTS @ 24" O.C. BOND BEAMS W/ 2 - #4 @ 48" O.C. MAX CONTINUOUS W/ 1.7 JOINT REINFORCEMENT @ 16" O.C.



10/24/2024 4:59:01 PM



- NOTES:
- USE 1.5C DECK 24 GA 80KSI MIN G60.
 - ATTACH DECK AS SHOWN BELOW:
STRUCTURAL #12 - 36/4
SIDELAP #10 - 2 PER SPAN
EDGE #12 - 12" O.C.
 - PUDDLE WELDS MAY BE SUBSTITUTED FOR #12 SDS
 - PAF (POWER ACTUATED FASTENERS) MAY BE SUBSTITUTED FOR #10 AND #12
 - MINIMUM DECK BEARING IS 1 1/2" FOR END BEARING AND 3" FOR INTERMEDIATE BEARING.
 - ALL CONNECTIONS NOT DETAILED ON THESE PLANS SHALL BE STANDARD AISC CONNECTIONS, AND SHALL BE DETAILED BY THE STEEL FABRICATOR.

1 FRAMING PLAN - MEZZANINE

1/8" = 1'-0"



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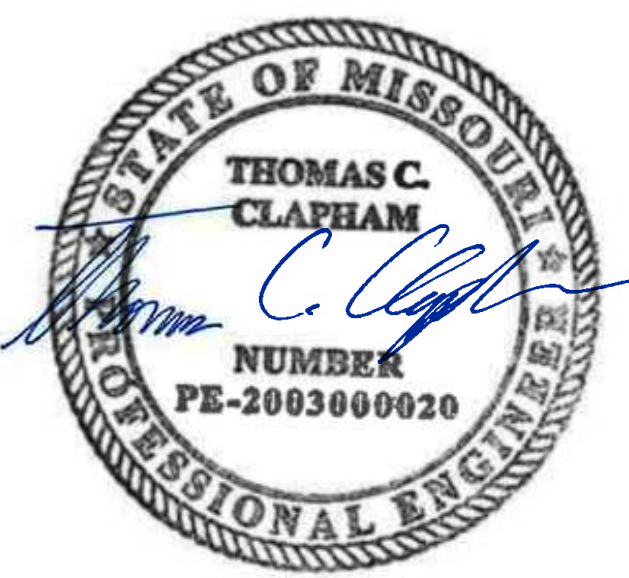


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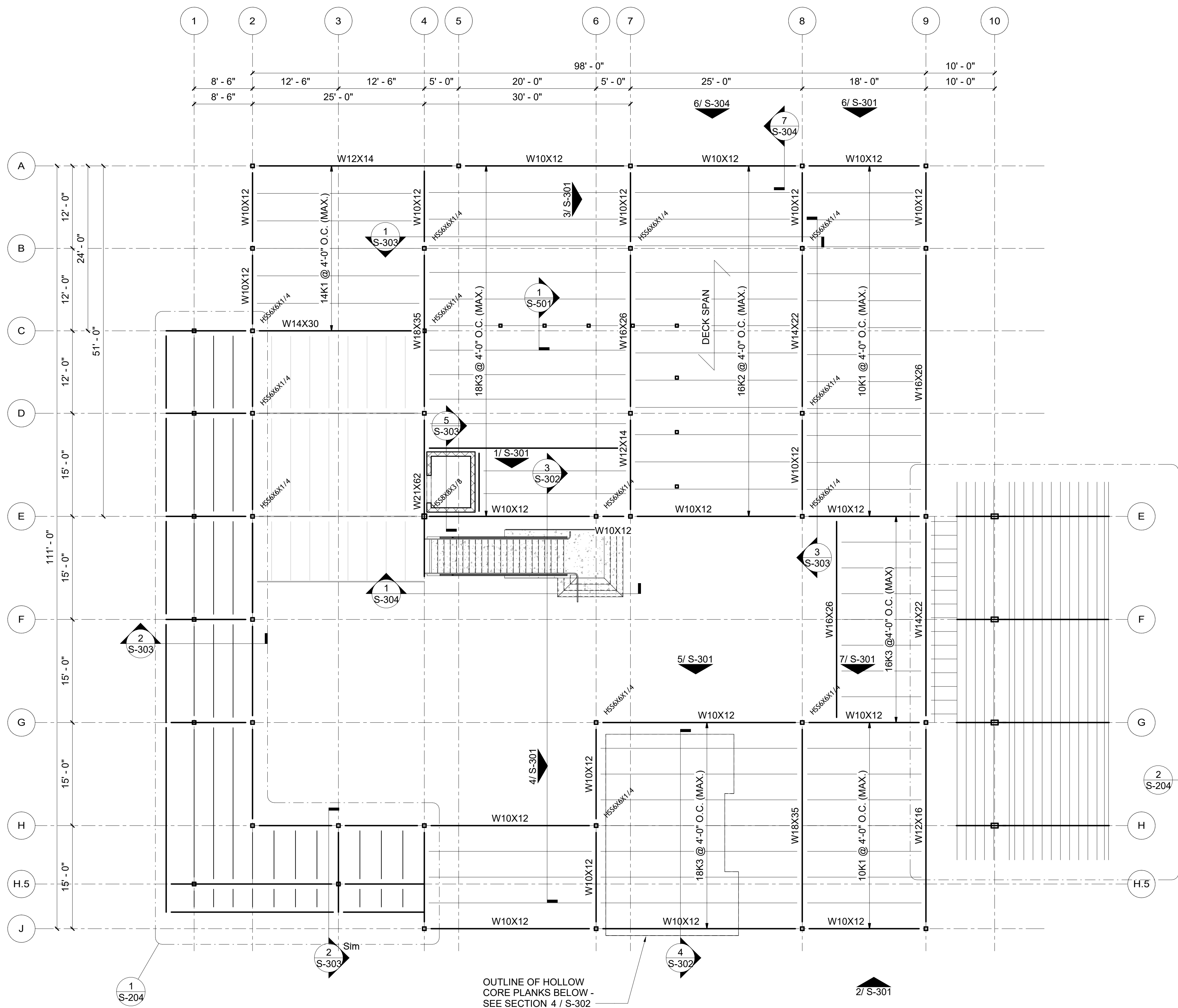
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MEZZANINE FRAMING
PLAN

S-201

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1 FRAMING PLAN - LOW ROOF
1/8" = 1'-0"



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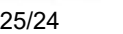
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LOW ROOF FRAMING
PLAN

S-202



GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



ARK	DATE	DESCRIPTION
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-204

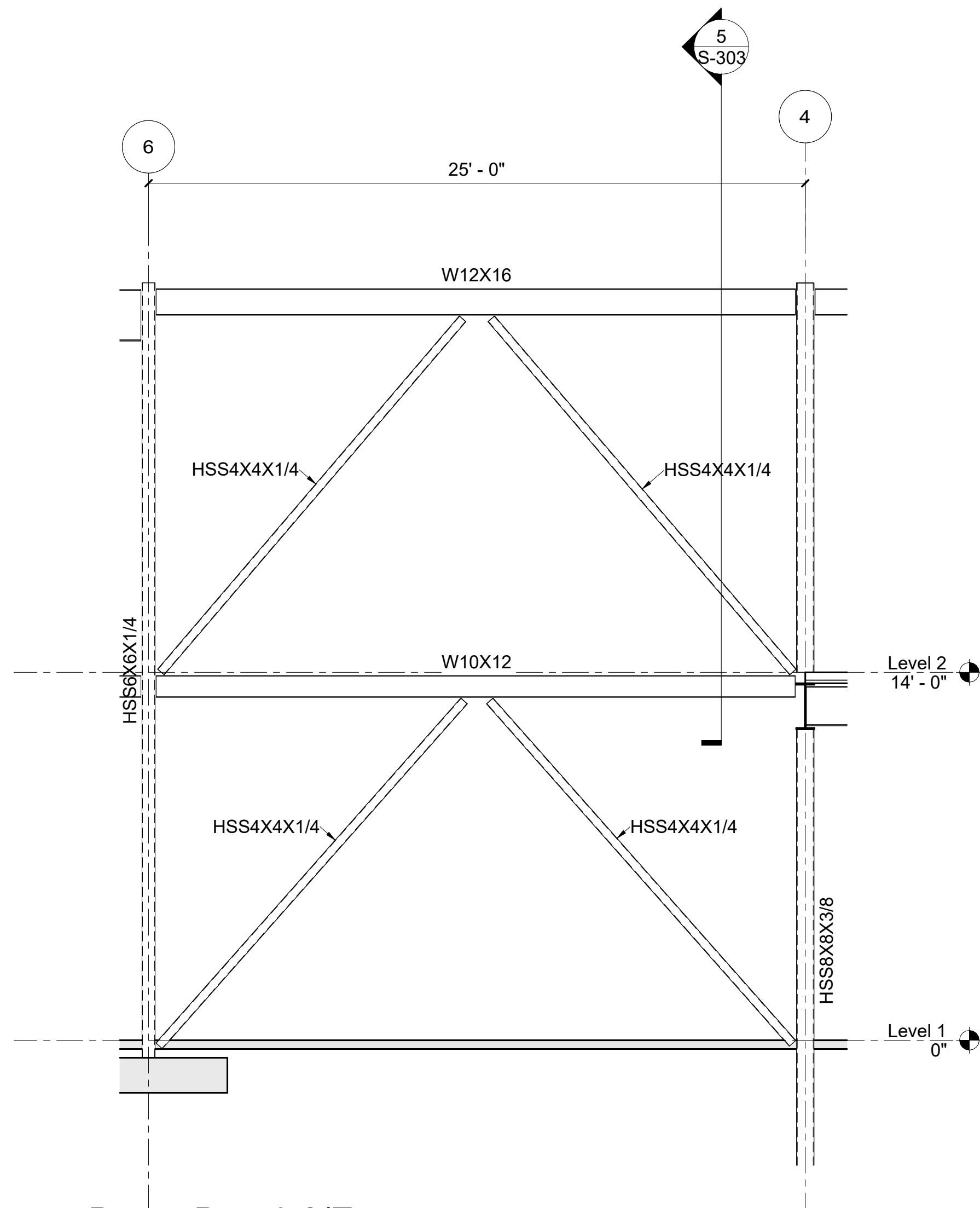

$$1/4'' = 1'-0''$$

$$1/4'' = 1'-0''$$

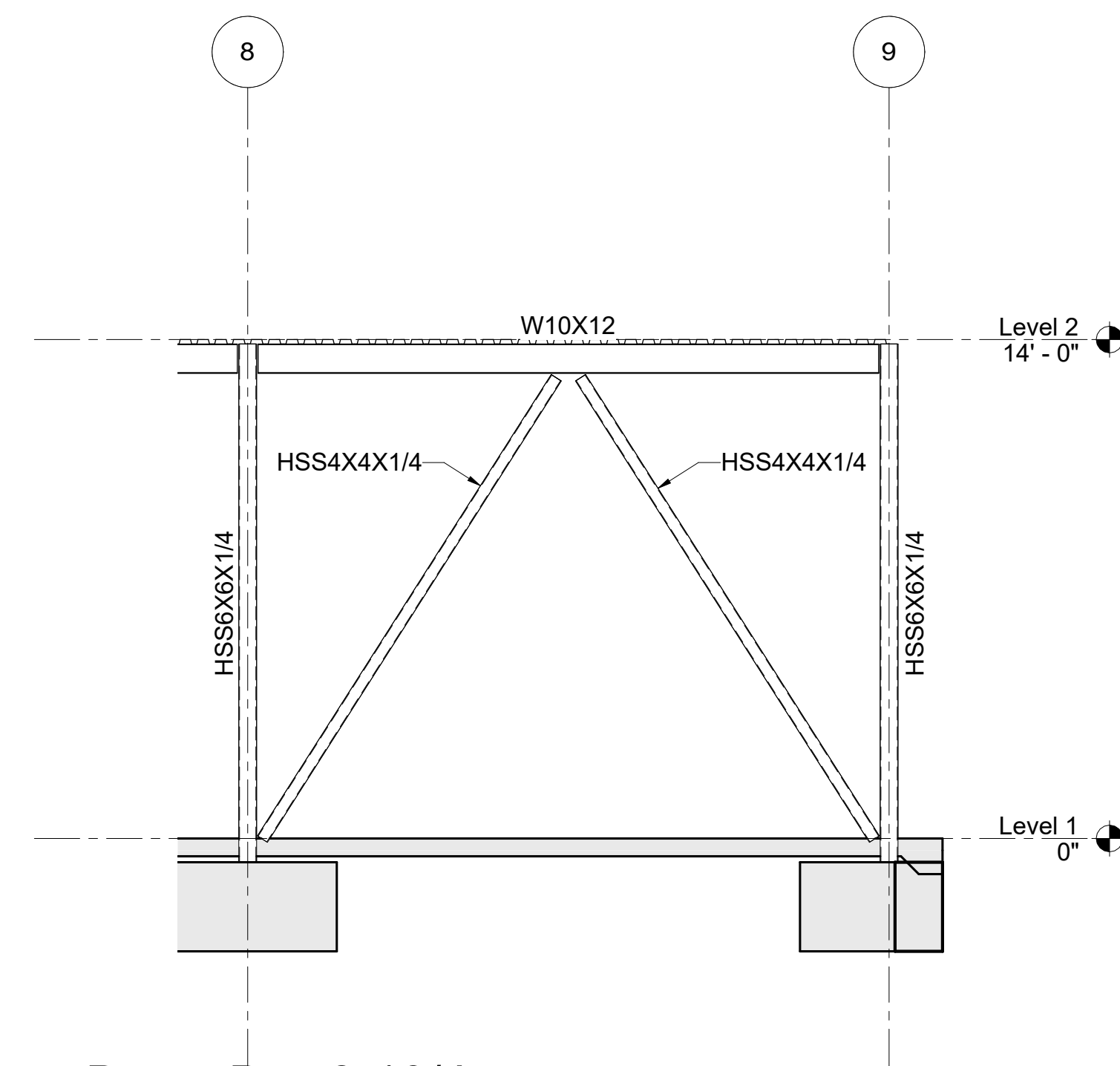
- NOTES:
1. USE 1.5B DECK 24 GA 80KSI MIN G60.
 2. ATTACH DECK AS SHOWN BELOW:

STRUCTURAL	#12 - 36/4
SIDELAP	#10 - 2 PER SPAN
EDGE	#12 - 12" O.C.
 3. PUDDLE WELDS MAY BE SUBSTITUTED FOR #12 SDS
 4. PAF (POWER ACTUATED FASTENERS) MAY BE SUBSTITUTED FOR #10 AND #12
 5. MINIMUM DECK BEARING IS 1 1/2" FOR END BEARING AND 3" FOR INTERMEDIATE BEARING.
 6. ALL CONNECTIONS NOT DETAILED ON THESE PLANS SHALL BE STANDARD AISC CONNECTIONS, AND SHALL BE DETAILED BY THE STEEL FABRICATOR.

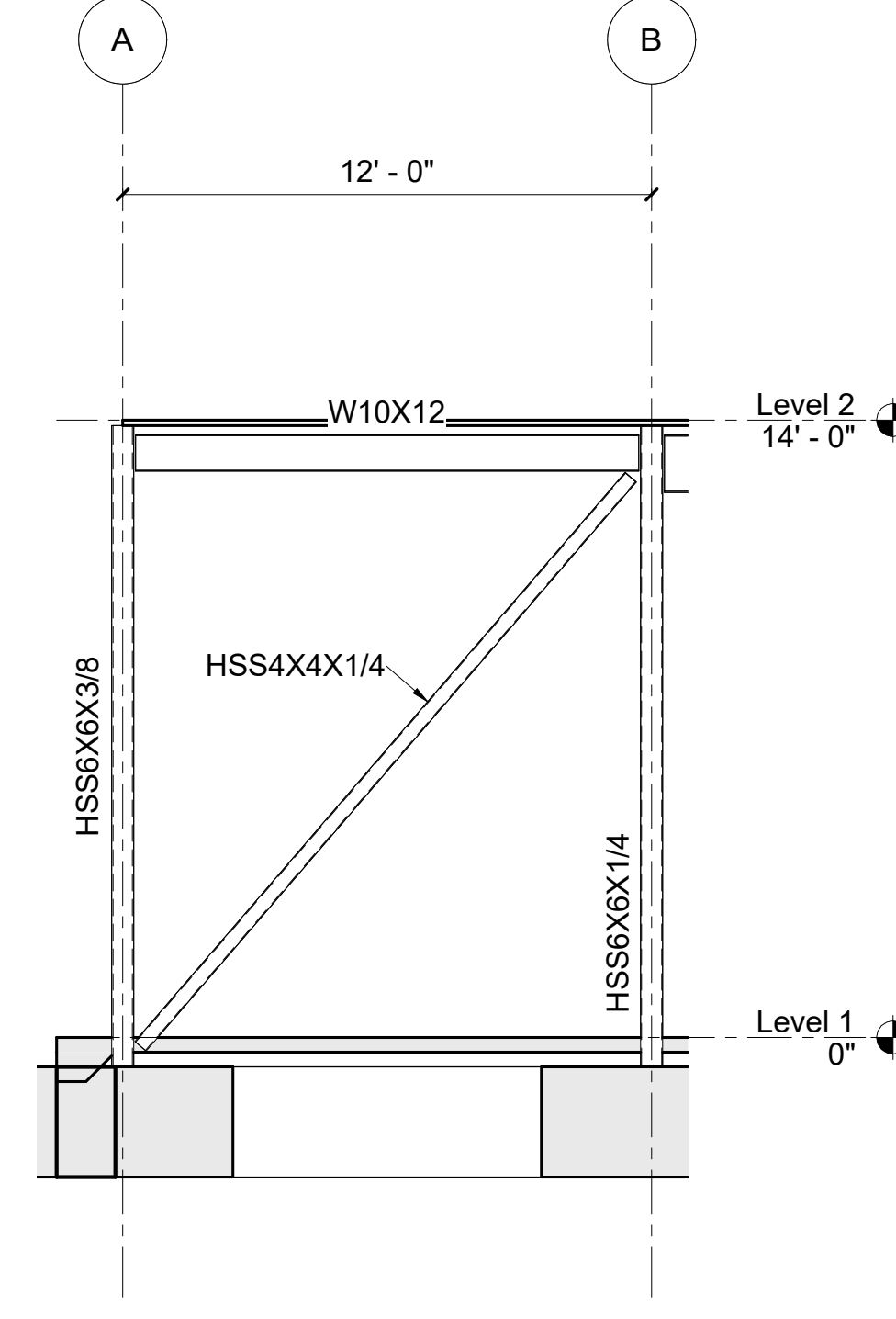
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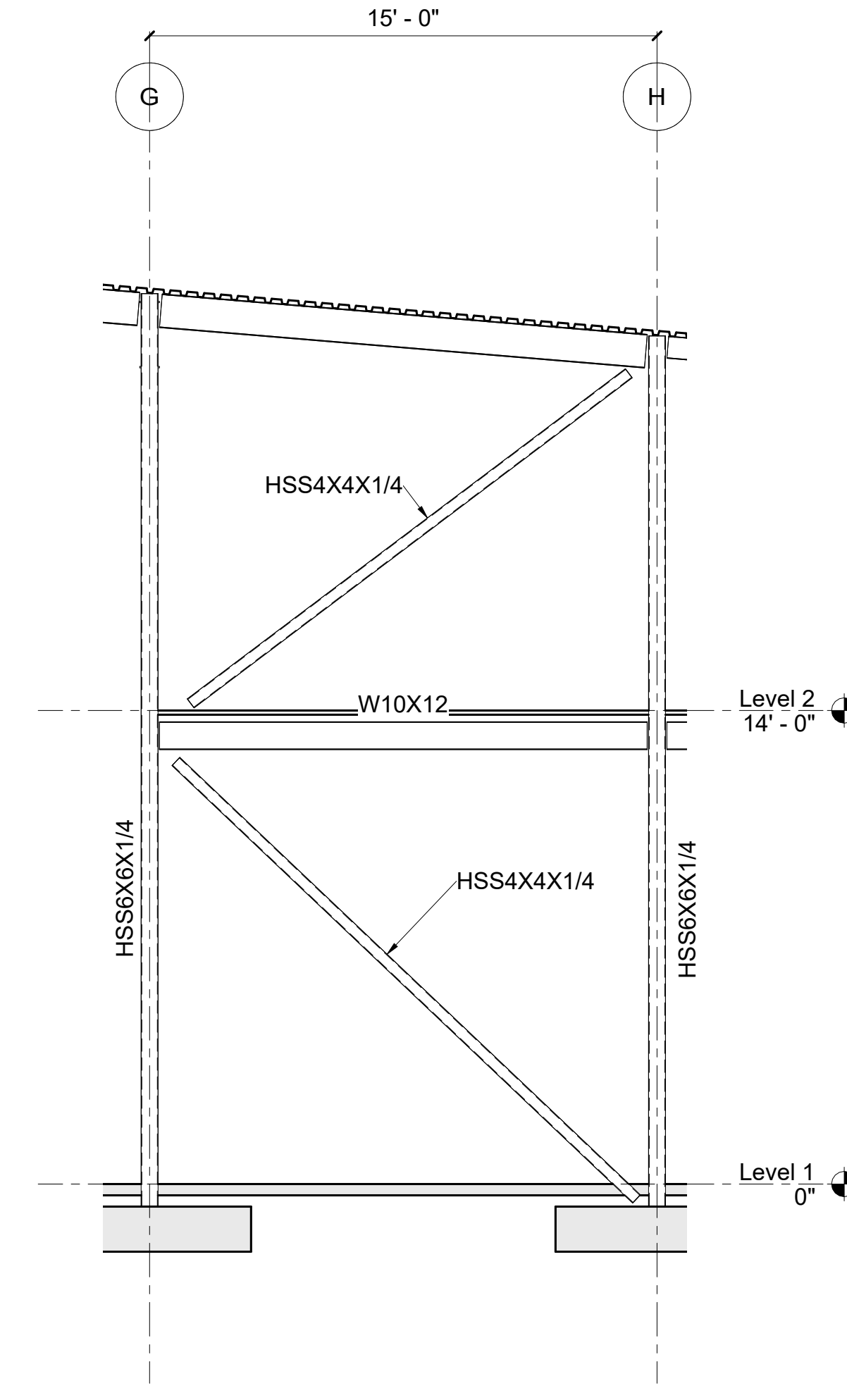
1 Brace Bay 4-6/E
1/4" = 1'-0"



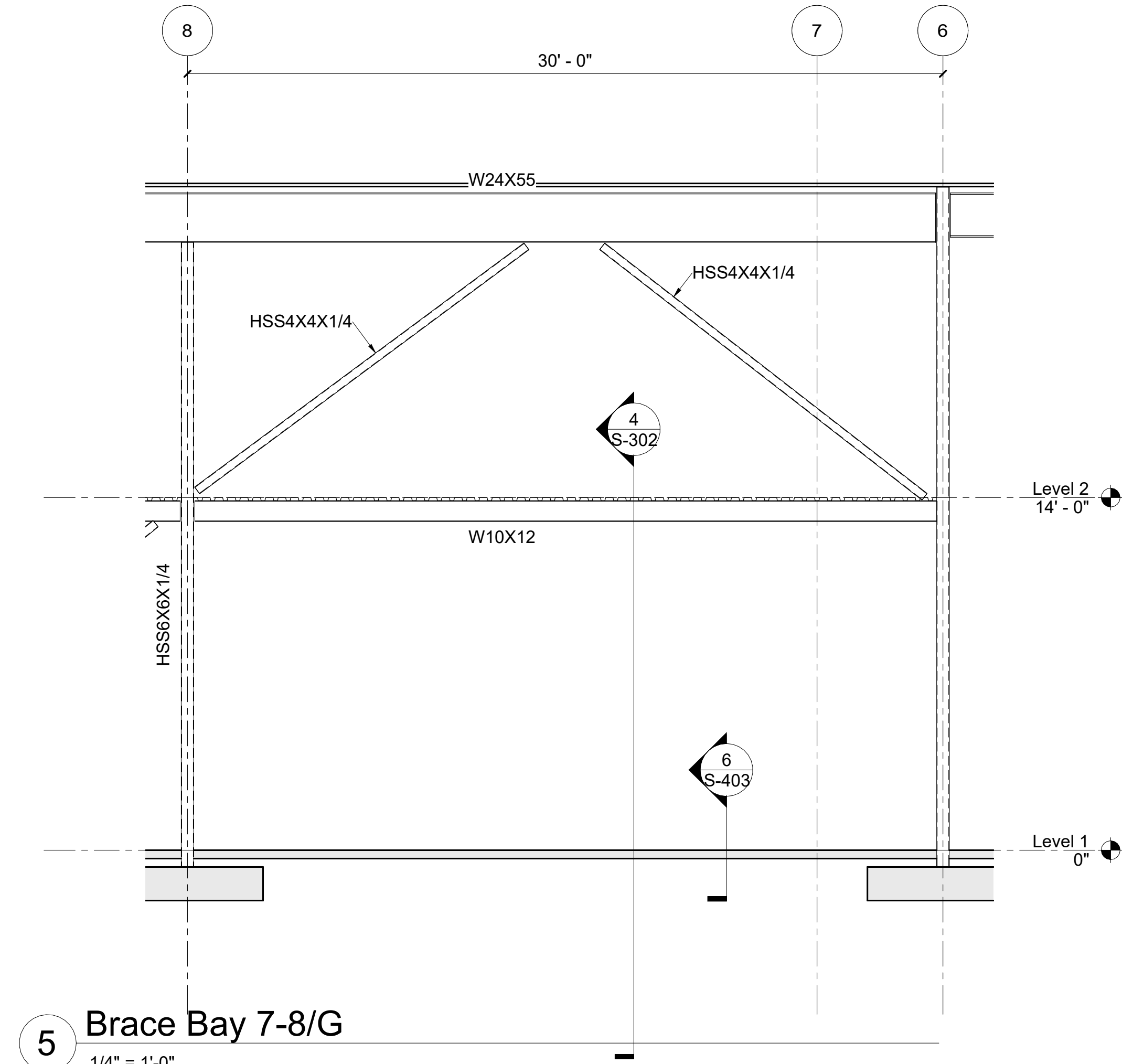
2 Brace Bay 8-10/J
1/4" = 1'-0"



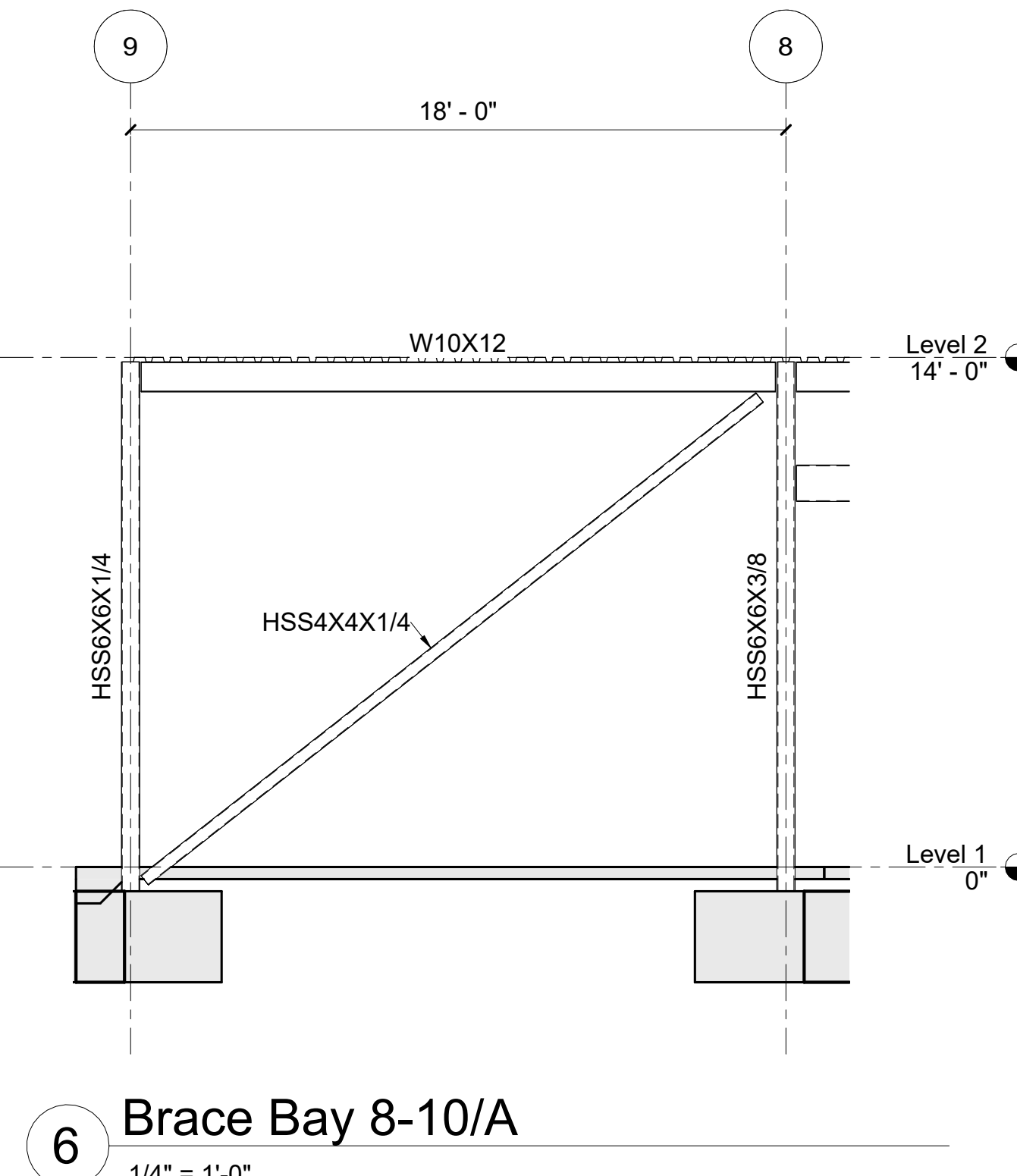
3 Brace Bay 7/A-B
1/4" = 1'-0"



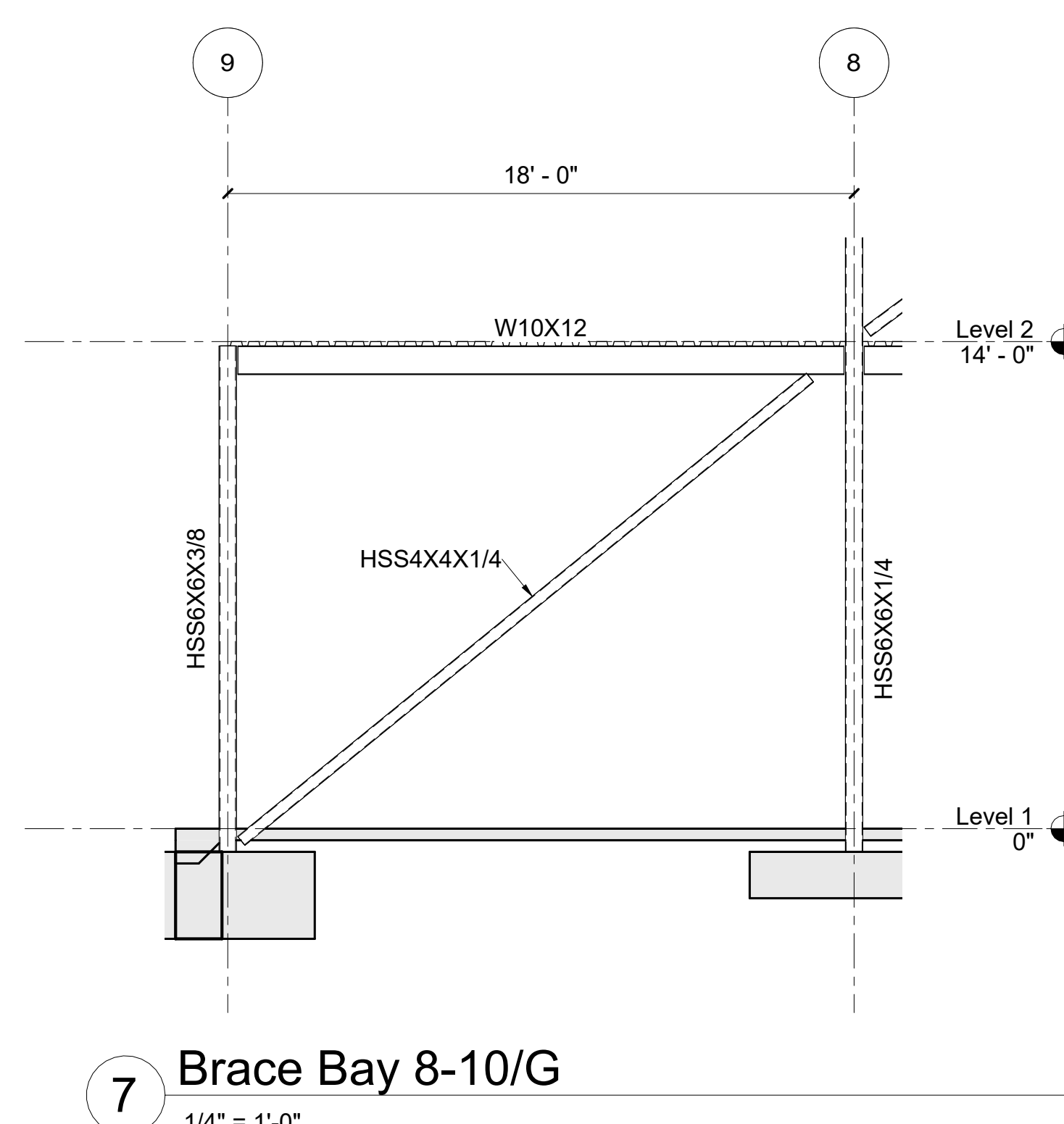
4 Brace Bay 6/G-H
1/4" = 1'-0"



5 Brace Bay 7-8/G
1/4" = 1'-0"



6 Brace Bay 8-10/A
1/4" = 1'-0"



7 Brace Bay 8-10/G
1/4" = 1'-0"



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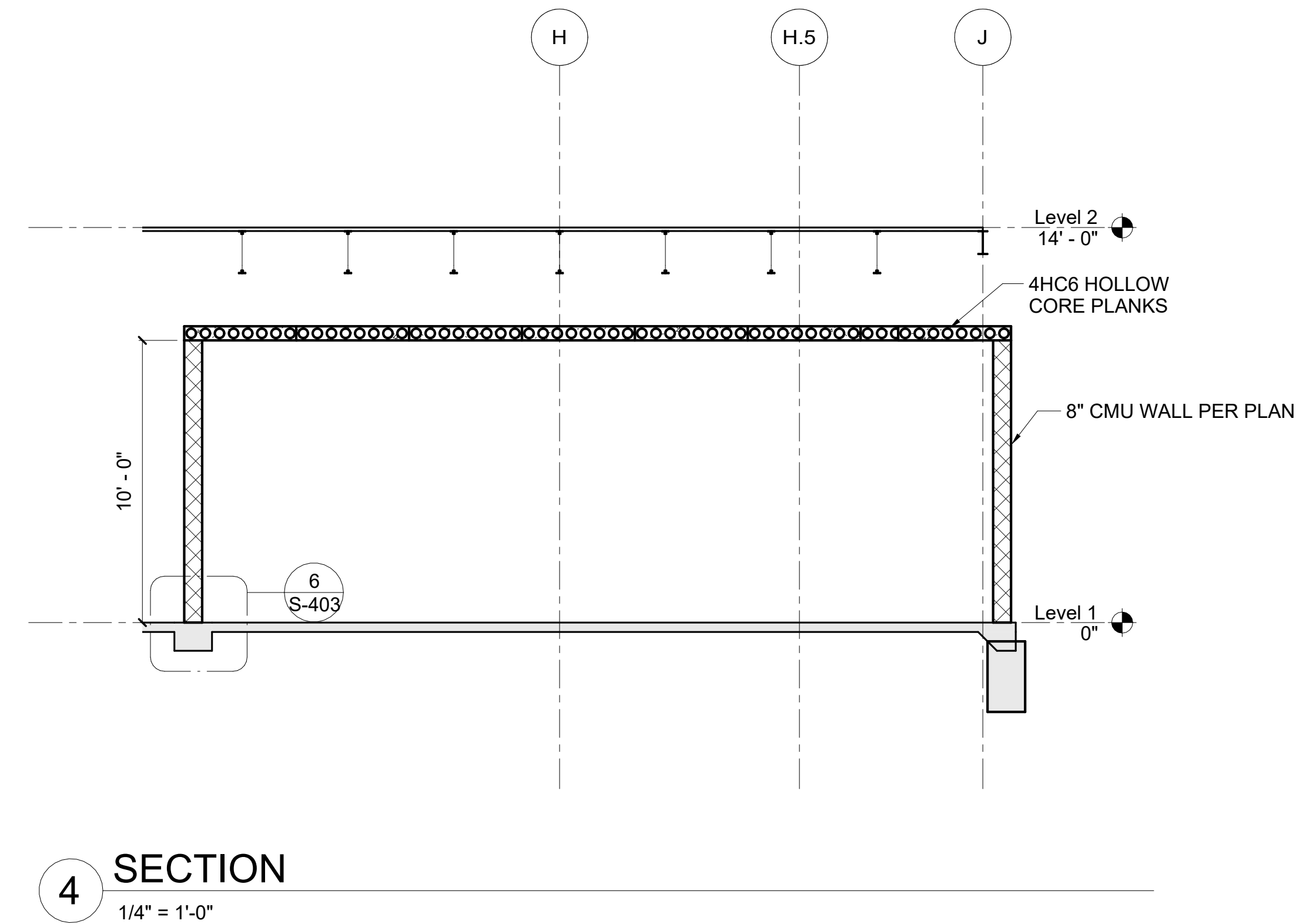
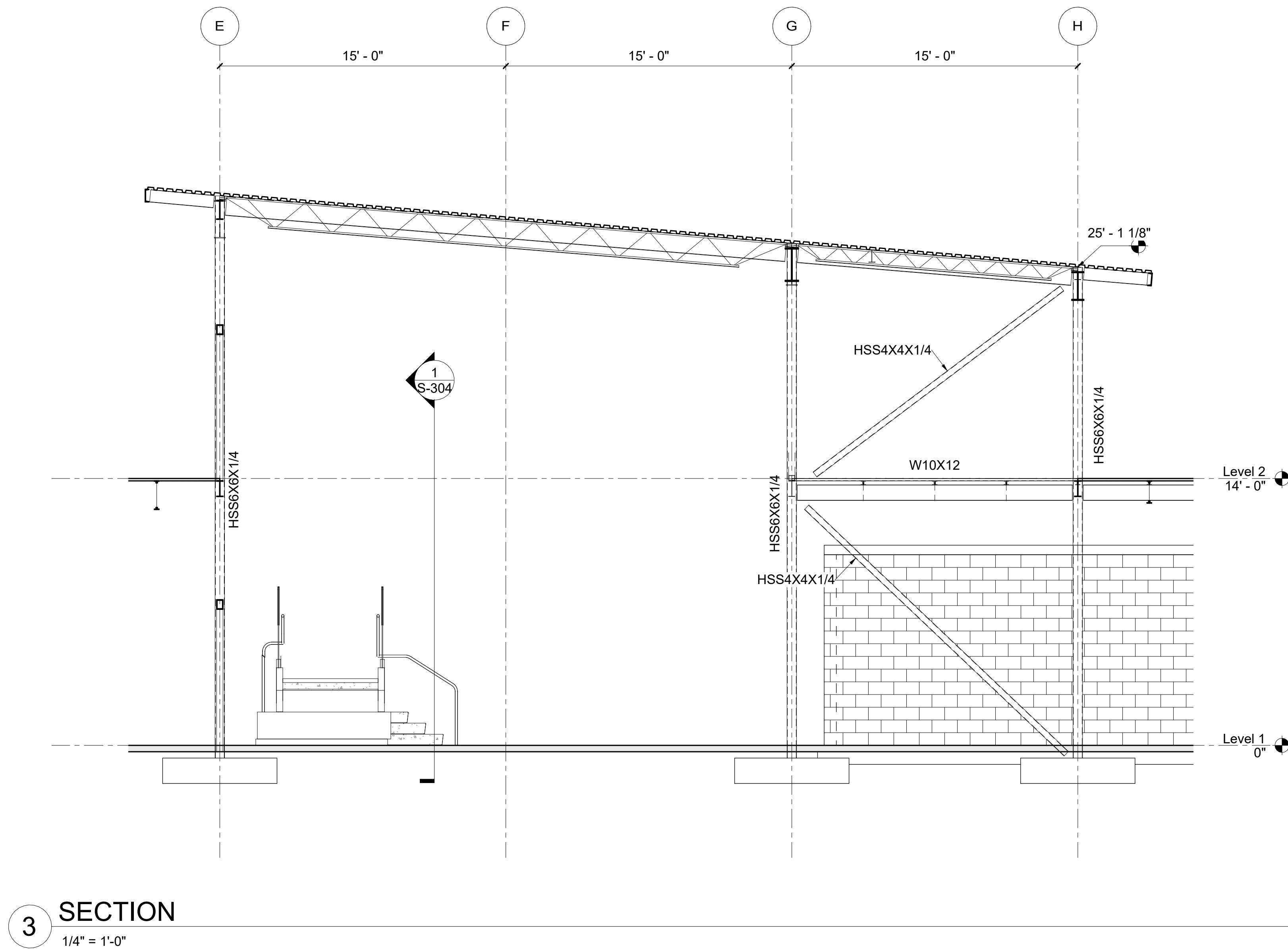
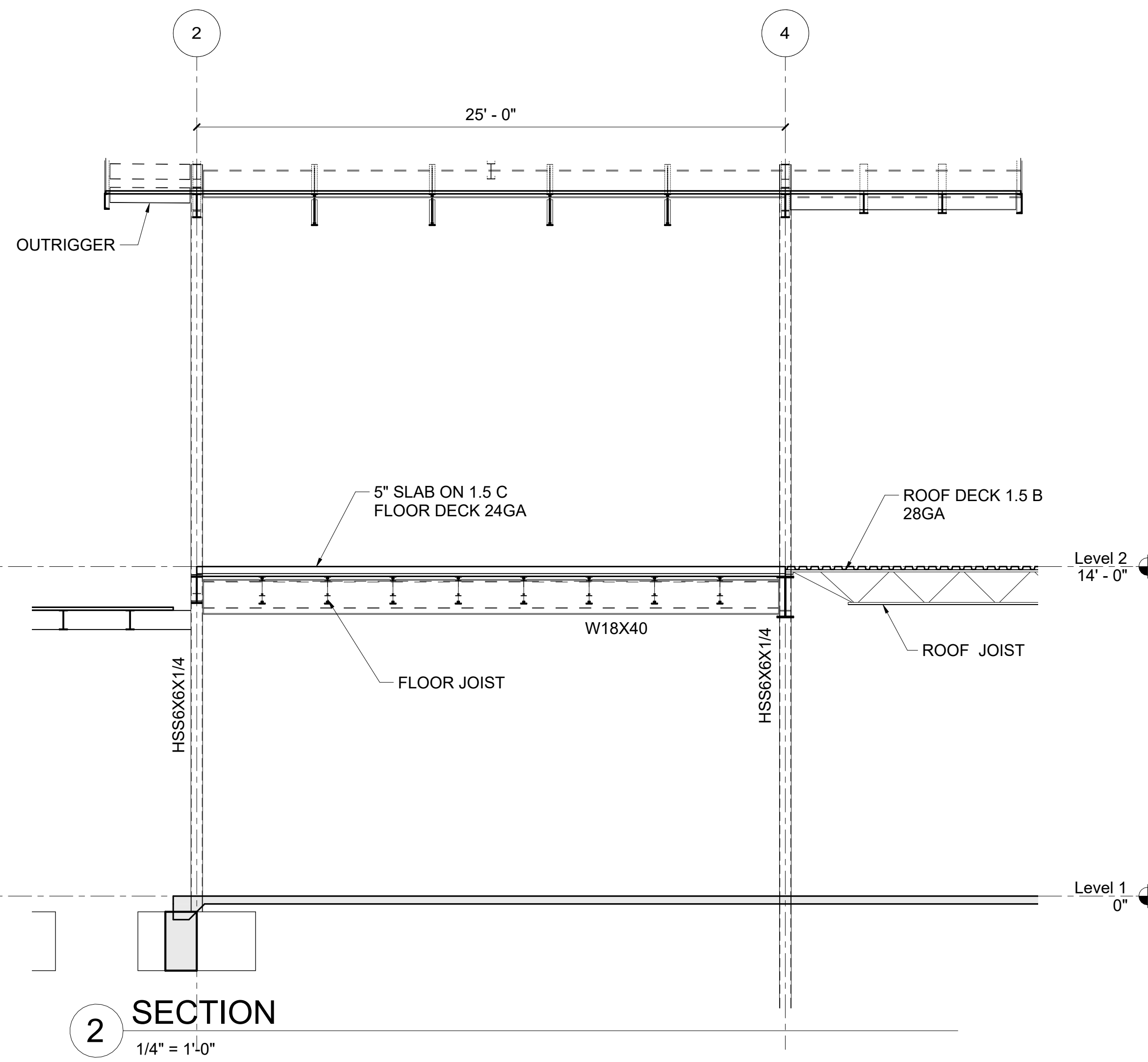
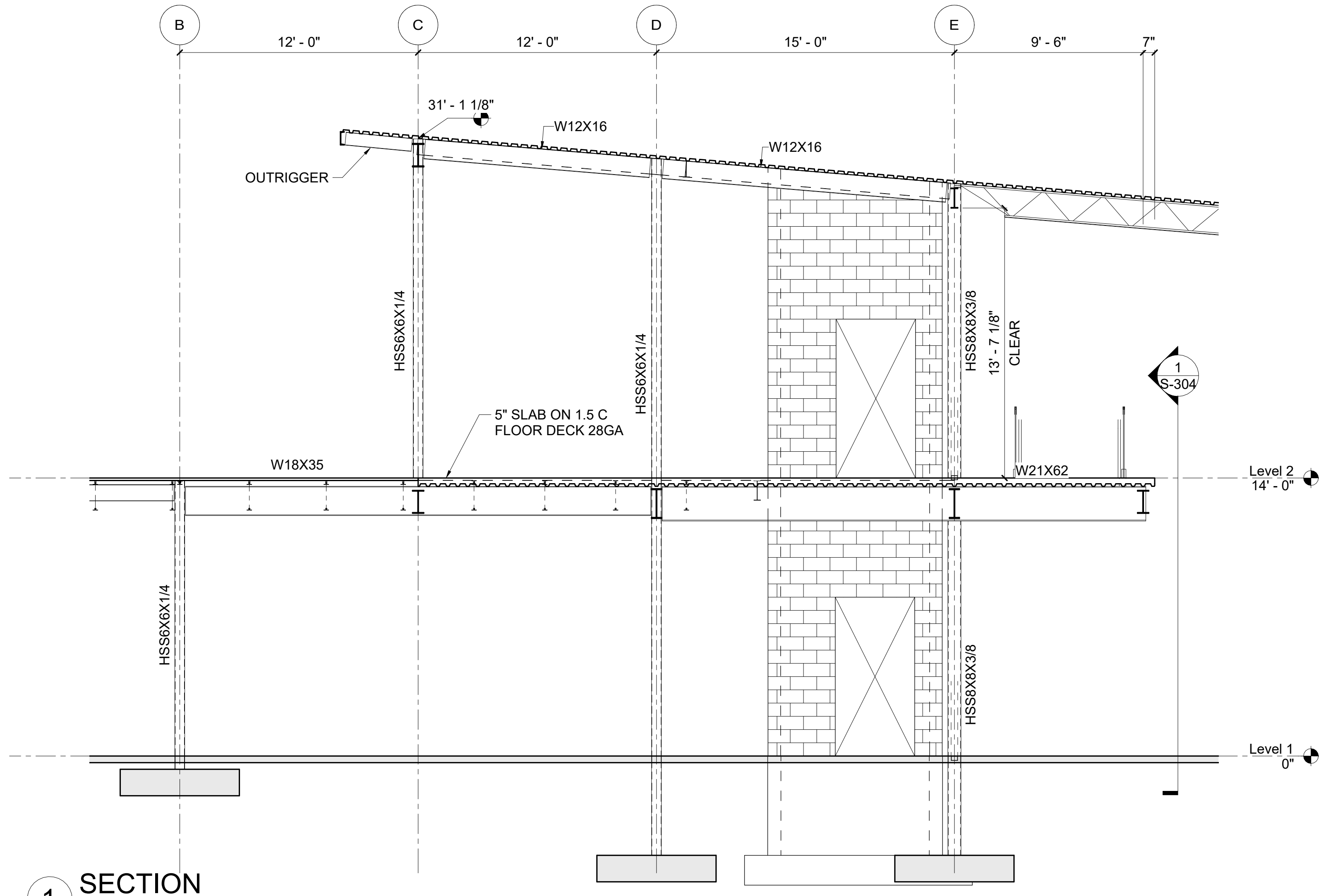
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BRACE BAY
SECTIONS

S-301

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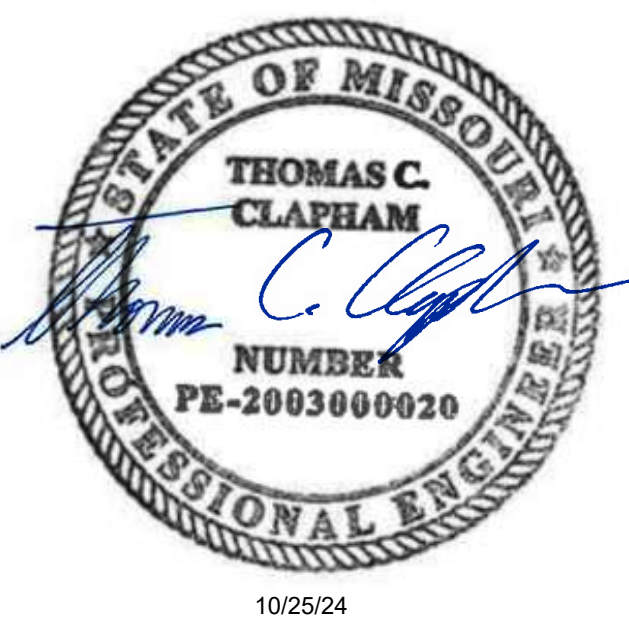


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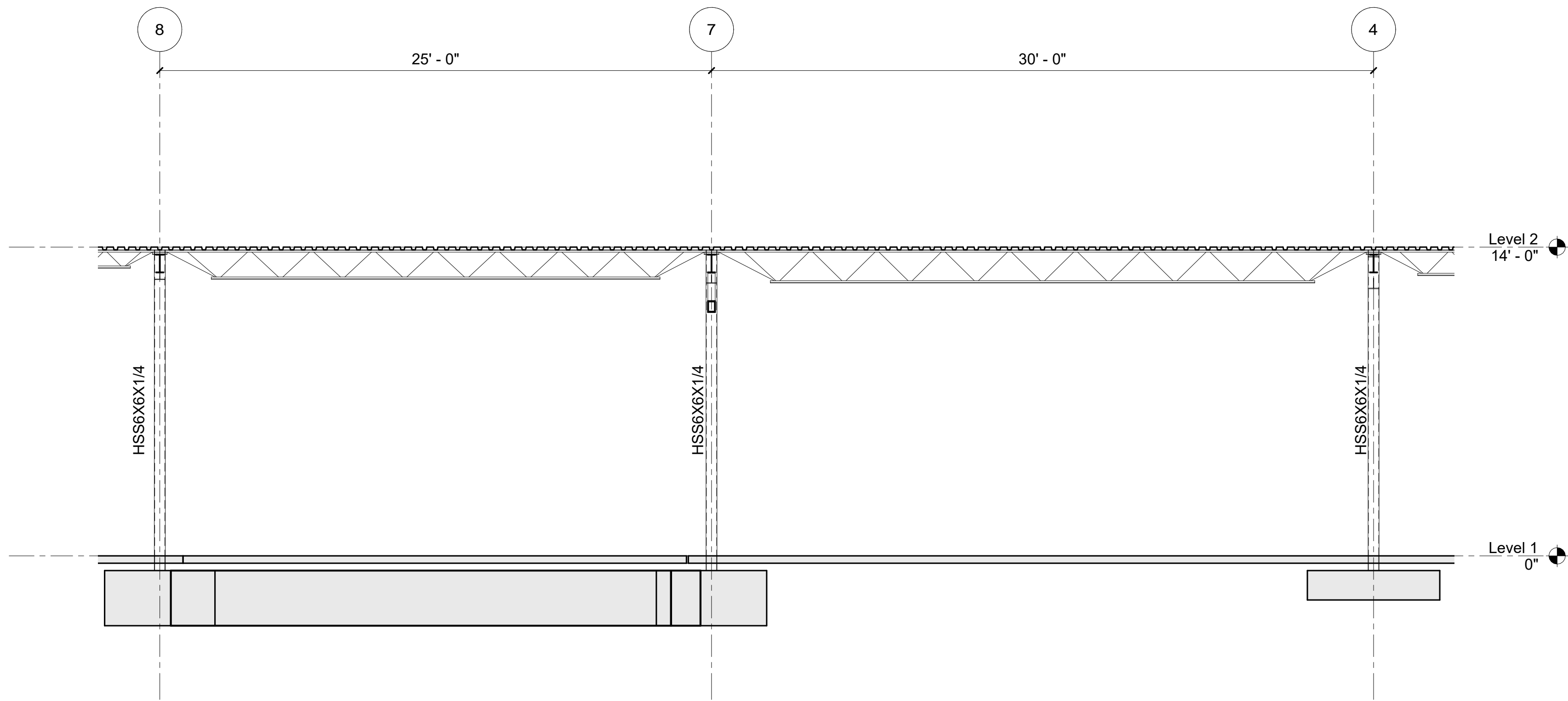
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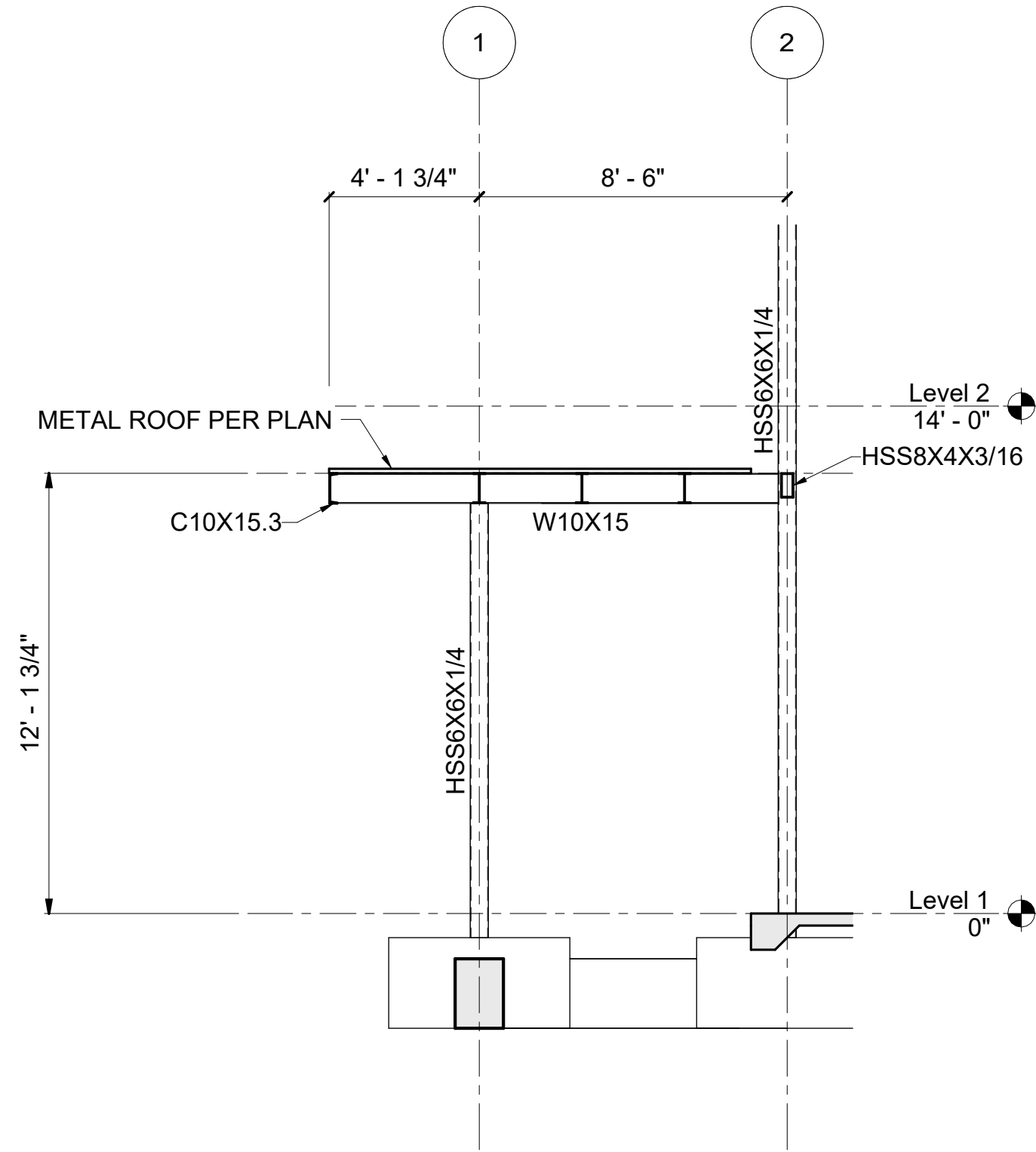
BUILDING SECTIONS

S-302

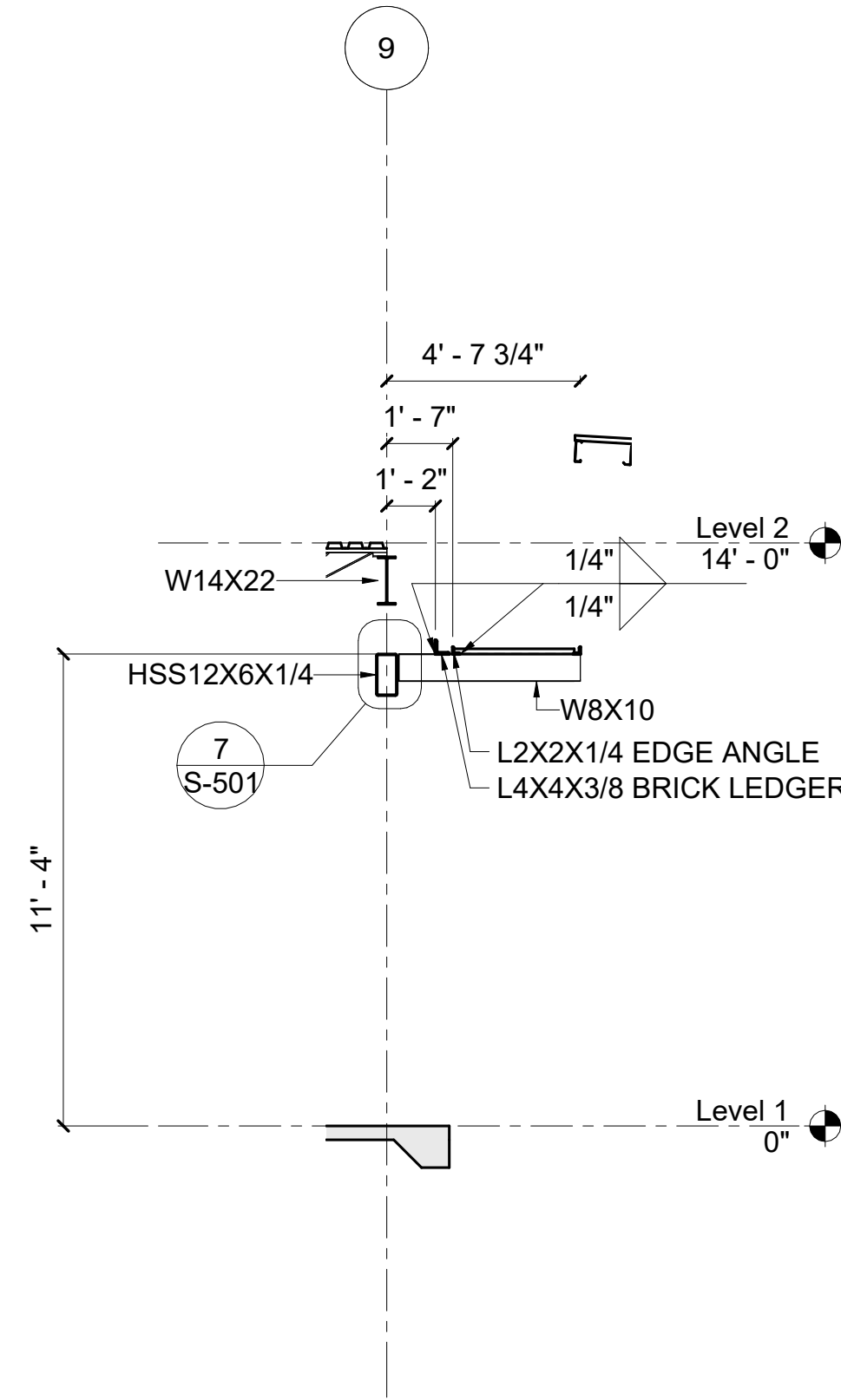
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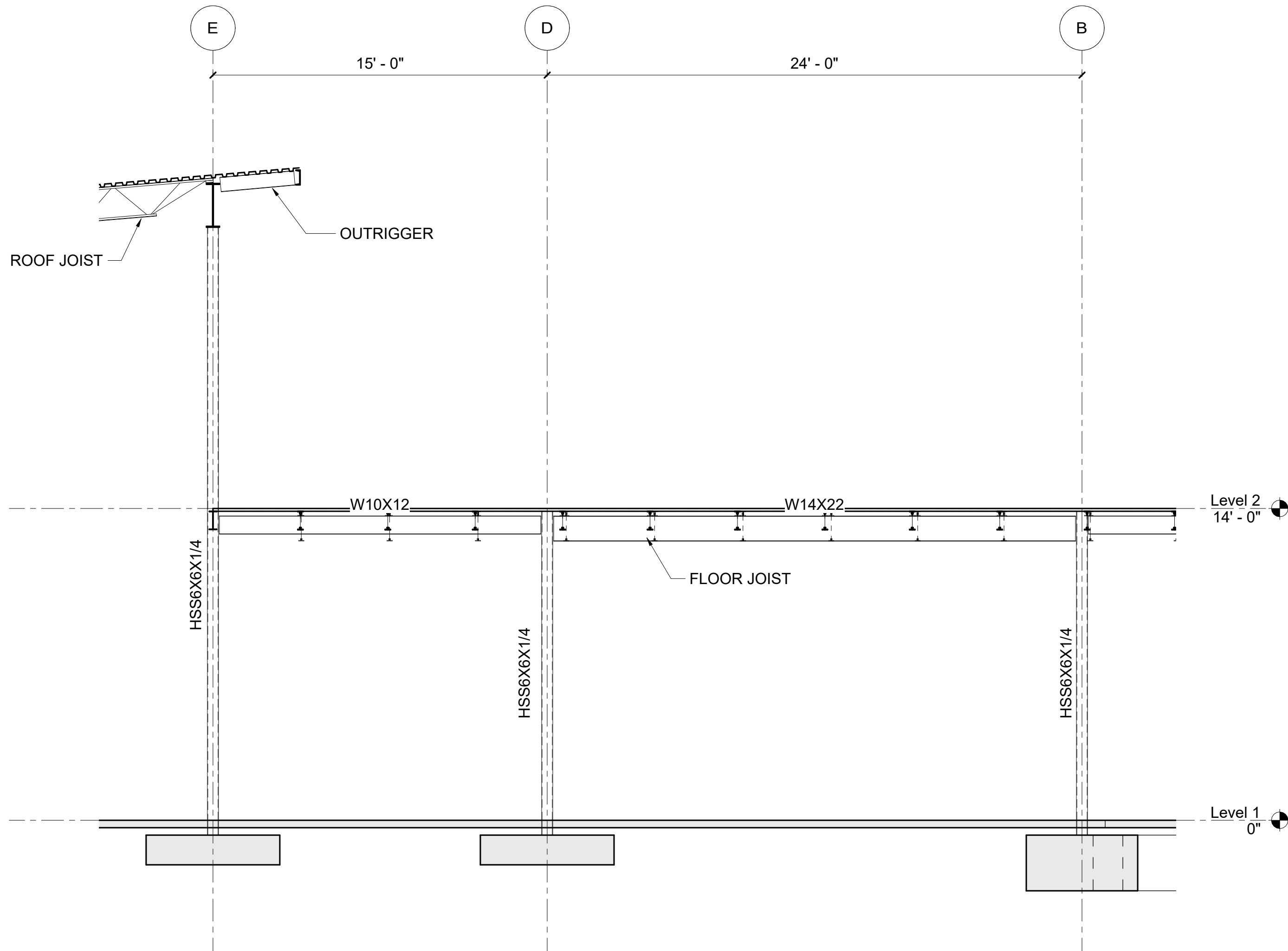
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1/4" = 1'-0"



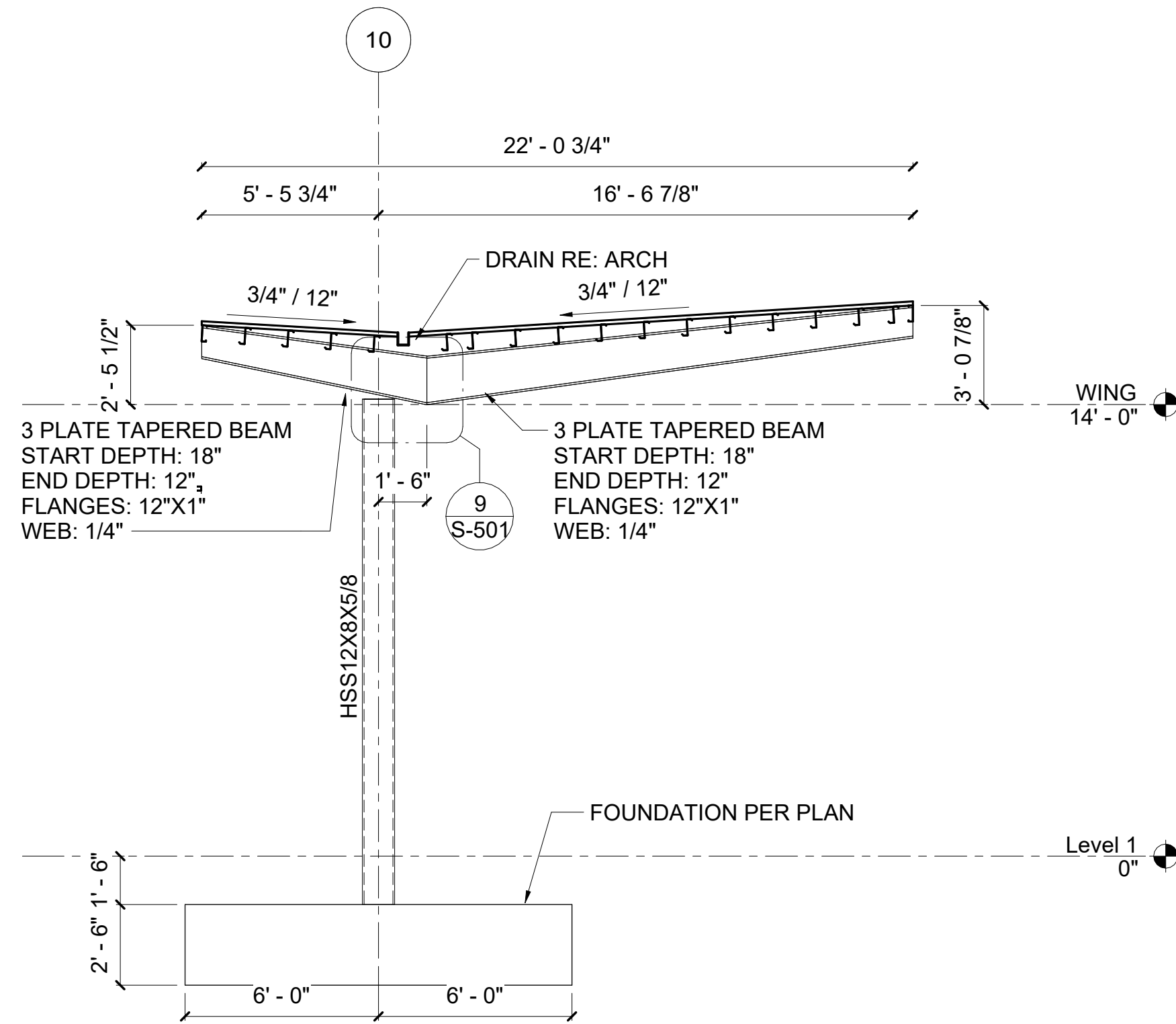
2 SECTION
1/4" = 1'-0"



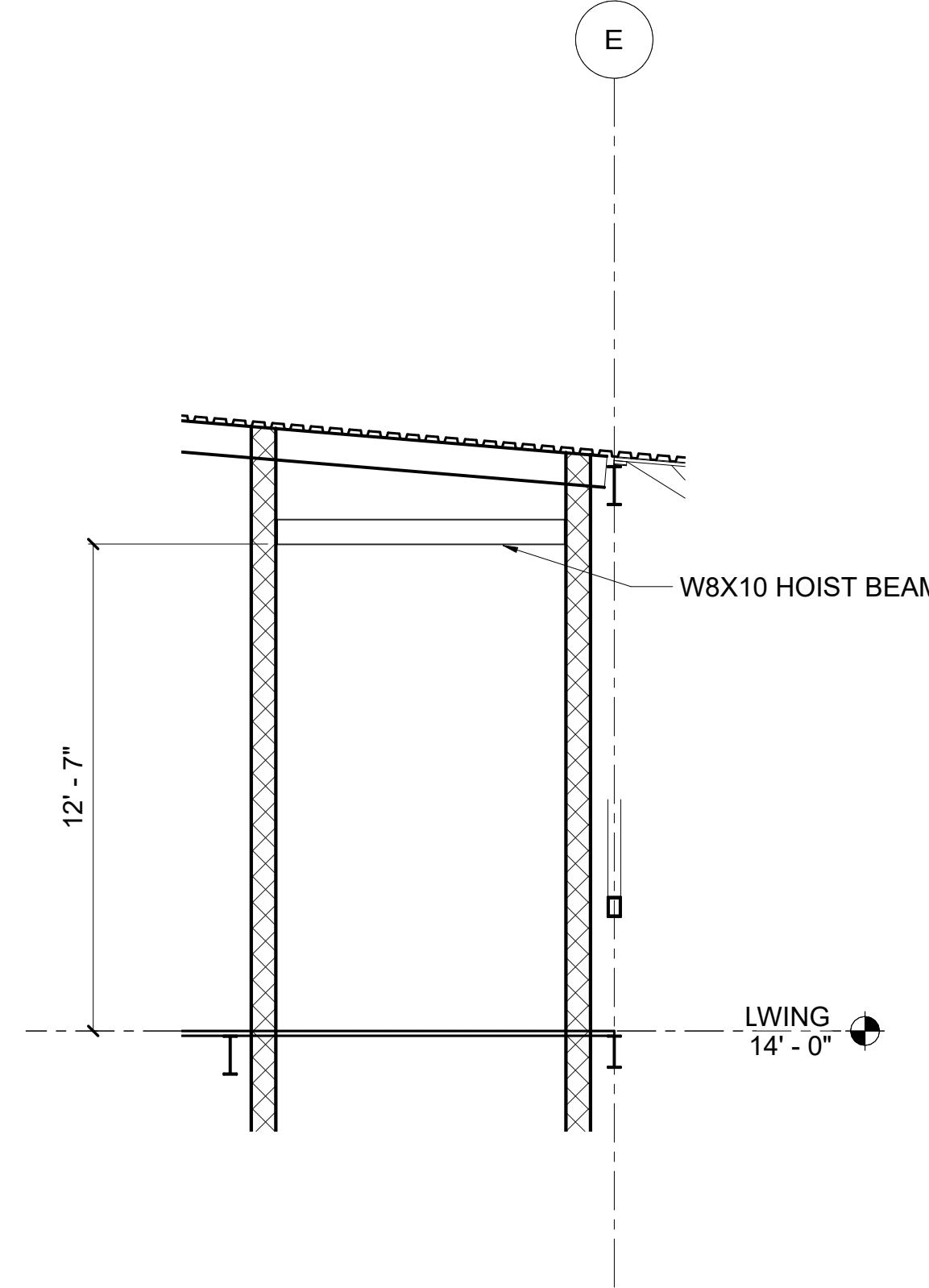
6 SECTION
1/4" = 1'-0"



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



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



5 SECTION
1/4" = 1'-0"



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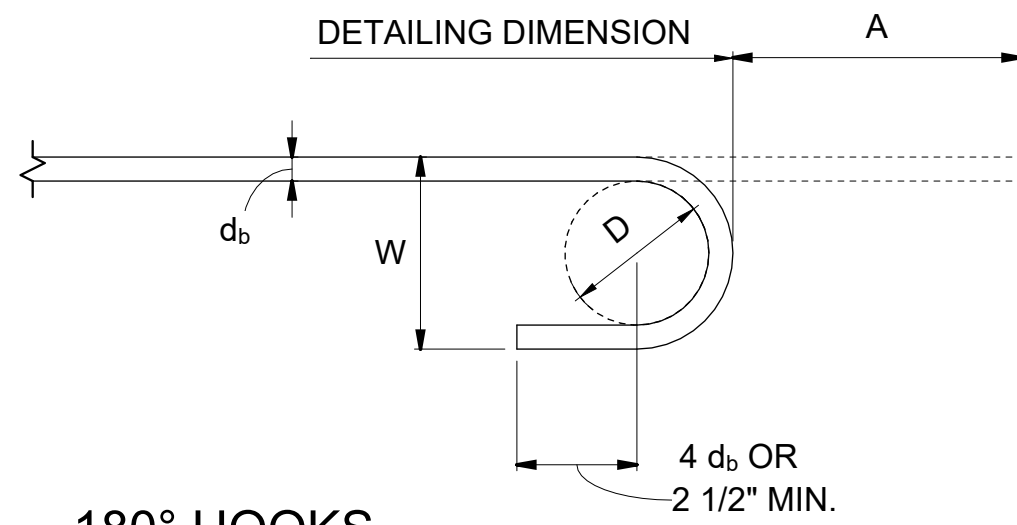
BUILDING SECTIONS

S-303

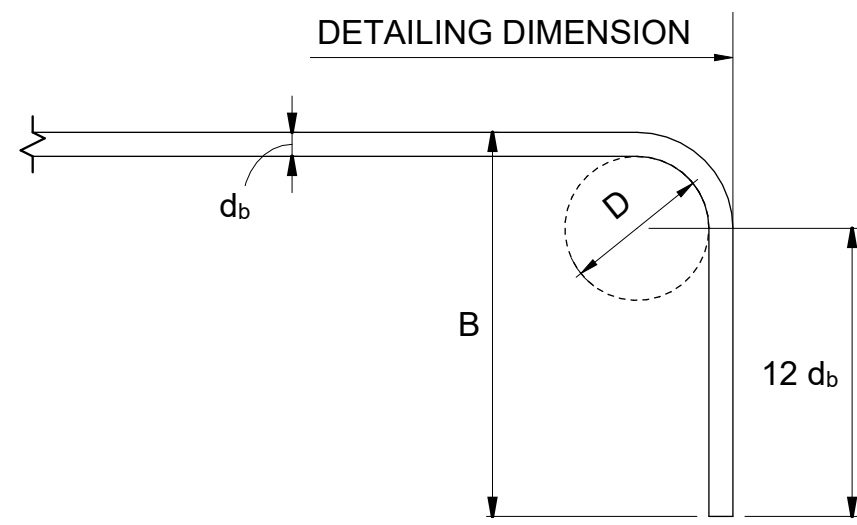
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TYPICAL LAP SPLICE LENGTHS IN INCHES, PER ACI 318									
BAR SIZE	LAP CLASS	f'c = 3,000 psi		f'c = 4,000 psi		f'c = 4,500 psi		f'c = 5,000 psi	
		CAT. 1	CAT. 2	CAT. 1	CAT. 2	CAT. 1	CAT. 2	CAT. 1	CAT. 2
#4	A	22	33	19	28	18	27	17	25
	B	28	43	25	37	24	35	22	33
#5	A	27	41	24	36	23	34	21	32
	B	36	53	31	46	30	44	28	41
#6	A	33	49	28	43	27	41	25	38
	B	43	64	37	55	36	53	33	50
#7	A	48	72	42	62	40	59	37	56
	B	62	93	54	81	51	77	48	72
#8	A	55	82	47	71	45	68	42	64
	B	71	106	61	92	58	88	55	83
#9	A	62	92	53	80	51	76	48	72
	B	80	120	69	104	66	99	62	93
#10	A	70	105	61	91	57	86	54	81
	B	91	136	79	118	74	111	71	106

- NOTES:
- FOR GRADE 60 REINFORCING STEEL BARS.
 - ALL LAP SPLICES SHALL BE CLASS B, UNLESS OTHERWISE NOTED.
 - LENGTH TO BE SELECTED BY CATEGORY OF BARS BEING SPLICED:
 - CATEGORY 1: CLEAR COVER $\geq d_b$ AND CLEAR SPACING $\geq d_b$, AND STIRRUPS OR TIES THROUGHOUT L_d ARE PROVIDED.
 - CATEGORY 1: CLEAR COVER $\geq d_b$ AND CLEAR SPACING $\geq 2d_b$.
 - CATEGORY 2: CLEAR COVER $>< d_b$ OR CLEAR SPACING $< 2d_b$.
 - FOR TOP BARS, MULTIPLY LAP LENGTH LISTED BY 1.30. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
 - FOR EPOXY COATED BARS, LAP LENGTHS SHALL BE MULTIPLIED BY 1.20.



180° HOOKS

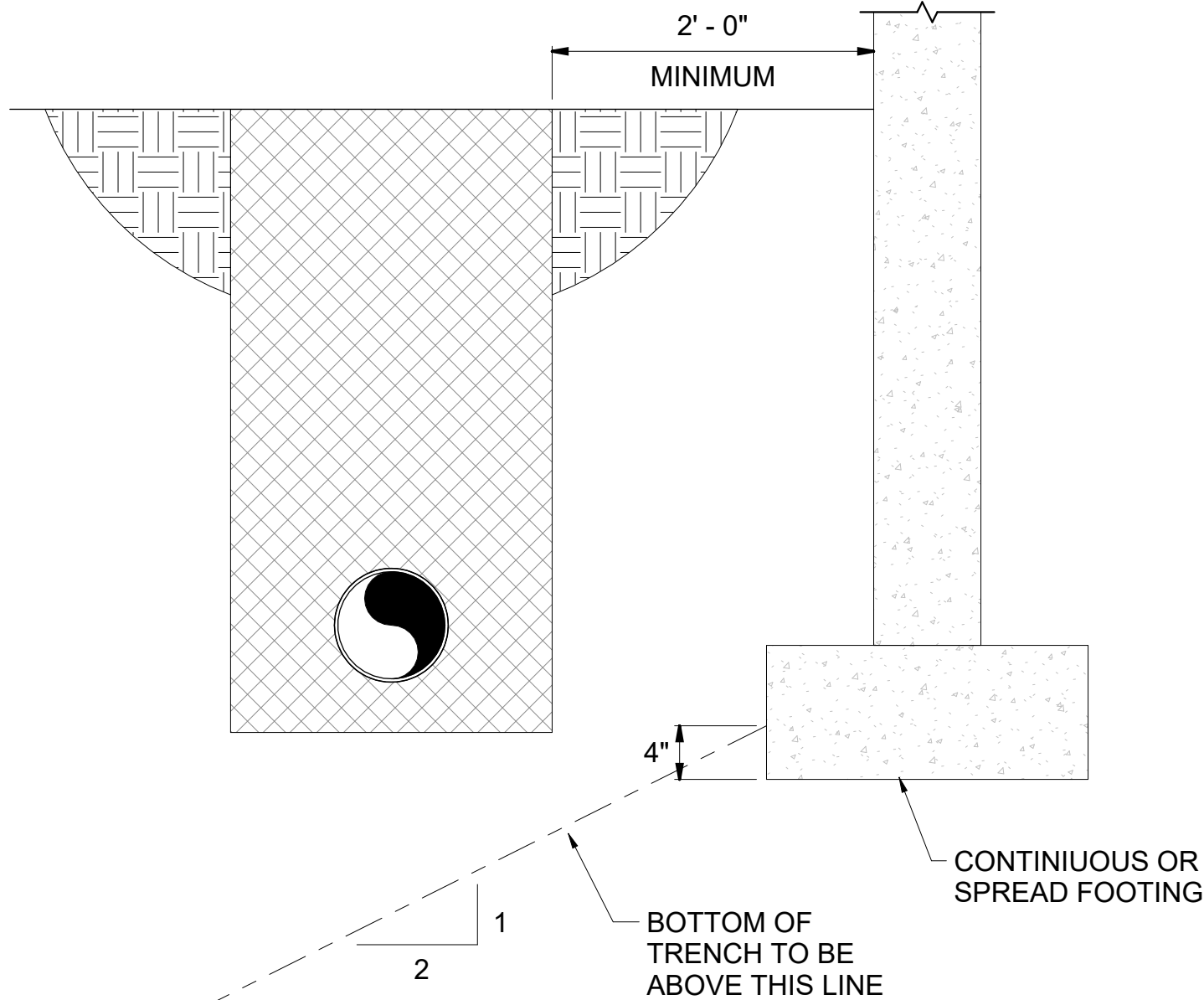


90° HOOKS

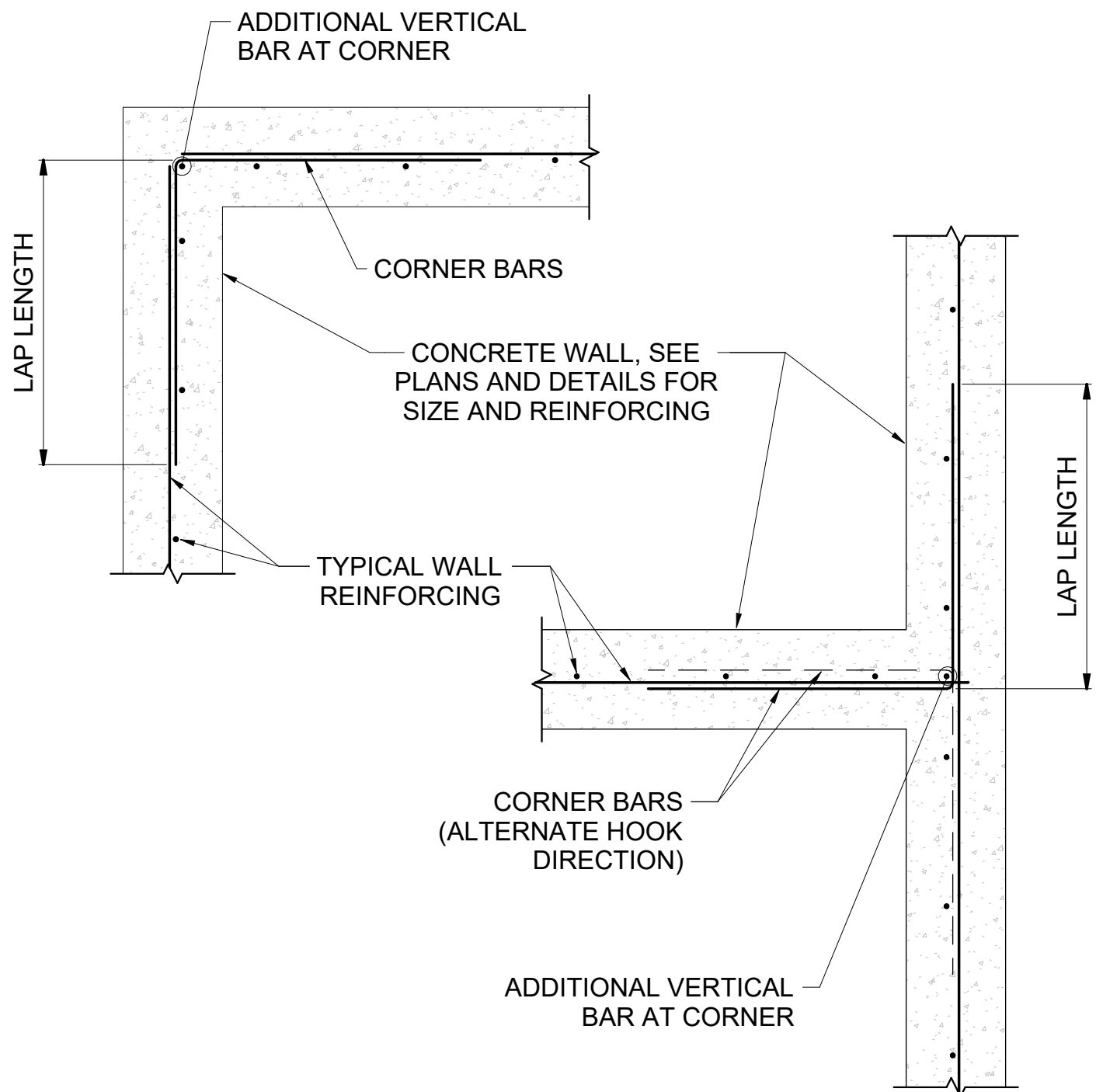
TYPICAL HOOK DIMENSIONS

BAR SIZE	D	180° HOOKS		90° HOOKS
		A	W	
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	12"
#7	5 1/4"	10"	7"	14"
#8	6"	11"	8"	16"
#9	9 1/2"	15"	11 3/4"	19"
#10	10 3/4"	17"	13 1/4"	22"
#11	12"	19"	14 3/4"	24"

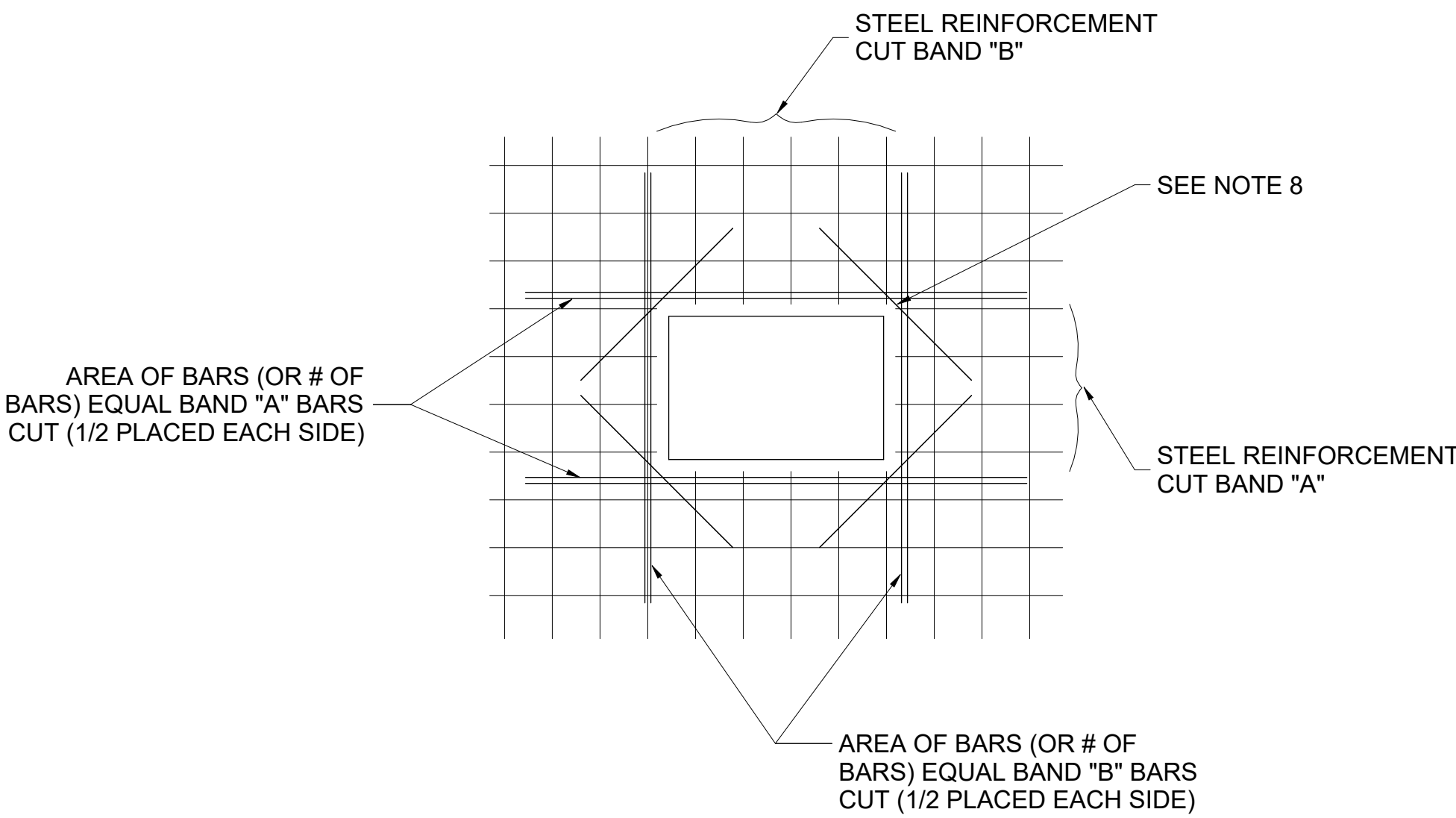
- NOTES:
- d_b = NOMINAL BAR DIAMETER
 - D = FINISHED INSIDE BEND DIAMETER
 - MINIMUM D = $6d_b$ FOR #3 TO #8 BARS.
 - MINIMUM D = $8d_b$ FOR #9 TO #11 BARS.
 - MINIMUM D = $10d_b$ FOR #14 TO #18 BARS.



3 Pipe Parallel to Footing

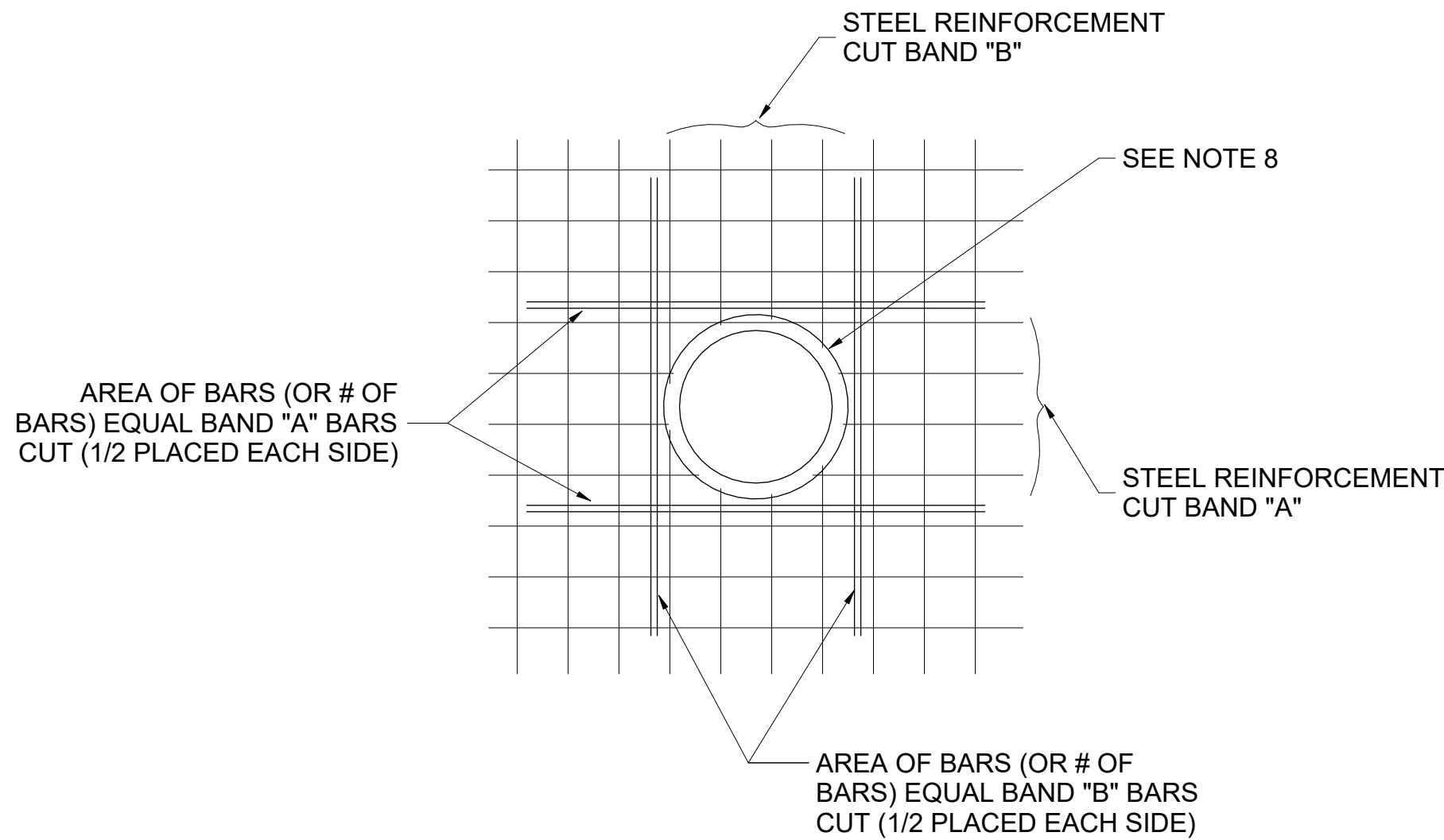


4 Corner Reinforcement for Concrete Walls - Single Mat



- NOTES:
- TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.
 - COORDINATE PLACEMENT OF ALL PIPING AND REINFORCING STEEL SO THAT NO CONTACT EXISTS BETWEEN TWO METALS.
 - DO NOT WELD REINFORCEMENT TO PIPE SLEEVES, INSERTS OR EMBEDMENTS.
 - PROVIDE A MINIMUM OF TWO (2) "A" BARS AND TWO (2) "B" BARS EACH SIDE OF OPENING (ONE EACH FACE).
 - SPACE BARS AT 3 BAR DIAMETERS (OR 3" MIN.) ON CENTER.
 - IF OPENING REINFORCING TERMINATES AT THE EDGE OF THE SLAB PROVIDE A STANDARD HOOK ON THE "EDGE" SIDE OF THE REINFORCING.
 - CONTINUE SPLICE REINFORCEMENT THROUGH ON SPAN LENGTH PLUS REQUIRED EMBEDMENT LENGTH.
 - PROVIDE DIAGONAL BARS ACCORDING TO THE FOLLOWING:
 - OPENINGS UP TO 30" WIDE: (1) #5 x 4'-0" AT EACH CORNER, EACH FACE.
 - OPENINGS GREATER THAN 30" WIDE: (1) #5 x 6'-0" AT EACH CORNER, EACH FACE.

5 Typical Opening Reinforcement - Rectangular



- NOTES:
- TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.
 - COORDINATE PLACEMENT OF ALL PIPING AND REINFORCING STEEL SO THAT NO CONTACT EXISTS BETWEEN TWO METALS.
 - DO NOT WELD REINFORCEMENT TO PIPE SLEEVES, INSERTS OR EMBEDMENTS.
 - PROVIDE A MINIMUM OF TWO (2) "A" BARS AND TWO (2) "B" BARS EACH SIDE OF OPENING (ONE EACH FACE).
 - SPACE BARS AT 3 BAR DIAMETERS (OR 3" MIN.) ON CENTER.
 - IF OPENING REINFORCING TERMINATES AT THE EDGE OF THE SLAB PROVIDE A STANDARD HOOK ON THE "EDGE" SIDE OF THE REINFORCING.
 - CONTINUE SPLICE REINFORCEMENT THROUGH ON SPAN LENGTH PLUS REQUIRED EMBEDMENT LENGTH.
 - PROVIDE HOOP BARS ACCORDING TO THE FOLLOWING:
 - OPENINGS UP TO 30" DIAMETER: (1) #4 BAR, DIAMETER OF OPENING + 8" WITH 12" LAP, EACH FACE.
 - OPENINGS GREATER THAN 30" DIAMETER: (1) #5 BAR, DIAMETER OF OPENING + 8" WITH 18" LAP, EACH FACE.
 - AT CIRCULAR OPENING PIPE PENETRATIONS, CONTRACTOR SHALL CAST PIPE IN SEEP RING.

6 Typical Opening Reinforcement - Circular



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KANSAS CITY, MO 64108



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KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI

GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK DATE DESCRIPTION

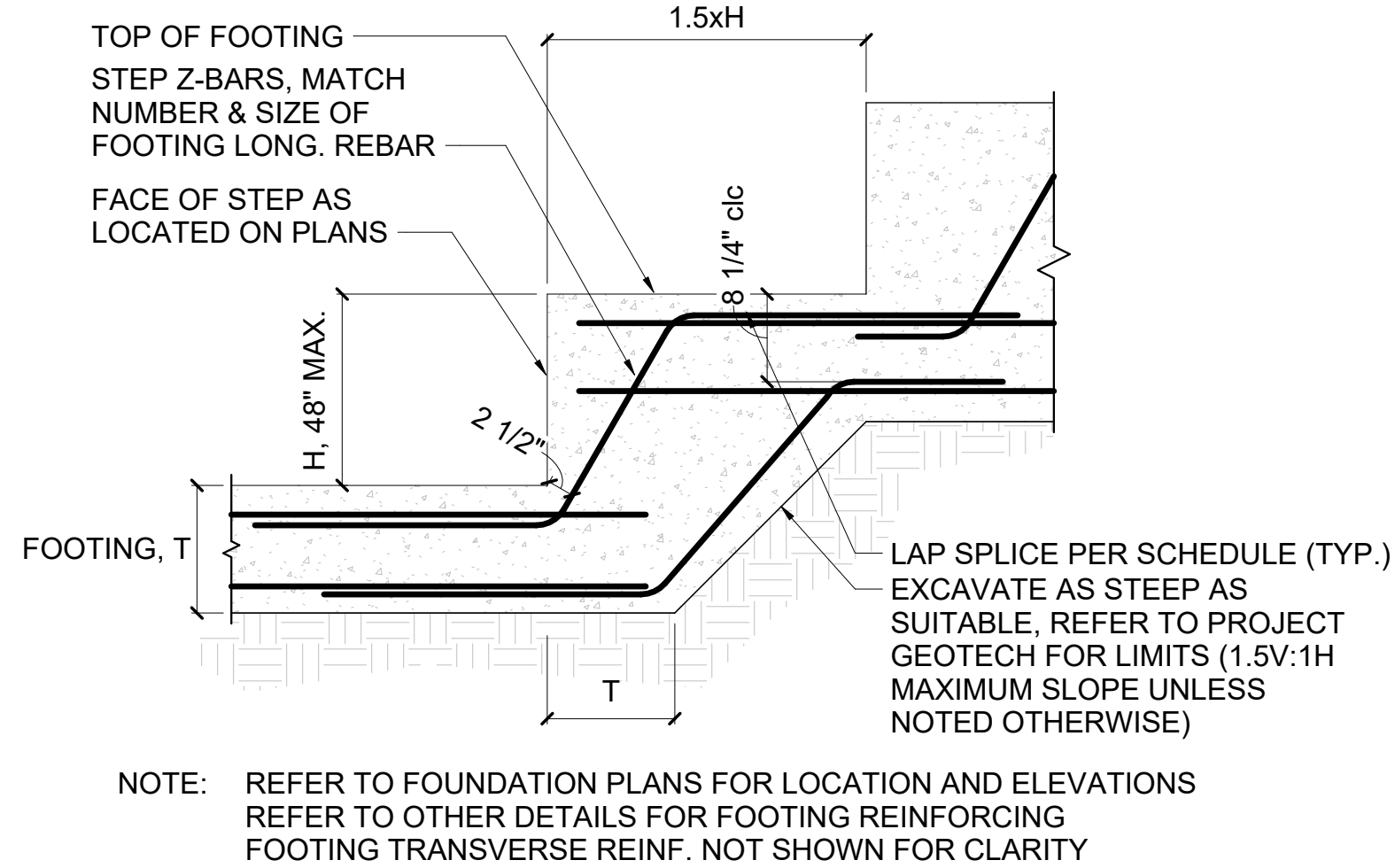
PROJECT NO: 24KC50013
CAD DWG FILE: Lee's Summit - Hangar 2.rvt
DESIGNED BY: JDH & BLL
DRAWN BY: JDH
CHECKED BY: BLL
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SHEET TITLE

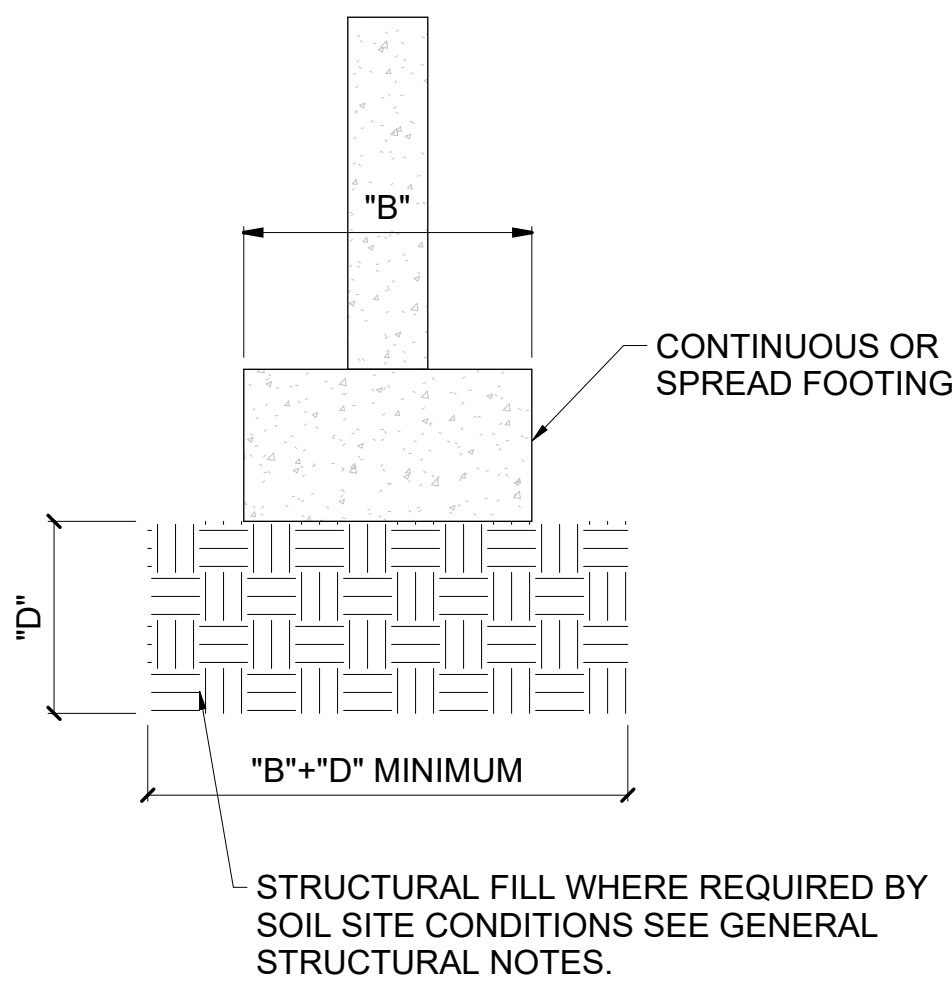
STANDARD DETAILS

S-401

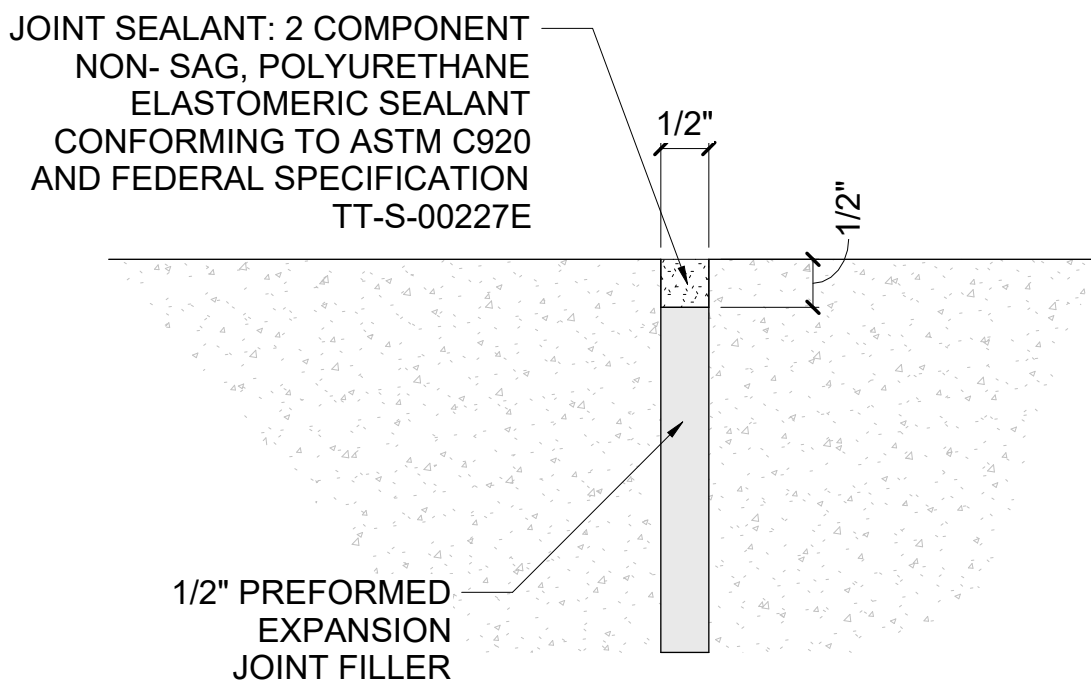
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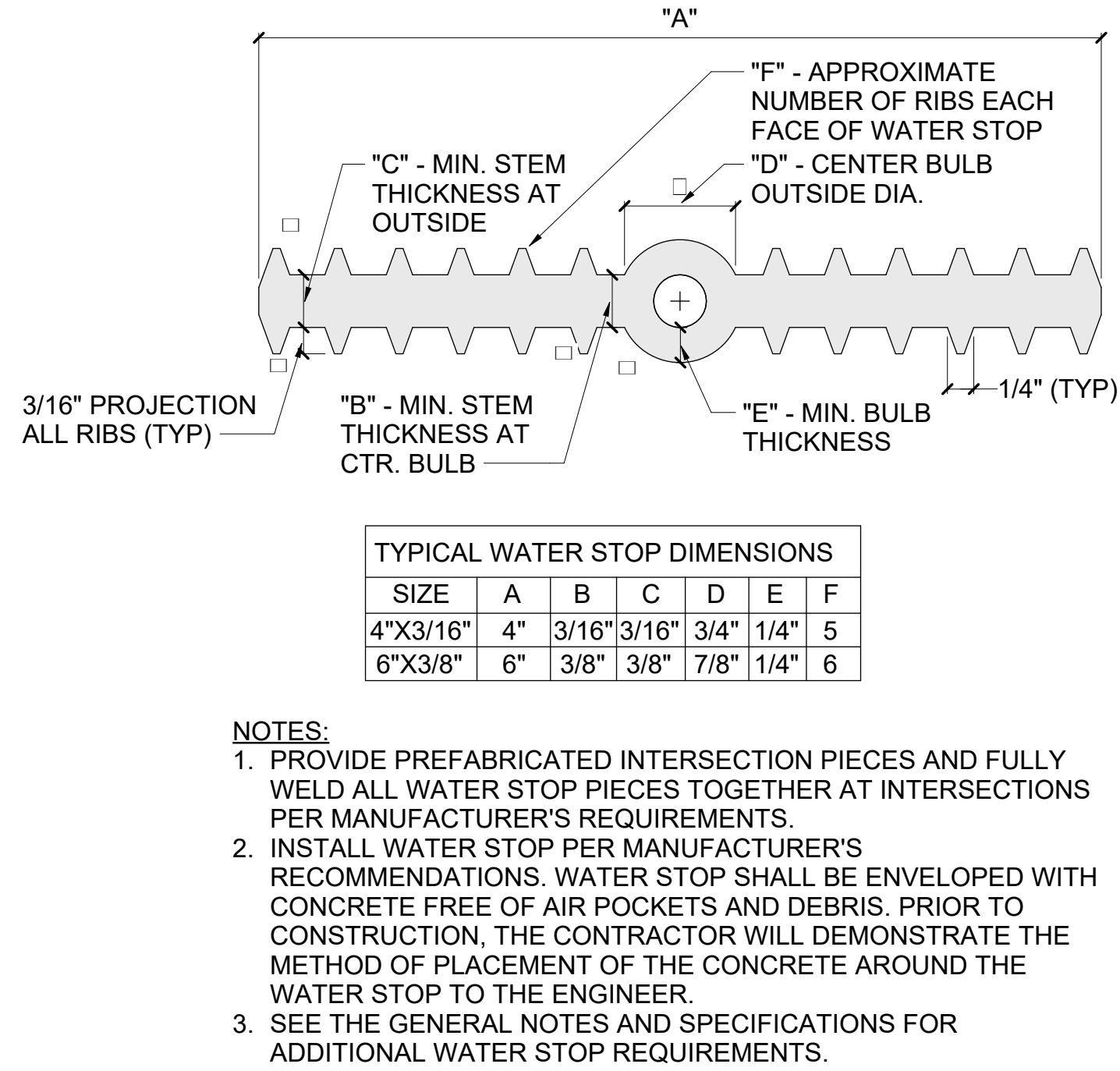
1 Typical Stepped Footing



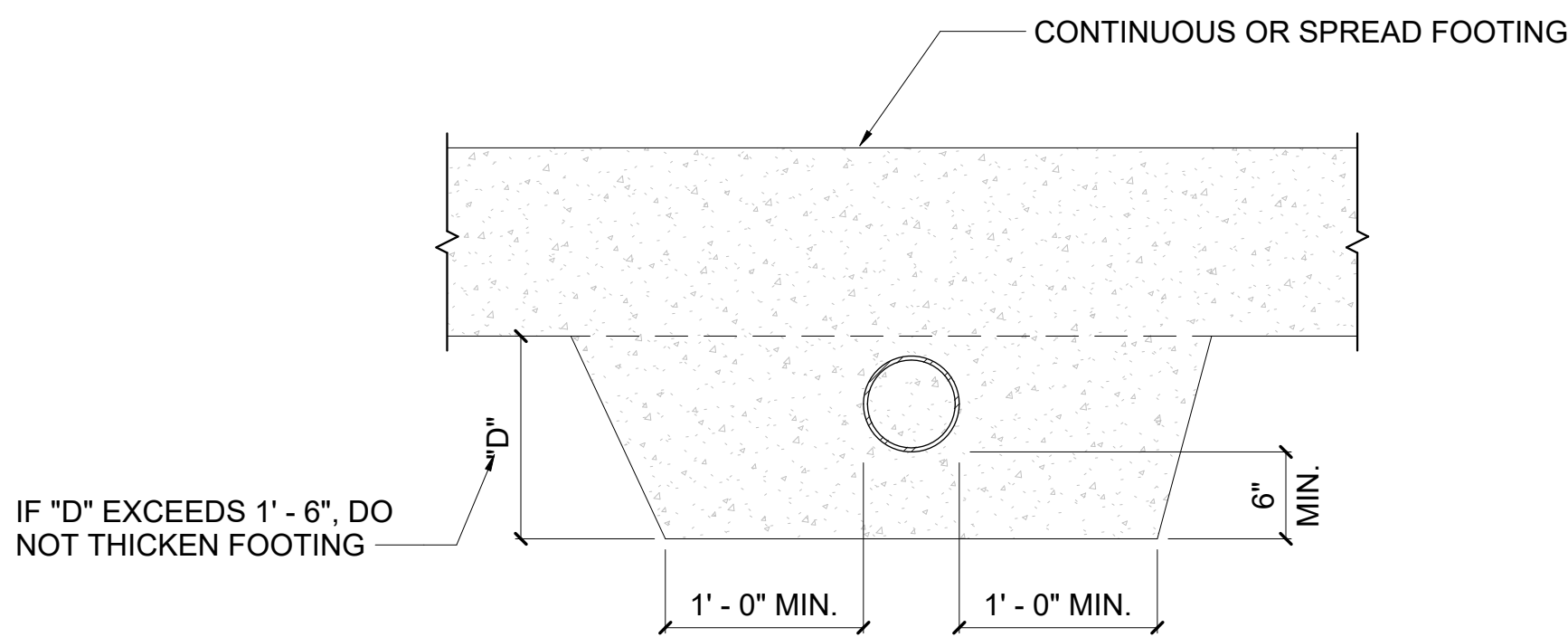
2 Structural Fill



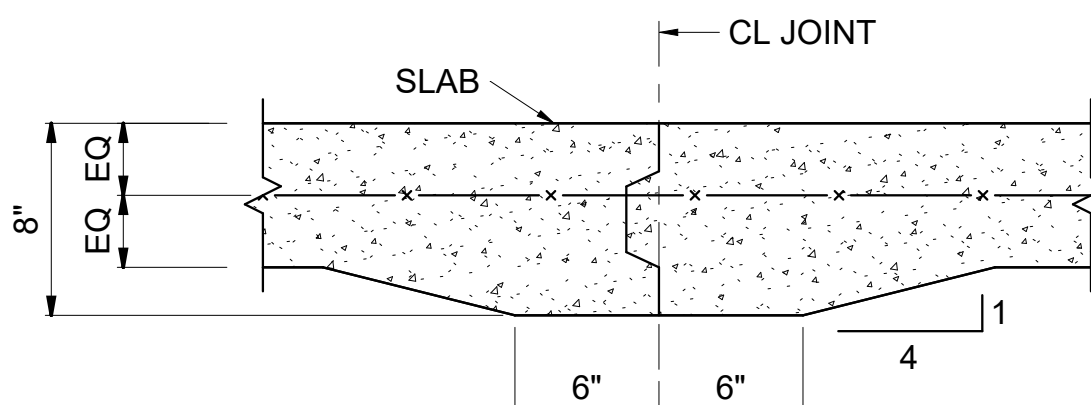
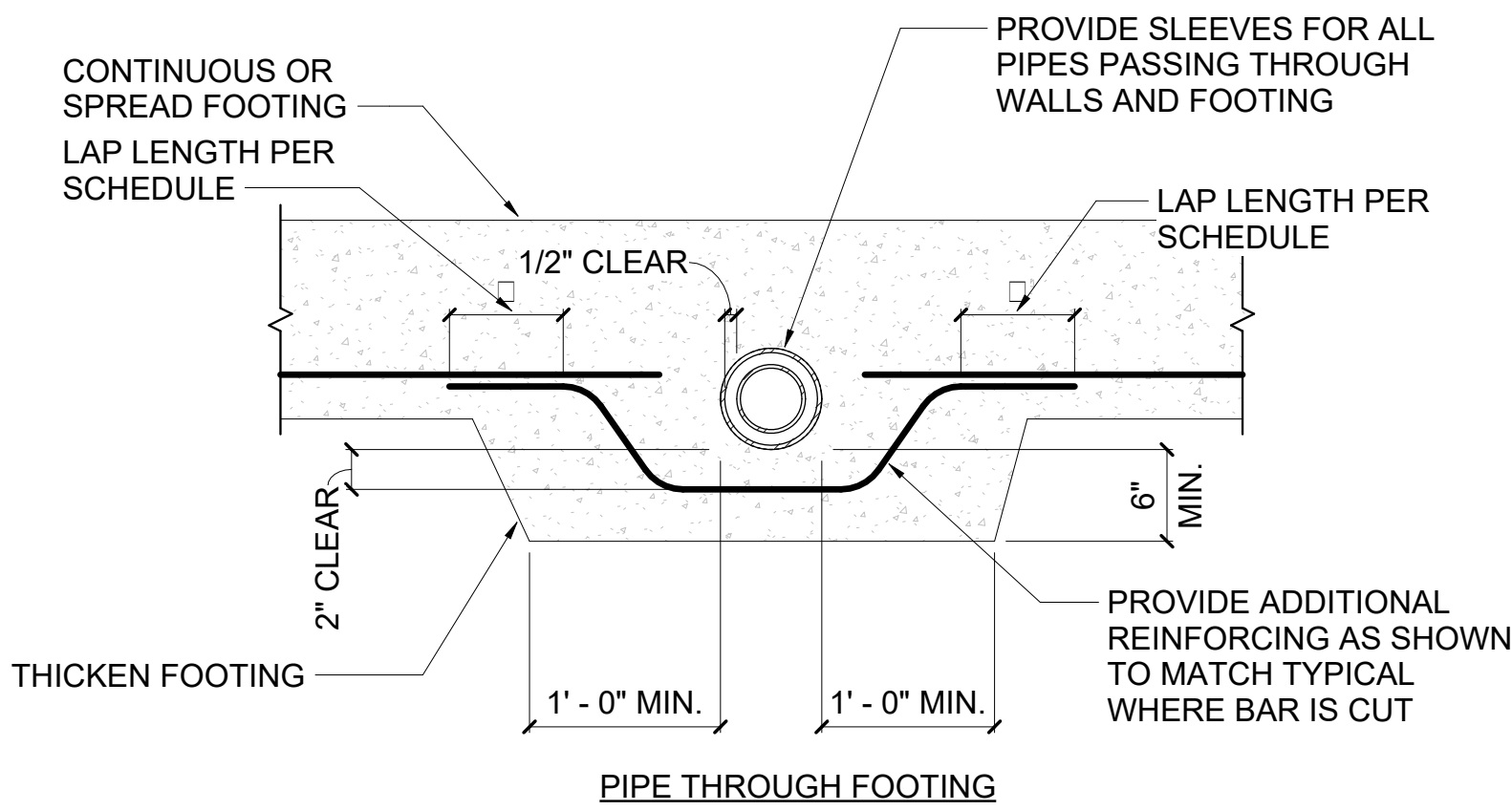
3 Expansion Joint Sealant



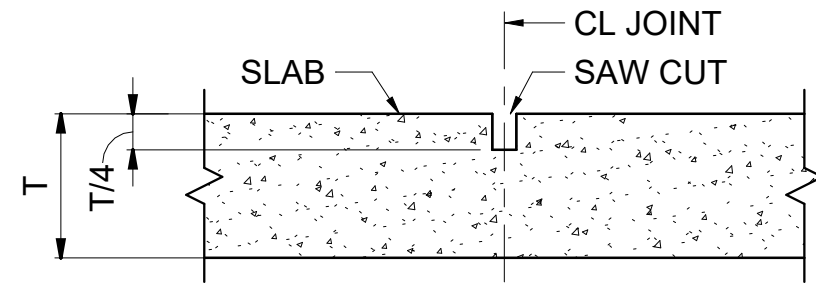
4 PVC Water Stop



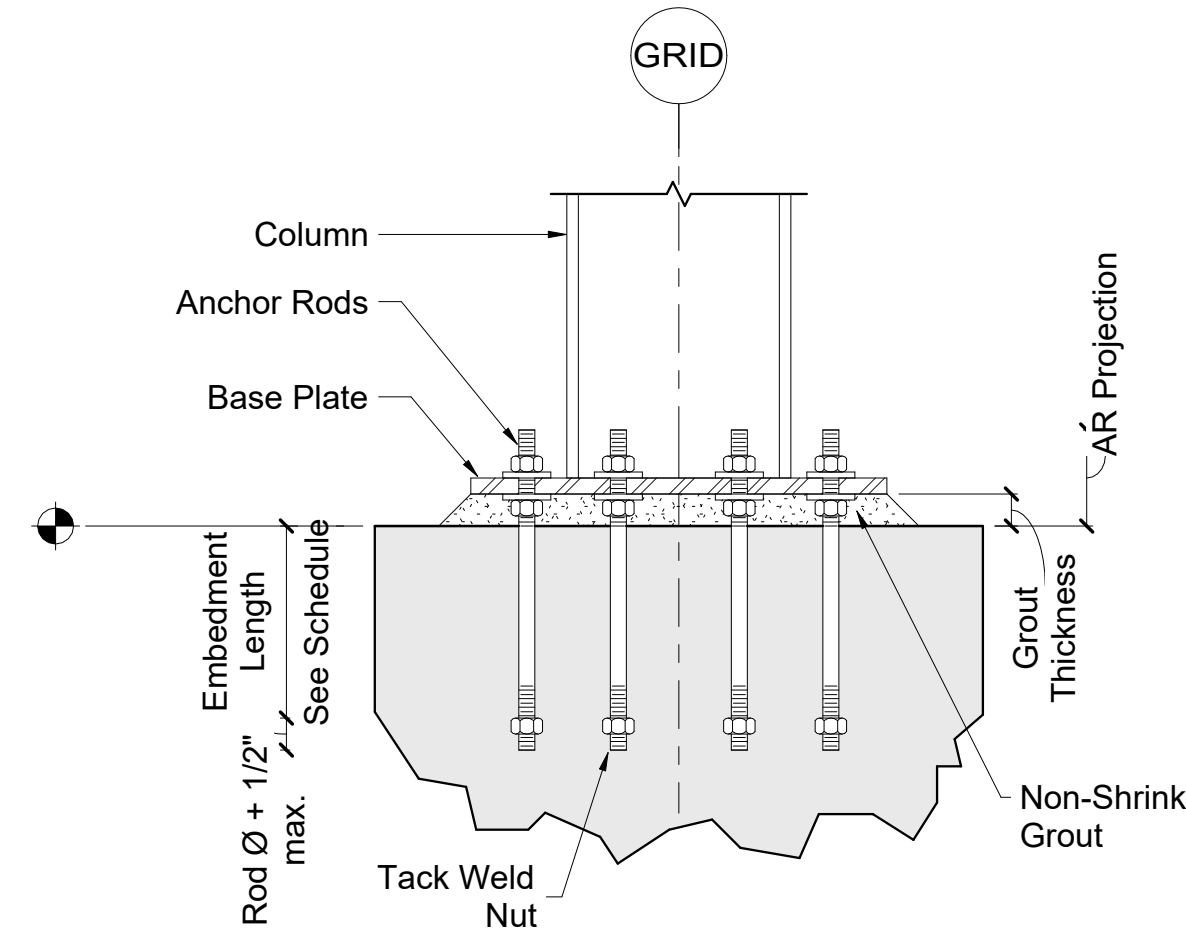
5 Pipe Perpendicular to Footing



6 Typical Construction Joint
1 1/2" = 1'-0"



7 Typical Contraction Joint
1 1/2" = 1'-0"



8 Anchor Rod Detail
1" = 1'-0"



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LEES SUMMIT, MO

MARK DATE DESCRIPTION

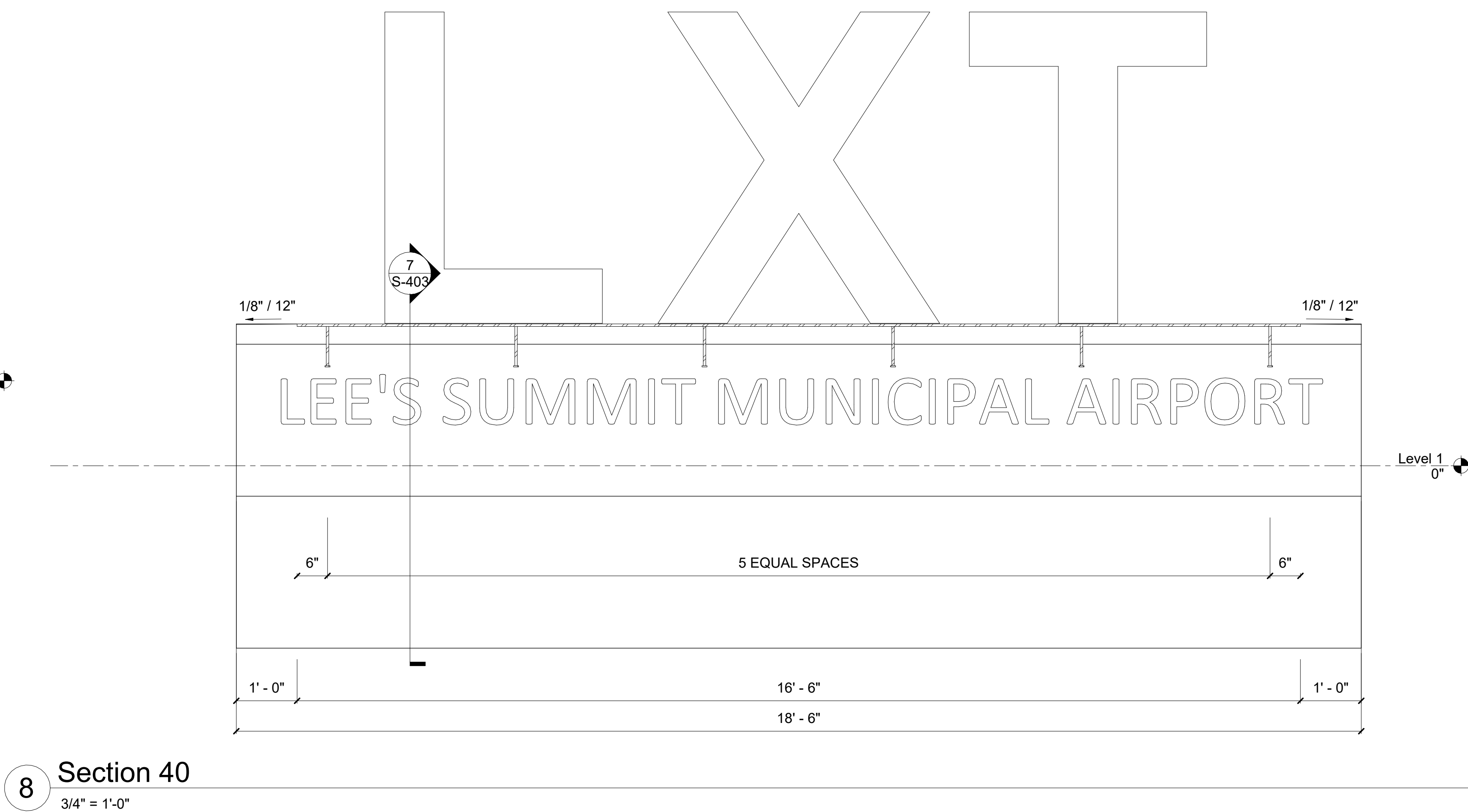
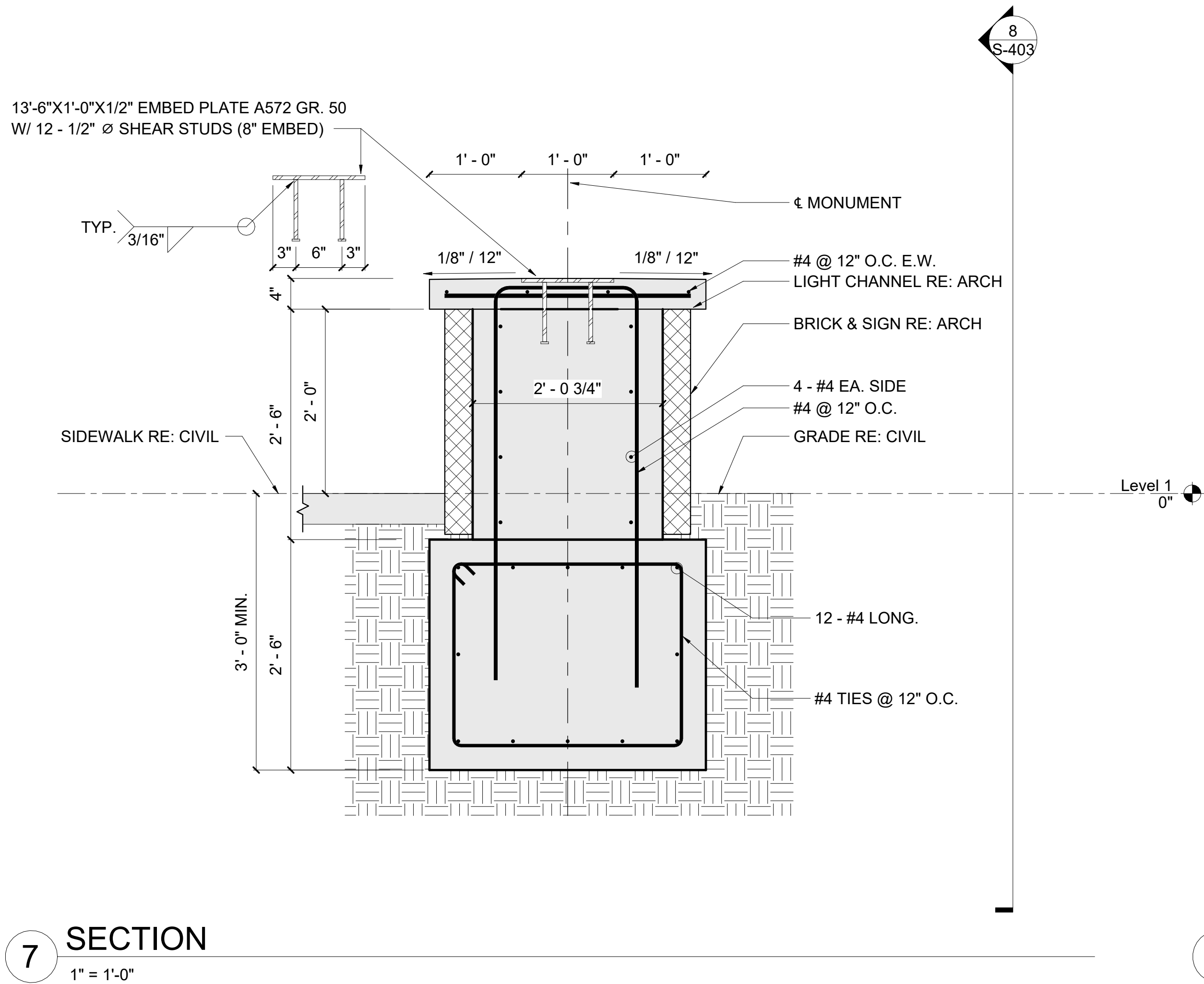
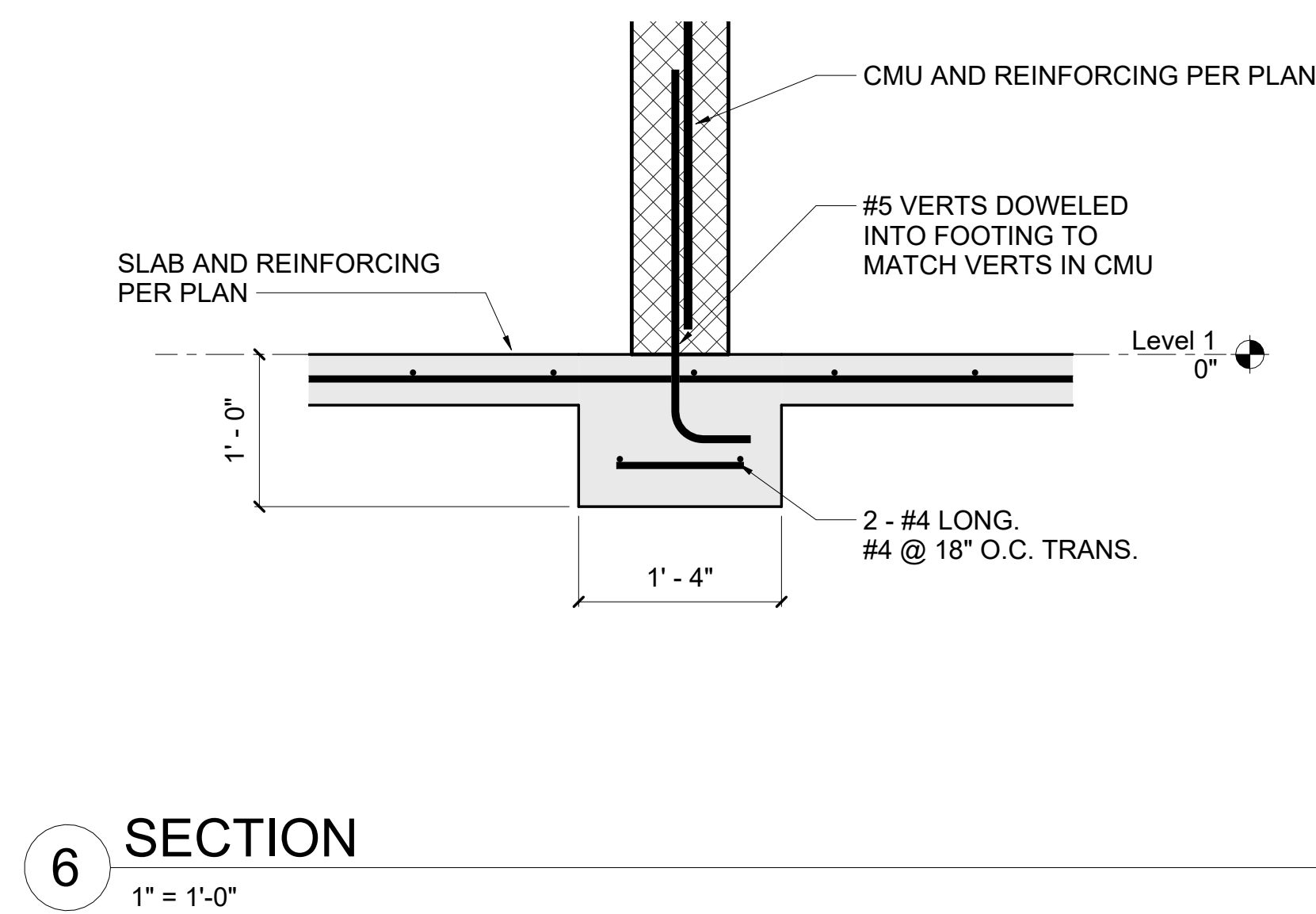
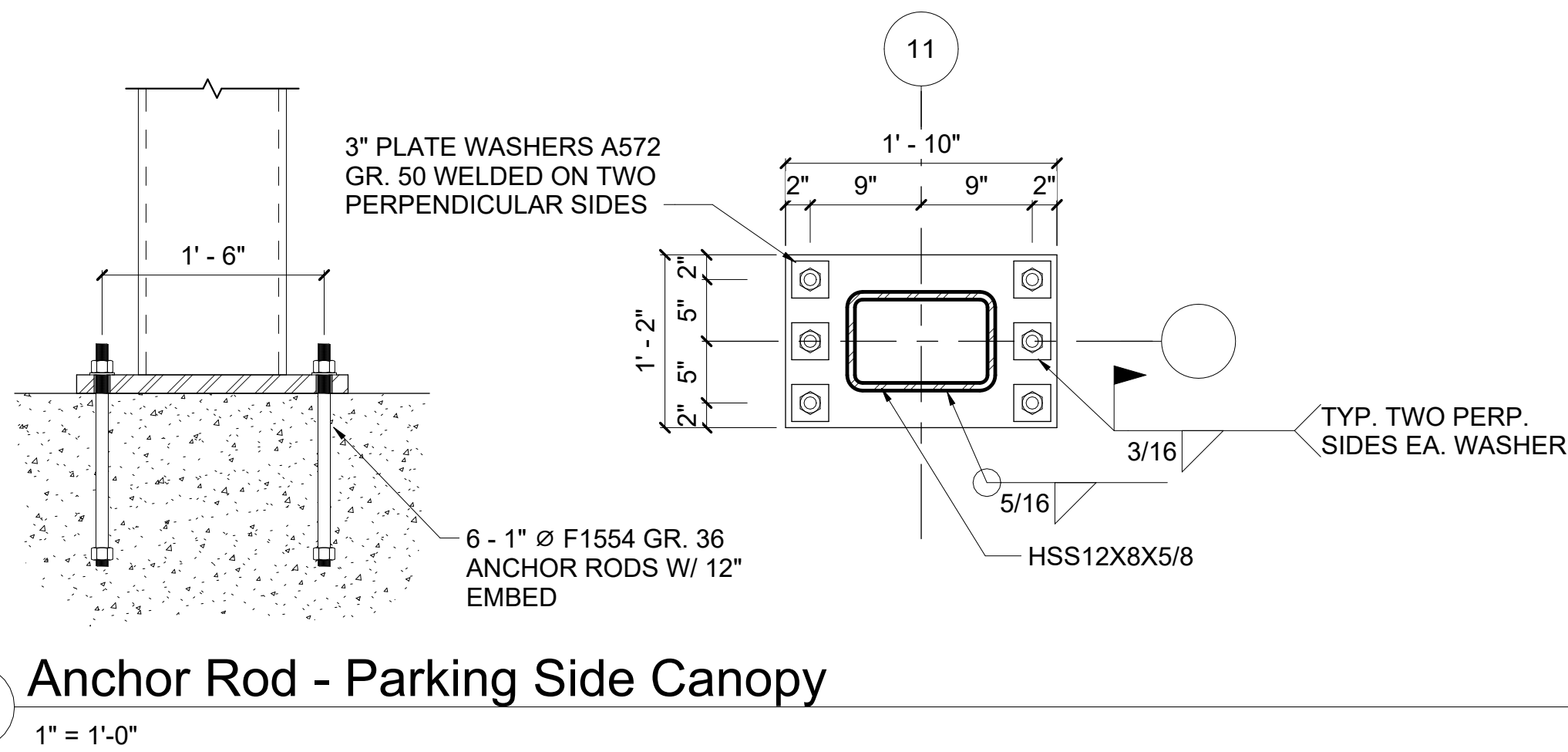
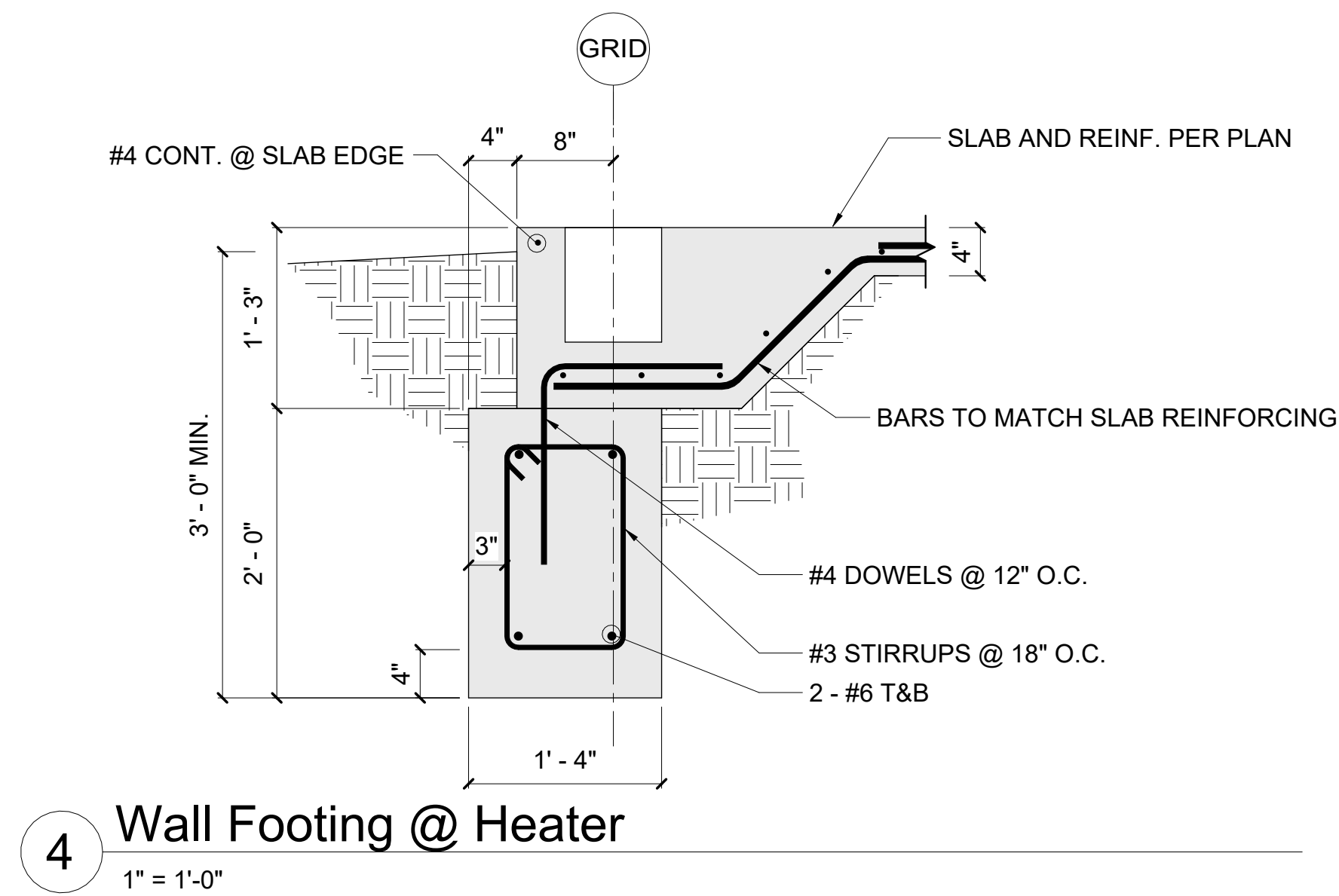
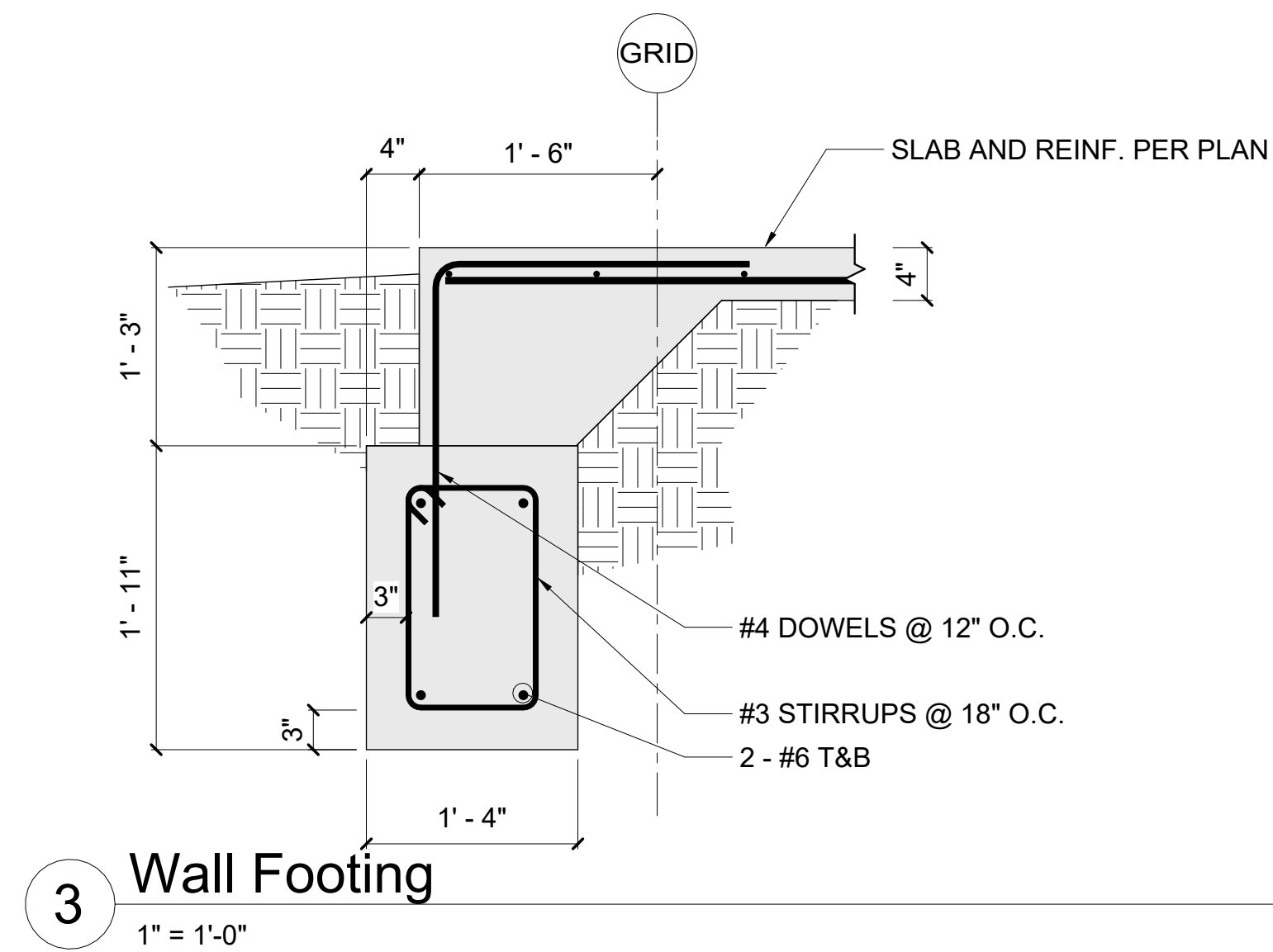
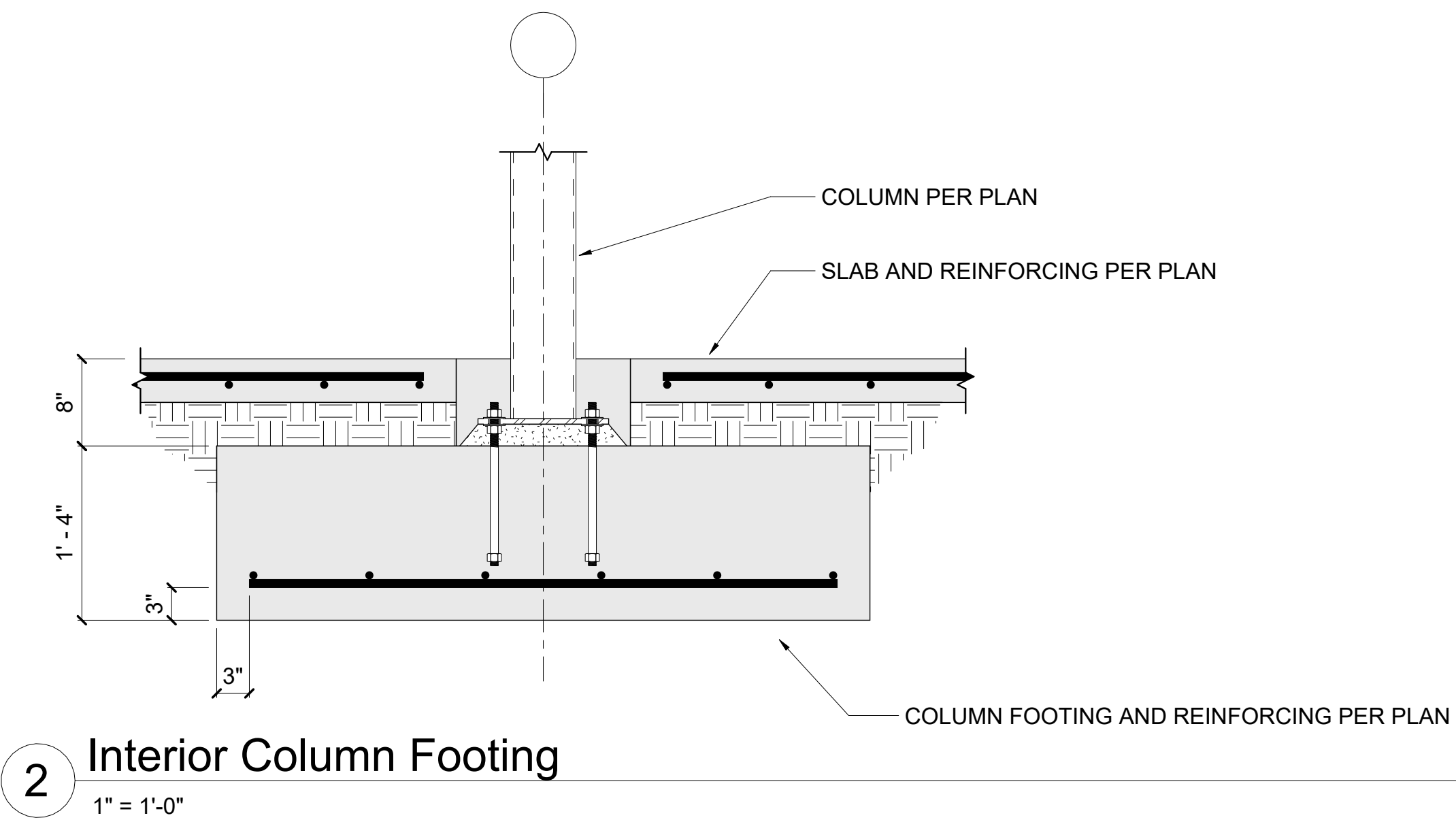
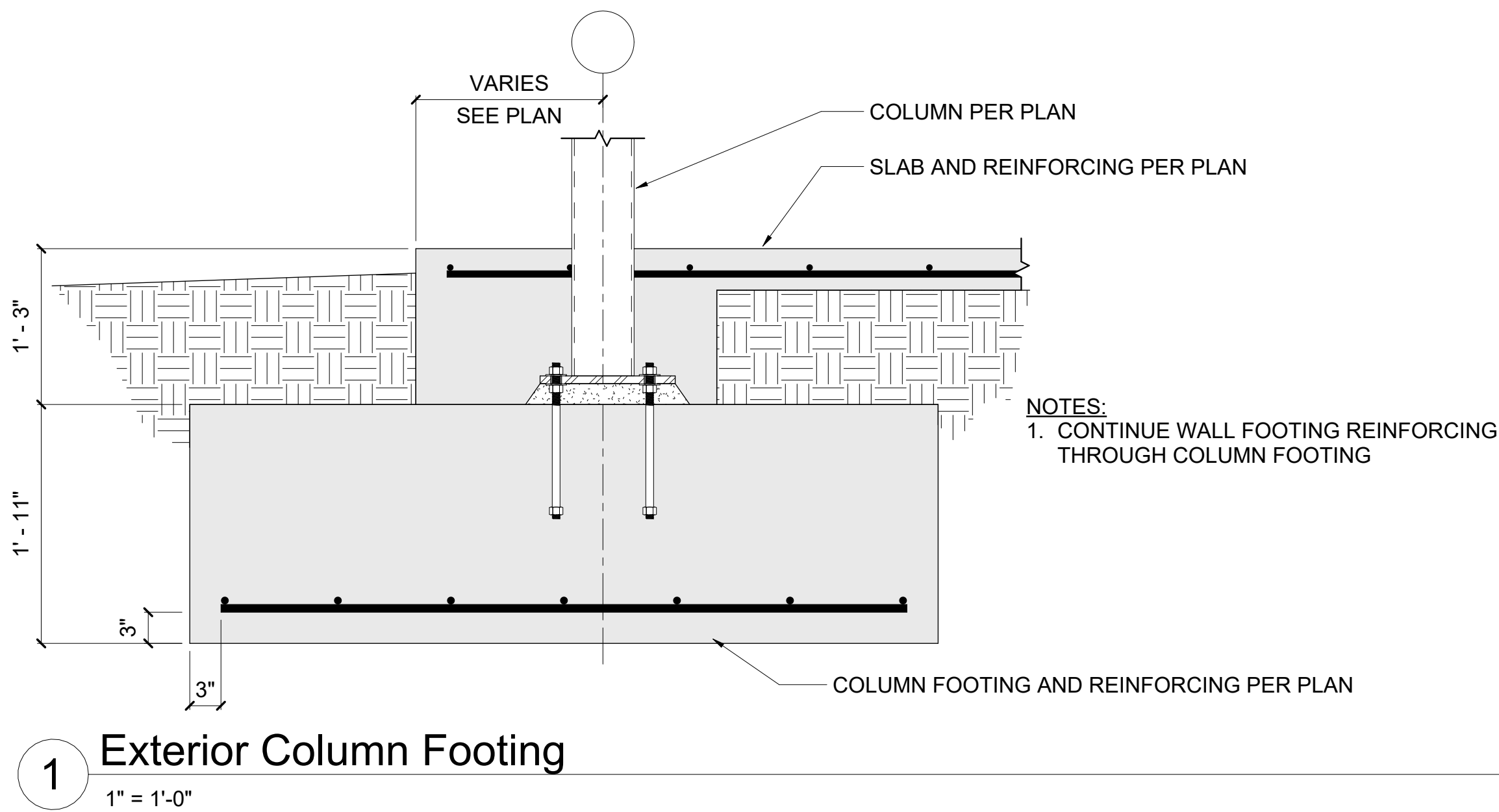
PROJECT NO: 24KC50013
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SHEET TITLE

STANDARD DETAILS

S-402

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GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



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LEES SUMMIT, MO

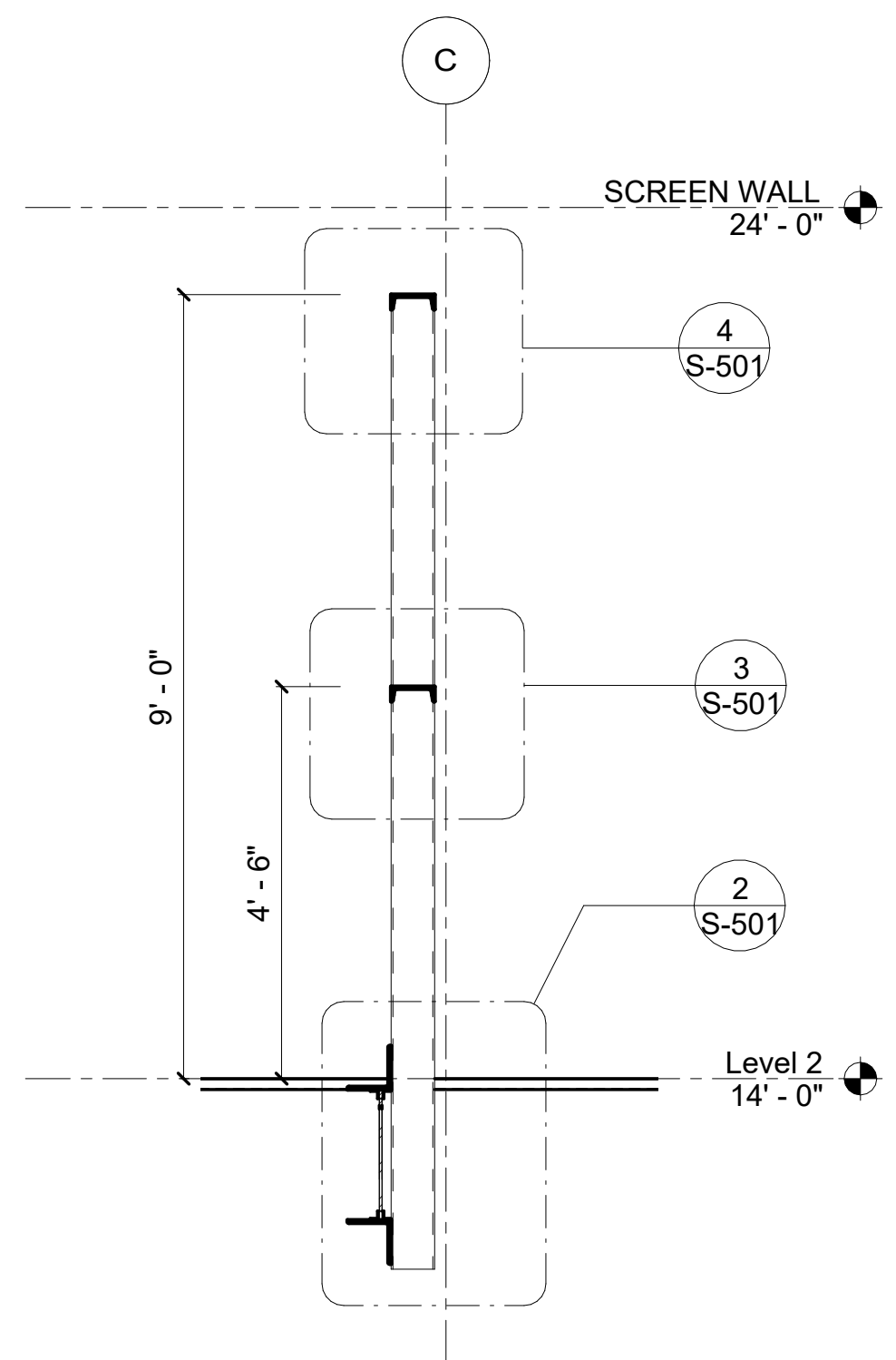
MARK DATE DESCRIPTION

PROJECT NO: 24KC50013
CAD DWG FILE: Lee's Summit - Hangar 2.rvt
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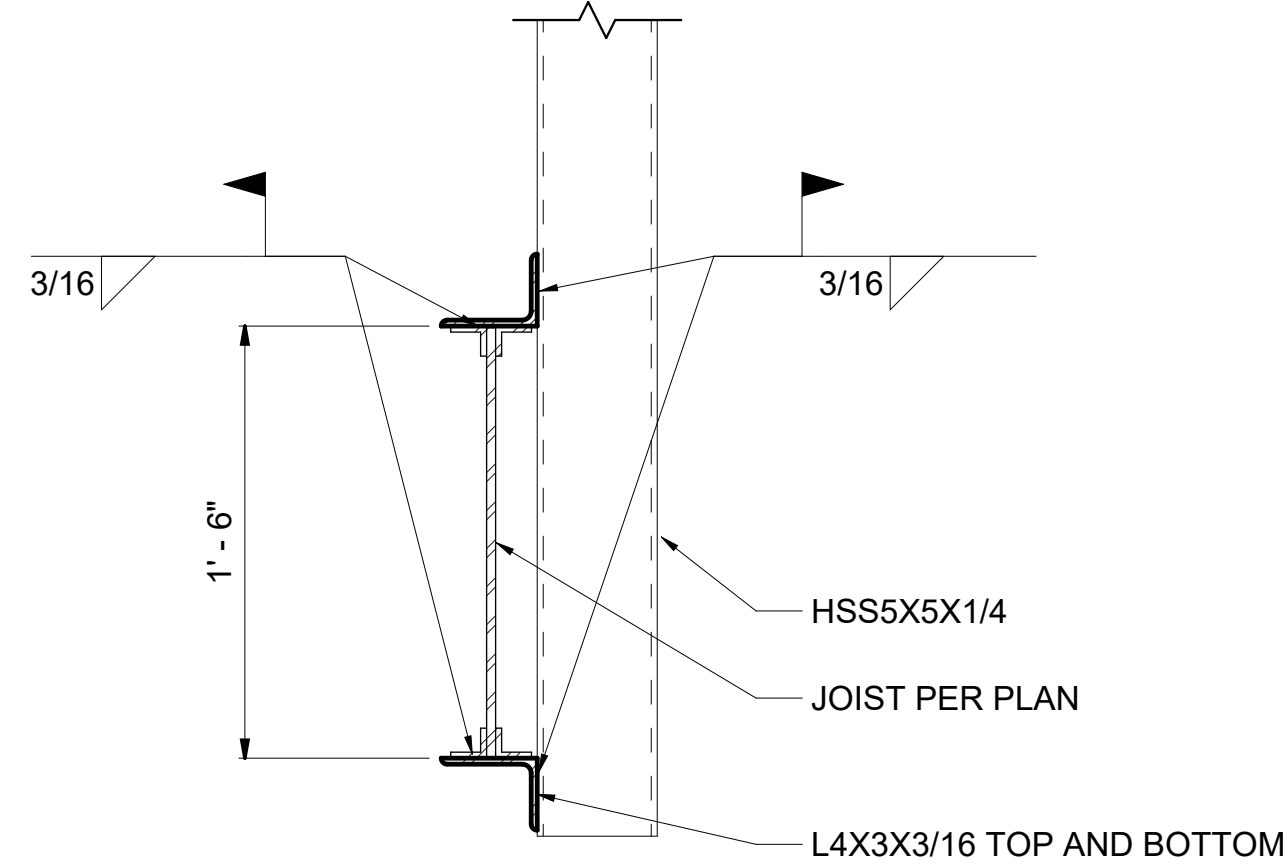
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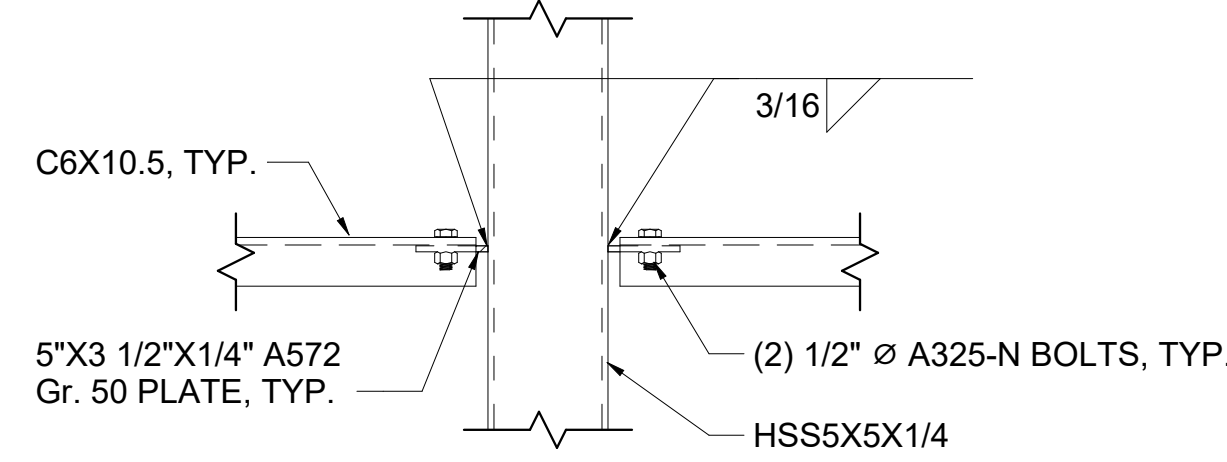
S-403



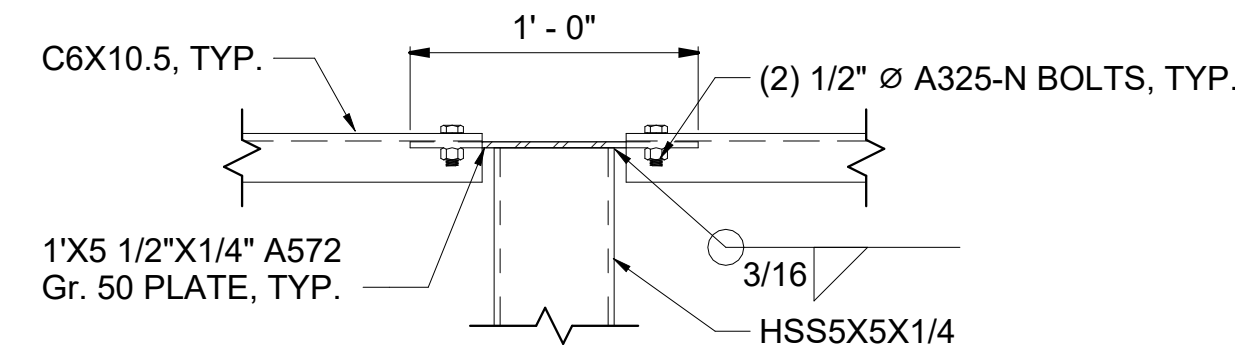
1 SECTION
1/2" = 1'-0"



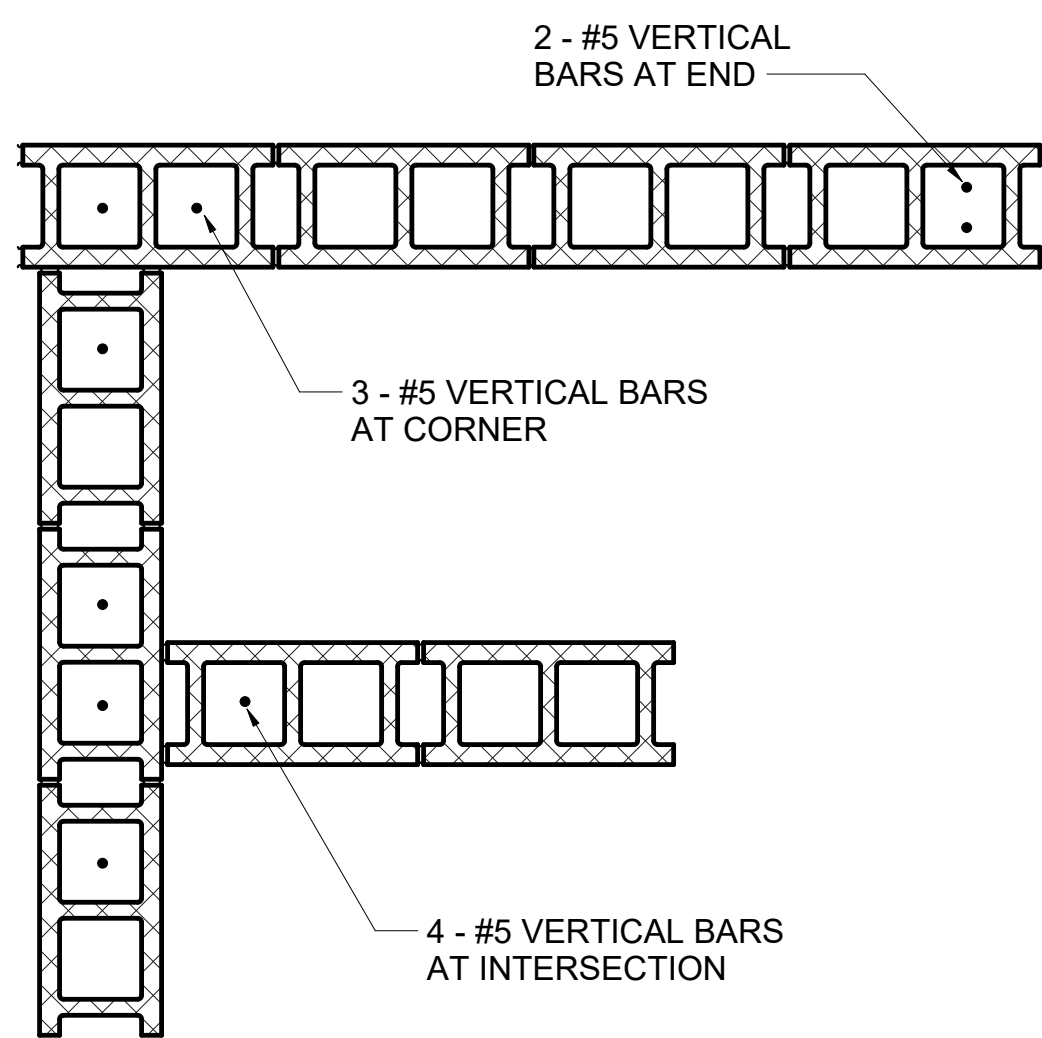
2 Screenwall Support - Joist Connection
1 1/2" = 1'-0"



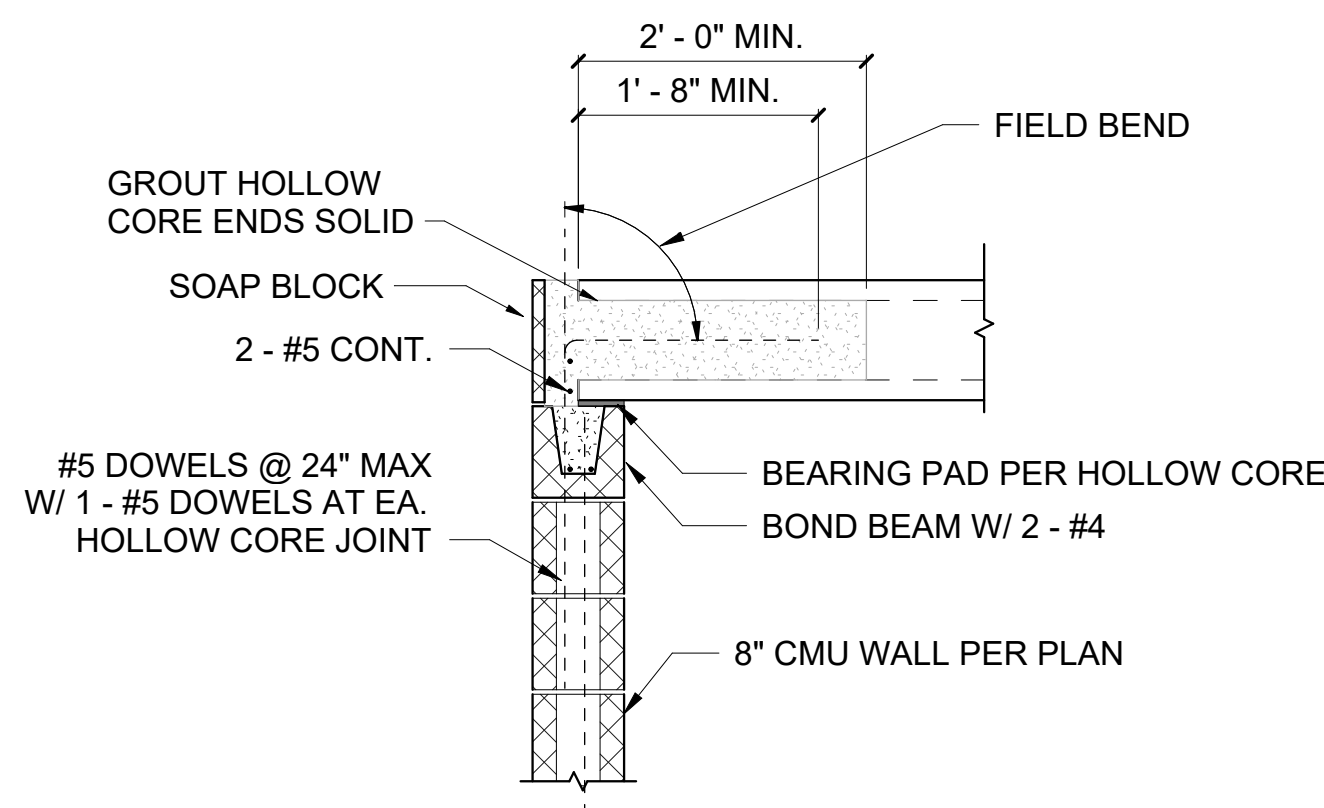
3 Screenwall Support - Mid Connection
1 1/2" = 1'-0"



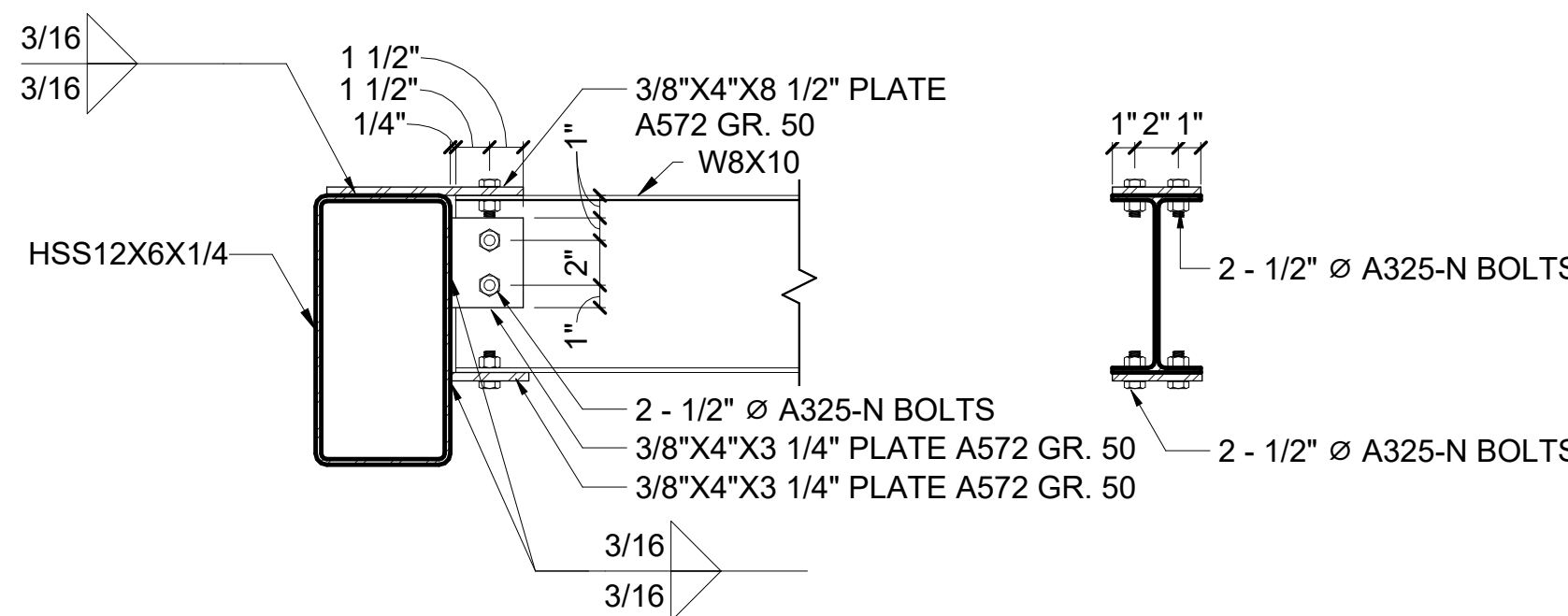
4 Screenwall Support - Top Connection
1 1/2" = 1'-0"



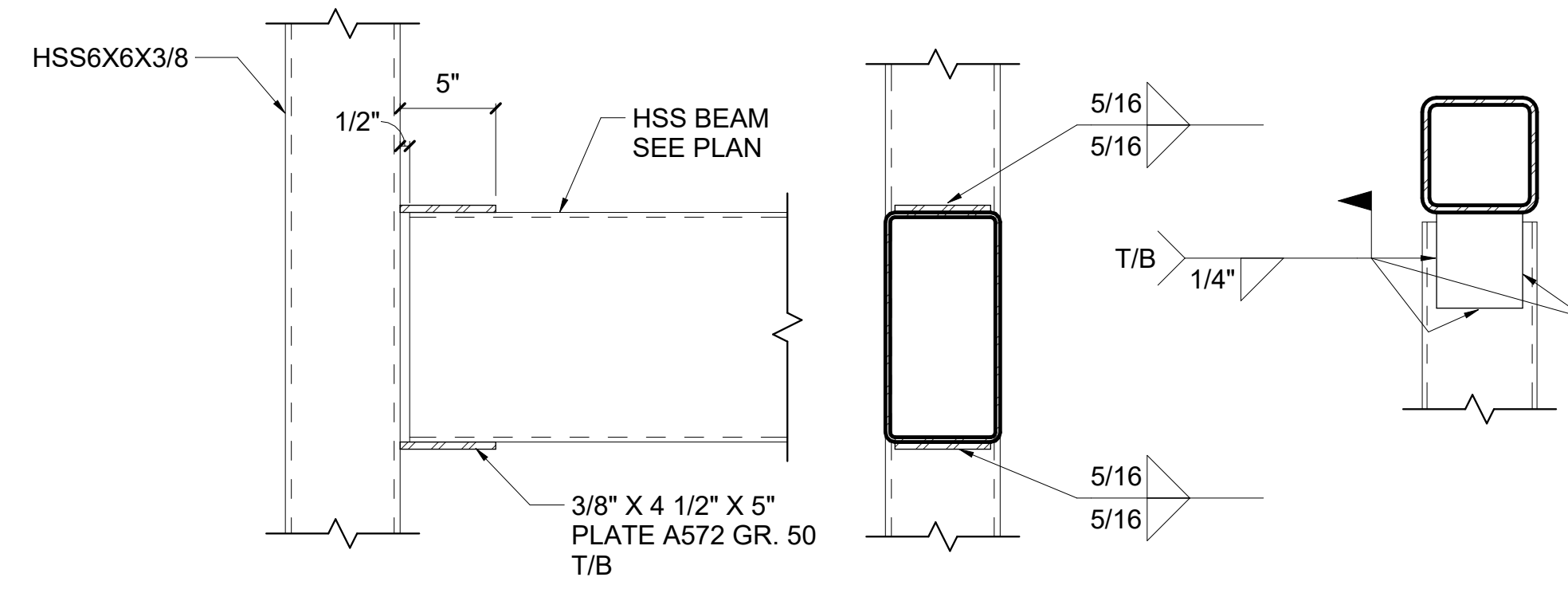
5 CMU VERTICAL BARS
1" = 1'-0"



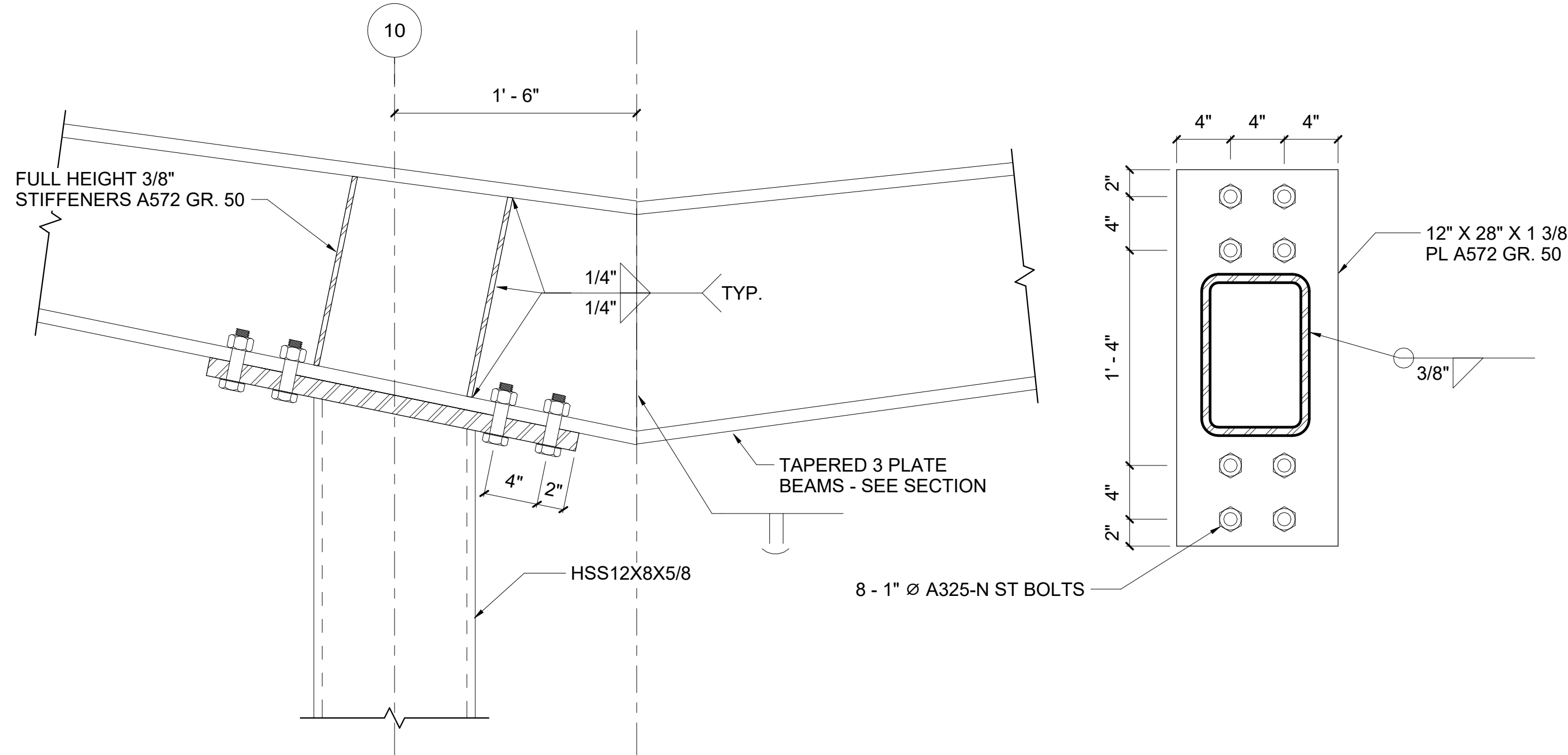
6 TYPICAL HOLLOW CORE BEARING AT CMU
3/4" = 1'-0"



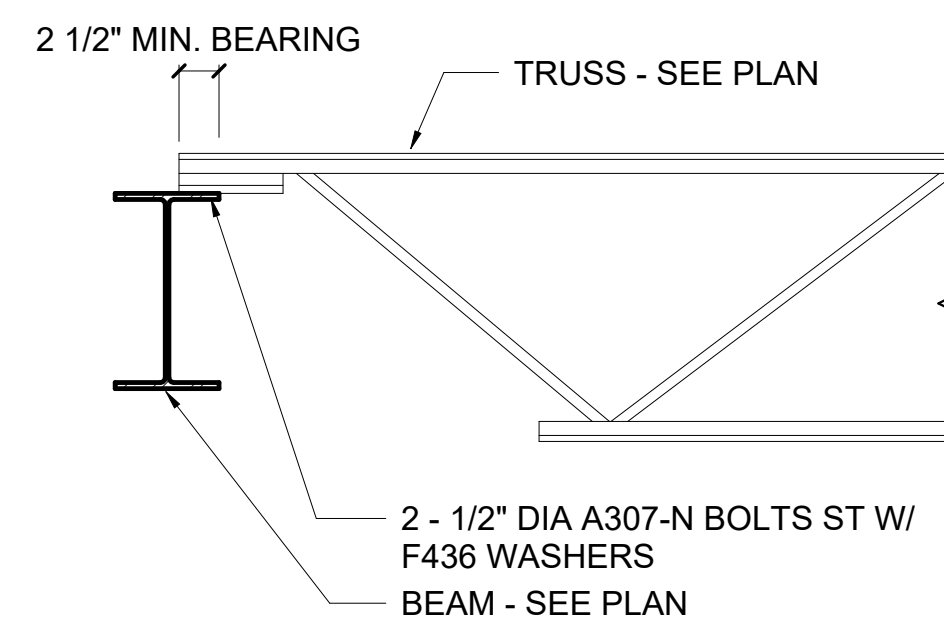
7 DETAIL
1 1/2" = 1'-0"



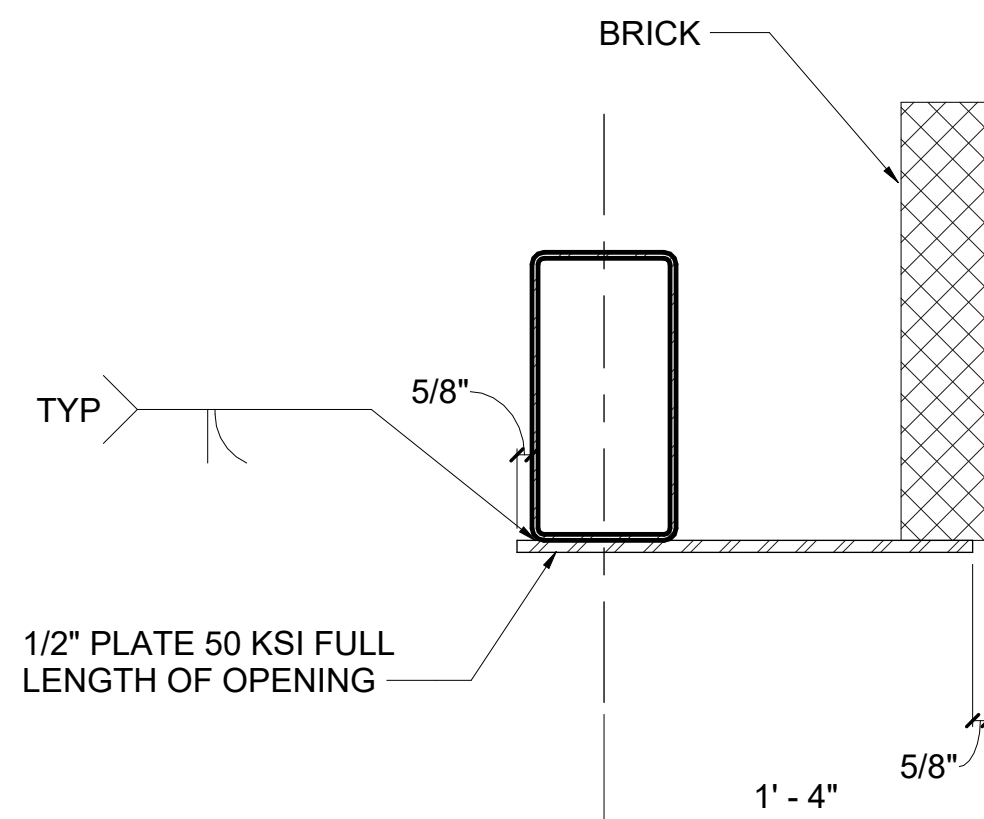
8 DETAIL
1 1/2" = 1'-0"



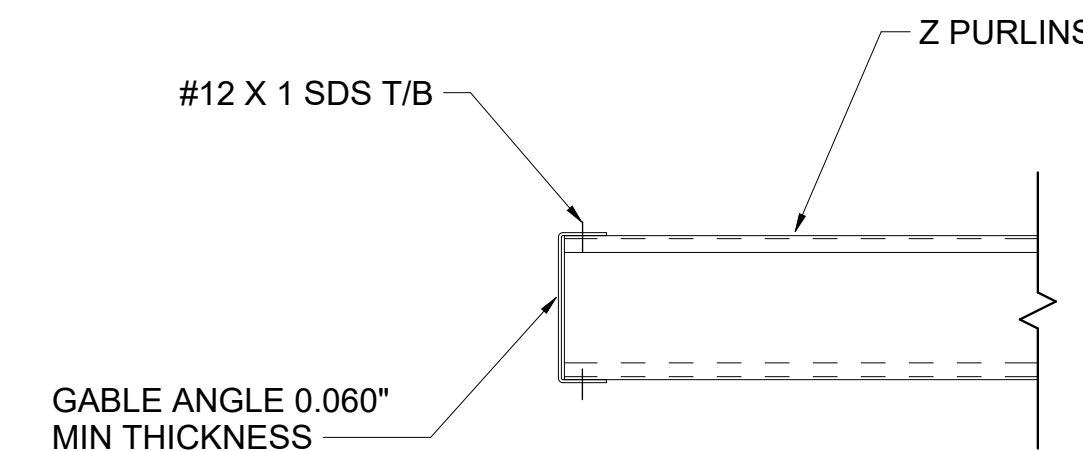
9 DETAIL
1 1/2" = 1'-0"



10 TRUSS TO BEAM
1" = 1'-0"



11 LINTEL SUPPORT
1 1/2" = 1'-0"



12 GABLE ANGLE
1 1/2" = 1'-0"



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GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
------	------	-------------

PROJECT NO: 2403

CAD DWG FILE: Lee's Summit - Terminal MEP.rvt

DESIGNED BY: CMW

DRAWN BY: BM

CHECKED BY: WAI

APPROVED BY: Approver

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SHEET TITLE

MEP GENERAL NOTES AND ABBREVIATIONS

ME001

SHEET 78 OF 102

GENERAL ABBREVIATIONS

GENERAL ABBREVIATIONS:

A/C

ADON

ADJ

ADJT

ADMIN

A.F.F.

A.F.G.

AIRU

ALT

ALUM

AMB

APPROX

AUTO

BHP

BLDG

BLK

BMS

BOF

BSMT

BTU

BTUH

CFM

CI

CIRC

CLG

CMU

CO

CO2

COL

CONC

CONF

CONFIG

CONST

CORR

CT

CJ

CJ

CJH

CW

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OD

OPP

OSAY

PIT

PORT

PSF

PF

PERF

PERP

PH

PIG

PIV

PLBG

PNEU

PREFAB

PRV

FACTORY MUTUAL

FEET PER MINUTE

FEET (FOOT)

FOOTING

GAUGE

GALLON

GALVANIZED

GRADE CLEANOUT

GOVERNMENT

GALLONS PER HOUR

GALLONS PER MINUTE

HANDS-OFF-AUTOMATIC

HORSEPOWER

HOUR

HEATING

HEATER

HEATING, VENTILATING, & AIR CONDITIONING

DOMESTIC HOT WATER

DOMESTIC HOT WATER

CIRCULATING

HEAT EXCHANGER

HERTZ

INTERNATIONAL BUILDING CODE

INSIDE DIAMETER

INVERT ELEVATION

INTERNATIONAL MECHANICAL CODE

INCH

INCLUDE(ING)

INTERNATIONAL PLUMBING CODE

JANITOR

JOIST

KILOVOLT AMPERES

KILOWATT

KILOWATT-HOUR

LABORATORY

LEAVING AIR TEMPERATURE

POUND

POUNDS

LINEAR FOOT (FEET)

LIGHTING

LEAVING WATER TEMPERATURE

MIXED AIR

MATERIAL

MAKE-UP AIR UNIT

MAXIMUM

THOUSAND BTU PER HOUR

THOUSAND BTU PER HOUR

MINIMUM CIRCUIT AMPS

MOTOR CONTROL CENTER

MECHANICAL

MEZZANINE

MANUFACTURER

MANUFACTURING

MINIMUM

MISCELLANEOUS

NON APPLICABLE

NORMALLY CLOSED

NOISE CRITERIA

NATIONAL ELECTRIC CODE

NATIONAL ELECT

MANUFACTURER'S ASSN

NOT IN CONTRACT

NORMALLY OPEN

NOT TO SCALE

OUTSIDE AIR

ON CENTER

OUTSIDE DIAMETER

OPPOSITE

OUTSIDE SCREW & YOKE

PRESSURE/TEMPERATURE TEST

POUND PER CUBIC FOOT

PRESSURE DROP

PERFORATED

PERPENDICULAR

PHASE

PRESSURE INDEPENDENT

POST INDICATOR VALVE

PLUMBING

PNEUMATIC

PREFABRICATED

PRESSURE REDUCING VALVE

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

POLYVINYL CHLORIDE

RETURN AIR

REFLECTED CEILING PLAN

REFERENCE

RELATIVE HUMIDITY

RADIANT HEATING PANEL

ROOM

REVOLUTIONS PER MINUTE

ROOFTOP UNIT

SUPPLY AIR

SANITARY WASTE

SOFT COLD WATER

SMOKE DAMPER

SMOKE DETECTOR

SECTION

SENSIBLE

SQUARE FOOT (FEET)

STATIC PRESSURE

SPECIFICATIONS

SQUARE

STAINLESS STEEL

STANDARD

STORAGE

STEAM WORKING PRESSURE

THERMOSTAT

TRANSFER AIR

TOTAL DYNAMIC HEAD

TEMPORARY

TEMPERATURE

THICKNESS

TOP OF CONCRETE

TOP OF FOOTING

TOTAL STATIC PRESSURE

TYPICAL

UNIFORM BUILDING CODE

UNDERGROUND

UNIT HEATER

UNDERWRITERS LABORATORIES

UNLESS NOTED OTHERWISE

UTILITY

VOLT

VARIABLE AIR VOLUME

VINYL COMPOSITION TILE

VOLUME DAMPER - MANUAL

VELOCITY

VERTICAL

VARIABLE FREQUENCY DRIVE

VOLUME

VENT THROUGH ROOF

WIDE, WIDTH

WATT

WITH

WITHOUT

WET BULB

WATER COLUMN

WALL CLEAN OUT

WALL HYDRANT

WEIGHT

TRANSFORMER

YARD HYDRANT

&

AT

THAT IS

NUMBER

A OR AMP

ALTERNATING CURRENT

A.F.F.

ABOVE FINIS

APPROX.

APPROXIMATELY

ARCH.

ARCHITECT

AWG

AMERICAN WIRE GAUGE

BKR.

BREAKER

C

CONDUIT

COMM.

COMMUNICATIONS

D

DEEP

DISC

DISCONNECT SWITCH

DWGS.

DRAWINGS

ELECT.

ELECTRICAL

EMCS

ENERGY MANAGEMENT

ELECTRICAL GENERAL NOTES

1. ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH 2018 NATIONAL ELECTRIC CODE (NEC).

2. INSTALL ALL WIRING IN RACEWAYS. OPEN WIRING IS PROHIBITED.

3. WHERE SURFACE WIRING IS REQUIRED, SURFACE MOUNTED RACEWAY (WIEMOLD OR APPROVED EQUAL) SHALL BE USED AND PAINTED TO MATCH ADJACENT SURFACES (UNLESS SPECIFIED COLOR WAS PROVIDED). COORDINATE ALL SURFACE MOUNTED CONDUIT AND RACEWAY ROUTING WITH OWNER AND ENGINEER.

4. ALL RACEWAYS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

5. PROVIDE ALL MOTORS WITH A LOCAL DISCONNECT SWITCH (UNFUSED UNLESS OTHERWISE NOTED) LOCATED AT THE MOTOR OR A MAXIMUM OF 5FT AWAY, WITHIN SIGHT.

6. NO MORE THAN SIX RECEPTACLES SHALL BE INSTALLED ON A SINGLE BRANCH CIRCUIT FOR GENERAL USE. GFCI RECEPTACLES SHALL NOT SERVE OTHER RECEPTACLES FROM THEIR LOADSIDE TERMINALS.

7. TELECOMMUNICATION OUTLET BOXES SHALL BE MINIMUM SIZE AS NEC STANDARD 676/2.5' THAT COULD CONTAIN DUAL DUPLEX ELECTRICAL OUTLETS, RECESSED TO ALLOW EMT OR FLEXIBLE CONDUIT TO TERMINATE ON THEM.

8. WALL MOUNTED JUNCTION BOXES SHALL BE EQUIPPED WITH FULL COVERED STAINLESS STEEL WALL FACEPLATES THAT SHALL COVER THE ENTIRE BOX WITHOUT TRIM RINGS ADDED.

9. TELECOM J-BOXES SHALL EMPLOY TWO EACH MODULAR CAT 6 (OR BETTER) RJ-45 JACKS FOR VOICE/DATA. VERIFY STANDARD CABLEING WITH OWNER PRIOR TO BID.

10. CONTRACTOR SHALL FIELD VERIFY LOCATIONS, SIZES, AND ELEVATIONS OF MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS THAT MAY IMPACT IMPLEMENTATION OF THIS WORK PRIOR TO MAKING BIDS.

11. CONTRACTOR SHALL COORDINATE AND EXPEDITE ALL WORK WITH OTHER TRADES AND OWNER.

12. ALL OVERCURRENT PROTECTIVE DEVICES INSTALLED UNDER THIS CONTRACT SHALL MEET THE INTERRUPTING CAPABILITY OF THE SCHEDULES. "SERIES RATING" SHALL BE ALLOWED.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR ARC FLASH STUDY AND LABELS PER NEC.

14. ALL WIRING TO BE CONTINUOUS WITHOUT SPLICES UNLESS OTHERWISE NOTED.

15. NO POWER AND CONTROL WIRING SHALL BE RUN IN SAME CONDUIT.

16. FINAL ROUTING OF CONDUITS IS TO BE DETERMINED BY THE CONTRACTOR. INFORM ENGINEER OF RECORD OF ANY MAJOR DISCREPANCY PRIOR TO PROCEEDING WITH INSTALLATION.

17. PROVIDE TYPED PANEL SCHEDULES POLE AND LOAD SERVED.

18. PRIOR TO BID SUBMISSION, THE CONTRACTOR SHALL VISIT THE SITE AND AREA OF WORK TO FAMILIARIZE HIM OR HERSELF WITH THE EXISTING CONDITIONS.

LIGHTING GENERAL NOTES

1. PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

2. COORDINATE ALL SCHEDULING, ELEVATIONS, SIZES, QUANTITIES, AND ROUTING OF WORK WITH OWNER AND OTHER TRADES.

3. FIELD VERIFY SIZE, LOCATION, ELEVATION AND QUANTITY OF ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PIPING EQUIPMENT AND COMPONENTS THAT MAY IMPACT IMPLEMENTATION OF THIS WORK.

4. REPAIR OR REPLACE ARCHITECTURAL, MECHANICAL, ELECTRICAL, OR PLUMBING EQUIPMENT OR COMPONENTS DAMAGED WHILE EXECUTING THIS WORK. SUCH REPAIRS OR REPLACEMENTS SHALL MATCH OR EXCEED EXISTING EQUIPMENT OR COMPONENT FINISH AND QUALITY.

5. ALL ELECTRICAL BOXES SHALL BE GALVANIZED STEEL. BACK BOXES MOUNTED ON GALVANIZED STUDS SHALL HAVE BETWEEN STUD MOUNTING BRACKETS EQUAL TO "ODDY" IRB516 OR IRB52A. PROVIDE 3/4" MUD RINGS WHERE LOCATED IN WALLS WITH 5/8" THICK GYPSUM WALLBOARDS.

6. PROVIDE DEVICE AND EQUIPMENT LABELING PER THE SPECIFICATIONS. ALL PANELBOARDS SHALL BE PROVIDED WITH AN UPDATED TYPED CIRCUIT DIRECTORY WITH CIRCUIT NUMBERS AND EQUIPMENT SERVED.

7. ALL POWER CIRCUITS SHALL HAVE A GROUNDING CONDUCTOR.

8. CONFIRM THAT NO WIRING CIRCUIT EXCEEDS 1920VA (120V).

9. ALL WALL OCCUPANCY SENSORS AND COVERPLATES SHALL BE GREY IN COLOR. ALL STANDARD TOGGLE SWITCHES SHALL BE GREY IN COLOR AN COVERPLATES SHALL BE STAINLESS STEEL. REFERENCE ELECTRICAL PLAN SPECIFICATIONS.

10. FOR ANY EMERGENCY OR NIGHT LIGHT FIXTURE, A CONSTANT HOT CONDUCTOR SHALL BE ROUTED TO FIXTURE WHETHER IT IS SHOWN OR NOT.

11. EXIT LIGHT FIXTURES MOUNTED ON WALLS SHALL BE AT LEAST 8" ABOVE DOOR HEADER OR PER DRAWING ELEVATIONS.

12. REFERENCE LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION ON FIXTURE TYPE AND CONTROLS.

MECHANICAL GENERAL NOTES

1. ALL MECHANICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE INTERNATIONAL MECHANICAL CODE (IMC).

2. COORDINATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND AVOID INTERFERENCES AND CONFLICTS. BEFORE ANY PIPING, DUCTWORK, CONDUIT, ETC. IS INSTALLED, IT SHALL BE COORDINATED CAREFULLY BETWEEN ALL TRADES.

3. CONTRACTOR SHALL SUBMIT HVAC SHEET METAL PLANS WITH ACTUAL FITTINGS AND LAYOUT PER THE SHOP FABRICATION.

4. REFER TO EXISTING STRUCTURAL PLANS, OR VERIFY IN FIELD, THE LOCATION OF STRUCTURAL MEMBERS. NEW ROOF PENETRATIONS AND ROOF CURBS FOR EQUIPMENT ON ROOF ARE SHOWN SCHEMATICALLY AND SHALL BE COORDINATED WITH EXISTING STRUCTURAL MEMBERS.

5. PROVIDE FLEXIBLE CONNECTION AND DUCT TRANSITIONS AT CONNECTIONS TO ALL DUCTED MECHANICAL EQUIPMENT.

6. COORDINATE ROUTING OF DUCTWORK WITH ALL OTHER TRADES TO AVOID INTERFERENCES IN CEILING PLENUM.

7. MAINTAIN ALL MANUFACTURER'S REQUIRED CLEARANCES FOR ALL HVAC EQUIPMENT.

8. COORDINATE ALL CEILING INSTALLED EQUIPMENT AND DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING PLANS.

9. ROUND BRANCH TAKE-OFF FITTINGS TO DIFFUSERS SHALL BE "BELLMOUTH" TYPE EXCEPT LOCATIONS WHERE LISTED DUCT HEIGHT DOES NOT ACCOMMODATE. IN THIS CASE PROVIDE HIGH EFFICIENCY 45 DEGREE RECTANGULAR TO ROUND (HETO) FITTING. BOTH OF THESE FITTINGS ARE REQUIRED IN ALL CIRCUMSTANCES. ALL ROUND BRANCH TAKE-OFF FITTINGS TO DIFFUSERS SHALL INCLUDE AN INTEGRAL MANUAL VOLUME DAMPER.

10. BRANCH DUCTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE DIFFUSER. NECK UNLESS NOTED OTHERWISE. MAXIMUM LENGTH OF FLEXIBLE DUCT ROUTING TO BE 5'-0" (NO EXCEPTIONS).

11. INSTALL TEMPERATURE SENSORS/THERMOSTATS/CO2 SENSORS AT 48" AFF. COORDINATE LOCATIONS WITH LIGHT SWITCHES. THERMOSTAT BOXES AND CONDUITS TO ABOVE CEILING ARE TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

12. CONTRACTOR SHALL REPAIR OR REPLACE LAY-IN OR GYPSBOARD CEILINGS AS NECESSARY TO INSTALL NEW DUCTWORK, PIPING AND ELECTRICAL CONDUITS.

13. ALL EXISTING PLUMBING WASTE, WATER, AND VENT PIPING LOCATION AND ROUTING SHALL BE FIELD VERIFIED.

14. FIRE DAMPERS SHALL BE PROVIDED WHERE DUCTWORK PENETRATES ANY RATED ASSEMBLY. REFER TO ARCHITECTURAL CODE PLAN FOR FURTHER DETAILS.

PLUMBING GENERAL NOTES

1. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC).

2. COORDINATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND AVOID INTERFERENCES AND CONFLICTS. BEFORE ANY PIPING, DUCTWORK, CONDUIT, ETC. IS INSTALLED, IT SHALL BE COORDINATED CAREFULLY BETWEEN ALL TRADES.

3. MAINTAIN MANDATORY 10'-0" SEPARATION FROM ALL VENTS/EXHAUST AND OUTSIDE AIR INTAKES. REFER TO MECHANICAL PLANS PRIOR TO ROUGH-IN.

4. ALL DOMESTIC WATER, WASTE, AND VENT PIPING SHALL BE ROUTED TIGHT TO STRUCTURE. COORDINATE ROUTING WITH ALL TRADES.

5. PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS. IF ANY DISCREPANCIES OCCUR FROM THESE PLANS, CONTACT A/E IMMEDIATELY.

6. UNLESS NOTED OTHERWISE, MAINTAIN MINIMUM 1/8" PER 1'-0" SLOPE ON ALL DRAINAGE PIPING.

7. ALL PLUMBING PIPING SHALL BE INSULATED / JACKETED PER SPECIFICATIONS.

8. ALL PLUMBING MATERIALS SHALL BE PER SPECIFICATIONS AND SCHEDULES.

ELECTRICAL ABBREVIATIONS:

A OR AMP

ALTERNATING CURRENT

A.F.F.

ABOVE FINIS

APPROX.

APPROXIMATELY

ARCH.

ARCHITECT

AWG

AMERICAN WIRE GAUGE

BKR.

BREAKER

C

CONDUIT

COMM.

COMMUNICATIONS

D

DEEP

DISC

DISCONNECT SWITCH

DWGS.

DRAWINGS

ELECT.

ELECTRICAL

EMCS

ENERGY MANAGEMENT

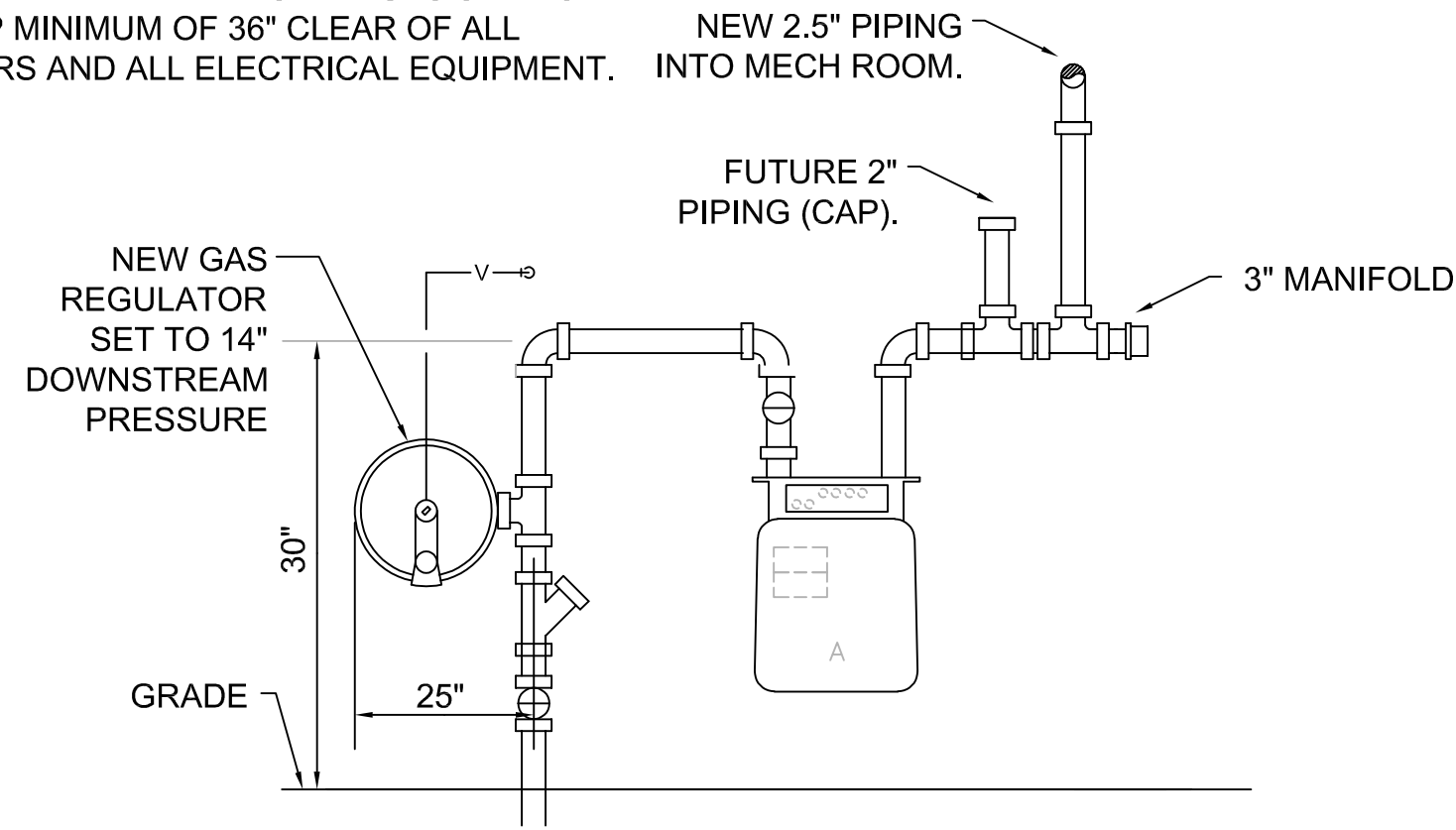
GAS CONNECTED LOAD TABLE	
EQUIPMENT:	BTUH
TANKLESS WATER HEATERS (2)	398,000
NEW RTU-1	450,000
FUTURE	150,000
TOTAL BUILDING LOAD	998,000
CONTRACTOR SHALL CONTACT XXXX WITH SPIRE GAS SERVICE (785-XXX-XXXX) AND COORDINATE REQUIREMENTS OF NATURAL GAS SERVICE, SUPPLIED AT LOW PRESSURE (1/2-PSI), AS SHOWN ON PLANS. PROVIDE ALL NECESSARY MATERIALS FOR A COMPLETE INSTALLATION, INCLUDING NEW METER, NEW REGULATOR, ETC.	

ESTIMATED GAS HEATING LOAD @ LOW PRESSURE (14"wg)

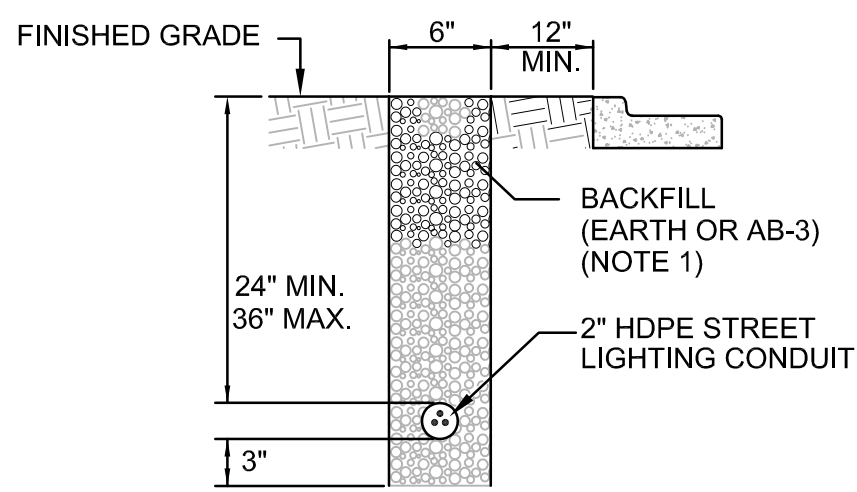
METER	CFH	SIZE
A	1000	2"

NOTE:

GAS METER LOCATION SHALL BE COORDINATED WITH SPIRE GAS SERVICE. KEEP MINIMUM OF 36" CLEAR OF ALL DOORS AND ALL ELECTRICAL EQUIPMENT.



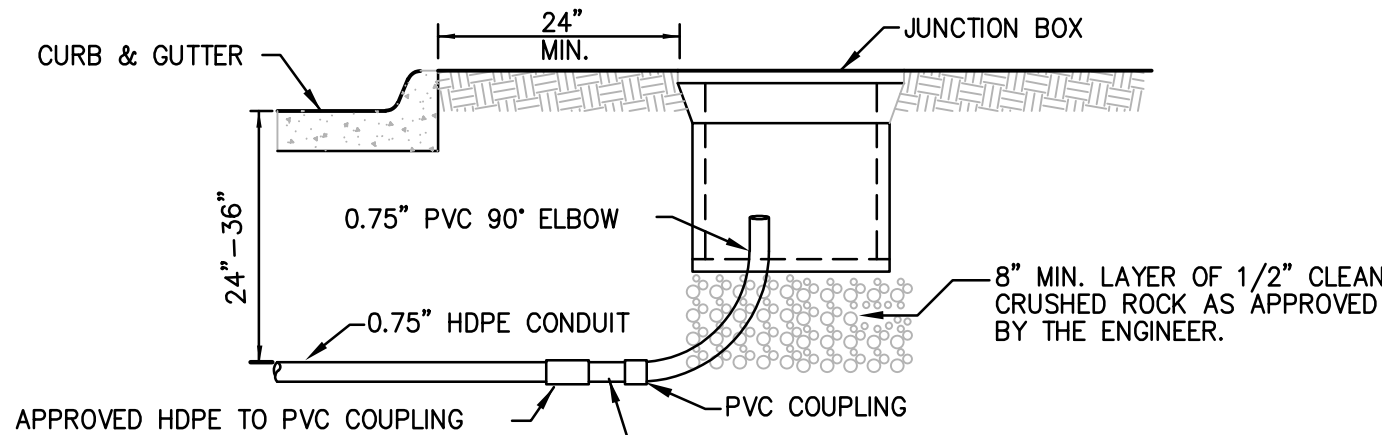
4 GAS METER ELEVATION
SCALE: NONE



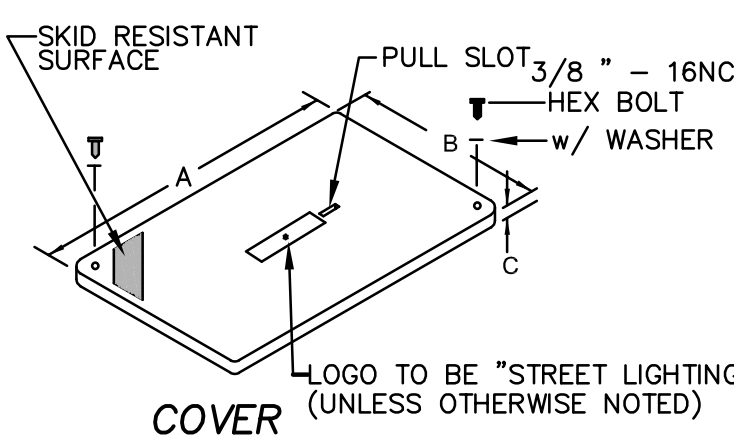
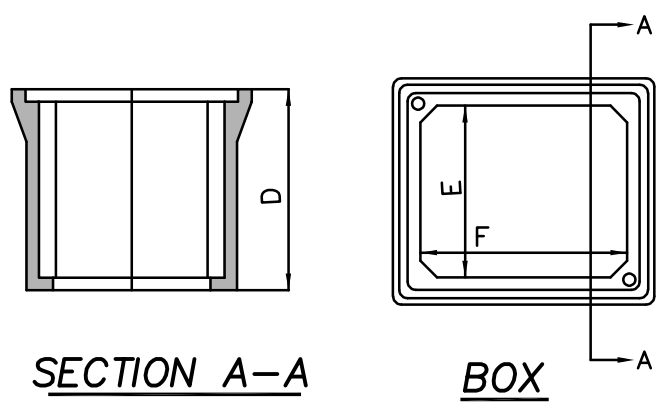
TRENCHING IN UNPAVED AREAS

NOTE: ALL TRENCHES FOR CONDUIT UNDER PROPOSED PAVED SURFACES SHALL BE BACKFILLED WITH FLOWABLE FILL.

3 TRENCHING DETAILS
SCALE: NTS



JUNCTION BOX INSTALLATION DETAIL



TYPE	DIMENSION (IN.)					
I-JUNCTION	12 1/8	12 1/8	3/4	12 1/4	9 3/4	10

2 EXTERIOR QUAZITE DETAIL
SCALE: NTS

SITE PLAN NOTES

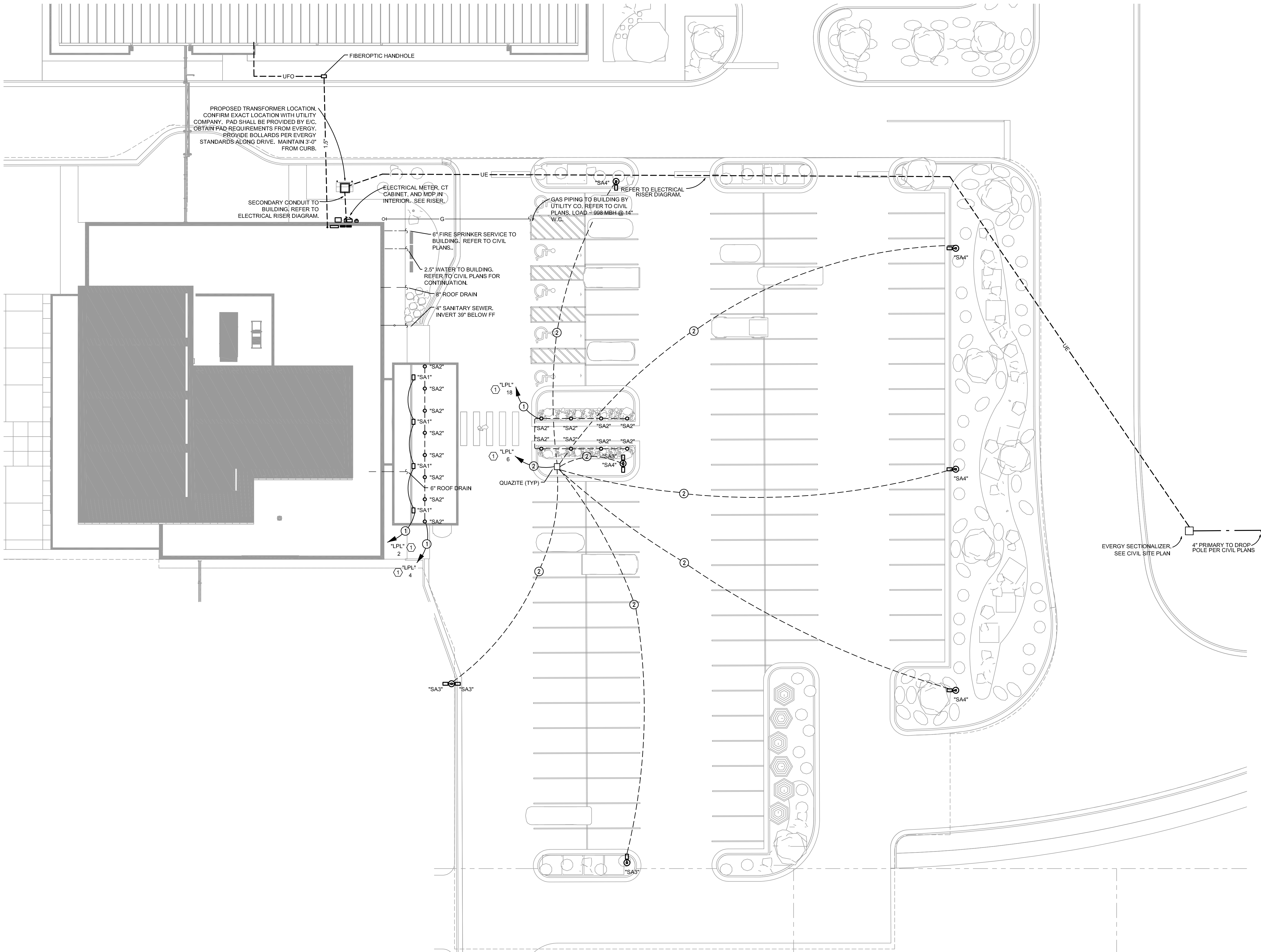
1. ROUTE HOMERUN VIA LIGHTING CONTROL SYSTEM "LCS1". REFER TO RELAY PANEL SCHEDULE FOR ZONE CONTROLLED BY RELAY PRIOR TO HOMERUN TO POWER PANEL. REFER TO DETAILS ON SHEET E300.

FEEDER SCHEDULE

1. 2 - #10 AND 1 - #10 GROUND IN 0.75" CONDUIT.
2. 2 - #8 AND 1 - #10 GROUND IN 0.75" CONDUIT.

GENERAL NOTES

1. REFER TO CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS AND FOR ROUTING OF ALL UTILITIES OUTSIDE THE BUILDING.
2. CONTRACTOR SHALL CONTACT LEE'S SUMMIT WATER DEPARTMENT AND ARRANGE FOR WATER SERVICE AND FIRE SERVICE AS INDICATED ON DRAWINGS, INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY LOCAL AUTHORITIES INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR WATER SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
3. CONTRACTOR SHALL CONTACT LEE'S SUMMIT PUBLIC WORKS AND ARRANGE FOR SEWER SERVICE AS INDICATED ON DRAWINGS, INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY LOCAL AUTHORITIES INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR SEWER SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
4. CONTRACTOR SHALL CONTACT SPIRE GAS AND ARRANGE FOR GAS SERVICE AS INDICATED ON DRAWINGS, INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY LOCAL AUTHORITIES INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR GAS SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
5. CONTRACTOR SHALL CONTACT EVERY POWER & LIGHT AND ARRANGE FOR ELECTRIC SERVICE AS INDICATED ON DRAWINGS, INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY UTILITY COMPANY INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR ELECTRIC SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
6. CONTRACTOR SHALL STUB OUT A 1.5" SUPPLY LINE FOR IRRIGATION SYSTEM FROM INTERIOR BUILDING BACKFLOW PREVENTER. REFER TO CIVIL PERFORMANCE SPECIFICATION FOR SYSTEM REQUIREMENTS.



1 MEP SITE PLAN
SCALE: 1/16"=1'-0"



1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108



1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108



1701 WALNUT STREET, SUITE 300
KANSAS CITY, MO 64108

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LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-201009876
Certificate of Authority - MO #2024005146

01-02-2025

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LEES SUMMIT, MO

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SHEET TITLE

MEP SITE PLAN

ME002

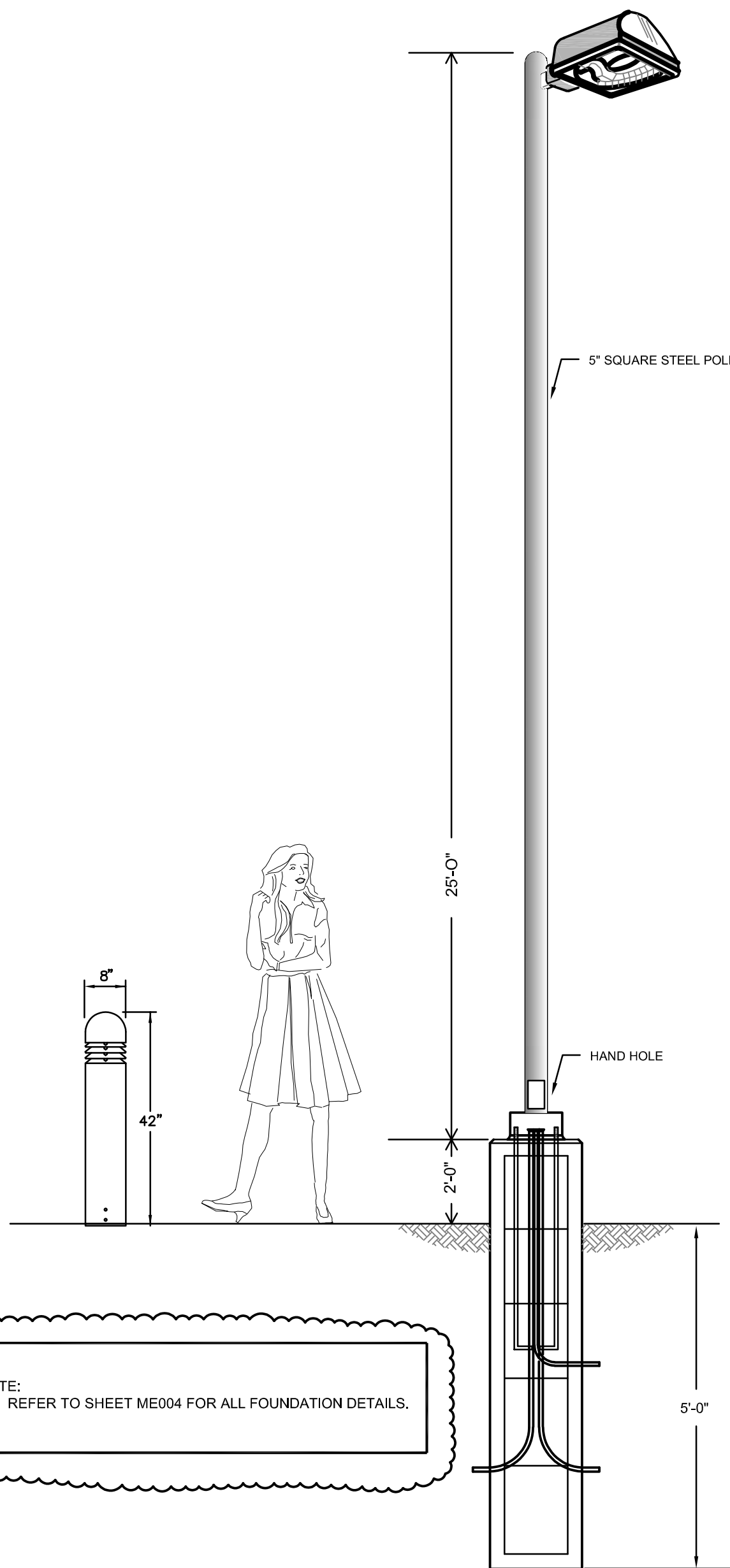
SHEET 79 OF 102

EXTERIOR LIGHT FIXTURE PHOTOMETRIC SCHEDULE

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	SL1		8	KIM LIGHTING	PA7R-CH1-12L-020-4K7	PA7R	1	1932	1	22	
	SL2		4	KIM LIGHTING	CY2-45-4K7-2-3-3-R	CY2	1	4405	1	51.57	
	SL3		4	KIM LIGHTING	AR2-81L-700-4K7-3	AR2	1	1858	1	171.66	
	SL4		3	KIM LIGHTING	AR2-81L-700-4K7-4	AR2	1	19220	1	178.24	

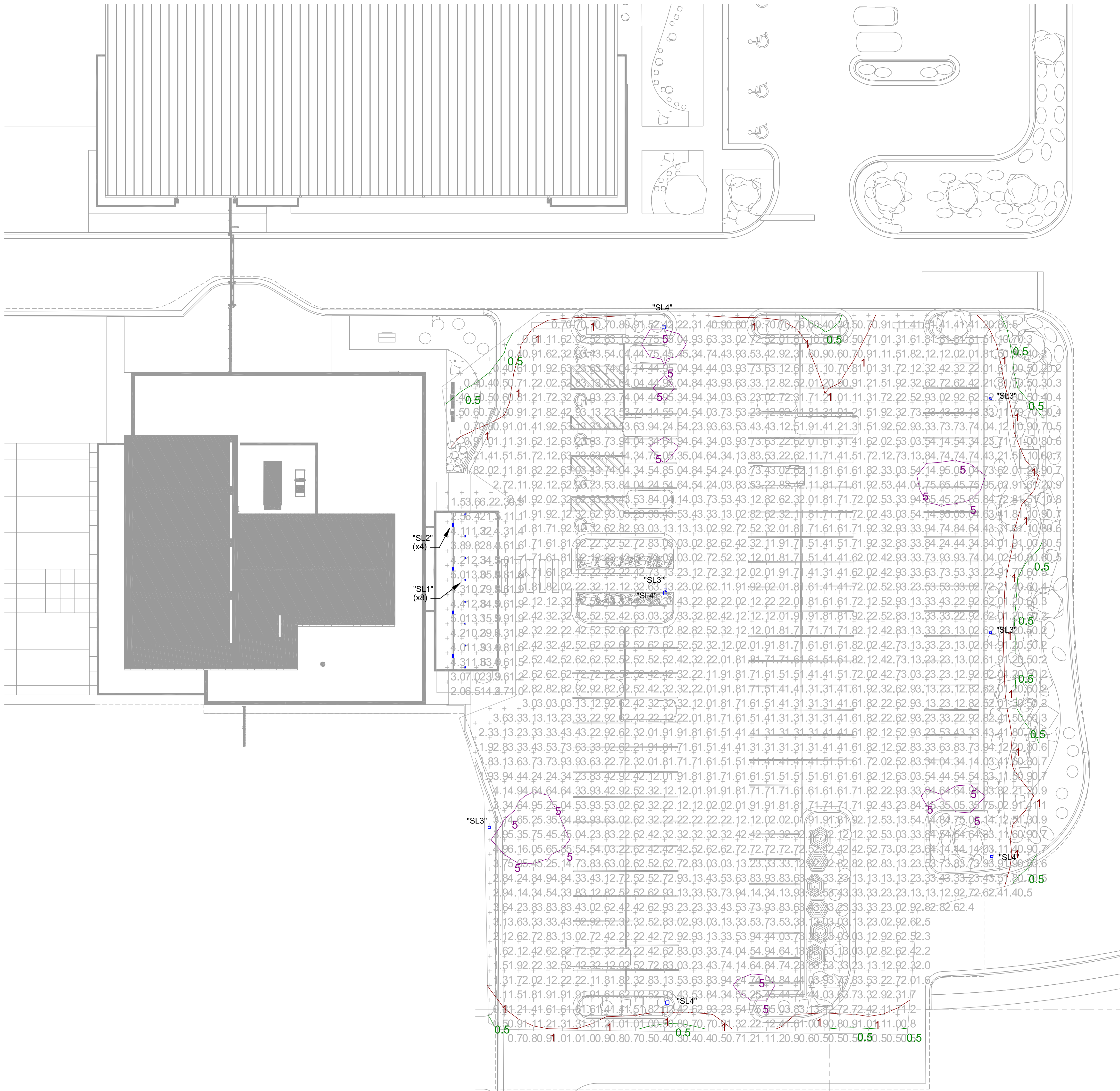
STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking Lot		2.6 fc	6.1 fc	0.2 fc	30.5:1	13.0:1
Canopy		9.6 fc	35.9 fc	0.9 fc	39.9:1	10.7:1



2 LIGHT POLE DETAILS

SCALE: NTS



1 SITE PHOTOMETRICS PLAN

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



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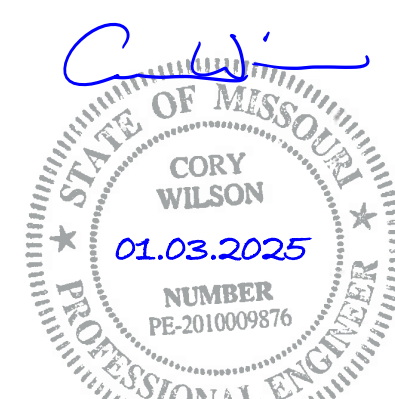
1701 WALNUT STREET, SUITE 300
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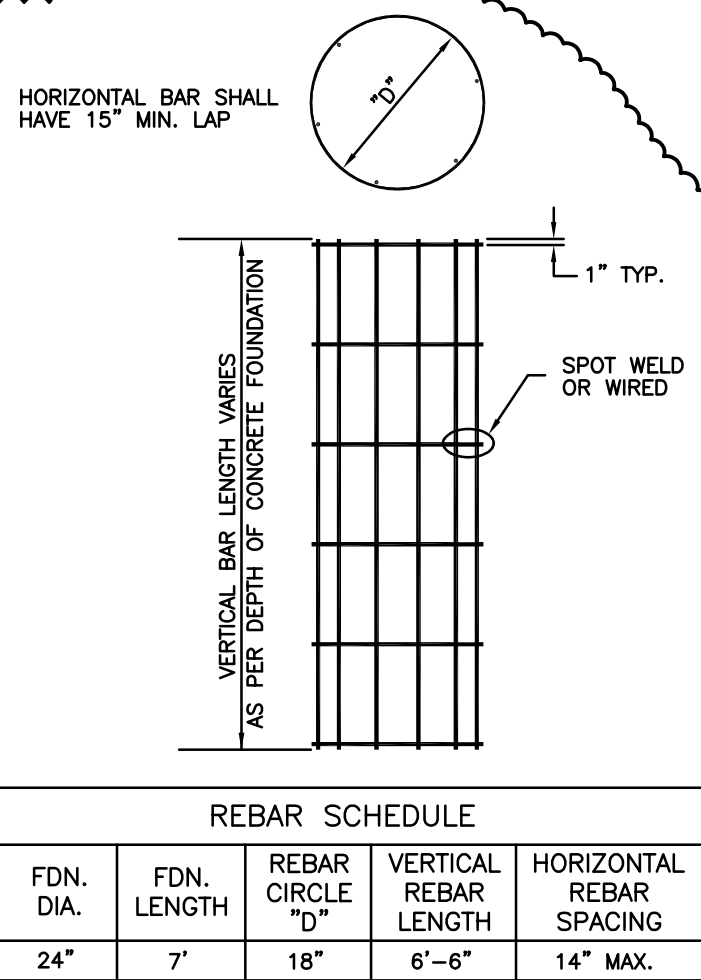
SHEET TITLE

LIGHTING SITE
PHOTOMETRIC
PLAN

ME003

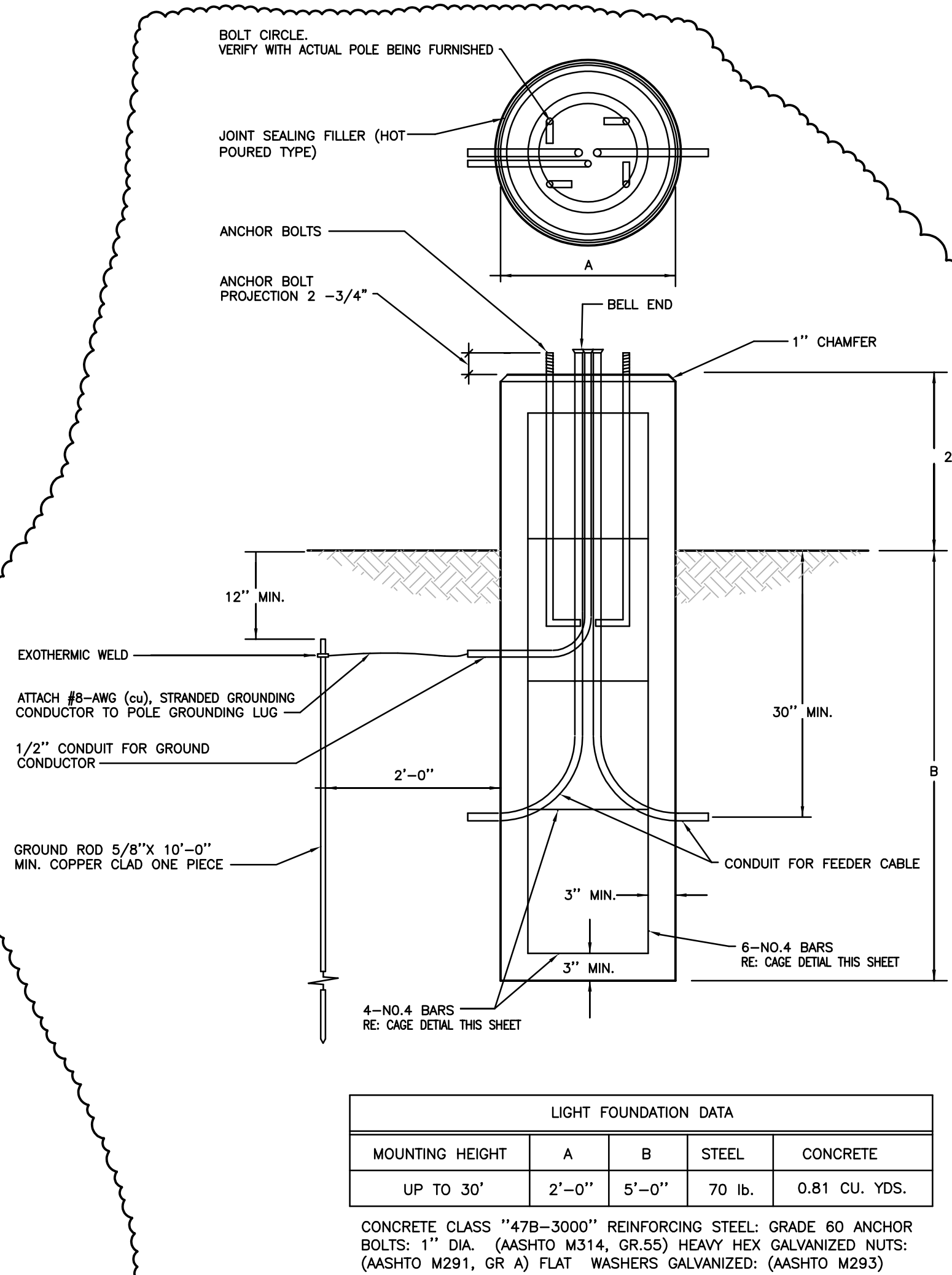
SHEET 80 OF 102

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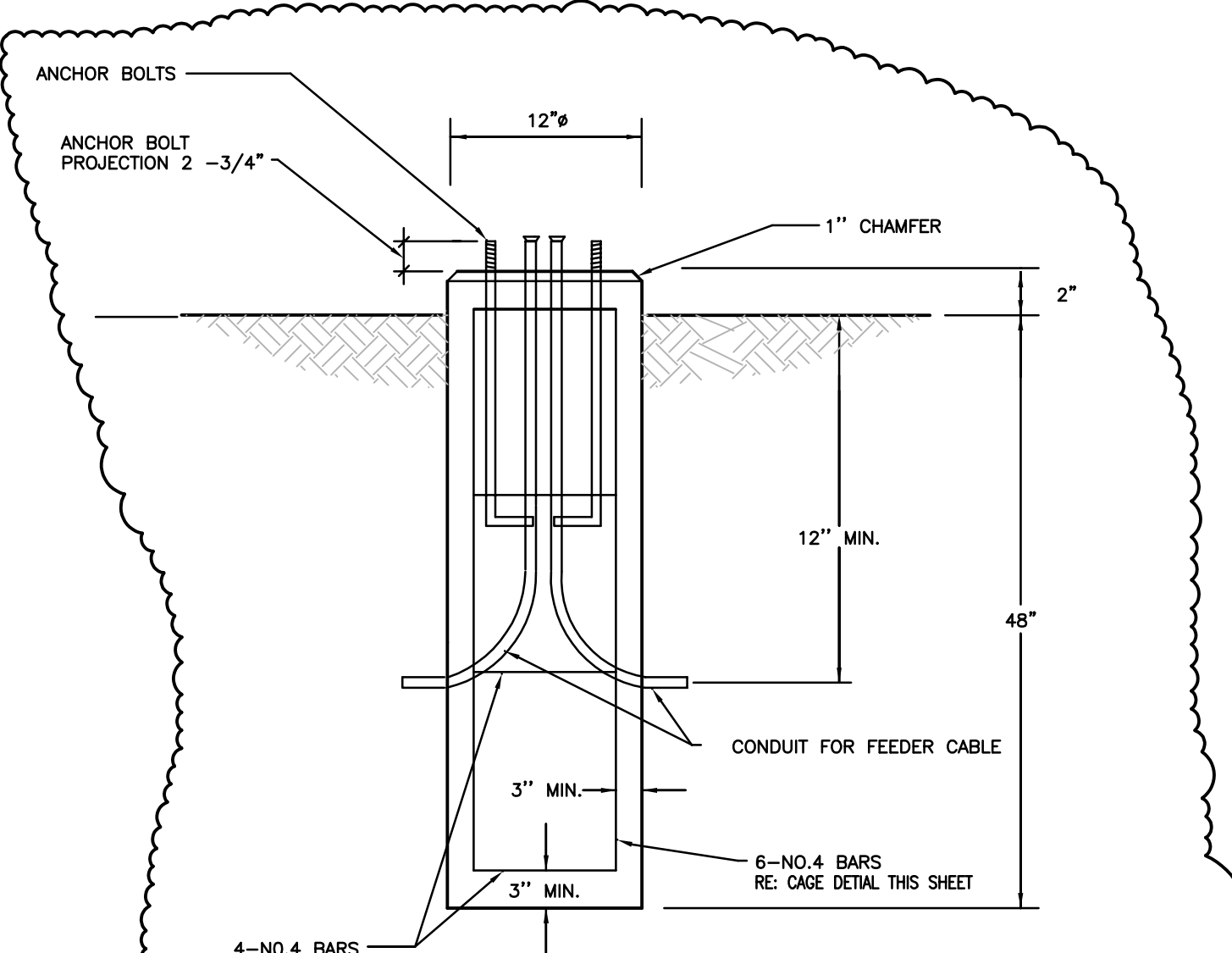
4 REBAR CAGE DETAIL

SCALE:



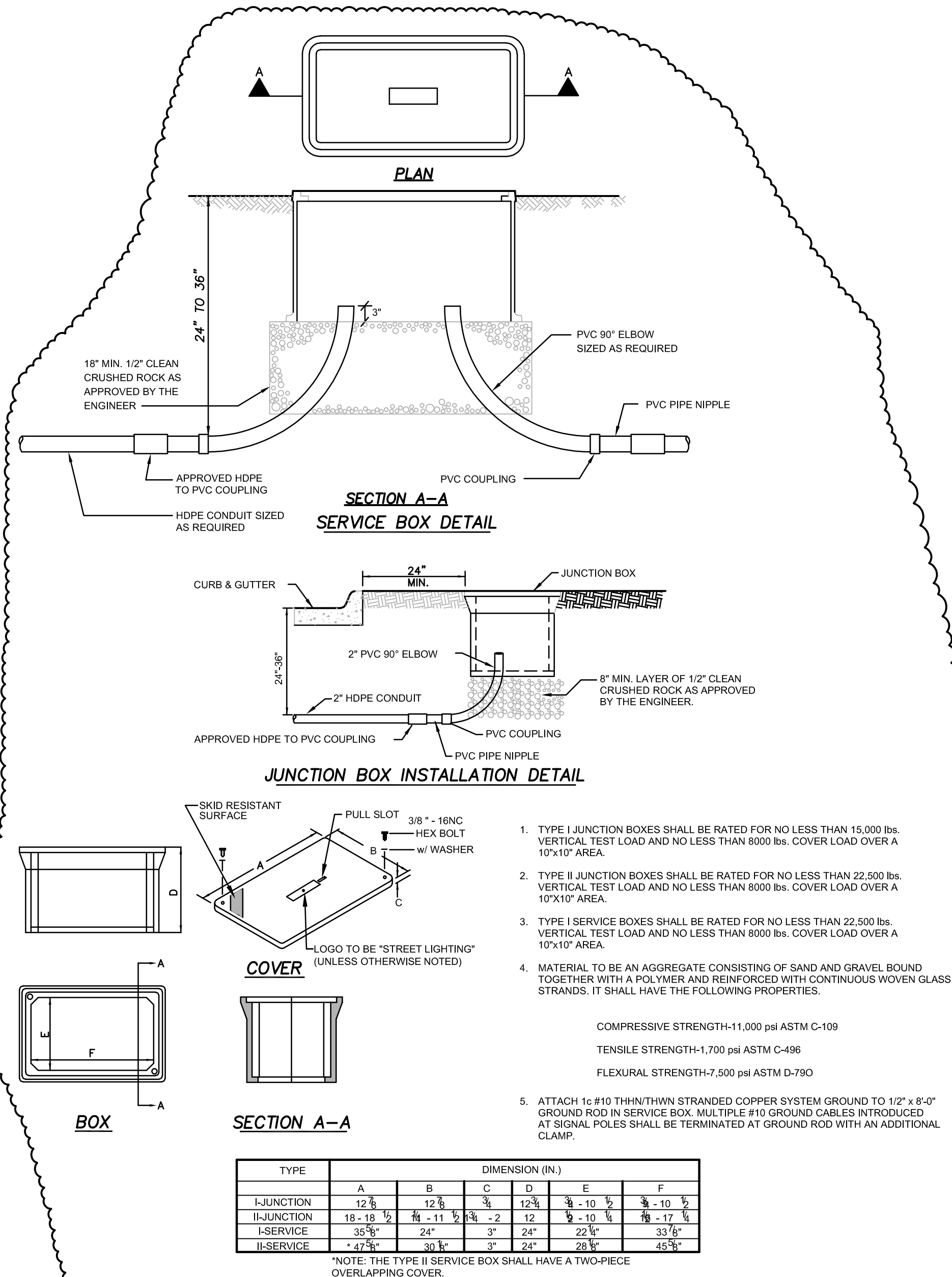
3 PARKING LOT POLE FOUNDATION

SCALE:



2 BOLLARD FOUNDATION DETAIL

SCALE:



1 FIBERGLASS REINFORCED POLYMER CONCRETE JUNCTION & SERVICE BOX DETAILS

NOT TO SCALE



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KANSAS CITY, MO 64108

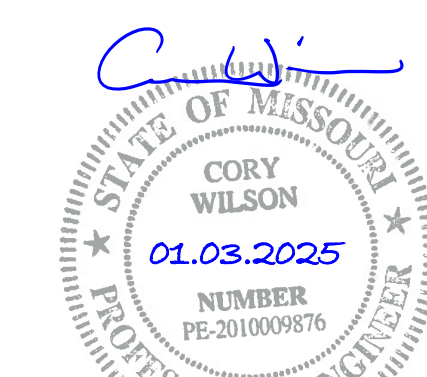


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KANSAS CITY, MO 64108

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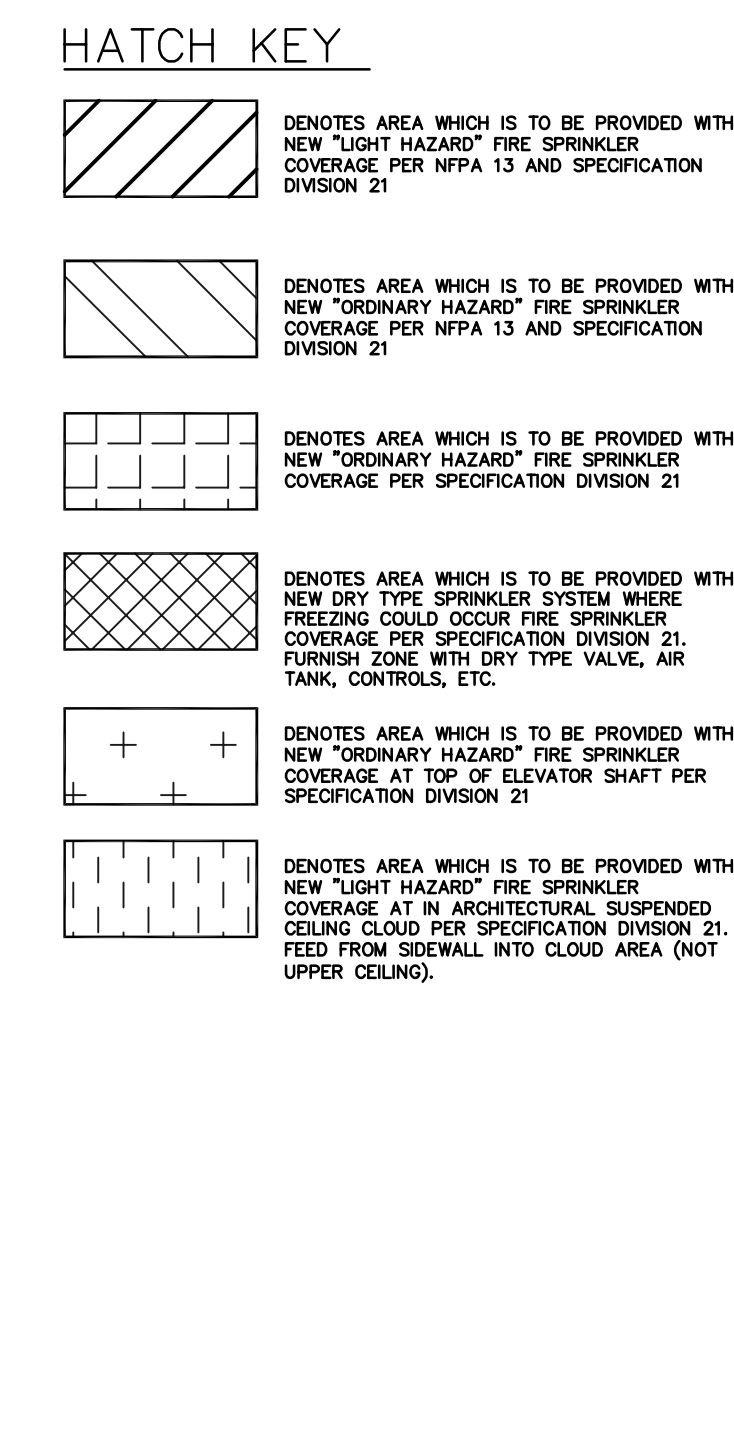
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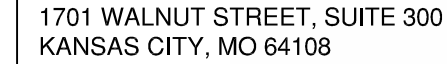
SHEET TITLE

SITE
ELECTRICAL
DETAILS
ME004
SHEET 98 OF 102



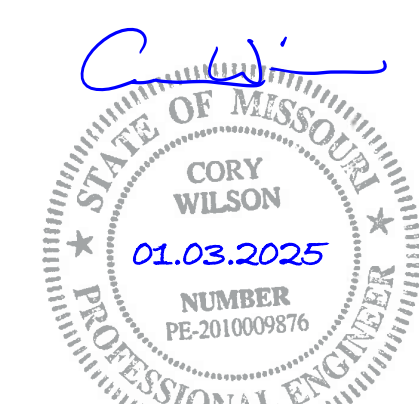
GENERAL NOTES

- SPRINKLER CONTRACTOR IS RESPONSIBLE FOR VERIFYING HYDRANT FLOW DATA FOR ANY DESIGN CALCULATIONS AND FOR THE PROPER SIZING OF THE HYDRANT. THE DESIGN IS BASED UPON REDUCING FRICTION LOSSES WITHOUT THE USE OF FLOW PIPES.
- SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND FOLLOWING SAME SCHEDULE
- THE PRESSURES GIVEN WERE APPROXIMATELY THE FOLLOWING:
 - 76 PSI AT 1133H PLACE AND VERDE DR.
 - 63 PSI AT 1133H PLACE AND VERDE DR.
- SPRINKLER CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXISTING HYDRANT FLOW DATA AND THE EXISTING HYDRANT PROVIDED WITH NEW SPRINKLER CONNECTION AS INDICATED ON PLANS
- THE ENTIRE DESIGN SHALL BE A NET SYSTEM FOLLOWING MFA 13 FOR DRY TYPED BUILDING EXCEPT FOR ATTIC SPACE. THIS AREA IS NOT PROTECTED BY SPRINKLERS.
- LOCATION OF DRY TYPE COMPONENTS: VALVE, COMPRESSOR, PUMP, AND CONTROL PANELS, SHALL BE INDICATED BY NATIONAL FIRE PROTECTION ASSOCIATION, AND THE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL COORDINATE ALL SCHEDULING, ELEVATIONS, AND LOCATIONS OF ALL HYDRANT, VALVES, PIPES, TRACES, COORDINATE AND FIELD VERIFY SIZE, LOCATION, AND THE QUANTITY OF ALL HYDRANT, VALVES, PIPES, TRACES, AND PUMPING EQUIPMENT AND COMPONENTS THAT ARE NOT INDICATED ON THE PLANS.
- UNLESS OTHERWISE INDICATED, ALL AREAS OF THE BUILDING SHALL BE "NET-PIPE" FIRE PROTECTION SYSTEM AS SHOWN ON PLANS
- PROVIDE NEW QUICK-RESPONSE SPRINKLER HEADS FOR ALL AREAS OF THE BUILDING AND ALL EXISTING SPRINKLER HEADS. HALL CEILINGS, PROVIDE SEMI-RECESSED PENDANT HEADS WITH 150 PSI RATED THERMAL ELEMENTS. ALL EXISTING HEADS SHALL BE POLISHED CHROMES, UNLESS OTHERWISE NOTED. AREAS OF THE BUILDING (OR AREAS OF THE BUILDING) SHALL BE PROVIDED WITH BRASS, UN-PLATED, UPRIGHT PENDANT HEADS.
- REFER TO SPECIFICATIONS FOR FURTHER FIRE PROTECTION SYSTEM REQUIREMENTS NOTED
- THE FIRE PROTECTION WORK SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR (SPRINKLER FITTER OR PER JURISDICTIONAL AUTHORITY) WITH A MINIMUM OF 5 YEARS OF PROFESSIONAL EXPERIENCE ON PROJECTS WITH FIRE PROTECTION WORK SIMILAR TO THAT OF THE STATE OF CALIFORNIA
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL FLOW TESTS AND PRESSURE TESTS AND PROVIDING THE TESTS AND EXACT READINGS AT CLOSEST LOCATION TO BUILDING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING HYDRANT FLOW TESTS AND PROVIDING THE TESTS AND EXACT READINGS TO BEGINNING WORK. FIRE PROTECTION PLANS SHALL BE PROVIDED TO THE CONTRACTOR FOR DESIGN CALCULATION, AND ALL NECESSARY INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR FOR DESIGN CALCULATION. PLANS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF CALIFORNIA.



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LEE'S SUMMIT, MISSOURI

GENERAL AVIATION TERMINAL
CITY PROJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146
01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

A	01.03.25	CITY REVIEW COMMENTS
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SHEET TITLE

FIRE PROTECTION PLAN

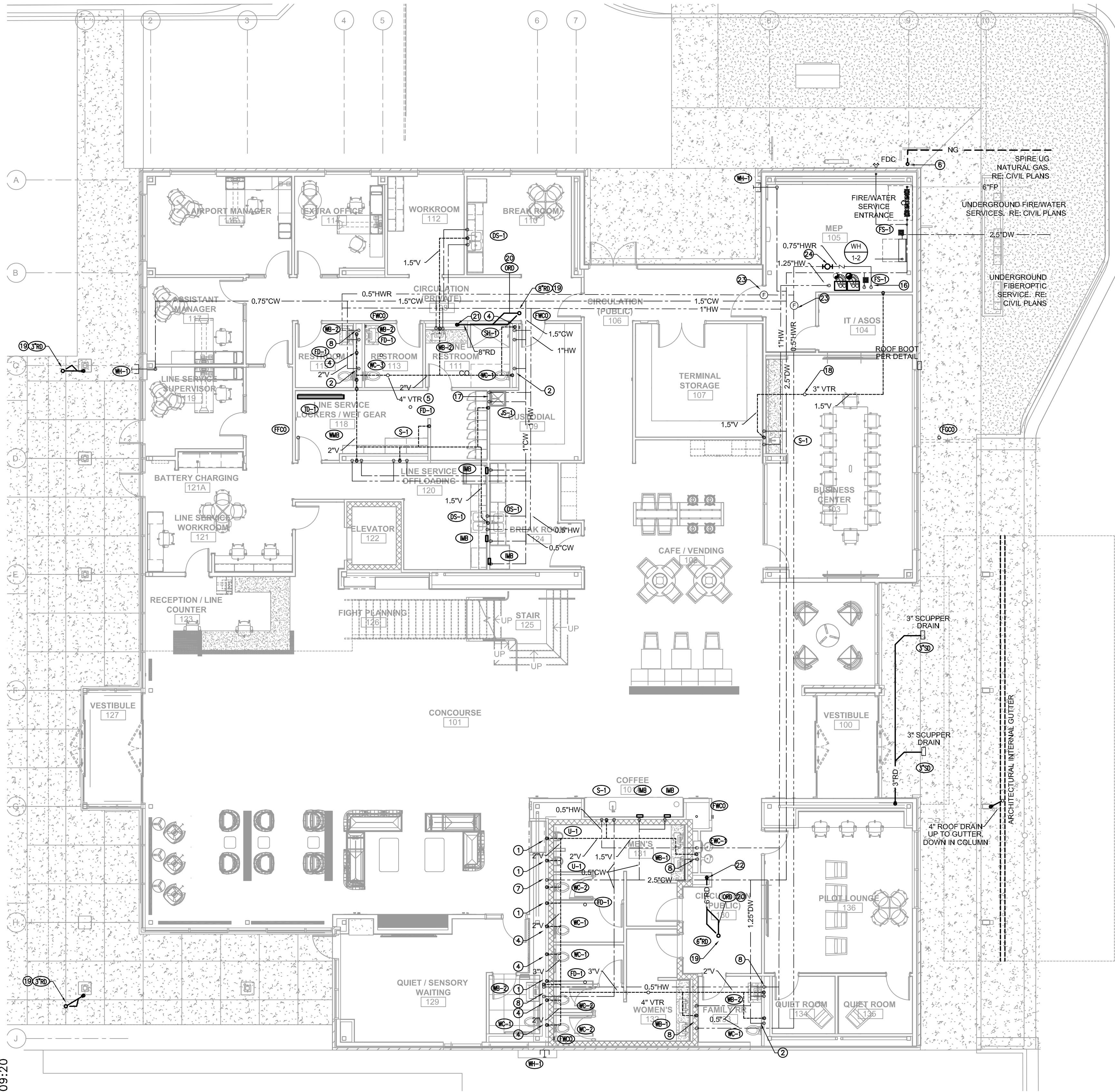
FP100

SHEET 81 OF 102



PLAN NOTES - ABOVE GRADE

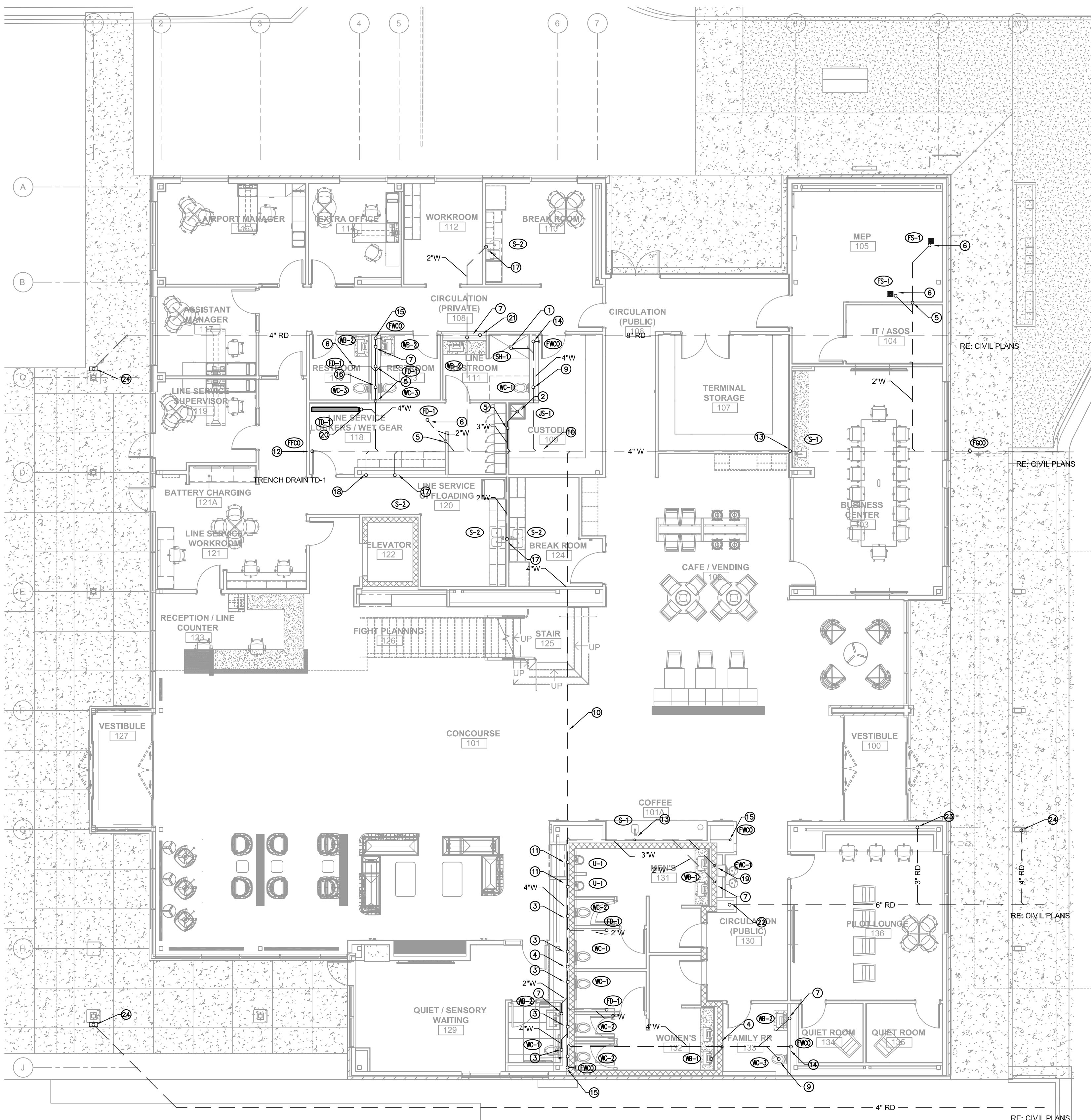
- 1.5" VENT DOWN.
- 1.25" COLD WATER DOWN TO WATER CLOSETS.
- CONNECT 2" VENT UP TO 3" VENT UP THRU ROOF (VTR).
- 2" CIRCUIT VENT DOWN.
- 3" VENT UP TO 4" VENT THRU ROOF (VTR).
- NEW GAS METER/REGULATOR WITH LOADS PER SCHEDULE. RE: MECH PLAN.
- 2.5" COLD WATER DOWN TO URINALS/WATER CLOSETS. ROUTE MAIN HORIZONTALLY LOW TO CONNECT TO ALL WATER CLOSET FLUSH VALVES (RE: RISER DIAGRAM).
- ROUTE 1-1/2" VENT, 1/2" COLD AND 1/2" HOT WATER DOWN WITHIN WALL TO SERVE LAVATORIES (TEE BOTH DIRECTIONS IF DUAL LAVS).
- ROUTE 1.5" VENT, 1/2" COLD AND 1/2" HOT WATER DOWN TO SINK.
- NEW WALL MOUNTED INSTANTANEOUS WATER HEATER. REFER TO DETAIL FOR PIPING CONNECTIONS. INSTALL 1.25" COLD WATER MAIN AND 1.25" HOT WATER MAIN FROM MANIFOLD.
- 2" GAS PIPING DOWN WATER HEATERS. REFER TO WATER HEATER DETAIL.
- 2" GAS PIPING UP TO RTU. INSTALL ACCESSORIES AT CONNECTION, INCLUDING GAS COCK, DIRT LEG, AND UNION. TRANSITION TO MATCH CONN.
- 1.5" VENT, 0.5" COLD/HOT WATER DOWN TO WASHING MACHINE ROUGH-IN BOX.
- 0.5" COLD WATER DOWN TO ICE MAKER ROUGH-IN BOX, EQUAL TO GUY GRAY OR IPS.
- 0.75" COLD WATER DOWN TO NEW WALL HYDRANT. MAINTAIN FREEZELESS CONNECTION PER DETAIL. HOSE BIBB EQUAL TO WOODFORD WITH RECESSED BOX AND LOOSE TEE KEY.
- NEW 1" HOT AND COLD WATER, 0.75" RECIRC DOWN TO WATER HEATER PER DETAILS.
- NEW 0.5" HOT/COLD WATER DOWN TO JANITOR BASIN.
- 2" VENT UP TO 3" VENT THRU ROOF.
- 4" OR 6" or 8" PRIMARY/SECONDARY DRAINS UP TO COMBINATION ROOF DRAIN.
- OVERFLOW FLOW SENSOR INSTALLED IN HORIZONTAL PRIOR TO CONNECTION INTO PRIMARY DRAIN. SEE FIXTURE SCHEDULE, BMS CONNECTION BY TCC.
- 8" ROOF DRAIN DOWN INTO CHASE. REFER TO UNDERGROUND PLUMBING PLAN.
- 6" ROOF DRAIN DOWN INTO CHASE. REFER TO UNDERGROUND PLUMBING PLAN.
- AUTOMATIC FLOW VALVE SET TO 1 GPM.
- INLINE ECO-CIRC PUMP PER DETAIL.



1 PLUMBING PLAN - ABOVE GRADE
SCALE: 1/8"=1'-0"

PLAN NOTES - UNDERGROUND

- 2" TRAPPED WASTE UP TO SHOWER BASIN DRAIN.
- 3" TRAPPED WASTE UP TO JANITOR BASIN.
- 4" WASTE FROM BELOW GRADE UP TO WATER CLOSET CARRIER, 2" VENT UP.
- 2" CIRCUIT VENT UP.
- 1.5" VENT UP.
- 2" TRAPPED WASTE FROM BELOW GRADE TO FLOOR DRAIN/SINK. PROVIDE FLOOR DRAIN WITH PROSET TRAP-GUARD INSERT (RE: DETAIL).
- 2" WASTE FROM BELOW GRADE TO LAVATORIES.
- 2" TRAPPED WASTE FROM BELOW GRADE TO FLOOR SINK.
- 4" WASTE UP TO WALL MOUNTED WATER CLOSET CARRIER, CONTINUE 2" VENT UP.
- INSTALL ALL SANITARY PIPING AT 1/8" SLOPE. UPON COMPLETE INSTALLATION OF NEW BELOW GRADE PIPING, CONTRACTOR SHALL TEST PIPING AT 10 FT HEAD BEFORE MAKING CONNECTION TO EXISTING SAN SEWER.
- 2" WASTE UP TO URINAL.
- 4" WASTE UP TO FINISH FLOOR CLEANOUT.
- 2" WASTE UP TO NEW SINK. CONTINUE 1.5" VENT UP.
- 4" WASTE UP TO FINISH WALL CLEANOUT AT 18" AFF. CONTINUE 2" VENT UP.
- 4" WASTE UP TO FINISH WALL CLEANOUT AT 18" AFF.
- 4" WASTE UP TO WATER CLOSET DOUBLE CARRIER, 2" VENT UP.
- 2" WASTE UP TO DOUBLE COMPARTMENT SINK.
- 2" WASTE UP TO LAUNDRY ROUGH-IN BOX.
- 2" WASTE UP TO ELECTRIC WATER COOLER, CONTINUE 1.5" VENT UP.
- 3" TRAPPED WASTE CONNECTED TO END DISCHARGE OF TRENCH DRAIN.
- 8" STORM PIPING UP INTO CHASE.
- 6" STORM PIPING UP INTO CHASE.
- 3" STORM PIPING UP INTO CHASE.
- 4" STORM PIPING UP CONNECTING TO GUTTER TO ROUND BOOT.



1 WASTE & VENT PLAN - BELOW GRADE
SCALE: 1/8"=1'-0"



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KANSAS CITY, MO 64108



1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108



1701 WALNUT STREET, SUITE 300
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LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PROJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

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LEES SUMMIT, MO

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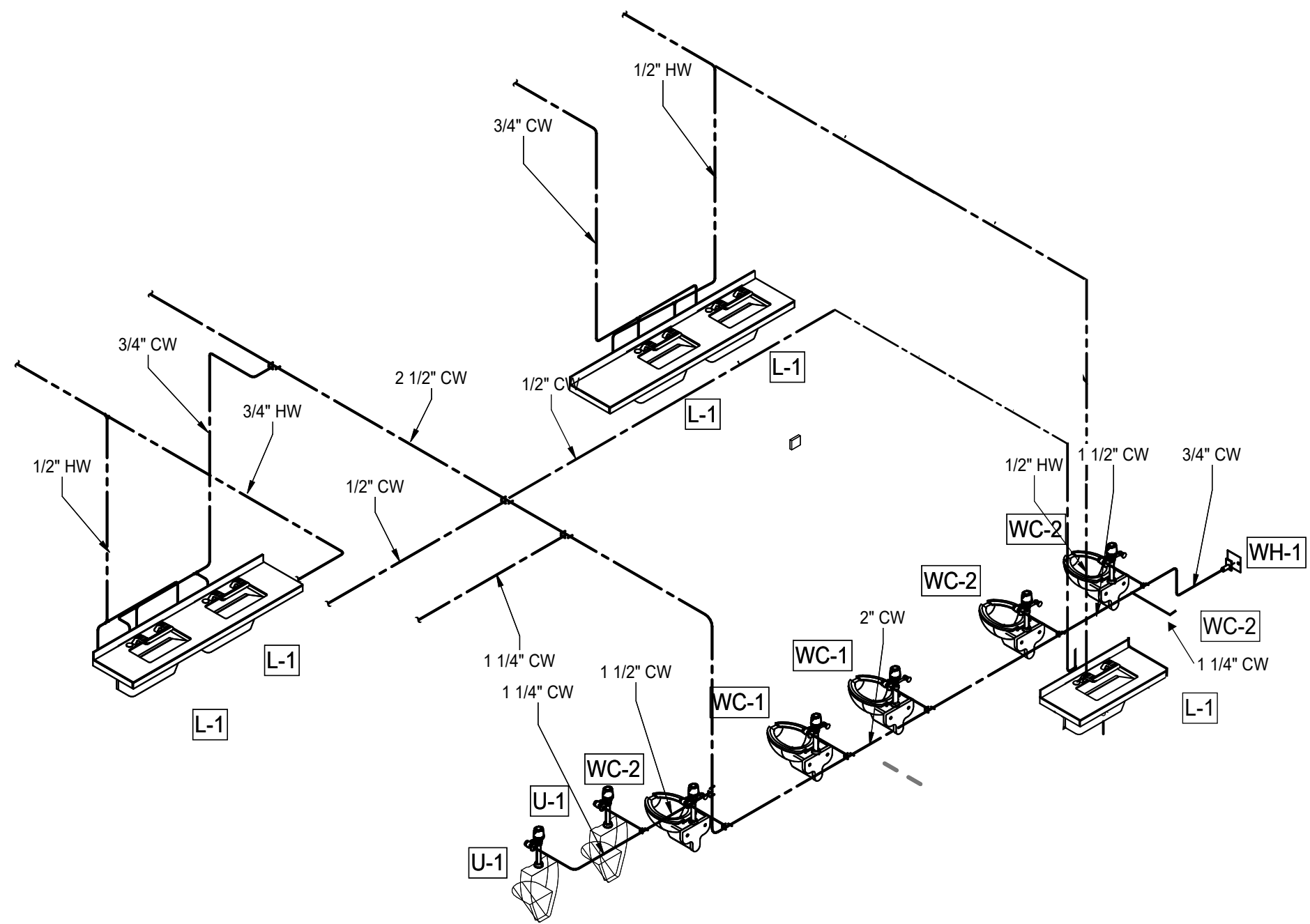
SHEET TITLE

ABOVE AND
BELOW GROUND
PLUMBING PLANS

P-100

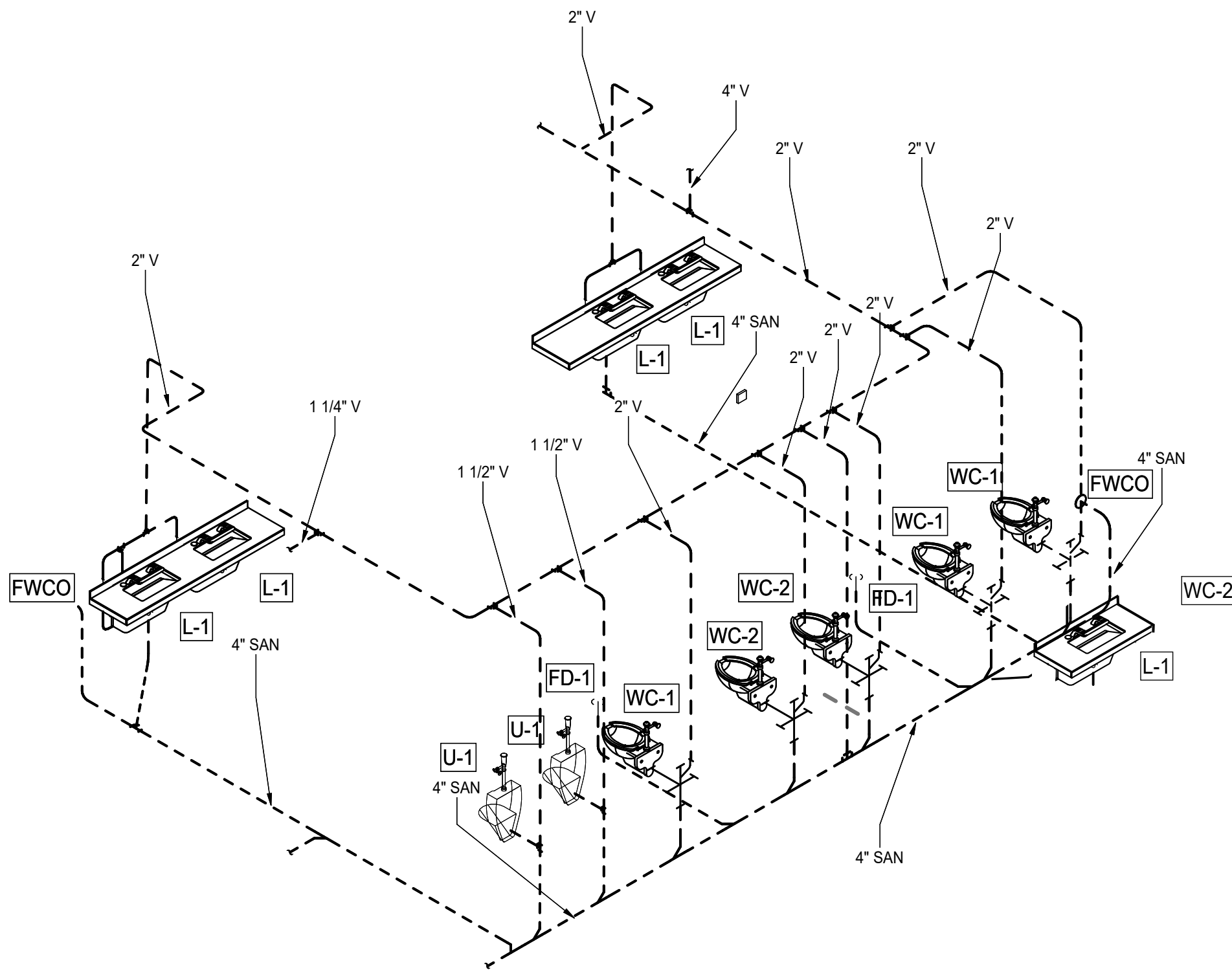
SHEET 82 OF 102

8/11/2024 10:09:20 PM



2 PARTIAL WATER PIPING DIAGRAM

SCALE: NONE



1 PARTIAL WASTE/VENT PIPING DIAGRAM

SCALE: NONE



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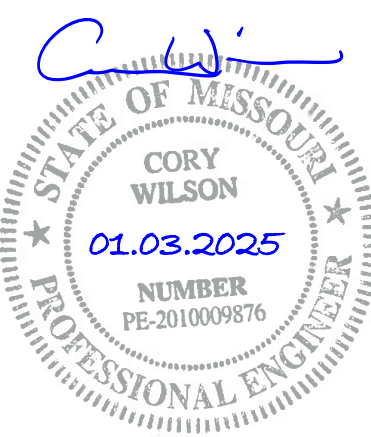


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1701 WALNUT STREET, SUITE 300
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SHEET TITLE

PLUMBING
DIAGRAMS

P-300

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LEES SUMMIT, MO

MARK DATE DESCRIPTION

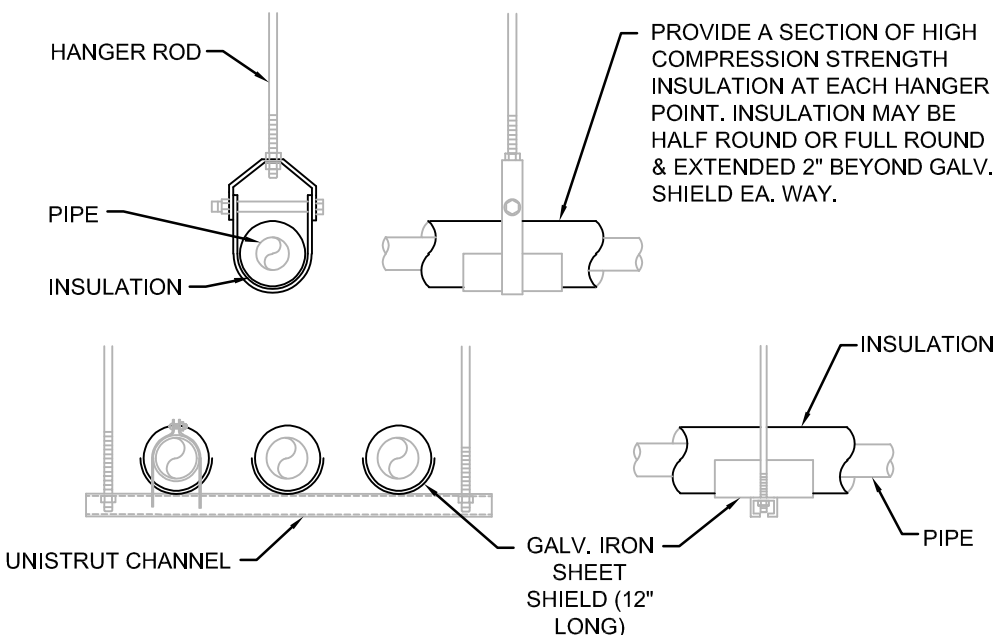
PROJECT NO: 2403
CAD DWG FILE: Lee's Summit - Terminal MEP.rvt
DESIGNED BY: CMW
DRAWN BY: DM
CHECKED BY: WAI
APPROVED BY: Approver
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SHEET TITLE

PLUMBING
DETAILS

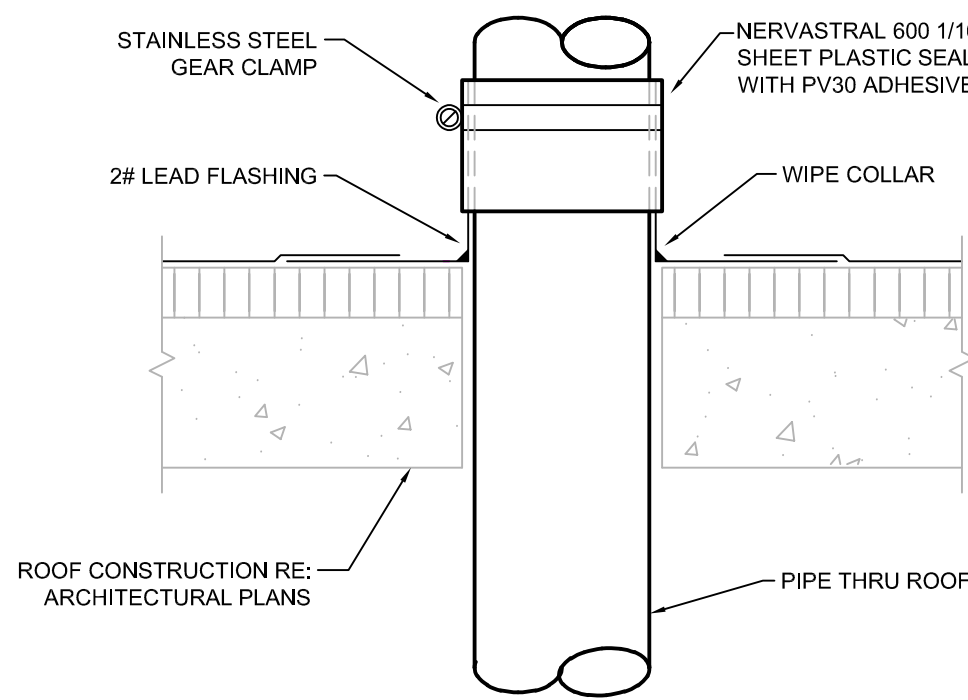
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SHEET 84 OF 102

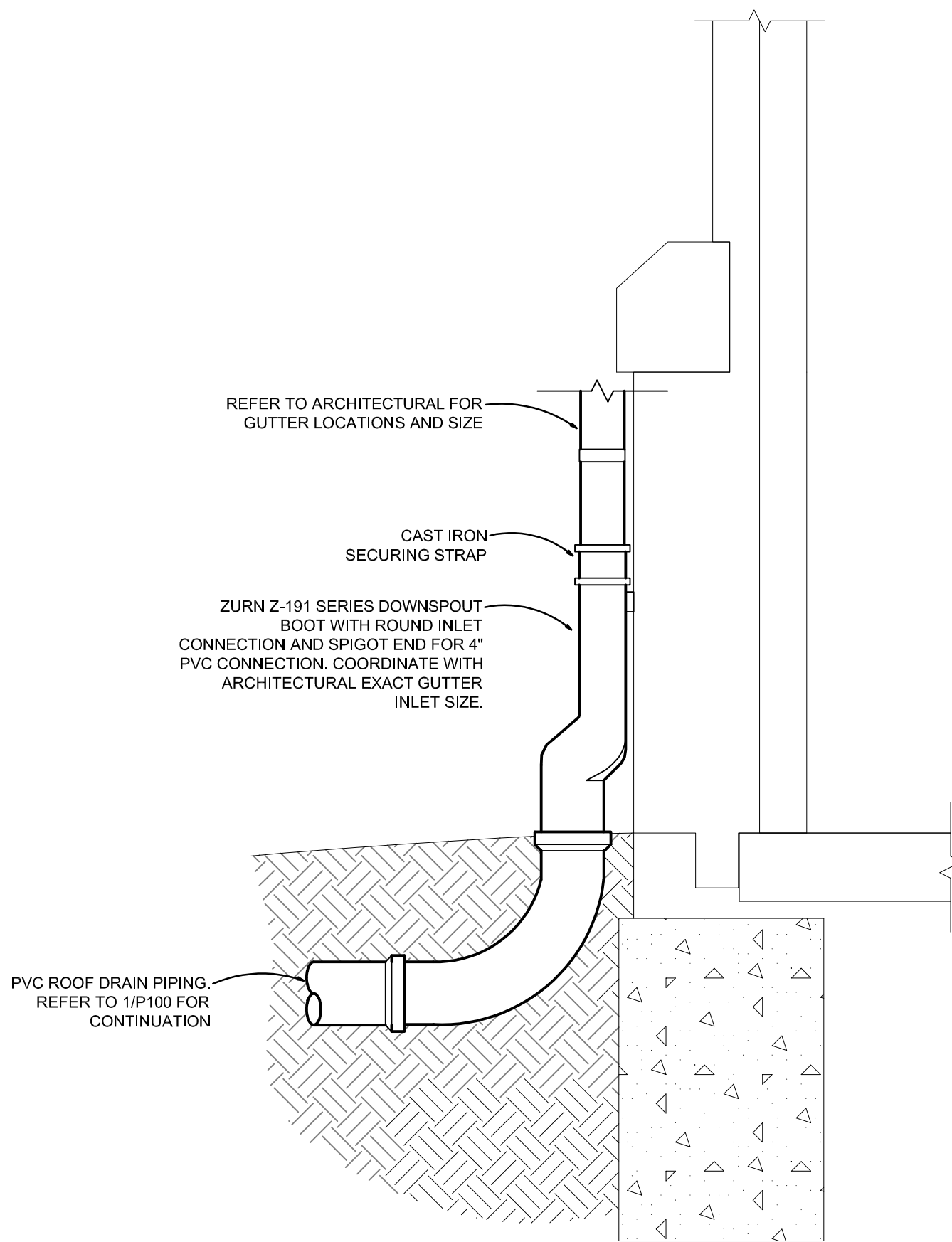


- NOTES:
1. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAMS.
 2. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.

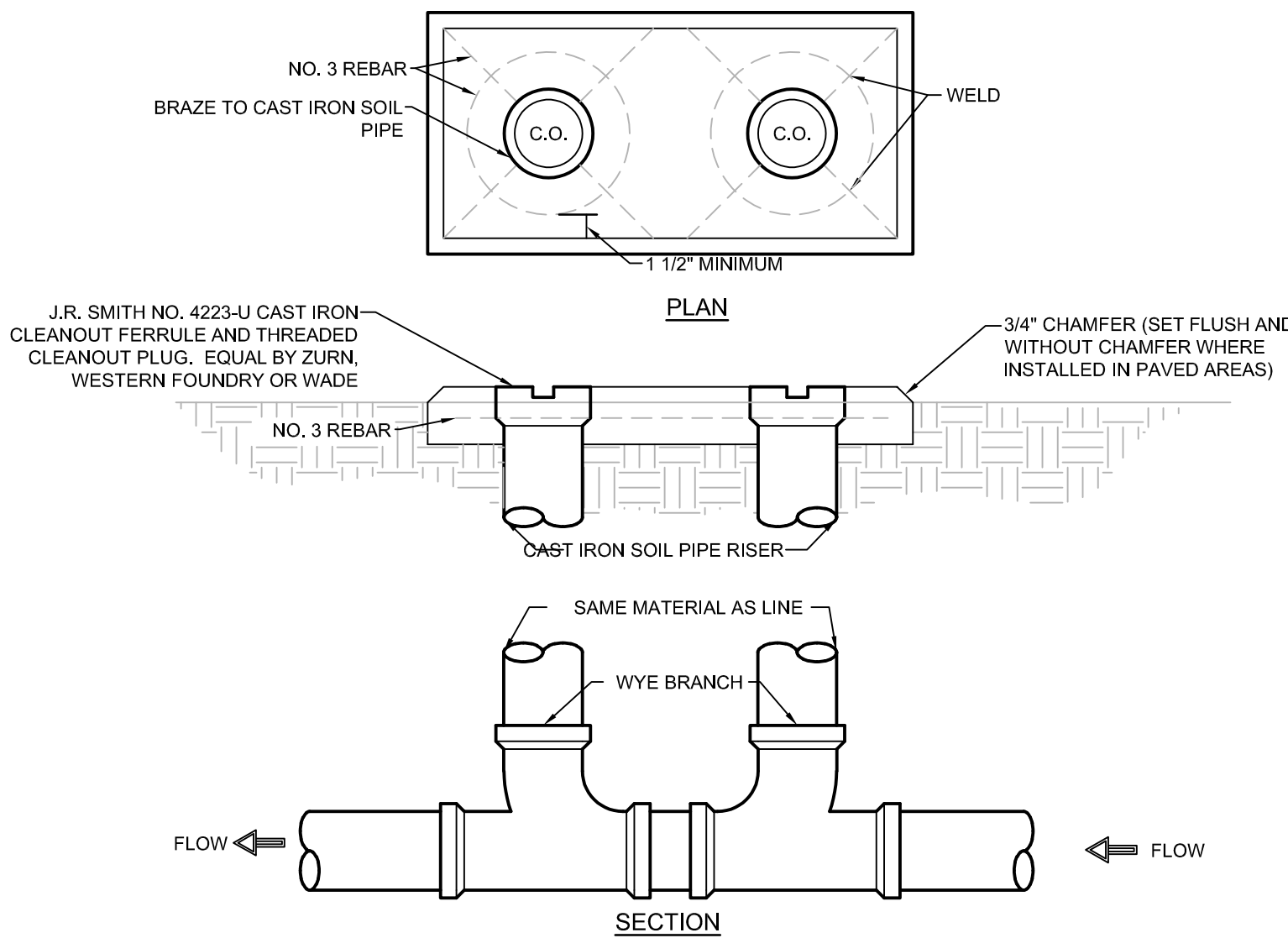
9 PIPE INSULATION DETAIL
SCALE: NONE



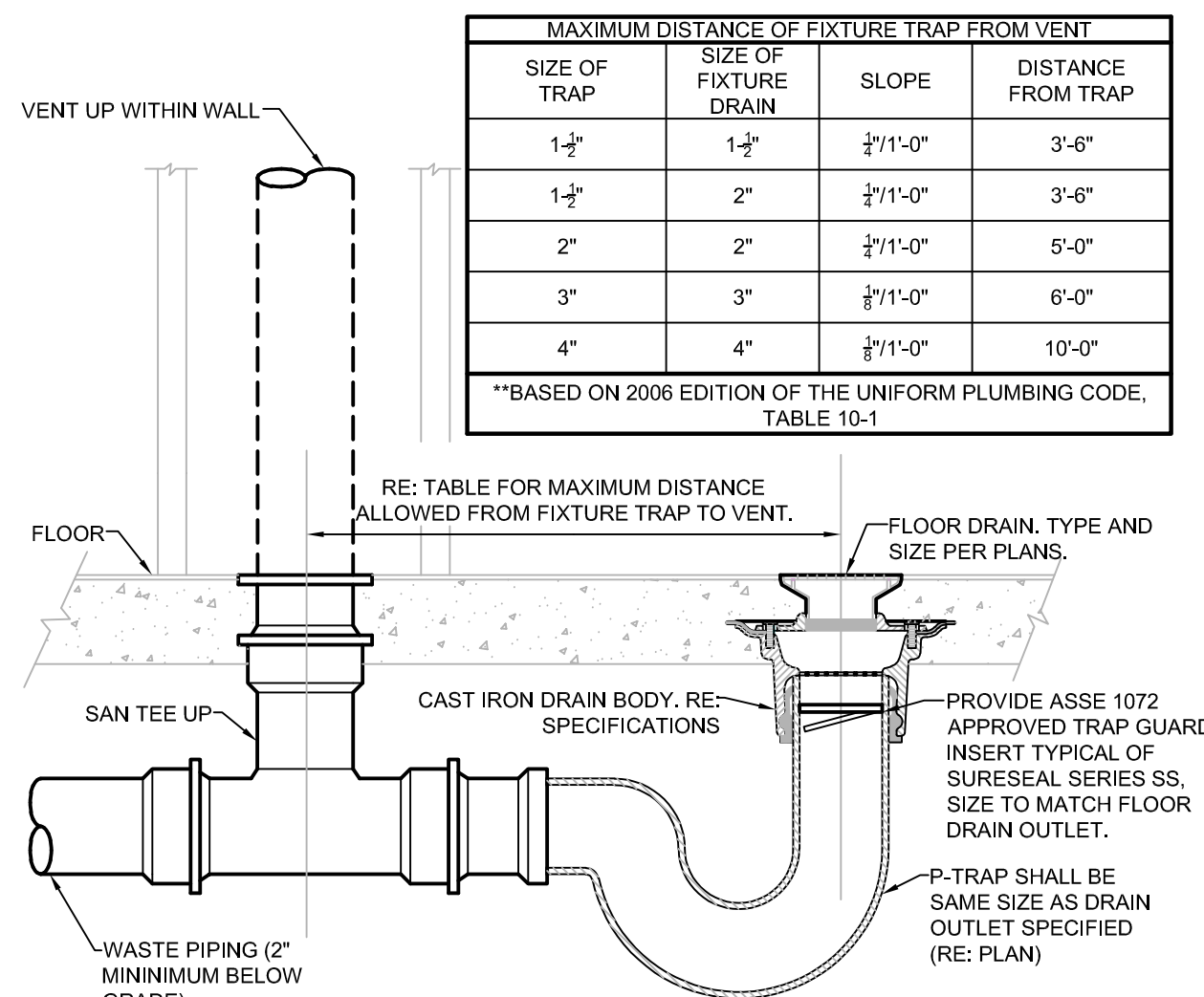
8 VENT THRU ROOF DETAIL
SCALE: NONE



7 DOWNSPOUT BOOT DETAIL
SCALE: NONE



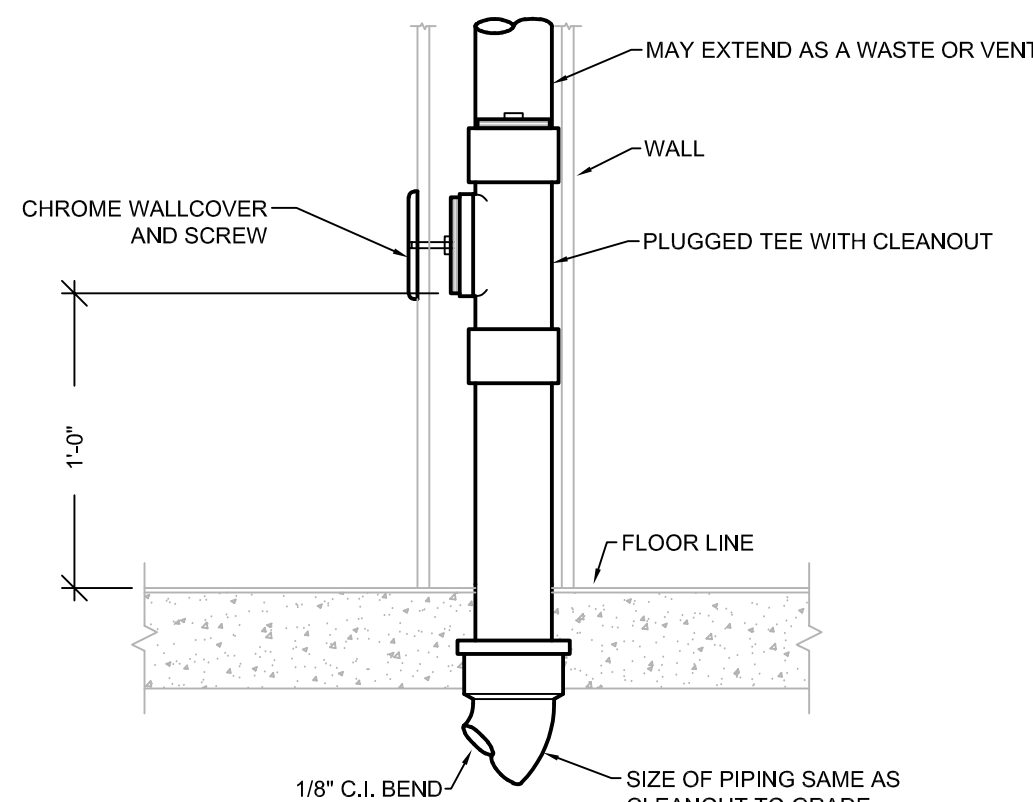
6 TWO WAY FINISHED GRADE CLEANOUT DETAIL
SCALE: NONE



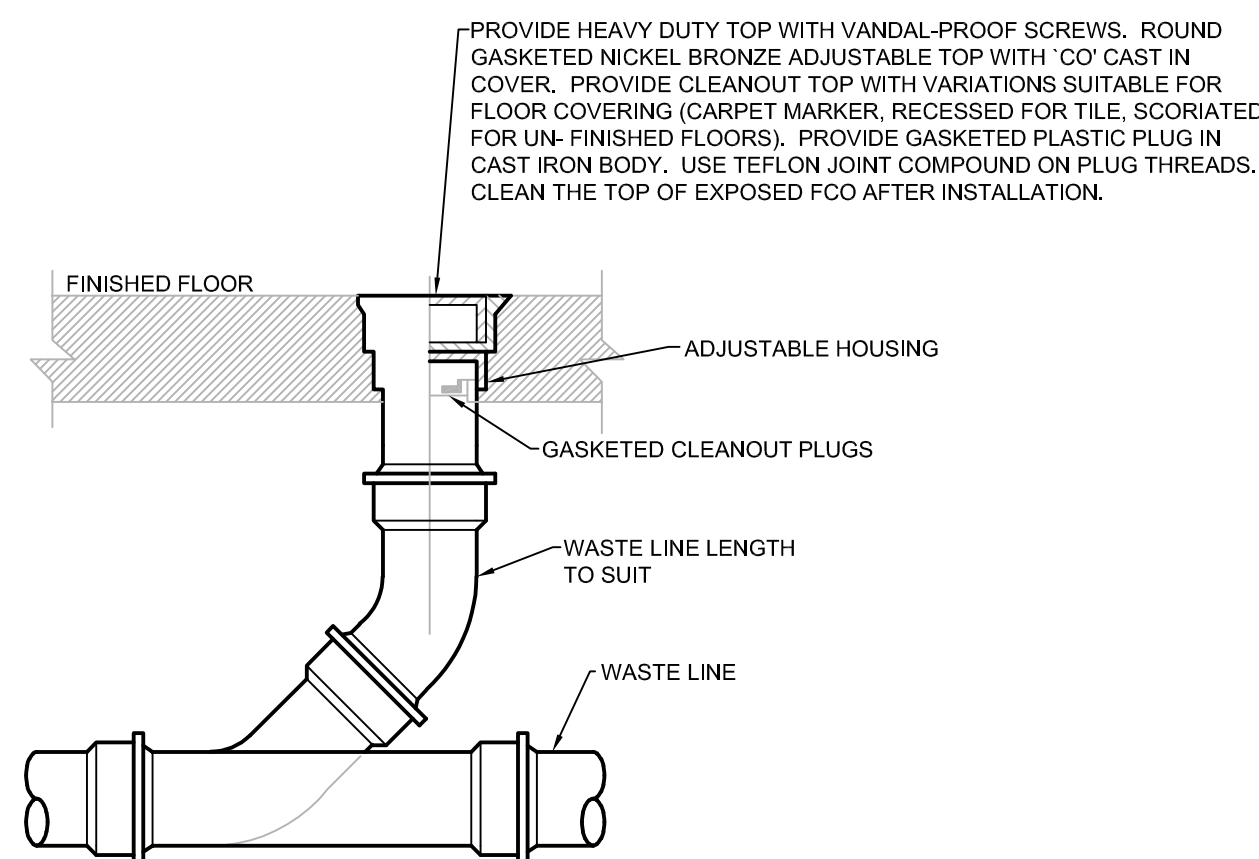
MAXIMUM DISTANCE OF FIXTURE TRAP FROM VENT			
SIZE OF TRAP	SIZE OF FIXTURE DRAIN	SLOPE	DISTANCE FROM TRAP
1-1/2"	1-1/2"	1/4"=1'-0"	3'-6"
1-1/2"	2"	1/4"=1'-0"	3'-6"
2"	2"	1/4"=1'-0"	5'-0"
3"	3"	1/4"=1'-0"	6'-0"
4"	4"	1/4"=1'-0"	10'-0"

**BASED ON 2008 EDITION OF THE UNIFORM PLUMBING CODE, TABLE 101.1

5 FLOOR DRAIN DETAIL
SCALE: NONE

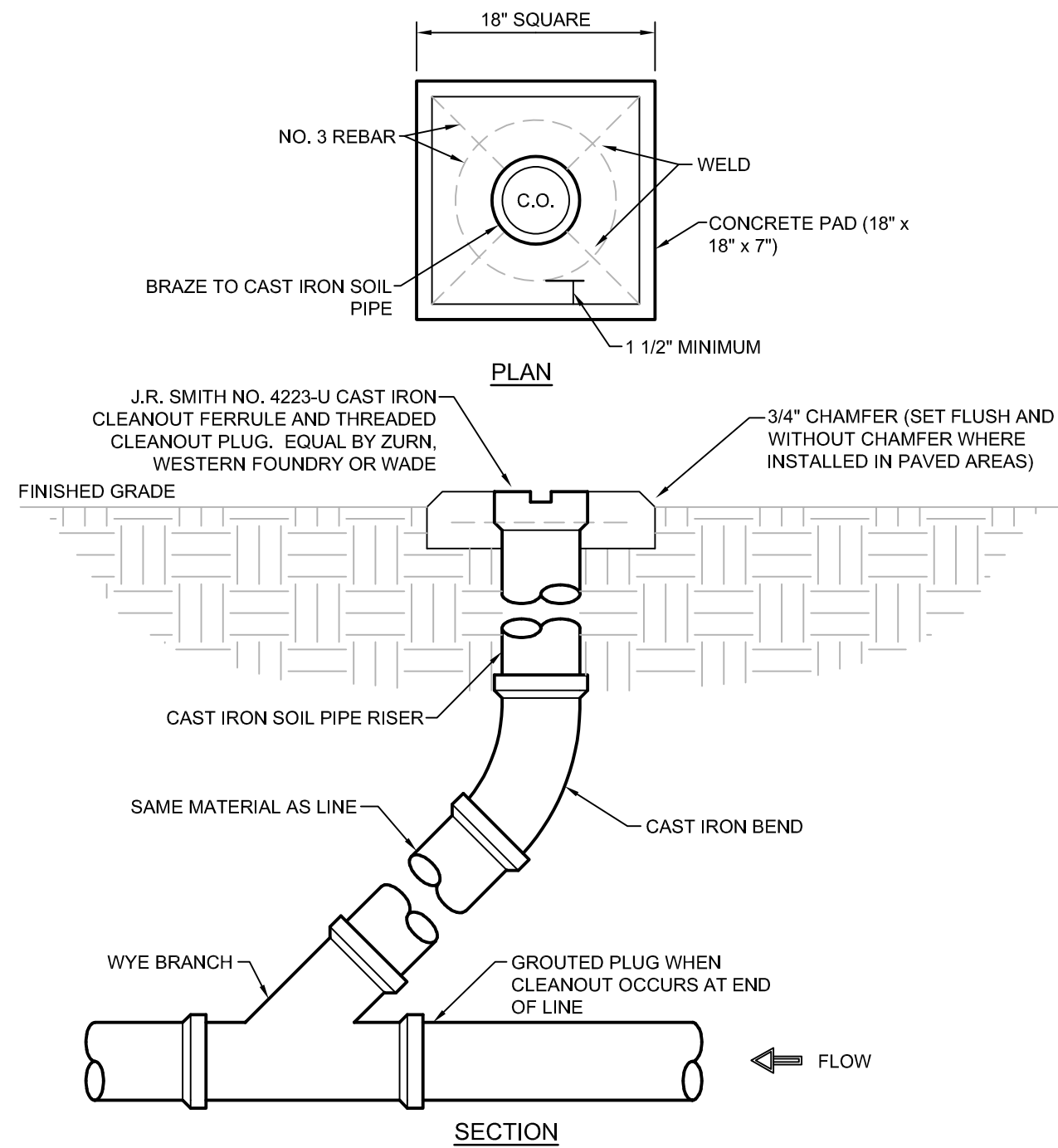


4 WALL CLEANOUT DETAIL
SCALE: NONE

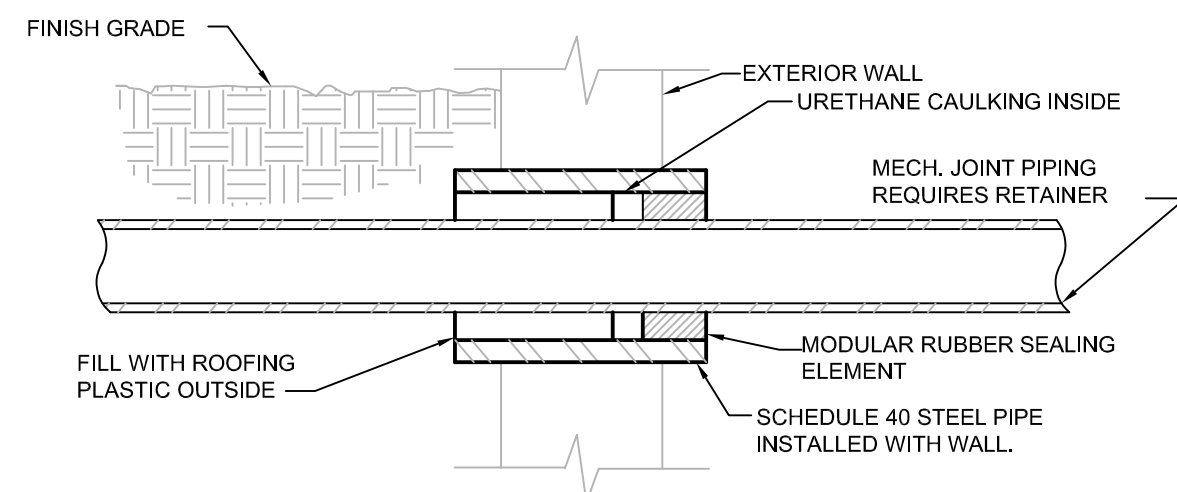


LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50'-0" INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS. PROVIDE BACKFILL PER ARCHITECTURAL SPECIFICATIONS. LOCATE CLEANOUTS WHERE THERE IS 1'-6" CLEAR AROUND. CONSULT LOCAL CODES FOR OTHER PCO REQUIREMENTS.

3 FLOOR CLEANOUT DETAIL
SCALE: NONE



2 FINISHED GRADE CLEANOUT DETAIL
SCALE: NONE



- NOTES:
1. IF PIPING PASSES THROUGH WALL ABOVE GRADE, SLEEVE SHALL BE FLUSH WITH EXTERIOR SIDE OF WALL.

1 PIPE SLEEVE THRU EXTERIOR WALL
SCALE: NONE

KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PROJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

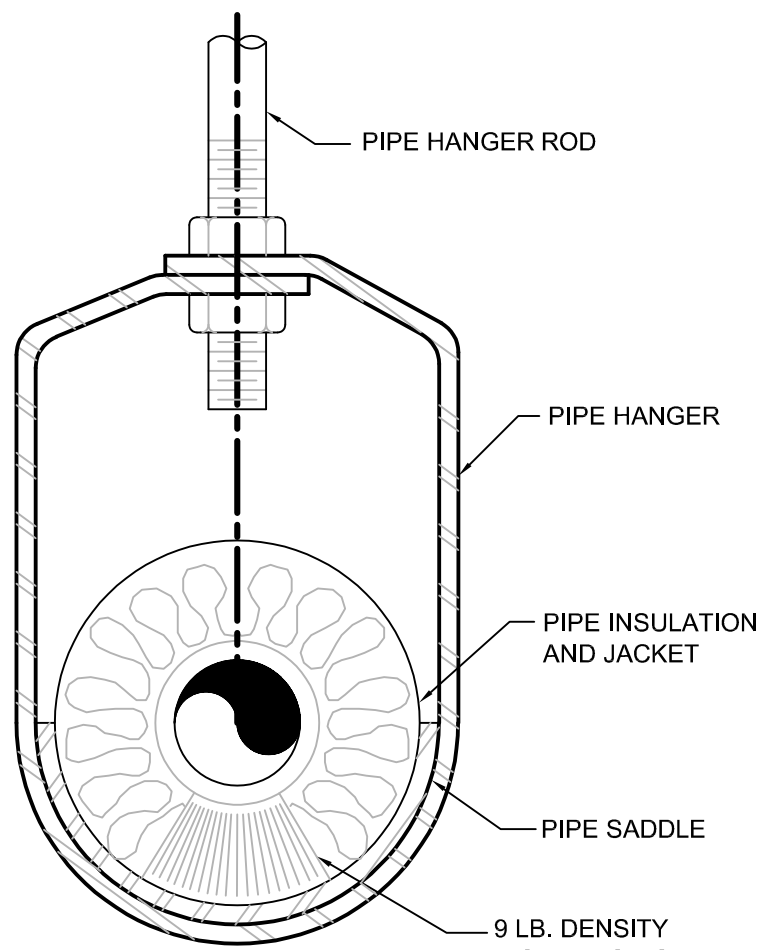
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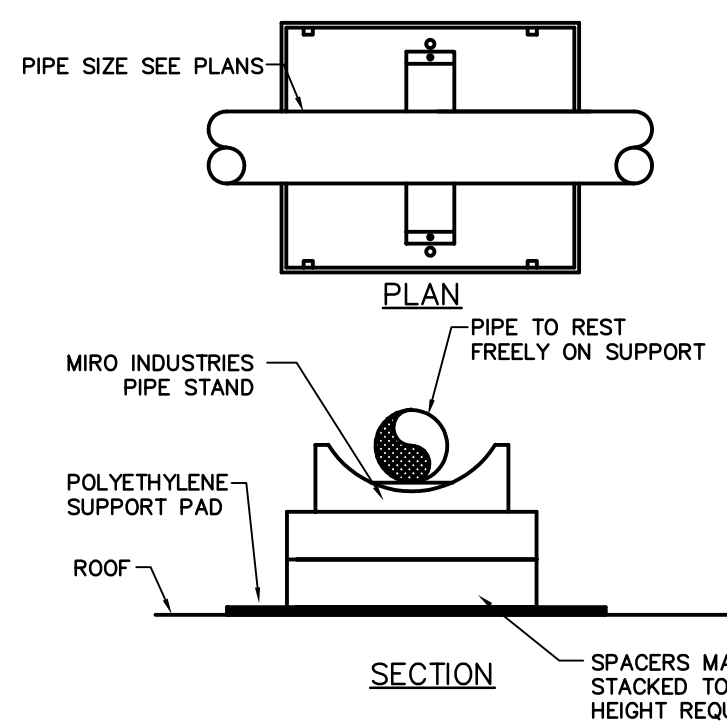
PLUMBING
DETAILS

P-410

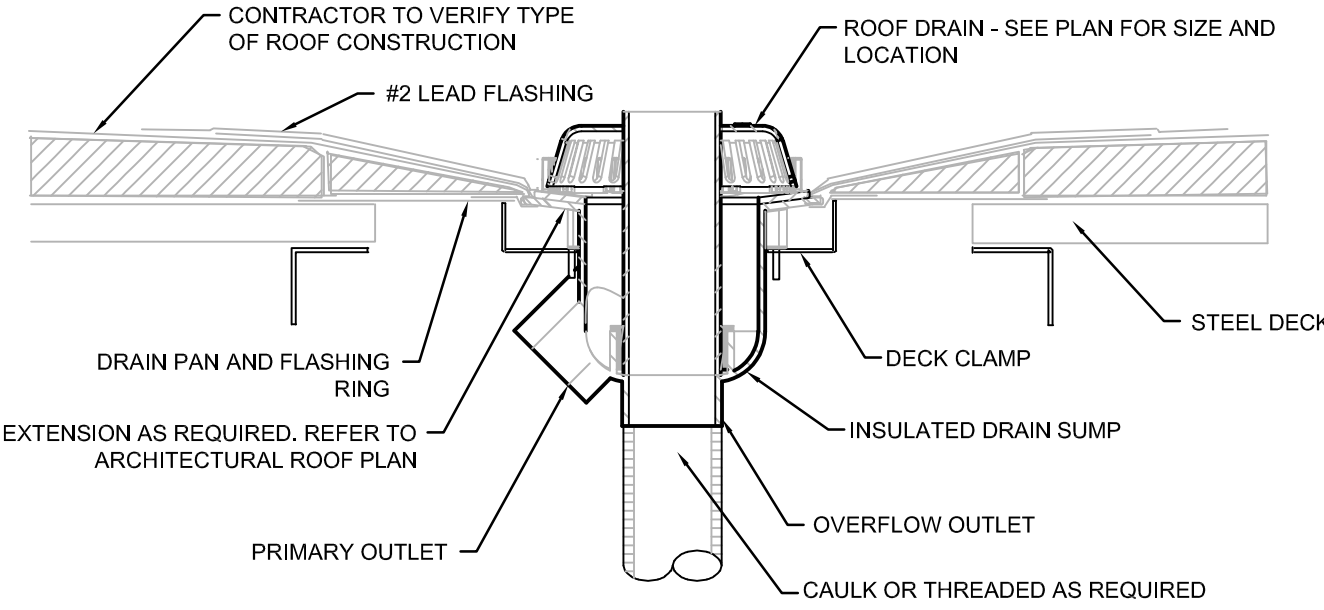
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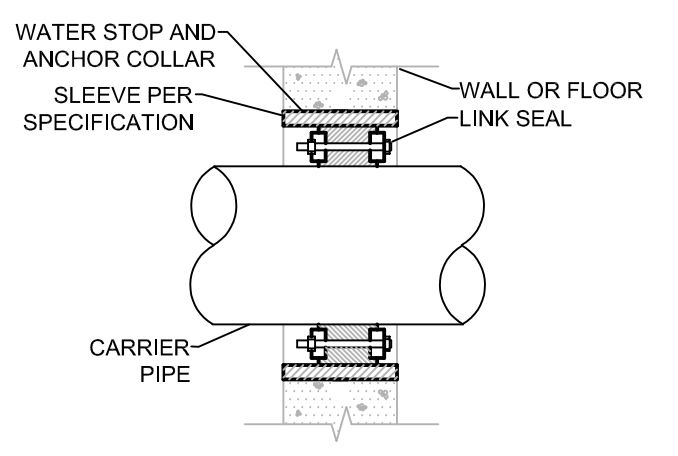
11 PIPE HANGER DETAIL
SCALE: NONE



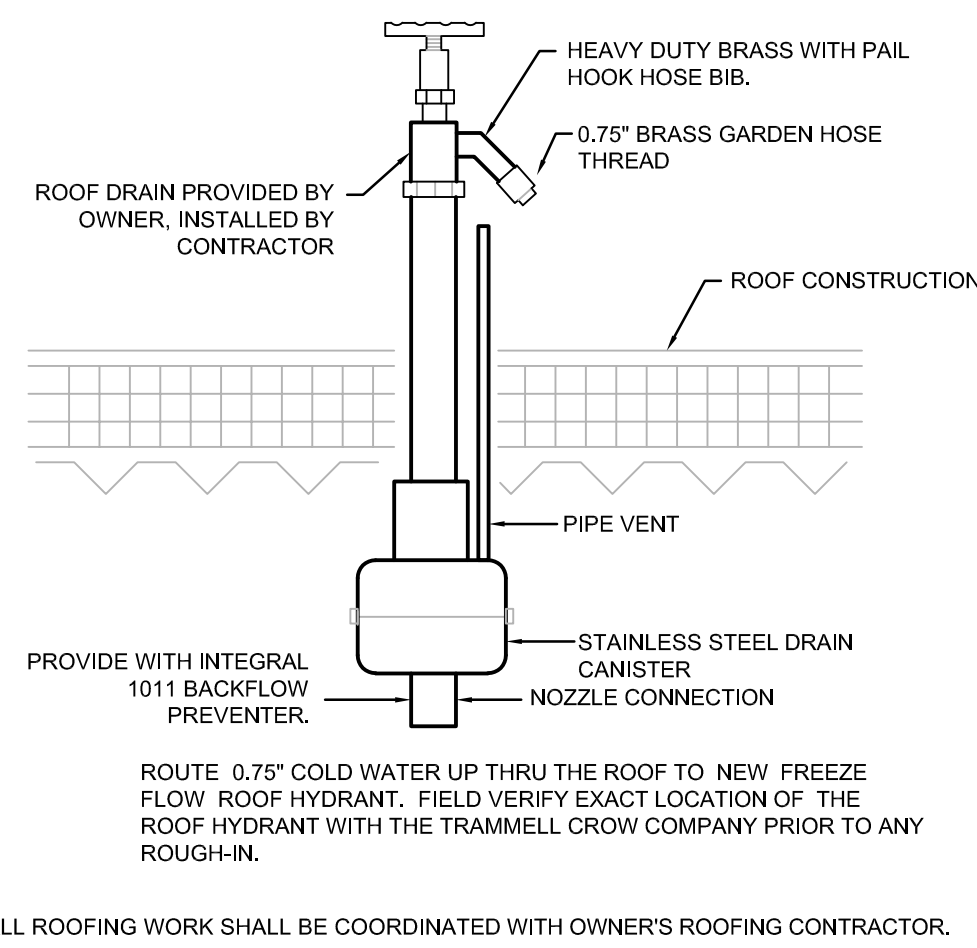
9 ROOF PIPE SUPPORT
SCALE: NONE



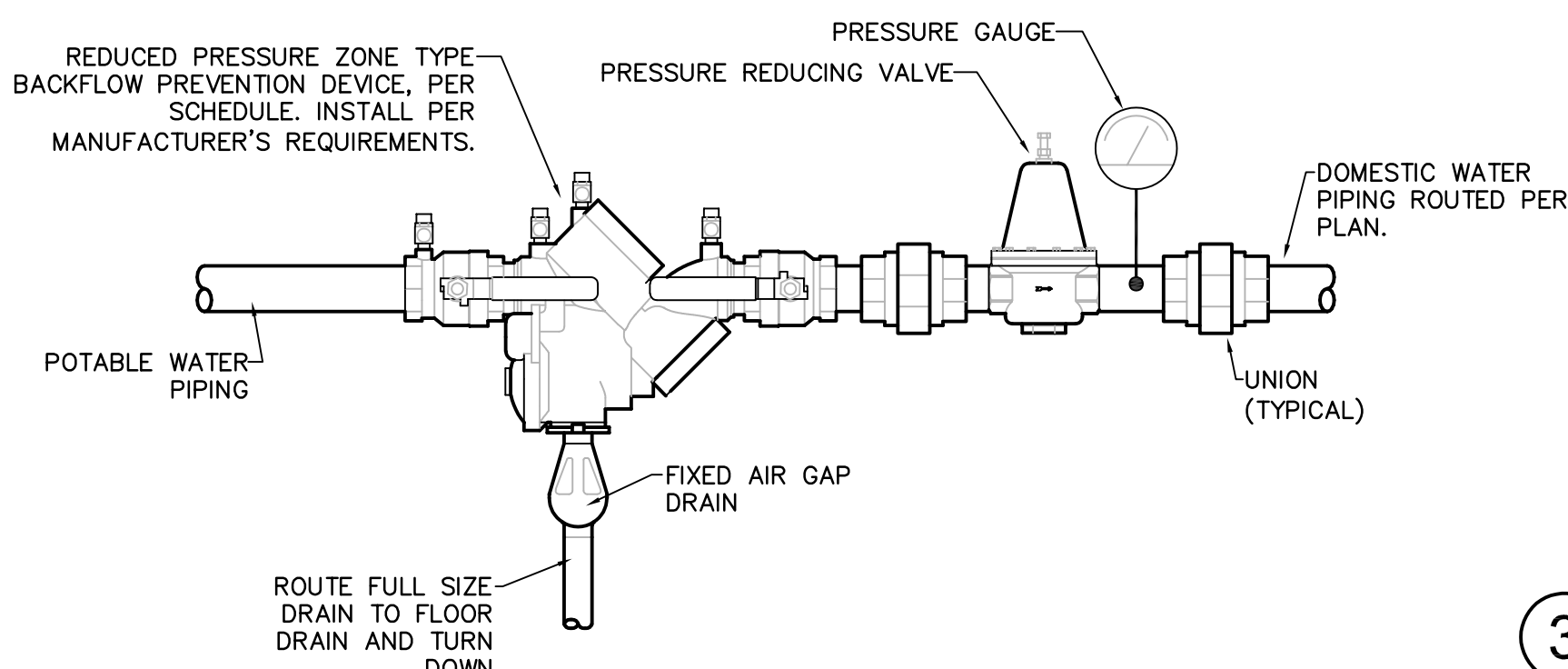
10 ROOF DRAIN DETAIL
SCALE: NONE



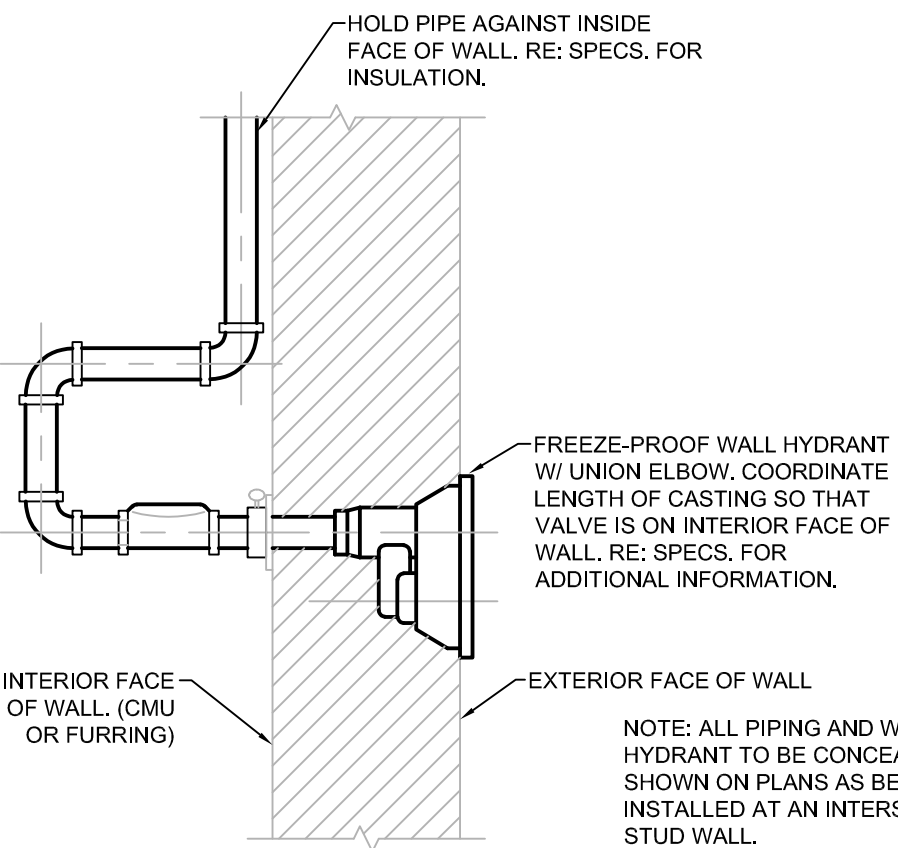
8 LINK SEAL DETAIL
SCALE: NONE



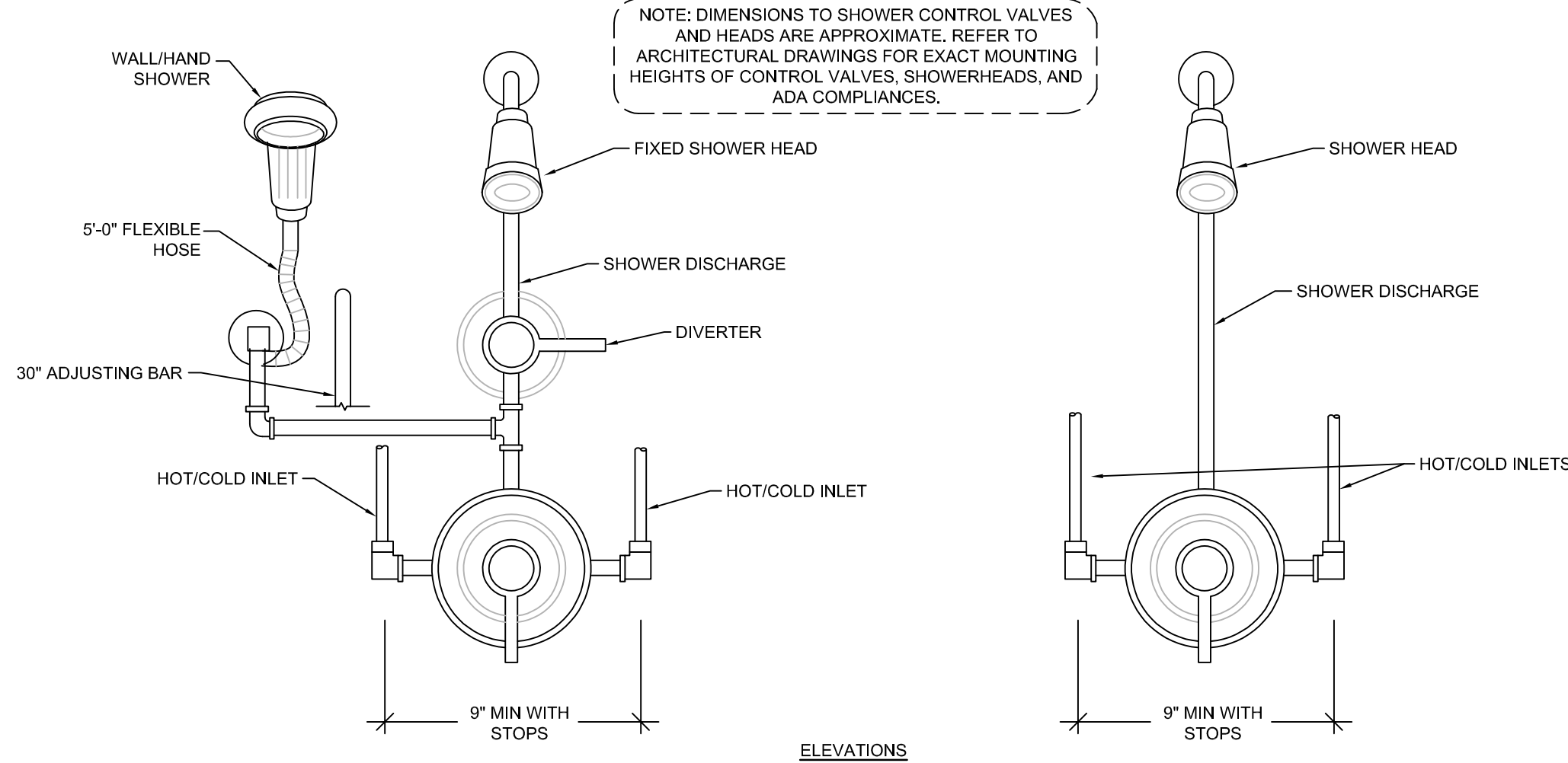
7 ROOF HYDRANT DETAIL
SCALE: NONE



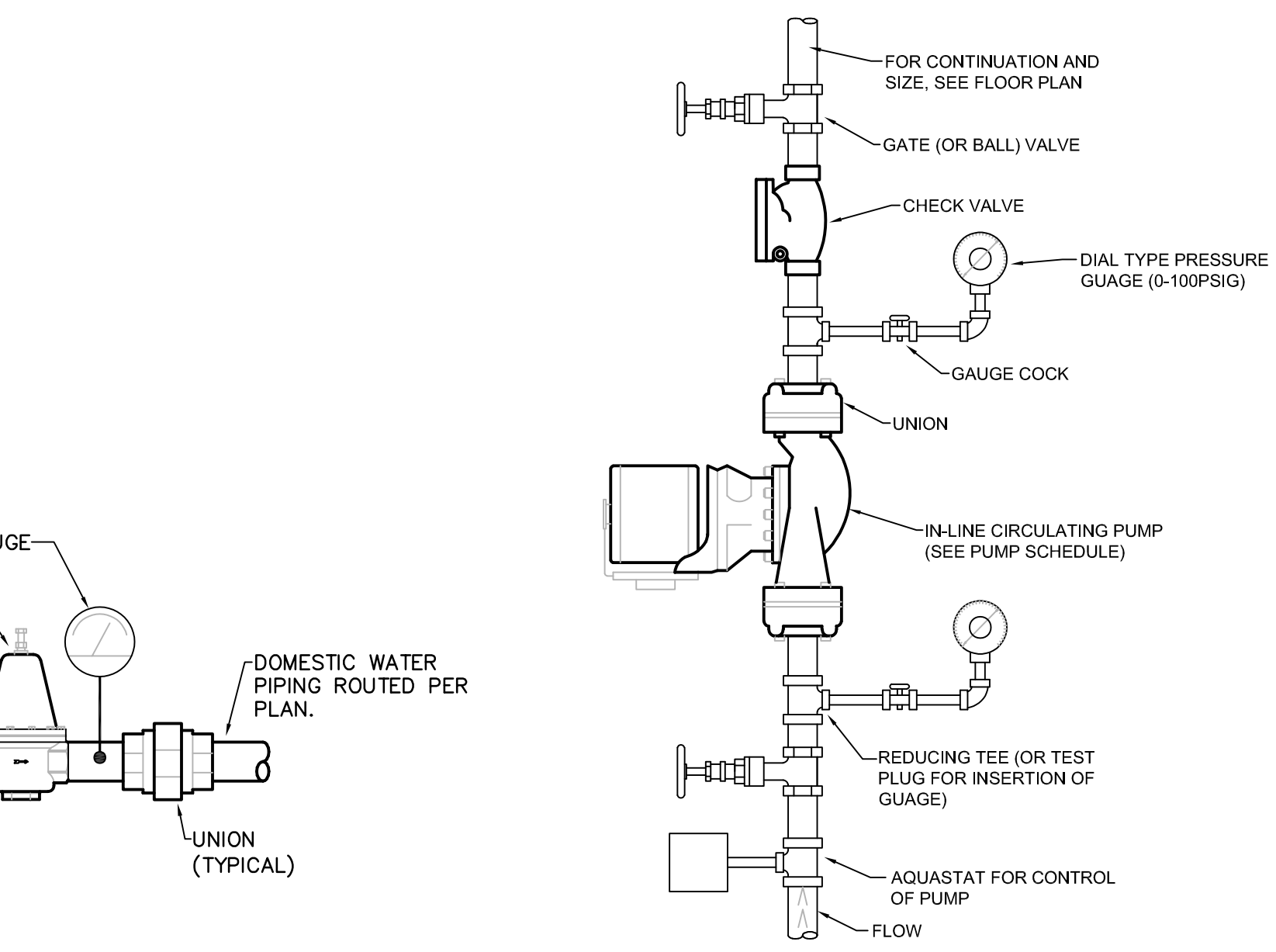
9 BACKFLOW PREVENTOR DETAIL
SCALE: NONE



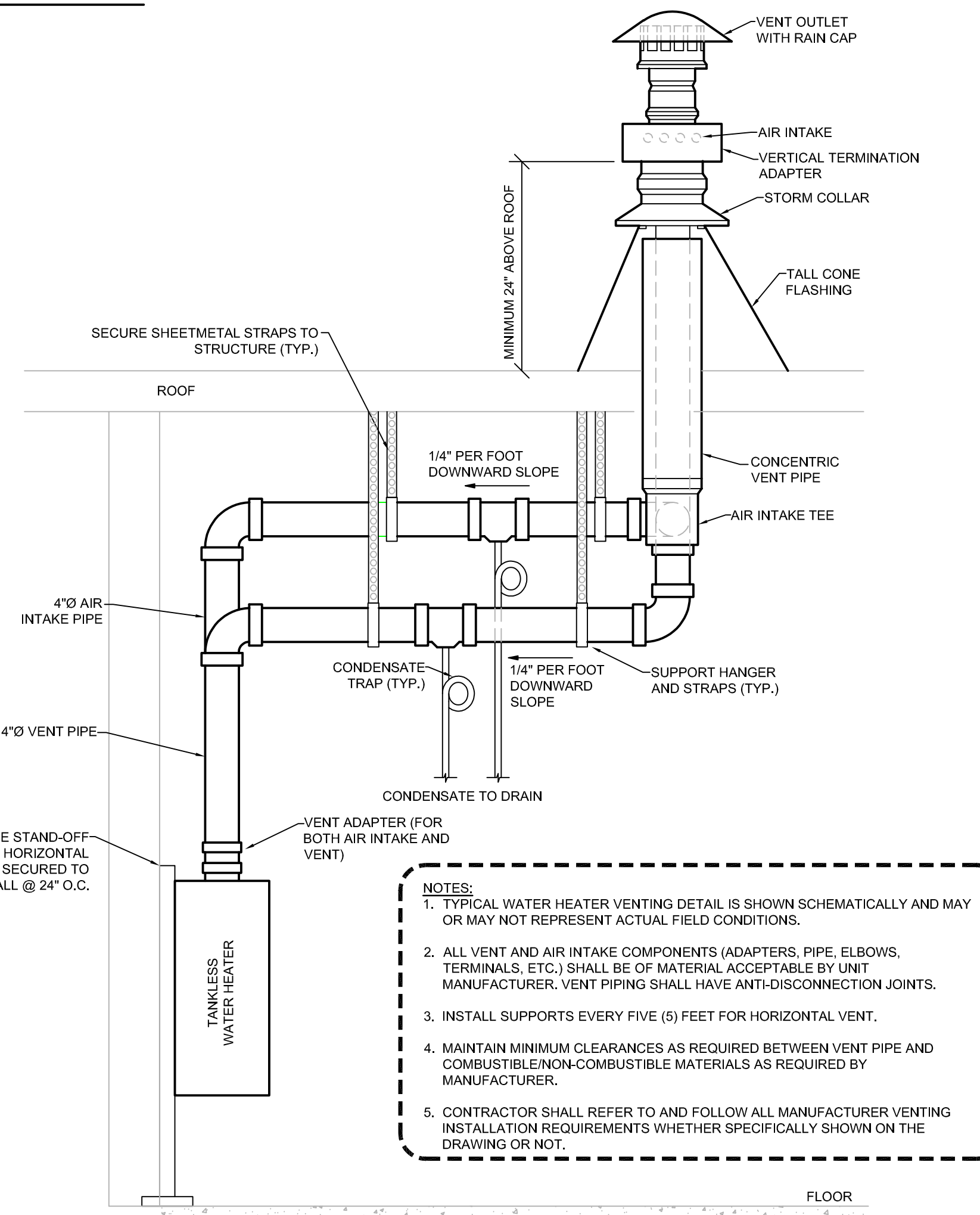
6 WALL HYDRANT DETAIL
SCALE: NONE



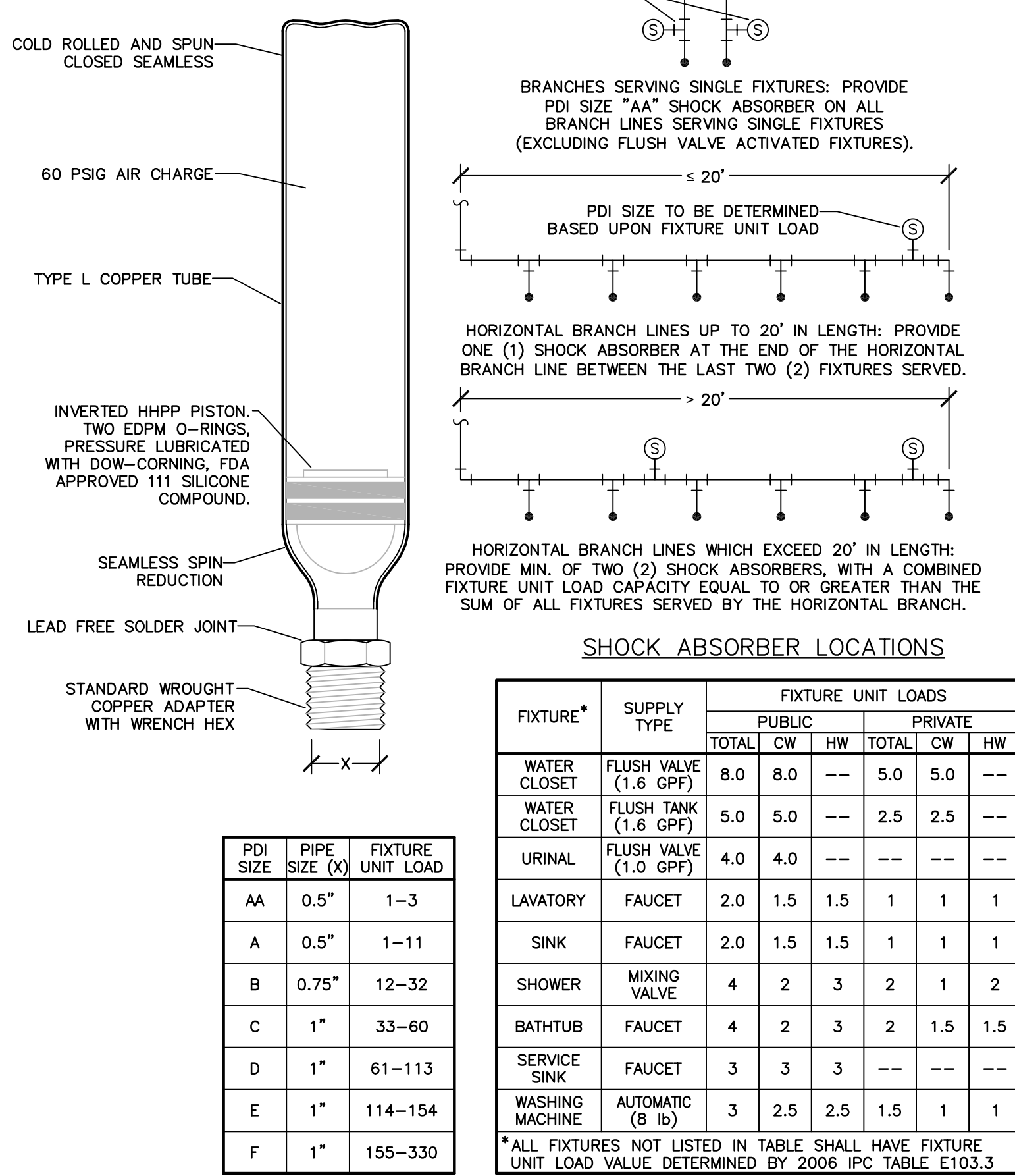
4 SHOWER INSTALLATION DETAIL
SCALE: NONE



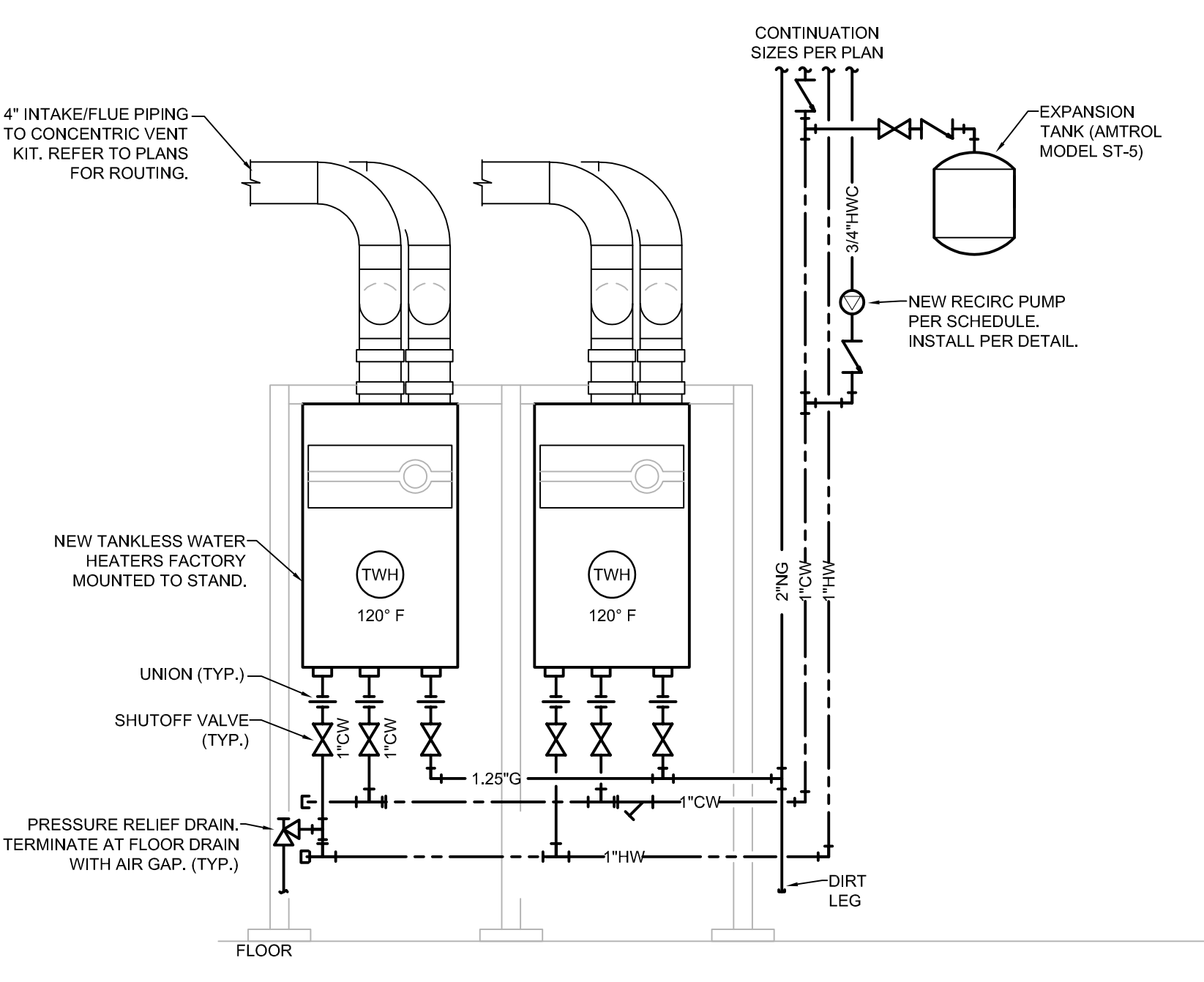
3 CIRCULATING PUMP DETAIL
SCALE: NONE



2 TANKLESS WATER HEATER VENTING DETAIL
SCALE: NONE



5 SHOCK ABSORBER DETAIL
SCALE: NONE



1 WATER HEATER (WH-1-2) PIPING DIAGRAM
SCALE: NONE

PLUMBING FIXTURE SCHEDULE - SUPPLY FIXTURES

TAG	TYPE	MANUFACTURER	MODEL	DESCRIPTION	ACCESSORIES	CONNECTIONS ²			
						WASTE	VENT	CW	HW
WC-1	WALL MOUNTED HIGH EFFICIENCY WATER CLOSET	TOTO	CT708EV	WALL MOUNTED, VITREOUS CHINA, ASME A112.19.2 COMPLIANT, LOW CONSUMPTION (1.28 GPF) SIPHON JET FLUSH WATER CLOSET WITH ELONGATED BOWL, 1-1/2" BACK SPUD, AND 2-1/2" TRAPWAY. REFER TO ARCHITECTURAL PLANS FOR ADA MOUNTING HEIGHT.	FINISH SHALL BE COTTON (#01). PROVIDE WITH TOTO MODEL #SC534 WHITE OPEN FRONT ELONGATED SEAT LESS COVER. PROVIDE WITH ASSE 1037 COMPLIANT, CONCEALED ECO-POWER 1.28 GPF AUTOMATIC INFRARED SENSOR ACTIVATED FLUSH VALVE TYPICAL OF TOTO MODEL TEL2N3HSS WITH 1" ANGLE STOP, 1-1/2" VACUUM BREAKER, 4"x4" STAINLESS STEEL ACCESS COVER PLATE. UNIT SHALL INCLUDE A PISTON VALVE WITH STAINLESS STEEL SELF-CLEANING SOLENOID, WITH 24 HOUR MAINTENANCE FLUSH. PROVIDE WITH HEAVY DUTY FLOOR MOUNTED CARRIER COMPATIBLE WITH FIXTURE SPECIFIED, ZURN, JR SMITH, OR EQUAL.	4"	2"	1-1/4"	--
WC-2	WALL MOUNTED HIGH EFFICIENCY WATER CLOSET	TOTO	CT708EV	WALL MOUNTED, VITREOUS CHINA, ASME A112.19.2 COMPLIANT, LOW CONSUMPTION (1.28 GPF) SIPHON JET FLUSH WATER CLOSET WITH ELONGATED BOWL, 1-1/2" BACK SPUD, AND 2-1/2" TRAPWAY. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.	FINISH SHALL BE COTTON (#01). PROVIDE WITH TOTO MODEL #SC534 WHITE OPEN FRONT ELONGATED SEAT LESS COVER. PROVIDE WITH ASSE 1037 COMPLIANT, CONCEALED ECO-POWER 1.28 GPF AUTOMATIC INFRARED SENSOR ACTIVATED FLUSH VALVE TYPICAL OF TOTO MODEL TEL2N3HSS WITH 1" ANGLE STOP, 1-1/2" VACUUM BREAKER, 14"x12" STAINLESS STEEL ACCESS COVER PLATE. UNIT SHALL INCLUDE A PISTON VALVE WITH STAINLESS STEEL SELF-CLEANING SOLENOID, WITH 24 HOUR MAINTENANCE FLUSH. PROVIDE WITH HEAVY DUTY FLOOR MOUNTED CARRIER COMPATIBLE WITH FIXTURE SPECIFIED, ZURN, JR SMITH, OR EQUAL.	4"	2"	1-1/4"	--
UR-1	WALL MOUNTED HIGH EFFICIENCY URINAL	TOTO	UE080UVG	WALL MOUNTED, VITREOUS CHINA, ASME A112.19.2 COMPLIANT, LOW CONSUMPTION (0.125 GPF) WASHOUT URINAL WITH CONCEALED INTEGRAL TRAP, 3/4" BACK SPUD INLET. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS.	FINISH SHALL BE COTTON (#01). PROVIDE WITH INTEGRATED FLUSH-VALVE WITH 1/2" ANGLE STOP, 1/2" VACUUM BREAKER, ECO SELF-POWERED HYDROELECTRIC FLUSH VALVE AND SENSOR, AND STAINLESS STEEL DRAIN COVER (JTH3010). UNIT SHALL INCLUDE A PISTON VALVE WITH STAINLESS STEEL SELF-CLEANING SOLENOID, WITH 12 HOUR MAINTENANCE FLUSH. PROVIDE WITH HEAVY DUTY FLOOR MOUNTED CARRIER COMPATIBLE WITH FIXTURE SPECIFIED	2"	1-1/2"	3/4"	--
WB-1	WALL MOUNTED CUSTOM WASH STATION	BRADLEY	SEE ARCH PLANS	WALL MOUNTED, DUAL BOWL, OMNI-DECK WITH CUSTOM LENGTH PER ARCH PLANS, LD-3001 SERIES WITH TERREON SOLID SURFACE DECK WITH INTEGRAL RECTANGULAR BOWLS	FINISH SHALL BE COLOR AS SELECTED BY ARCHITECT (BASIS IS BRUSHED BRONZE, TBD). PROVIDE WITH TWO (2) BRADLEY WASHBAR DUO WB01 WHICH INCLUDES SOAP DISPENSER AND FAUCET WITH TMJ AND HAND DRYER. FURNISH ALL REQUIRED ACCESSORIES INCLUDING WALL BRACKETS, STAINLESS SHROUDS FOR COVERING SUPPLY-TRAPS, TOP FEED SOAP REFILL, BRUSH STAINLESS IN COLOR.	2"	1-1/2"	1/2"	1/2"
WB-2	WALL MOUNTED CUSTOM WASH STATION	BRADLEY	SEE ARCH PLANS	WALL MOUNTED, SINGLE BOWL OMNI-DECK WITH CUSTOM LENGTH PER ARCH PLANS (30" AND 64"), LD-3001 SERIES WITH TERREON SOLID SURFACE DECK WITH INTEGRAL RECTANGULAR BOWLS	FINISH SHALL BE COLOR AS SELECTED BY ARCHITECT (BASIS IS BRUSHED BRONZE, TBD). PROVIDE WITH ONE (1) BRADLEY WASHBAR DUO WB01 WHICH INCLUDES SOAP DISPENSER AND FAUCET WITH TMJ AND HAND DRYER. FURNISH ALL REQUIRED ACCESSORIES INCLUDING WALL BRACKETS, STAINLESS SHROUDS FOR COVERING SUPPLY-TRAPS, TOP FEED SOAP REFILL, BRUSH STAINLESS IN COLOR.	2"	1-1/2"	1/2"TW	
L-1	HALL WUNG WHEELCHAIR USERS LAVATORY	TOTO	LT308	WALL MOUNTED, ADA AND ASME A112.19.2 COMPLIANT VITREOUS CHINA LAVATORY WITH 20.5"x27" OVERALL SIZE AND 15"x15" BASIN WITH SANAGLOSS CERAMIC GLAZING, FRONT OVERFLOW, AND MOUNTING KIT, COORDINATE FAUCET HOLE QUANTITY AND SPACINGS WITH FAUCET SPECIFIED. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT. PROVIDE WITH PUNCHING FOR CONCEALED ARM CARRIER, AND APPROPRIATE FLOOR MOUNTED CARRIER SUPPORTS TYPICAL OF JR SMITH OR ZURN. FINISH TO BE COTTON	PROVIDE WITH ADA COMPLIANT AUTOMATIC INFRARED, HYDRO-POWER SELF GENERATING, SENSOR OPERATED FAUCET TYPICAL OF TOTO AXIOM MODEL TEL3K10S, 0.20 GALLON PER CYCLE SINGLE HOLE MOUNT SELF-ADJUSTING FAUCET WITH CONTROL BOX AND MOUNTING HARDWARE, PROVIDE WITH CHROME PLATED FINISH, GRID STRAINER, ANTI-SCALD FEATURE, AND "ON-DEMAND" OPERATION. COORDINATE QUARTER-TURN OPENINGS WITH GENERAL CONTRACTOR. PROVIDE WITH CHROME PLATED COPPER SUPPLIES WITH QUARTER-TURN ANGLE STOPS. PROVIDE CHROME PLATED CAST-BRASS TRAP WITH CLEANOUT, TRAP ARM EXTENSION TO WALL, AND WALL ESCUTCHEON, COVER EXPOSED COLD AND HOT SUPPLIES AND WASTE PIPING WITH PROTECTIVE SHIELDING GUARD, TRUEBRO INSULATED VINYL PIPE COVERS WITH ANTIMICROBIAL, REUSABLE FASTENERS, AND STOP VALVE LOCKING ACCESS COVER.	2"	1-1/2"	1/2"TW	
DS-1	STAINLESS STEEL DOUBLE COMPARTMENT UNDERMOUNT SINK	ELKAY	ECTRY321719-LTFC (CROSS-TOWN)	UNDERCOUNTER MOUNTED, ASME A112.19.3 COMPLIANT, TYPE 304 (18-8) NICKEL BEARING STAINLESS STEEL DOUBLE BOWL SINK (60x40) WITH SATIN FINISH ON EXPOSED SURFACES AND SOUND DAMPENING UNDERCOATING APPLIED TO CONCEALED SURFACES. SINK SHALL HAVE 5" DEPTH, 9" RADIUS CORNERS, REAR SETBACK DRAIN OPENINGS, AND MOUNTING CLIPS, COORDINATE COUNTERTOP CUTOUTS WITH GENERAL CONTRACTOR TO PROVIDE A 1/2" REVEAL. INSTALLATION PROFILE.	PROVIDE WITH ELKAY MODEL LKAV2601 AVADO KITCHEN SINK BASE FAUCET WITH ADA COMPLIANT LEVER HANDLE AND PULL-OUT COIL SPRAY - FAUCET SHALL BE ASME A112.18.1 AND NSF 61 COMPLIANT. FAUCET TO INCLUDE ALL BRASS CONSTRUCTION, BRASS VALVE BODIES, QUARTER TURN WATERLESS CERAMIC DISC VALVES, 21" MULTI-SWIVEL SWING SPOUT, AND 1.8 GPM AERATOR, PROVIDE 1-1/2" LUSTROUS STEEL CAST-BRASS TRAP WITH CLEANOUT AND WALL ESCUTCHEON. FAUCET TO BE LUSTROUS STEEL FINISH ON ALL PARTS 1/2" CHROME-PLATED SUPPLIES WITH QUARTER-TURN STOPS AND WALL ESCUTCHEON. PROVIDE WITH GRID STRAINER DRAIN.	2" (2)	1-1/2"	1/2"	1/2"
S-1	STAINLESS STEEL SINGLE COMPARTMENT SINK	ELKAY	ELUHAD1916	UNDERCOUNTER MOUNTED, ASME A112.19.3 COMPLIANT, TYPE 304 (18-8) NICKEL BEARING STAINLESS STEEL SINGLE BOWL SINK WITH SATIN FINISH ON EXPOSED SURFACES AND SOUND DAMPENING UNDERCOATING APPLIED TO CONCEALED SURFACES. SINK SHALL HAVE 5-1/2" BOWL DEPTH, RADIUS CORNERS, REAR SETBACK DRAIN OPENING, AND MOUNTING CLIPS, COORDINATE COUNTERTOP CUTOUTS WITH GENERAL CONTRACTOR TO PROVIDE A 1/2" REVEAL. INSTALLATION PROFILE.	PROVIDE WITH KOHLER MODEL K-7776-K-CP KITCHEN SINK BASE FAUCET WITH K-16012-4 ADA COMPLIANT LEVER HANDLES - FAUCET SHALL BE ASME A112.18.1 AND NSF 61 COMPLIANT. FAUCET TO INCLUDE ALL BRASS CONSTRUCTION, BRASS VALVE BODIES, QUARTER TURN WATERLESS CERAMIC DISC VALVES, 8" MULTI-SWIVEL SWING SPOUT, AND 1.5 GPM AERATOR, PROVIDE 1-1/2" CHROME-PLATED CAST-BRASS TRAP WITH CLEANOUT AND WALL ESCUTCHEON. 1/2" CHROME-PLATED SUPPLIES WITH QUARTER-TURN STOPS AND WALL ESCUTCHEON. PROVIDE WITH GRID STRAINER DRAIN.	2"	1-1/2"	1/2"	1/2"
DF-1	NO-LEAD DUAL LEVEL SWIRL FLOW DRINKING FOUNTAIN WITH INTEGRAL BOTTLE FILLING STATION	ELKAY	LZVSS-LRPBM28K	HEAVY DUTY, FULLY EXPOSED, NSF-61 COMPLIANT, DUAL-LEVEL DRINKING FOUNTAIN WITH 18 GAUGE TYPE 300 STAINLESS STEEL BASINS AND 16 GAUGE TYPE 300 TUBULAR STAINLESS STEEL SUPPORT ARMS. FOUNTAIN SHALL BE NSF-61 COMPLIANT. PROVIDE WITH FRONT PUSH BUTTON ACTUATORS, VANDAL RESISTANT BUBBLERS, SURFACE MOUNTING PLATE, AND IN-WALL SUPPORT LEGS.	DRINKING FOUNTAIN TO BE PROVIDED WITH CANE AFFRON FOR ADA COMPLIANCE. FRONT ACCESS PANELS ON TOP AND BOTTOM OF UNIT. BOTTLE FILLER SHALL BE SENSOR ACTIVATED, 1.5 GPM FILL RATE, DRAIN SYSTEM TO ELIMINATE STANDING WATER, VISUAL USER INTERFACE, AUTO SHUTOFF, AND ANTIMICROBIAL PROTECTION. PROVIDE WITH INTEGRAL WATER CHILLER CAPABLE OF 8 GPM AND 50° DRINKING WATER BASED ON 80° AMBIENT. COORDINATE ELECTRICAL REQUIREMENTS WITH E/C. PROVIDE WITH ELKAY MODEL EWV172 LEAD REDUCTION WATER FILTRATION KIT, WITH (1) SPARE REPLACEMENT FILTER FOR EACH KIT PROVIDED.	2"	1-1/2"		1/2" CHILLED DOMESTIC WATER TO FOUNTAIN & BOTTLE FILLER
SH-1	SHOWER VALVE AND TRIM	TOTO	TSST	THERMOSTATIC MIXING VALVE WITH SHAPE MEMORY ALLOY, INTEGRATED SERVICE STOPS, 1/2" NPT CONNECTIONS, AND CORROSION RESISTANCE. UNIT SHALL BE COMPLIANT WITH ASME A112.18.1.	PROVIDE WITH VALVE TRIM TYPICAL OF TOTO LEGATO MODEL TS6241 - SOLID BRASS TEMPERATURE CONTROL, TRIM WITH ANTI-SCALD SAFETY STOP LEVER HANDLE, AND POLISHED CHROME FINISH. TRIM SHALL BE ASME A112.18.1 AND ADA COMPLIANT. PROVIDE WITH SINGLE SPRAY SHOWERHEAD TYPICAL OF TOTO LEGATO MODEL TS624A - SOLID BRASS SHOWERHEAD WITH 2.5 GPM MAX FLOW RATE, 7.5"x5" SPARY FACE WITH RUBBER NOZZLES TO PREVENT LIMESCALE BUILDUP, AND PROVIDED COMPLETE WITH SHOWER ARM AND WALL ESCUTCHEON. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS OF ALL COMPONENTS.	-	-	1/2"	1/2"
JS-1	FLOOR MOUNTED TERRAZZO MOP SERVICE BASIN	FIAT	TSB100	FLOOR MOUNTED, 24"x24"x12" ONE PIECE PRECAST TERRAZZO MOP BASIN WITH STAINLESS STEEL CURB CAPS, STAINLESS STEEL DRAIN BODY WITH S.S. STRAINER, QUICK DRAIN CONNECTOR, STAINLESS STEEL TILING FLANGES, AND CHROME PLATED BRASS DRAIN.	PROVIDE WITH MOP SERVICE SINK FAUCET WITH 3/4" MALE HOSE THREAD, VACUUM BREAKER, INTEGRAL STOPS, AND PAL HOOK (830AA), HOSE & HOSE BRACKET (832AA), STAINLESS STEEL WALL GUARDS, AND SILICONE SEALANT. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR AND UNIT MANUFACTURER REQUIREMENTS - ENSURE LEVEL INSTALLATION.	3"	1-1/2"	1/2"	1/2"
JS-2	FLOOR MOUNTED 'NEO-CORNER' TERRAZZO MOP SERVICE BASIN	FIAT	TSBC0010	FLOOR MOUNTED, 24"x24"x12" ONE PIECE NEO-CORNER PRECAST TERRAZZO MOP BASIN WITH STAINLESS STEEL CURB CAPS, STAINLESS STEEL DRAIN BODY WITH S.S. STRAINER, QUICK DRAIN CONNECTOR, STAINLESS STEEL TILING FLANGES, AND CHROME PLATED BRASS DRAIN.	PROVIDE WITH MOP SERVICE SINK FAUCET WITH 3/4" MALE HOSE THREAD, VACUUM BREAKER, INTEGRAL STOPS, AND PAL HOOK (830AA), HOSE & HOSE BRACKET (832AA), STAINLESS STEEL WALL GUARDS, AND SILICONE SEALANT. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR AND UNIT MANUFACTURER REQUIREMENTS - ENSURE LEVEL INSTALLATION.	3"	1-1/2"	1/2"	1/2"
HB-1	HOSE BIB	WOODFORD	MODEL 24	ANTI-SIPHON VACUUM BREAKER WALL FAUCET WITH HOSE THREADS.		-	-	3/4"	-
FPWH	FREEZE-PROOF WALL HYDRANT	WOODFORD	B65	NON-FREEZE, SELF DRAINING TYPE WITH POLISHED BRASS CONCEALING BOX AND DOOR. HOSE THREAD SPOUT, REMOVABLE KEY WITH EACH HYDRANT, AND VACUUM BREAKER.	PROVIDE WITH SPARE KEY FOR EACH HYDRANT PROVIDED.	-	-	3/4"	-
HR-1	FREEZE-PROOF ROOF HYDRANT	FREEZEFLOW	2131R	SELF CONTAINED DRAIN PROOF AND FREEZE PROOF ROOF HYDRANT WITH HEAVY DUTY BRASS HOSE BIBS WITH PAL HOOK, 1" GALVANIZED SCHEDULE 40 STEEL PIPE RISER, STAINLESS STEEL DRAINAGE CANISTER, AND OPTIONAL BACKFLOW PREVENTION DEVICE. INSTALL WITH CANISTER AT MANUFACTURER REQUIRED DEPTH BELOW ROOF DECK.		-	-	3/4"	-
IMB	ICE MACHINE DRAIN-IN BOX	GUY GRAY	MB1	20 GAUGE ROUGH-IN BOX WITH FACEPLATE, WHITE POWDER COAT ON COLD ROLLED STEEL FINISH.	PROVIDE WITH 1/2" QUARTER TURN SWEAT VALVE.	-	-	1/2"	-

REMARKS:

1. VERIFY ALL CONNECTIONS & MOUNTING HEIGHTS WITH CODES, MANUFACTURERS, AND PLANS.
2. SIZES LISTED INDICATE MIN. SIZE ONLY, SEE PLUMBING RISERS AND FLOOR PLANS FOR LARGER SIZES.

TANKLESS WATER HEATER SCHEDULE (RACK SYSTEM)

[illegible]

BACKFLOW PREVENTOR SCHEDULE

MARK	LOCATION	MFG	MODEL	TYPE	SERVES	BFP SIZE	DRAIN SIZE	LINE SIZE	REMARKS
BFP-1	MAIN MECH ROOM	WATTS	707DCDA	DOUBLE CHECK DETECTOR	FIRE SERVICE	4"	N/A	4"	3,4,5
BFP-2	MECHANICAL ROOM 109	WATTS	009	REDUCED PRESSURE ZONE	WATER SERVICE	2-1/2"	2-1/2"	2-1/2"	1,3,4,5
BFP-3	KITCHEN	WATTS	007	DOUBLE CHECK VALVE	ICE MAKER	1/2"	N/A	1/2"	3,4,5

REMARKS:

1. PROVIDE WITH MANUFACTURER REQUIRED AIRGAP, EXTEND FULL SIZE DRAIN PIPING TO TERMINATE AT NEAREST FLOOR DRAIN.
2. COORDINATE CONFIGURATION WITH SPACE LIMITATIONS PRIOR TO ORDERING.
3. PROVIDE WITH "Y" TYPE STRAINER.
4. PROVIDE WITH UNION END BALL VALVES ON ASSEMBLY.
5. PROVIDE AND INSTALL PER DETAIL.

PLUMBING FIXTURE SCHEDULE - DRAINAGE

TAG	TYPE	MANUFACTURER	MODEL	DESCRIPTION	ACCESSORIES	CONNECTIONS ²			
						WASTE	VENT	QV	HW
MS-1	24"x24" JANITORS SINK	FIAT	TSB100	ONE PIECE PRECAST TERRAZO MOP SERVICE BASIN, 12" CONTINUOUS DEPTH. TERRAZO SHALL BE CONSTRUCTED TO A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI, WITH POLISHED AND SEALED FINISH. FLAT TO BE INSTALLED ON MINIMUM 1/2" LAYER OF MORTAR FOR LEVELING. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS.	PROVIDE WITH STAINLESS STEEL STRAINER (F1453BB). QUICK DRAIN CONNECTORS, INTEGRAL TILING FLANGES, STAINLESS STEEL CAPS ON ALL SHOULDERS. WALL MOUNTED MOP SERVICE SINK WITH PAPER HOOK (833AA), HOSE AND END BRACKET (832AA), SILICONE SEALANT (833AA) AND HEAVY GAUGE STAINLESS STEEL WALL GUARDS (MSG).	3"	1-1/2"	1/2"	1/2"
FD-1	FLOOR DRAIN (GENERAL SERVICE)	ZURN	Z-415	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAE SLOTS AND TYPE 'B' POLISHED NICKEL BRONZE, LIGHT-DUTY STRAINER.	PROVIDE WITH 6" DIAMETER STRAINER. PROVIDE TY SEALS FOR FLOOR DRAINS MOUNTED IN FLOORS ABOVE GRADE. VERIFY PIPE SIZES ON PLANS. PROVIDE WITH ASSE 1072 APPROVED TRAP SEALING INSERT TYPICAL OF SURESEAL SERIES SS - SIZE PER FLOOR DRAIN OUTLET.	OUTLET SIZE PER PLAN	-	-	-
FD-2	FLOOR DRAIN (MECHANICAL AREAS)	ZURN	Z-415	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAE SLOTS AND HEAVY DUTY STRAINER.	PROVIDE WITH 8" DIAMETER STRAINER AND ALL ACID RESISTING EPOXY COATING. PROVIDE TY SEALS FOR FLOOR DRAINS MOUNTED IN FLOORS ABOVE GRADE. VERIFY PIPE SIZES ON PLANS. PROVIDE WITH TRAP PRIMER INLET CONNECTION.	OUTLET SIZE PER PLAN	-	1/2"	-
FD-3	FLOOR DRAIN (INDIRECT WASTE RECEPTOR)	ZURN	Z-415	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAE SLOTS AND TYPE 'B' POLISHED NICKEL BRONZE, LIGHT-DUTY STRAINER.	PROVIDE WITH 6" DIAMETER STRAINER WITH 4" DIAMETER FUNNEL. PROVIDE TY SEALS FOR FLOOR DRAINS MOUNTED IN FLOORS ABOVE GRADE. VERIFY PIPE SIZES ON PLANS. PROVIDE WITH ASSE 1072 APPROVED TRAP SEALING INSERT TYPICAL OF SURESEAL SERIES SS - SIZE PER FLOOR DRAIN OUTLET.	OUTLET SIZE PER PLAN	-	-	-
FD-4	FLOOR DRAIN (CRITICAL AREAS)	ZURN	Z-415	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAE SLOTS AND TYPE 'B' POLISHED NICKEL BRONZE, LIGHT-DUTY STRAINER.	PROVIDE WITH 6" STRAINER AND ALL ACID RESISTING EPOXY COATING. PROVIDE TY SEALS FOR FLOOR DRAINS MOUNTED IN FLOORS ABOVE GRADE. VERIFY PIPE SIZES ON PLANS. PROVIDE WITH TRAP PRIMER INLET CONNECTION AND BACKWATER VALVE.	OUTLET SIZE PER PLAN	-	1/2"	-
FD-5	FLOOR DRAIN (SHOWER)	ZURN	Z-415	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET. COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAE SLOTS AND TYPE 'S' DECORATIVE POLISHED STRAINER.	PROVIDE WITH 6"x6" SQUARE HEEL-PROOF STRAINER. PROVIDE TY SEALS FOR FLOOR DRAINS MOUNTED IN FLOORS ABOVE GRADE. VERIFY PIPE SIZES ON PLANS. PROVIDE WITH ASSE 1072 APPROVED TRAP SEALING INSERT TYPICAL OF SURESEAL SERIES SS - SIZE PER FLOOR DRAIN OUTLET.	OUTLET SIZE PER PLAN	-	-	-
FS-1	FLOOR SINK 12"x12" BODY (FULL GRATE)	ZURN	Z-1901	12"x12"x8" FLOOR RECEPTOR WITH DEEP CAST IRON BODY AND SQUARE, LIGHT-DUTY GRATE WITH 1/2" SLOTTED OPENINGS. WHITE ACID-RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, AND WITH WHITE ABS ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER.	PROVIDE WITH FULL SIZE GRATE, OUTLET SIZE TO MATCH CONNECTION SIZE NOTED ON PLAN, AND TRAP PRIMER CONNECTION.	OUTLET SIZE PER PLAN	-	1/2"	-
FS-2	FLOOR SINK 12"x12" BODY (3/4 GRATE)	ZURN	Z-1901	12"x12"x8" FLOOR RECEPTOR WITH DEEP CAST IRON BODY AND SQUARE, LIGHT-DUTY GRATE WITH 1/2" SLOTTED OPENINGS. WHITE ACID-RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, AND WITH WHITE ABS ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER.	PROVIDE WITH 3/4 GRATE. OUTLET SIZE TO MATCH CONNECTION SIZE NOTED ON PLAN, AND TRAP PRIMER CONNECTION.	OUTLET SIZE PER PLAN	-	1/2"	-
TD-1	TRENCH DRAIN	ZURN	2882-HDG	MODULAR TRENCH DRAIN CHANNELS CONSTRUCTED OF 72" LONG x 12" WIDE REVEAL WITH 9-1/4" THROAT. MODULAR CHANNEL SECTIONS SHALL BE MADE OF 0% WATER ABSORBENT HIGH DENSITY POLYETHYLENE (HDPE). CHANNELS SHALL BE PRE-SLOPED. PROVIDE END PIPING CONNECTION.	PROVIDE WITH HEAVY DUTY LOAD CLASS E DUCTILE IRON SLOTTED GRATE, COMPLIANT WITH ASTM A536-84, AND LOCKABLE TO TRENCH. PROVIDE WITH REBAR CLIPS AND ASTM A123 COMPLIANT CONCRETE ANCHORS. PROVIDE WITH END OUTLET. SIZE AS NOTED ON PLAN, WITH STRAINER ON OUTLET.	OUTLET SIZE PER PLAN	-	-	-
RD	COMBO ROOF DRAIN	ZURN/FROET	100C	CAST IRON BODY COMBO PRIMARY/OVERFLOW ROOF DRAIN. VARIABLE DIAMETER BASED UPON OUTLET SIZE. PROVIDE WITH DECK CLAMP AND MINIMUM 5" HIGH DOME STRAINER AND OVERFLOW THRU DOME. ROOF DRAIN SHALL BE COMPLIANT WITH ASME A112.6.4. PROVIDE WITH DECK CLAMP, DECK PLATE	PROVIDE WITH OUTLET SIZE AS NOTED ON PLAN. OUTLET SIZE TO DETERMINE OVERALL DIAMETER OF DOME STRAINER. 3" AND 4" OUTLETS TO HAVE A 14" DIAMETER DOME STRAINER. 5" AND 6" OUTLETS TO HAVE A 18" DIAMETER DOME STRAINER. ROOF DRAIN SHALL HAVE A 25 YEAR WARRANTY.	OUTLET AS NOTED ON PLAN	-	-	-
ORD	WITH COMBO DRAIN ABOVE	-	200Cx	FURNISH WITH OVERFLOW WATER FLOW SENSOR TO BE INSTALLED IN OVERFLOW PIPING CONNECTING TO PRIMARY. SENSOR EQUAL TO ZURN F7000 WITH INTEGRAL BATTERY BACKUP, BMS INTERFACE, AND PIPE SIZE PER PLANS	PROVIDE WITH OUTLET SIZE AS NOTED ON PLAN. OUTLET SIZE TO DETERMINE OVERALL DIAMETER OF DOME STRAINER. 3" AND 4" OUTLETS TO HAVE A 14" DIAMETER DOME STRAINER. 5" AND 6" OUTLETS TO HAVE A 18" DIAMETER DOME STRAINER. ROOF DRAIN SHALL HAVE A 25 YEAR WARRANTY.	OUTLET AS NOTED ON PLAN	-	-	-
SD	SIDEWALL SCUPPER DRAIN	ZURN	Z-187	DURA-COATED CAST IRON BODY WITH OBLIQUE ALUMINUM GRATE WITH 90 DEG COMBINATION FRAME AND MEMBRANE FLASHING CLAMP, AND SIDE OUTLET PIPE SIZE PER PLANS (4").	PROVIDE WITH OUTLET SIZE AS NOTED ON PLAN. OUTLET SIZE TO DETERMINE SIZE OF OBLIQUE STRAINER.ROOF DRAIN SHALL HAVE A 25 YEAR WARRANTY.	OUTLET AS NOTED ON PLAN	-	-	-
DB	DOWNSPOUT BOOT	ZURN	Z-191-RD	DURA-COATED CAST IRON BODY WITH ROUND INLET AND OUTLET AND STRAP WITH 1/4" DIA. CAST HOLES FOR FLAT HEAD BOLTS, AND INLET/OUTLET PIPE SIZE PER PLANS (4").	PROVIDE WITH INLET/OUTLET SIZE AS NOTED ON PLAN (4"). OVERALL HEIGHT OF BOOT 18" DRAIN SHALL HAVE A 25 YEAR WARRANTY. FURNISH WITH CLEANOUT ACCESS WITH PLUG AND NO-HUB CONNECTIONS.	OUTLET AS NOTED ON PLAN	-	-	-
FGCO	FINISHED GRADE CLEANOUT	ZURN	Z-1400-HD	ADJUSTABLE FLOOR CLEANOUT, CAST IRON BODY, WITH GAS AND WATER-TIGHT ABS TAPERED THREAD PLUG AND ROUND SCORATED SECURED HEAVY DUTY TOP. ADJUSTABLE TO FINISH FLOOR. CAST IN CONCRETE PER DETAIL.	CLEANOUT SHALL BE THE SAME SIZE AS PIPING UP TO 4". 4" AND LARGER PIPING SHALL BE A 4" CLEANOUT.	-	-	-	-
FCO	FINISHED FLOOR CLEANOUT	ZURN	Z-1400	ADJUSTABLE FLOOR CLEANOUT, CAST IRON BODY, WITH GAS AND WATER-TIGHT ABS TAPERED THREAD PLUG AND ROUND SCORATED SECURED HEAVY DUTY TOP. ADJUSTABLE TO FINISH FLOOR.	CLEANOUT SHALL BE THE SAME SIZE AS PIPING UP TO 4". 4" AND LARGER PIPING SHALL BE A 4" CLEANOUT.	-	-	-	-
WCO	WALL CLEANOUT	ZURN	Z-1446	CLEANOUT TEE, DURA COATED CAST IRON BODY, GAS AND WATER-TIGHT, ABS TAPERED THREAD PLUG AND ROUND, SMOOTH STAINLESS STEEL WALL, ACCESS COVER WITH SECURING SCREW.	CLEANOUT SHALL BE THE SAME SIZE AS PIPING UP TO 4". 4" AND LARGER PIPING SHALL BE A 4" CLEANOUT.	-	-	-	-
DSN	DOWNSPOUT NOZZLE	ZURN	ZANB-199	ALL NICKLE BRONZE BODY DOWNSPOUT NOZZLE, WITH OPTIONAL THREADED OR NO-HUB INLET AND DECORATIVE FACE OF WALL FLANGE AND OUTLET NOZZLE.	-	SIZE TO MATCH ROOF DRAIN PIPING NOTED ON PLAN	-	-	-

REMARKS:

1. VERIFY ALL CONNECTIONS & MOUNTING HEIGHTS WITH CODES, MANUFACTURERS, AND PLANS.
2. SIZES LISTED INDICATE MIN. SIZE ONLY. SEE PLUMBING RISERS AND FLOOR PLANS FOR LARGER SIZES.
3. ACCEPTABLE ALTERNATE MANUFACTURERS INCLUDE HAWS, CHICAGO FAUCET, HALSEY TAYLOR, JOSA

PIPING MATERIAL SCHEDULE

PIPING							FITTINGS		MAX. WORKING		FIELD TEST	
SYSTEM	SIZE	TYPE	SCH	GRD	ASTM	MATERIAL	MAT.	TYPE	PRESS (PSI)	TEMP (°F)	PRESS (PSI)	TIME
DOMESTIC WATER ABOVE GRADE	ALL	L	--	--	B88	CP	CP	SJ	120	40-180	150	1 HR
DOMESTIC WATER BELOW GRADE	ALL	K	--	--	B88	CP	CP	SJ	120	40-180	150	1 HR
CONDENSATE DRAIN ABOVE GRADE	ALL	M	--	--	B88	CP	CP	DRIS	10FT	40-70	10FT	1 HR
FIRE PROTECTION	ALL				PER	NFPA	13	AND	14		200	2 HR
FIRE SERVICE BELOW GRADE	ALL	CL150	--	--	C900	PVC	CI	MJ	120	40-80	200	2 HR
REFRIGERANT PIPING	ALL	ACR	--	--	B280	CP	DI	S	150	40-140	200	4 HR
ROOF DRAIN BELOW GRADE	ALL	DMV	40	--	2665	PVC	PVC	DRSW	10 FT	40-80	10 FT	1 HR
ROOF DRAIN ABOVE GRADE	ALL	NH	SS	--	A74	CI	CI	DRNH	10 FT	40-180	10 FT	1 HR
TEMPERATURE & PRESSURE RELIEF DRAIN	ALL	M	--	--	B88	CP	CP	DRIS	10FT	40-70	10FT	1 HR
NATURAL GAS ABOVE GRADE	0.5"-2.5"	SLWCW	40	A	A53	CS/BLK	CS	THRD	1	-	100	1 HR
NATURAL GAS ABOVE GRADE	ABOVE 3"	SLWCW	40	A	A53	CS/BLK	CS	THRD	1	-	100	1 HR
NATURAL GAS BELOW GRADE	ALL	REFER TO NOTE 1 BELOW										
WASTE BELOW GRADE	ALL	DWW	40	--	2665	PVC	PVC	DRSW	10 FT	40-80	10 FT	1 HR
WASTE & VENT ABOVE GRADE	ALL	NH	SS	--	A74	CI	CI	DRNH	10 FT	40-180	10 FT	1 HR

NOTES:
1. BURIED GAS PIPING SHALL BE DRISCOPEX 6500 PE2406, SDR11, POLYETHYLENE WITH #12 COPPER TRACER WIRE AND ANODELESS RISERS WHERE RISING ABOVE GRADE.

ATP - ARMO TRUSS PIPE	MJ - MECHANICAL JOINT
BLK - BLACK	NG - NEOPRENE GASKET
BS - BELL & SPIGOT	NH - NO-HUB
CR - CAST IRON	PE - POLYETHYLENE
CP - COPPER	PVC - POLYVINYL CHLORIDE
CS - CAST STEEL	BRZ - BRASS
CTD - PIPE LINE SERVICE COMPANY X-TRU-COAT	SL - SILVER BRAZING ALLOY
HIGH DENSITY POLYETHYLENE COATING	SP - 90% NITRANTIM
EXT - EXTRUDED OVER	SW - SEAMLESS STEEL
CG - CONTINUOUS WELD	ST - STANDARD STRENGTH - SERVICE WEIGHT
DC - DUCTILE IRON	SW - SWELED S.W.
DR - DRAINAGE FITTING	TS - TYSER
GL - GALVANIZED	THRD - THREADED
LC - LEAD CALCULING	VP - VITRIFIED CLAY PIPE
ML - MALLEABLE IRON	WELD - WELDED
	XH - EXTRA HEAVY



1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108



1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108



1701 WALNUT STREET, SUITE 300
KANSAS CITY, MO 64108

KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI

GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172

Can Win



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
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PROJECT NO: 2403

CAD DWG FILE: Lee's Summit - Terminal MEP.rvt

DESIGNED BY: CMW

DRAWN BY: DM

CHECKED BY: WAI

APPROVED BY: Approver

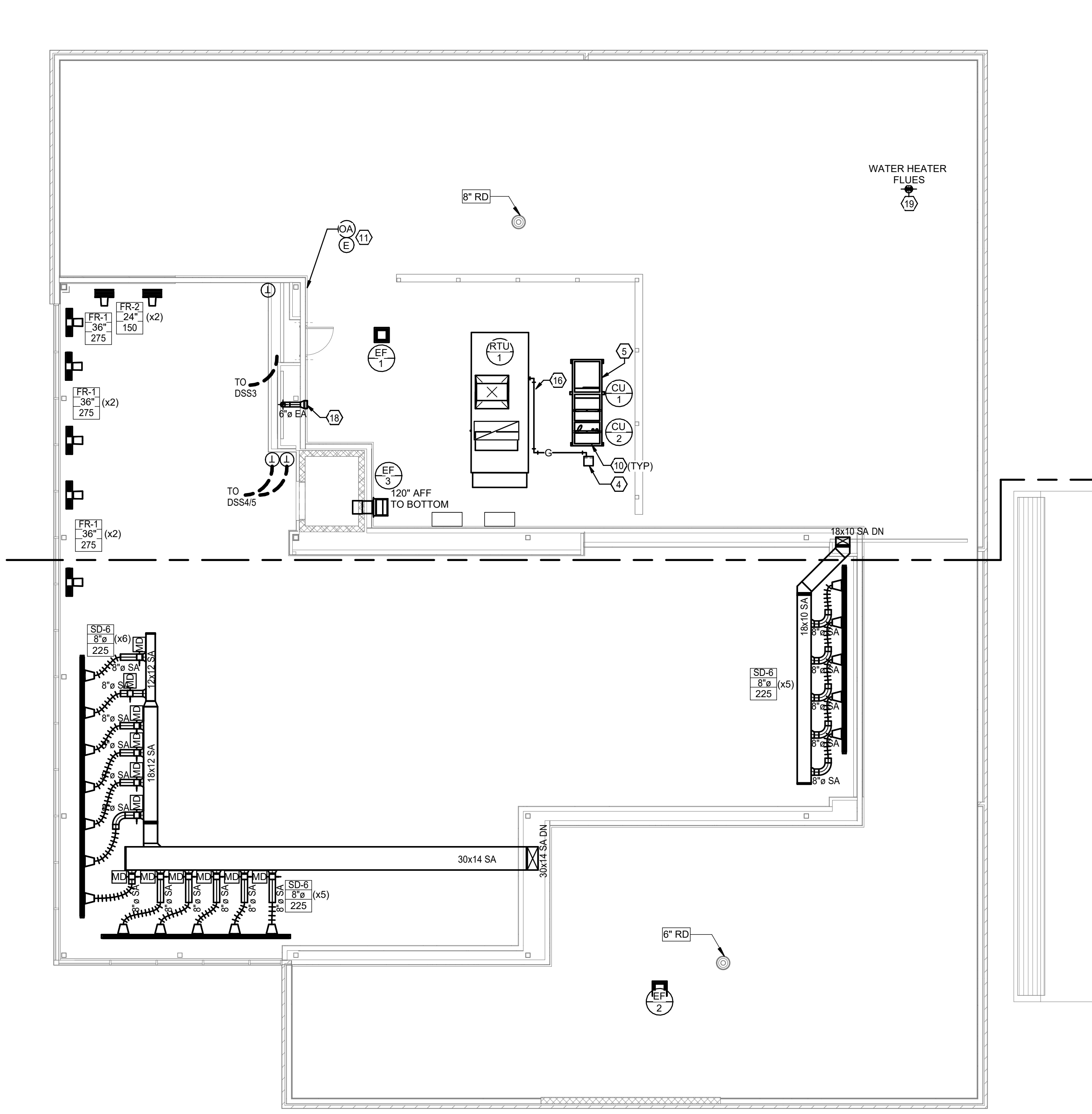
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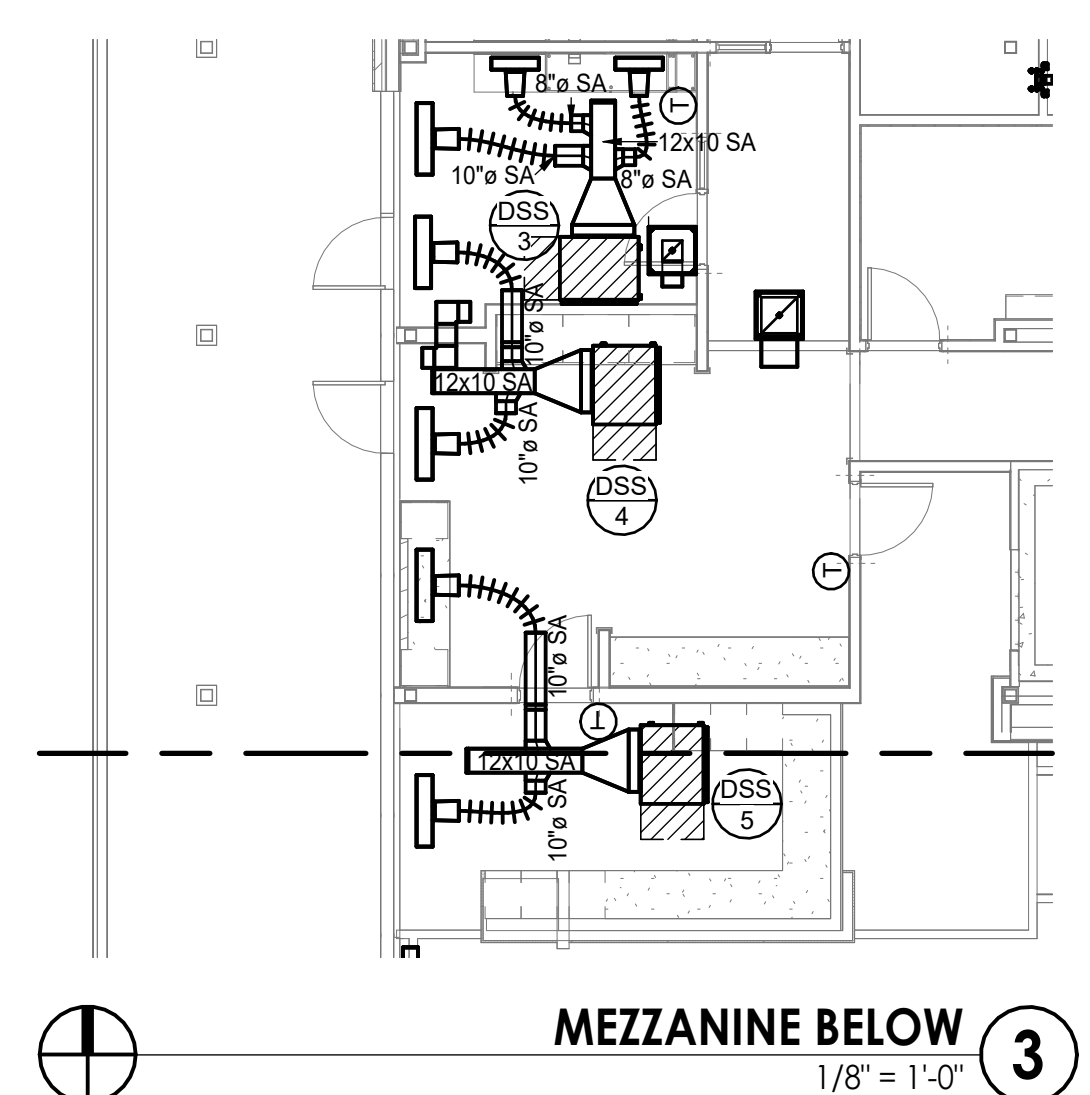
PLUMBING SCHEDULES

P-500

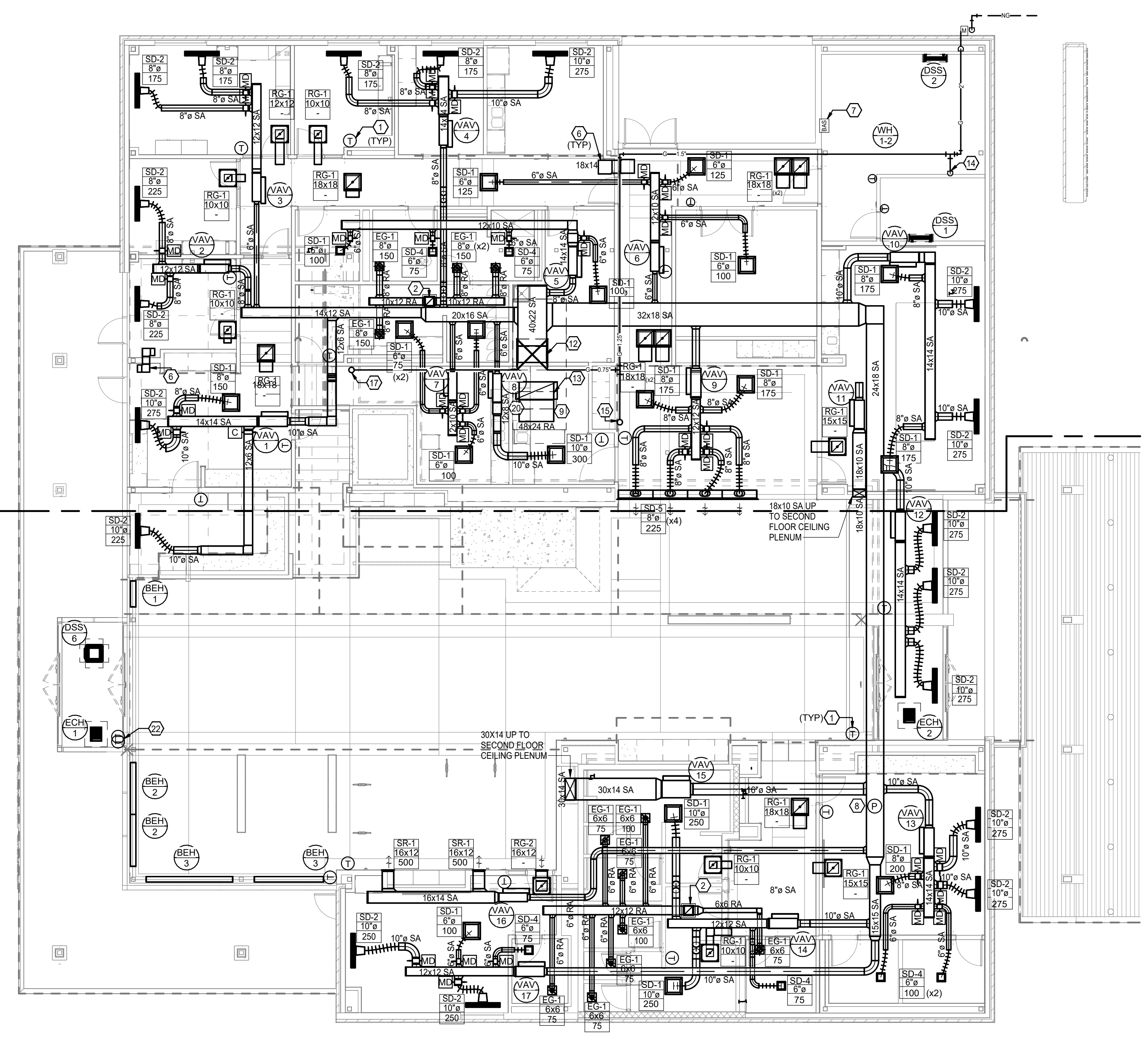
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MECHANICAL PLAN - LEVEL 2
1/8" = 1'-0"



MEZZANINE BELOW
1/8" = 1'-0"



MECHANICAL PLAN - LEVEL 1
1/8" = 1'-0"

MECHANICAL PLAN NOTES

- WHEREVER A THERMOSTAT SYMBOL IS SHOWN, PROVIDE DDC TEMPERATURE SENSOR WITH DIGITAL SCREEN, TEMPERATURE ADJUSTMENT, AND OVERRIDE. SENSOR SHALL CONNECT TO VAV CONTROLLER PER P&IDS.
- 12x12 EXHAUST AIR UP TO EXHAUST FAN ON ROOF.
- REFER TO REFRIGERANT CONNECTIONS DETAIL FOR INSTALLATION OF ALL LIQUID/SUCTION LINE INSTALLATIONS TO ALL INDOOR UNITS. ALL REFRIGERANT PIPING TO BE BRAZED ACR TYPE WITH INSULATION WRAP AND JACKETING.
- PATE PIPE HOOD PH-1 ON CURB FOR REFRIGERANT PIPING AND CONDUITS.
- FURNISH PATE BASE RAILS FOR SUPPORTING VRF CONDENSING UNITS AND ASOS ANTENNAE.
- TYPICAL Z-DUCT TRANSFER GRILLE. ANY TRANSFER DUCTWORK SHALL HAVE ARMACELL LINING (FIBER-FREE).
- BMS TEMPERATURE CONTROL PANEL LOCATION. FROM NETWORK RACK ROUTE CAT-6 ETHERNET TO THIS LOCATION.
- LOCATION OF DUCT MOUNTED STATIC PRESSURE SENSOR FOR VFD CONTROL.
- FOR VAV RTU, FURNISH RA DUCT DETECTOR WITH FAN SHUTDOWN RELAY AND CONNECT TO FIRE ALARM SYSTEM.
- REFER TO REFRIGERATION DIAGRAM FOR ALL VRF LIQUID/SUCTION PIPING FROM OUTDOOR CONDENSING UNIT TO INDOOR UNITS. ALL PIPING SHALL BE BRAZED ACR WITH 1" FIBERGLASS JACKETED INSULATION AND PVC COVERS AT ALL FITTINGS.
- ON UPPER ROOF, INSTALL ON BACKBOX OUTSIDE AIR AND ENTHALPY SENSORS FOR BMS SYSTEM CONTROL.
- 40x22 SUPPLY AIR DUCTWORK UP TO RTU. PROVIDE FLEXIBLE CONNECTION AND TRANSITION TO MATCH UNIT OPENING.
- 48x24 RETURN AIR DUCTWORK UP TO RTU. PROVIDE FLEXIBLE CONNECTION AND TRANSITION TO MATCH UNIT OPENING.
- 1.25" GAS PIPING DOWN TO WATER HEATERS. REFER TO WATER HEATER ELEVATION. TEE TO BOTH HEATERS. PROVIDE INDIVIDUAL SHUT-OFF VALVES, UNION, AND DIRT LEG.
- 1.25" GAS PIPING UP TO ROOFTOP UNIT. COME UP THRU PATE PIPE CURB. USE MIRO OR EQUAL PILLOWBLOCK SUPPORTS.
- 1.25 GAS PIPING CONNECTED TO RTU. PROVIDE GAS COCK, DIRT LEG, AND UNION. ALL GAS PIPING PAINTED WITH EPOXY YELLOW ON ROOF.
- 0.75" GAS UP TO FIREPLACE WITHIN BASE. PROVIDE GAS COCK, DIRT LEG, AND UNION.
- TYPE B SIDEWALL VENT FROM GAS FIREPLACE. INSTALL 6" VENT PER MANUFACTURER'S INSTRUCTIONS TO ROOF. VENT. MAINTAIN ALL REQUIRED EXTERIOR CLEARANCES.
- ROOF MOUNTED CONCENTRIC VENT TERMINATION KIT, PROVIDED WITH WATER HEATER. COORDINATE INSTALLATION REQUIREMENTS WITH GENERAL CONTRACTOR. INSTALL PER UNIT MANUFACTURER REQUIREMENTS.
- OVEN RECIRC HOOD PER ARCH EQUIPMENT PLAN.
- MO DIAGRAMMATICALLY SHOWN ON PLANS IS FOR MANUAL BALANCING DAMPERS AT TAKE-OFF (TYPICAL).
- CEILING HEATER AND VRF TSTAT MOUNTED TO SIDE OF METAL CHANNEL ABOVE SLIDING DOOR ASSEMBLY (1102). ALL LOW VOLTAGE CABLE TO BE FISHED THRU MULLION ASSEMBLIES TO ABOVE VESTIBULE CEILING.



1627 MAIN STREET, SUITE 600
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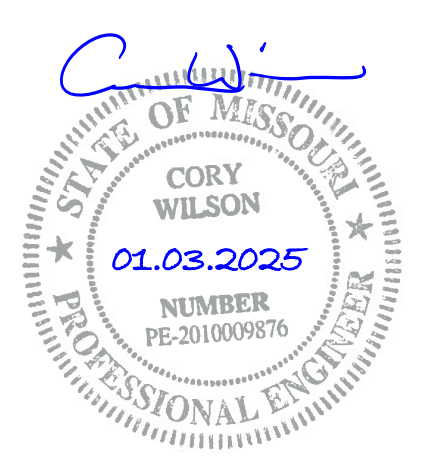


1627 MAIN STREET, SUITE 100
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1701 WALNUT STREET, SUITE 300
KANSAS CITY, MO 64108

KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PROJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146
01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE	DESCRIPTION
PROJECT NO:	2403
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	CMW
DRAWN BY:	MR
CHECKED BY:	CMW
APPROVED BY:	APPROVER
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SHEET TITLE
1ST FLOOR &
MEZZANINE
MECHANICAL PLANS

M-100

SHEET OF

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LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

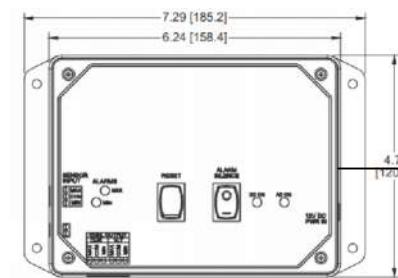
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CAD DWG FILE: Lee's Summit - Terminal MEP.rvt
DESIGNED BY: CMW
DRAWN BY: DM
CHECKED BY: WAI
APPROVED BY: Approver
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SHEET TITLE

CONTROLS
DIAGRAMS

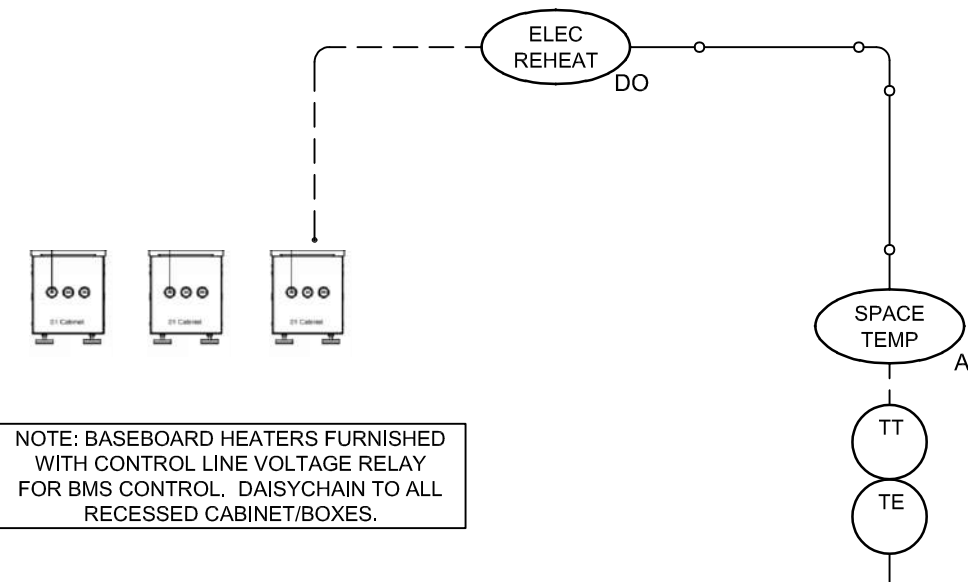
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SHEET 88 OF 102



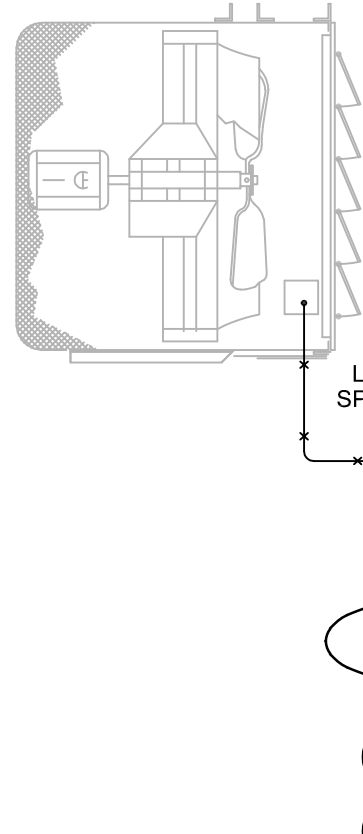
FLOW SWITCH INSTALLED BY PLUMB
CONTRACTOR. CONTROL PANELS
INSTALLED IN JANITOR ROOM (X3)
PROGRAM GRAPHICS AND ALARM FOR
OVERFLOW MONITORING.

5 ROOF DRAIN MONITORING
SCALE: NONE



NOTE: BASEBOARD HEATERS FURNISHED
WITH CONTROL LINE VOLTAGE RELAY
FOR BMS CONTROL. DAISYCHAIN TO ALL
RECESSED CABINET BOXES.

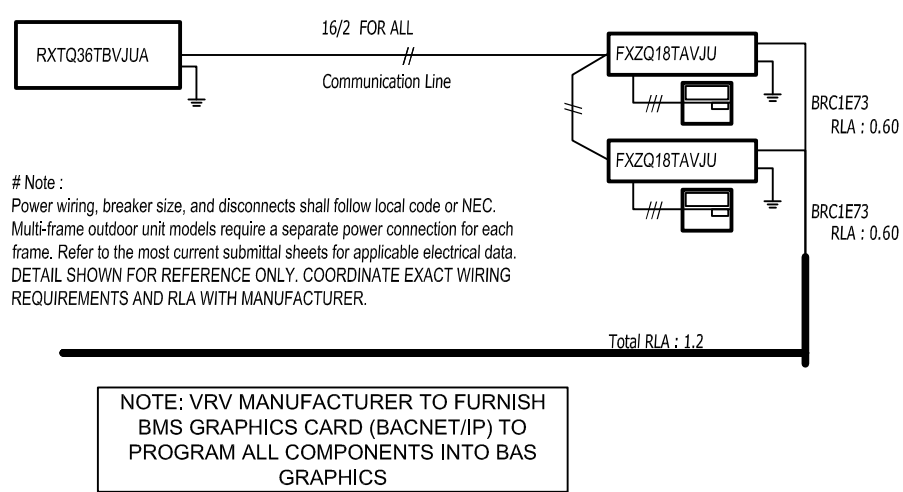
5 BASEBOARD HEATING CONTROL DIAGRAM
SCALE: NONE



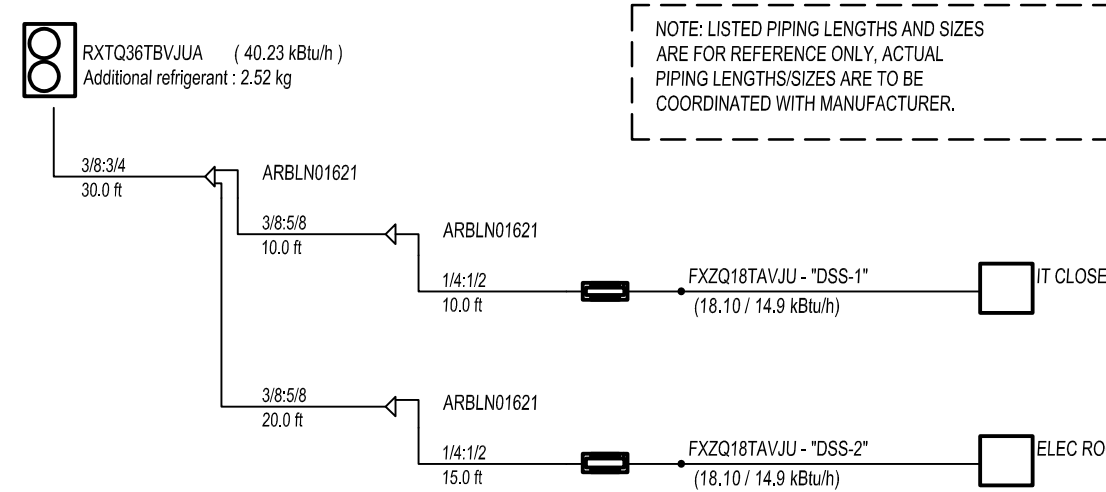
NOTE: FAN OPERATES BASED ON A TIME
OF DAY SCHEDULE SET BY TIMECLOCK
(RE: ELEC). EACH FAN SHALL HAVE A
SEPARATE SCHEDULE.

NOTE: FAN OPERATES BASED ON A TIME
OF DAY SCHEDULE SET BY TIMECLOCK
(RE: ELEC). EACH FAN SHALL HAVE A
SEPARATE SCHEDULE.

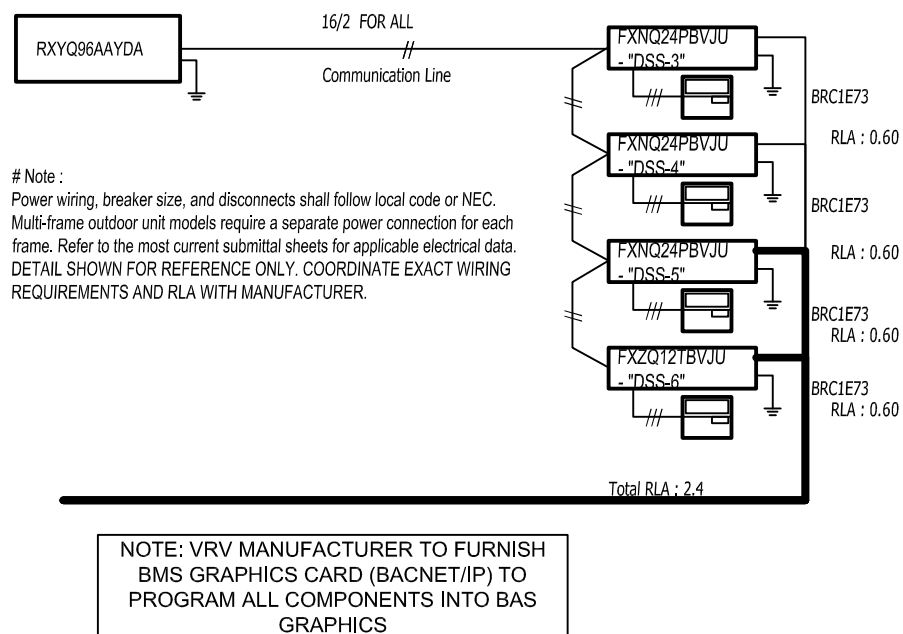
6 EXHAUST FAN CONTROL DIAGRAM
SCALE: NONE



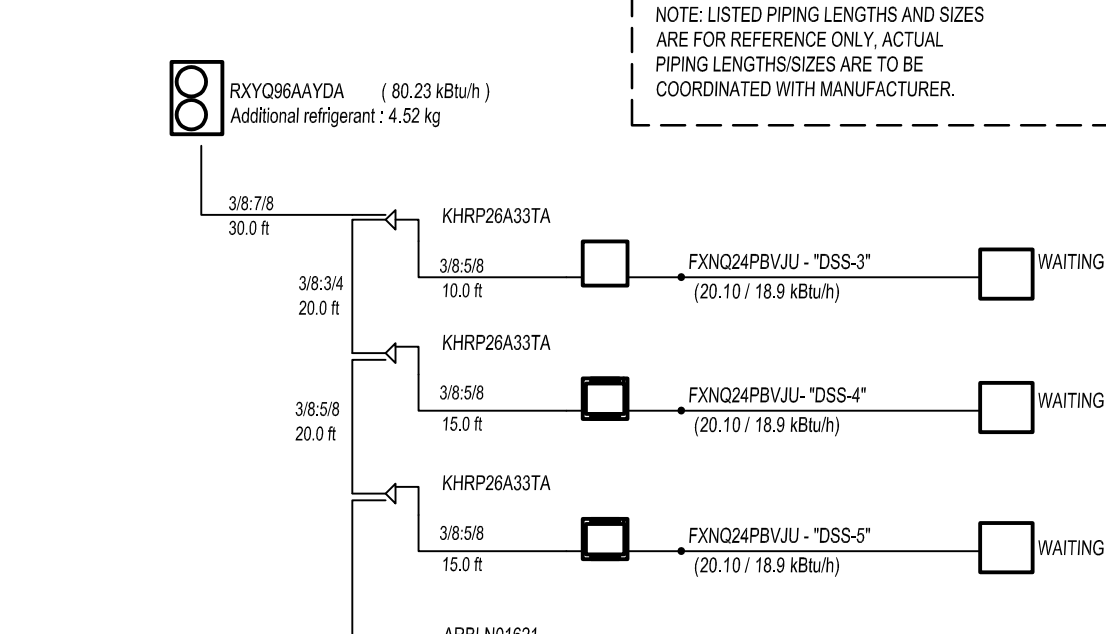
SPLIT SYSTEM WIRING DIAGRAM CU-2



SPLIT SYSTEM PIPING DIAGRAM CU-2

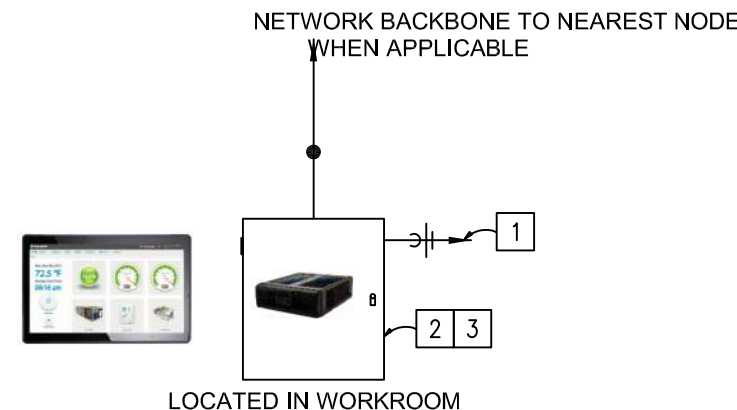


SPLIT SYSTEM WIRING DIAGRAM CU-1



SPLIT SYSTEM PIPING DIAGRAM CU-1

4 VRV HVAC TYPICAL EQUIPMENT DETAILS
SCALE: NONE

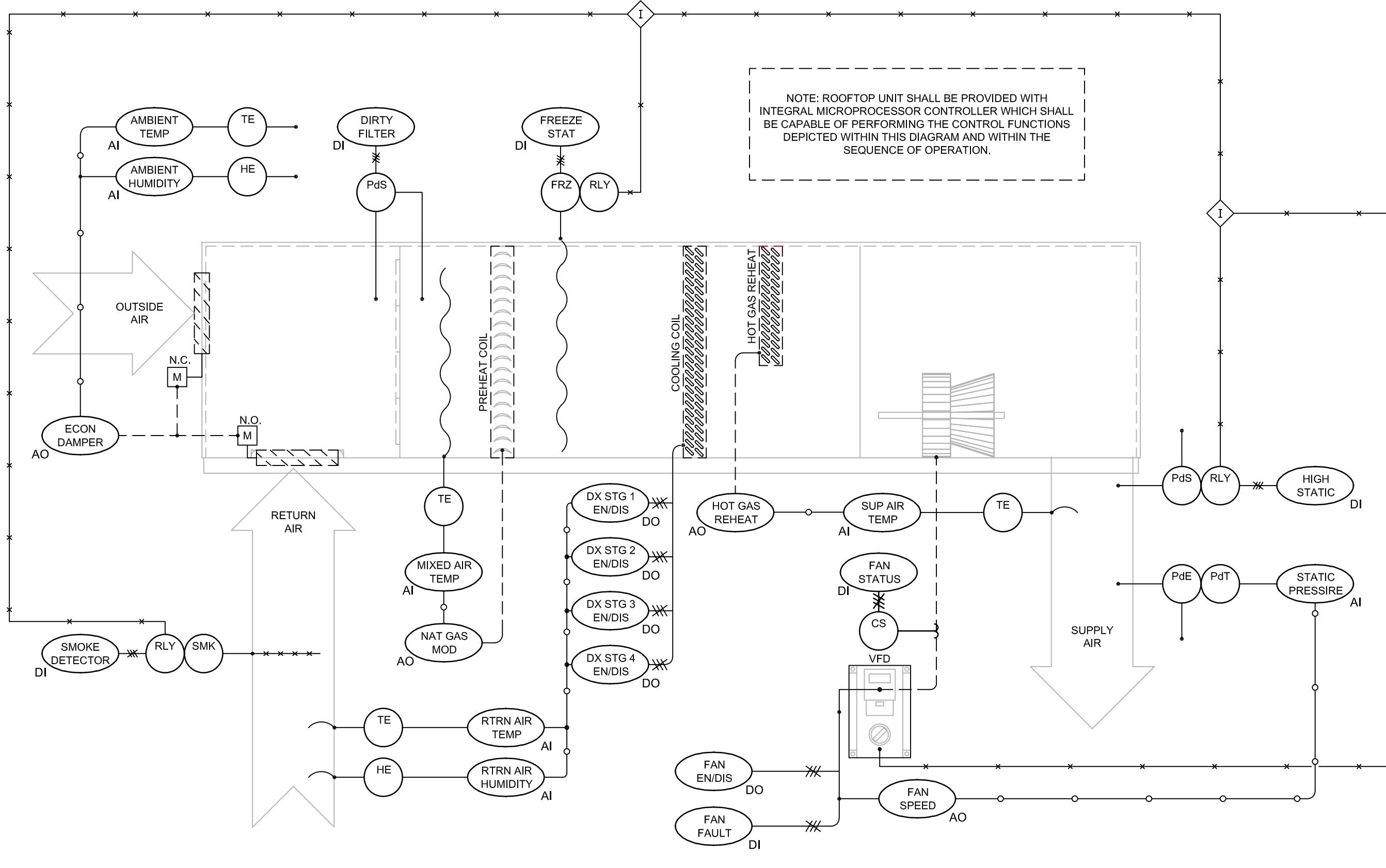


NOTES

- 120 VAC PROVIDED BY E.C. CONTROLS CONTRACTOR TO COORDINATE WITH E.C. ON ALL NEW ENCLOSURE LOCATIONS.
- CONTRACTOR TO PROVIDE ALL NEW CONTROL ENCLOSURES. NO EXISTING ENCLOSURES ARE TO BE REUSED. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE AND INSTALL NEW ENCLOSURES.
- ALL VAV & FAN POWERED BOX ASCS ARE TO BE POWERED FROM TRANSFORMERS HOUSED IN NEW ENCLOSURES OR SOME OF THE FPB/VAV'S MAY BE PROVIDED WITH CONTROL TRANSFORMER BY MANUFACTURER. TCC TO COORDINATE WITH M/C. MULTIPLE CONTROLLERS CAN BE POWERED OFF OF A SINGLE TRANSFORMER. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE ENCLOSURES, TRANSFORMERS, AND ALL LOW VOLTAGE WIRING INCLUDING 24 VAC, NETWORK, AND CONTROL WIRING.

3 CONTROL ENCLOSURES
NOT TO SCALE

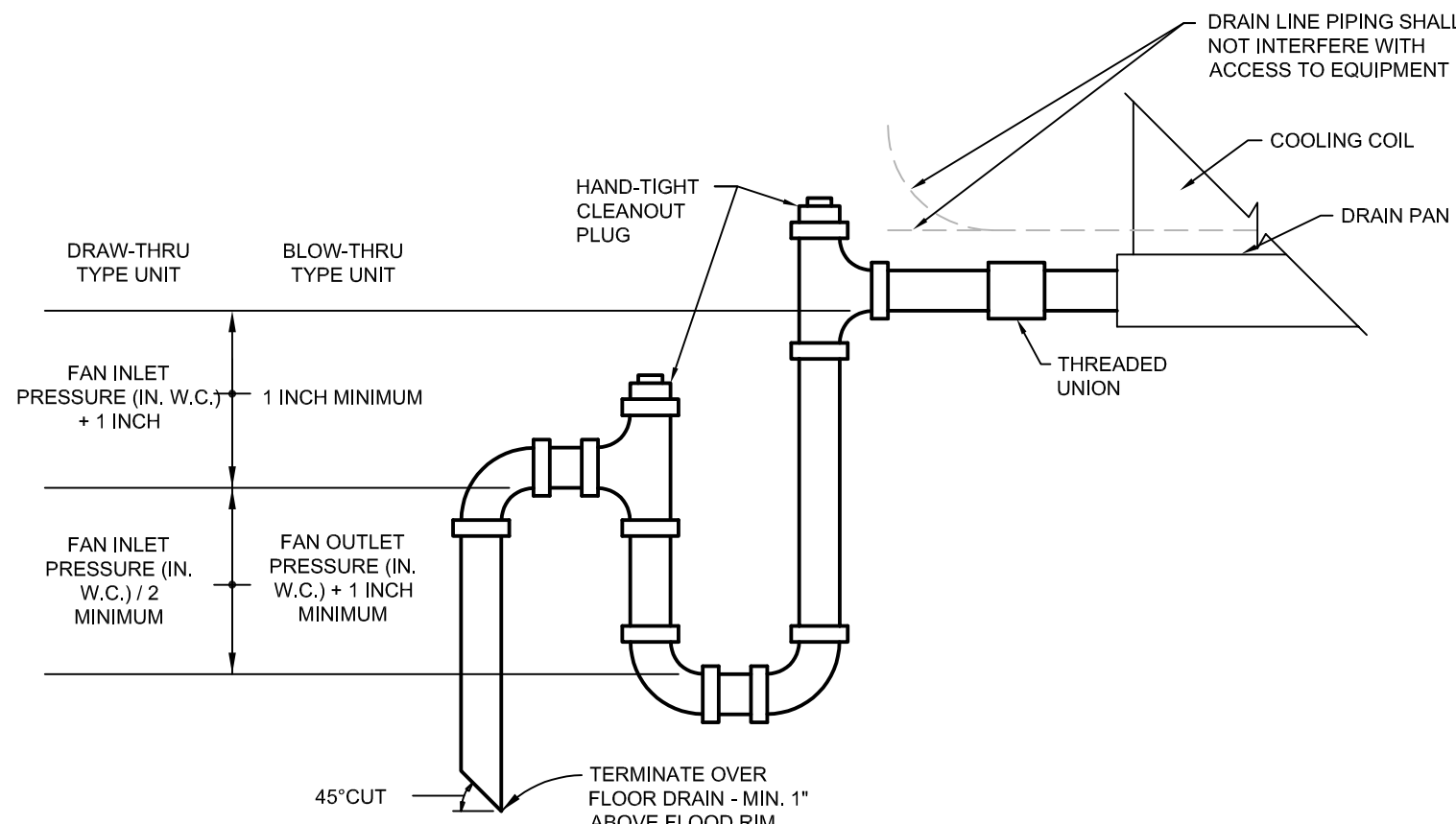
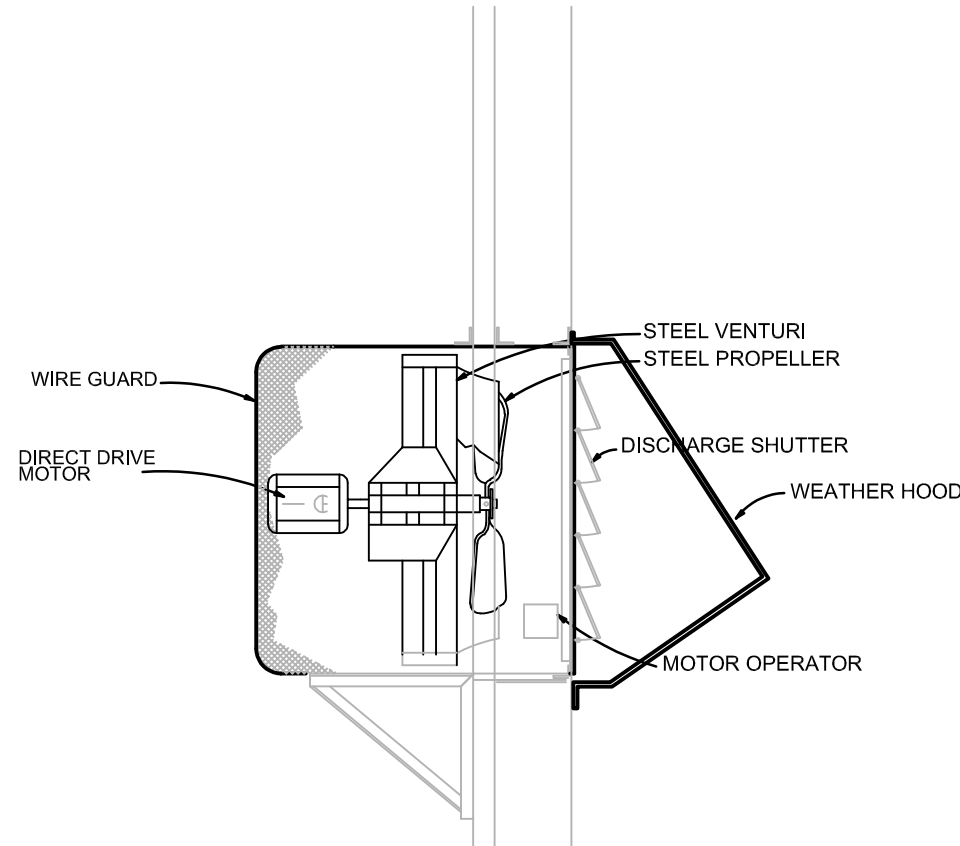
2 VAV TERMINAL CONTROL DIAGRAM
SCALE: NONE



1 PACKAGED ROOFTOP UNIT CONTROL DIAGRAM
SCALE: NONE

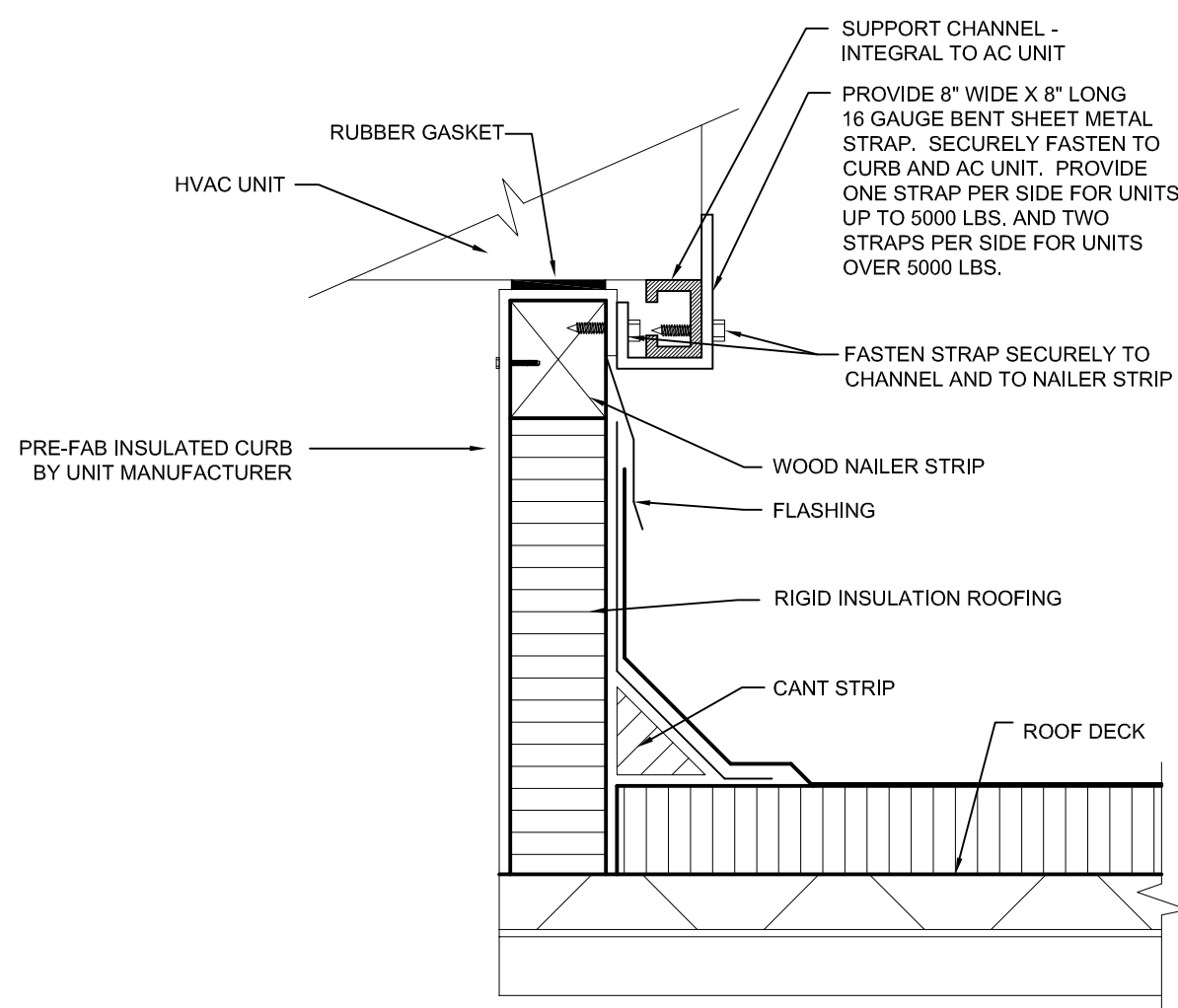
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9 WALL PROP EXHAUST FAN DETAIL
SCALE: NONE



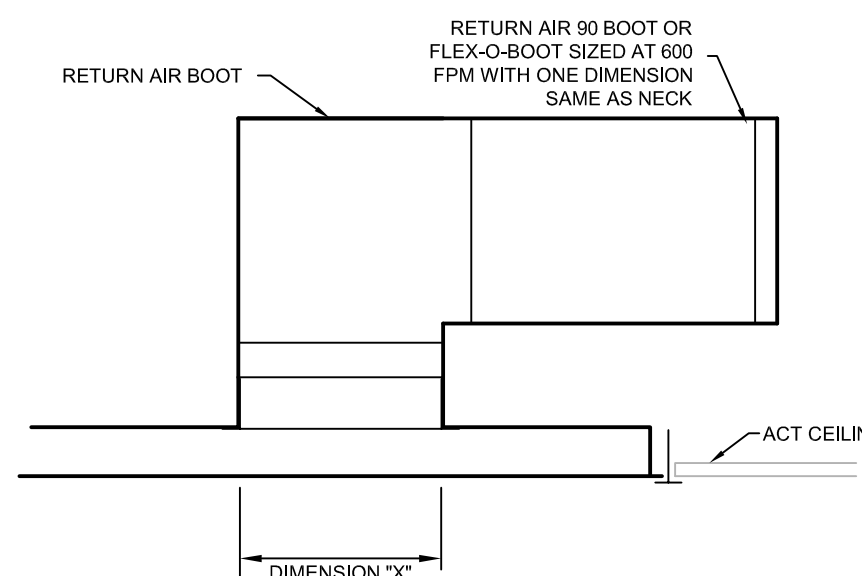
NOTES:
1. FOR EQUIPMENT WITHOUT INTERNAL CONDENSATE TRAPS.
2. PIPING TO BE PER SCHEDULE

8 CONDENSATE TRAP DETAIL
SCALE: NONE

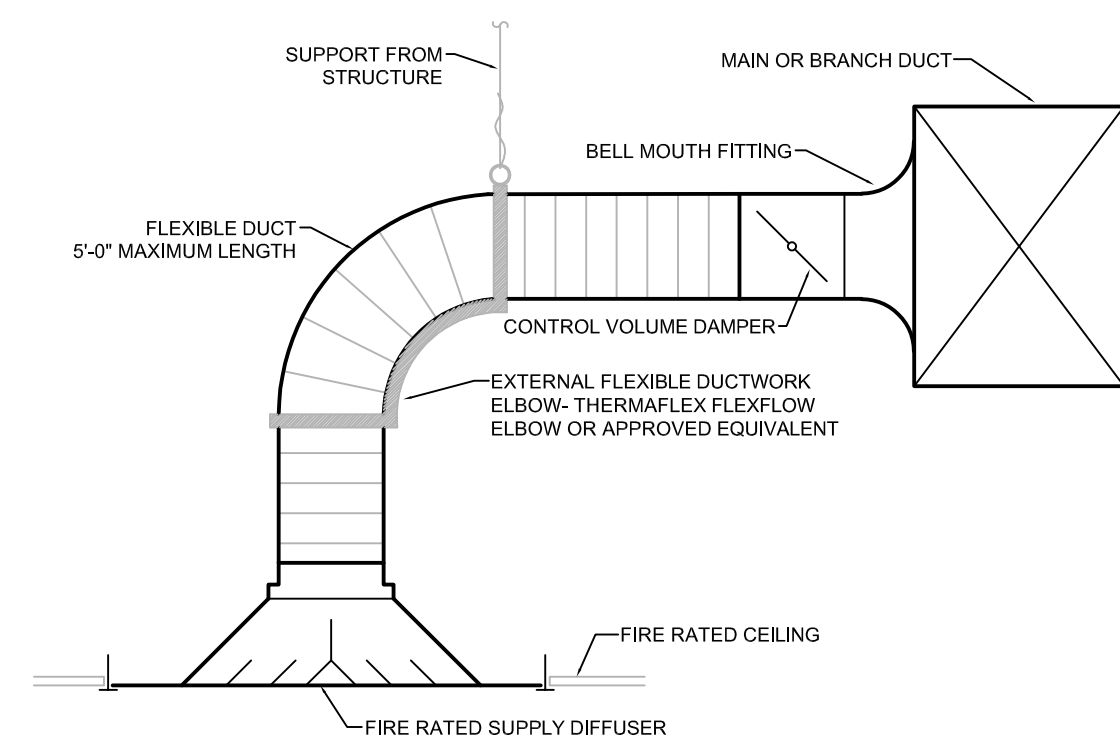


NOTES:
1. UTILIZE MANUFACTURER'S CURB SUITABLE FOR METAL ROOF OR "HY-CURB" OR APPROVED CURB.
2. COORDINATE EXACT DETAIL WITH HVAC UNIT MANUFACTURER.

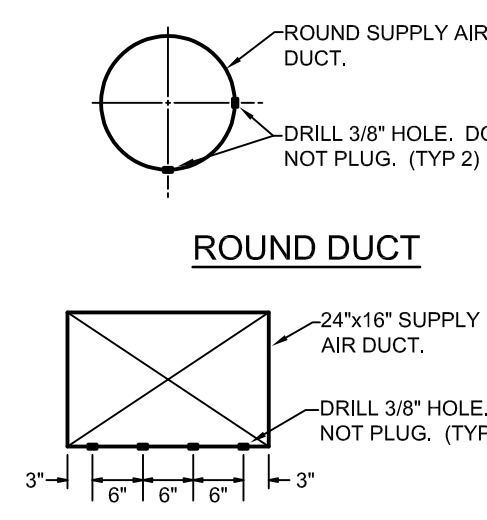
7 RTU CURB ATTACHMENT
SCALE: NONE



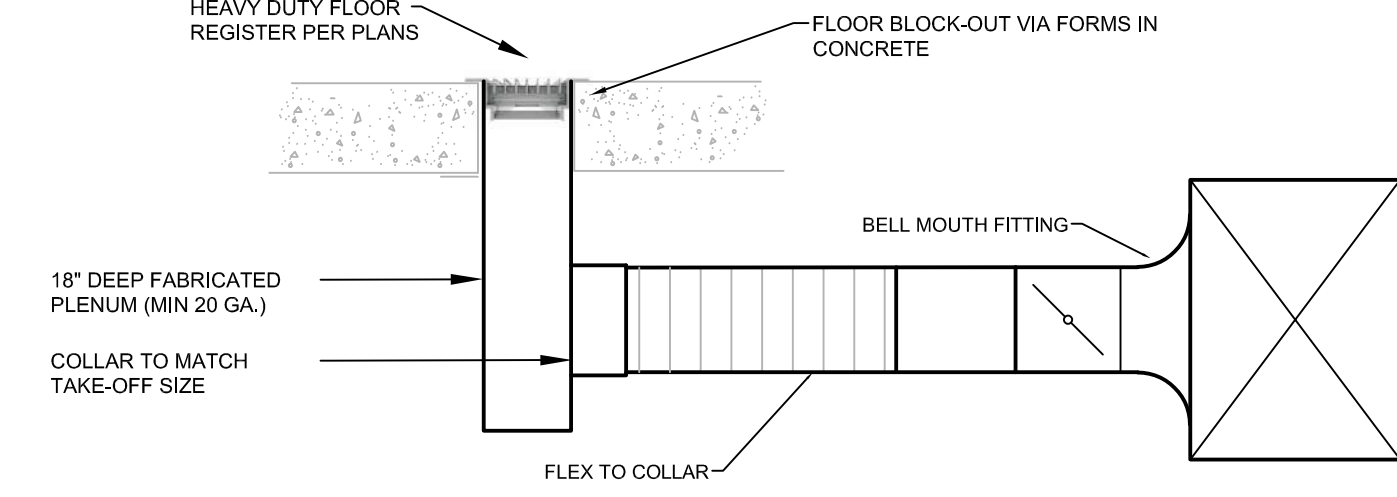
6 RETURN BOOT DETAIL
SCALE: NONE



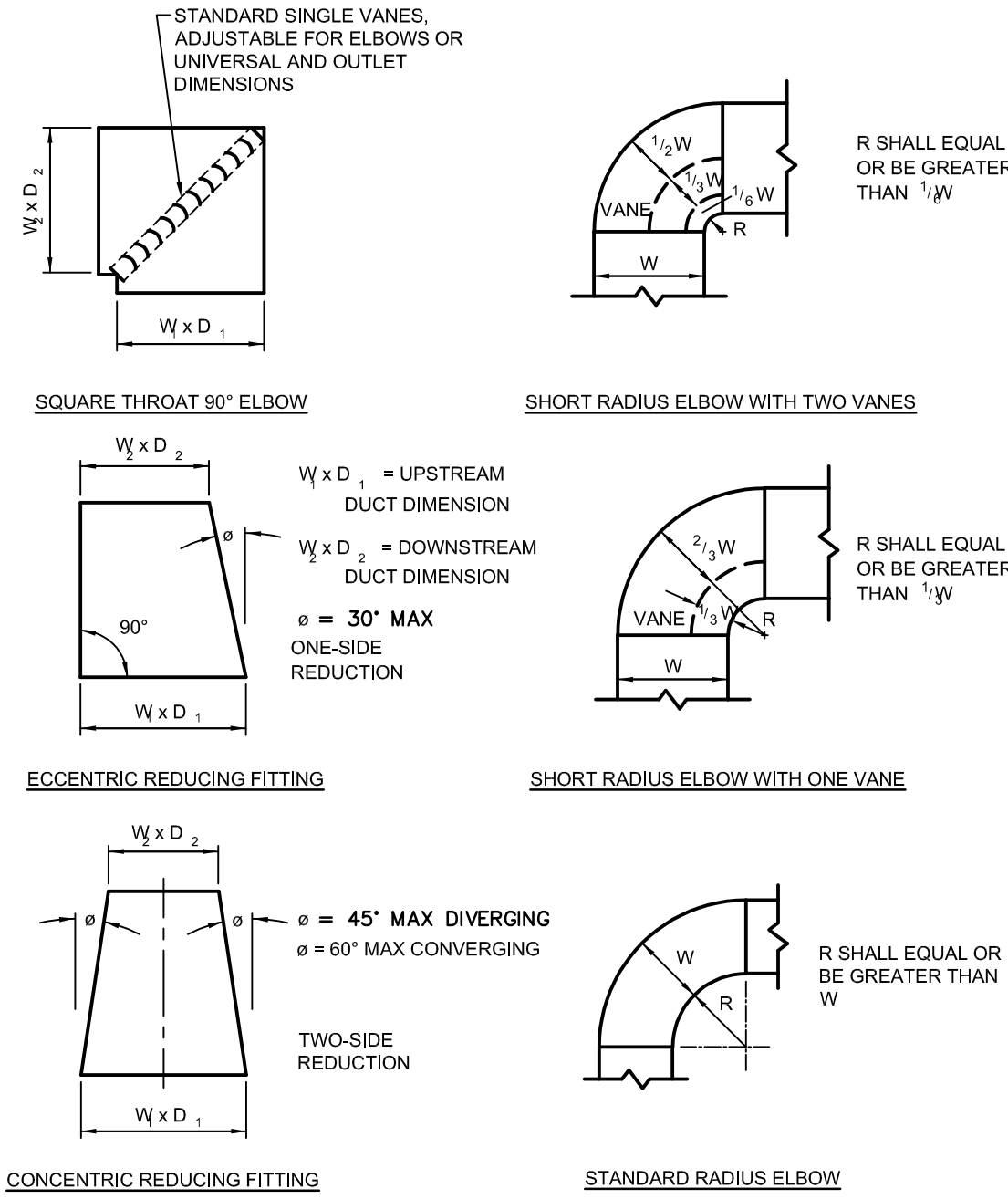
4 CEILING DIFFUSER DETAIL
SCALE: NONE



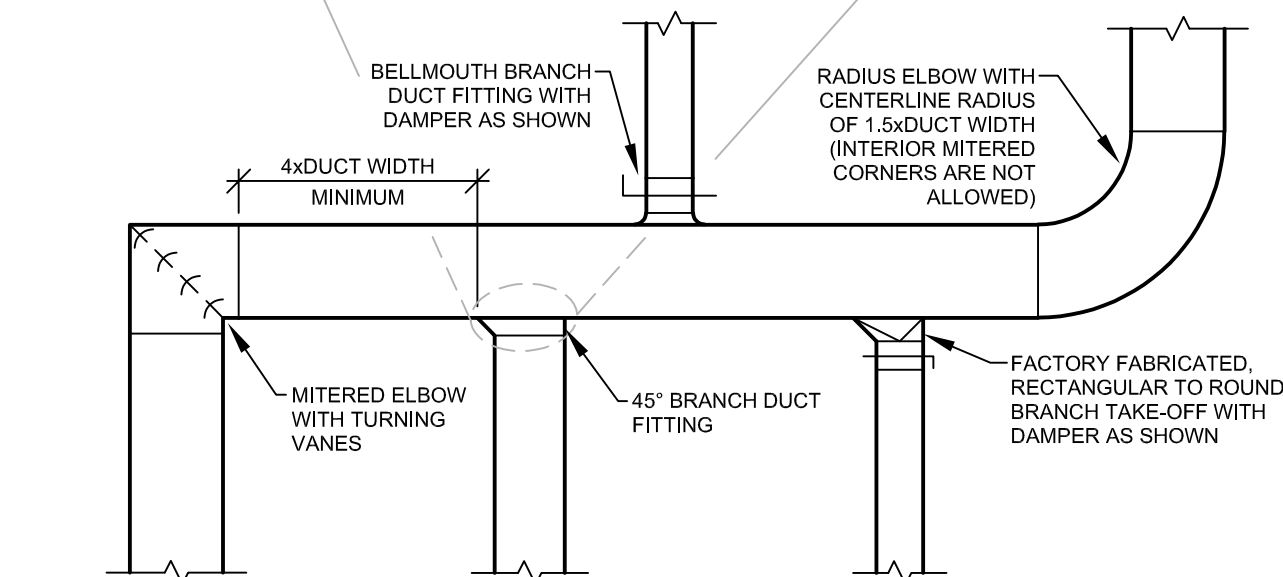
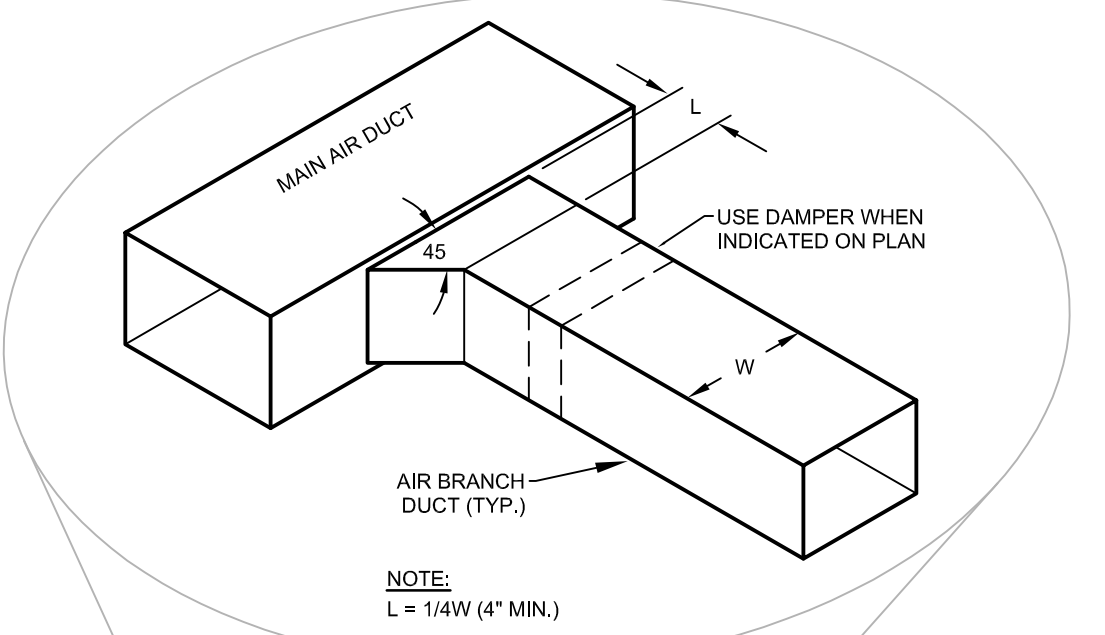
3 DUCT TRAVERSE DETAIL
SCALE: NONE



10 FLOOR REGISTER DETAIL
SCALE: NTS



2 SHEET METAL FITTINGS
SCALE: NONE



1 DUCTWORK CONSTRUCTION DETAIL
SCALE: NONE



1627 MAIN STREET, SUITE 600
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1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108



1701 WALNUT STREET, SUITE 300
KANSAS CITY, MO 64108

KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PROJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

PROJECT NO: 2403

CAD DWG FILE: Lee's Summit - Terminal MEP.rvt

DESIGNED BY: CMW

DRAWN BY: DM

CHECKED BY: WAI

APPROVED BY: Approver

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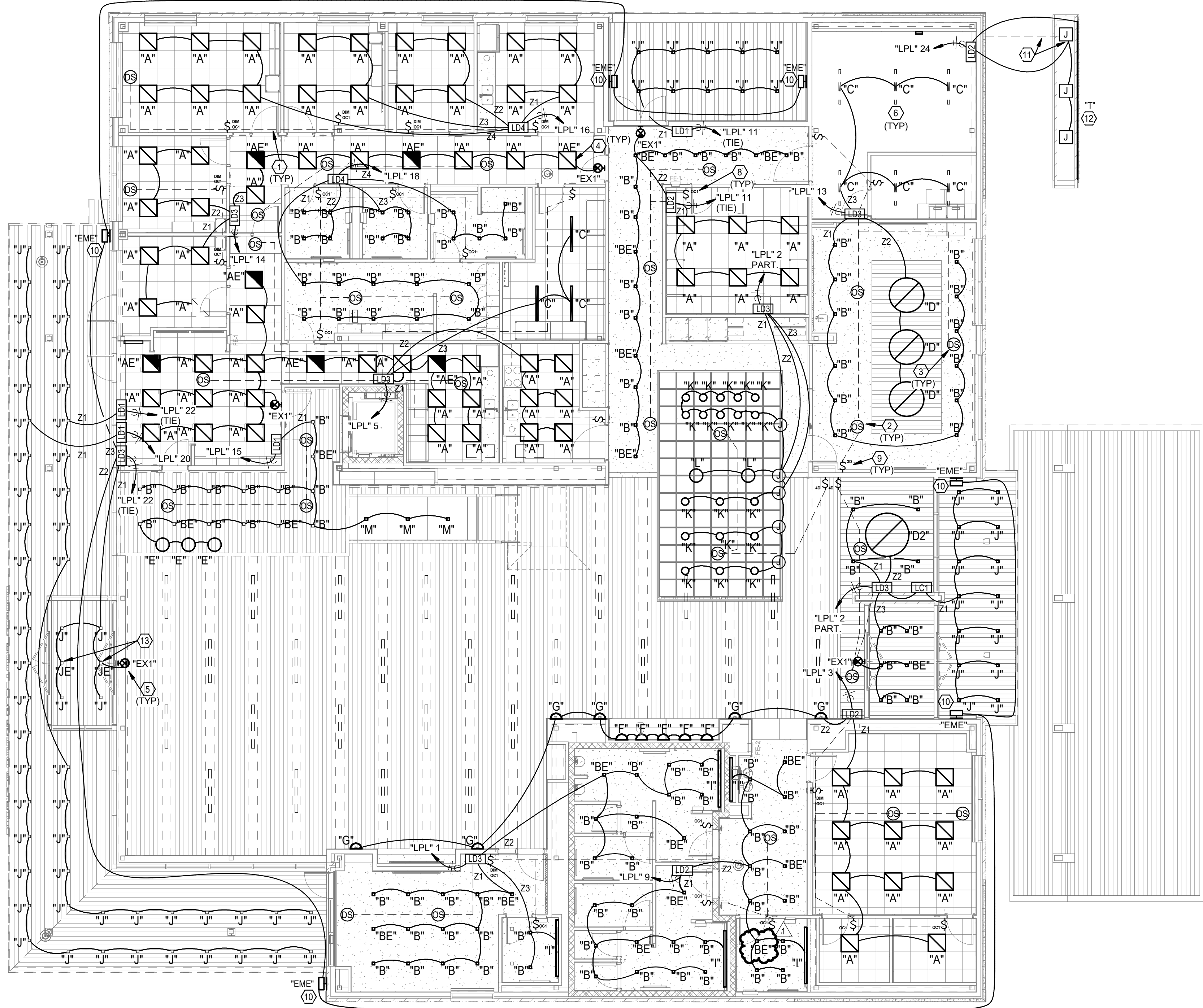
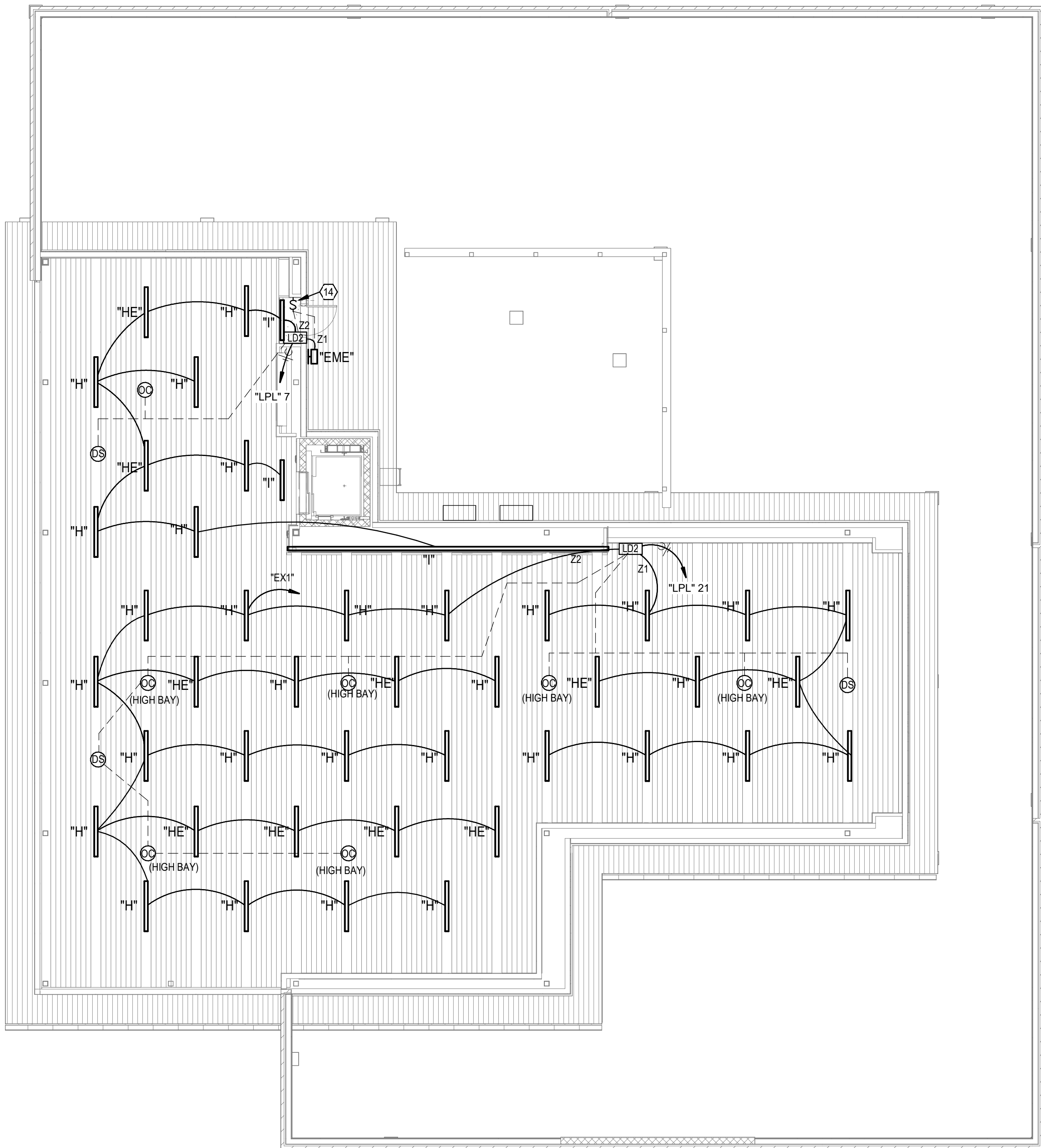
SHEET TITLE

MECHANICAL
DETAILS

M-400

SHEET 89 OF 102

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LIGHTING PLAN NOTES

- ROUTE CAT-6 CABLEING FOR ALL CONTROL DEVICES TO CONTROLLER.
- DUAL TECHNOLOGY (PIRUS) LOW VOLTAGE CEILING OCCUPANCY SENSOR FURNISHED AS PART OF DIGITAL LIGHTING CONTROL SYSTEM. ROUTE COMMUNICATION CABLEING TO CONTROLLER.
- TYPICAL DAYLIGHT HARVESTING SENSOR MOUNTED IN CEILING WITHIN 60" OF WINDOW.
- FIXTURES WITHIN DRYWALL CEILING LID TO BE FURNISHED WITH PLASTER FRAM (TYP. RE: ARCH REFLECTED CEILING PLANS).
- INCLUDE HOT UNSWITCHED CONDUCTOR WITH CIRCUITS THAT POWER EMERGENCY BATTERY PACK.
- SUSPEND LED STRIP FIXTURE WITH CHAINS AT 8'-0" AFF.
- DIGITAL LIGHTING CONTROLLER (1-4 CIRCUIT) MOUNTED ABOVE CEILING ON WALL 12" ABOVE GRID (LD FOR DIMMING, LC FOR GROUP CONTROL).
- TYPICAL DUAL TECHNOLOGY (PIRUS) WALL SWITCH OCCUPANCY SENSOR WITH OVERRIDE OFF AND PUSH TO DIM FURNISHED AS PART OF DIGITAL LIGHTING CONTROL SYSTEM. ROUTE COMMUNICATION CABLEING TO CONTROLLER.
- TYPICAL MULTI-BUTTON DIGITAL SWITCH SENSOR FURNISHED AS PART OF DIGITAL LIGHTING CONTROL SYSTEM. ROUTE COMMUNICATION CABLEING CONTROLLER. PROGRAM PER SEQUENCES FOR DAYLIGHTING, PUSH TO DIM, ETC.
- MOUNT EXTERIOR FIXTURE AT 108" AFF PROVIDE SURFACE MOUNTING PLATE AND CONDUIT ENTRY. EXTERIOR EMERGENCY FIXTURES SHALL COME WITH BUILT-IN PHOTOCELL.
- PROVIDE 2#12, 3/4" UG CONDUIT FROM PANELBOARD SERVING LOAD TO JUNCTION BOX FOR MONUMENT SIGN POWER. FINAL CONNECTION BY MONUMENT SIGN VENDOR.
- LED STRIP LIGHTING ON FRONT OF MONUMENT SIGN. RE: ARCH DRAWINGS FOR ADDITIONAL DETAILS.
- PROVIDE "IE" TYPE LIGHT FIXTURE WITH SURE-LITES E8PLED EMERGENCY BATTERY PACK RE: DETAIL 6/E-400.
- MANUAL OVERRIDE SWITCH FOR EXTERIOR MEZZANINE "EME" LIGHT FIXTURE. SWITCH TO ALLOW FIXTURE TO REMAIN OFF IN NORMAL OPERATION AND TURN ON VIA SWITCH OR EMERGENCY POWER.

LIGHTING GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LOCAL VERSION OF THE NATIONAL ELECTRIC CODE AND NFPA AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION.
- COORDINATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND AVOID INTERFERENCES AND CONFLICTS BEFORE ANY PIPING, DUCTWORK, CONDUIT, ETC. IS INSTALLED. IT SHALL BE COORDINATED CAREFULLY BETWEEN ALL TRADES.
- CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, ACCESSORIES, AND MATERIAL FURNISHED BY THEM FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE AGAINST ALL DEFECTORS.
- VERIFY IN FIELD THE LOCATION OF ALL STRUCTURAL MEMBERS. CEILINGS ARE SHOWN SCHEMATICALLY FROM ARCHITECTURAL PLANS.
- ROUTE ALL CONDUIT TIGHT TO STRUCTURE.
- LIGHT FIXTURES DESIGNATED WITH THE LETTER "E" (IE, "DE", "BE", ETC.) SHALL BE CONNECTED TO CIRCUIT SHOWN THAT SHALL AUTOMATICALLY SWITCH TO EMERGENCY POWER IN THE EVENT OF A NORMAL POWER LOSS.
- PROVIDE ALL LED DIMMABLE FIXTURES WITH 0-10V DIMMABLE DRIVERS.
- REFER TO SHEET E-400 FOR DIMMING SWITCH BANKS.
- EXIT LIGHTS SHALL BE CIRCUITED TO UNSWITCHED HOT, TYPICAL ALL EXITS THROUGHOUT.



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LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146
01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION
A 01.03.25 CITY REVIEW COMMENTS

PROJECT NO: 2403
CAD DWG FILE: Lee's Summit - Hangar 2.rvt
DESIGNED BY: CMW
DRAWN BY: MR
CHECKED BY: WAI
APPROVED BY: APPROVER
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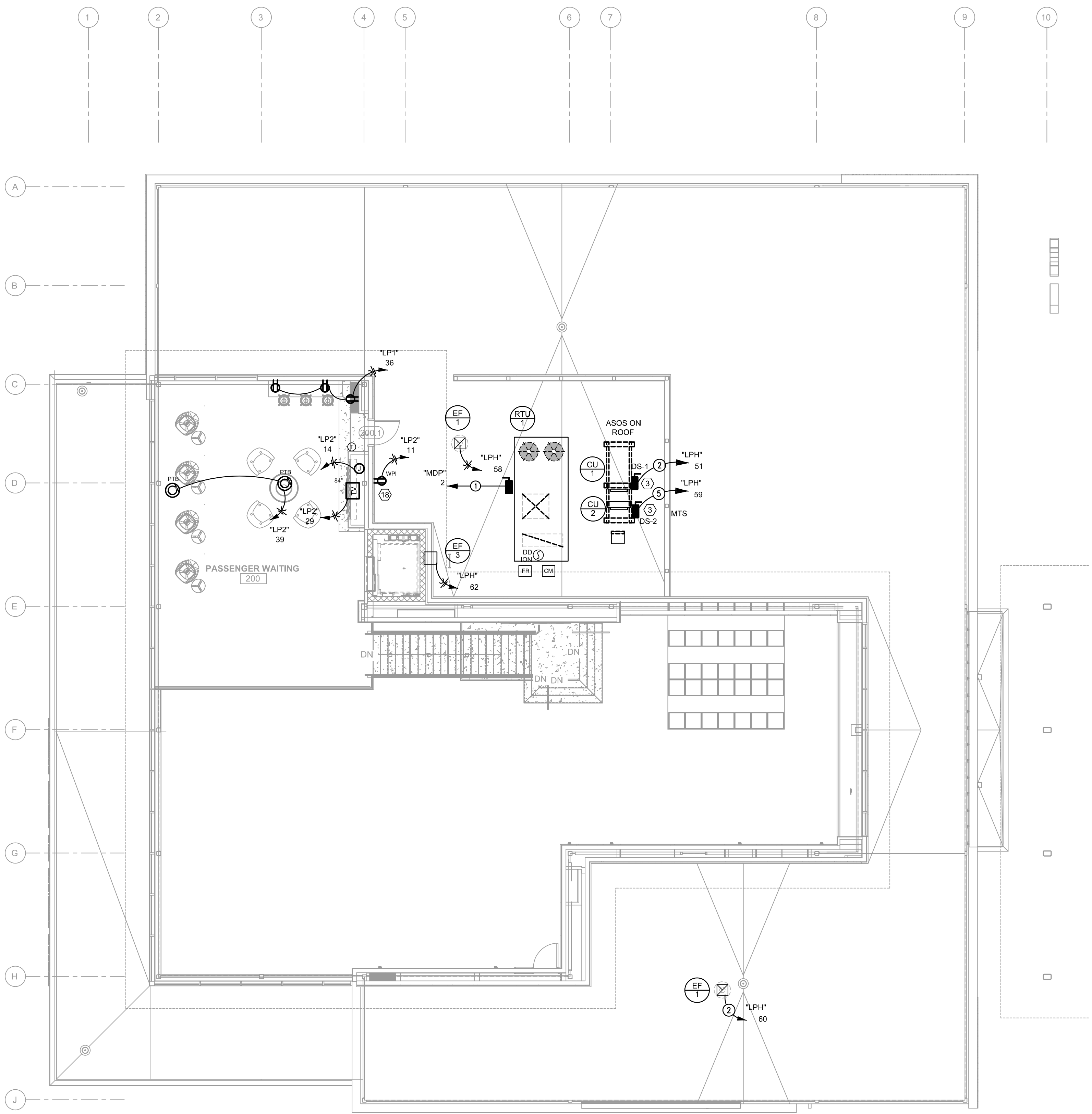
SHEET TITLE

LIGHTING PLANS

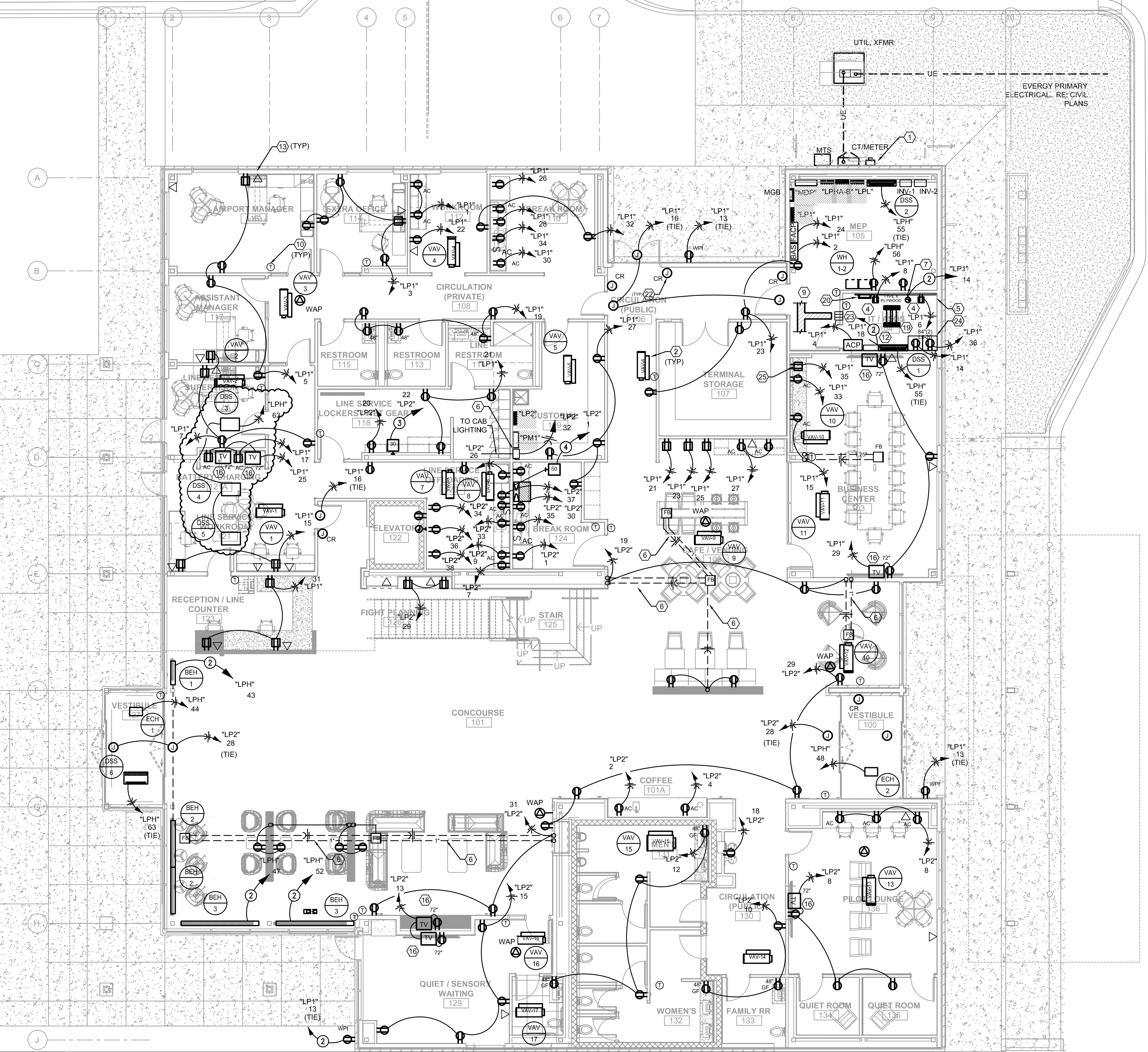
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1 POWER PLAN - LEVEL 2
SCALE: 1/8"=1'-0"



1 POWER PLAN - LEVEL 1
SCALE: 1/8"=1'-0"

POWER PLAN NOTES

- LOCATION OF MAIN DISCONNECT/TRANSFER SWITCH WITH HOOK-UP, CT CABINET (30" WIDE, LOCKABLE), METER, SURFACE MOUNT ON WALL.
- FACTORY INSTALLED DISCONNECTING MEANS/BREAKER FURNISHED WITH VAV EQUIPMENT. SEE SCHEDULE ON THIS SHEET FOR ALL FEEDERS TO HVAC EQUIPMENT.
- NEW NEMA 3R DISCONNECT "DS1" WITH LIQUID-TIGHT FLEXIBLE CONDUIT FOR CONNECTION TO MECHANICAL EQUIPMENT. ROUTE CONDUIT THRU WALL ON LOWER ROOF INTO BUILDING. FIELD VERIFY EXACT REQUIREMENTS.
- PROVIDE DEDICATED QUAD RECEPTACLES FOR SERVER OR AV EQUIPMENT LOCATED IN RACKS. INSTALL ONE WALL MOUNTED CABINET PER DETAILS WITH BUILT-IN OUTLET WITHIN.
- INSTALL 5/8" THICK, FIRE RATED PLYWOOD TERMINATION BOARD ON THE ENTIRE WALL. PAINT TO MATCH WALL COLOR.
- PROVIDE 30A, 1P DISCONNECT SWITCH FUSED AT 20A FOR ELEVATOR HOISTWAY CAB LIGHTING AND RECEPTACLES.
- FURNISH 50 DROP BOX AT CEILING WITH NEMA L5-30P DROP FOR CONNECTION TO RACK MOUNTED UPS UNIT.
- FURNISH (1) DOUBLE GANG JUNCTION BOXES FOR SYSTEMS FURNITURE FEED CONNECTIONS (POWER). PROVIDE SINGLE GANG MUD RING FOR 0.75" (POWER) WHIP CONNECTION. FURNISH ALL IN-FEEDS PER MANUFACTURER (2-1).
- 12" WIDE x 2" DEEP WIRE BASKET CABLE TRAY EQUAL TO COOPER B-LINE MODEL WB12-CW. PROVIDE ALL-THREAD SUPPORTS FROM CEILING. COORDINATE EXACT MOUNTING HEIGHT WITH DUCTWORK AND PIPING (MOUNT AS HIGH AS POSSIBLE). PROVIDE CONTINUOUS GROUND WIRE ATTACHED TO EACH WIRE BASKET SECTION, TERMINATING AT SERVER ROOM GROUND BAR. INSTALL TEES, SUPPORTS, FITTINGS, ETC PER MANUFACTURER SPECIFICATIONS.
- PROVIDE NEW SINGLE GANG BACKBOX WITH 0.5" CONDUIT TO ABOVE CEILING FOR THERMOSTAT/SENSOR WIRING. ALL TEMPERATURE CONTROL WIRING AND DEVICES SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
- SCHEMATIC LOCATION OF NEW VAV BOX WITH ELECTRIC REHEAT. CONFIRM EXACT LOCATION WITH MECHANICAL PLANS. CONFIRM EXACT MOCP WITH MECHANICAL PLANS TO COORDINATE BREAKER/WIRE SIZE. VAV'S FURNISHED WITH INTEGRAL DISCONNECT. SEE SCHEDULE ON THIS SHEET.
- ASOS EQUIPMENT BOX ON WALL WITH POWER TERMINATED AT JUNCTION BOX. CIRCUIT 2-WIRE AND 1 - #12 GROUND TO 20A/2P BREAKER PER PANEL SCHEDULE.
- WHERE A DATA SYMBOL IS SHOWN ON THE PLANS, PROVIDE DOUBLE GANG BACKBOX WITH SINGLE GANG MUD RING. PROVIDE 1" CONDUIT TO ABOVE CEILING TERMINATING WITH BUSHING. (TYP OF ALL SHOWN ON THE PLANS). RE: ROUGH-IN DETAIL. ANY SCIF PERIMETER WALL SHALL BE SURFACE MOUNTED CONDUIT AND BACKBOXES. INTERIOR SCIF WALLS CAN BE RECESSED.
- CIRCUIT HOMERUN FROM EXHAUST FAN THRU DDC RELAY FOR TIME CLOCK CONTROL.
- FLOOR COPIER RECEPTACLE.
- PROVIDE NEW WALL RECEPTACLE AND LOW VOLTAGE ROUGH-IN BOXES FOR FLAT SCREEN TELEVISION. INSTALL AT 72" AFF PER ARCH PLANS. PROVIDE INSTALLATION PER DETAIL FOR WIREMOLD AV PREMANUF. BOX. ROUTE HDMI AND CAT-6 TO WALL BOX IN CONDUIT (COORDINATE WITH OWNER/TELECOMM CONTRACTOR).
- WIREMOLD DS4000 SERIES DUAL CHANNEL PLUGMOLD WITH OUTLETS AT 12" O.C. AND LOW VOLTAGE SECTION FOR TELECOMM OUTLET AND PANIC HARDWARE MOUNTING WITHIN. MOUNT 4" ABOVE TOP OF COUNTER.
- MOUNT MAINTENANCE RECEPTACLE TO OUTSIDE OF WALL ABOVE LOWER ROOF AT 24" ABOVE ROOF LINE. INSTALL WITHIN WEATHERPROOF IN-USE ENCLOSURE. ROUTE CONDUITS THRU WALL.
- TELECOM CONTRACTOR FURNISHED FLOOR MOUNTED 2-POST RACK WITH RACK MOUNTED UPS AND PATCH PANELS (BY OTHERS). PROVIDE 50 CORD DROP TO CONNECT TO RACK MOUNTED UPS INPUTS WITH MULTIPLE NEMA L5-30R OUTLETS WITHIN RACK.
- PROVIDE COOPER, LEVITON, OR HUBBEL 12" LONG GROUND BAR WITH INSULATORS, (6) #4 MAX LUGS.
- TYPICAL LOCATION OF CAMERA BY OTHERS. FURNISH JUNCTION BOX AND CONDUIT TO ABOVE CEILING IF INSTALLED WITHIN WALL. USE RADIUS ELBOW AND TERMINATE WITH BUSHING.
- FURNISH CARD READER JUNCTION BOX AND CONDUIT WITHIN WALL TO 4X4 JUNCTION BOX ABOVE DOOR. REFER TO SECURITY ROUGH-IN DETAIL.
- CABLE TRAY TO STOP PRIOR TO WALL (12") WITH LEGRAND EZPASS THRU-WALL BARRIER (3 SECTIONS PARTITIONS FOR EACH NETWORK). EZPASS FURNISHED AND INSTALLED BY E/C.
- TRIPPLITE 12U WALL IT CABINET FOR PA SYSTEM (1) AND CRESTRON EQUIPMENT (1). PROVIDE L5-20R OUTLET BEHIND CABINET FOR CONNECTION TO RACK MOUNTED PDU.

FEEDER SCHEDULE

- (4)-#250MCM AND (1)-#4 GROUND IN 2.5" CONDUIT.
- (2)-#10 AND (1) #10 GROUND IN 3/4" CONDUIT.
- (3)-#10 AND (1) #10 GROUND IN 3/4" CONDUIT.
- (2)-#8 AND (1) #10 GROUND IN 3/4" CONDUIT.
- (3)-#6 AND (1) #10 GROUND IN 3/4" CONDUIT.



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GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
PROJECT NO:	2403	
CAD DWG FILE:	Lee's Summit - Terminal MEP.rvt	
DESIGNED BY:	CMW	
DRAWN BY:	DM	
CHECKED BY:	WAI	
APPROVED BY:	Approver	
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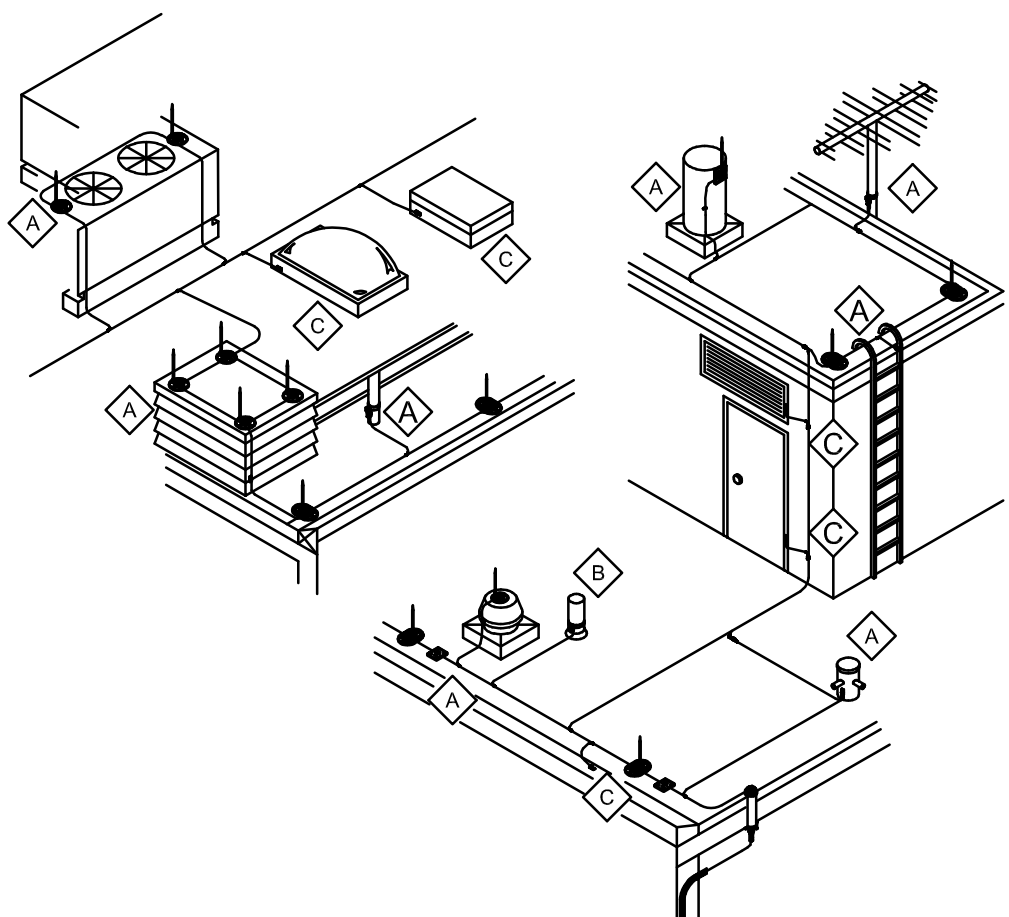
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POWER PLANS

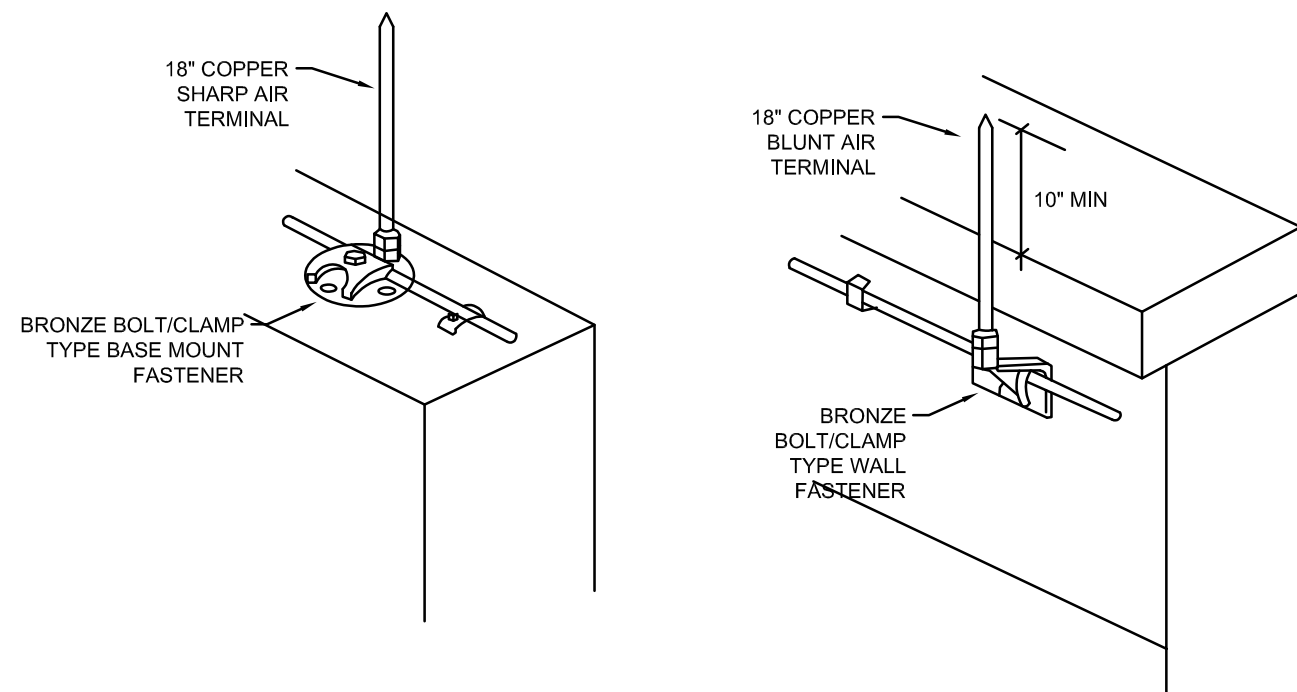
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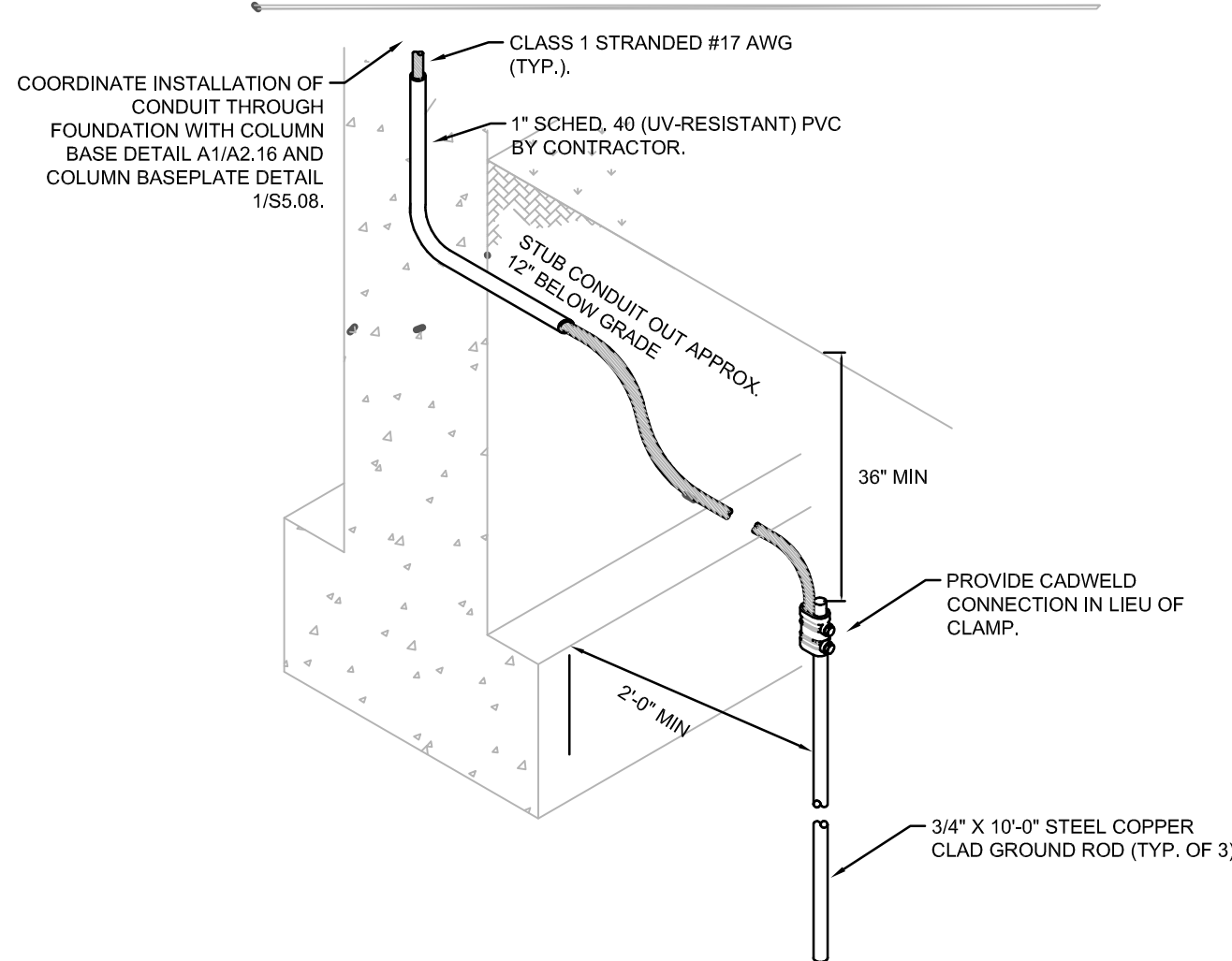
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3 LIGHTNING PROTECTION AIR TERMINAL DETAIL
SCALE: NTS



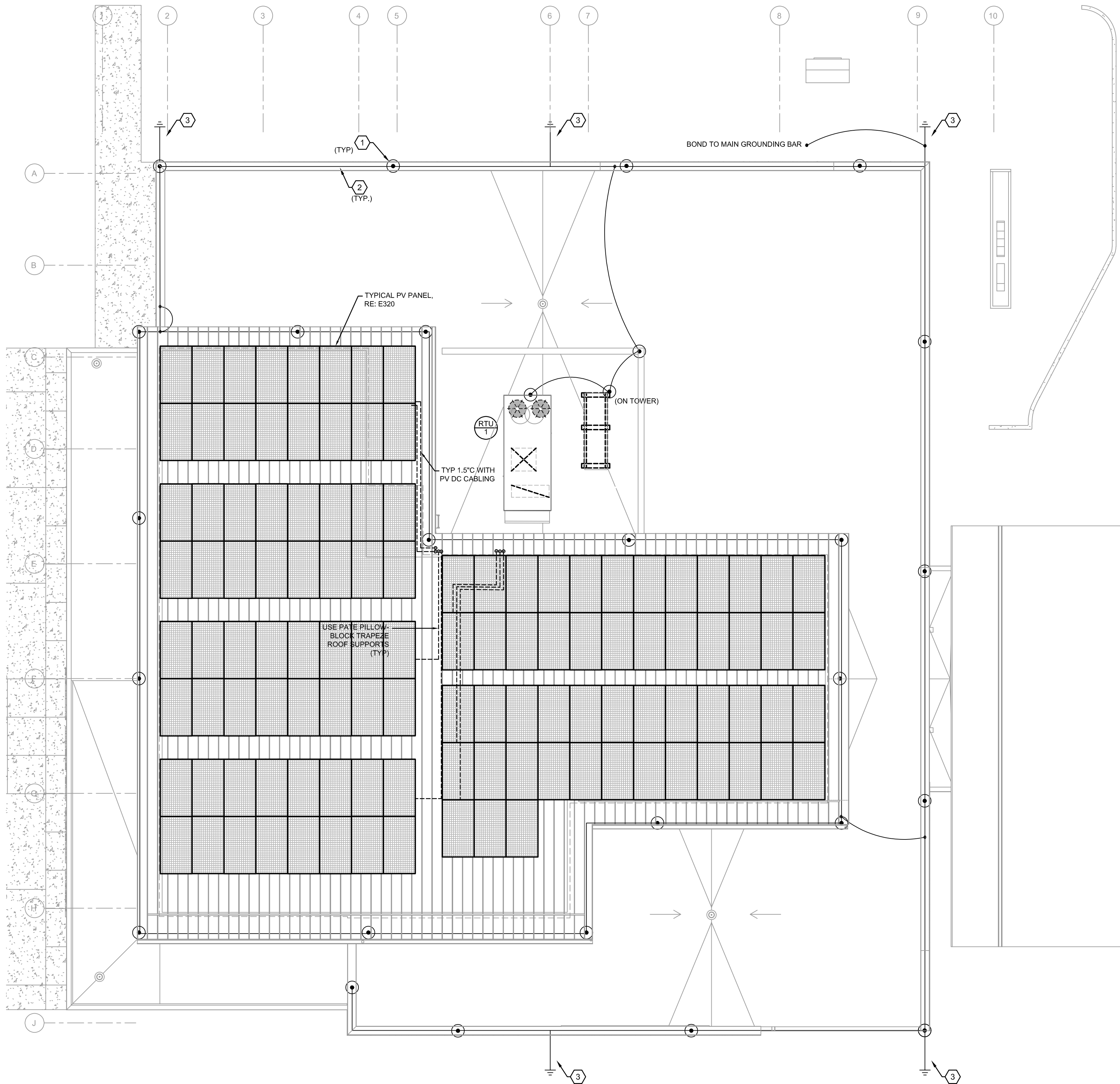
4 LIGHTNING PROTECTION AIR TERMINAL DETAIL
SCALE: NTS



5 LIGHTNING PROTECTION GROUND ROD DETAIL
SCALE: NTS

DETAIL NOTES

- A TYPICAL BODIES OF CONDUCTANCE AS NOTED BELOW. USE FULL SIZE CONDUCTOR AND APPROPRIATE FITTING SHOWN FOR CONNECTION.
- B (PLUMBING STACK) REQUIRES BONDING WITH MAIN SIZE CABLE ONLY IF WITHIN 6'-0" (1.828mm) OF LIGHTNING PROTECTION SYSTEM.
- C TYPICAL BODIES OF INDUCTANCE AS NOTED BELOW. USE SECONDARY SIZE (SMALLER) CONDUCTOR AND APPROPRIATE FITTING SHOWN FOR CONNECTION.
- D BONDING CONNECTIONS AND FITTINGS SHOWN ARE TYPICAL EXAMPLES. MAKE ALL CONNECTIONS REQUIRED TO MEED CODES AS NOTED BELOW. ADJUST FITTING TYPE AS REQUIRED TO SUIT FIELD CONDITIONS.



1 LIGHTNING PROTECTION ROOF PLAN
SCALE: 1/8"=1'-0"

PHOTOVOLTAIC ARRAY NOTES

- REFER TO SHEET E-320 FOR ALL WIRING AND SOLAR ARRAY WORK ON ROOF.
- POTENTIAL AVAILABILITY OF RENEWABLE ENERGY SOURCE IS ~45 KW OF OFFSET ENERGY.
- ARRAY CURRENTLY ORIENTATED SOUTH AT 27 DEG ON SINGLE ROW ARRAY FRAMING.

ELECTRICAL ROOF PLAN NOTES

- FURNISH AND INSTALL 3/8" DIAMETER COPPER LIGHTNING AIR TERMINAL 18" LONG WITH SHARP BARE COPPER POINTS. (TYPICAL) AIR TERMINAL SHALL EXTEND A MINIMUM OF 10" ABOVE SURROUNDING OBJECTS (WALLS). SPACE TERMINALS AT 20'-0".
- INSTALL CLASS 2 STRANDED COPPER CONDUCTOR WITH #17 AWG STRANDS FOR MAINBONDING CONDUCTOR THROUGHOUT LIGHTNING PROTECTION SYSTEM. FASTEN TO STRUCTURE EVERY 3'-0" MINIMUM.
- ROUTE DOWN CONDUCTOR DOWN THROUGH BUILDING AND CWD WELD TO A 100X4" COPPER CLAD STEEL GROUND ROD AT THE BASE OF THE BUILDING. INSTALL TEST STATION PER DETAIL. FASTEN THE CONDUCTOR SECURELY TO STRUCTURE AT EVERY 3'-0" THROUGHOUT. AT FOUNDATION COORDINATE DOWN CONDUCTOR INSTALLATION THROUGH FOUNDATION WALL WITH ARCHITECTURAL COLUMN BASE DETAIL AND STRUCTURAL DETAIL. INSTALL 1" SCHEDULE 40 CONDUIT (PER DETAIL E410) THROUGH FOUNDATION SO THAT DOWN CONDUCTOR WILL ROUTE AROUND BASEPLATE AND BE CONCEALED WITHIN COLUMN FOUNDATION WALL THROUGHOUT.

GENERAL NOTES

- LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 780. SHOP DRAWINGS SHALL BE PROVIDED THAT INCLUDE ALL APPROPRIATE WIRE, TERMINALS, CONNECTION INFORMATION, DETAILED DIMENSIONS OF ALL EQUIPMENT, ETC.
- LIGHTNING PROTECTION SYSTEM GROUNDING SHALL BE TIED INTO ELECTRICAL/TELEPHONE SERVICE GROUNDING SYSTEMS. SIZE OF CONDUCTOR FOR INTERCONNECTION SHALL BE THE SAME AS THE MAIN-SIZE LIGHTNING CONDUCTORS.
- LIGHTNING PROTECTION SYSTEM SHALL BE BONDED TO ALL STRUCTURAL, ARCHITECTURAL, ETC., METALLIC EQUIPMENT THAT IS A PART OF THE STRUCTURE.
- PROVIDE ALL NECESSARY BASES AND/OR FASTENERS TO INSTALL LIGHTNING PROTECTION SYSTEM AS INDICATED. REFERENCE DETAILS FOR FURTHER INFORMATION.
- FOR SOLAR ARRAY, UTILIZE STANDING SEAM CLIPS AND BRACKETING FOR ALL ARRAYS. MINIMUM STAND-OFF FROM ROOF SHALL BE 6".
- FOR CONDUITS DOWN THRU UPPER ROOF OVERHANG, UTILIZE PASS-THRU BOOTS AND SLEEVES FOR CONDUITS. ALL PENETRATIONS SHALL BE WEATHERTIGHT. USE LB FITTINGS DOWN.



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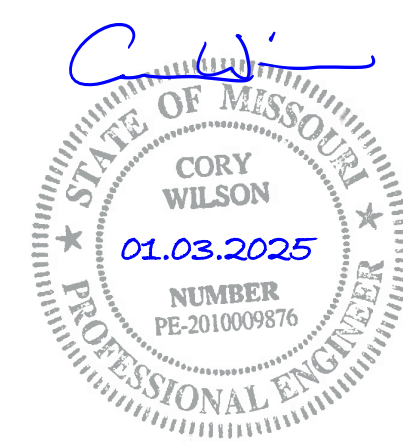


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KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

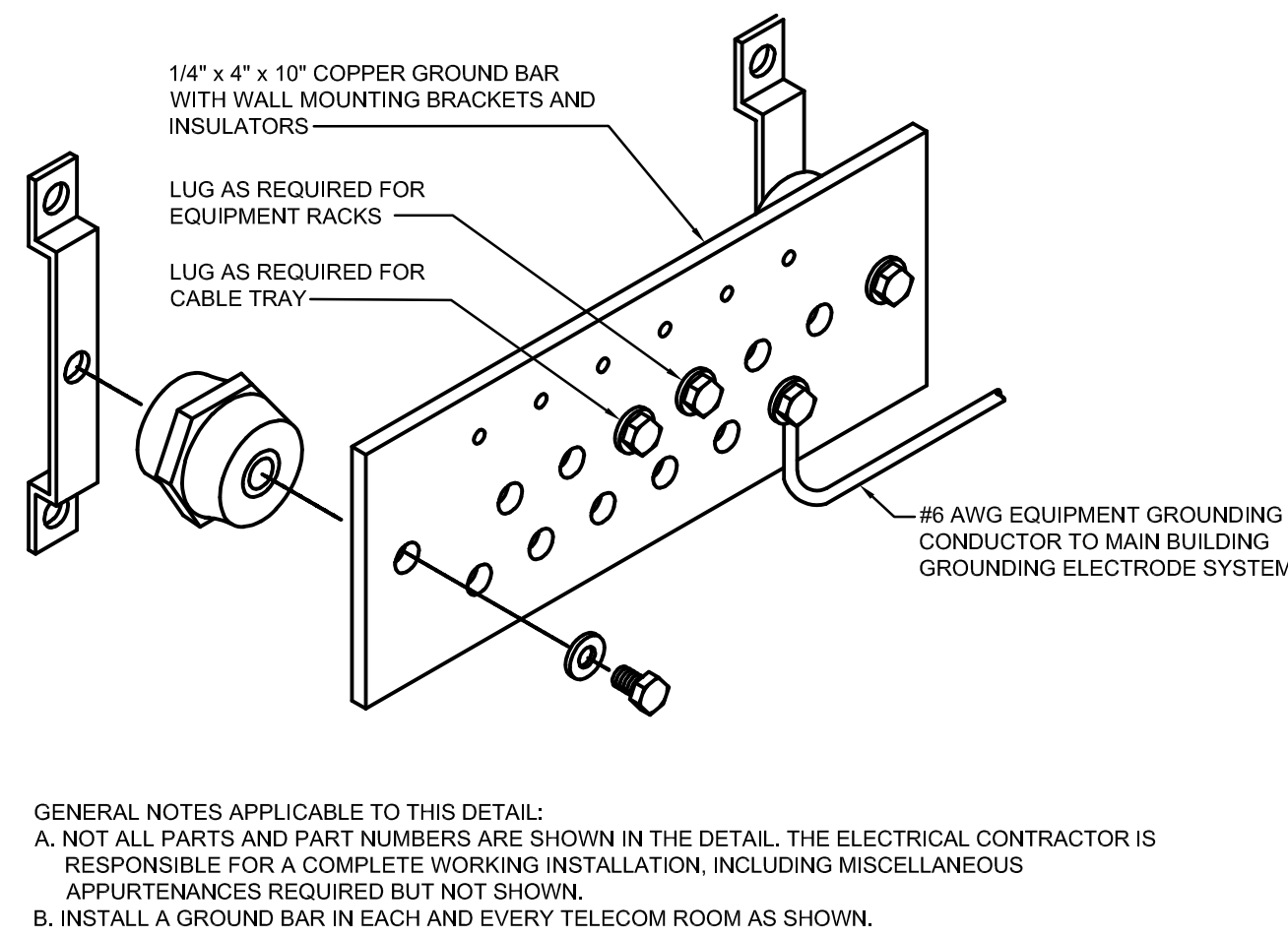
PROJECT NO: 2403
CAD DWG FILE: Lee's Summit - Terminal MEP.rvt
DESIGNED BY: CMW
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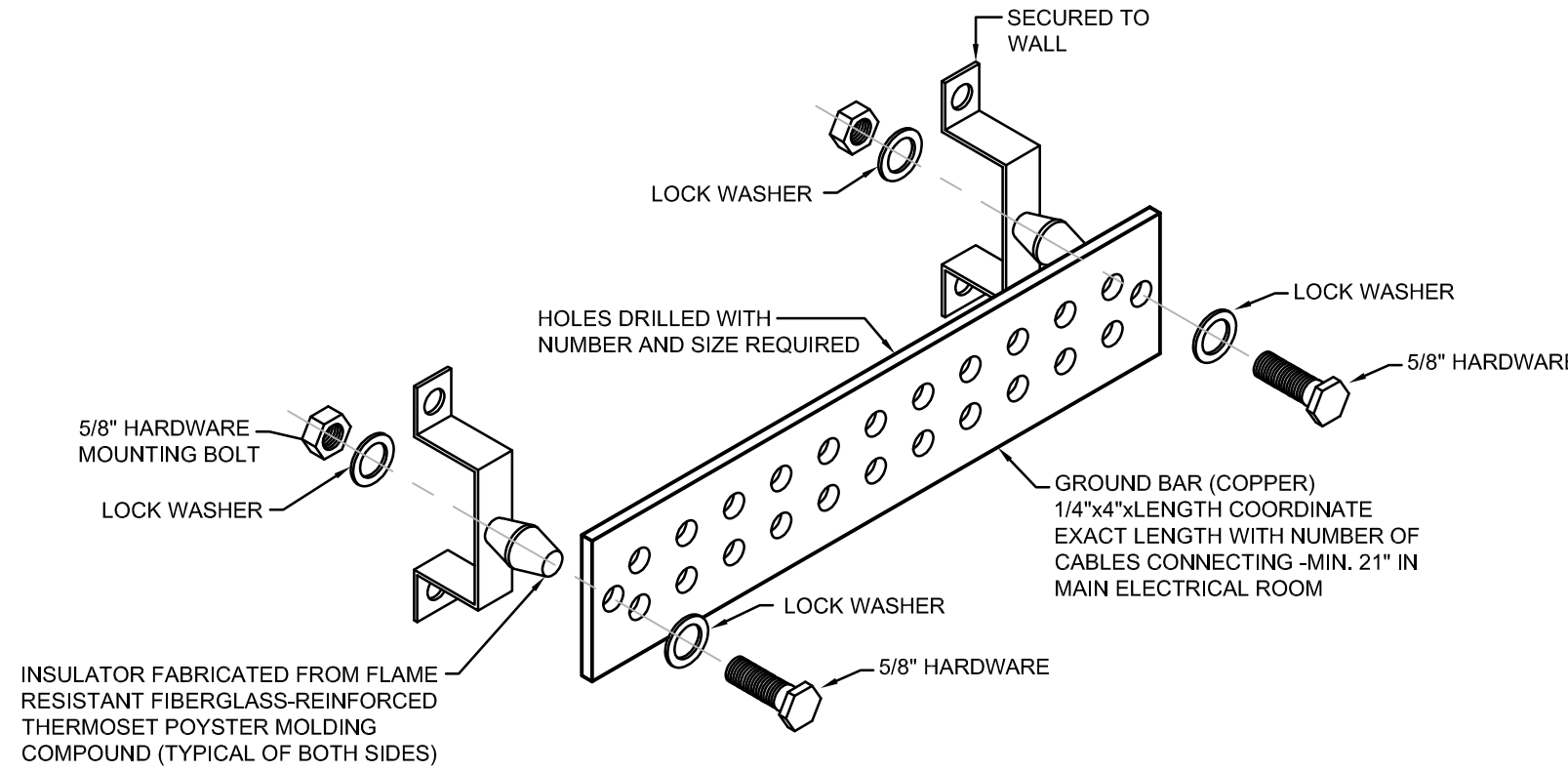
ROOF LIGHTNING
PROTECTION
PLAN

E-130

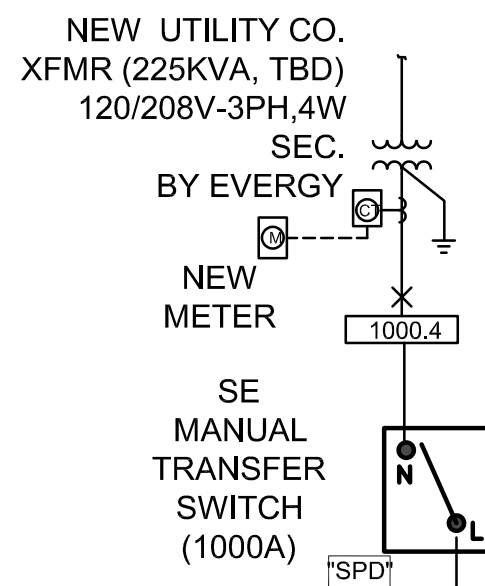
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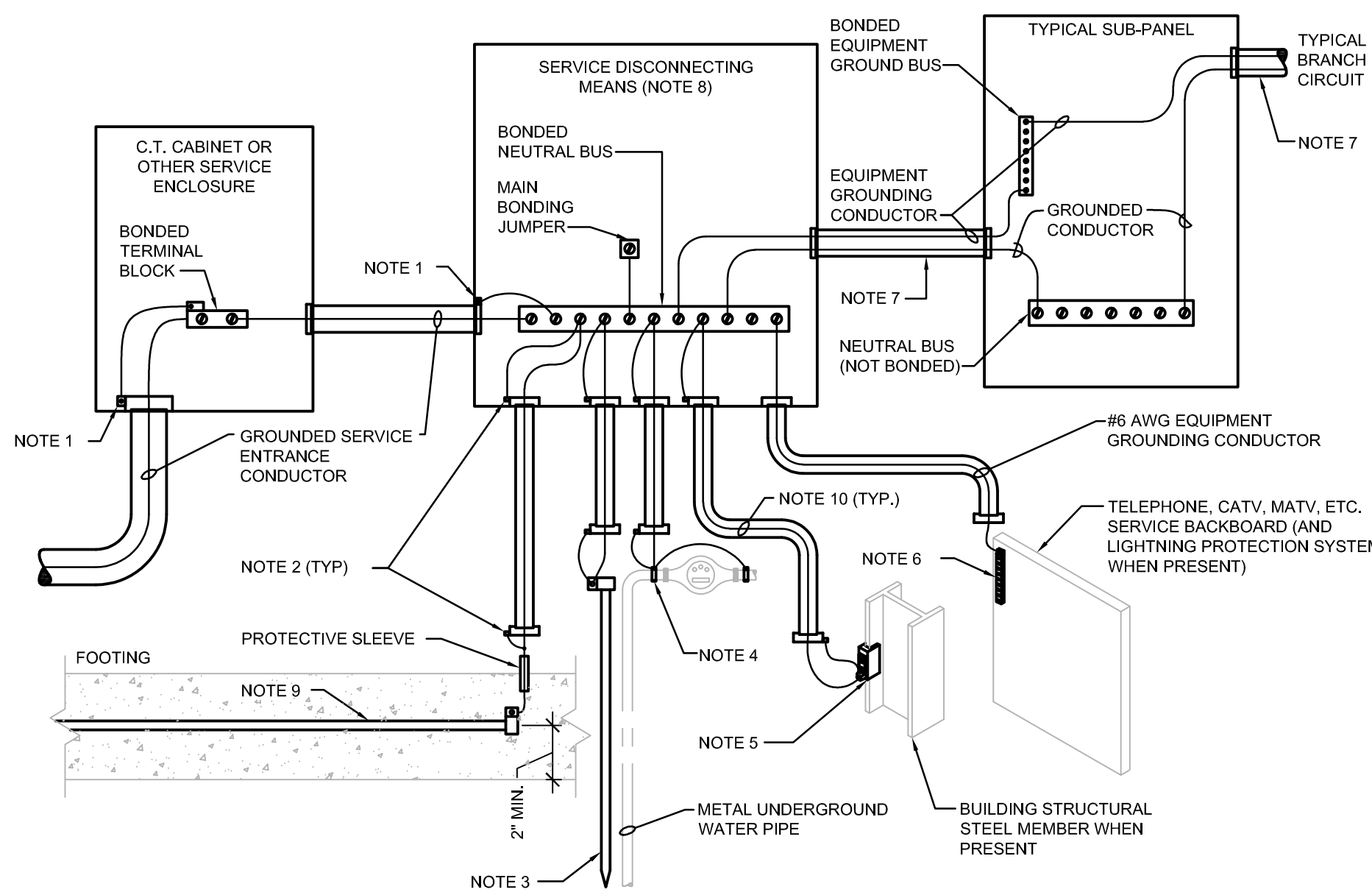
6 IT ROOM GROUND BAR DETAIL
SCALE: NTS



5 MAIN GROUND BAR DETAIL
SCALE: NTS



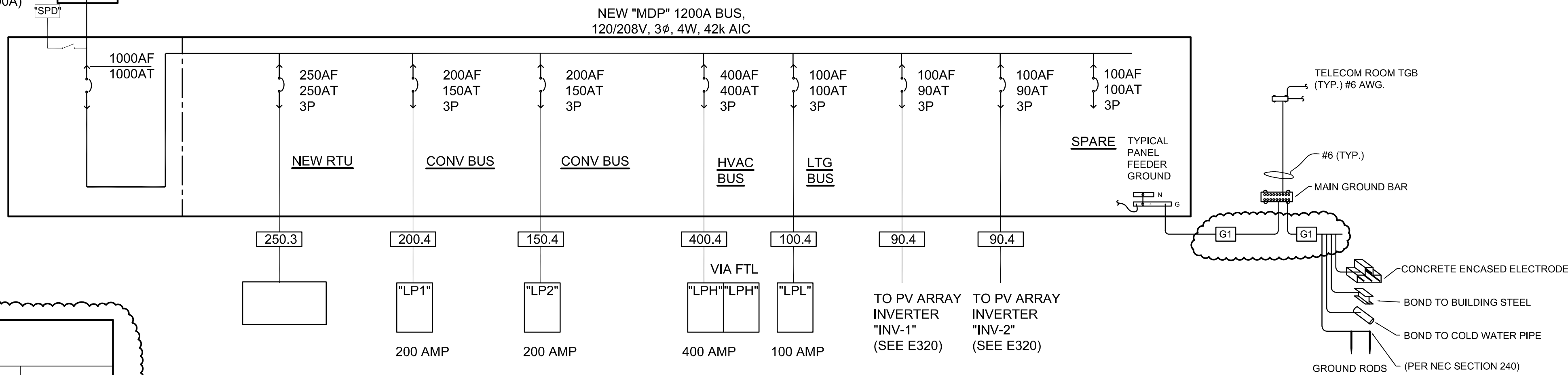
4 GROUND TEST WELL DETAIL
SCALE: NTS



3 SERVICE ENTRANCE GROUND DETAIL
SCALE: NTS

ITEM	BILL OF MATERIAL
1	GROUND ROD, 3/4" DIA. x 10' LONG, COPPER CLAD STEEL
2	CONNECTOR, #4 SOLID THRU #20 STR. CABLE TO GND. ROD, BURNDY #GAR-6428
3	PVC PIPE, 10" DIA. x 2'-0" LONG, SCHEDULE 40
4	COVER PLATE & HANDLE, FIELD FABRICATE PER DETAIL
5	GROUND WIRE, SDB COPPER
6	SQUARE NUT, 1/2", UNISTRUT #HSON050EG
7	FLAT WASHER, 1/2", UNISTRUT #HFW050EG
8	CONNECTOR, #20 SOLID THRU 250KCMIL STR. CABLE TO GND. ROD, BURNDY #GAR-6429
9	CONNECTOR, #8 SOLID THRU #4 STR. CABLE TO GND. ROD, BURNDY #GAR-644C

* FOR EACH ADDITIONAL CABLE CONNECTION ADD 1 CONNECTOR.

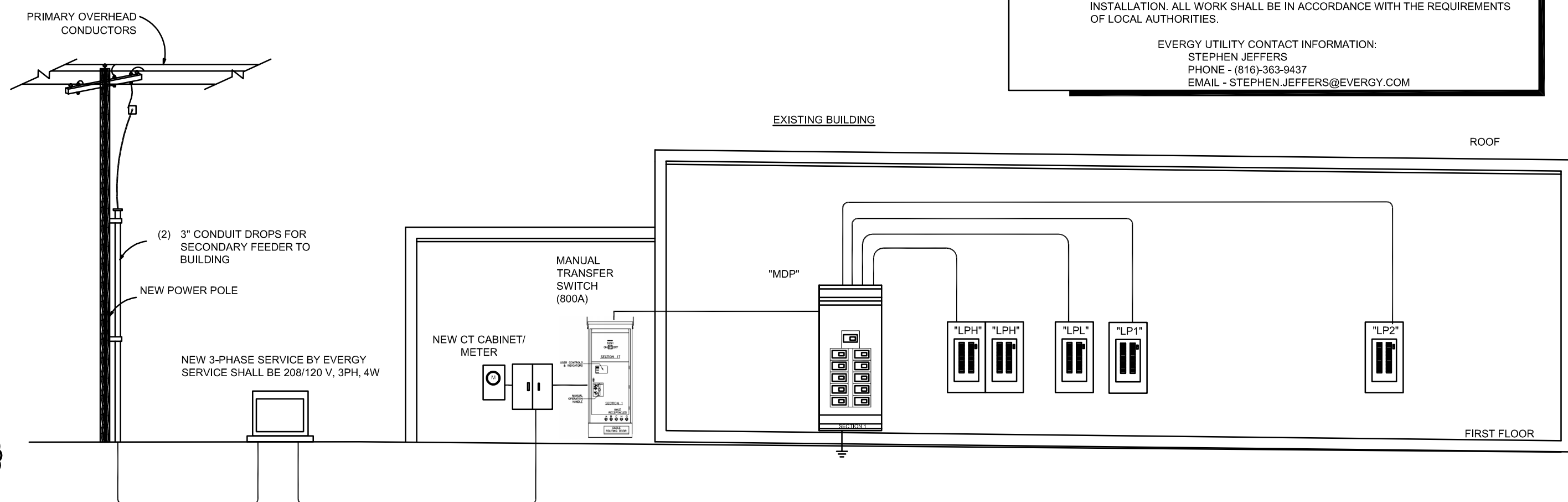


2 NEW WORK ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

ALL LIFE SAFETY ITEMS, INCLUDING FIRE ALARM, EMERGENCY LIGHTING, ETC SHALL BE BATTERY SOURCE. NO GENERATOR SHALL BE INCLUDED WITH PROJECT.

- COORDINATE WITH AEP/POWERCO FOR ADDITIONAL REQUIREMENTS AND FOR ROUTING OF ALL UTILITIES OUTSIDE THE BUILDING. ALL TRENCHING AND SECONDARY CONDUITS TO BUILDING SHALL BE BY CONTRACTOR.
- CONTRACTOR SHALL CONTACT EVERY ELECTRIC AND ARRANGE FOR ELECTRIC SERVICE AS INDICATED ON DRAWINGS. INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY UTILITY COMPANY INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR ELECTRIC SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.

EVERY UTILITY CONTACT INFORMATION:
STEPHEN JEFFERS
PHONE: (816) 363-5437
EMAIL: STEPHEN.JEFFERS@EVERY3.COM



1 NEW WORK RISER DIAGRAM
SCALE: NOT TO SCALE

SERVICE ENTRANCE MANUAL TRANSFER SWITCH												
	SERVICE RATED *	RATING (AMPS)	VOLT/PH POLE	TYPE	SOURCE 1	SOURCE 2	ENCLOSURE		ACCESSORIES	ALTERNATES		
							RATING	MOUNTING				
-M	YES UL 981	1000A	208V/3PH 3-POLE	OPEN TRANSITION	UTILITY - 1000A CB	ROLL-UP GEN SERIES 16 CMLCLOCK (3 ROWS ON PHASE/NEUTRAL 2 ROWS ON GROUND	NEMA 3R	FLOOR MOUNTED (77.5" H x 31" W x 43" D)	HP, AC, PLAC2, MP, G	RUSS ELECTRIC, ZENITH, SQUARE D		

NG PAD
RFACE

MB - MAINTENANCE BYPASS / RACK OUT
AC - AUX CONTACTS (BREAKER TRIP RELAYS)
PL - PILOT LIGHTS FOR STATUS/POSITION

AC2 - AUX CONTACTS (120V), TO TERMINAL STRIP
MP - MICROPROCESSOR CONTROLLER
G - SOLID GROUND BUS

ACCESSORIES:
HP - FREE-STANDING FRAME ON HOUSEKEEPING PAD
IC - MODBUS INTEGRATION CARD / COMM INTERFACE
RA - REMOTE ANNUNCIATOR
MB - MAINTENANCE BYPASS / RACK OUT
AC - AUX CONTACTS (BREAKER TRIP RELAYS)
PL - PILOT LIGHTS FOR STATUS/POSITION
AC2 - AUX CONTACTS (120V), TO TERMINAL STRIP
MP - MICROPROCESSOR CONTROLLER
G - SOLID GROUND BUS

RISER & ONE-LINE DIAGRAM SCHEDULE						
TAG	OCPD	SETS	3-P CONDUCTORS	NEUTRAL	GROUND	CONDUIT
1000.4	1000A	3	400 KCMIL	400 KCMIL	#2/0 AWG	3"
400.4	400A	2	#3/0 AWG	-	#3 AWG	2"
200.4	200A	1	#3/0 AWG	-	#6 AWG	2"
150.4	150A	1	#1/0 AWG	#1/0 AWG	#6 AWG	2"
150.3	150A	1	#1/0 AWG	-	#6 AWG	1-1/2"
100.4	100A	1	#3 AWG	#3 AWG	#8 AWG	1-1/4"
90.4	90A	1	#3 AWG	-	#8 AWG	1-1/4"
50.3	50A	1	#6 AWG	-	#10 AWG	1"

GROUNDING ELECTRODE CONDUCTOR REQUIRED SIZE		
MARK	CONDUCTOR AMPACITY RATING (AMPS)	REQUIRED GROUNDING ELECTRODE CONDUCTOR
G-1	-	#10-AWG (cu) - INSTALL PER NEC. BOND TO ALL GROUNDING ELECTRODES (DRIVEN GROUND ROD, WATER SERVICE, BUILDING STEEL, CONCRETE ENCLOSED REBAR)



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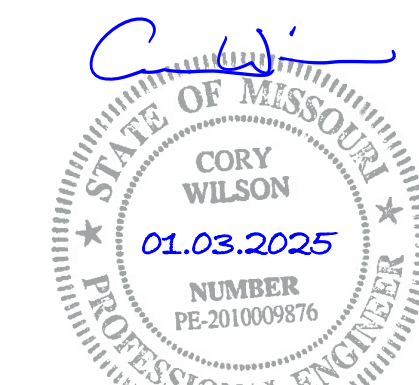


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1701 WALNUT STREET, SUITE 300
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LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

A 01.03.25 CITY REVIEW COMMENTS
MARK DATE DESCRIPTION

PROJECT NO: 2403
CAD DWG FILE: Lee's Summit - Terminal MEP.rvt
DESIGNED BY: CMW
DRAWN BY: DM
CHECKED BY: WAI
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SHEET TITLE

ELECTRICAL
RISERS AND
DETAILS

E-300

SHEET 95 OF 102



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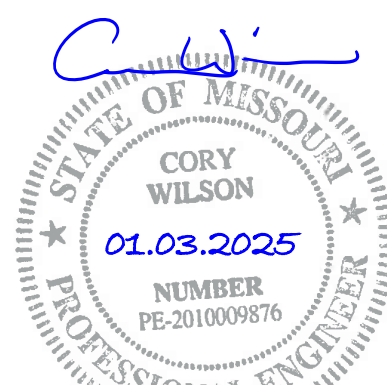


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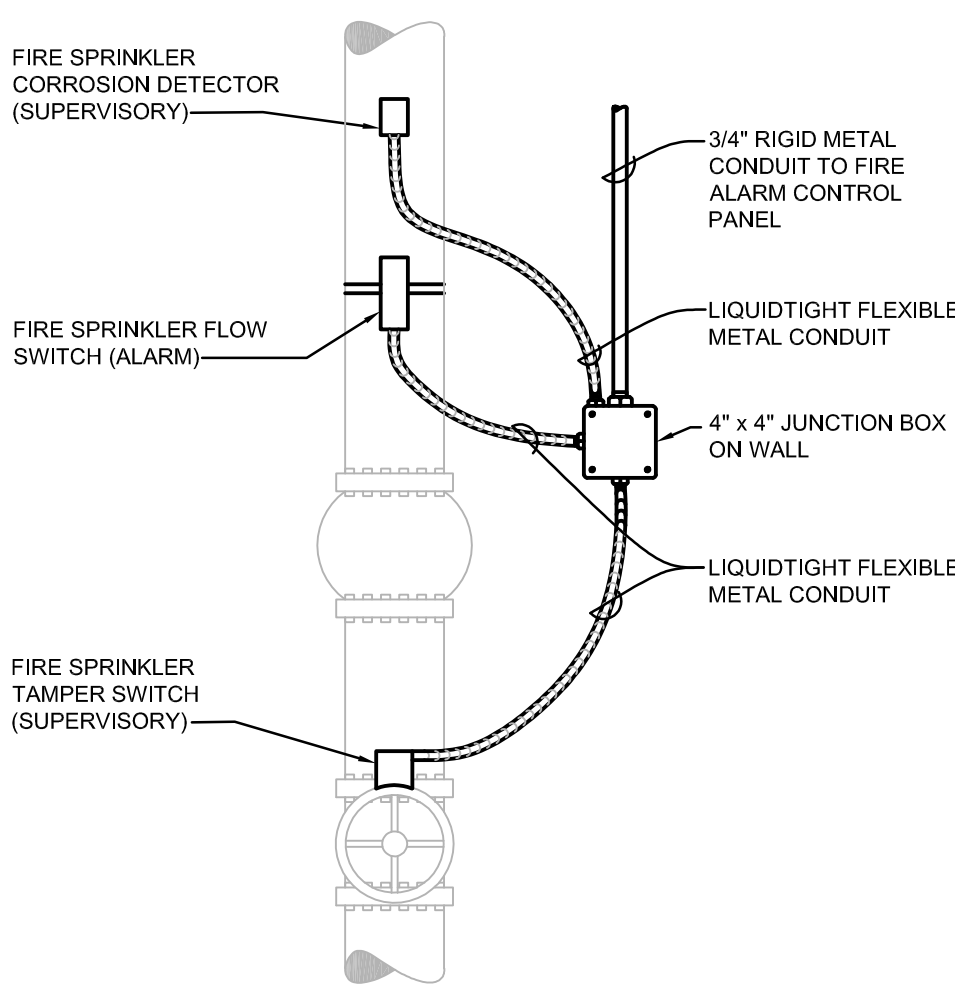
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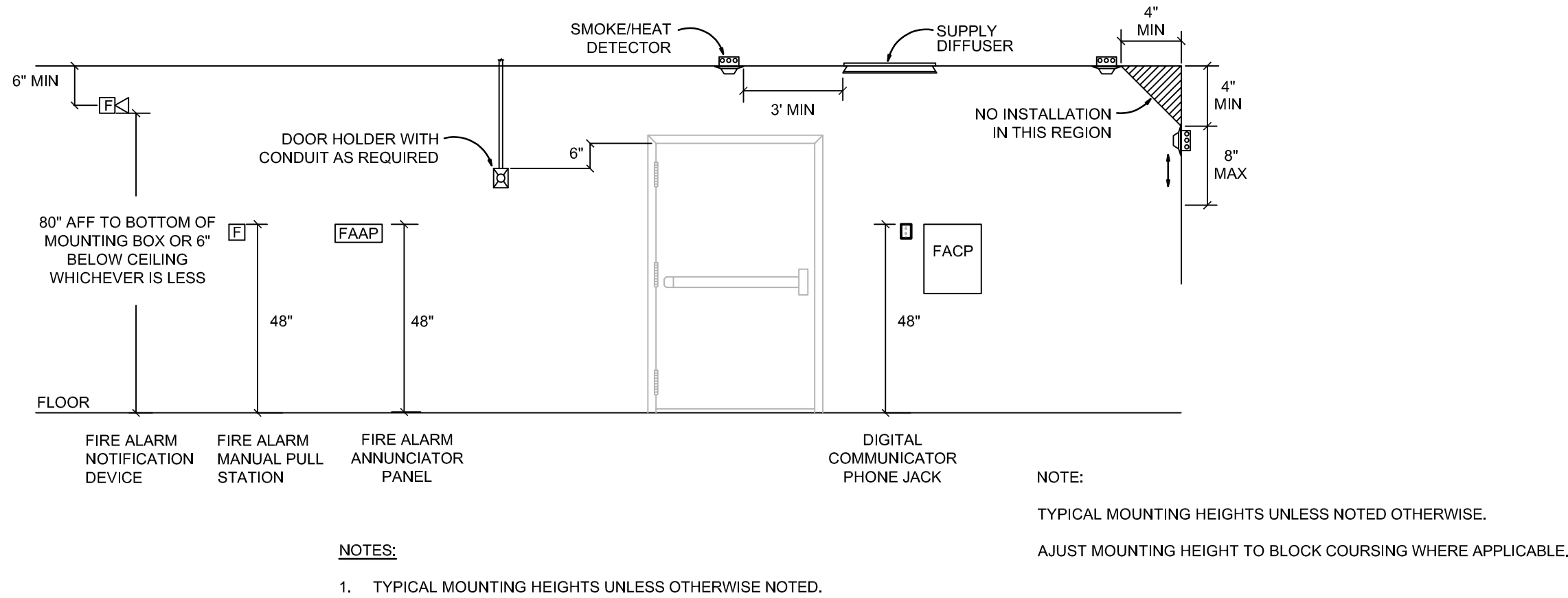
FIRE ALARM
DIAGRAMS

E-310

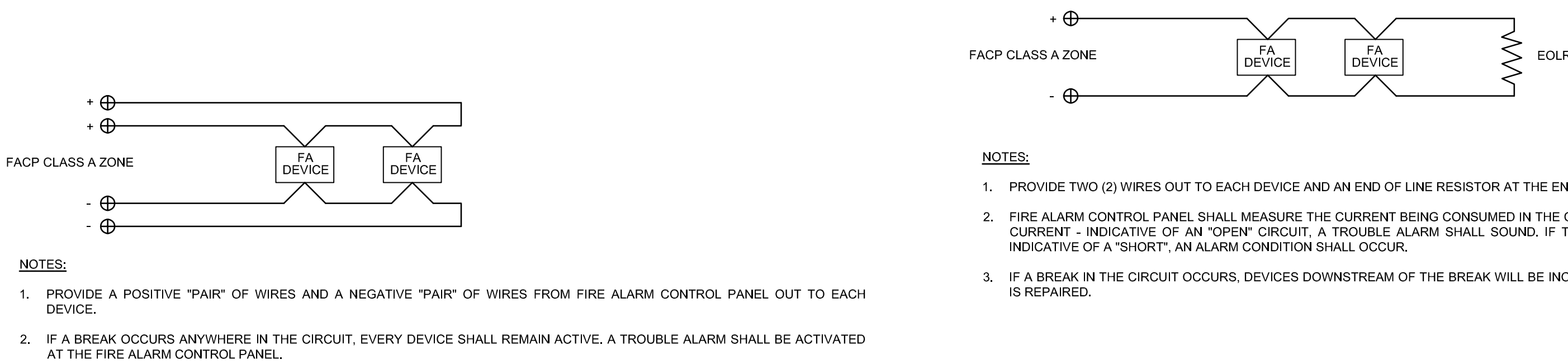
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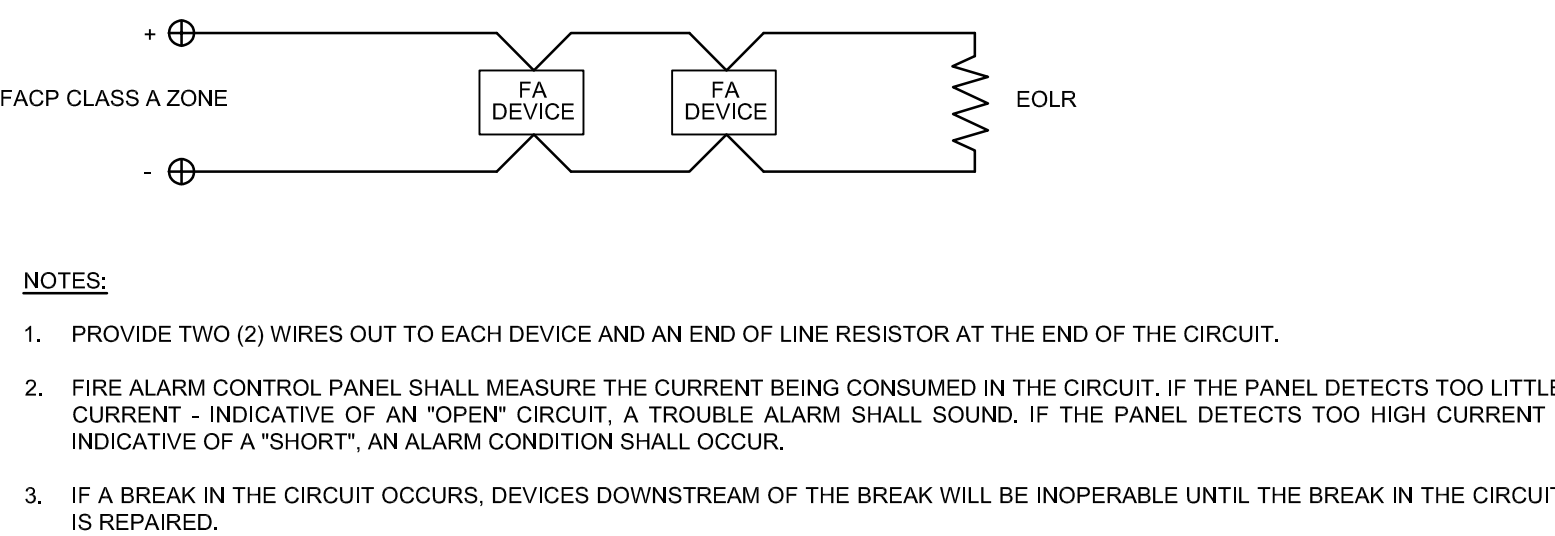
6 FIRE SPRINKLER CONNECTION DETAIL
SCALE: NTS



5 ELECTRICAL DEVICE MOUNTING HEIGHT DETAIL
SCALE: N.T.S.



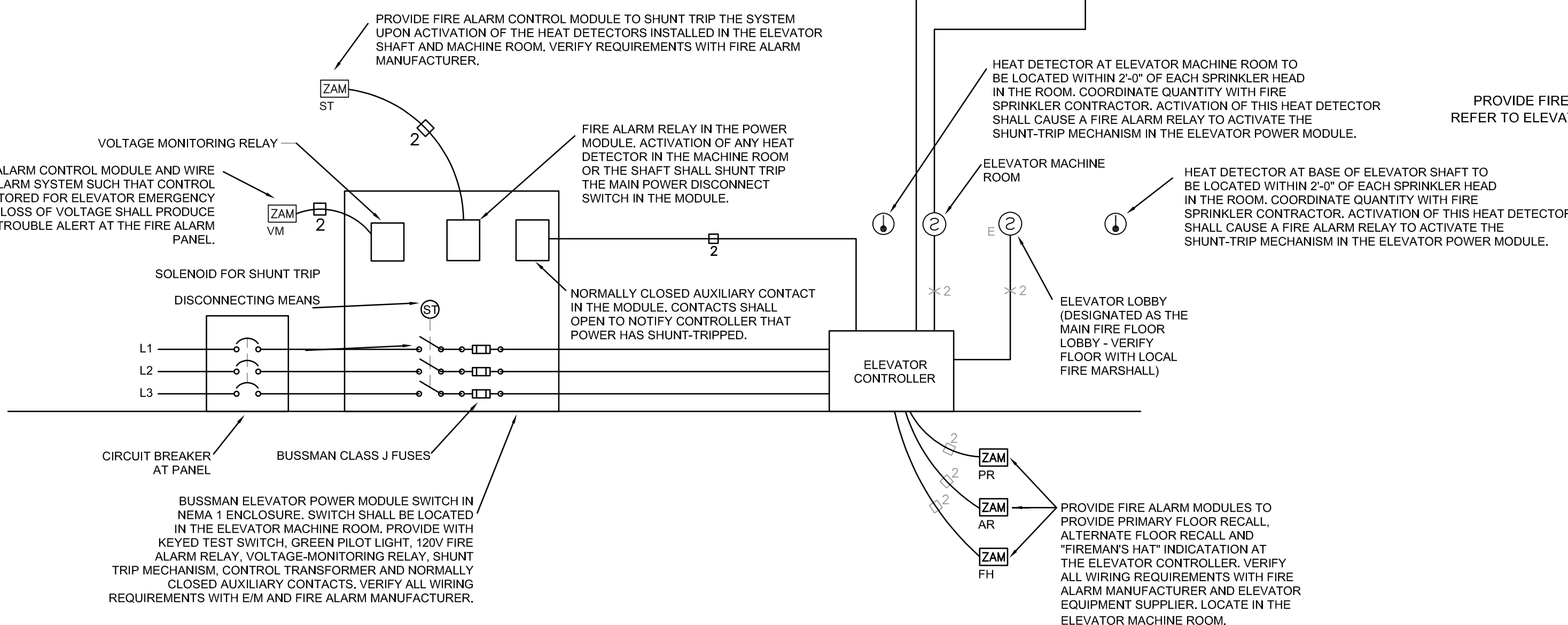
4 CLASS A FIRE ALARM WIRING
SCALE: N.T.S.



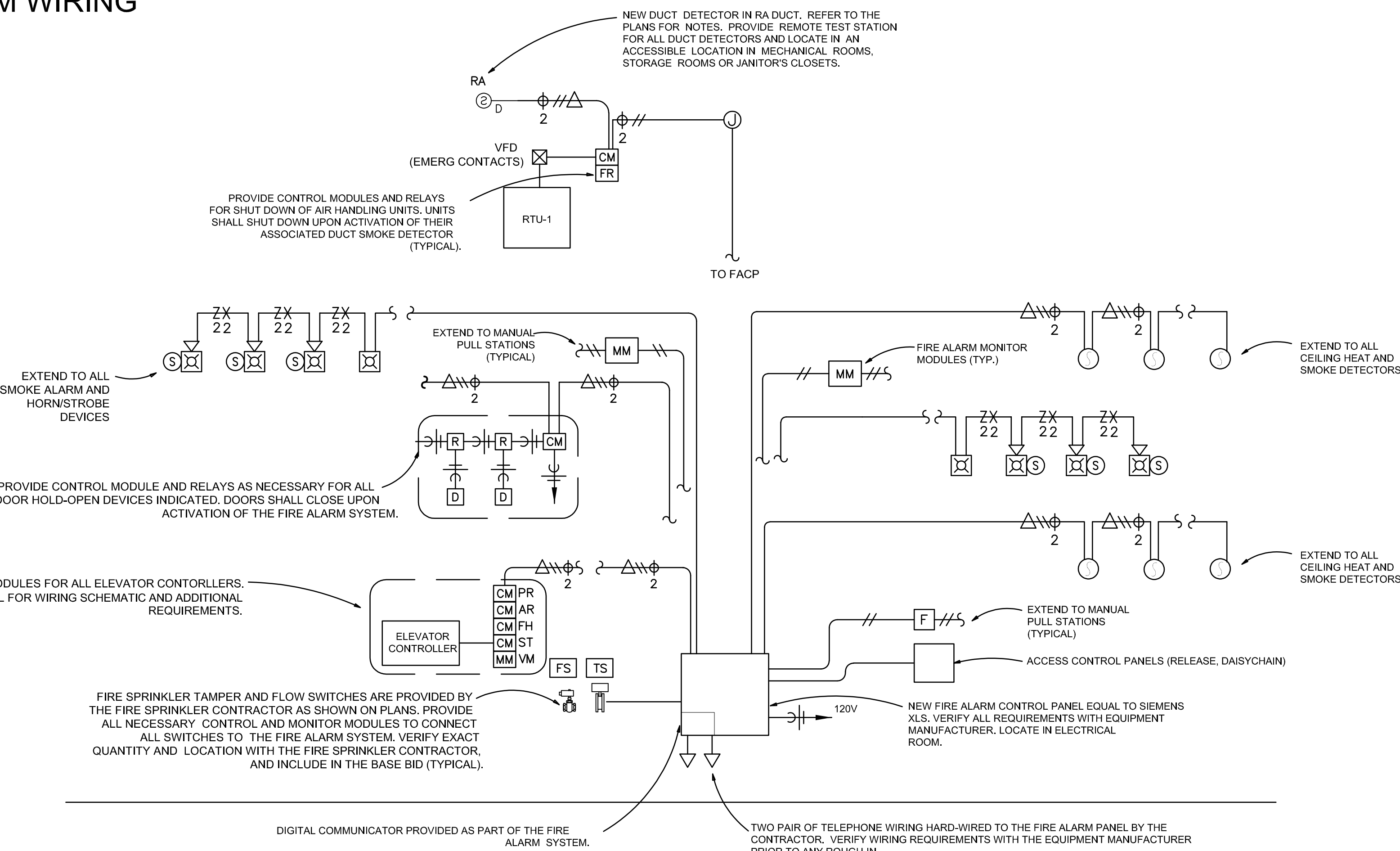
3 CLASS B FIRE ALARM WIRING
SCALE: N.T.S.

NOTES

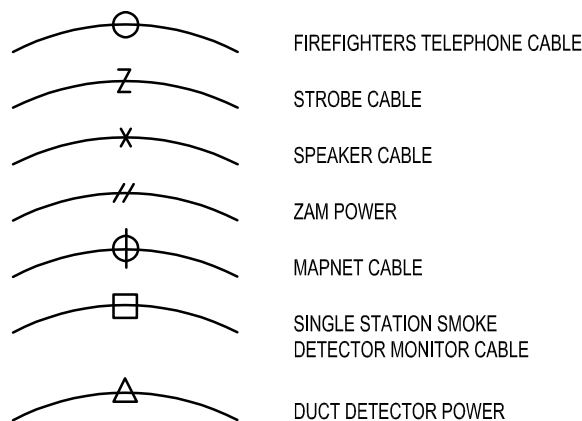
1. VERIFY ALL WIRING REQUIREMENTS WITH THE ELEVATOR EQUIPMENT SUPPLIER PRIOR TO ANY ROUGH-IN. E/C SHALL VERIFY THAT INSTALLATION
2. IS IN COMPLETE COMPLIANCE WITH THE LATEST EDITION OF THE ANSI ELEVATOR CODE.
3. ALL SMOKE DETECTORS ARE TO BE PROVIDED WITH NORMALLY CLOSED, DRY ISOLATED CONTACTS AND SHALL BE NON-RESETTING.
4. ONE LOBBY IS DESIGNATED AS THE MAIN FIRE FLOOR LOBBY. E/C SHALL VERIFY LOBBY DESIGNATION WITH THE LOCAL FIRE MARSHALL AND THE ELEVATOR EQUIPMENT SUPPLIER PRIOR TO ANY ROUGH-IN.
5. ALL FIRE ALARM DEVICES SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM.



2 MACHINE-LESS ELEVATOR WIRING SCHEMATIC
SCALE: NTS



FIRE ALARM WIRING LEGEND:

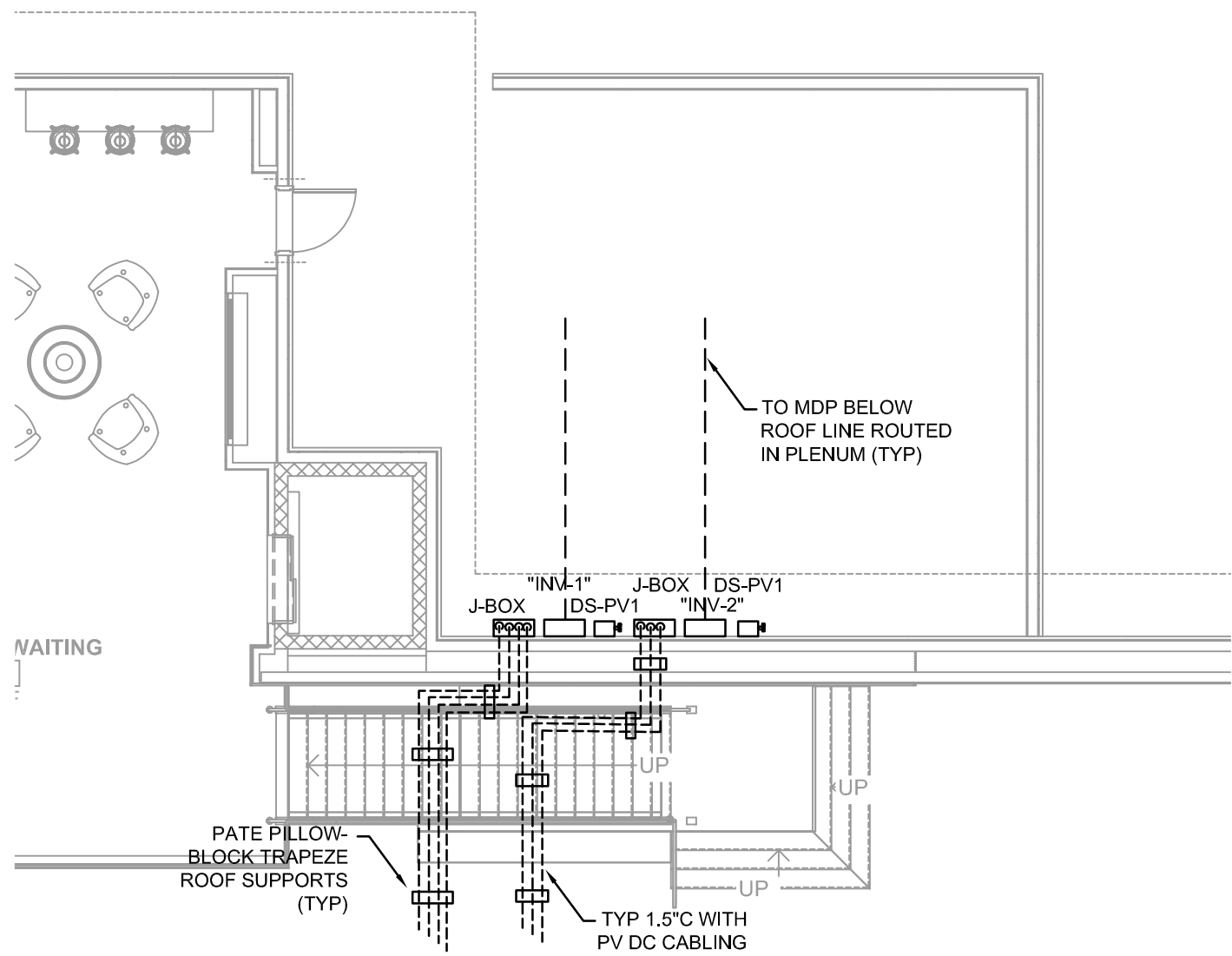


1 FIRE ALARM RISER DIAGRAM
SCALE: NTS

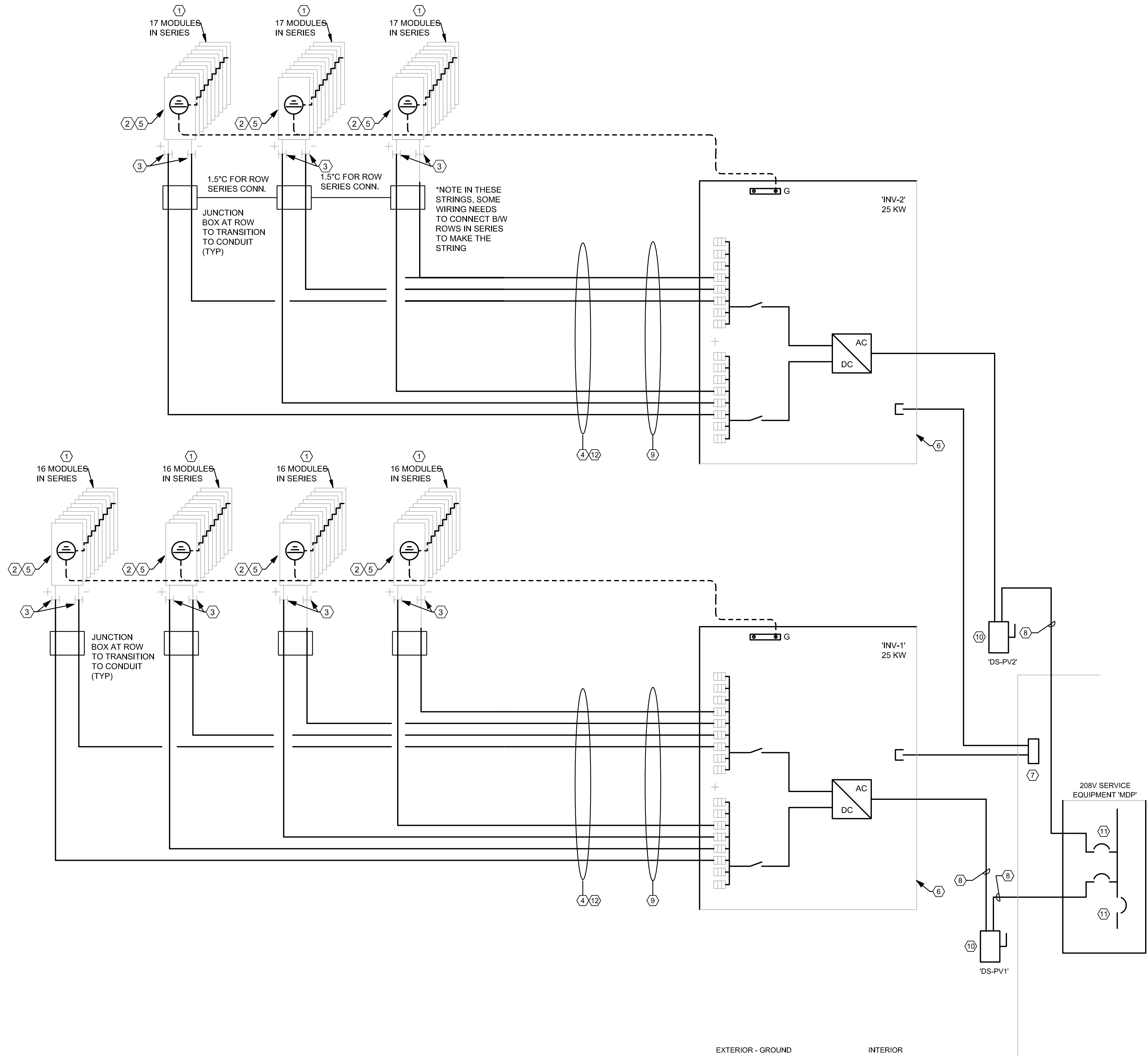
GENERAL FIRE ALARM NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE ALL DEVICES WITH THE NEW FIRE ALARM SYSTEM. CONTRACTOR SHALL CONTACT EIM FOR EXTENSION OF THE SYSTEM IF REQUIRED, AND INCLUDE ANY EXTRAS INCURRED BY THE MANUFACTURER TO ACCOMMODATE NEW DEVICES. EXTENDER/TRANSFORMER PANELS, AND 120V CIRCUITS. THIS SHALL BE INCLUDED IN BASE BID. FIRE ALARM EQUIPMENT SHOPS, WIRING, AMPERAGE CALCULATIONS, AND LAYOUT SHALL BE SUBMITTED FOR REVIEW PRIOR TO FINAL ACCEPTANCE.
2. THIS FIRE ALARM RISER DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY. REFER TO THE PLANS FOR DEVICE LOCATIONS AND QUANTITIES. THE E/C SHALL PROVIDE A COMPLETE RISER DIAGRAM WITH THE SHOP DRAWING SUBMITTAL WITH EACH DEVICE LOCATED ON THE PLANS (AND ITS ADDRESS) AND ALL WIRING REQUIREMENTS.
3. VERIFY ALL WIRING REQUIREMENTS WITH THE FIRE ALARM MANUFACTURER PRIOR TO ANY ROUGH-IN. INCLUDE ALL WIRING REQUIREMENTS IN THE BASE BID

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1 PHOTOVOLTAIC EQUIPMENT ROOF PLAN
SCALE: 1/8"=1'-0"



GENERAL NOTES:

- REFER TO SPECIFICATIONS FOR ADDITIONAL MATERIALS AND INSTALLATION REQUIREMENTS. SEE POWER PLANS FOR EQUIPMENT LOCATIONS. SEE ONE-LINE DIAGRAM FOR METERING REQUIREMENTS.
- TORQUE WIRE TERMINATIONS AND RACKING PER MANUFACTURER RECOMMENDATIONS WITH CALIBRATED TORQUE LIMITING DEVICES.
- OBTAIN APPROVAL FROM UTILITY PRIOR TO PARALLELING SOLAR INVERTER WITH GRID. FURNISH ELECTRICAL INSPECTOR WITH COPY OF APPROVED UTILITY DISTRIBUTED APPLICATION.
- REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- ALL EQUIPMENT SPECIFIED ON THIS SHEET DENOTES THE BASIS OF DESIGN. REFER TO THE SPECIFICATIONS AND NOTES REGARDING PERFORMANCE CHARACTERISTICS FOR ADDITIONAL APPROVED VENDORS AND REQUIREMENTS.
- DIAGRAM IS SCHEMATIC ONLY.

KEYNOTES:

- TRINA SOLAR TSM-DE18M OR EQUAL SOLAR MODULES UL LISTED FOR 1500VDC USE. EACH MODULE HAS A RAPID SHUTDOWN DEVICE MOUNTED TO FRAME, WITH RAPID SHUTDOWN DEVICES SERIES CONNECTED IN 14-MODULE STRINGS.
- PROVIDE MINIMUM 1000V, #10 BLACK PV WIRE (UL4703, 90 DEGREE WET RATING, 150 DEGREE DRY) CONNECTORIZED JUMPERS BETWEEN ROWS VIA RAYTRAY WIRE MANAGEMENT AND PERMANENTLY LABEL JUMPER ENDS WITH POLARITY AND SOURCE CIRCUIT NUMBER. PERMANENTLY LABEL MODULE LEADS THAT REPRESENT THE POSITIVE AND NEGATIVE OF THE OVERALL STRING. PROVIDE RAYTRAY RPVC SOLAR WIRE MANAGEMENT SYSTEM WITH CAP INSTALLED BETWEEN MODULE ROWS FOR PROTECTION FROM MOVING SNOW AND ICE.
- PROVIDE MINIMUM 1500V, #10 BLACK PV WIRE (UL4703, 90 DEGREE WET RATING, 150 DEGREE DRY) HOME RUN CABLES FROM STRING END TO INVERTER DC CONNECTION BOX WITHOUT SPLICING. LABEL PV SOURCE CIRCUIT NUMBER AND POLARITY AT BOTH ENDS.
- TRANSITION FROM OPEN WIRE TO 1-1/2\"/>
- SECURE WIRE IN A NEAT AND WORKMANLIKE MANNER, KEEPING EXPOSED CABLE AS HIGH OFF OF ROOF AS POSSIBLE AND TUCKED INTO THE INNER PORTION OF MODULE FRAME WHERE POSSIBLE. USE STAINLESS STEEL HEYCO CABLE CLIPS ATTACHED TO MODULE FRAMES AND/OR RACKING COMPONENTS AT INTERVALS THAT KEEP WIRE SECURED WITH MINIMAL STRAIN THAT COULD RESULT IN CABLE PULLING FROM CLIP.
- OPS SC425KTL-DOUS-208, 25KW, 208/3ph, NEMA 4X INVERTER OR EQUAL WITH INTEGRAL DC DISCONNECTING MEANS, DC ARC-FAULT CIRCUIT PROTECTION, AND RAPID SHUTDOWN SUSPEC DC POWERLINE SIGNALING INITIATED BY LOSS OF AC CONNECTION VOLTAGE. VERIFY OPERATION OF RAPID SHUTDOWN UPON SYSTEM BECOMING OPERABLE. PROVIDE WITH 20A PV STRING FUSING.
- PROVIDE A 3/4\"/>
- 3/8\", #36, #8G-1-1/4\"/>
- INCLUDE A #6 EQUIPMENT GROUNDING CONDUCTOR FOR ARRAY GROUNDING, SIZED PER NEC 690.45, CONNECT TO AEROCOMPACT RACKING PER MANUFACTURER UL 2703 CERTIFIED METHOD.
- 100V, 600V, NEMA 3R, NON-FUSED, KNIFE-BLADE DISCONNECT FOR OPPD AS REDUNDANT GRID ISOLATION FEATURE. PROVIDE WITH NEUTRAL TERMINATION (PROVISION FOR UTILITY TO GROUND), DISCONNECT SHALL BE LOCKABLE.
- CONNECT TO BREAKER IN MDP AS SHOWN ON ONE-LINE DIAGRAM.
- UNGROUNDING DC SYSTEM PER NEC 690.12 AND 690.35. UTILIZE #10 PV WIRE LISTED FOR A MINIMUM OF 1000V.

1 PHOTOVOLTAIC SYSTEM RISER DIAGRAM
SCALE: NTS



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Certificate of Authority - MO #2024005146

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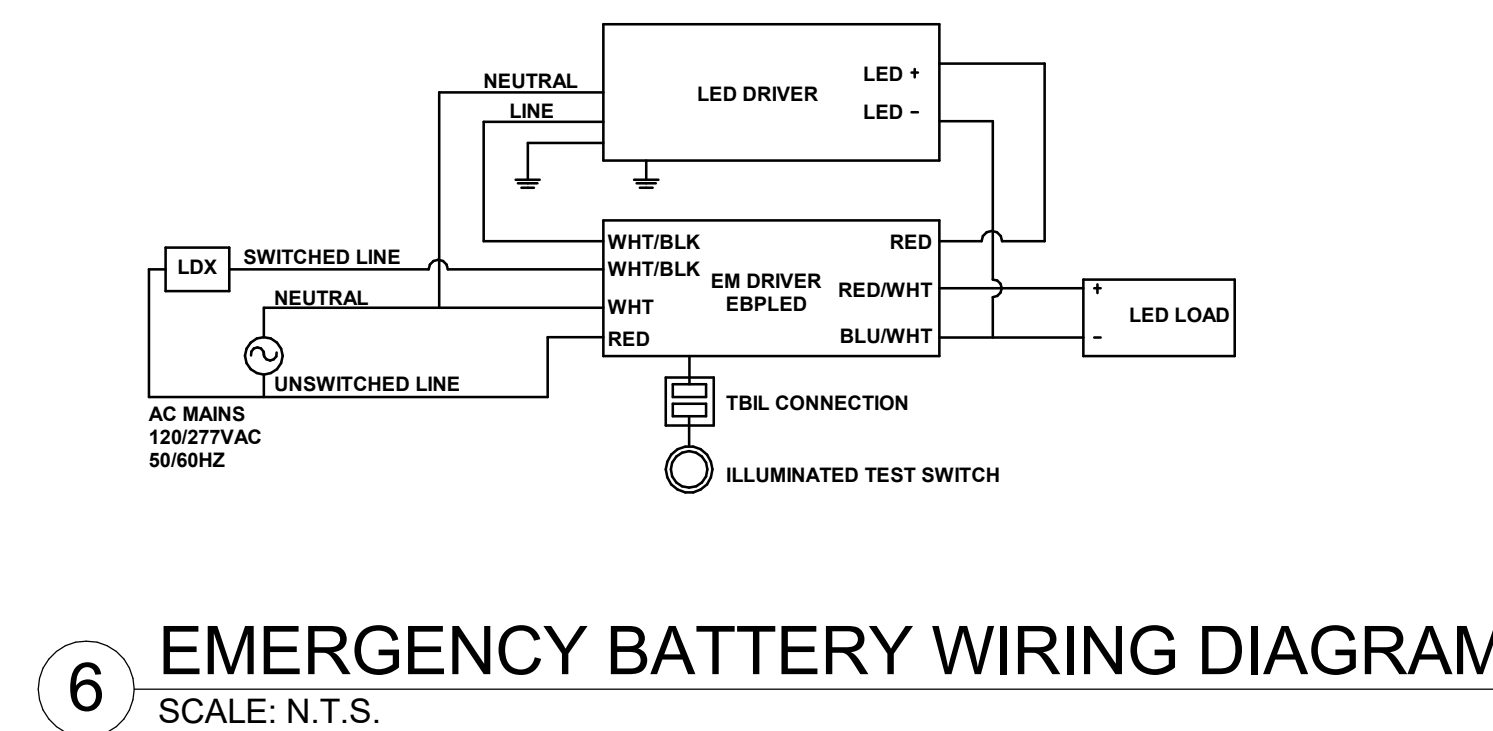
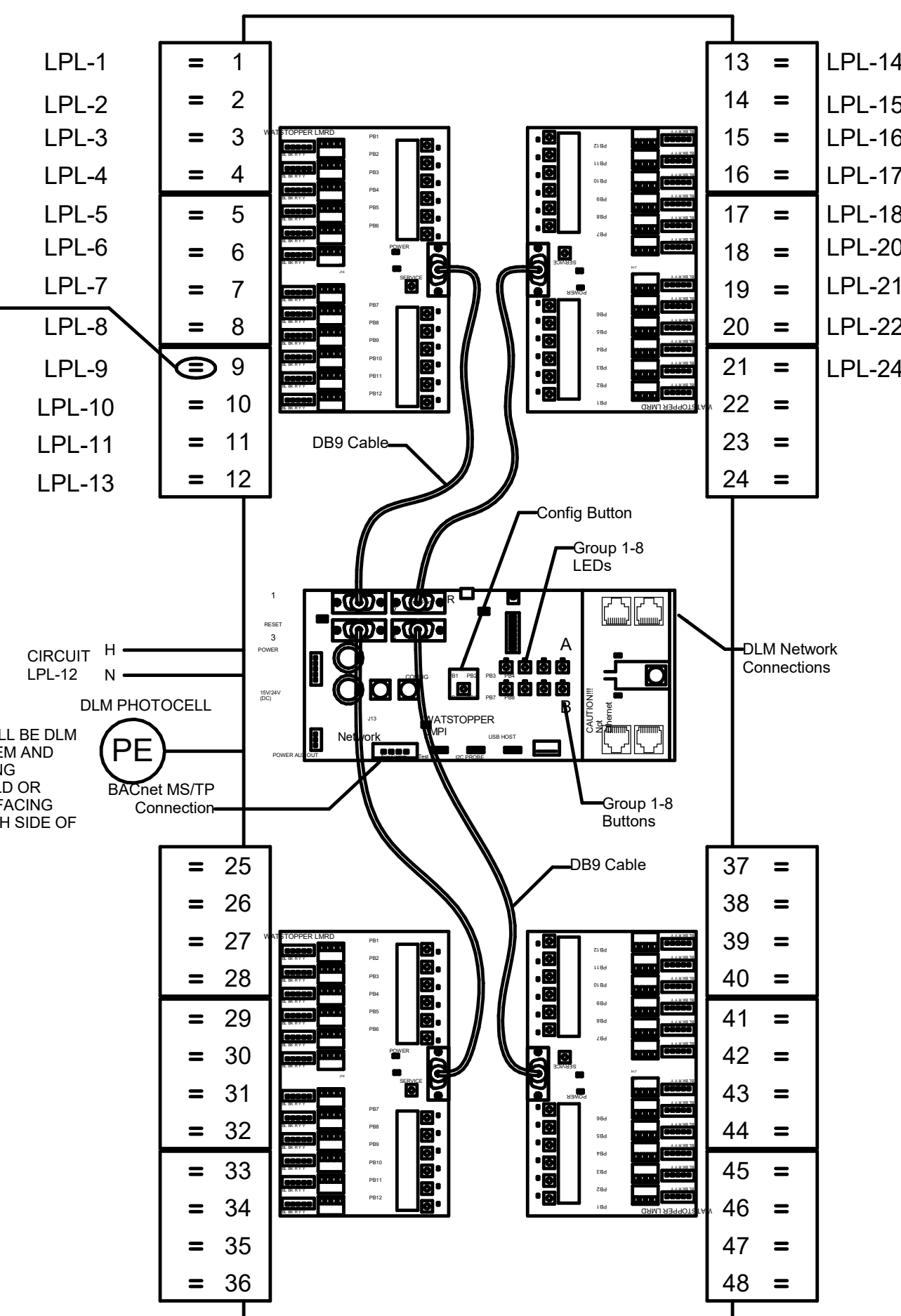
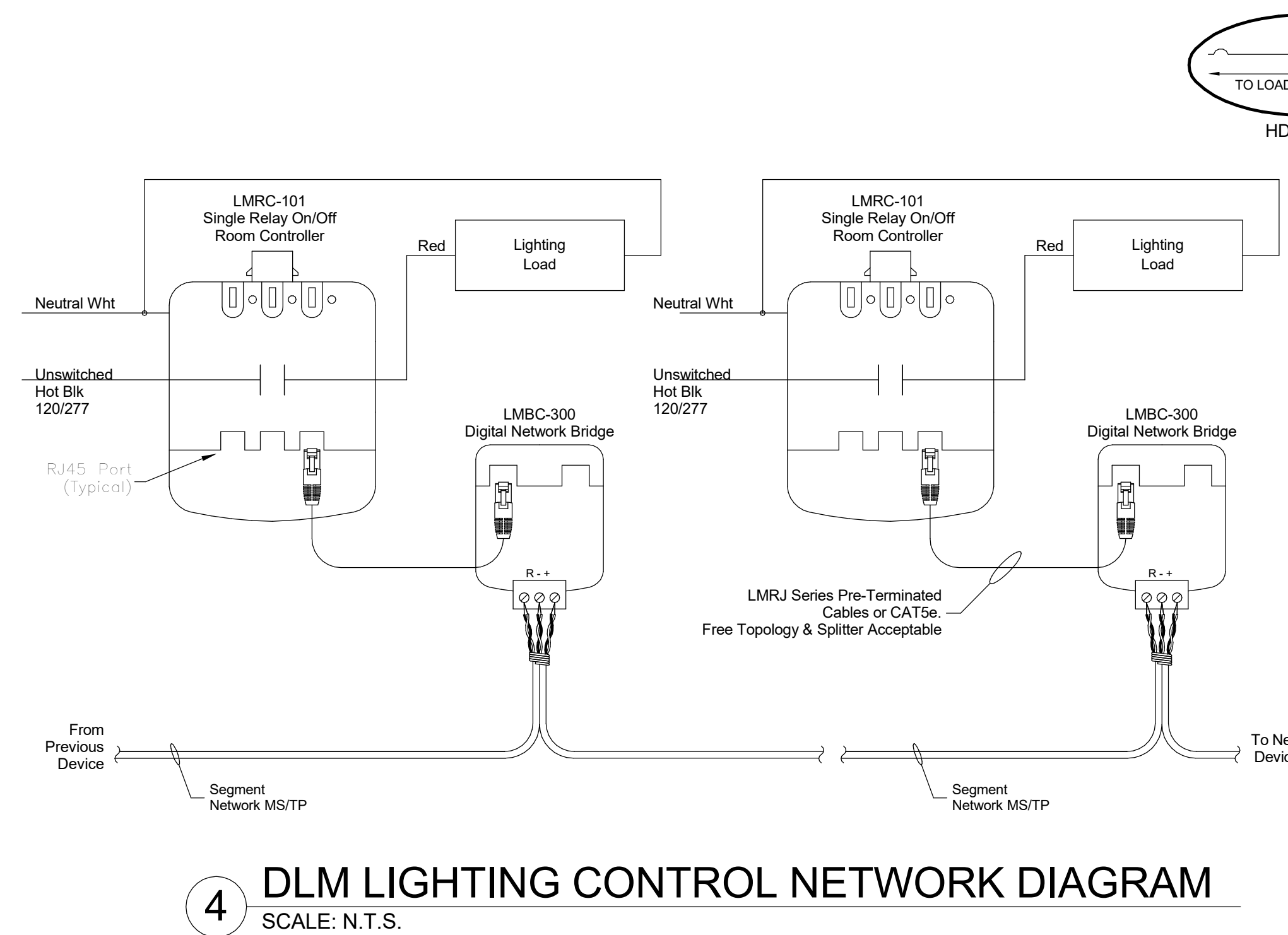
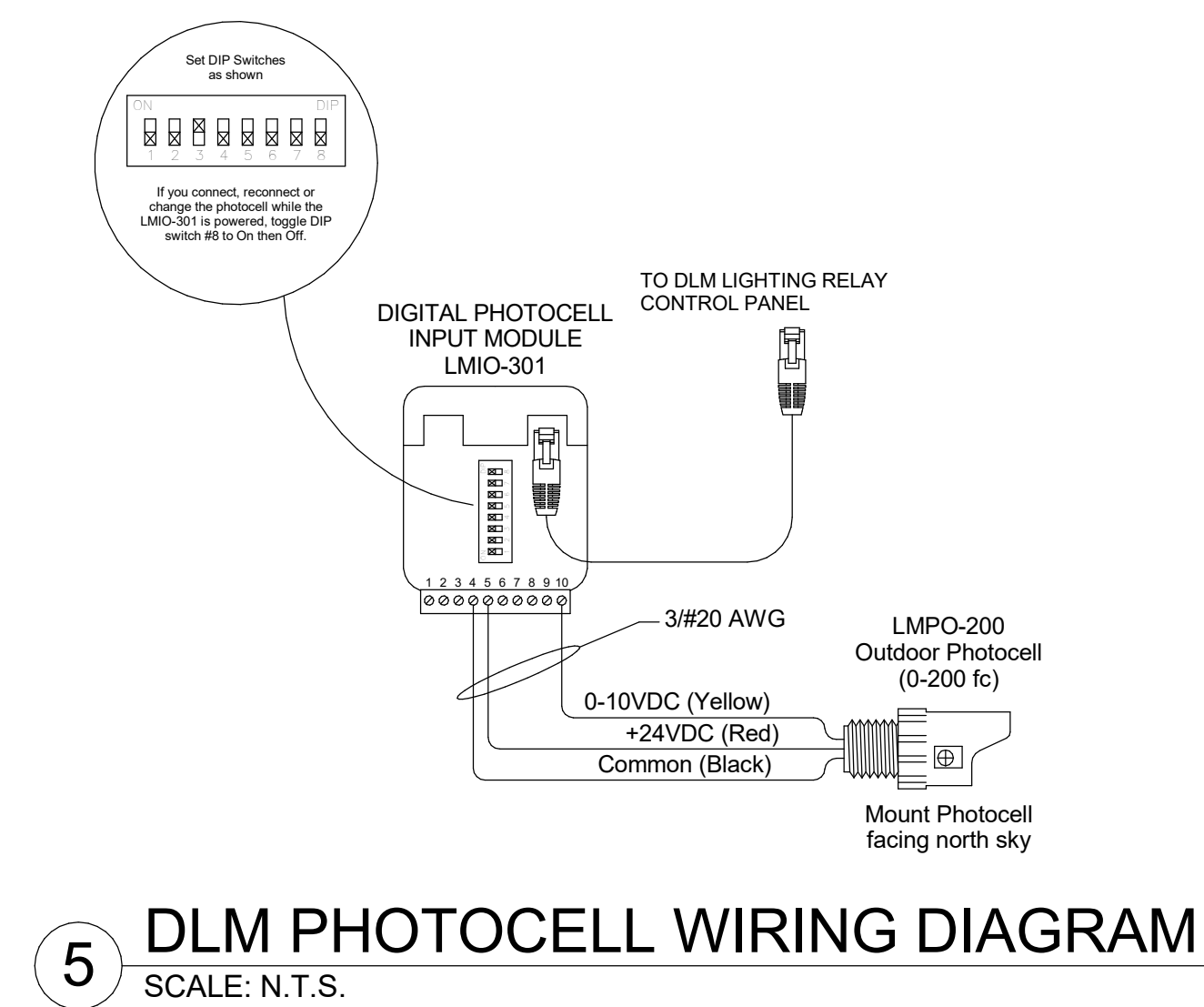
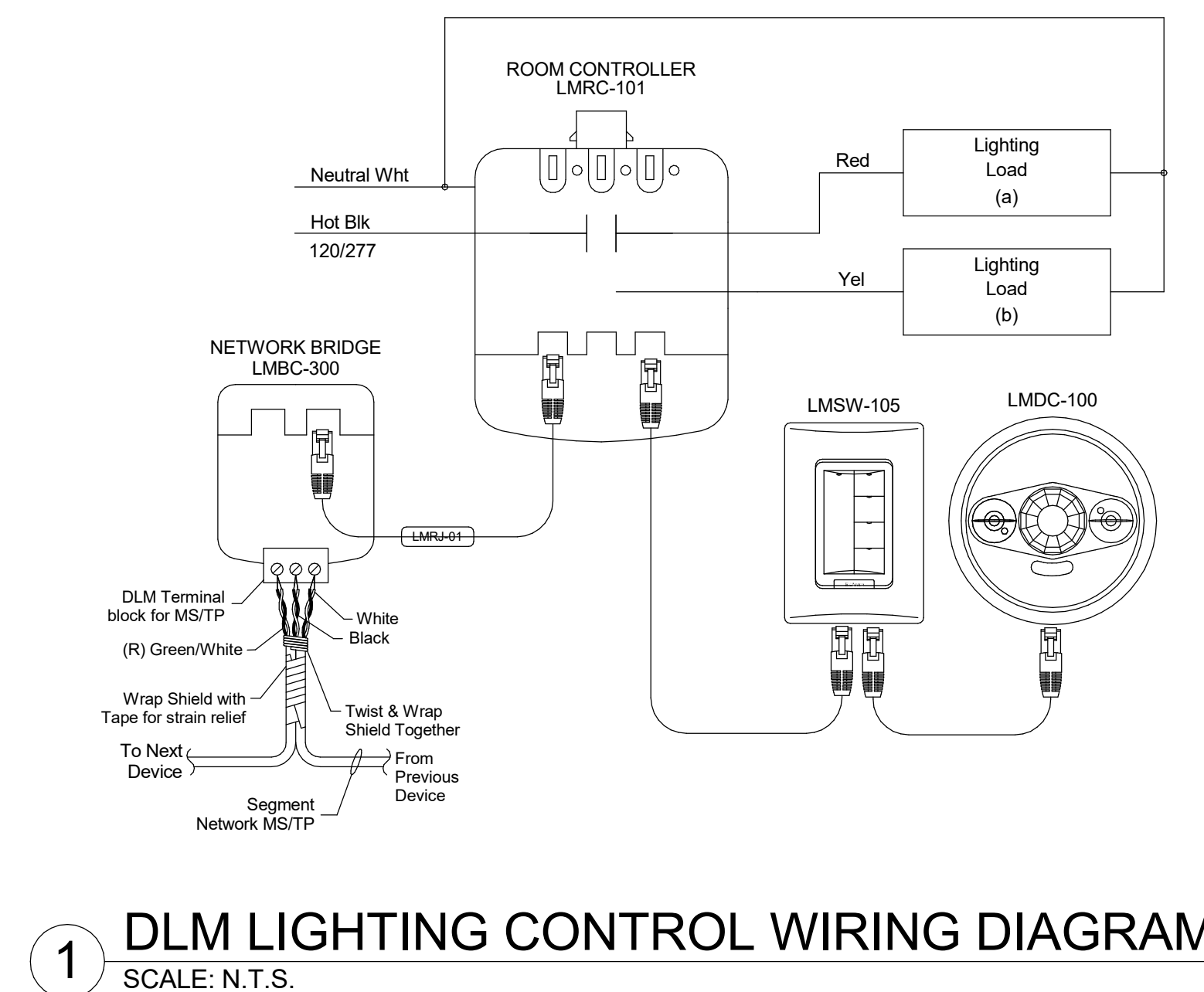
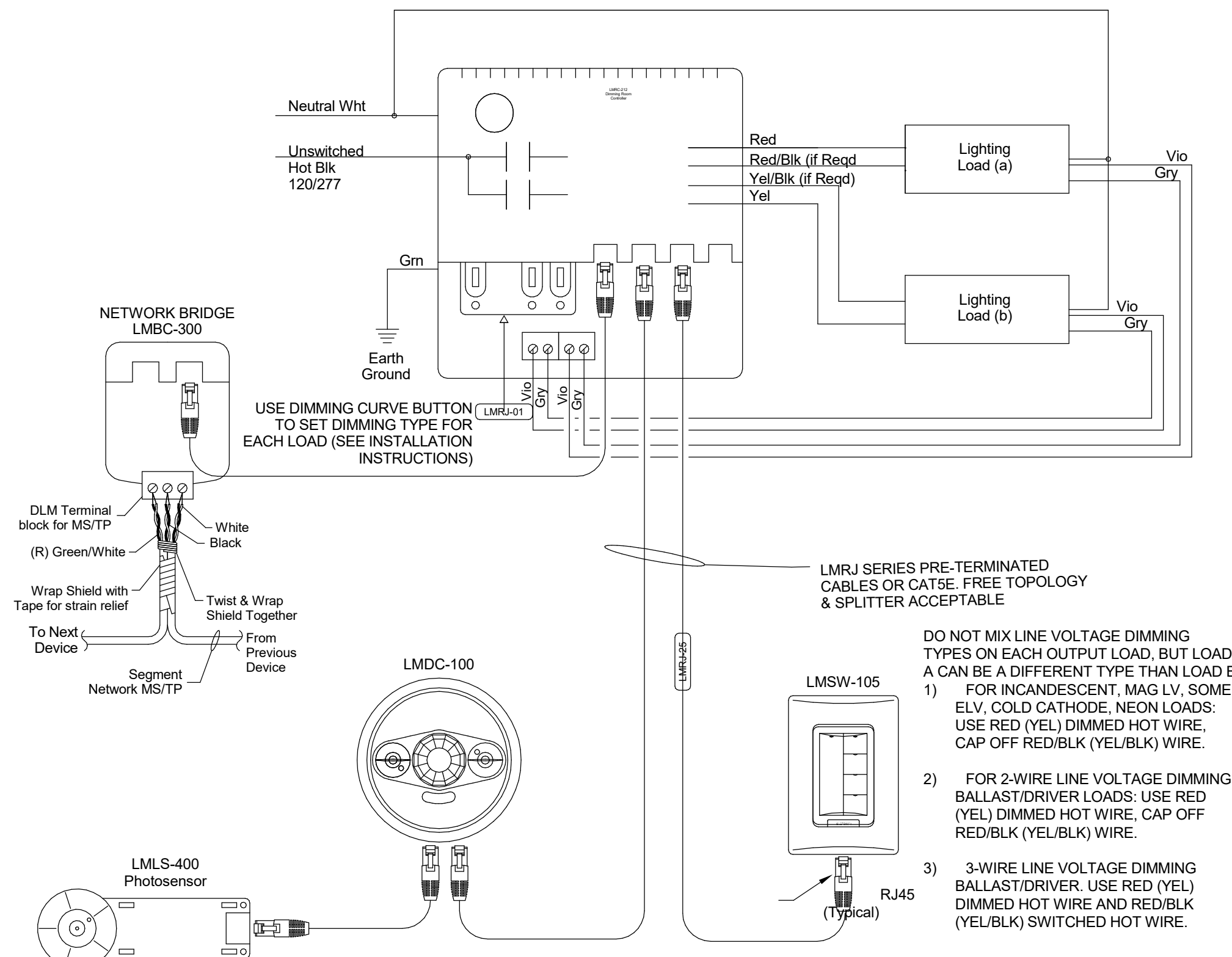
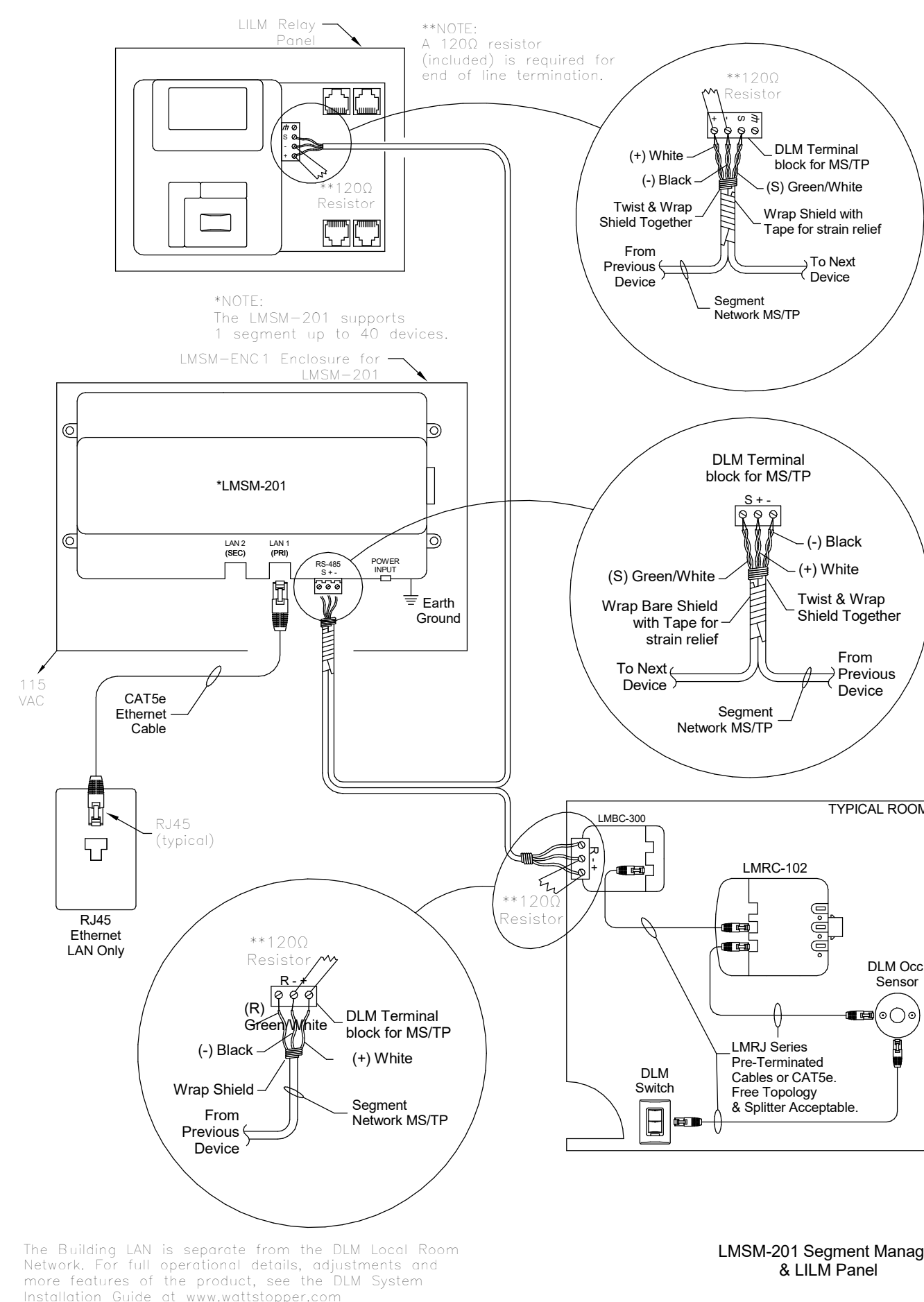
PROJECT NO: 2403
CAD DWG FILE: Lee's Summit - Terminal MEP.rvt
DESIGNED BY: CMW
DRAWN BY: DM
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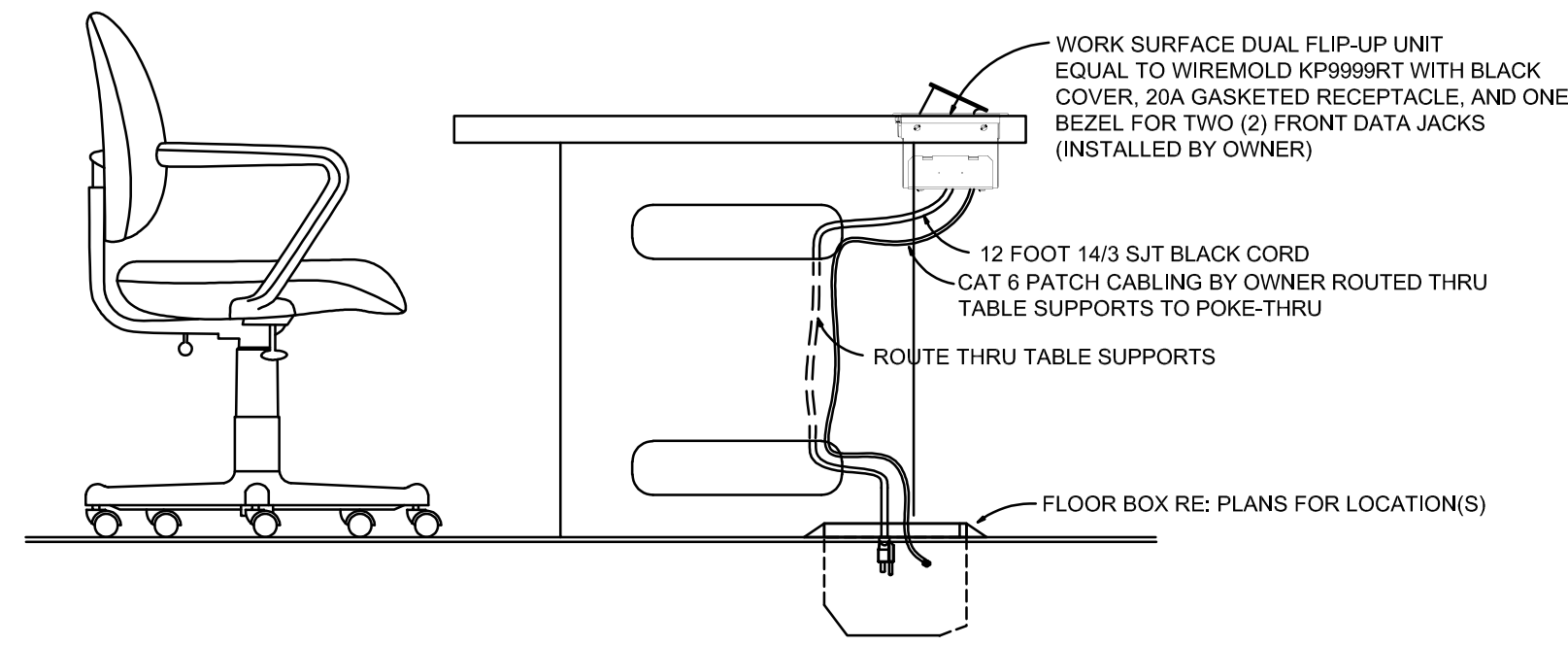
PV ARRAY
DIAGRAMS

E-320

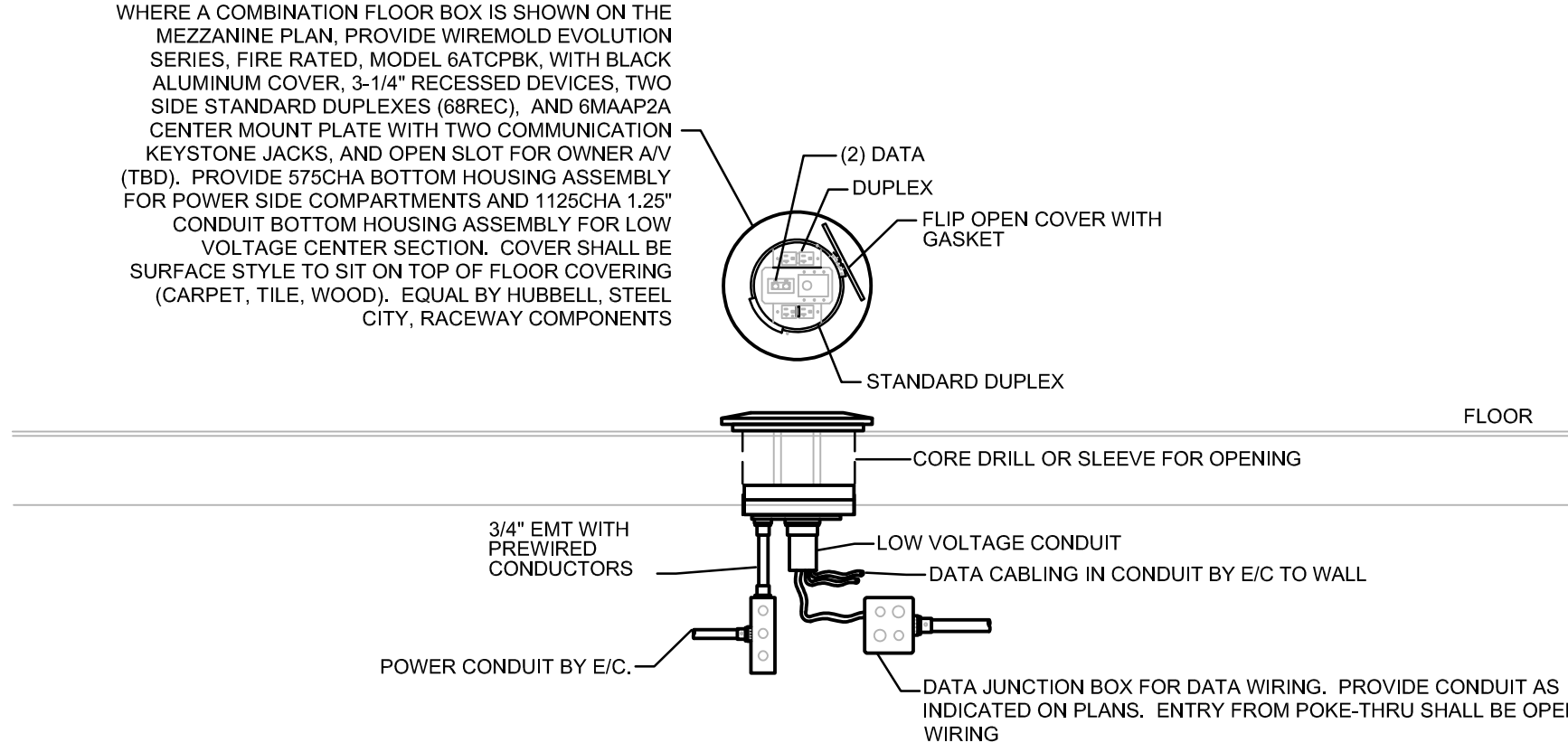
SHEET 96 OF 102



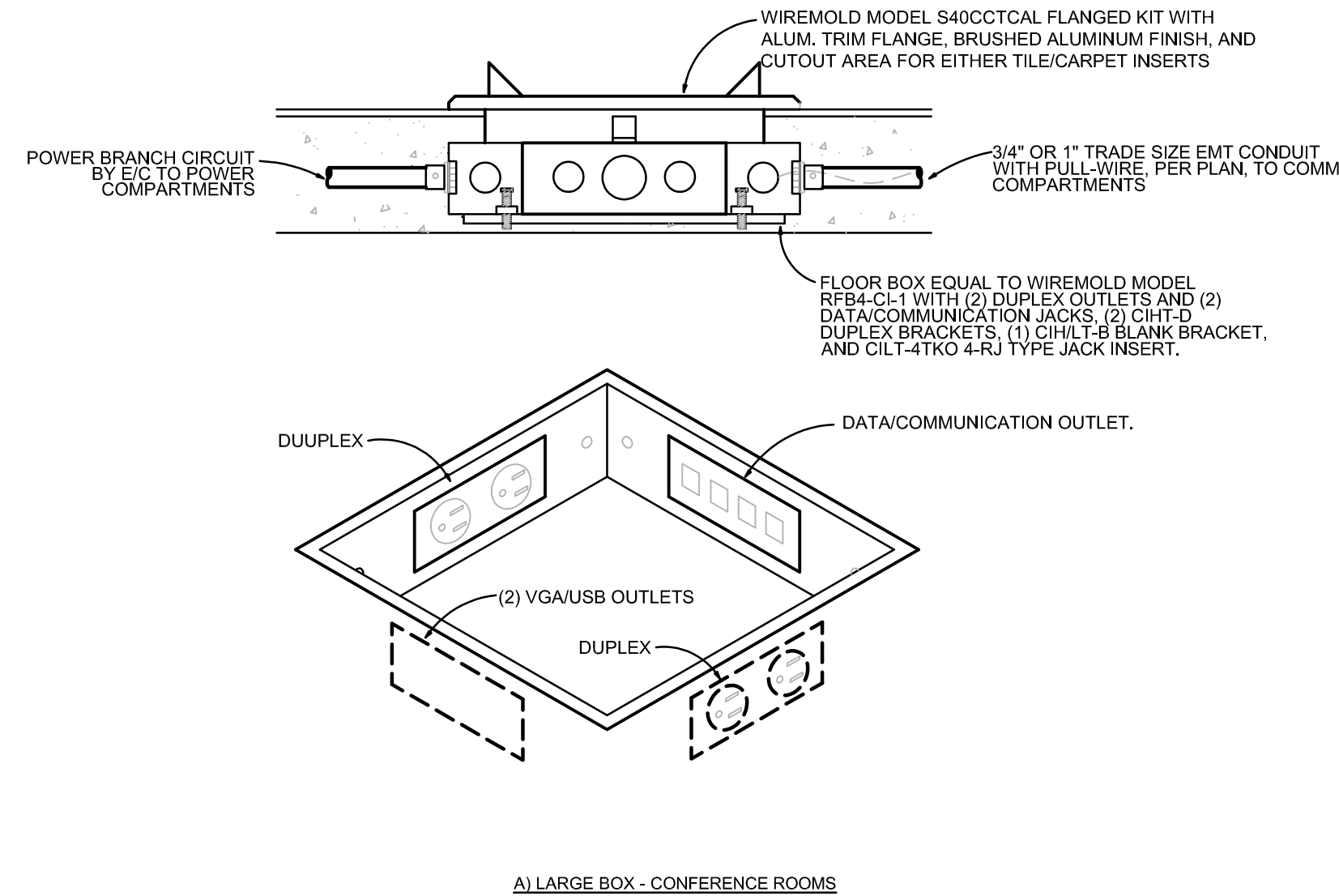
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10 WORK SURFACE MODULE
INSTALLATION DETAIL
SCALE: N.T.S.



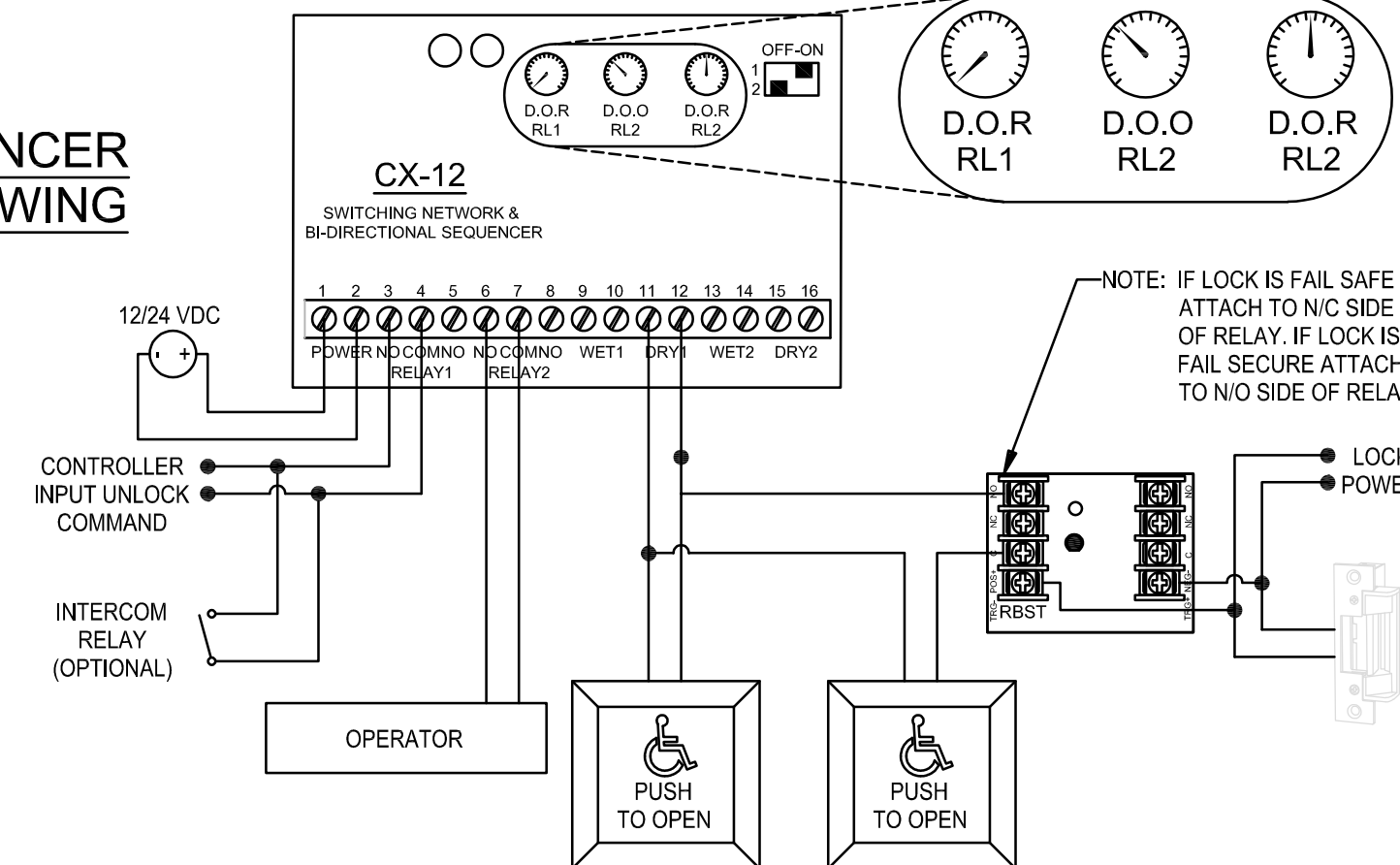
11 POKE-THRU FLOOR BOX DETAIL
SCALE: NTS



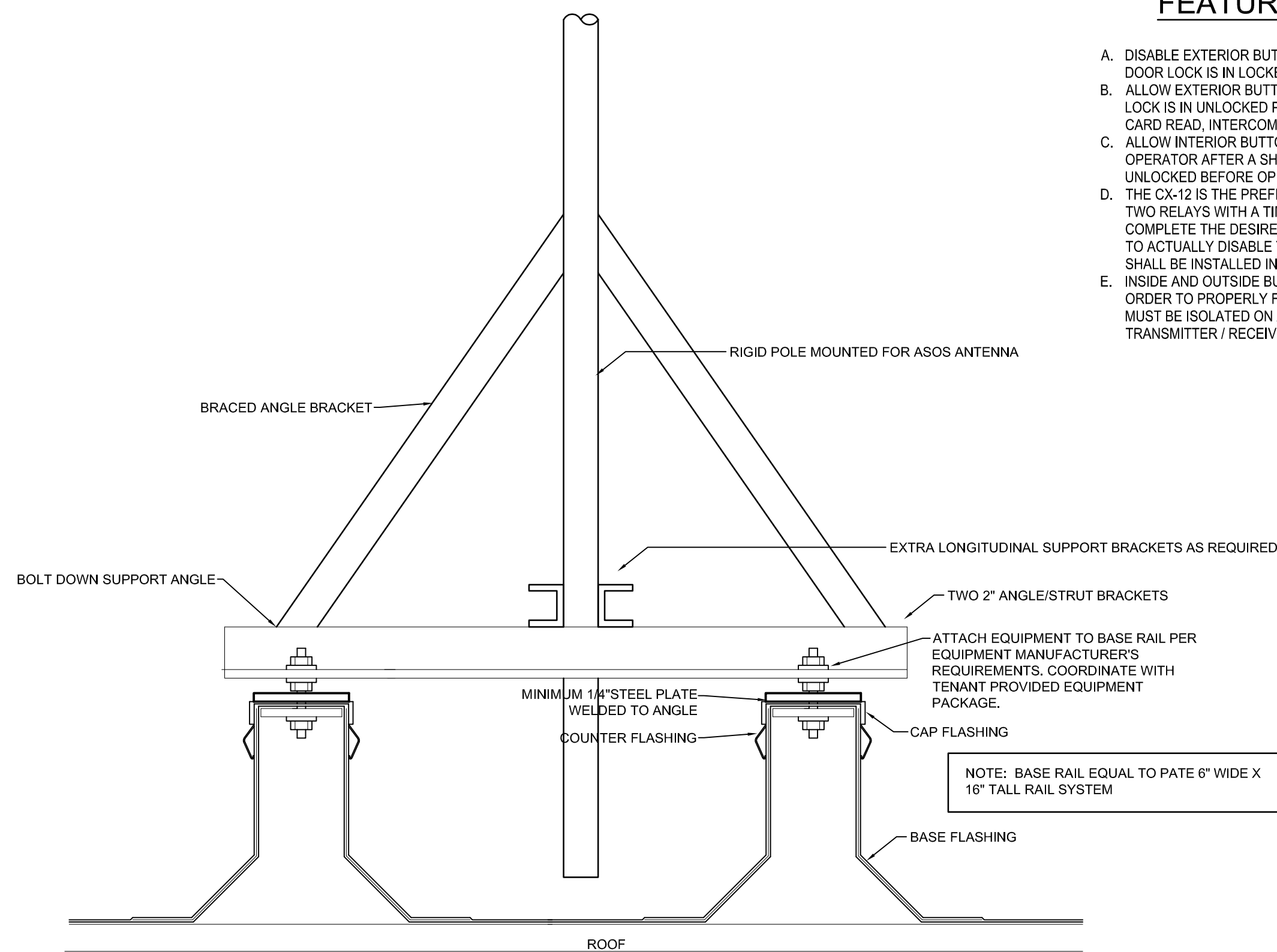
4 FLOOR BOX DETAIL
SCALE: NTS

ADA INTERFACE MODULE - DOOR SEQUENCER
ADA INTERFACE SHALL MEET THE FOLLOWING
FEATURES AND FUNCTIONS:

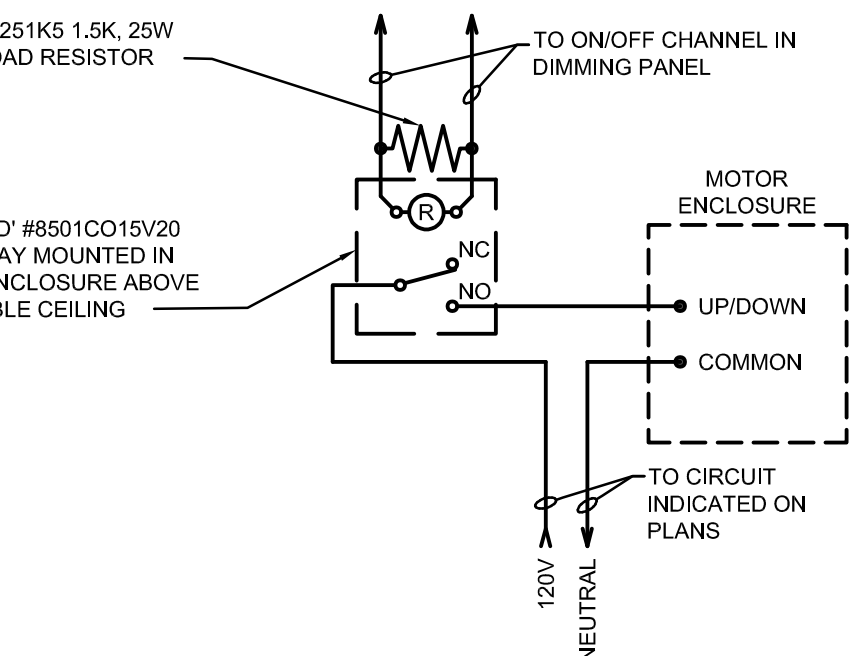
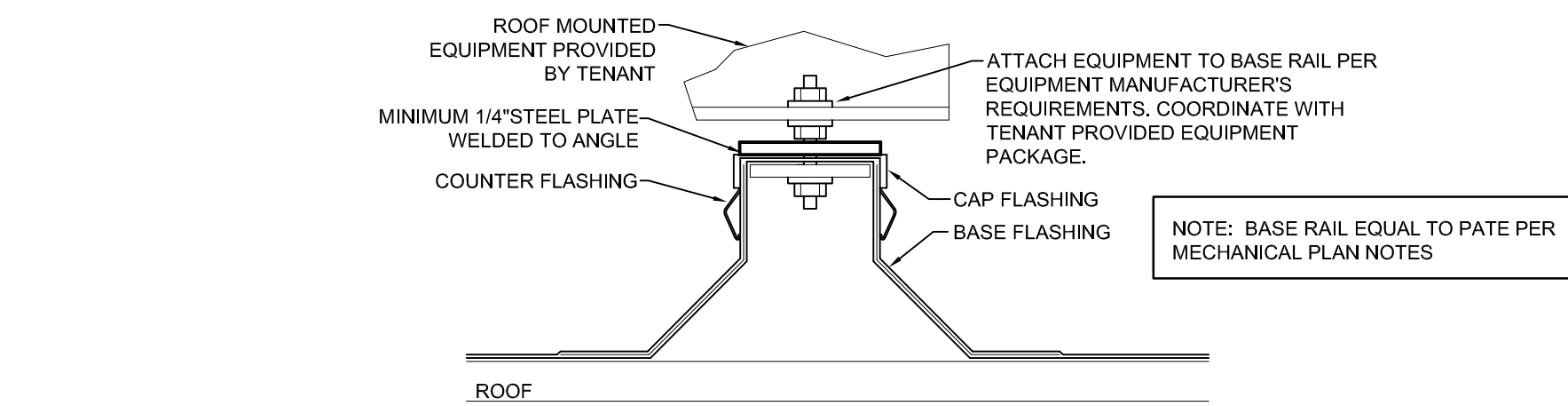
- DISABLE EXTERIOR BUTTON FROM TRIGGERING DOOR OPERATOR WHEN DOOR LOCK IS IN LOCKED POSITION.
- ALLOW EXTERIOR BUTTON TO ACTIVATE THE OPERATOR WHEN DOOR LOCK IS IN UNLOCKED POSITION BY ANY OF THE FOLLOWING MEANS: CARD READ, INTERCOM, OR SCHEDULED UNLOCK EVENT.
- ALLOW INTERIOR BUTTON TO UNLOCK DOOR AND ACTIVATE THE OPERATOR AFTER A SHORT DELAY TO ENSURE DOOR IS FULLY UNLOCKED BEFORE OPERATING.
- THE CX-12 IS THE PREFERRED MODULE DUE TO ITS ABILITY TO SEQUENCE TWO RELAYS WITH A TIME DELAY, HOWEVER, IT DOES NOT FULLY COMPLETE THE DESIRED TASK, THUS A SECONDARY RELAY MUST BE USED TO ACTUALLY DISABLE THE OUTSIDE BUTTON. THE SECONDARY RELAY SHALL BE INSTALLED IN PARALLEL WITH LOCK POWER.
- INSIDE AND OUTSIDE BUTTONS MUST BE ISOLATED AT THE OPERATOR IN ORDER TO PROPERLY FUNCTION. IF THE BUTTONS ARE WIRELESS THEY MUST BE ISOLATED ON A SEPARATE CHANNEL BY MEANS OF A DIFFERENT TRANSMITTER / RECEIVER SET.



7 ACCESS CONTROL SYSTEM ADA DOOR INTERFACE
SCALE: NTS

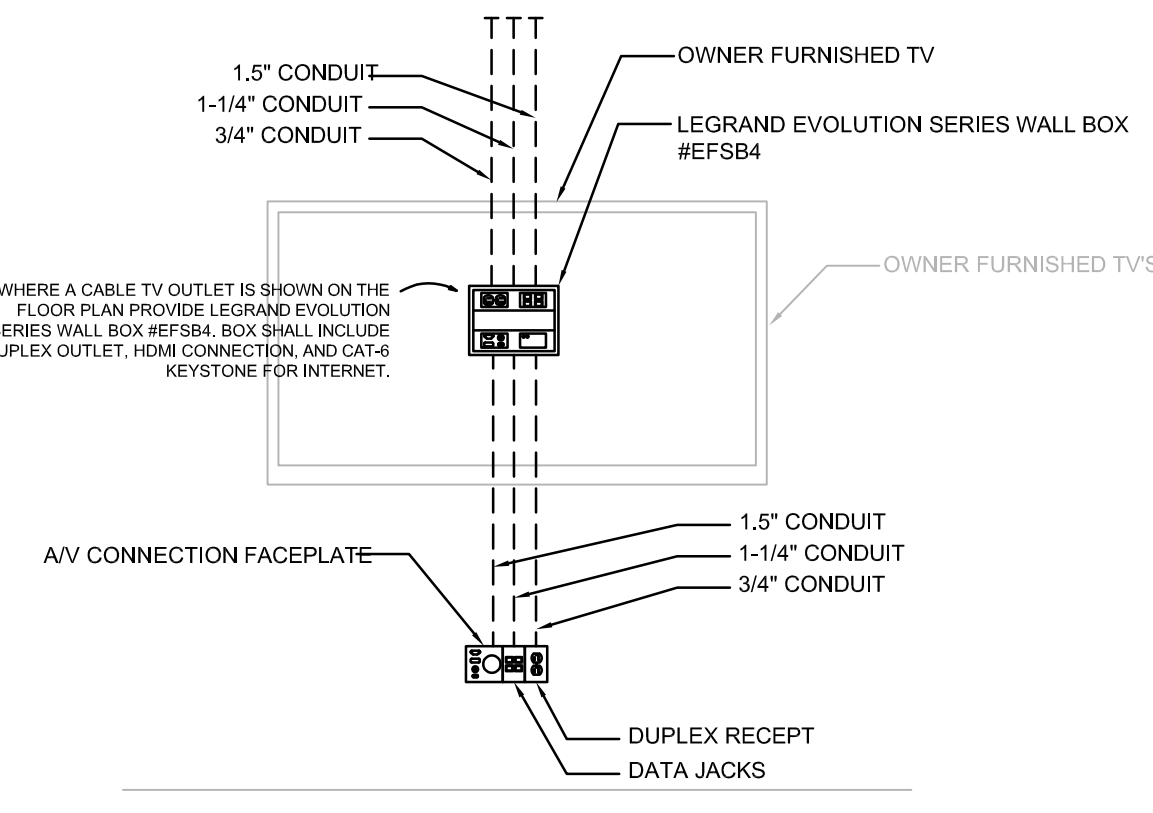


9 ROOF EQUIPMENT/ANTENNA SUPPORT
SCALE: NONE

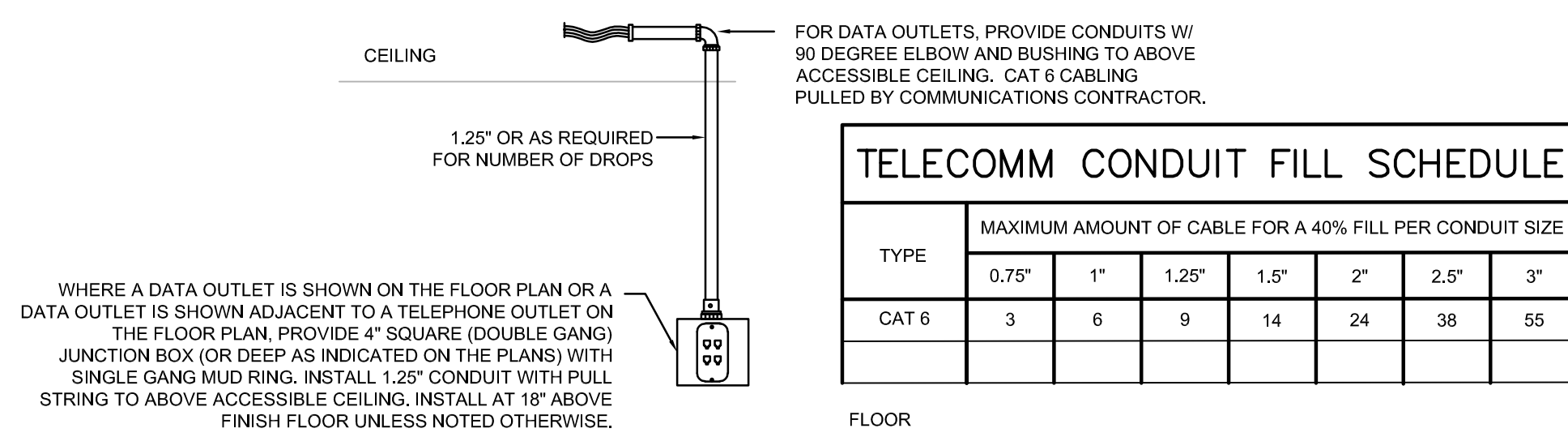


A/V EQUIPMENT CONTROL DETAIL

6 TYPICAL A/V SCREEN DETAIL
SCALE: NTS



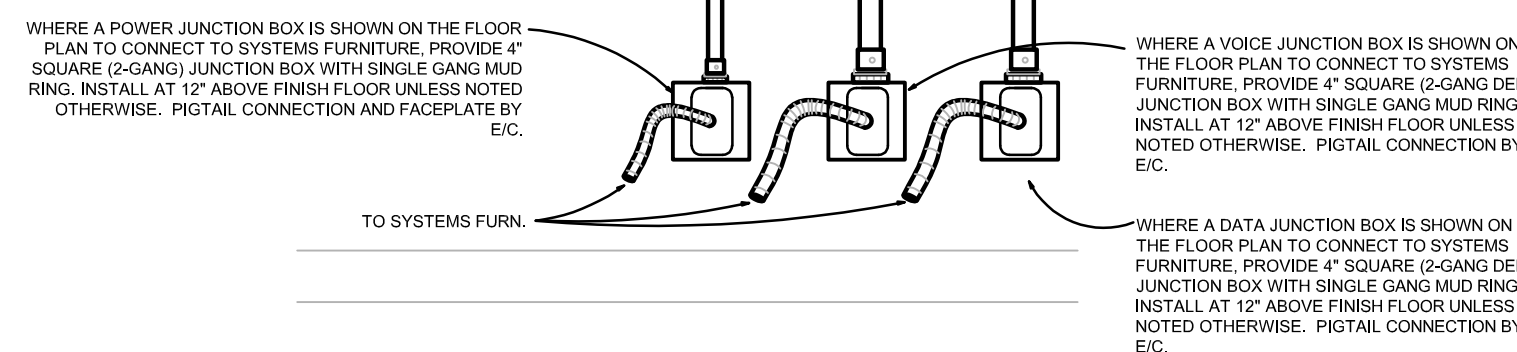
2 TYPICAL A/V ROUGH-IN DETAIL
SCALE: NTS



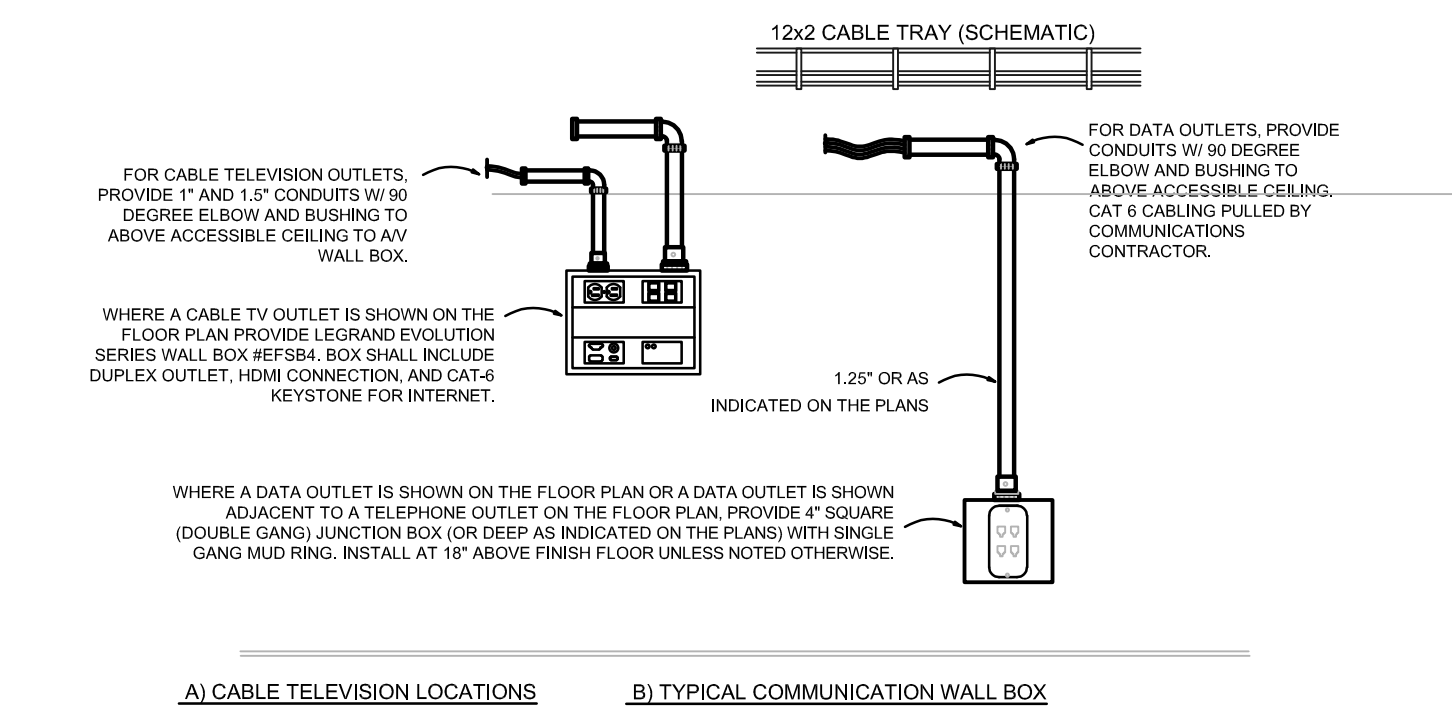
GENERAL NOTES

- ALL DATA/TELEPHONE CABLING TO BE INSTALLED BY COMMUNICATIONS CONTRACTOR.

8 COMMUNICATIONS ROUGH-IN DETAIL
SCALE: N.T.S.



5 SYSTEMS FURNITURE ROUGH-IN DETAILS
SCALE: NTS



NOTES:

- ALL DATA/TELEPHONE CABLING TO BE INSTALLED BY OWNER.
- DESIGNATION NEXT TO SYMBOL ON DRAWING INDICATES NUMBER OF CABLE DROPS FOR EACH OUTLET, FOR REFERENCE ONLY.

1 COMMUNICATIONS ROUGH-IN DETAILS
SCALE: NTS



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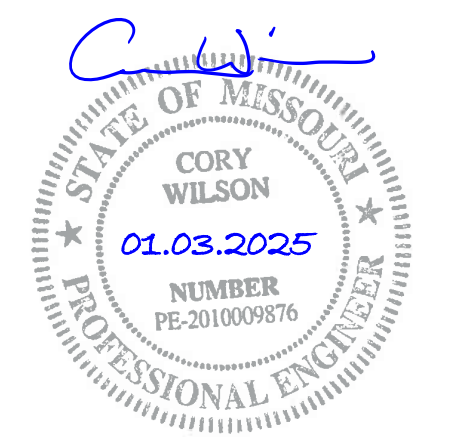


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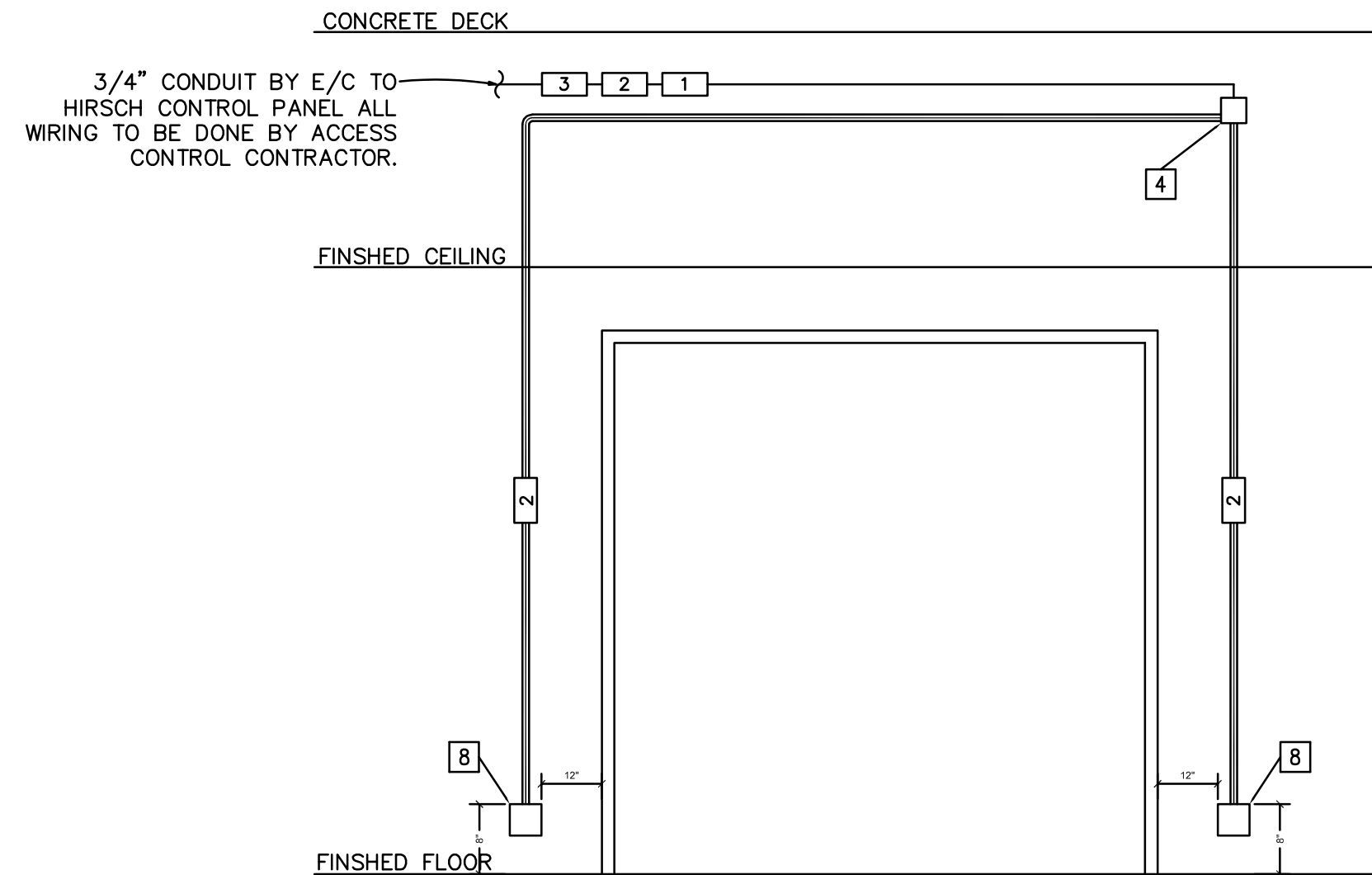
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ELECTRICAL
DETAILS

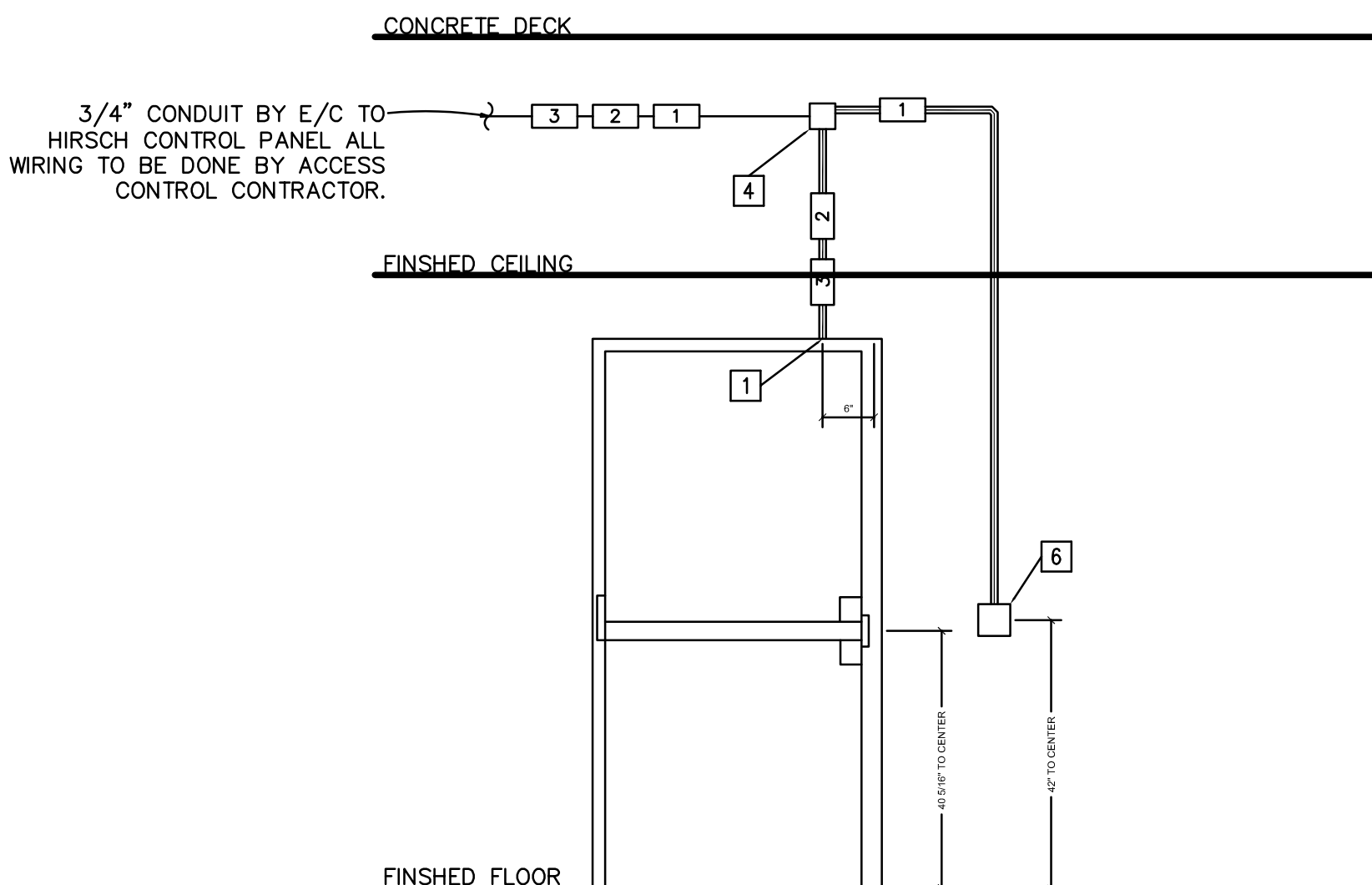
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SHEET 98 OF 102

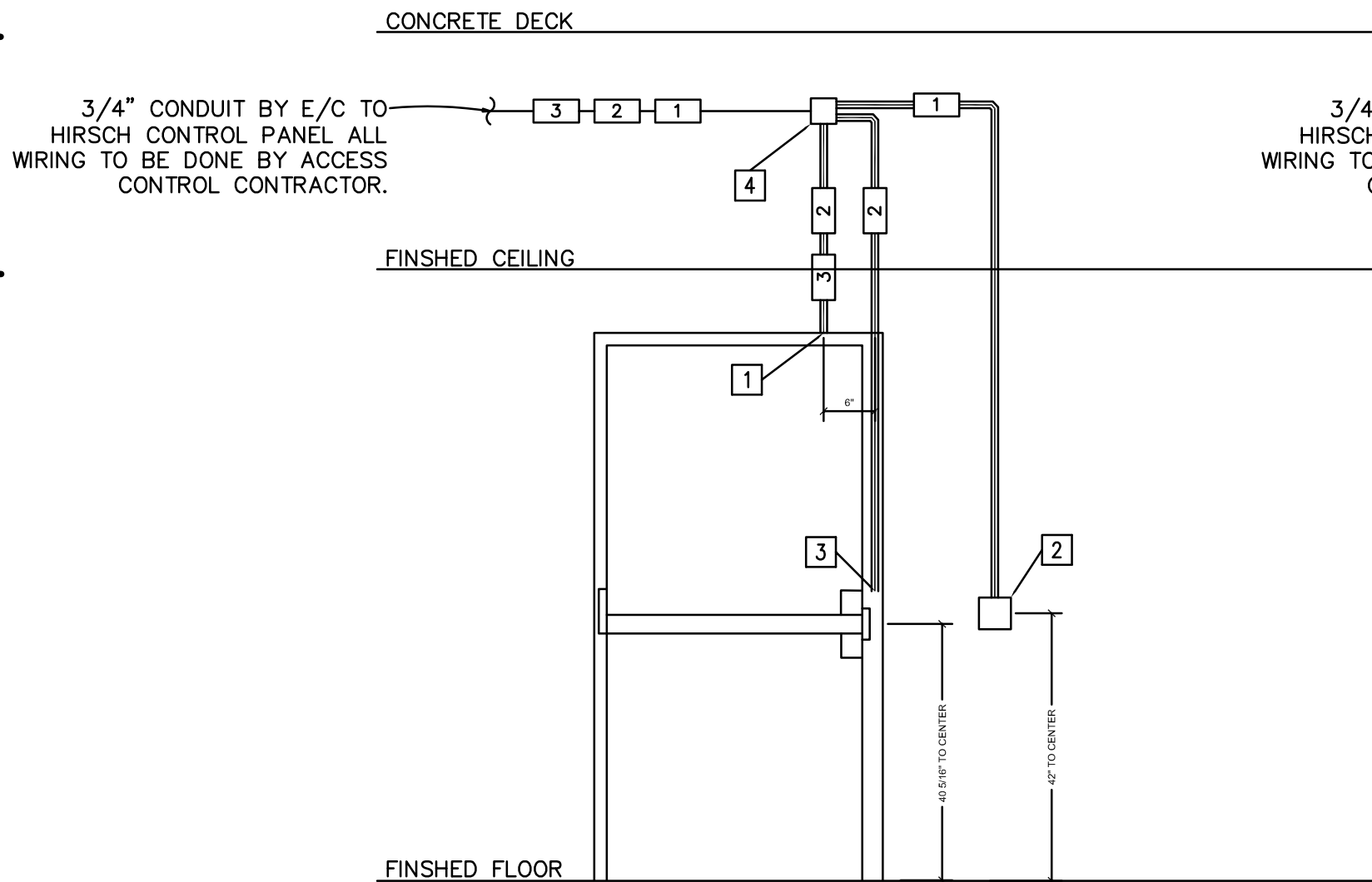
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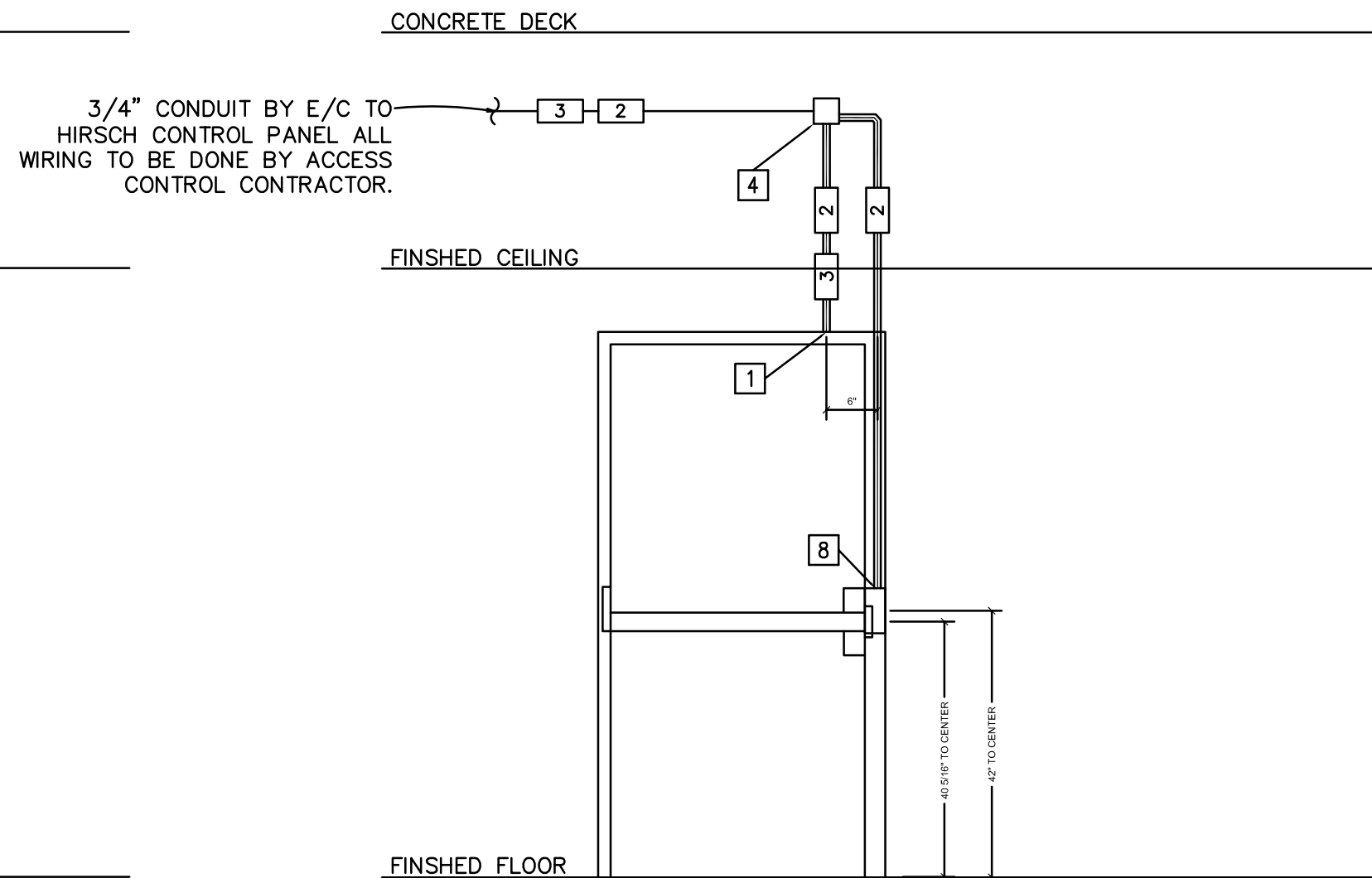
A SLIDER DOOR WITH DOOR CONTACT, CARD READER, REQUEST TO EXIT
NOT TO SCALE



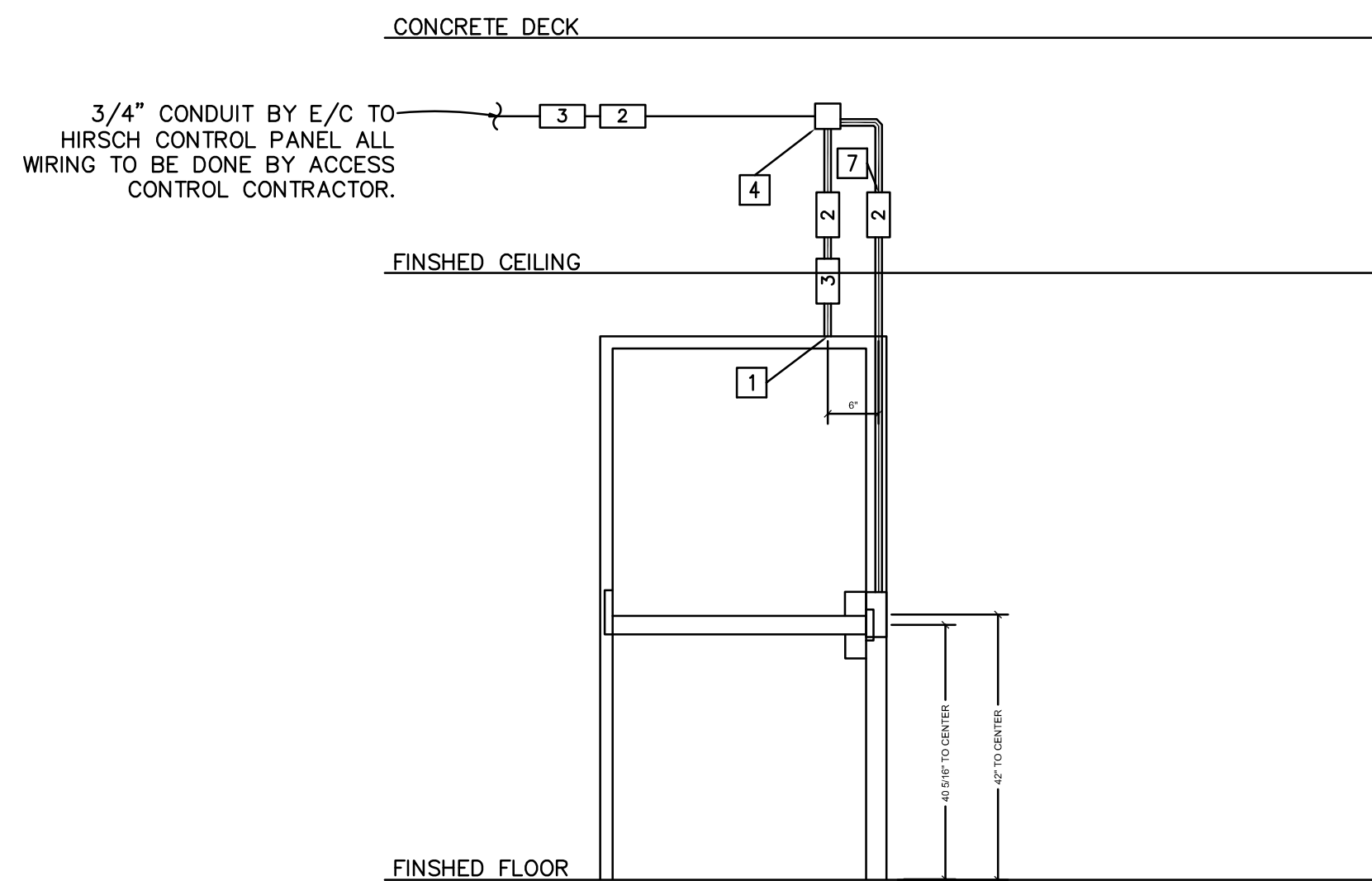
B SINGLE DOOR WITH DOOR CONTACT, MAG LOCK CARD READER, REQUEST TO EXIT, ELECTRIC HINGE
NOT TO SCALE



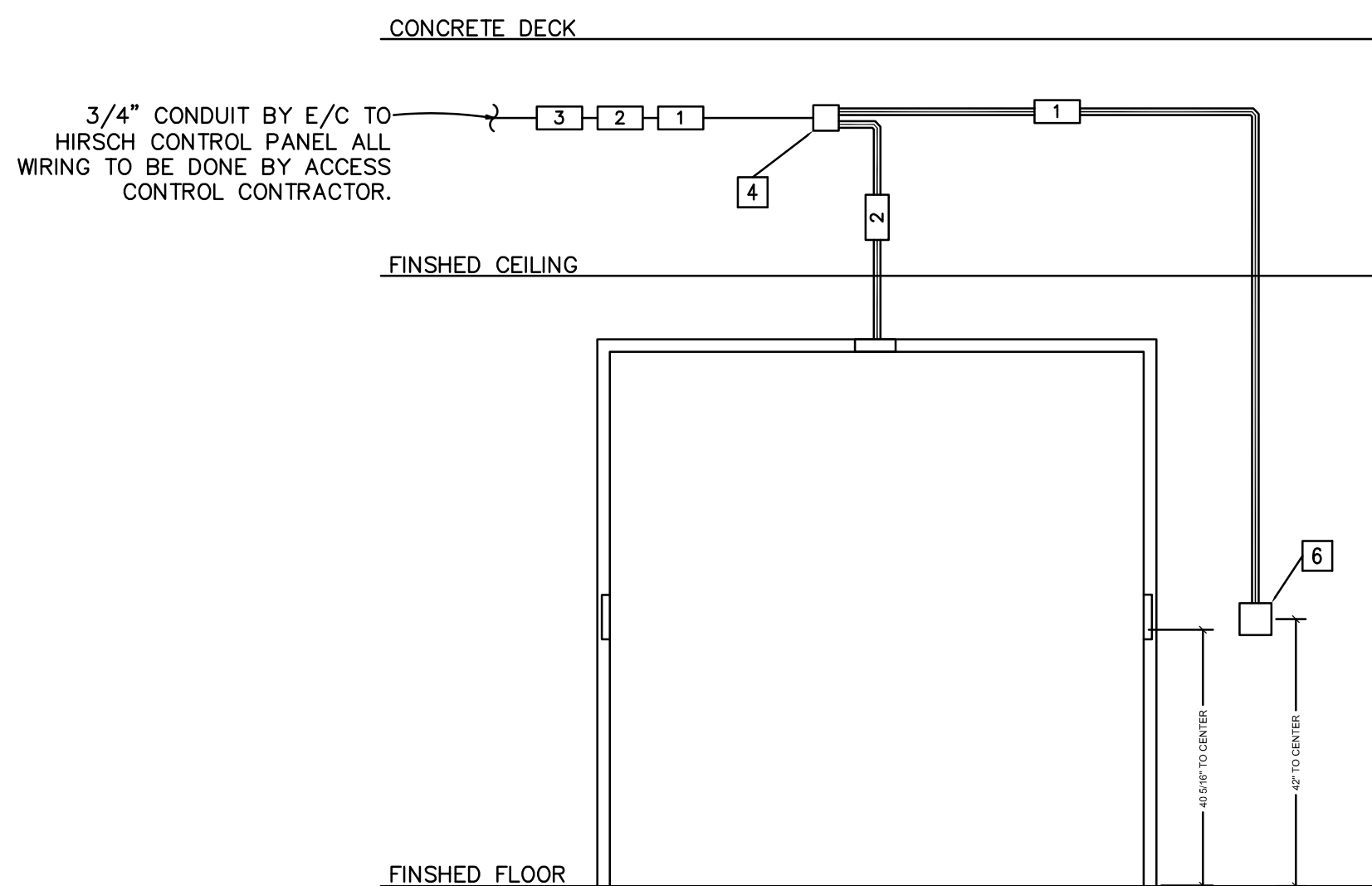
C SINGLE DOOR WITH DOOR CONTACT, ELECTRONIC STRIKE, CARD READER, REQUEST TO EXIT
NOT TO SCALE



D SINGLE DOOR WITH DOOR CONTACT, ELECTRONIC STRIKE, (2) CARD READERS, REQUEST TO EXIT
NOT TO SCALE

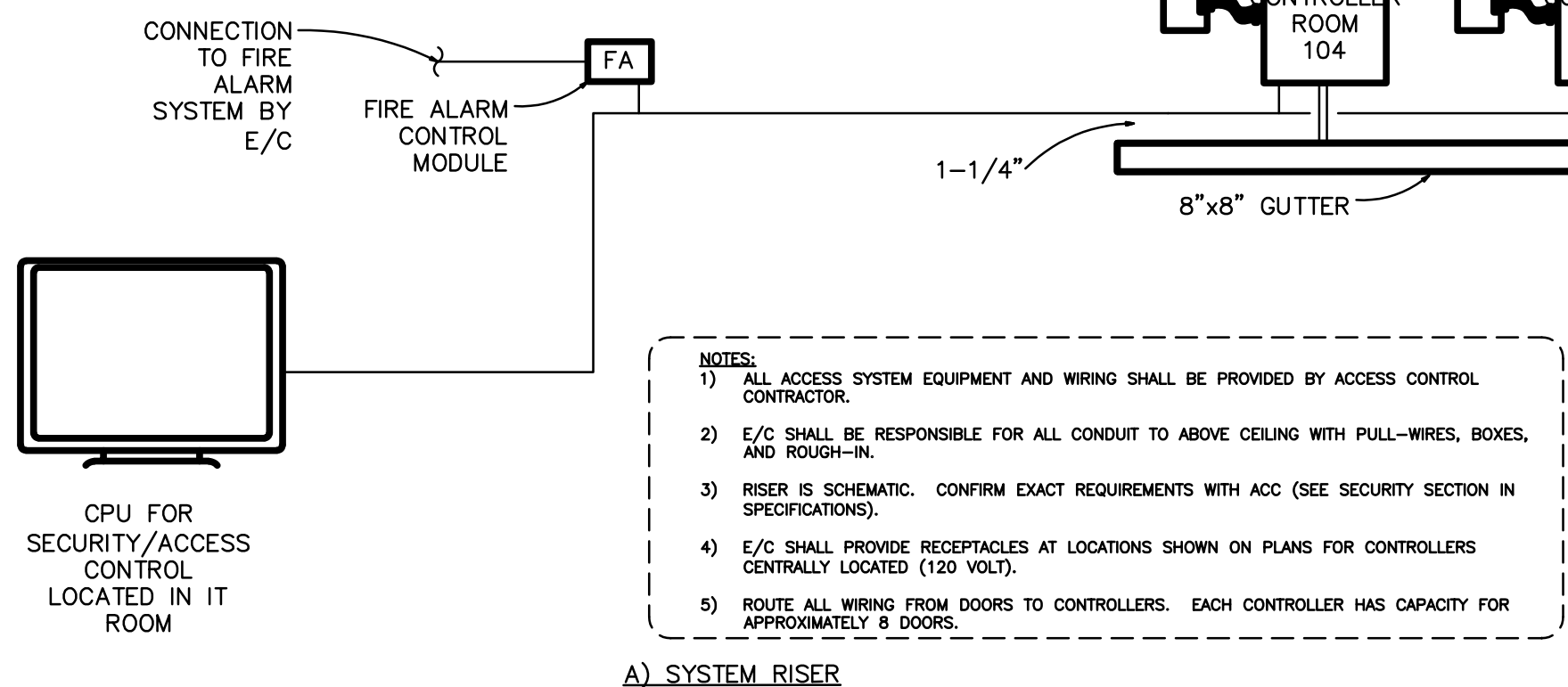


E SINGLE DOOR WITH DOOR CONTACT, ELECTRONIC STRIKE, CARD READER, REQUEST TO EXIT
NOT TO SCALE



F SLIDER DOOR WITH DOOR CONTACT, CARD READER, REQUEST TO EXIT
NOT TO SCALE

- 1 PROVIDE 1/2" EMT CONDUIT STUBBED INTO DOOR FRAME FOR DOOR CONTACT AND REQUEST TO EXIT SENSOR.
- 2 PROVIDE (2) 4 SQ. JBOX MOUNTED 42" TO CENTER FROM FINISHED FLOOR ON SECURE AND INSECURE SIDE OF DOOR. OFFSET JUNCTION BOXES BY 10" HORIZONTALLY TO KEEP READERS FROM INTERFERING WITH EACH OTHER. PROVIDE SINGLE GANG MUD RING SIZED FOR DEPTH OF FINISHED WALL. PROVIDE 1/2" EMT STUBBED TO JUNCTION BOX.
- 3 PROVIDE 1/2" EMT STUBBED INTO DOOR FRAME TO STRIKE POCKET.
- 4 PROVIDE 6"x6"x4" JUNCTION BOX MOUNTED ABOVE FINISHED CEILING AND BELOW CONCRETE DECK. CONNECT ALL EMT CONDUITS TO THIS JUNCTION BOX.
- 5 VERIFY ACCESSABLE PATHWAY FROM CONDUIT STUB TO SECOND DOOR CONTACT.
- 6 PROVIDE 4 SQ. JBOX MOUNTED 42" TO CENTER FROM FINISHED FLOOR ON INSECURE SIDE OF DOOR. PROVIDE SINGLE GANG MUD RING SIZED FOR DEPTH OF FINISHED WALL. PROVIDE 1/2" EMT STUBBED TO JUNCTION BOX.
- 7 PROVIDE 1/2" EMT STUBBED INTO DOOR FRAME TO 44" AFF FOR ELECTRONIC STRIKE & CARD READER.
- 8 PROVIDE SINGLE GANG JUNCTION BOX MOUNTED 8" FROM FINISHED FLOOR AND 12" FROM DOOR FRAME.
- 9 PROVIDE 4" SQUARE JUNCTION BOX MOUNTED BELOW CONCRETE DECK.

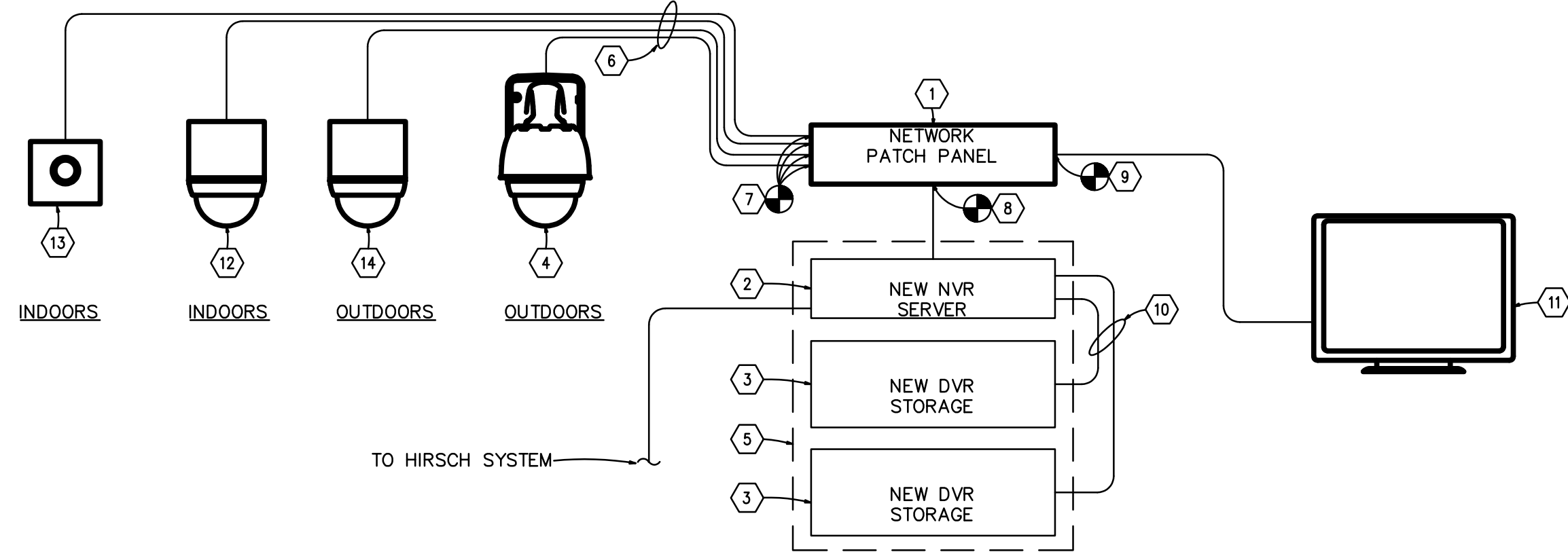


1 ACCESS SYSTEM DETAIL
SCALE: N.T.S.

SECURITY EQUIPMENT WIRING LEGEND	
1	4 - #22 SHIELDED CARD READER CIRCUIT
2	2 - #18 REQUEST TO EXIT CIRCUIT
3	2 - #22 DOOR CONTACT CIRCUIT

NOTES

- 1 CONTRACTOR SHALL FIELD VERIFY EXISTING NETWORK PATCH PANEL TO SERVE NEW IP SECURITY CAMERA SYSTEM. COORDINATE ALL EXISTING NETWORK REQUIREMENTS AND LOCATION WITH OWNER.
- 2 NEW NETWORK VIDEO RECORDER (NVR) EQUIVALENT TO AMERICAN DYNAMICS VIDEODGE IP NVR. 2U. NEW NETWORK VIDEO RECORDER SHALL COME AS A PRECONFIGURED BUNDLED SERVER PACKAGE INCLUDING SOFTWARE AND LICENSING, AND SHALL BE SUITABLE FOR RACK MOUNTING.
- 3 NEW RAID STORAGE SYSTEM EQUIVALENT TO AMERICAN DYNAMICS 30TB. RAID STORAGE SYSTEM SHALL HAVE A CAPACITY OF 30.0 TB OR HIGHER.
- 4 NEW SECURITY CAMERAS OUTDOORS. SECURITY CAMERAS TO BE EQUIVALENT TO AXIS #215 PTZ-Z. PROVIDE WITH VANDAL RESISTANT OUTDOOR PENDANT HOUSING WITH SMOKE COLOR, BASE MOUNT ADAPTER, AND MOUNTING ARM ACCESSORIES REQUIRED SUITABLE FOR MOUNTING ON WALL. SECURITY CAMERAS SHALL BE POWERED BY THE NETWORK ETHERNET CONNECTION. CONFIRM ALL MOUNTING REQUIREMENTS AND ACCESSORIES WITH SECURITY SYSTEM MANUFACTURER.
- 5 CONTRACTOR SHALL PROVIDE NEW COMPONENT RACK FOR MOUNTING NEW NVR SERVER AND RAID STORAGE COMPONENTS AS REQUIRED. CONFIRM SIZE AND TYPE OF RACK WITH SECURITY SYSTEM MANUFACTURER AND COORDINATE WITH OWNER FOR NEW LOCATION OF RACK.
- 6 PROVIDE CAT-6 CABLE OR OTHER TYPE OF CABLE AS REQUIRED BY SECURITY MANUFACTURER FROM NETWORK PATCH PANEL TO NEW SECURITY CAMERAS. CONFIRM ALL CABLE REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER.
- 6 PROVIDE AND CONNECT NEW CAT-6 CABLE TO NEW NETWORK PATCH PANEL. CONFIRM ALL CABLE TYPE AND REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER.
- 7 PROVIDE AND CONNECT NEW CAT-6 CABLE FROM NEW NVR SERVER TO NEW NETWORK PATCH PANEL. CONFIRM ALL CABLE TYPE AND REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER.
- 8 PROVIDE NEW CAT-6 CABLE FROM NEW NVR SERVER AND CONNECT TO EXISTING NETWORK PATCH PANEL. CONFIRM ALL CABLE TYPE AND REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER.
- 9 IF REQUIRED, CONTRACTOR SHALL PROVIDE NEW CAT-6 CABLE FROM NEW NETWORK PATCH PANEL TO NEW HOST COMPUTER.
- 10 PROVIDE NEW SCSI CABLE FROM NEW NVR SERVER TO NEW RAID STORAGE UNITS. CONFIRM ALL CABLE TYPE AND REQUIREMENTS WITH SECURITY SYSTEM MANUFACTURER.
- 11 NEW HOST COMPUTER TO BE USED FOR INSTALLATION AND CONTROL OF NEW SECURITY SYSTEM SOFTWARE. CONTRACTOR SHALL COORDINATE EXACT LOCATION THAT WILL BE USED TO CONTROL NEW SECURITY SYSTEM WITH OWNER.
- 12 NEW SECURITY CAMERAS INDOORS. SECURITY CAMERAS TO BE EQUIVALENT TO AXIS #215 PTZ. PROVIDE WITH VANDAL RESISTANT INDOOR PENDANT HOUSING WITH SMOKE COLOR, BASE MOUNT ADAPTER, AND MOUNTING ARM ACCESSORIES REQUIRED SUITABLE FOR MOUNTING ON WALL. SECURITY CAMERAS SHALL BE POWERED BY THE NETWORK ETHERNET CONNECTION. CONFIRM ALL MOUNTING REQUIREMENTS AND ACCESSORIES WITH SECURITY SYSTEM MANUFACTURER.
- 13 NEW FIXED SECURITY CAMERAS INDOORS. SECURITY CAMERAS TO BE EQUIVALENT TO AXIS #211M. MOUNTING ARM ACCESSORIES REQUIRED SUITABLE FOR MOUNTING ON WALL. SECURITY CAMERAS SHALL BE POWERED BY THE NETWORK ETHERNET CONNECTION. CONFIRM ALL MOUNTING REQUIREMENTS AND ACCESSORIES WITH SECURITY SYSTEM MANUFACTURER.
- 14 NEW PTZ SECURITY CAMERA OUTDOOR AT LOADING DOCK POLE & LIGHTS. SECURITY CAMERA TO BE 360° IMMERSIVE VIDEO SURVEILLANCE CAMERA. SECURITY CAMERAS SHALL BE POWERED BY THE NETWORK ETHERNET CONNECTION. CONFIRM ALL MOUNTING REQUIREMENTS AND ACCESSORIES WITH SECURITY SYSTEM MANUFACTURER.



- GENERAL NOTES:
1. THE NEW IP SECURITY SYSTEM DIAGRAM SHOWN MAY OR MAY NOT BE ACCURATE AND ONLY SERVES AS A GUIDE FOR THE SPECIFICATION OF A NEW SECURITY SYSTEM.
 2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE IP SECURITY SYSTEM. ALL REQUIRED EQUIPMENT, ACCESSORIES, CABLE, ETC. SHALL BE PROVIDED BY CONTRACTOR AND SHALL BE DETERMINED BASED ON WHICH MANUFACTURER WILL BE SPECIFIED.
 3. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR NEW SECURITY SYSTEM.

3 SECURITY SYSTEM RISER DIAGRAM
SCALE: NTS



1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108



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KANSAS CITY, MO 64108

KC - LEE'S SUMMIT REGIONAL LEE'S SUMMIT, MISSOURI GENERAL AVIATION TERMINAL CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

PROJECT NO: 2403

CAD DWG FILE: Lee's Summit - Terminal MEP.rvt

DESIGNED BY: CMW

DRAWN BY: DM

CHECKED BY: WAI

APPROVED BY: Approver

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SHEET TITLE

SPECIAL
SYSTEMS
DETAILS

E-420

SHEET 99 OF 102

11/27/2024 9:17:31 AM

LIGHTING CONTROL AND DLM DEVICE SCHEDULE						
TYPE	MOUNTING	TYPE	MANUFACTURER MODEL NO.	COVERAGE	COLOR	NOTES
LC1	STRUCTURE (ABOVE ACCESSIBLE CEILING WHERE CEILING EXISTS)	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) PLENUM RATED CONTROLLER WITH LINE VOLTAGE RELAY(S) AND ON/OFF POWER SUPPLY COMPONENT OF DIGITAL LIGHTING MANAGEMENT SYSTEM CONNECT TO COMPONENTS WITH CAT5E CABLES WITH RJ45 CONNECTORS	WATTSTOPPER LMRC-102	PER ROOM	N/A	1,3
LDX	STRUCTURE (ABOVE ACCESSIBLE CEILING WHERE CEILING EXISTS)	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) PLENUM RATED CONTROLLER WITH LINE VOLTAGE RELAY(S) AND ON/OFF/0-10V DIMMING POWER SUPPLY COMPONENT OF DIGITAL LIGHTING MANAGEMENT SYSTEM CONNECT TO COMPONENTS WITH CAT5E CABLES WITH RJ45 CONNECTORS PROVIDE 0-10V CONTROL SIGNAL TO DIMMABLE FIXTURES.	WATTSTOPPER LD1 = LMRC-211 LD2 = LMRC-212 LD3 = LMRC-213	PER ROOM	N/A	1,3
S ₂	WALL	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) LOW VOLTAGE PUSHBUTTON SWITCH TWO BUTTONS AS FOLLOWS: "OFF", "ON"	WATTSTOPPER LMSW-102	PER ROOM / ZONE	GREY	2,3
S ₃	WALL	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) LOW VOLTAGE PUSHBUTTON SWITCH THREE BUTTONS AS FOLLOWS: "OFF", "1", "2"	WATTSTOPPER LMSW-103	PER ROOM / ZONE	GREY	2,3
S ₄	WALL	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) LOW VOLTAGE PUSHBUTTON SWITCH FOUR BUTTONS AS FOLLOWS: "OFF", "1", "2", "3"	WATTSTOPPER LMSW-104	PER ROOM / ZONE	GREY	2,3,4
S ₁₀	WALL	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) LOW VOLTAGE PUSHBUTTON SWITCH FIVE BUTTONS AS FOLLOWS: "OFF", "1", "2", "3", AND DIMMING.	WATTSTOPPER LMSW-105	PER ROOM / ZONE	GREY	2,3
OS	CEILING	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) DUAL TECHNOLOGY ULTRASONIC AND PASSIVE INFRARED DIGITAL CEILING SENSOR BY WATTSTOPPER	WATTSTOPPER CEILING MOUNT: LMDC-100 CORNER MOUNT: LMDX-100 GYMNASIUM: HBL4 LENS WITH WC	1000 SQFT	WHITE	3,4
OS HIGHBAY	CEILING	DIGITAL PASSIVE INFRARED CEILING SENSOR WITH 360 DEG PATTERN COMPONENT OF DIGITAL LIGHTING MANAGEMENT INTEGRATED CONTROL SYSTEM	WATTSTOPPER LMPC-100-5	1000 SQFT	WHITE	3
DS	CEILING	DIGITAL LIGHTING MANAGEMENT SYSTEM (DLM) SINGLE ZONE SWITCHING AND DIMMING CLOSED LOOP DIGITAL PHOTOSENSOR	WATTSTOPPER LMLS-400		WHITE	3,4
ELT	WALL MOUNTED	EMERGENCY LIGHTING CONTROL TRANSFER SWITCH TRANSFERS LIGHTING LOADS TO EMERGENCY POWER SOURCE UPON LOSS OF POWER. BYPASSES LIGHTING CONTROLS ON NORMAL POWER CIRCUIT. UL924. PROVIDE WITH TEST SWITCH ACCESSORY.	BODINE GTD OR EQUAL AS APPROVED	PER ROOM OR ZONE	N/A	
S _{DS1}	WALL	LINE VOLTAGE OCCUPANCY SENSOR WALL SWITCH PASSIVE INFRARED	WATTSTOPPER PW-101	PER ROOM	GREY	3
S _{DS2}	WALL	LINE VOLTAGE OCCUPANCY SENSOR WALL SWITCH PASSIVE INFRARED, DUAL RELAY	WATTSTOPPER PW-200	PER ROOM	GREY	3
RP1	WALL MOUNTED	ARCHITECTURAL DIMMING PANEL, BACNET ENABLED 16 ZONES 0-10VOLT DIMMING / 16 HIGH-VOLTAGE RELAYS RP1 WITH IC-DIN-II-LITE RP1 WITH SERIAL DATA INTERFACE FOR COMMUNICATION TO DLM CONTROLLERS	WATTSTOPPER LCAP44A A-6 LMDI-100 BACNET-IP-IC IC-DIN-II-LITE LVOS-0-10-PWM (4)	EXTERIOR BUILDING LIGHTING AND INTERIOR COMMON SPACES	N/A	3
RP2E	WALL MOUNTED	ARCHITECTURAL DIMMING PANEL 12 ZONES 0-10VOLT DIMMING / 12 HIGH-VOLTAGE RELAYS RP2E WITH (3) EMERGENCY LIGHTING RELAYS RP2E WITH (3) EMERGENCY LIGHTING TEST SWITCH NETWORK TO RP1 FOR CONTROL	WATTSTOPPER LCAP44A A-6 LMDI-100 VA-RRU-1-277(3) VA-EPC-DFS-277V (3) LVOS-0-10-PWM (3)	EXTERIOR BUILDING LIGHTING AND INTERIOR COMMON SPACES	N/A	3
PC	EXTERIOR WALL	DIGITAL PHOTO CELL INPUT MODULE AND EXTERIOR PHOTOCELL	WATTSTOPPER LMIO-301 LMPO-200	EXTERIOR BUILDING LIGHTING	N/A	3
NOTES: 1) REFER TO LIGHTING CONTROL SEQUENCE FOR CONTROL SETTINGS. 2) WALL STATIONS SHALL INCLUDE ENGRAVING TO STATE BUTTON FUNCTION. REFER TO OWNER FOR ENGRAVING PREFERENCES. 3) APPROVED LIGHTING CONTROL EQUALS INCLUDE: ACUTY BRANDS N LIGHT, CRESTRON SPACE BUILDER, HUBBELL NX, CRESTRON 4)						

ELEVATOR POWER MODULE SCHEDULE

MARK	LOAD		MANUFACTURER MODEL	SWITCH		FUSE		ENCLOSURE NEMA TYPE	ACCESSORIES
	EQUIPMENT SERVED	VOLTS		AMP	POLE	AMP	TYPE		
"PM1"	ELEVATOR P1	208	BUSSMAN-#PS1120KRBF1	100	3	100	AJT	1	CT FR,K,RP,MR,VMR, AFX
ABBREVIATIONS: GD - GENERAL DUTY HD - HEAVY DUTY SN - SOLID NEUTRAL CT - CONTROL POWER TRANSFORMER FR - FIRE SAFETY INTERFACE RELAY K - KEYED TEST SWITCH RP - RED PILOT LIGHT MR - MECHANICAL INTERLOCK AUXILIARY RELAY VMR - FIRE ALARM VOLTAGE MONITORING RELAY AUX - AUXILIARY ALARM CONTACT									
NOTES: 1. ELEVATOR FUSE REQUIREMENTS SHALL BE VERIFIED WITH THE ELEVATOR EQUIPMENT MANUFACTURER PRIOR TO ANY ROUGH-IN OR ORDER OF SWITCHES.									

LIGHTING FIXTURE SCHEDULE

R	MANUFACTURER	MODEL	DESCRIPTION	LAMP		VA	VOLTAGE	DIMMING	COMMENTS
				TYPE	CCT				
A	COOPER LIGHTING	Z28R-LD2-58-C-UNV-L835-CD-1-U	RECESSED 2X2 DIRECT/INDIRECT TROFFER	LED	3500 K	50	UNV	0-10V	
AE	COOPER LIGHTING	Z28R-LD2-58-C-UNV-L835-CD-1-U-E1	RECESSED 2X2 DIRECT/INDIRECT TROFFER	LED	3500 K	50	UNV	0-10V	FURNISH WITH EMERGENCY BATTER PACK FOR MINIMUM 1100 LUMENS
B	COOPER LIGHTING	LD5Q4D-358-90-35-D010	4" SQUARE DOWNLIGHT	LED	3500 K	33	UNV	0-10V	
BE	COOPER LIGHTING	LD5Q4D-358-90-35-D010-EM7	4" SQUARE DOWNLIGHT	LED	3500 K	33	UNV	0-10V	FURNISH WITH EMERGENCY BATTER PACK FOR MINIMUM 1100 LUMENS
C	METALUX	4SNX-48SL-SLW-UNV-L835-CD-1	LED STRIPLIGHT	LED	3500 K	33	UNV	0-10V	
D	BUZZSPACE	BUZZJET XL	DECORATIVE PENDANT	LED	3500 K	70	UNV	0-10V	
D2	BUZZSPACE	BUZZJET XXL	DECORATIVE PENDANT	LED	3500 K	70	UNV	0-10V	
E	EUREKA	4256-24-LED-25-80-120V-DV	DECORATIVE PENDANT	LED	3500 K	33	120 V	0-10V	
EME	<varies>	<varies>	<varies>	LED	4000 K	45	<varies>	<varies>	<varies>
EX1	COOPER LIGHTING	LPX SERIES EDGE-LIT	EXIT SIGN	LED	3500 K	5	UNV	N/A	
F	EUREKA	3450-LED-4-35-90-120-DV-BLK-CFR	SURFACE MOUNT PENDANT	LED	3500 K	5	120 V	0-10V	
G	EUREKA	3450-LED-35-90-120-DV-BLK	SURFACE MOUNT PENDANT	LED	3500 K	5	120 V	0-10V	
H	AXIS LIGHTING	B2SQSLD-1000-80-35-SO-5-DIMLED-BLK-UNV-OP-1	SURFACE MOUNT LINEAR FIXTURE	LED	3500 K	43	UNV	0-10V	
HE	AXIS LIGHTING	B2SQSLD-1000-80-35-SO-5-DIMLED-BLK-UNV-OP-E1	SURFACE MOUNT LINEAR FIXTURE	LED	3500 K	43	UNV	0-10V	FURNISH WITH EMERGENCY BATTER PACK FOR MINIMUM 1100 LUMENS
I	AXIS LIGHTING	GPSLED-NL-300-80-3500-FL-BLK-UNV-OP	SURFACE MOUNT WALL GRAZE FIXTURE	LED	3500 K	40	UNV	0-10V	
J	COOPER LIGHTING	HCSQ4-40-D010-HMM-3040-835	EXTERIOR DOWN LIGHT	LED	4000 K	43	120 V	0-10V	WET LOCATION LISTED
JE	COOPER LIGHTING	HCSQ4-40-D010-EM06-HMM-3040-835	EXTERIOR DOWN LIGHT	LED	4000 K	43	UNV	0-10V	WET LOCATION LISTED, FURNISH WITH EMERGENCY BATTER PACK FOR MINIMUM 1100 LUMENS
K	BEGA	B50539-K35-B13183	DECORATIVE PENDANT	LED	3500 K	20	120 V	0-10V	
L	BUZZSPACE	BUZZPROP LED PENDANT LIGHT	DECORATIVE PENDANT	LED	3000 K	20	120 V	N/A	
M	COOPER LIGHTING	LD5Q4D-35-90-35-D010	2" SQUARE DOWNLIGHT	LED	3500 K	22	UNV	0-10V	
SL1	KIM LIGHTING	PATRF1-CH3-125-020-47K-4MRB-S20-BLT-UNV	SITE BOLLARD	LED	4000 K	80	UNV	N/A	
SL2	KIM LIGHTING	CY2-45-4K8-2-SP-3-UNV-BLT-F-LFSW	SITE UP/DOWN LIGHT	LED	4000 K	52	UNV	N/A	IP66
SL3	KIM LIGHTING	ALT2-100L160-4K3-4-UNV-ASQ-BLT	SITE LIGHTING POWER POLE	LED	4000 K	160	UNV	0-10V	
SL4	KIM LIGHTING	ALT2-100L160-4K3-4-UNV-ASQ-BLT	SITE LIGHTING POWER POLE	LED	4000 K	160	UNV	0-10V	
T	PURE EDGE	SS2C-24-40K-W	OUTDOOR LED STRIP	LED	4000 K	50	120 V	0-10V	WET LOCATION LISTED

LIGHTING FIXTURE SCHEDULE NOTES:

- EQUALS BY LITHONIA, HUBBEL, LSI, ACUTY.
- DECORATIVE PENDANT EQUAL REQUIRES APPROVAL BY ARCHITECT PRIOR TO SUBMITTAL.

LIGHTING CONTROL SEQUENCE

SPACE TYPE / ROOM NAME	CONTROLS															SEQUENCE OF OPERATIONS	NOTES / OTHER COMMENTS		
	LINE VOLT MANUAL SWITCH	LINE VOLT WALL OCCUPANCY SWITCH	LOW VOLT WALL STATION	LOW VOLT DIMMING WALL STATION	PHOTOSENSOR GROUP	ASTRONOMIC TIME CLOCK PERMISSION	MANUAL ON ONLY	OCCUPANCY SENSOR 33% AUTO ON	OCCUPANCY SENSOR 50% AUTO ON	OCCUPANCY SENSOR 100% AUTO ON	BH-LEVEL EXTERIOR SENSOR	OCCUPANCY SENSOR OFF	OPERATING HOURS SCHEDULE	OPERATING HOURS 25% AUTO ON	OPERATING HOURS 33% AUTO ON			OPERATING HOURS 50% AUTO ON	DAYLIGHT SENSOR DIMMING
EXTERIOR - PARKING					X	X					X							1	BH-LEVEL SENSOR FROM 11 PM TO 5 PM.
EXTERIOR - BUILDING					X	X												1	50% LEVEL FROM 11 PM TO 5 AM.
EXTERIOR - SIGNAGE					X	X												1	
EXTERIOR - CANOPY					X	X												1	
QUIET WAITING & PILOT LOUNGE			X						X		X							E400	2
PRIVATE OFFICE / WORK ROOM	X							X		X									2
CONCOURSE			X					X	X	X	X	X		X		X		E400	3,4,11
RECEPTION COUNTER				X				X		X								E400	2,4
CAFE/VENDING			X					X		X	X	X						E400	2,3,11
ENTRY								X	X	X	X	X	X	X	X			E400	5,11
ENTRY STAIRS								X	X	X	X	X	X	X	X	X		E400	5,6,11
CONFERENCE				X				X		X								E400	2,7
ELECTRICAL / MECHANICAL / IT	X																		
LARGE STORAGE / JANITOR			X						X	X								E400	8
SMALL STORAGE			X						X	X									8
VESTIBULES								X	X	X	X	X	X	X	X	X		E400	5,11
PUBLIC RESTROOMS									X	X								E400	8
PRIVATE RESTROOMS / JANITOR	X								X	X									8
MEZZANINE				X				X		X					X			E400	9
LINE SERVICE / LOCKER					X			X				X	X	X	X			E400	6,9
WORK ROOM / BREAK ROOM				X					X	X	X	X	X	X	X			E400	6,10,11
CORRIDORS								X		X		X	X	X	X				5,11
SEQUENCE OF OPERATIONS																			
1 TIME CLOCK PERMISSION ON FROM 4 PM TO 8 AM. PHOTOSENSOR ON AND OFF. DIMMING AND BH-LEVEL FUNCTIONALITY AS DESCRIBED IN COMMENTS.																			
2 OCCUPANCY SENSOR 50% ON. TASK LIGHTS MANUAL ON AT LOCAL SWITCH, IF APPLICABLE. ALL LIGHTS OCCUPANCY SENSOR OFF.																			
3 TIME PERMISSIONS. DURING OPERATING HOURS, LIGHT LEVELS ON AT 25% AND AUTO RAISE TO 50% WHEN OCCUPIED. AFTER HOURS, LIGHTS OFF WHEN UNOCCUPIED, AUTO ON TO 50% WHEN OCCUPIED.																			
4 PRESENTATION SETTING DIMS ALL LIGHTS TO 50% AND TURNS OFF ZONE ADJACENT TO PRESENTATION SCREEN.																			
5 TIME PERMISSIONS. DURING OPERATING HOURS, LIGHT LEVELS ON AT 50% AND AUTO RAISE TO 100% WHEN OCCUPIED. AFTER HOURS, LIGHTS OFF WHEN UNOCCUPIED, AUTO ON TO 100% WHEN OCCUPIED.																			
6 DAYLIGHT CONTROLS. DIM LIGHTING, LINEARLY, STARTING AT 100% OUTPUT AT 40 FC TO 0% OUTPUT AT 120 FC. EVALUATE ACTUAL LIGHT LEVELS AND CALIBRATE SETTINGS PER SPECIFICATIONS.																			
7 PRESENTATION SETTING DIMS LINEAR PENDANT TO 10% AND TURNS OFF DOWNLIGHTS.																			
8 OCCUPANCY SENSOR 100% ON. ALL LIGHTS OCCUPANCY SENSOR OFF.																			
9 TIME PERMISSIONS. DURING OPERATING HOURS, LIGHT LEVELS ON AT 33% AND AUTO RAISE TO 100% WHEN OCCUPIED. AFTER HOURS, LIGHTS OFF WHEN UNOCCUPIED, AUTO ON TO 33% WHEN OCCUPIED.																			
10 TIME PERMISSIONS. DURING OPERATING HOURS, LIGHT LEVELS ON AT 50%. AFTER HOURS, LIGHTS OFF WHEN UNOCCUPIED, AUTO ON TO 55% WHEN OCCUPIED.																			
11 SPACE CONTROLS NETWORKED TO RELAY PANEL "RP1" FOR TIME CLOCK FUNCTIONALITY.																			

FLOOR BOX DEVICE SCHEDULE

TAG NO.	MAKE				POWER			COMM		AUDIO VISUAL	NOTES
	MODEL	COLOR	MANUF	COVER	MODEL	QTY	DEPTH	MODEL	LOC		
FB-1	EVOLUTION RFB4-C1-1	BRUSHED NI BLACK	WIREMOLD	S40CC7CAL	CHT-D	2	3"	CLT-ATKO-4-RJ	CENTER	AV	CS,LF,CT,LVD
ABBREVIATIONS: FR - FIRE RATED CS - CONCEALED SERVICE LF - LEVELING FEET CT - CARPET TILE FLANGE KIT, BA FINISH TRIM, CARPET INSERT LVD - LOW VOLTAGE DIVIDER AV - AV PLATE CHLT-B BLANK INSERT WITH VGA AND HDMI CONNECTIONS (WIRING JACKS BY CONTRACTOR)											
*REFER TO SPECIFICATIONS FOR EQUIVALENT MANUFACTURERS.											

BRANCH CIRCUIT COPPER CONDUCTOR AND CONDUIT SIZE

OVERCURRENT PROTECTION DEVICE RATING (AMPS)	REQUIRED CONDUCTOR SIZE	EQUIPMENT GROUNDING CONDUCTOR SIZE	SINGLE PHASE 2 WIRE + GND. CONDUIT SIZE	SINGLE PHASE 3 WIRE + GND. CONDUIT SIZE (where noted on circuit)	THREE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 4 WIRE + GND. CONDUIT SIZE (where noted on circuit)
15	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
20	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
25	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
30	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
35	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
40	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"

MAIN DISTRIBUTION PANEL SCHEDULE														
PANEL DESIGNATION:			MANUFACTURER:		SQUARE D			VOLTAGE: 120/208V, 3 PHASE, 4 WIRE			MIN. AIC: 42K			
NEW "MDP"			TYPE:		LINE		MAINS: 100 AMP MLO			DIMENSIONS: 42" WIDE, 8.5" DEEP				
			MOUNTING:		SURFACE		MTG SP: 84"							
CKT NO	LOAD DESCRIPTION	CIRCUIT BREAKER	TYPE	LOAD (VA)	PHASE LOADS			LOAD (VA)	CIRCUIT BREAKER	TYPE	LOAD DESCRIPTION	CKT NO		
					A	B	C							
1	NEW PANEL "LPH"	400	KC	45417	64417			19000	250	KC	NEW 30-TON RTU	2		
	"	3		41417			60417	19000	3		"			
	"	3		38667			57667	19000	3		"			
3	NEW PANEL "LP1"	150	KC	10800	20000			9200	100	FC	ELEVATOR (20 HP)	4		
	"	3		9800			19000	9200	3		"			
	"	3		10200			19400	9200	3		"			
5	NEW PANEL "LP2"	150	KC	11500	19500			8000	100	FC	NEW PANEL "LPL"	5		
	"	3		10800			18800	8000	3		"			
	"	3		12600			20600	8000	3		"			
7	VAV-15 (15 KW)	60	FC	5000	5000				100	FC	SPARE			
	"	3		5000			5000		3		"			
	"	3		5000			5000		3		"			
7	SPACE	-		-					-		SPACE			
	"	3							3		"			
	"	3							3		"			
					</									



1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108



1627 MAIN STREET, SUITE 100
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1701 WALNUT STREET, SUITE 300
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KC - LEE'S SUMMIT REGIONAL
LEE'S SUMMIT, MISSOURI
GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

PROJECT NO: 2403
CAD DWG FILE: Lee's Summit - Terminal MEP.rvt
DESIGNED BY: CMW
DRAWN BY: DM
CHECKED BY: WAI
APPROVED BY: Approver
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SHEET TITLE

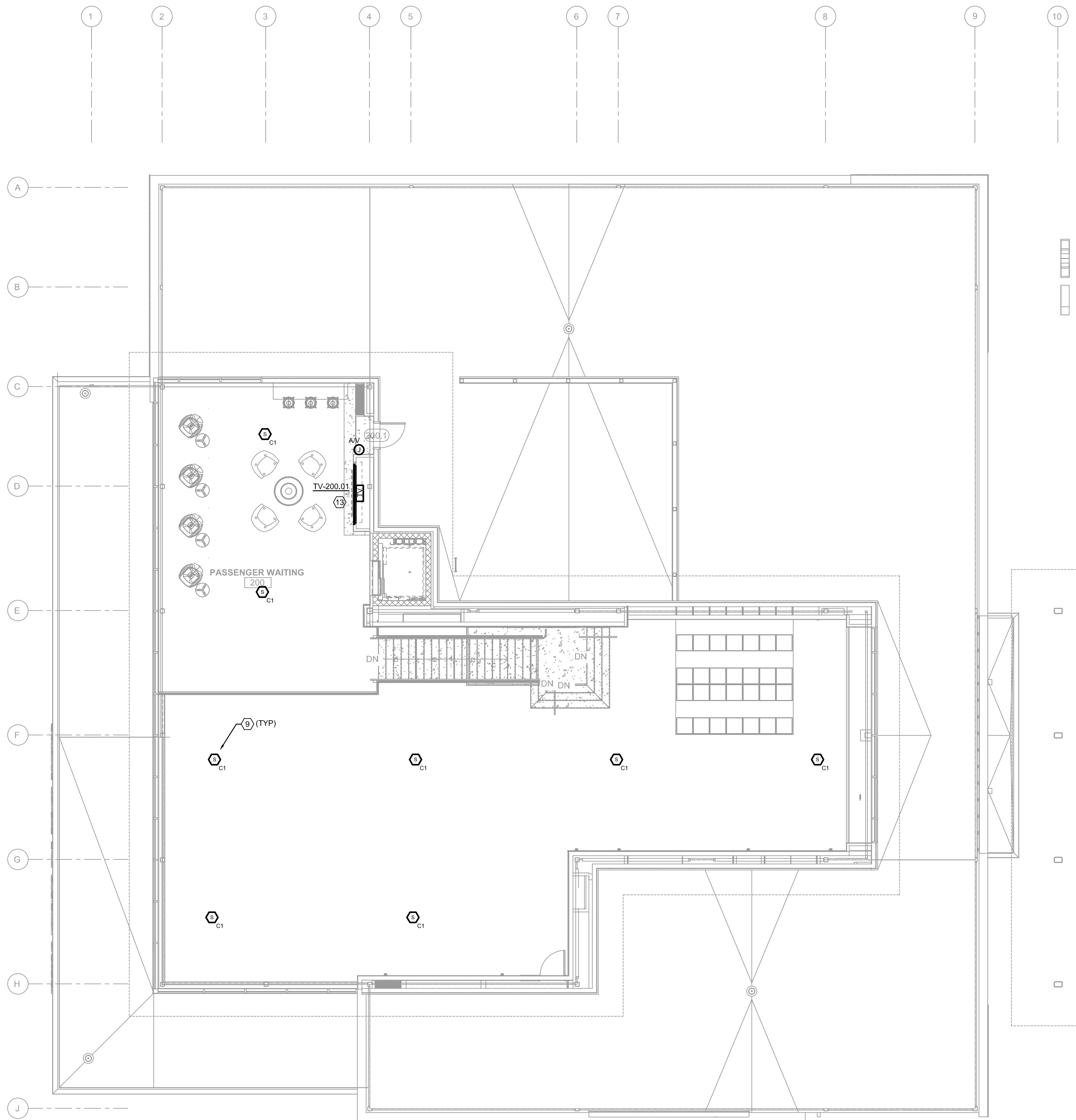
AUDIO/VISUAL
PLANS

AV100

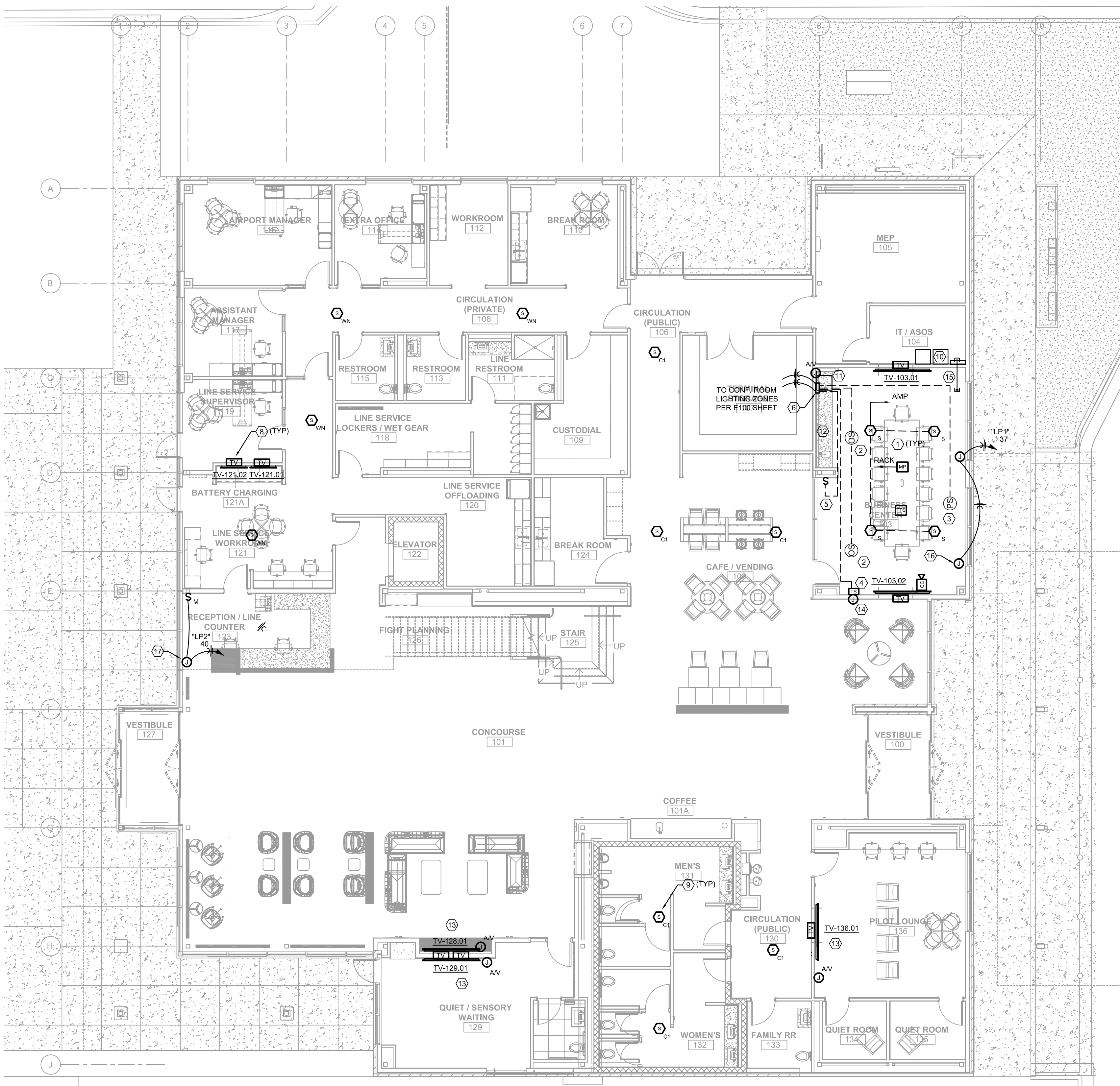
SHEET 103 OF 102

PLAN NOTES:④

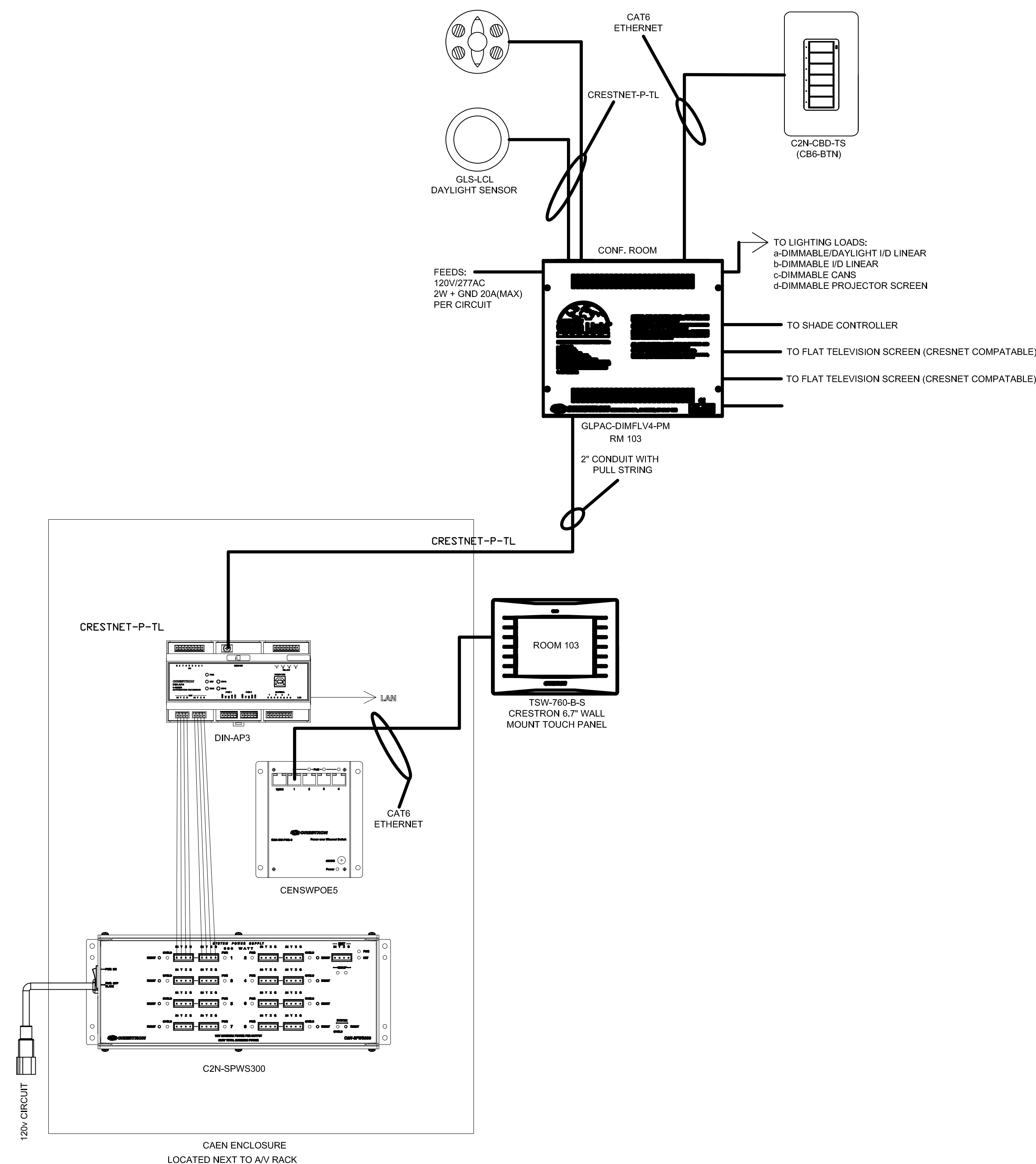
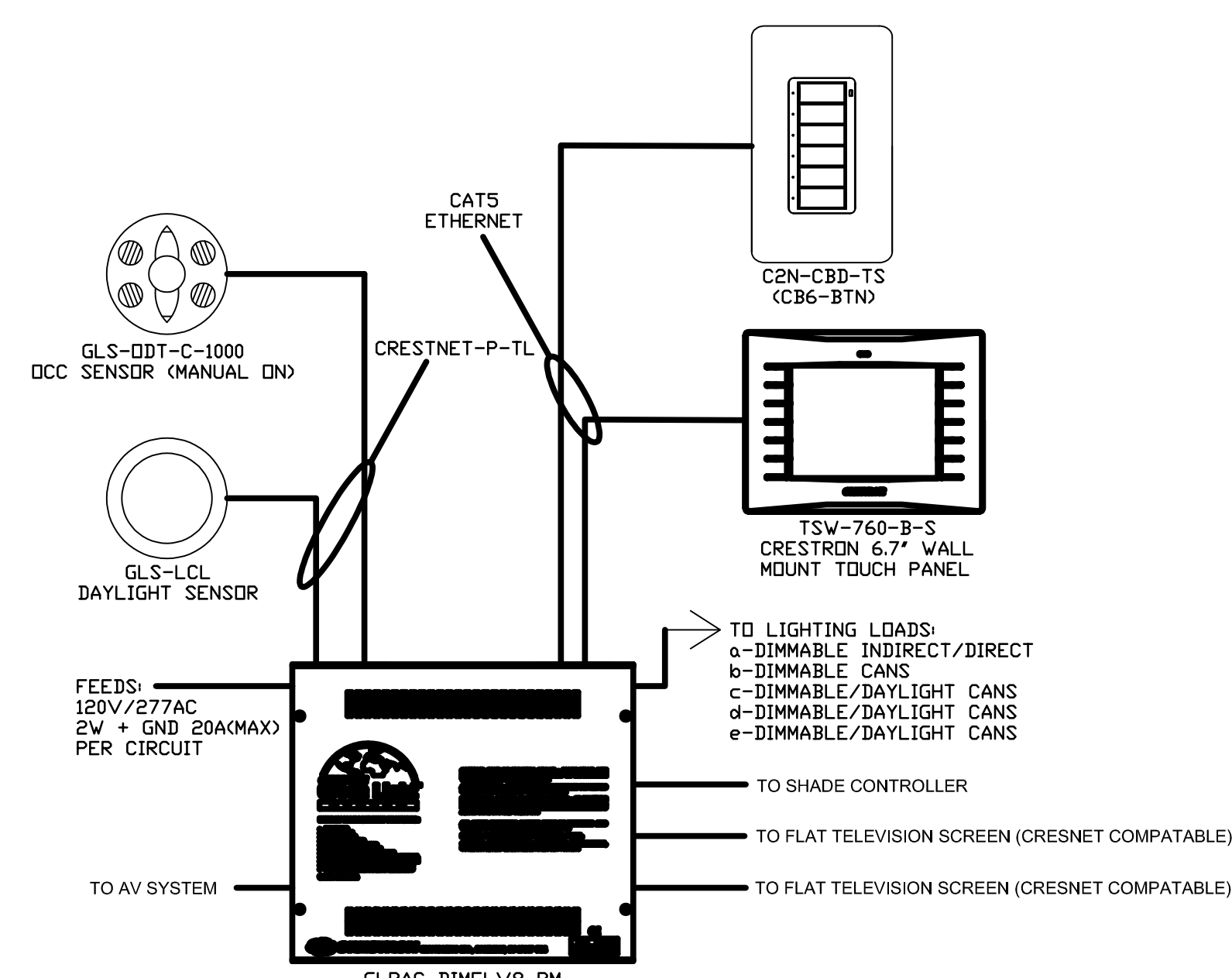
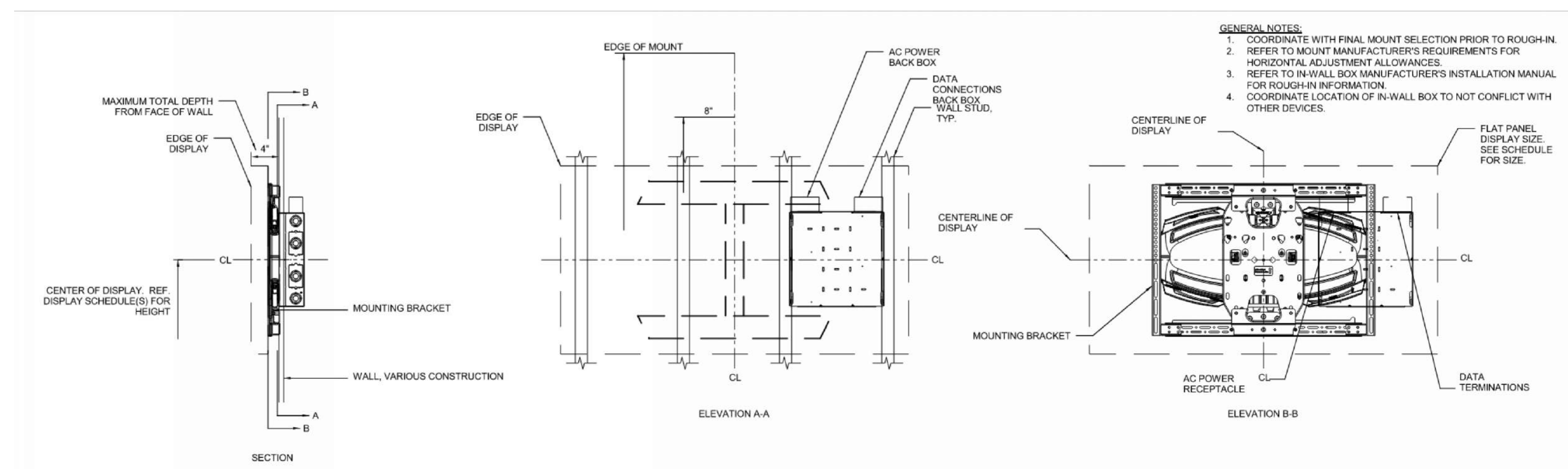
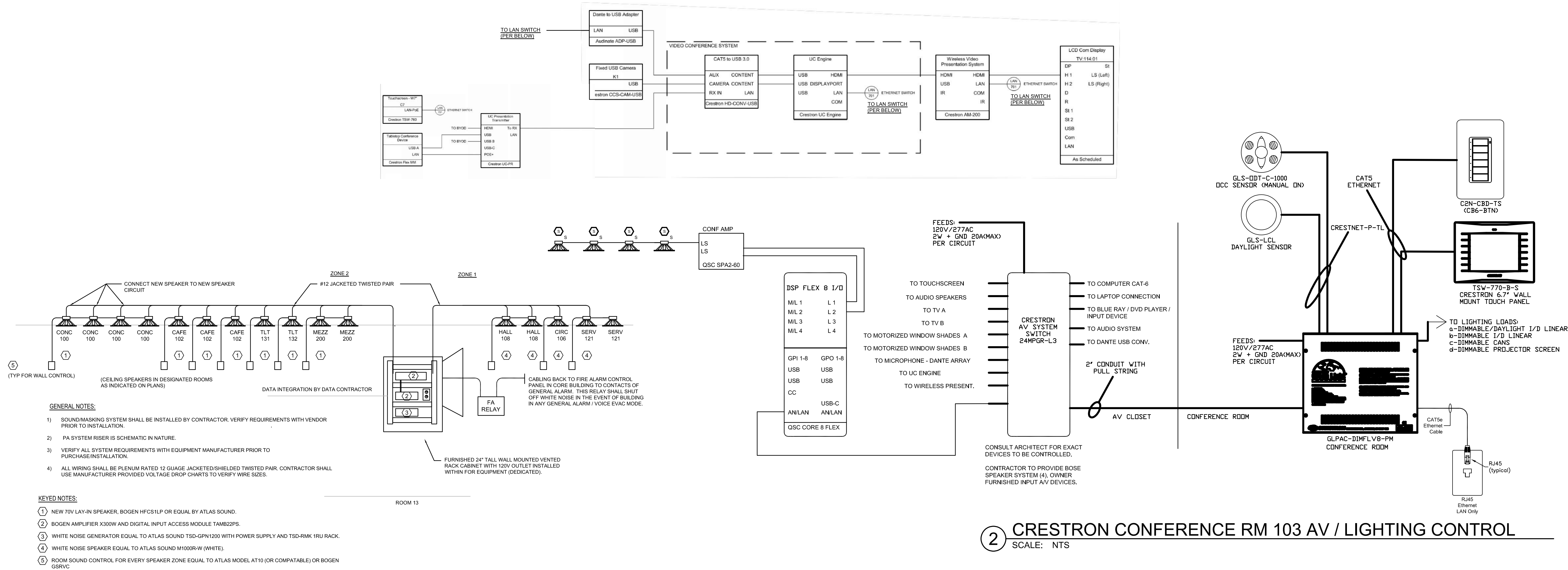
- ① PROVIDE CRESTRON GREEN LIGHT INTEGRATED LIGHTING SYSTEM FOR CONFERENCE ROOM. INTEGRATE SYSTEM WITH CRESTRON AV SYSTEM. PROVIDE ALL WIRING DEVICES AND COMPONENTS NECESSARY FOR A COMPLETE FUNCTIONAL SYSTEM. REFER TO DETAIL ON AV300.
- ② PROVIDE CRESTRON DUAL TECH CEILING MOUNT OCCUPANCY SENSOR GLS-ODT-C-1000.
- ③ PROVIDE CRESTRON DAYLIGHT SENSOR GLS-LCL. MOUNT SENSOR LOCATION PER MANUFACTURERS RECOMMENDATIONS.
- ④ PROVIDE CRESTRON 5.7" WALL MOUNT TOUCH SCREEN PANEL TPS-6L.
- ⑤ PROVIDE CRESTRON CAMEO KEYPAD AND DECORA FACEPLATE C2N-CBD-TS (C86-BTN)
- ⑥ PROVIDE CRESTRON GREEN LIGHT INTEGRATED DIMMABLE CONTROLLER GLPAC-DIMFLV8 ABOVE CEILING.
- ⑦ PROVIDE A 2" CONDUIT WITH PULL STRING STUBBED ABOVE ACCESSIBLE CONFERENCE ROOM TO AV CABINET IN CENTRAL CLOSET.
- ⑧ LEGRAND TV ROUGH-IN BOX FURNISHED BY ELECTRICAL CONTRACTOR. UTILIZE LOW VOLTAGE SECTION FOR ANY COMMUNICATION CABLING JACKS AND A/V ROUGH-IN. SEE POWER/SPECIAL SYSTEMS PLANS.
- ⑨ TYPICAL WHITE NOISE - MUSAK CEILING SPEAKER. REFER TO RISER DIAGRAM AND ALL CABLING WORK. IN UPPER CEILING ENSURE THESE ARE INSTALLED IN THE BLACK PAN. SPEAKER TO BE BLACK.
- ⑩ WALL MOUNTED CABINET FOR PA SPEAKERS AND ADJACENT CABINET FOR CRESTRON SYSTEM. CRESTRON CABINET TO BE MINIMUM 12U WITH LOCKABLE DOOR.
- ⑪ UNDERCABINET A/V RACK FOR CRESTRON AND INPUT DEVICES.
- ⑫ REFER TO A/V WALL ELEVATION FOR ROUGH-IN REQUIREMENTS (103)
- ⑬ REFER TO A/V WALL ELEVATION FOR ROUGH-IN REQUIREMENTS (TYPICAL STANDALONE TV)
- ⑭ PROVIDE CUSTOM BACKBOX AND 1" CONDUIT TO ABOVE ACCESSIBLE CEILING FOR CRESTRON 7" A/V SCREEN.
- ⑮ PROVIDE A 2" CONDUIT WITH PULL STRING STUBBED ABOVE ACCESSIBLE CONFERENCE ROOM FROM AV CABINET IN CENTRAL CLOSET.
- ⑯ 120V CIRCUIT FOR MOTORIZED SHADES TO BE CONTROLLED BY CRESTRON SYSTEM VIA RELAY.
- ⑰ 120V CIRCUIT FOR MOTORIZED SHADES TO BE CONTROLLED FROM MOMENTARY DECORA SWITCH (UP/DOWN/STOP).



② AUDIO/VISUAL SYSTEMS PLAN - LEVEL 2
SCALE: 1/8"=1'-0"



① AUDIO/VISUAL SYSTEMS PLAN - LEVEL 1
SCALE: 1/8"=1'-0"



1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108



1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108



1701 WALNUT STREET, SUITE 300
KANSAS CITY, MO 64108

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GENERAL AVIATION TERMINAL
CITY PROJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025




LEES SUMMIT MUNICIPAL AIRPORT
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

MARK	DATE	DESCRIPTION
PROJECT NO:	2403	
CAD DWG FILE:	Lee's Summit - Terminal MEP.rvt	
DESIGNED BY:	CMW	
DRAWN BY:	DM	
CHECKED BY:	WAI	
APPROVED BY:	Approver	
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







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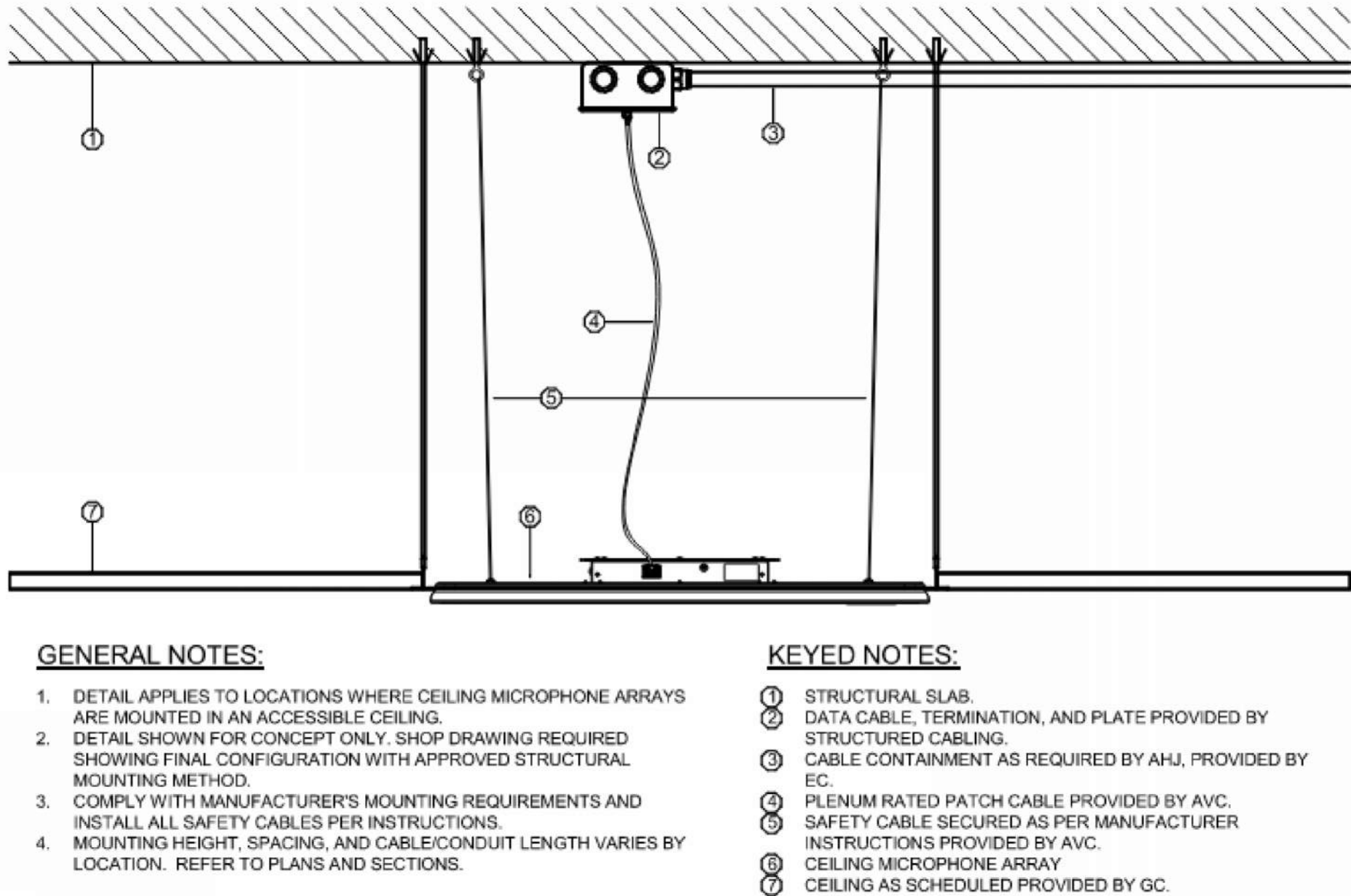
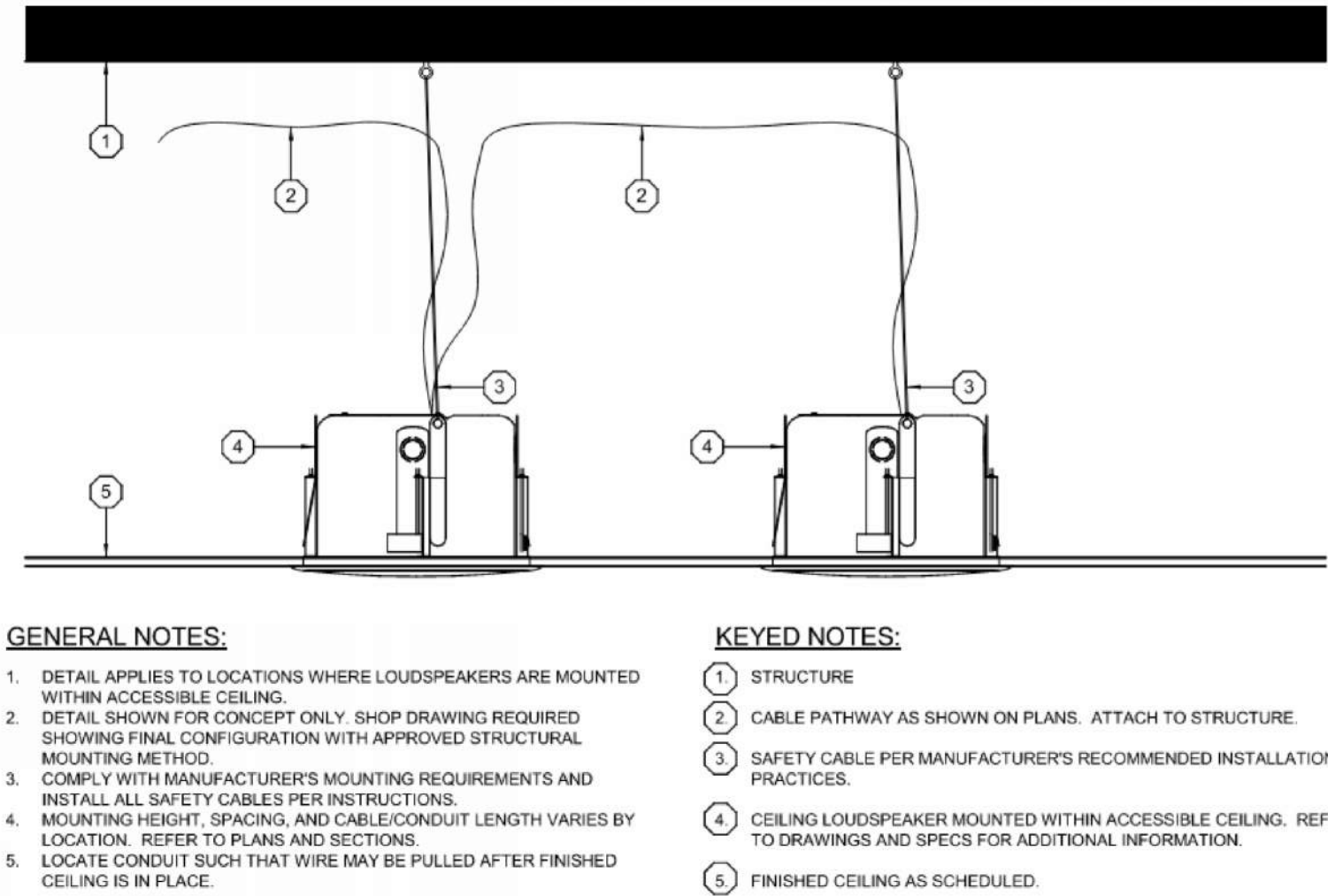
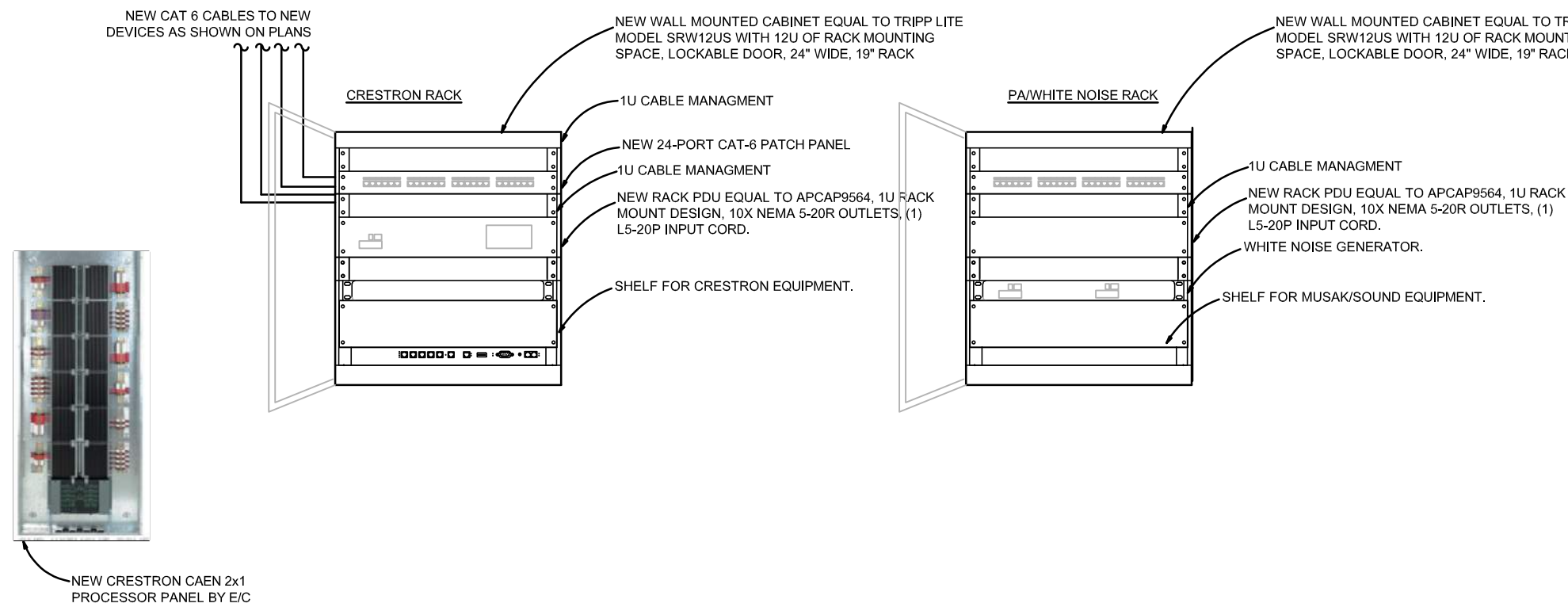
AUDIO/VISUAL DETAILS

AV400

AUDIO/VISUAL LOUDSPEAKER SCHEDULE									
SYMBOL	ID	DESCRIPTION	LOAD TYPE	LOCATION	B.O.D. MANUFACTURER & MODEL No.	INSTALL HEIGHT AFF	TYPE	INSTALLED/PROVIDED BY:	ADDITIONAL NOTES
	SP-C1	MUSAK SPEAKER	70V	ALL	BOGEN #: BOGEN HFCS1LP (BLACK UPPER, WHITE LOWER CEILING)	CEILING / FLUSH	T-BAR LAY-IN (CUT IN WOOD/GYP CEILING)	CONTRACTOR/CONTRACTOR	①②③
	SP-WN	WHITE NOISE SPEAKER	70V	OFFICE AREA	ATLAS SOUND #: M1000R-W (WHITE)	CEILING / FLUSH	T-BAR MOUNT	CONTRACTOR/CONTRACTOR	①②④
	SP-S	CONF ROOM AUDIO SPEAKERS	70V	CONF ROOM	COMMUNITY #: DB-70V (15 WATT)	CEILING/FLUSH	CUT-IN	CONTRACTOR/CONTRACTOR	①②
<div>NOTES: ① 12/2 PLENUM RATED CABLING TO AMPLIFIER ② BACKING AND MOUNTING PER DETAIL ON AV300 ③ FOR MUSAK SPEAKERS, FURNISH WALL VOLUME CONTROL BOGEN GSRVC TO BE MOUNTED IN SINGLE GANG BOX ④ FOR WHITE NOISE SPEAKERS, FURNISH ATLAS SOUND AT10 WALL VOLUME CONTROL.</div> <div>ADDITIONAL EQUIPMENT FOR SOUND: 1. BOGEN AMPLIFIER X300W AND DIGITAL INPUT ACCESS MODULE TAMB22PS. 2. WHITE NOISE GENERATOR EQUAL TO ATLAS SOUND TSD-GPN1200 WITH POWER SUPPLY AND TSD-RMK 1RU RACK. 3. PROVIDE 70W MINIMUM, 2 CHANNEL, 8 OHM IMPED AMPLIFIER FOR CONF ROOM SOUND SYSTEM, 1-2 RACK UNIT MOUNTING, QSC SPA2-60</div>									

AUDIO/VISUAL DEVICE SCHEDULE									
SYMBOL	ID	DESCRIPTION	BOX TYPE	LOCATION	B.O.D. MANUFACTURER & MODEL No.	(CENTER OF DISPLAY) INSTALL HEIGHT AFF	TYPE	INSTALLED/PROVIDED BY:	ADDITIONAL NOTES
	MP	CONF MICROPHONE ARRAY CONNECTION BOX	SHURE MXA910	CONF ROOM	DANTE #: X302 USB ADAPTER - AUDINATE ADP-USB	CEILING / FLUSH	T-BAR LAY-IN (CUT IN WOOD/GYP CEILING)	CONTRACTOR/CONTRACTOR	①
	CC	VIDEO CONFERENCING CAMERA		CONF ROOM	CRESTRON #: CCS-CAM-USB	SHELF/TV		CONTRACTOR/CONTRACTOR	
		VIDEO CONFERENCING SYSTEM		CONF ROOM	CRESTRON #: CAT6 TO USB 3.0 - HD-CONV-USB UC ENGINE - CRESTRON UC ENGINE WIRELESS VIDEO PRESENTATION - CRESTRON AM-200 UC PRESENTATION TRANSMITTER - CRESTRON UC-PR				
	TS	SYSTEM TOUCHSCREEN 7" FLAT		CONF ROOM	CRESTRON #: TSW-770-B-S	WALL, DOUBLE GANG BOX		CONTRACTOR/CONTRACTOR	
	TTS	TABLE TOP TOUCHSCREEN W/IT		CONF ROOM	CRESTRON #: FLEX MM UC-MM30-R	WORK SURFACE TABLE		CONTRACTOR/CONTRACTOR	
	AMP	CONF SPEAKER AMPLIFIER TYPE DVM		CONF ROOM	QSC #: SPA2-60	SHELF, IN CABINET		CONTRACTOR/CONTRACTOR	
	AVC	AV&C PROCESSOR DSP FLEX 8 I/O		CONF ROOM	QSC #: QSC CORE 8 FLEX	SHELF, IN CABINET		CONTRACTOR/CONTRACTOR	
<div>NOTES: ① CABLING TO USB CONVERTER PER DIAGRAM</div>									

AUDIO/VISUAL FLAT PANEL DISPLAY SCHEDULE									
SYMBOL	ID	DESCRIPTION	SIZE	LOCATION	B.O.D. MANUFACTURER & MODEL No.	INSTALL HEIGHT AFF (CENTER OF DISPLAY)	TYPE	INSTALLED/PROVIDED BY:	ADDITIONAL NOTES
	TV-103.01	LCD COMM DISPLAY - 2160/75 (4K)	75"	CONFERENCE	LG #: 75UR340C	75"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②③④
	TV-103.02	LCD COMM DISPLAY - 2160/75 (4K)	75"	CONFERENCE	LG #: 75UR340C	75"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②③④
	TV-129.01	LCD COMM DISPLAY - 2160/75 (4K)	75"	QUIET/WAITING	LG #: 75UR340C	75"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②④
	TV-136.01	LCD COMM DISPLAY - 2160/75 (4K)	75"	PILOT LOUNGE	LG #: 75UR340C	75"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②④
	TV-101.01	LCD COMM DISPLAY - 2160/86 (4K)	86"	CONCOURSE	LG #: 86UR340C	75"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②
	TV-121.01	LCD COMM DISPLAY - 2160/50 (4K)	50"	LINE SERVICE	LG #: 50UR340C	68"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②
	TV-121.02	LCD COMM DISPLAY - 2160/50 (4K)	50"	LINE SERVICE	LG #: 50UR340C	68"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②
	TV-200.01	LCD COMM DISPLAY - 2160/75 (4K)	75"	QUIET/WAITING	LG #: 75UR340C	75"	WALL - ARTICULATING	CONTRACTOR/CONTRACTOR	①②④
<div>NOTES: ① LEGRAND A/V POWER/DATA BOX PER POWER/SPECIAL SYSTEMS PLANS ② BACKING AND MOUNTING PER DETAIL ON AV300 ③ CRESTRON A/V CONTROLLER AND DIGITAL MEDIA CONNECTIONS ④ CAT-6 LAN DROP TO TELEVISION, HDMI TO WALL OR FLOOR BOX STATION</div>									

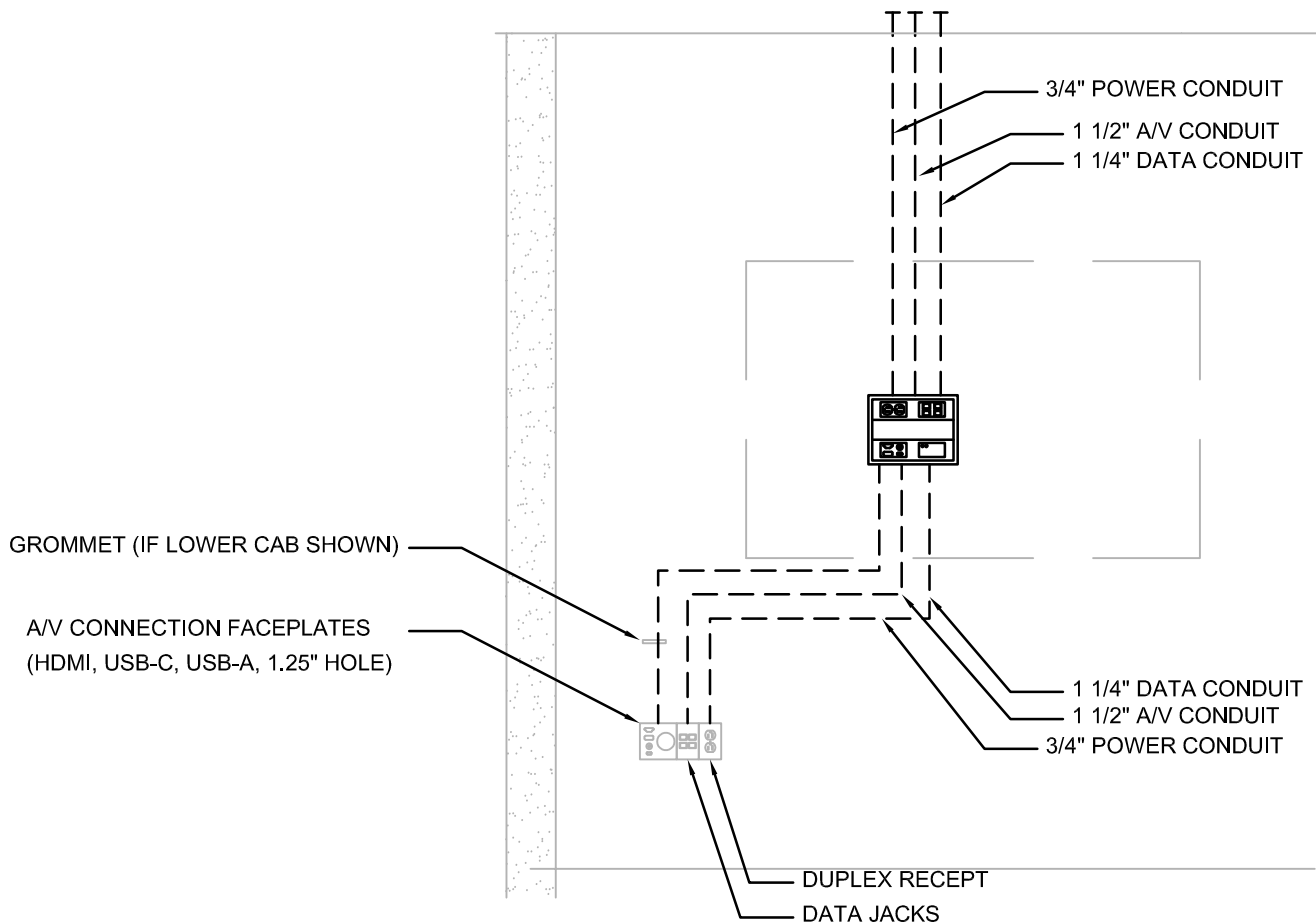


5 AV RACK CABINET DETAILS

SCALE:

4 CEILING LOUDSPEAKER MOUNTING DETAILS

SCALE: NTS

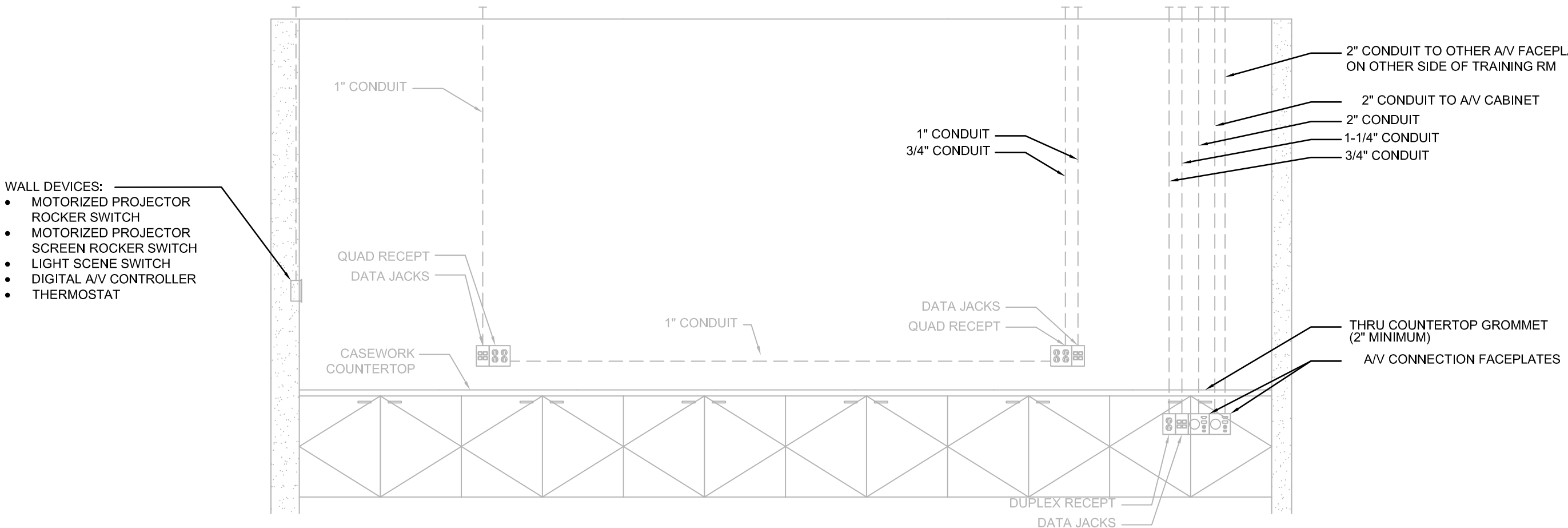


2 AV ROUGH-IN ELEVATION - TYPICAL REMOTE TV

SCALE: NTS

3 CEILING MICROPHONE ARRAY MOUNTING DETAIL

SCALE: NTS



1 AV ROUGH-IN ELEVATION - CONF ROOM 103

SCALE: NTS



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GENERAL AVIATION TERMINAL
CITY PORJECT NO. - 17932172



Cory Wilson - MO #PE-2010009876
Certificate of Authority - MO #2024005146

01-02-2025

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK DATE DESCRIPTION

PROJECT NO: 2403

CAD DWG FILE: Lee's Summit - Terminal MEP.rvt

DESIGNED BY: CMW

DRAWN BY: DM

CHECKED BY: WAI

APPROVED BY: Approver

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SHEET TITLE

AUDIOVISUAL
DETAILS &
SCHEDULES

AV500

SHEET 104 OF 102